Mobile Network Camera

Quick Start Guide

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2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info

2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info

Industry Canada ICES-003 Compliance

This device meets the CAN ICES-3 (A)/NMB-3(A) standards requirements.

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
Note	Provides additional information to emphasize or supplement important points of the main text.
Caution	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
Danger	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.

Safety Instructions

- Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.

- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region. Please refer to technical specifications for detailed information.
- Input voltage should meet limited power source or PS2 requirements according to the IEC60950-1 or IEC 62368-1 standard. Please refer to technical specifications for detailed information.
- Do not connect several devices to one power adapter as adapter overload may cause over-heating or a fire hazard.
- Please make sure that the plug is firmly connected to the power socket.
- If smoke, odor or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.

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Chapter 1 Product Introduction

1.1 Product Description

As a digital monitoring product, this mobile network camera integrates video and audio collection, intelligent coding and compression, network transmission, among other functions. It can be widely applied to monitoring scenes inside buses. With the embedded operating system and high-performance hardware processing platforms, it features high stability and reliability. You can view real-time video and configure settings through the browser.

Main features include:

- High-performance processing chips and platforms which bring reliable and stable performance
- Advanced video compression technology with high compression ratio, flexible processing and ultra-low bit rate
- Supports high-resolution video output, offering clear and sharp snapshots
- Supports Micro SD card storage
- Supports alarms including video occlusion, HDD error, HDD full and illegal access alarm
- Supports network remote upgrade, making remote maintenance possible

Note

Some functions of the network cameras are only available for certain models.
Please refer to the actual functions.

1.2 Camera Installation and Component Description

1.2.1 Appearance

The appearance of the camera and its internal structure are shown in the following figure.

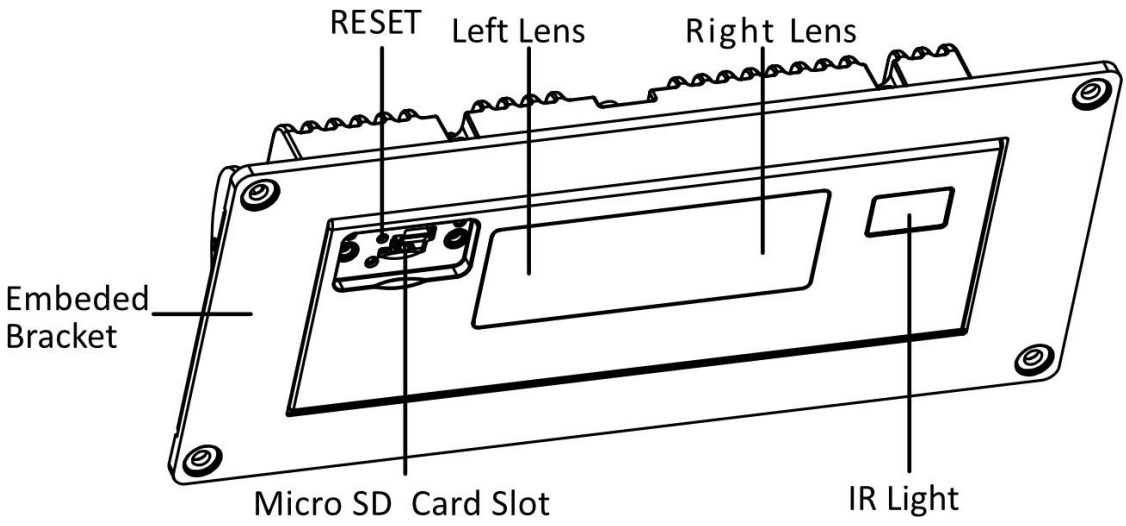


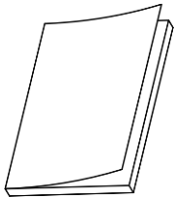
Figure 1-1 The Appearance and Internal Structure of the Camera

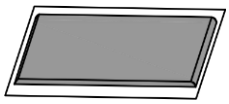
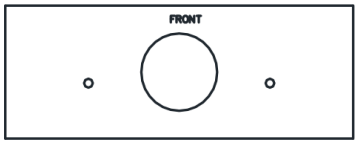
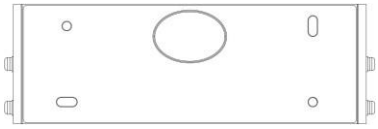
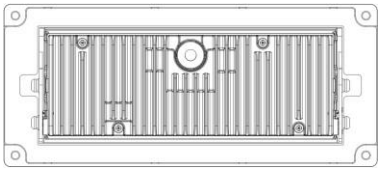
- Micro SD card slot: used for inserting Micro SD card.
- RESET key: used for restoring the camera parameters to the factory setting. First press the "RESET" key for a long time when the camera is powered off; then press the "RESET" key for another 10 seconds when the camera is powered on. Please reactivate the camera after full recovery.

1.2.2 Packing List

Before installation, please check whether the items on the packing list are complete.

Table 1-1 Packing List

No	Picture	Name	Number
1		QUG	1
2		PA4x25 Screw	1

No	Picture	Name	Number
3		Water Proof Tape	2
4		Drill Template	1
5		Celling Installation Bracket	1
6		Embeded Bracket	1

1.2.3 Cable Description

The cable of the camera is shown below.

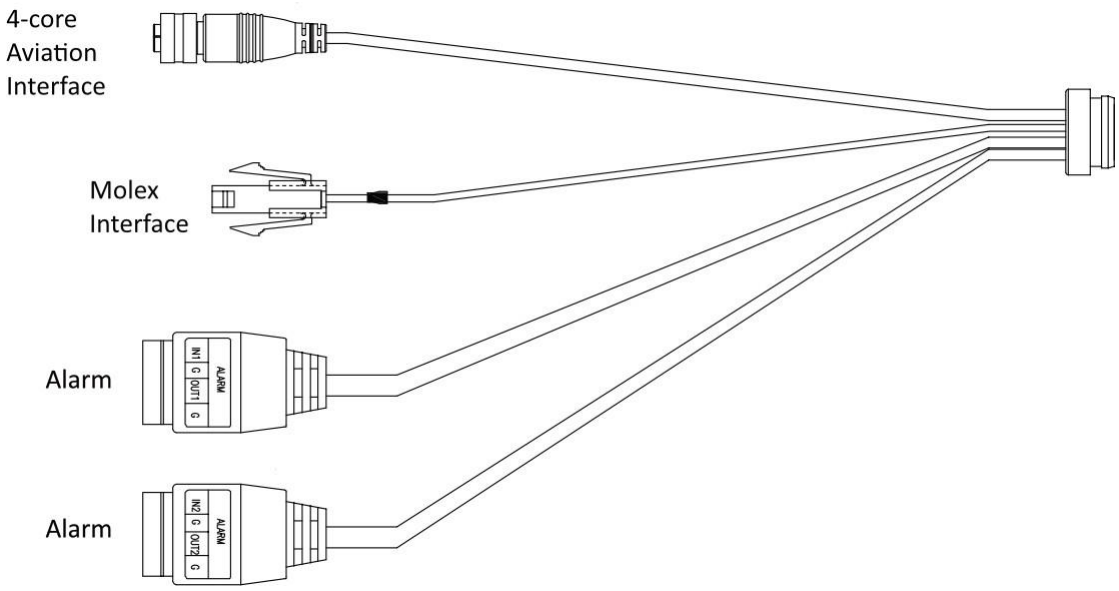


Figure 1-2 Camera Cable I

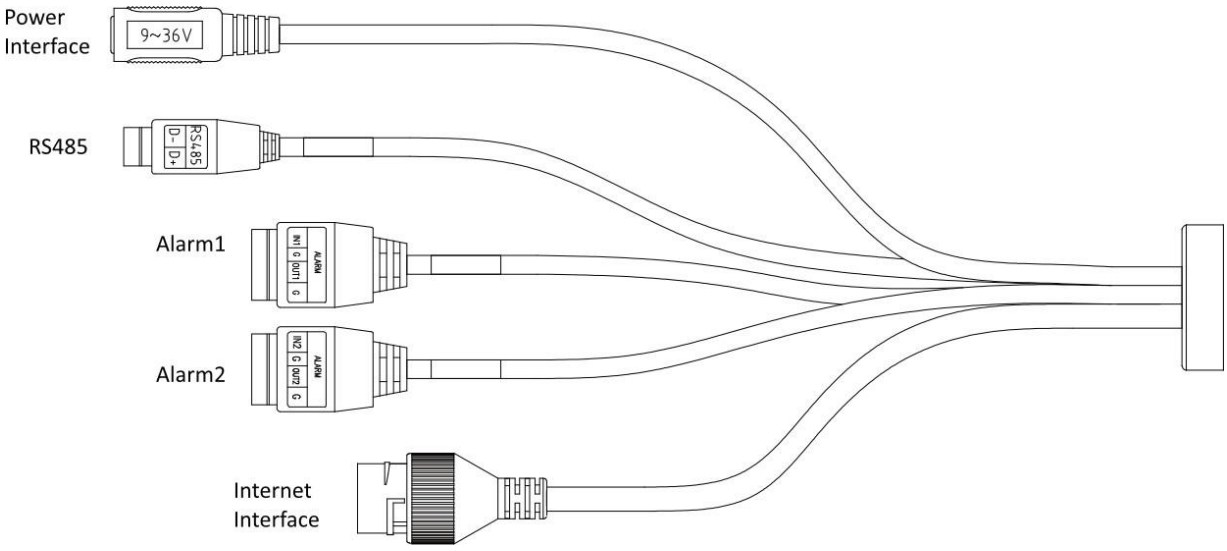
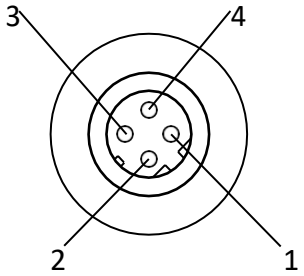


Figure 1-3 Camera Cable II

- RS485 Interface: RS485_1+ and RS485_1-, for the transmission of control signal.
- Alarm Interface: IN and COM for alarm input, OUT and GND for alarm output
- Power Interface: supports 9 V to 36 V power supply. Please connect the positive and negative poles of the power supply correctly.
- Network interface: for internet signal output.

The 4-core aviation plug interface definition is shown in Table 1-2.

Table 1-2 4-Core Aviation Plug Interface Definition



	Aviation Plug Interface
TX+	1
TX-	3
RX+	2
RX-	4

Chapter 2 Installation Instructions

2.1 Installation Considerations

Before installation, please make sure that the equipment in the packing box is in good condition and all the components are complete.

- The installation surface should have a certain thickness and can bear at least 4 times the total weight of the camera and installation accessories.
- Different lenses correspond to different detection distances, and the binocular network camera adopts a built-in fixed-focus lens, so the lens cannot be changed by itself. Please consult the relevant technicians of our company for the detection range and field angle when using cameras with different lenses.
- When handling the network camera, do not directly pull the cable at the camera tail, otherwise it may affect the normal use of the camera or cause wiring problems, as shown in Figure 2-1.

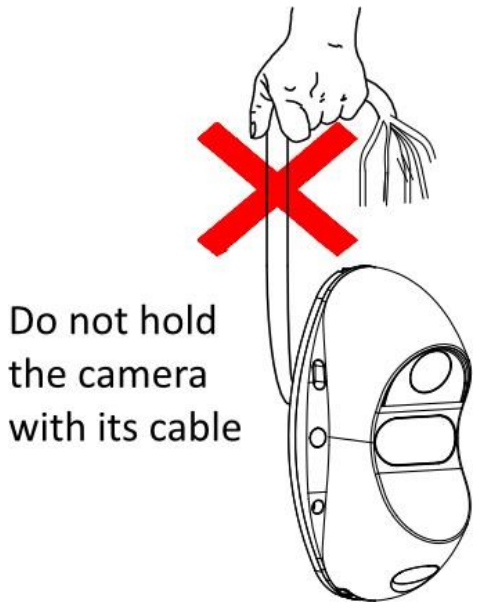


Figure 2-1 Typical Wrong Way of Carrying the Camera

2.2 Installation Position

The camera installation position is generally in the middle of the passage, just above the pedal area and parallel to the ground. The use of the camera will involve the corresponding relationship between installation height and maximum detection span. As the installation height determines the maximum detection span of the equipment, you need to pay special attention to the height of the installation position.

The function of the concept of pedal area is to remove the influence of the vehicle environment caused by the difference in step height, so that the passenger flow statistics algorithm can count normally and take it as the main counting area. The pedal area is the first step position of the bus boarding and alighting area, which is generally the standing restricted area.

Note

For vehicles with single step pedal area, the installation height shall be calculated from the pedal area to the roof;

For vehicles with multi-step pedal area, it is calculated from the average height of steps to the roof.

See Figure 2-2 and Table 2-1 for the relationship among focal length, installation height and maximum horizontal detection range.

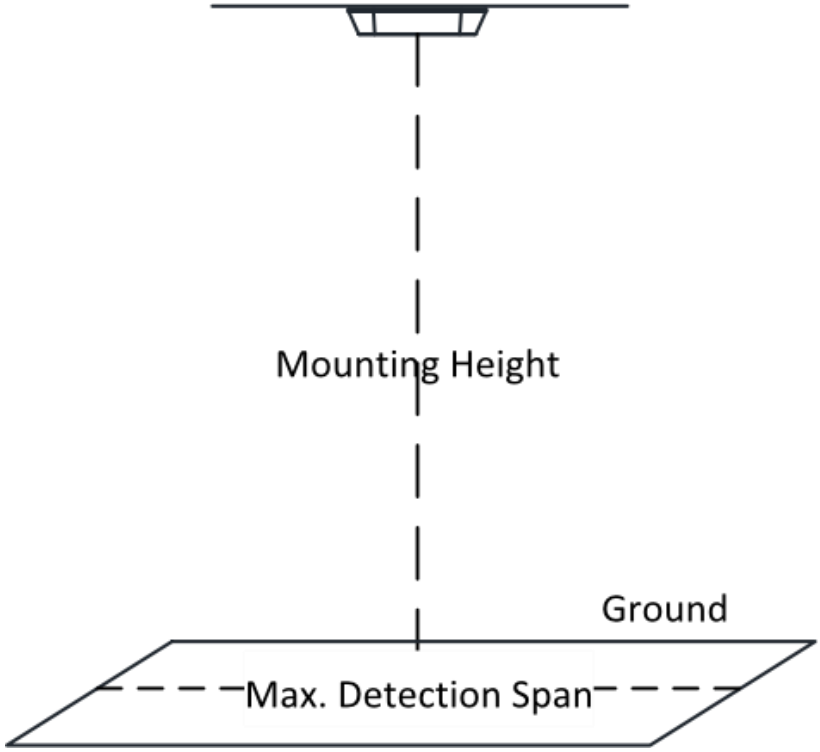


Figure 2-2 Mounting Illustration

Table 2-1 Mounting Data Relation

Focal Length (mm)	Mounting Height (m)	Max. Detection Span (m)
2.0	1.9	1.25
2.0	2.0	1.53
2.0	2.1	1.81

2.0	2.2	2.08
2.0	2.3	2.36
2.0	2.4	2.64

If the height of the door frame is greater than or equal to 1.9 meters, and the maximum detection span can cover the span after opening the door, the camera can be directly installed at the door frame above the door. If the door cannot be installed, it can be installed inward, but it must be as close to the door as possible, and the inward distance should not be more than 1/2 of the pedal area.

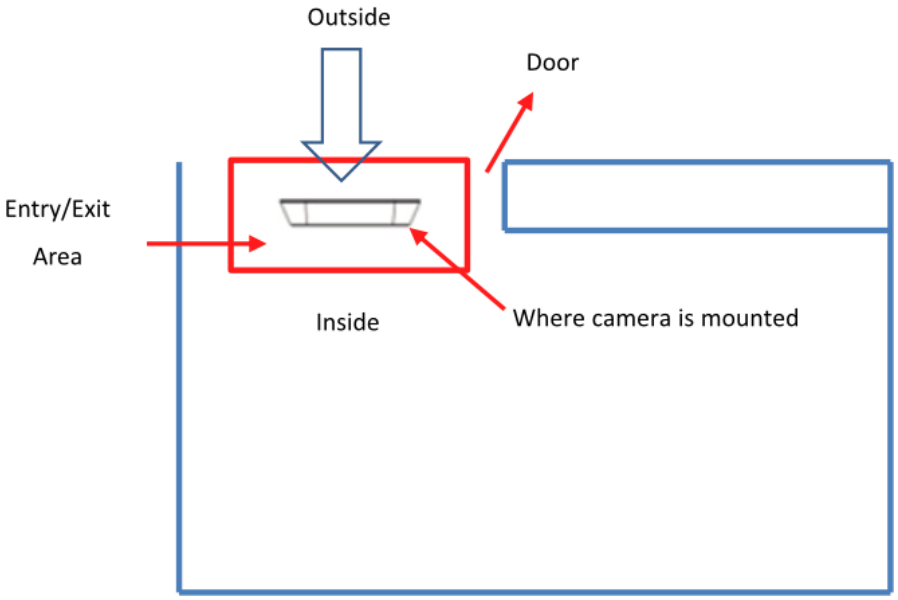


Figure 2-3 Top View of the Installation Position

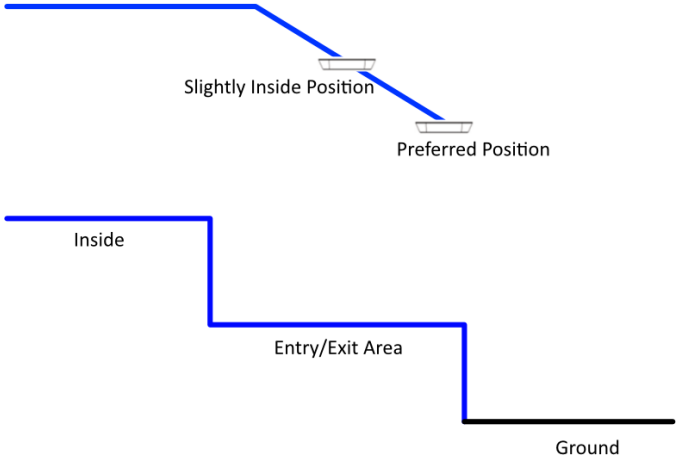


Figure 2-4 Side View of the Installation Position

The standard to follow during installation: keep the 2 lens of the camera facing downward and parallel to each other. In the preview, the people entering and exiting the vehicle will be moving upwards and downwards. If the camera is installed correctly, then people entering the vehicle will be moving downwards in the video.

Note

The counting area needs to cover the entry/exit area and part of the ground.

No beam or door frame will appear in the image of the camera.

The calibration height must be correct and should not be adjusted for increasing or decreasing the detection span.

2.3 Embeded Installation

Note

To ensure the detection accuracy, please install the camera within the height range of 1.9 ~ 2.5 m from the vehicle pedal.

Step 1 Install micro SD card: After installing micro SD card, it can be stored locally. Please install it according to actual needs.

1. Loosen the screw on the micro SD card cover.

1. Gently pull the micro SD card cover outward.

2. Insert the micro SD card into the card slot according to the direction indicated by the notch, and complete the installation of the micro SD card.

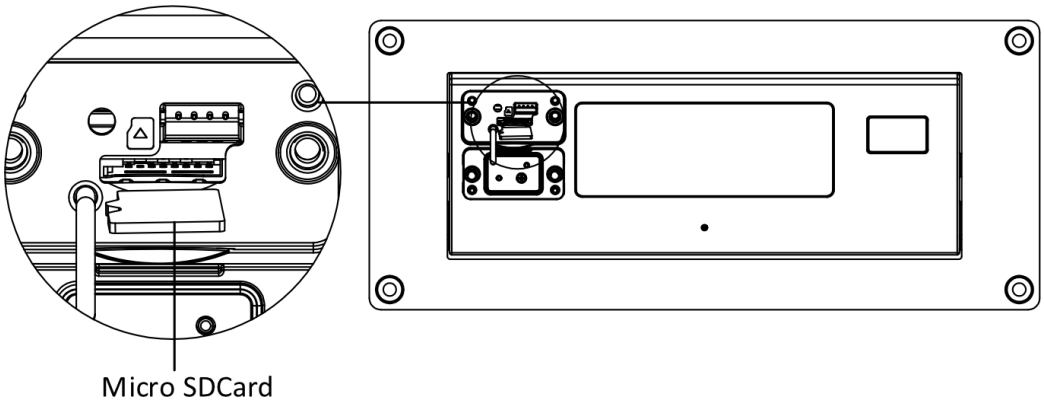


Figure 2-5 Installing Micro SD Card

Note

Please don't pull the handle hard to prevent the jam from breaking.

Step 2 Select the appropriate installation surface, take out the attached installation sticker, stick the installation sticker on the surface where the camera needs to be installed, and then make holes according to the holes identified on the installation sticker.

Note

When installing with expansion screw, please bury the expansion screw in the opening.

Step 3 Loosen (do not unscrew) the four screws on the side of the camera, adjust the camera to a proper angle, and tighten the four screws on the side.

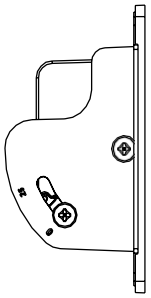


Figure 2-6 Adjusting The Camera Angle

Step 4 Install the camera: Support the use of expansion screws or ordinary screws for installation.

- Expansion screw: embed the embedded installation bracket into the opening of the installation surface, screw it into the expansion screw tube with 4 screws, and fix it.
- Ordinary screws (the thickness of the mounting surface should be less than 5 mm): Put the spring washer and the flat washer into the mounting screw in turn, then pass the screw through the camera and the car shell, and tighten the nut until the camera is completely fixed.

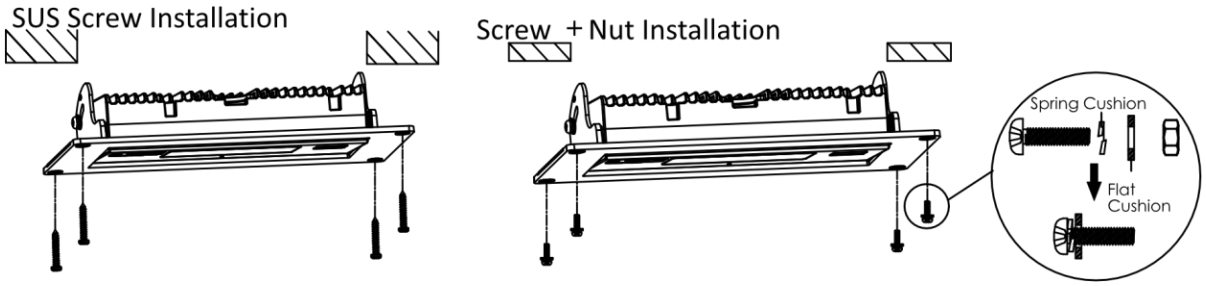


Figure 2-7 Installing the Camera

Step 5 Tear off the transparent protective film on the camera to complete the camera installation.

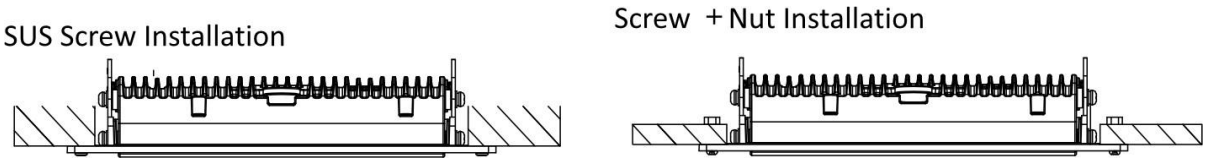


Figure 2-8 Complete Installation

2.4 Cellinig Installation

Step 1 Select a suitable mounting position.

Step 2 Paste the drill template to the desired mounting place and drill holes.

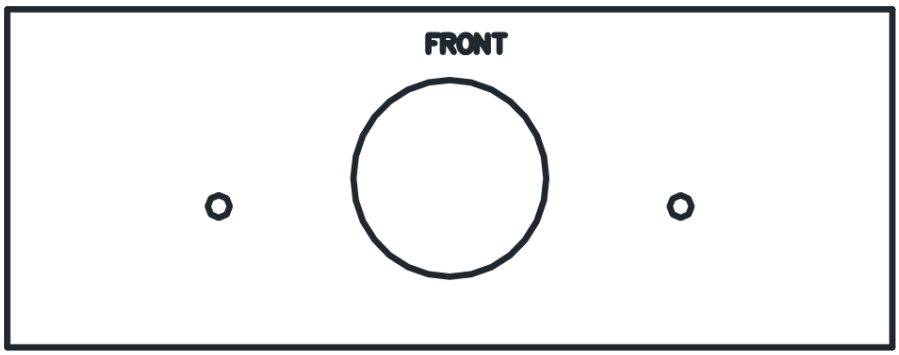


Figure 2-9 Drill Template

Step 3 Align the "Front" mark on drill template with "Up" mark on mounting base. Fix the celling installation bracket with supplied screws.

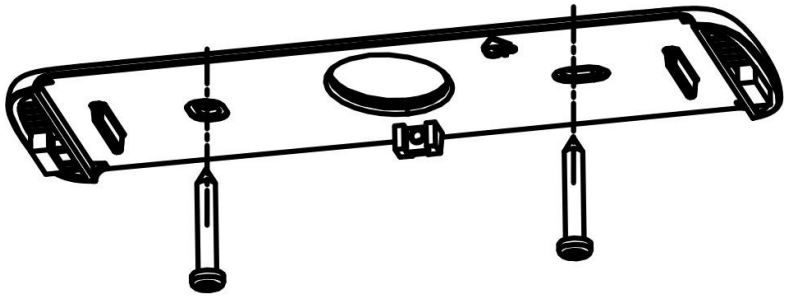


Figure 2-10 Fix the Mounting Base

Step 4 Route the cables. You can route the cables through the side outlet or the ceiling.

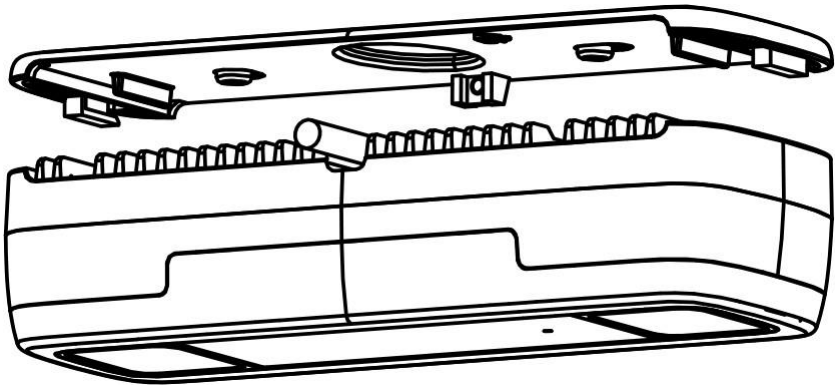


Figure 2-11 Route Cables Through Side Outlet

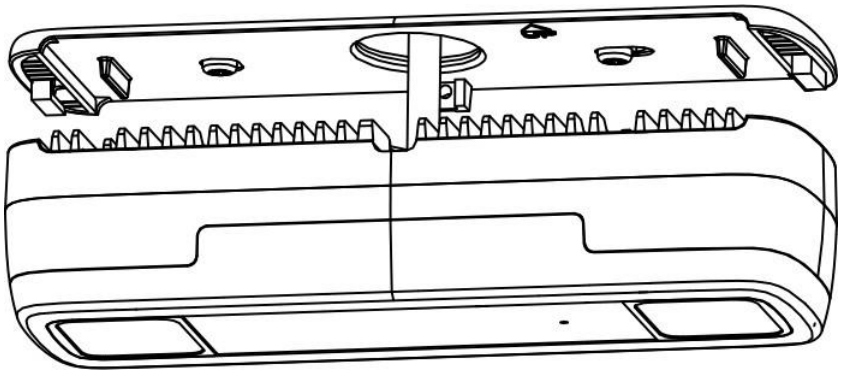


Figure 2-12 Route Cables Through Ceiling

Step 5 Buckle the camera body into the mounting base. Push to get the camera clasped.

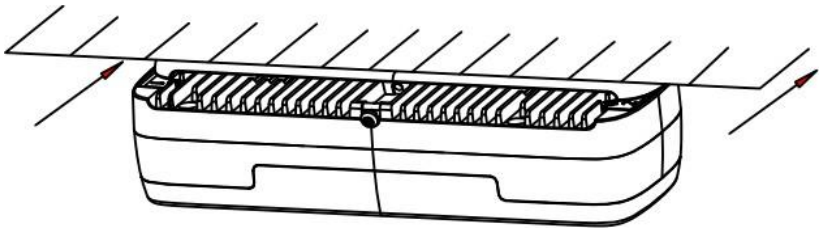


Figure 2-13 Fix the Camera Body

Step 6 Fasten the screw to finish.

2.5 Waterproof Tape Installation

The installation steps of waterproof tape are as follows.

Step 1 Tear off the yellow release paper on the back of the waterproof tape.

Step 2 Stretch the waterproof tape to both ends to about 2 times the initial length, as shown in in Figure 2-14.

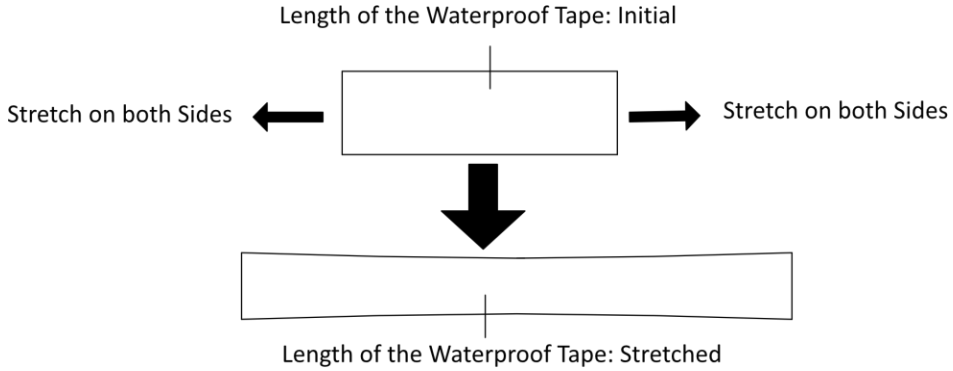


Figure 2-14 Stretch Waterproof Tape

Step 3 After stretching the waterproof tape, wind it tightly on the terminal and the nearby cable in a half-lap way. Please keep the waterproof tape taut during the winding process, as shown in Figure 2-15.

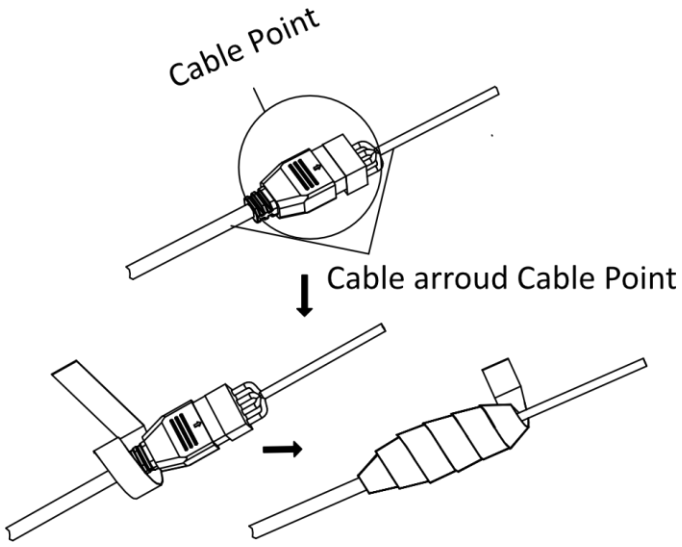


Figure 2-15 Wrapped Waterproof Tape

Step 4 Press the waterproof tape on both sides of the terminal to achieve insulation and sealing, as shown in Figure 2-16.

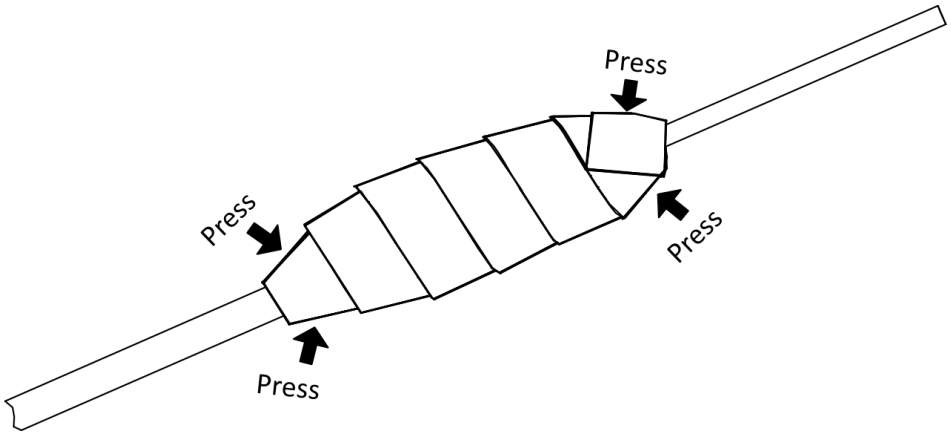


Figure 2-16 Compaction Waterproof Tape

2.6 Install the Waterproof Jacket for the Mesh Opening

When using the camera, the matching waterproof jacket of the network port can prevent water from entering the network cable. Please install it according to the requirements.

Step 1 Thread the network cable through the fixation nut and the waterproof jacket body in turn.

Step 2 Open the waterproof rubber ring, insert it between the waterproof jacket body and the fixation nut.

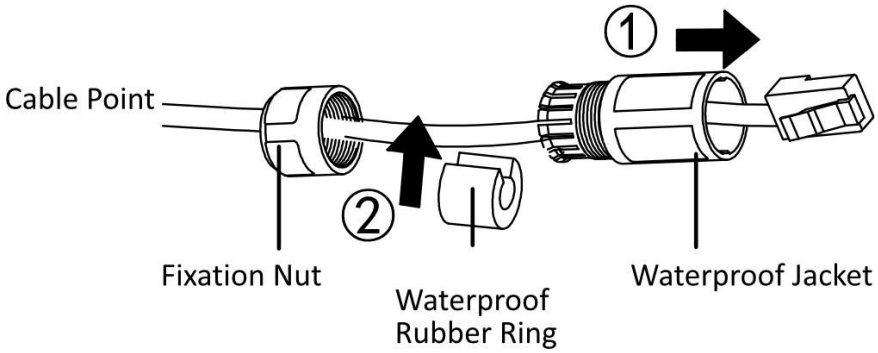


Figure 2-17 Install Waterproof Rubber Ring

Step 3 Insert the O-shaped rubber jacket into the network port and insert the network cable into the network port.

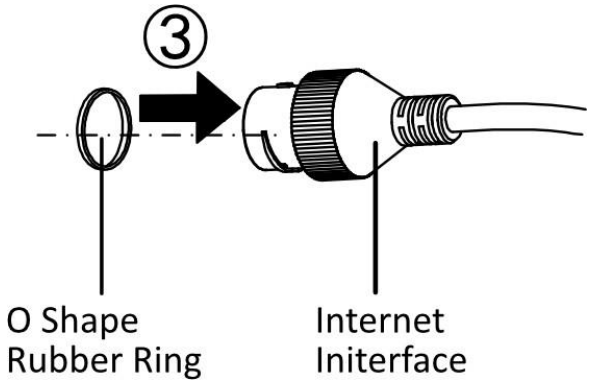


Figure 2-18 Install Network Cable

Step 4 Align the gap of the network port opening and the buckle of the waterproof jacket body, insert the waterproof jacket body into the net opening end, and tighten it clockwise.

Step 5 Plug the waterproof rubber ring into the waterproof cap body.

Step 6 Rotate the fastening nut clockwise to compress the waterproof rubber ring.

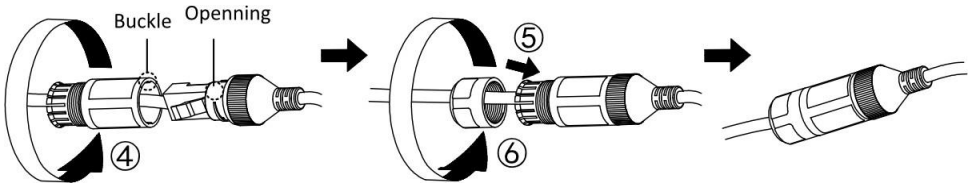


Figure 2-19 Complete Installation

Chapter 3 Door Opening/Closing Signal Connection

The camera requires the connection of door opening/closing control, which is divided into level signal and pulse signal.

3.1 Level Signal Connection

The level signal is generally two wires, a signal wire and a ground wire, and the high and low level changes with the door switch.

Please use a multimeter to measure and confirm the field level signal. The equipment thinks that 0-3 V is low level. Above 6 V is a high level, and the maximum access voltage is 30 V. The correct level signal should be in one level state when the door is opened and in another level state when the door is closed.

Connect the switch gate level signal wire and ground wire to ALARM IN1 and GND terminals of the equipment.

Note that external access is not allowed. At 0 V, it actually means off, not the 0 V level.

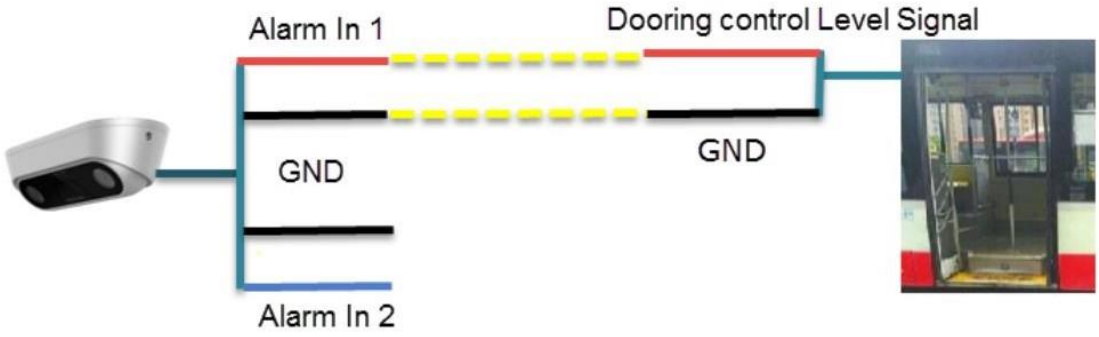


Figure 3-1 Level Signal Connection

3.2 Pulse Signal Connection

Generally, the pulse signals are three or four wires: one for opening the door, one for closing the door, and one or two ground wires. When the door opening and closing button is pressed, a pulse signal will be output from their respective signal wires.

Please use a multimeter to measure the on-site confirmation pulse signal. The correct pulse signal should be that one of the signal lines and the loop of the ground wire has an instantaneous voltage when the door opening button is pressed, and there is no response when the door is closed. The loop of the other signal wire and ground wire has an instantaneous voltage when the door closing button is pressed, and there is no response when the door is opened.

Connect the door-opening pulse signal line to the ALARM IN1 end of the equipment, the door-closing pulse signal line to the ALARM IN2 end of the equipment, and the ground wire to the equipment GND.

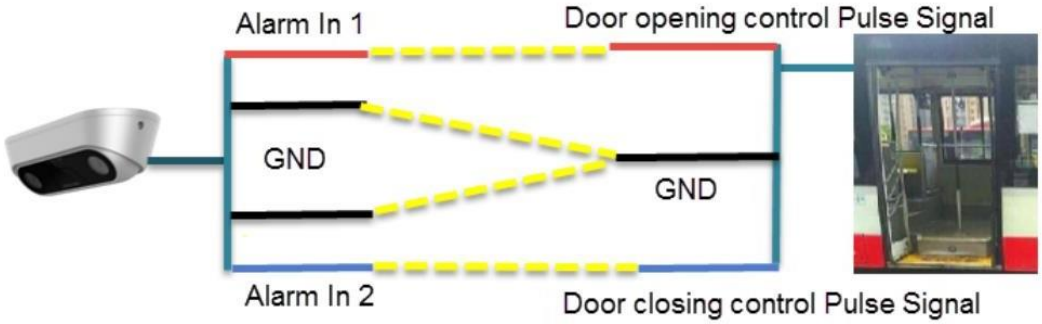


Figure 3-2 Pulse Signal Connection

Chapter 4 Quick Operation Guide

4.1 Connecting Network

Note

Connect your products to the Internet at your own risk, which includes but is not limited to network attacks, hacker attacks, virus infections, etc. We will not be responsible for the problems such as product abnormal function and information leakage, but we will provide you with the product-related technical support in time.

After the network camera is installed, you need to configure its functions and parameters. You can configure the relevant functions through the browser.

Before configuration, please make sure that the network camera is connected to the computer and can access the network camera that needs to be set up.

4.2 Activating and Configuring Cameras

You need to activate the camera and set a password for it before you can log in.

Note

To protect your personal privacy and corporate data, and avoid the network security problems of camera products, it is recommended that you set a strong password that meets the security specifications.

The network camera can be activated through the SADP software and the browser. Please refer to the User Manual for specific activation methods.

This guide demonstrates the activation process through SADP software.

Step 1 Install the SADP software downloaded from its official website. After running the software, the SADP software will automatically search all online devices in the local network, and information such as device type, IP address, activation status, serial number and so on will be displayed in the list.

Note

The default IP address of the network camera: 192.168.1.64.

Step 2 Check the device to be activated, set the device password at "Activate Device", and click "Activate" to complete activation, as shown in Figure 4-1.

Note

To improve the security of product network use, the set password should be 8 to 16 digits in length, composed of at least two or more types of numbers, lowercase letters, uppercase letters and special characters, and the password should not contain the user name.

After successfully activating the device, the "activation status" in the list will be updated to "activated".

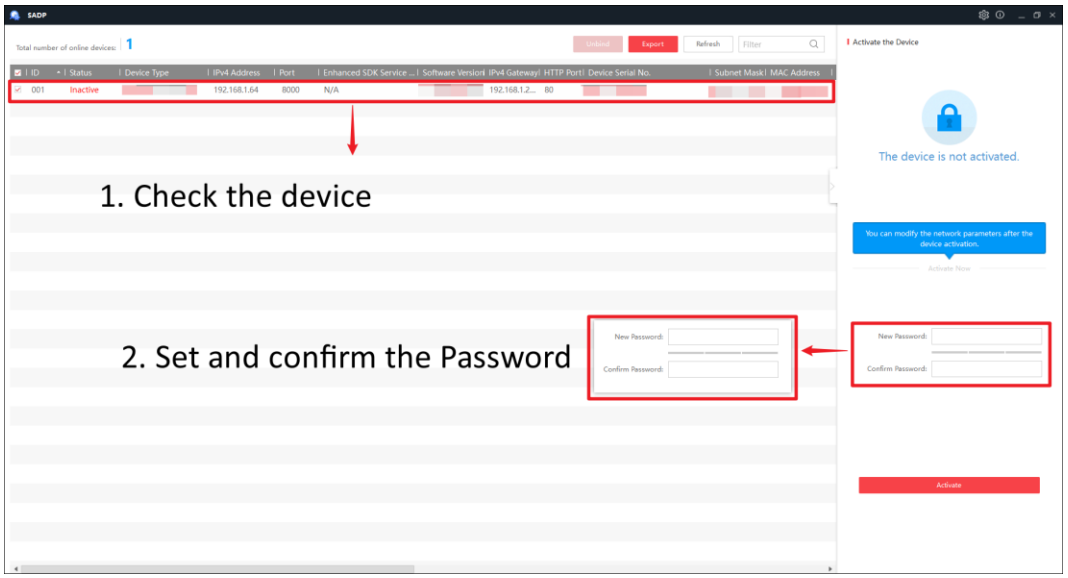


Figure 4-1 Activate Camera

Step 3 Modify the IP address of the device.

Check the activated device, enter the IP address, subnet mask, gateway and other information in "Modify Network Parameters" on the right, and enter the password of the device. Click "Modify", and the prompt "Modify Network Parameters Successfully" indicates that the network parameter setting takes effect, as shown in Figure 4-2 .

Note

When setting the IP address of the network camera, make sure that the IP address of the device and the IP address of the computer are in the same network segment.

If you are using a webcam for the first time, it is recommended to add a custom user.

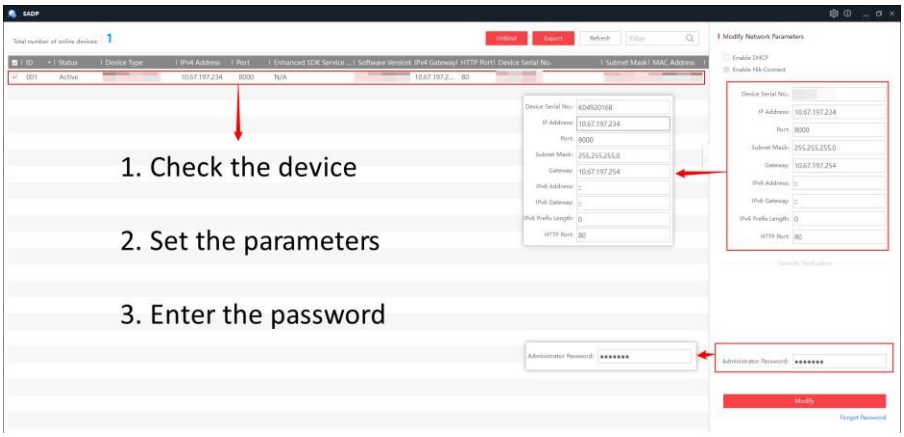


Figure 4-2 Modify Camera Information

Chapter 5 Maintenance Instruction

5.1 Lens Maintenance

The surface of the lens is coated with an anti-reflection coating. Dust, grease and fingerprints are harmful for the lens and will lead to its performance degradation or scratch, mildew, etc. Please clean the lens as instructed in the following.

- Dust contamination: Use an oil-free soft brush or a blowing ball to gently bounce off dust.
- Grease contamination: gently wipe the water drops or oil with a soft cloth and dry it, then use oil-free cotton cloth or lens cleaning paper to soak it in alcohol or lens cleaning solution and wipe it from the center of the lens.

5.2 Maintenance of Hemispherical Transparent Spherical Cover

The transparent spherical cover is made of transparent plastic. Please clean the cover as instructed in the following.

- Dust contamination: Use an oil-free soft brush or a blowing ball to gently bounce off dust.
- Grease or fingerprints: gently wipe off the water drops or oil with a soft cloth and dry it, then wipe it from the center to the outside with oil-free cotton cloth or lens cleaning paper dipped in lens cleaning solution.

5.3 Maintenance of Infrared Camera Glass

Gently wipe off the water drops or oil with a soft cloth and dry it, then wipe it from the center to the outside with oil-free cotton cloth or lens cleaning paper dipped in lens cleaning solution.

5.4 Network Security Maintenance

It is recommended that you regularly assess the security of the network camera system, and our company can provide corresponding professional technical services.


See Far, Go Further