# Panoramic Fisheye Network Camera

## Quick Start Guide



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

# 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, could 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 |
|---|---|---|
| V1.0.0 | First release. | November, 2021 |

## Privacy Protection Notice

As the device user or data controller, you might collect the personal data of others such as their face, fingerprints, and license 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 Cable

Waterproof all the cable joints with insulating tape and waterproof tape to avoid short circuit and water damage. For detailed operation, see FAQ manual.

Figure 1-1 Cables

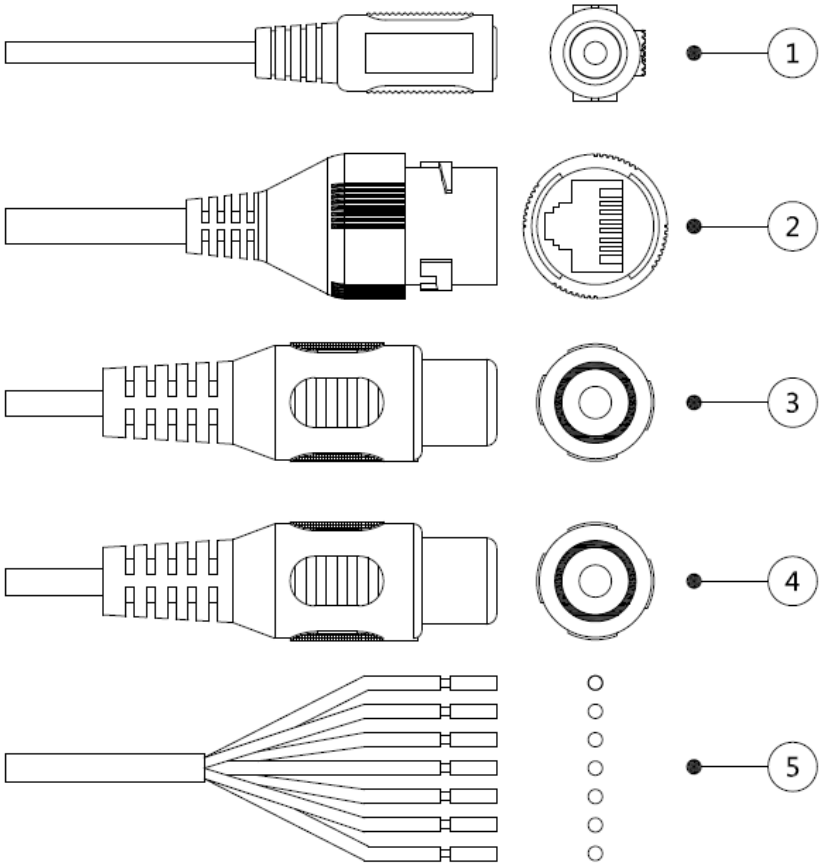



Table 1-1 Cable information

| No. | Port Name | Description |
|---|---|---|
| 1 | Power input | Inputs 12 VDC power. Please be sure to supply power as instructed in the Guide.<br>Device abnormity or damage could occur if power is not supplied correctly. |

| No. | Port Name | Description |
|---|---|---|
| 2 | Ethernet Port | • Connects to network with network cable.<br>• Provides power to the device with PoE.<br>PoE is available on select model. |
| 3 | Audio input | Connects to sound-pick-up device to receive audio signal. |
| 4 | Audio output | Connects to speaker to output audio signal. |
| 5 | Alarm I/O | Includes alarm signal input and output ports, the number of I/O ports Might vary on different devices. For detailed information, see Table 1-2. |

Table 1-2 Alarm I/O port information

| Port name | No. | Connector name | Description |
|---|---|---|---|
| I/O port | 1 | ALARM_OUT1 | Alarm output port 1 outputs alarm signal to alarm device.<br>When connecting to alarm device, only the ALARM_OUT 1 port and ALARM_OUT_GND 1 port with the same number can be used together. |
| | 2 | ALM_OUT_GND1 | |
| | 3 | ALARM_IN1 | Alarm input port 1 receives the switch signal of external alarm source. |
| | 4 | ALARM_IN2 | Alarm input port 2 receives the switch signal of external alarm source. |
| | 5 | ALM_IN_GND | Alarm input GND. |
| | 6 | ALARM_OUT2 | Alarm output port 2 outputs alarm signal to alarm device.<br>When connecting to alarm device, only the ALARM_OUT 2 port and ALARM_OUT_GND 2 port with the same number can be used together. |
| | 7 | ALM_OUT_GND2 | |

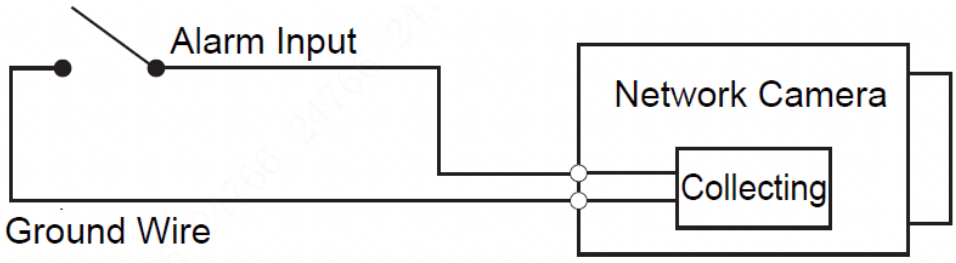
# 1.2 Connecting Alarm Input/output

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 connecting to 3.3 V or idling; device collects logic "0" when input signal being grounded.

Figure 1-2 Alarm input

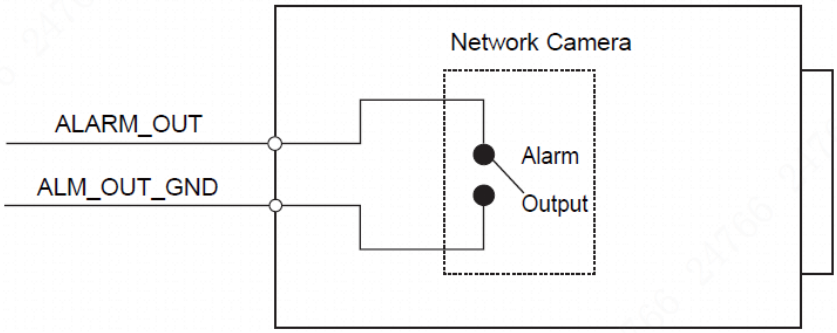



Step 2 Connect alarm output device to the alarm output end of the I/O port. The alarm output is relay switch output, which can only connect to NO alarm devices.

The ALARM_OUT port and the ALM_OUT_GND port with the same number constitute a switch for alarm output.

The switch is open normally and closes when there is alarm output.

Figure 1-3 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.

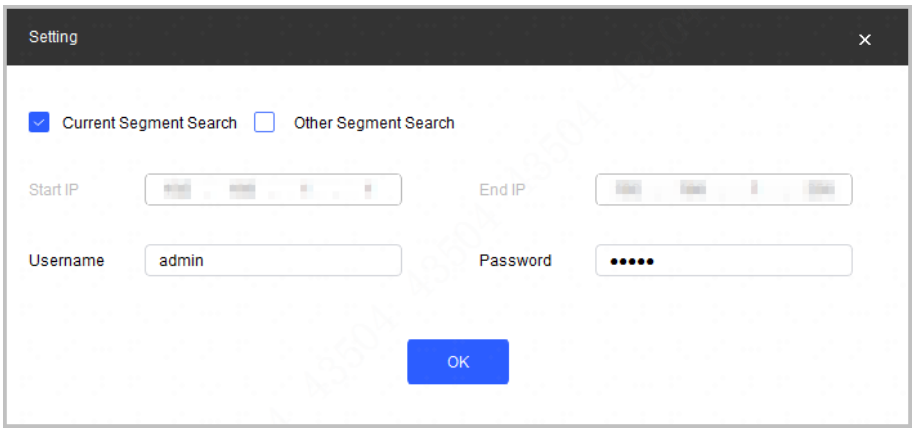
## 2.1 Initializing Device

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.

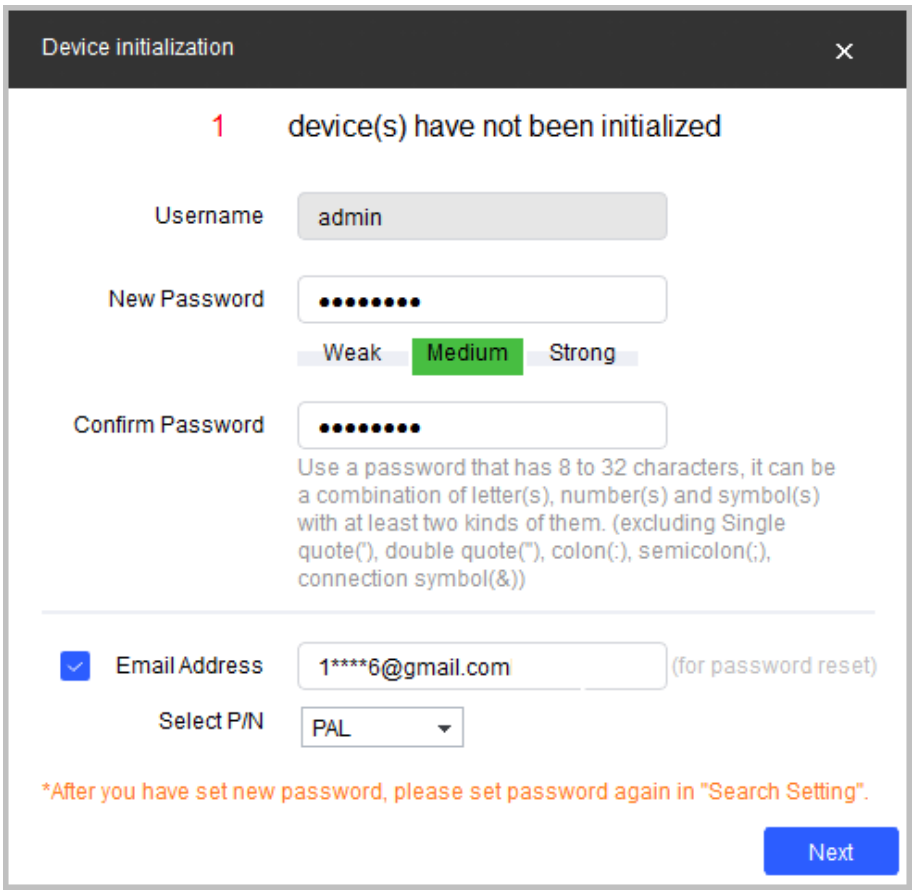
Step 5 Click **OK**.

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**.

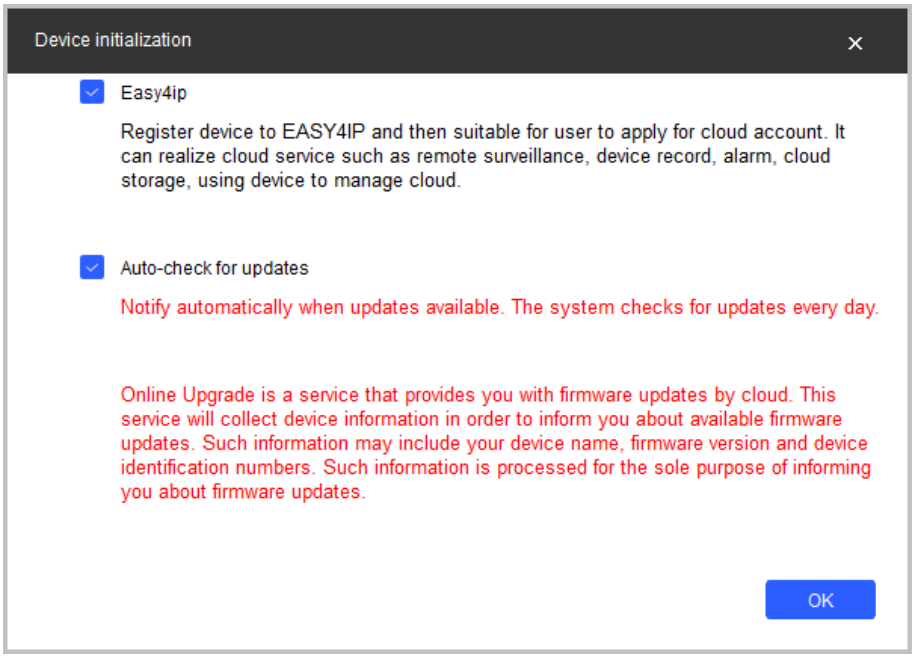
- If you do not provide the linked information for password reset, you can reset the password only through XML file.
- When initializing multiple devices, ConfigTool initializes all devices based on the password reset mode of the first selected device.

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

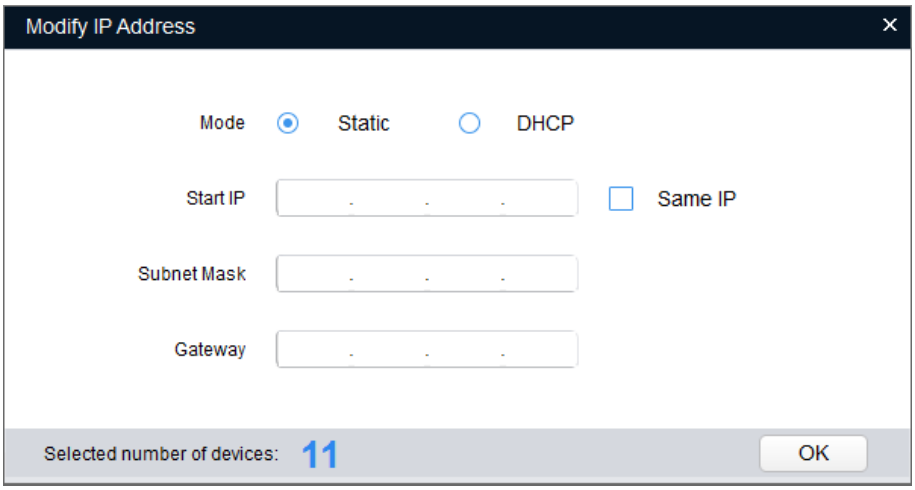
- You can change IP address of one or multiple devices in one time. This section is based on changing IP addresses in batches.
- Changing IP addresses in batches is available only when the corresponding devices have the same login password.

Step 1 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 2 Select the devices whose IP addresses need to be modified, and then click **Batch Modify IP**.

Figure 2-4 Change IP address




Step 3 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 4 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 the username and password in the login box, and then click **Login**.

Step 3 For the first-time login, click **Click Here to Download Plugin** and install the plugin as instructed.

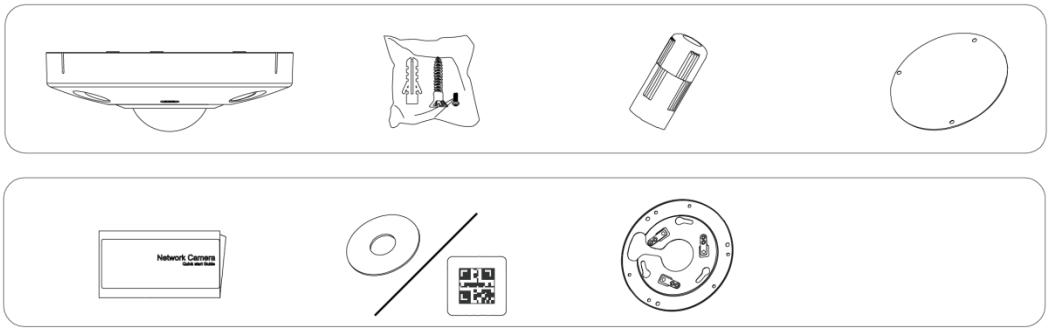
The home page is displayed when the installation is finished.

# 3 Installation

## 3.1 Packing List

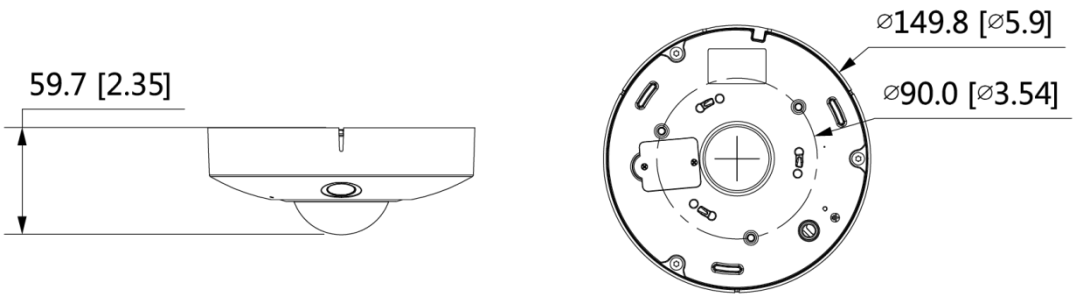
- The tools required for the installation including electric drill are not provided in the packing.
- The operation manual and related tool are contained in the disk or the QR code.

Figure 3-1 Packing list




## 3.2 Dimension

Figure 3-2 Dimensions (mm[inch])



# 3.3 Installing Device

## 3.3.1 Installation Method

Figure 3-3 Installation Type

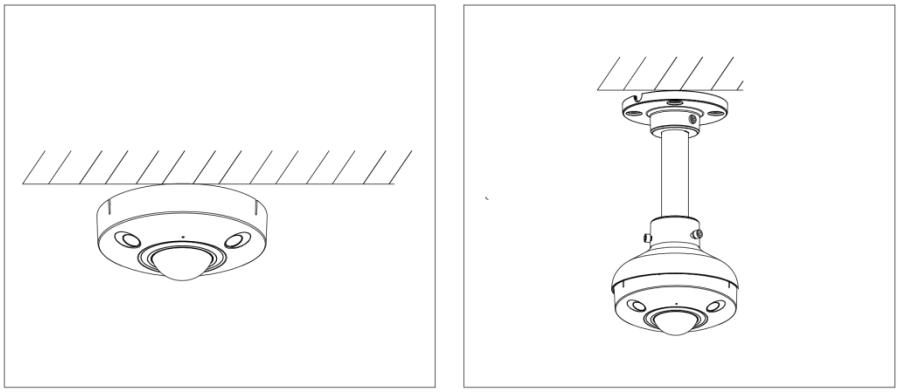
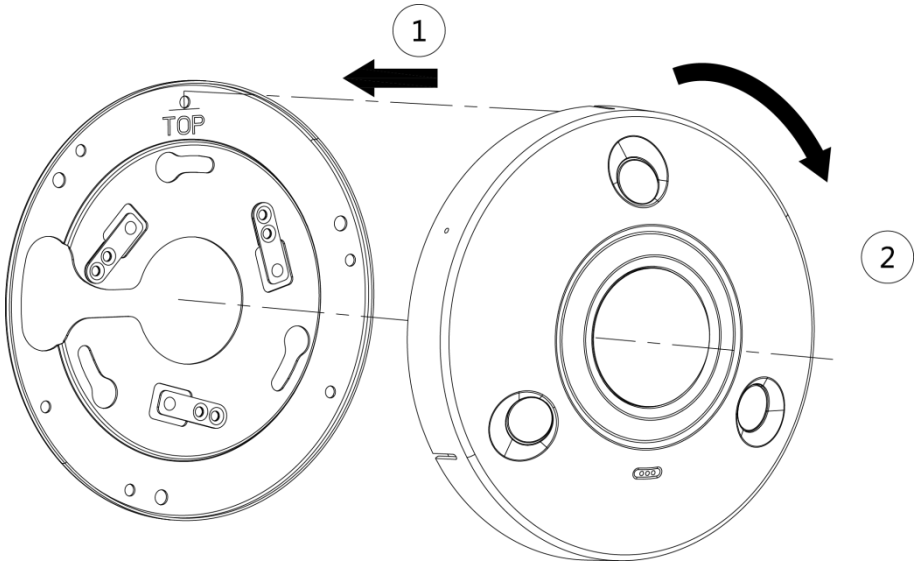


Figure 3-4 Covering Mode



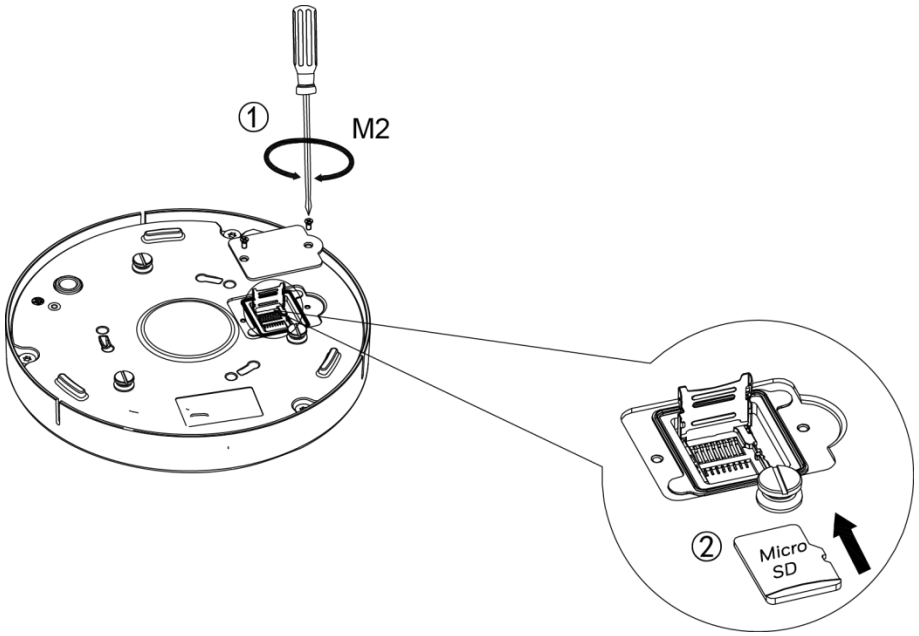

Find the gap on the camera body; align it with the “TOP” on the corresponding quick mounting board, rotate the camera body clockwise to complete installation.

## 3.3.2 Installing SD Card (Optional)

- SD card slot is available on select models.
- Please disconnect the power from the device before installing the SD card.

Press the reset button for 10 seconds to reset the device.

Figure 3-5 Install SD card

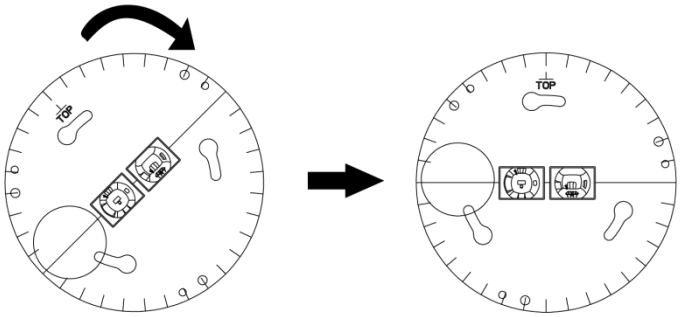



## 3.3.3 Attaching Device

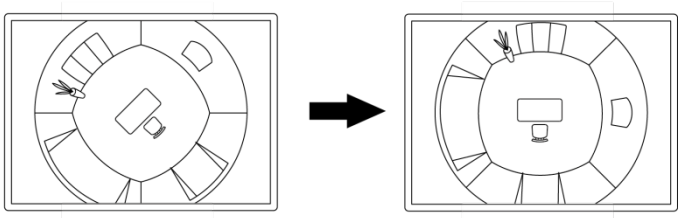
- Make sure the mounting surface is strong enough to hold at least three times of the total weight of device and bracket.
- Connect the host grounding hole ( ) to ground wire, which can improve device reliability effectively. The ground hole is located next to the cable exit hole which is on the back of the bottom cover; the specification of grounding screw is M2.5.

Figure 3-6 Attach device

Positioning Map




Ceiling-mount



Wall-mount

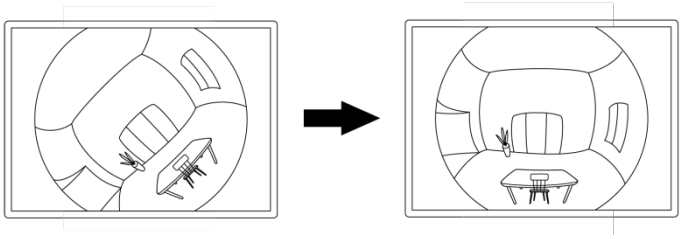


Figure 3-7 Cable going through ceiling-mount

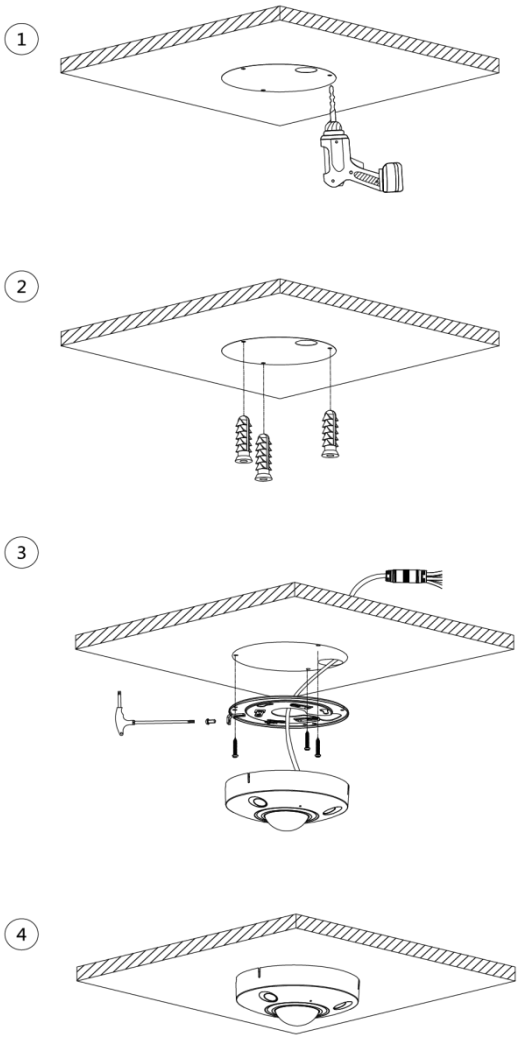
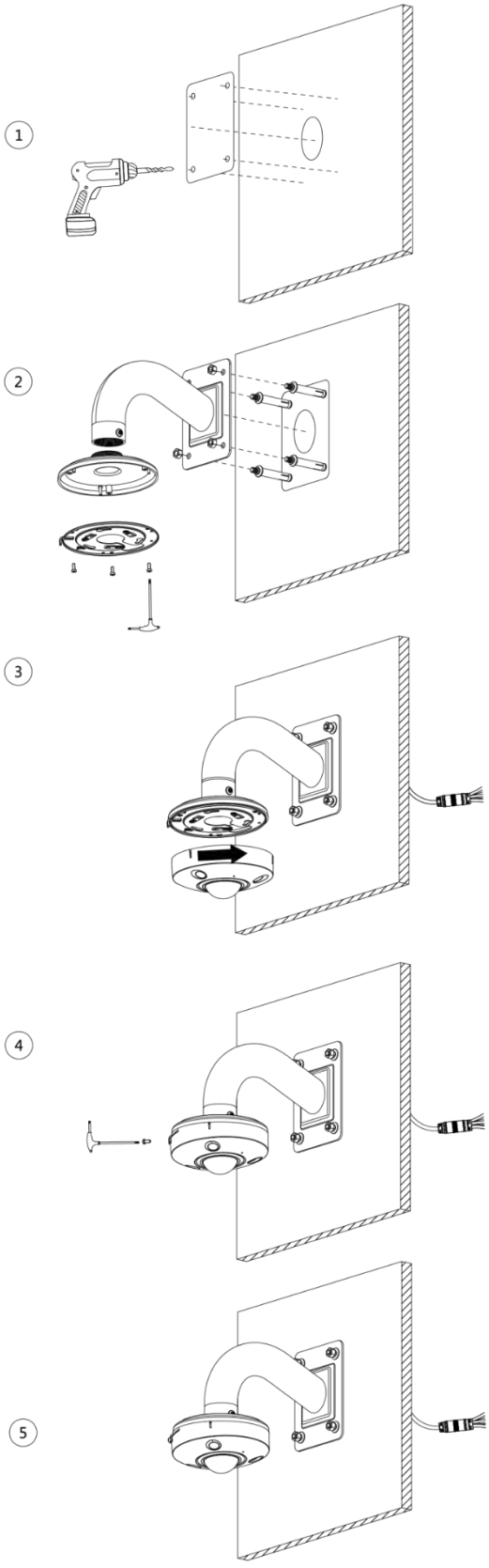


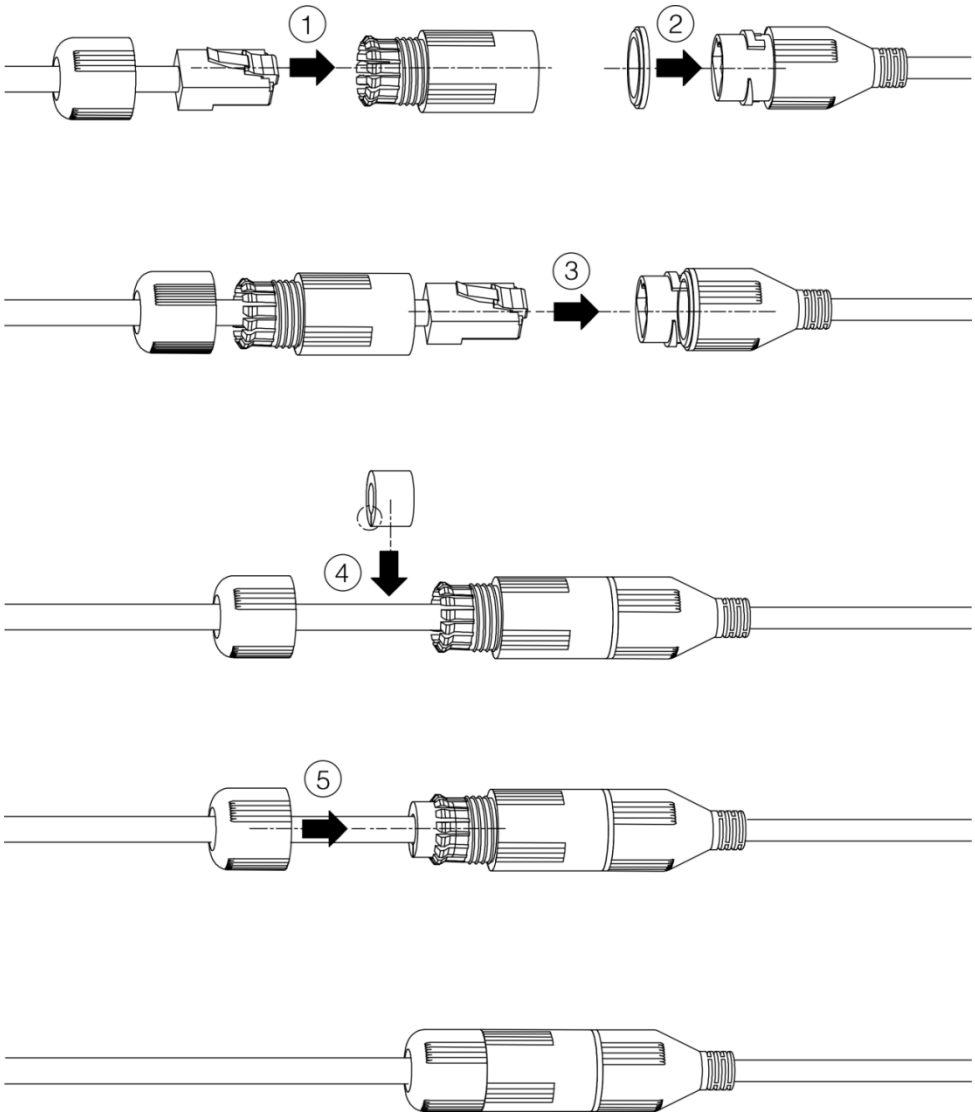
Figure 3-8 Cable going through wall-mount



## 3.3.4 Installing Waterproof Connector

This part is only needed when a waterproof connector comes with the device and the device is used outdoors.

Figure 3-9 Install waterproof connector



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