Flame Detection Network Camera

Quick Start Guide

ZHEJIANG DAHUA VISION TECHNOLOGY CO., LTD. V1.0.0

Foreword

General

This manual introduces the interfaces, configuration, appearance, dimensions and instruction process of the Flame Detection Network Camera (hereinafter referred to as "the Device"). Read the manual carefully before using the Device, and keep it well for future reference.

Safety Instructions

The following categorized signal words with defined meaning might appear in the manual.

Signal Words	Meaning
 DANGER	Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
 CAUTION	Indicates a potential risk which, if not avoided, could result in property damage, data loss, lower performance, or unpredictable result.
 NOTE	Provides additional information as the emphasis and supplement to the text.

About the Manual

- The manual is for reference only. If there is inconsistency between the manual and the actual product, the actual product shall prevail.
- We are not liable for any loss caused by the operations that do not comply with the manual.
- The manual would be updated according to the latest laws and regulations of related jurisdictions. For detailed information, refer to the paper manual, CD-ROM, QR code or our official website. If there is inconsistency between paper manual and the electronic version, the electronic version shall prevail.
- All the designs and software are subject to change without prior written notice. The product updates might cause some differences between the actual product and the manual. Please contact the customer service for the latest program and supplementary documentation.
- There still might be deviation in technical data, functions and operations description, or errors in 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.

Important Safeguards and Warnings

This section introduces content covering the proper handling of the device, hazard prevention, and prevention of property damage. Read carefully before using the device and comply with the guidelines when using it.

Transport Requirements

- Transport the device under allowed humidity and temperature conditions.
- Please pack the equipment with the original packaging or materials of equal quality when transporting it.
- Please do not put vertical pressure on, shake vigorously, or soak the equipment during transportation.

Storage Requirements

- Store the device under allowed humidity and temperature conditions
- Please do not place the device in damp, dusty, extremely hot, extremely cold, strong electromagnetic radiation, or unstable lighting conditions.
- Please do not put vertical pressure on, shake vigorously, or soak the equipment during transportation.

Installation Requirements

 WARNING

- Strictly abide by local electrical safety standards, and make sure that the voltage in the area is steady and conforms to the power requirements of the device.
- Please strictly follow the following requirements to provide power for the equipment.
  - When selecting a power adapter, please use one that meets the requirements of SELV (Safety Extra-Low Voltage). Ensure that it provides power according to the rated voltage specified in the standards of GB8898 (IEC 60065) or GB4943.1 (IEC 60950-1 or IEC 62368-1, which comply with Limited Power Source). The specific power supply requirements should be based on the equipment label.
  - If the equipment is equipped with a power adapter when it leaves the factory, it is recommended to use the accompanying power adapter.
- Unless otherwise specified, please do not provide two or more power supply methods to the equipment simultaneously, as it may result in damage to the equipment.
- The equipment should be installed in a location accessible only to professionals (who have a clear understanding of the safety precautions for using this equipment). Non-professionals entering the equipment installation area during normal operation may be injured accidentally.

- Please do not put vertical pressure on, shake vigorously, or soak the equipment during transportation.
- Please install an easy-to-use power cutoff device during wiring installation, so as to perform emergency power cutoff when necessary.
- It is recommended to use this equipment in conjunction with a lightning protector to improve the lightning protection effect. Outdoor use should comply with lightning protection standards.
- It is recommended to ground the functional grounding hole on the equipment to improve its reliability. (Some models do not have a grounding hole, so please refer to the actual situation for details.)
- Please connect products with structure I to a power outlet with protective earth connection.
- The hemispherical cover is an optical device. Please do not directly touch or wipe the surface of the cover during installation.

Operation Requirements

WARNING

Do not touch the heat dissipation components of the equipment to avoid burns.

- Use the device under allowed humidity and temperature conditions
- Ordinary equipment should not be used in environments containing corrosive substances (such as chloride, SO_2, etc.), such as seaside or chemical plants, to avoid damaging the appearance or functionality of the equipment.
- For the use of anticorrosion equipment or other special scenarios, please consult customer service to avoid damaging the appearance or functionality of the equipment.
- Please do not focus the device directly onto strong light sources (such as artificial lighting or sunlight), as this can easily cause overexposure or flare effects (which are not indications of device malfunction) and may also affect the lifespan of the light-sensitive CMOS (Complementary Metal Oxide Semiconductor) component.
- When using laser beam equipment, please avoid exposing the surface of the device to laser beam radiation.
- Please do not allow any liquid to flow into the device to avoid damage to internal components.
- Please do not expose indoor equipment to rain or moisture to avoid the risk of fire or electric shock.
- Please do not block the vents near the device to avoid heat accumulation.
- Please protect the power cord from being stepped on or tightly compressed, especially at the plug, power socket, and the connection points extending from the device.
- Please do not directly touch the photosensitive device CMOS. You can use an air gun to remove dust or dirt from the surface of the lens.
- The hemispherical cover is an optical device. Please do not directly touch or wipe the surface of the cover during installation.
- Please strengthen the protection of networks, device data, and personal information, and take necessary measures to ensure the security of device networks, including but not limited to

using strong passwords, regularly changing passwords, updating firmware to the latest version, and isolating computer networks. For some older versions of IP camera firmware, when the main password of the system is changed, the ONVIF (Open Network Video Interface Forum) password may not automatically change with it. You may need to update the camera's firmware or manually update the ONVIF password.

Maintenance and Repair Requirements

- Please strictly follow this document for any equipment-related disassembly operations. Improper disassembly may result in water leakage or poor image quality of the equipment. Before closing the cover of equipment that requires disassembly, please ensure that the sealing ring is flat and properly positioned in the installation slot. If you notice condensation on the lens when unpacking or find that the desiccant has turned green after disassembling the equipment, please contact customer service promptly to replace the desiccant. (Note: Some models do not include a desiccant. Please refer to the actual product for specific details.)
- Please use accessories or attachments specified by the manufacturer, and have them installed and maintained by professional service personnel.
- Please do not directly touch the photosensitive CMOS device. You can use an air gun to remove dust or dirt from the surface of the lens. If cleaning is necessary, slightly dampen a clean, soft cloth with alcohol and gently wipe away any dirt or contaminants.
- To clean the camera body, you can use a clean, soft cloth. If there are stubborn stains, gently wipe them away with a small amount of neutral cleaning agent applied to a clean, soft cloth, and then dry the surface. Do not use volatile solvents such as alcohol, benzene, or thinner, or strong abrasive cleaners, as they may damage the surface coating or compromise the performance of the device.
- The hemispherical cover is an optical device. If it becomes contaminated with dust, grease, or fingerprints, you can use a small amount of ether on absorbent cotton or a clean, damp soft cloth to gently wipe it clean. Alternatively, if it is only dusty, you can also use an air gun to gently blow away the dust.
- After a period of use in highly corrosive environments (such as the seaside, chemical plants, etc.), it is normal for stainless steel cameras to develop rust on their surface. To remove the rust, you can use a soft cloth with a sanding function dipped in a small amount of acidic solution (vinegar is suggested) to gently wipe it away, and then dry the surface.

Table of Contents

1. Structure

1.1 External Cables

When connecting cables, you'd better use insulating tape and waterproof tape to prevent short circuits and water leakage. Please refer to the corresponding Frequently Asked Questions (FAQ) manual for specific handling methods.

Figure 1-1 Externals

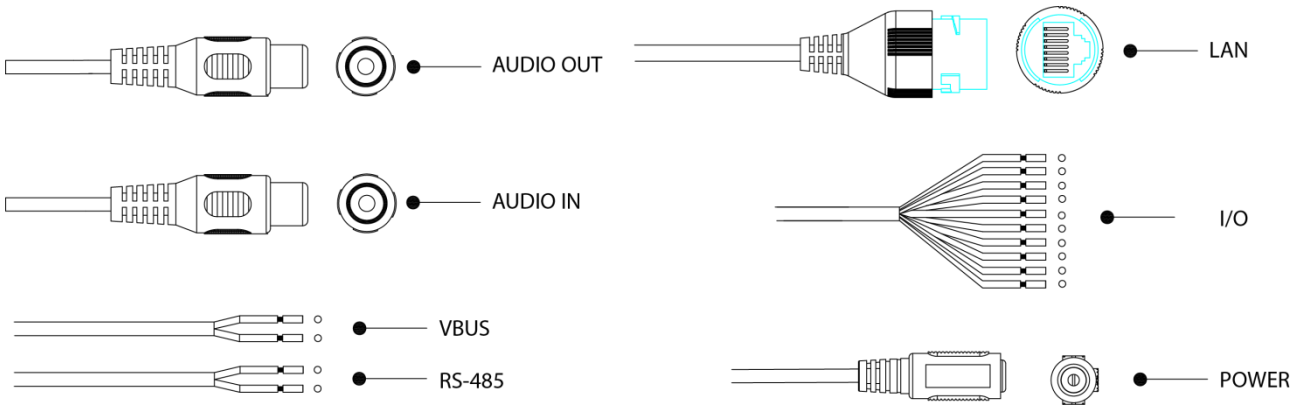


Table 1-1 Introduction of external cables

Cable	Interface	Description
POWER	Power input interface	To supply power to the device, connect the appropriate power source according to the cable label. If the cable is labeled as DC 12V, then input DC 12V power. If the cable is labeled as AC 24V, input AC 24V power. In case the cable label does not indicate the power specification, please refer to the power specification on the device label to select the power source. ⚠ • If the device has both DC 12V and AC 24V power cables, please do not supply power simultaneously, as this will result in damage to the device. • Please ensure to supply power to the device according to the labels when in use or it may result in damage to the device.
I/O	I/O interface	Including alarm signal input and output, the number of I/O ports may vary for different devices. Please refer to the "I/O Port Function Introduction" according to the device label for use.
VBUS	Two-wire communication port	Connected to the alarm host for alarm signal transmission.

Cable	Interface	Description
RS-485	RS-485 interface	Control external pan-tilt, etc.  Only some devices support the RS-485 interface.
LAN	Internet interface	Connected to a standard Ethernet port and provides Power over Ethernet (PoE) functionality.  Some devices do not support PoE power supply.
AUDIO IN	Audio input interface	RCA interface, for audio signal input, receives analog audio signals from devices such as microphones.
AUDIO OUT	Audio output interface	RCA interface, for audio signal output, provides audio to devices such as speakers.

Table 1-2 I/O Introduction of I/O interfaces

Interface	Name	Description
I/O interface	ALARM_OUT	Alarm output interface, which outputs alarm signals to alarm devices.  When connecting alarm output devices, ALARM_OUT can only be used in conjunction with ALARM_OUT_GND of the same number.
	ALARM_OUT_GND	
	ALARM_IN	Alarm input interface, which receives switching signals from external alarm sources.  Different alarm input devices are connected to the same ground terminal, namely ALARM_IN_GND.
	ALARM_IN_GND	

1.2 Alarm Configuration

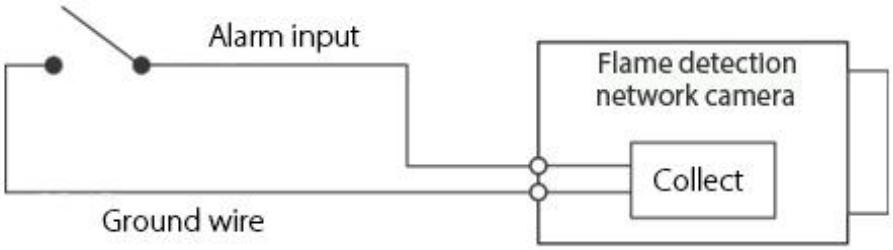
Some devices do not support alarm function, so this section is not applicable. Please refer to the actual devices.

Step 1 Connect to alarm input devices.

According to the following connection method, the device can collect different states of the alarm input interface.

- When the input signal is connected to +3 V to +5 V or left floating, the device collects a logical '1'.
- When the input signal is connected to ground, the device collects a logical '0'.

Figure 1-2 Alarm input

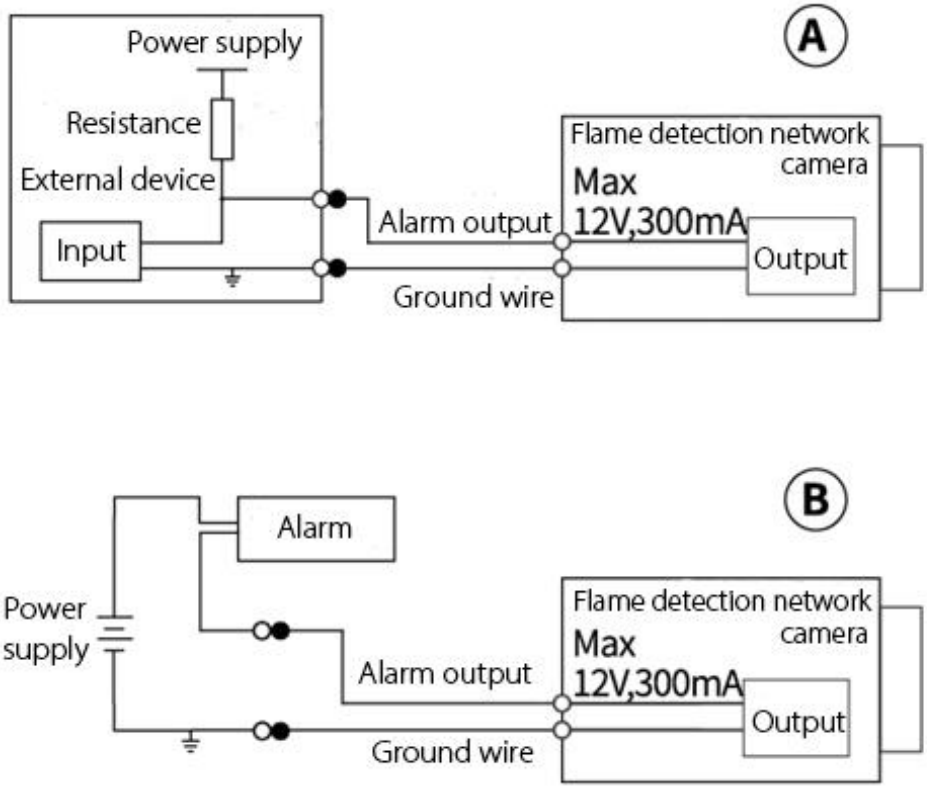


Step 2 Connect to alarm output devices.

The alarm output is an open-drain output.

- Mode A: Voltage Level Application. The alarm output operates at high and low voltage levels, with the alarm output port being an OD (Open-Drain) gate. To function properly, an external pull-up resistor (typical value of 10 KΩ) is required. The maximum external pull-up voltage level is 12 V, and the maximum port current is 300 mA. By adding an external pull-up resistor, the output signal defaults to a high voltage level (equal to the external pull-up voltage). When an alarm is triggered, the output signal changes to a low voltage level.
- Mode B: Switch Application. The alarm output is used to drive an external circuit, with a maximum voltage of 12 V and a maximum current of 300 mA (peak value). It is recommended to add an external relay when exceeding these values.

Figure 1-3 Alarm output



Step 3 Login WEB page and set the corresponding alarm input/output in Alarm Configuration.

- The alarm input on the WEB end corresponds to the alarm input interface on the I/O port cable. If the alarm input signal generates a logical "0" when an alarm occurs, it should be set as a normally open input (default state). If the alarm input signal generates a logical "1" when an alarm occurs, it should be set as a normally closed input.
- Set up alarm output at the WEB end, and the alarm output corresponds to the alarm output interface on the I/O port cable.

2. Internet Configuration

You can initialize the device and modify the IP address through the quick configuration tool (ConfigTool) and the WEB interface. This document illustrates with ConfigTool as an example. Please refer to the supporting instruction manual for relevant operations of the WEB interface.

- After the device is used for the first time or restored to factory settings, initialization is required.
- Functions such as initialization, modifying the IP address, and logging in to the device require ensuring that the device (with a default IP of 192.168.1.108) is on the same network as the PC.
- To ensure that the device can successfully access the network, please plan the available IP network segment reasonably based on the actual network environment.
- The following diagrams are for reference only. The interface display of different models of equipment may vary. Please refer to the actual situation.

2.1 Device Initialization

Step 1 Search for the device that needs to be initialized via ConfigTool.

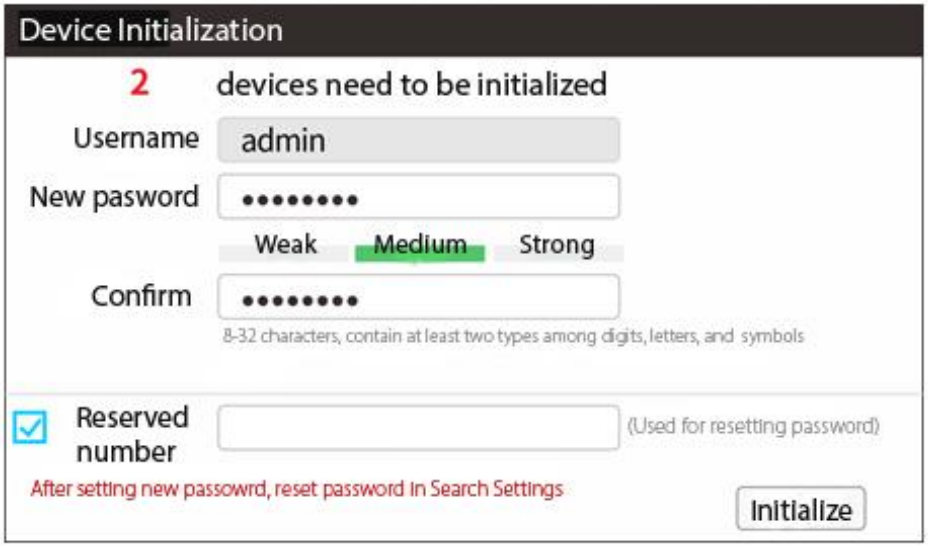
1. Double click ConfigTool to enable quick configuration tool.
2. Select  tab and click **Search Settings**.
3. In the popped-up dialog box, set the network segment where the device is located, and click **OK**.
4. From the list of searched devices, select the uninitialized device and click **Initialize**.

Step 2 Choose the device that needs to be initialized and click **Initialize**.

Step 3 In the popped-up dialog box, set password and reserved number and click **Initialize**.

The reserved phone number is used for resetting passwords. Please set the 'reserved phone number' according to your actual needs.

Figure 2-1 Device initialization



Step 4 Select functions such as automatic detection based on actual needs, and click **OK**.

Device initialization starts. ✓ means initialization completed. ⚠ means initialization fails. Click the icon to check detailed information.

Step 5 Click OK to finish device initialization.

2.2 Changing IP Address

Step 1 Search for the device of whose IP address needs to be modified through ConfigTool.

1. Double click ConfigTool to enable quick configuration tool.
2. Choose tab and click **Search Settings**.
3. In the popped-up dialog box, set the network segment where the device is located, username and password, and click **OK**.

Username is admin. The password is the one during initialization, otherwise the IP address cannot be modified.

Step 2 Select the device whose IP needs to be modified, and click **Modify IP in Batches**.

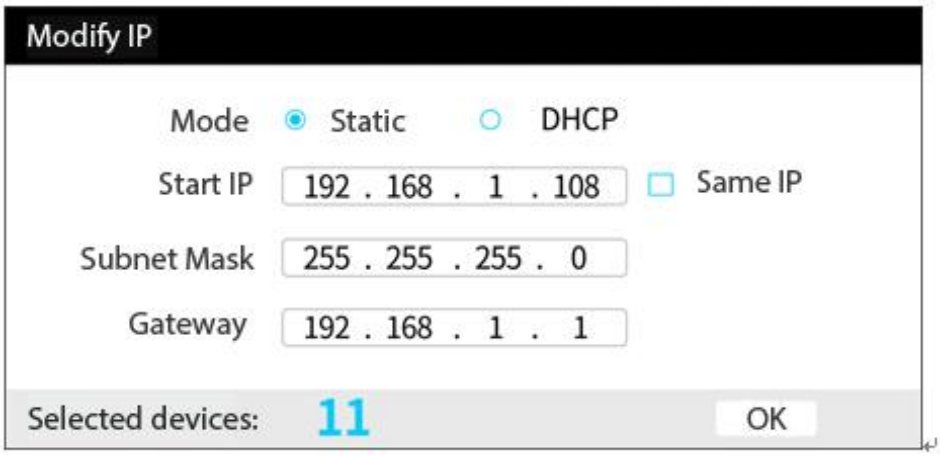
Step 3 In the popped-up dialog box, modify IP address and support static mode and DHCP mode.

- Static Mode: Set Mode as Static and enter Starting IP, Subnet Mask and Gateway.

- DHCP Mode: When there is a DHCP server in the network, set the Mode as DHCP and the Camera obtains IP addresses from the DHCP server automatically.

Select **Same IP** to set multiple selected devices to the same IP address. It is recommended to uniformly set the factory default IP.

Figure 2-2 Modify IP



Step 4 Click **OK** to finish modifying IP address.

2.3 Log in to WEB Page

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

If the interface displays a setup wizard, please follow the prompts on the screen to operate.

Step 2 Enter username and password and click **Login**.

- For the first login, you need to click Please click here to download the plugin and install the control according to the system prompts.
- If you forget the password, you can click forgot password in the login page to reset it.

3. Device Installation

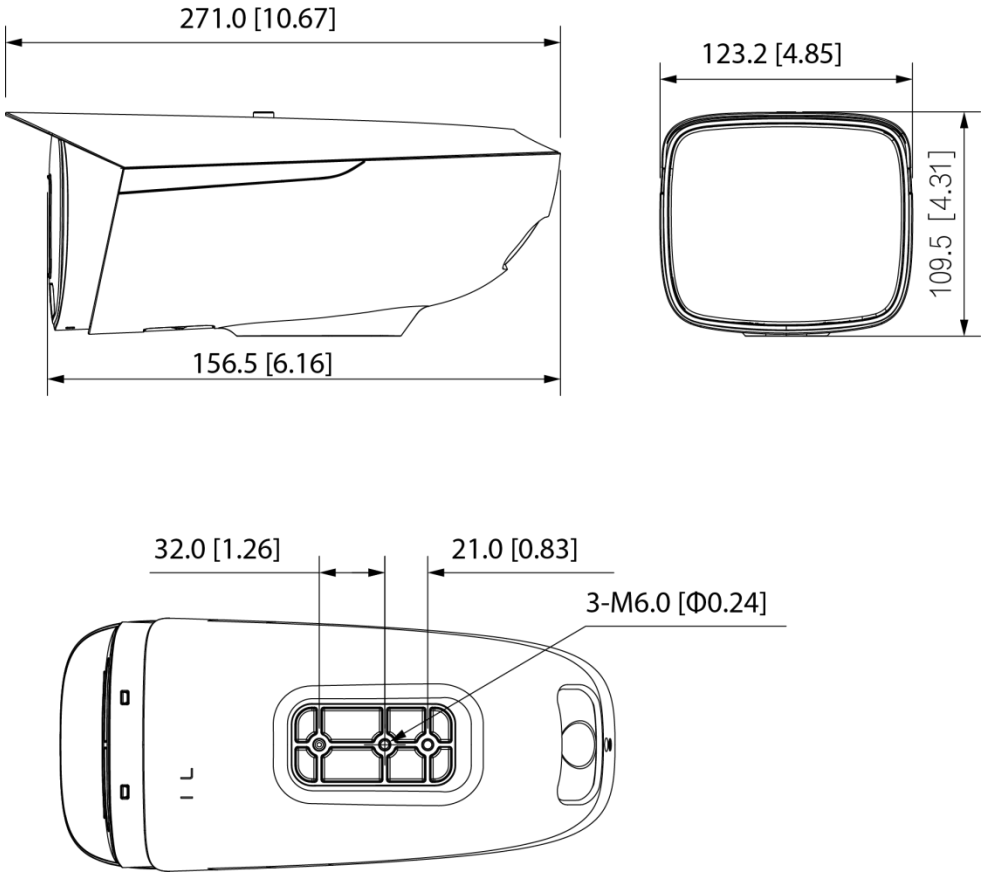
3.1 Unpacking Inspection

For any tools or accessories not mentioned, you are advised to purchase them on your own as needed.

Figure 3-1 Unpacking inspection

3.2 Dimensions

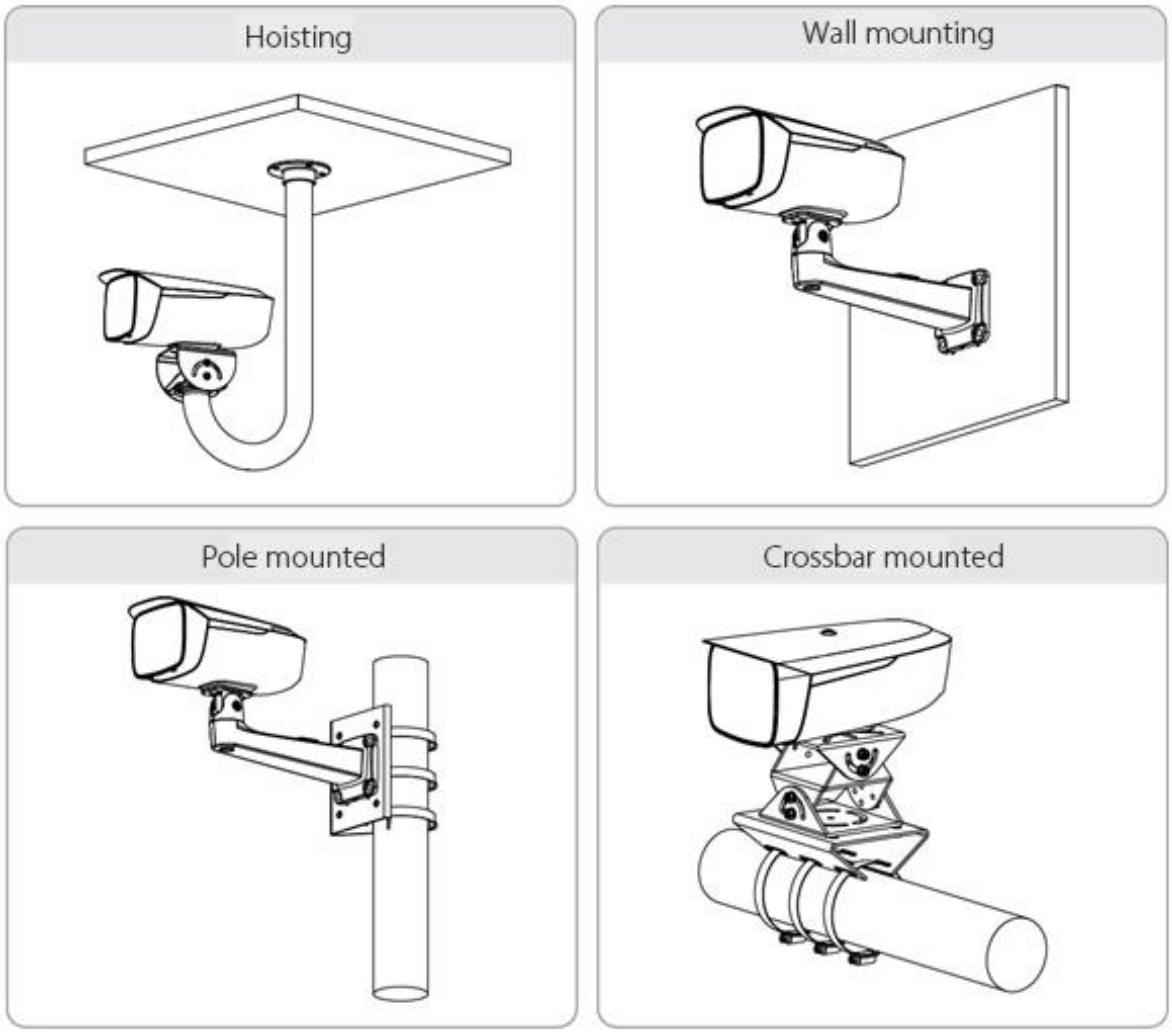
Figure 3-2 Dimensions(mm[inch])



3.3 Installation

3.3.1 Installation Scenario

Figure 3-3 Installation scenario



3.3.2 (Optional) Install SD Card

CAUTION

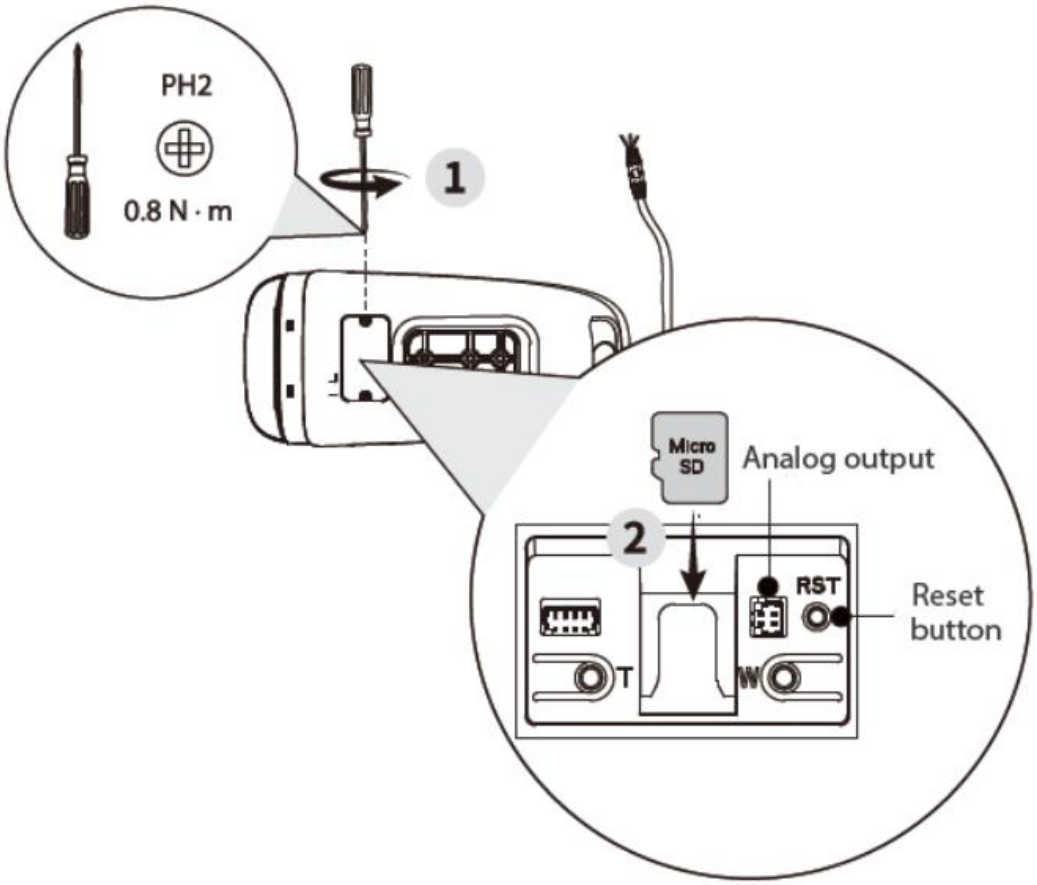
- When the device has an SD card slot and you need to use an SD card for video storage, please install the SD card first. When installing or removing the SD card, please cut off the power supply to the device before operating.

●Under normal operating conditions of the device, pressing and holding the reset button for 10 seconds will restore the system configuration to the factory default settings. Please proceed with caution.

- Please do not keep the lower flap open for a long time in a damp environment to avoid water vapor entering the device and causing abnormalities such as condensation.

- By using an analog output cable to connect the analog output interface to a TV monitor, you can view images.

Figure 3-4 Install SD Card



3.3.3 Fix Device

CAUTION

The installation surface should be able to bear at least 3 times the total weight of the bracket and the device.

Figure 3-5 Wall outlet installation

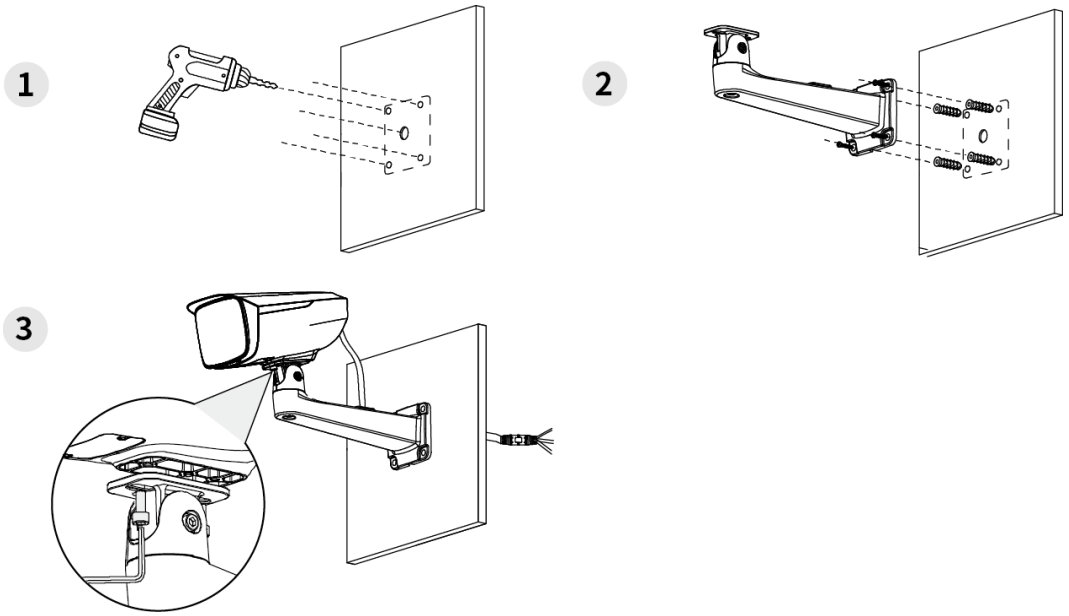
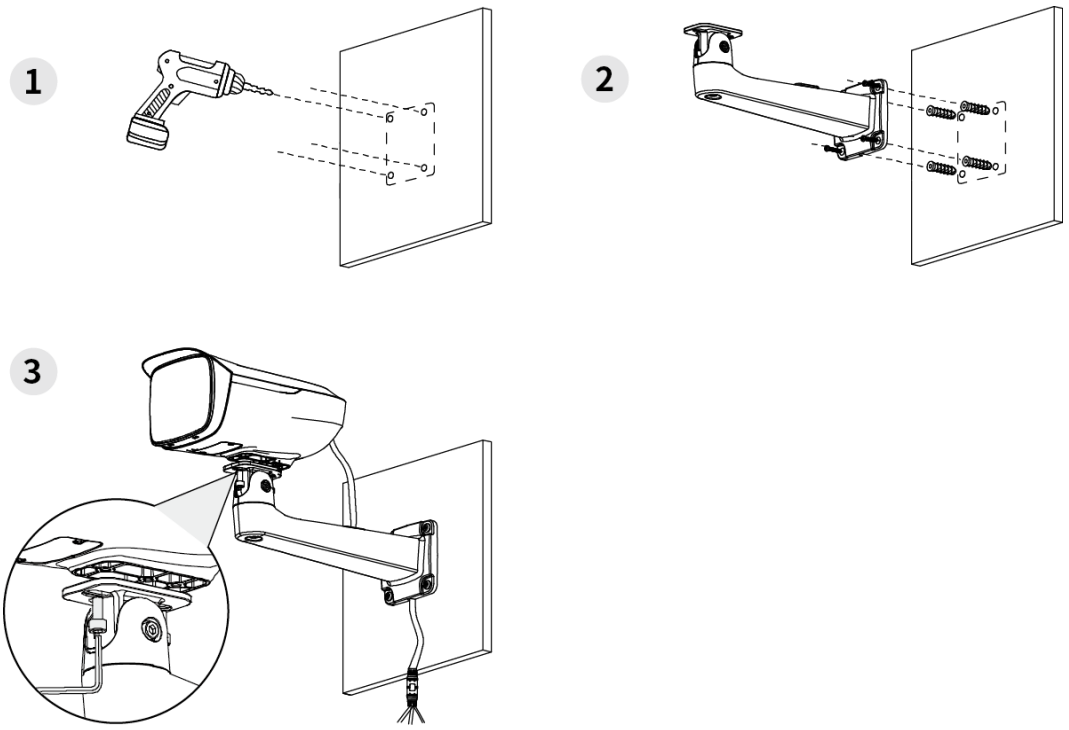


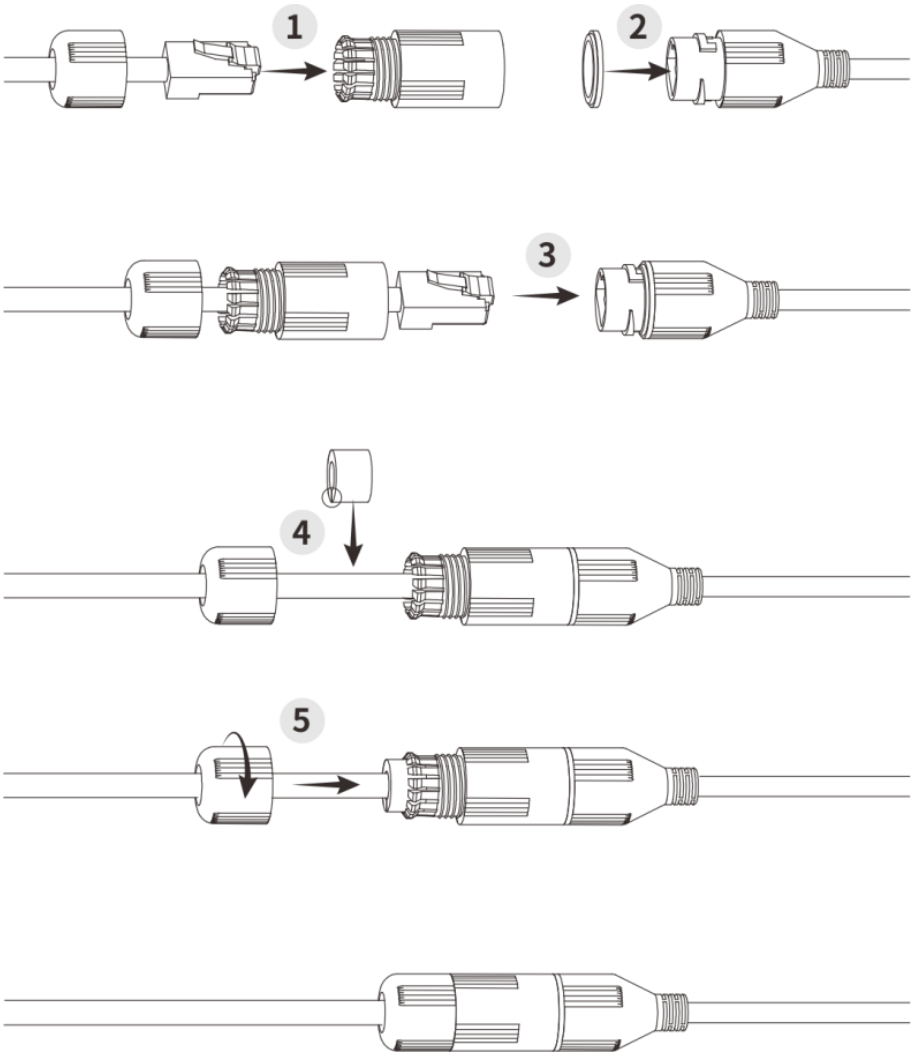
Figure 3-6 Outlet slot installation



3.3.4 (Optional) Install Waterproof Cover for Network Port

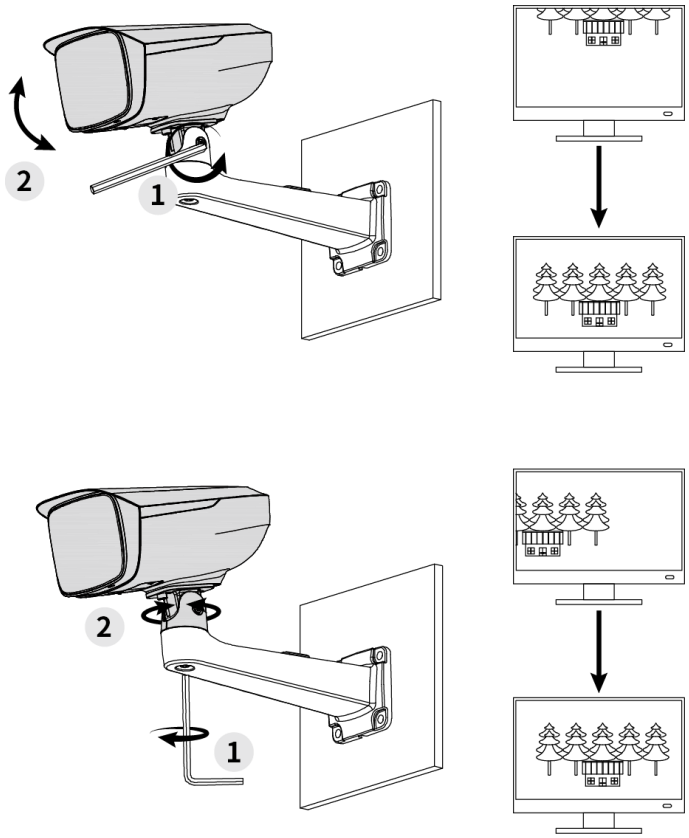
When the device is equipped with a waterproof cover for the network port and used outdoors, this operation needs to be performed.

Figure 3-7 Install waterproof cover for network port



3.3.5 Adjust Angles

Figure 3-8 Adjust angles



3.3.6 Adjust Focus

Press the W button to zoom out the image, press the T button to zoom in the image, and achieve variable magnification focusing through pressing the W/T buttons.

Figure 3-9 Adjust focus