

The background of the page is a decorative graphic consisting of numerous thin, red, wavy lines that create a sense of motion and depth. These lines are arranged in a pattern that resembles a stylized wave or a series of overlapping curves, starting from the left side and moving towards the right. The lines are most densely packed in the center and become more sparse towards the edges, creating a gradient effect. The overall color is a vibrant red, and the lines are set against a plain white background.

Dual-spectrum PT6 Network

Thermal Camera

Quick Start Guide

V1.0.2

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1. Open-package Inspection

1.1 Inspection Procedures

Please check whether there is any obvious damage on the device appearance after receiving the camera. The protective materials of the product package can withstand most accidental impacts during transportation.

Then open the outer carton to check whether the accessories delivered with the product are complete. See Table 1-1 for detailed information.

1.2 Accessories

Please confirm whether the items are consistent with the list when unpacking the outer box. For details, see the following table. Please refer to the product for actual configuration. If any parts are missing, please contact the dealer in time.

Table 1-1 Accessories List

| Accessories | QTY | Remarks |
|---|-----|---|
| Shield(thermal) | 1 | |
| Shield(visible) | 1 | |
| Sunshield | 2 | |
| PTZ | 1 | |
| Flying rings | 2 | |
| M6*25 screw (with flat washer and spring washer) | 16 | The protective cover is connected with L-shaped bracket |
| H5 hex keys | 1 | with M6 screw |
| M4*16 screw(with sealing fin) | 10 | fix the cover plate |

| | | |
|---|----|---|
| Cover plate | 2 | |
| M4*20 thread-off proof screws(with flat gasket, spring gasket, sealing fin, lifting column) | 12 | The protective cover is connected with the sunshield. |
| Binding post | 1 | |
| Waterproof cover of the network cable | 1 | |
| Power Supply | 1 | |
| Quick Operation Manual | 1 | |

2. Product Introduction

2.1 Cable Instructions

Connect the PTZ to the host communication interface by input port cable, and lock it tightly. Connect cables for the output port of the PTZ according to the labels (the actual cables shall prevail).

Instructions

- The following connections must be performed by qualified professional technicians or system installers under conditions that meet local regulations.
- At the same time, it is suggested that the cable connectors should be protected by a tape, in order to avoid short circuit caused by water inflow. Otherwise, it will affect the normal use of the product.

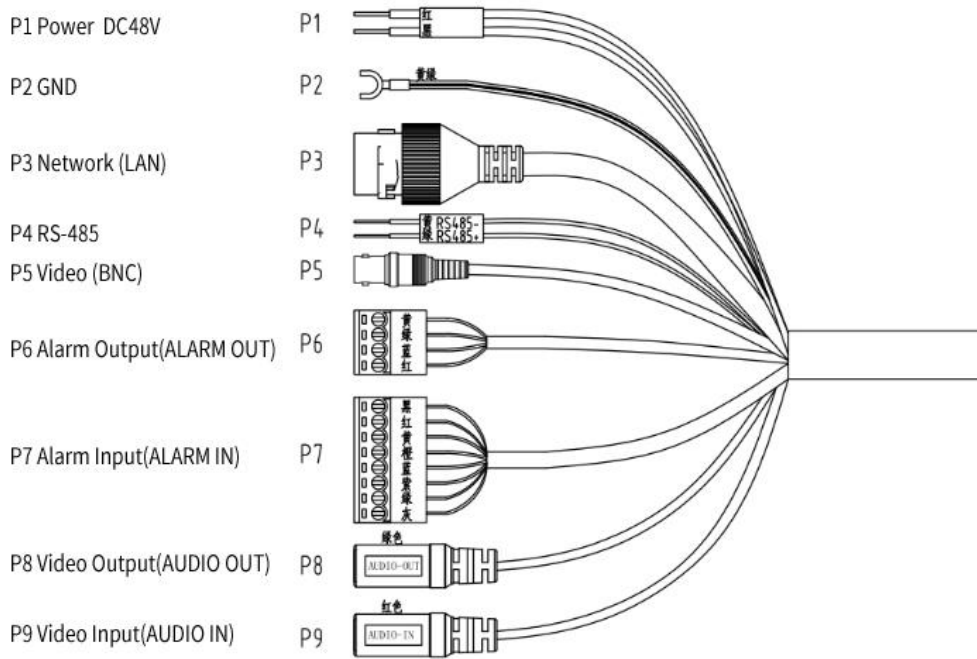


Figure 2-1 Cable Introduction

| | | | |
|----------------------|-------------------------------|-----------------------------------|---|
| P1 Power DC48V Input | Red DC48V+ Black DC48V- | P5 Video | BNC |
| P2 GND | GND | P6 Alarm Output | Yellow Alarm Com1 Green Alarm Out1 Blue Alarm Com2 Red Alarm Out2 |
| P3 Network | RJ45 | P7 Alarm Input | Black Alarm GND Red Alarm In7 Yellow Alarm In6 Orange Alarm In5 Blue Alarm In4 Purple Alarm In3 Green Alarm In2 Gray Alarm In1 |
| P4 RS485 | Green RS485+ Yellow RS485- | P8 Video Output P9 Video Input | Green Video Output Red Video Input |

2.2 Camera Introduction

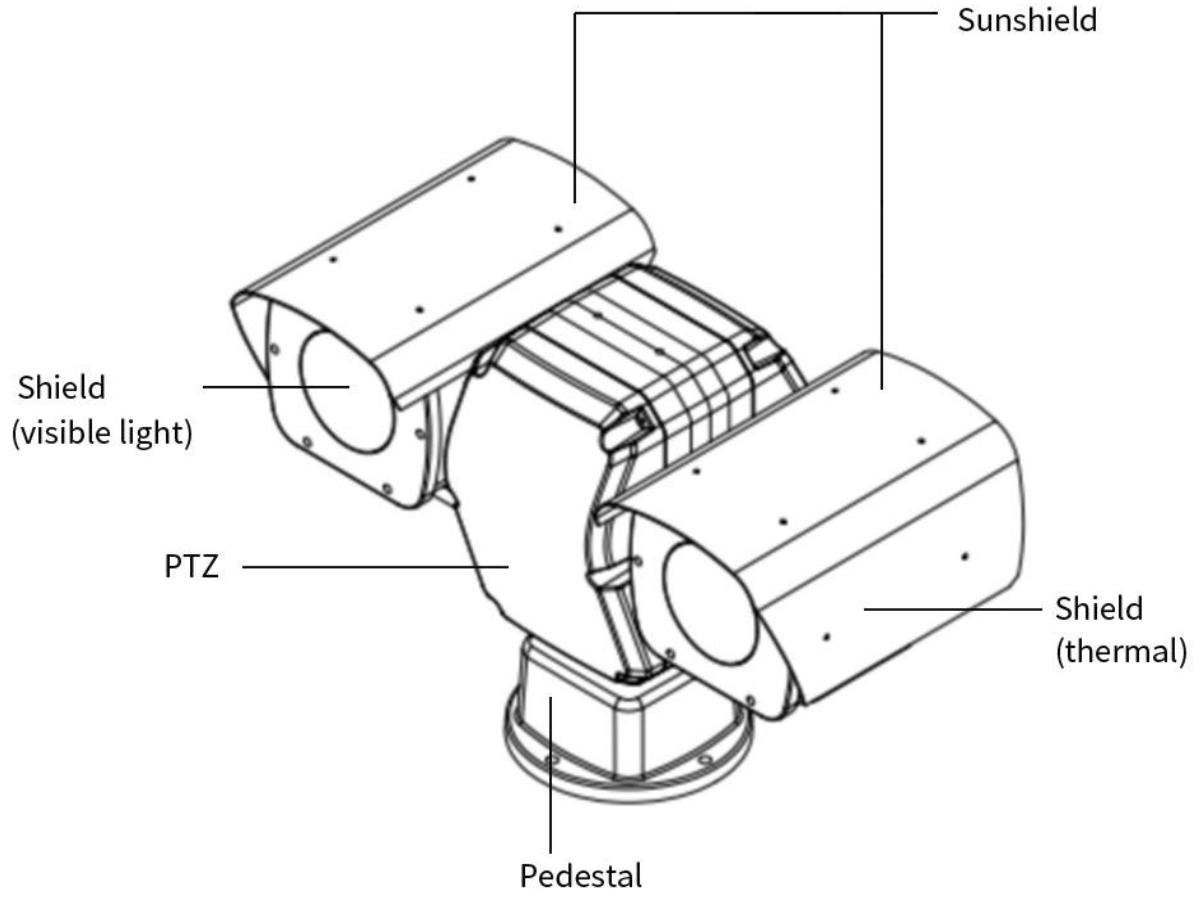
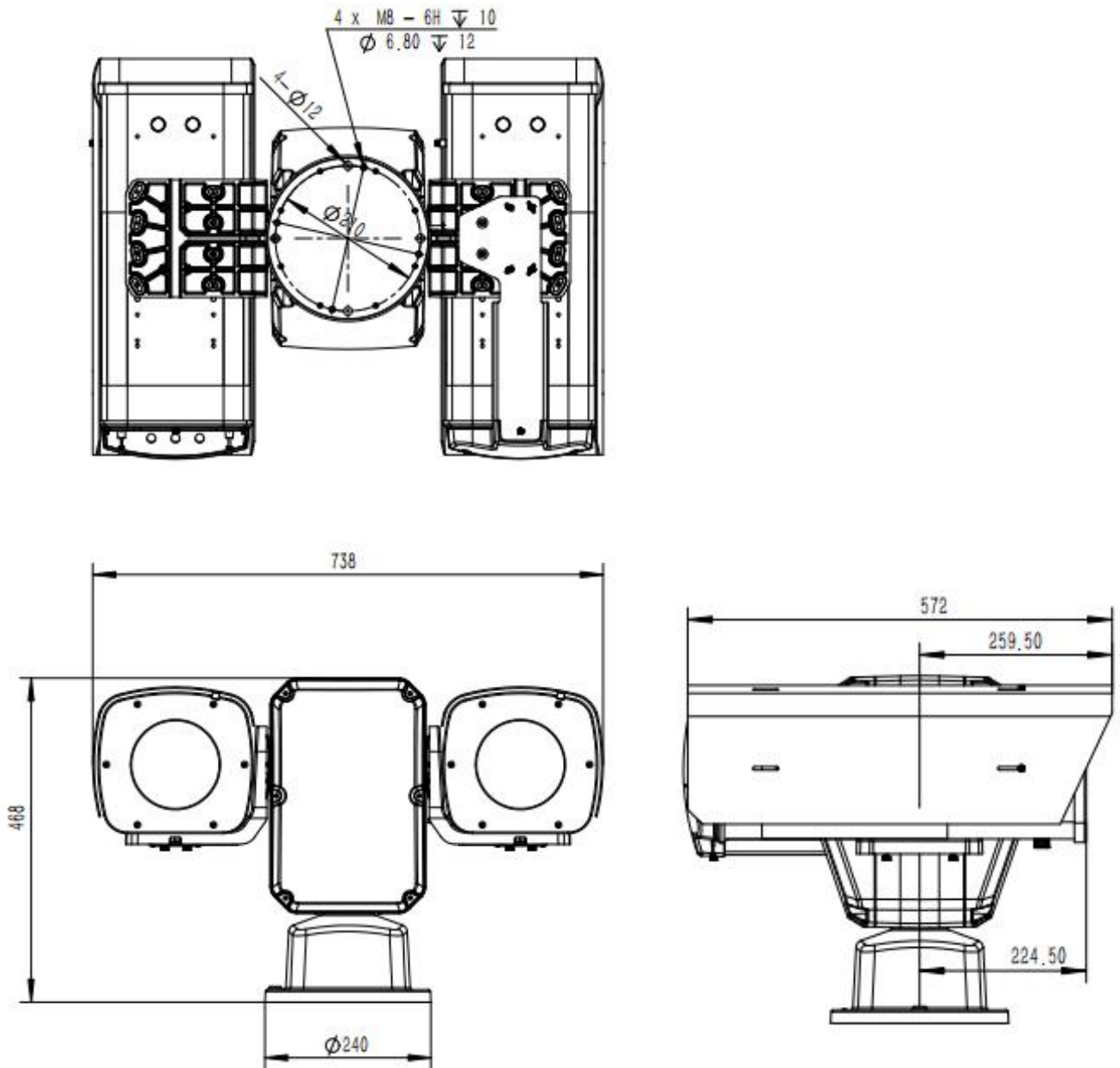


Figure 2-2 Camera Introduction

2.3 Camera Dimensions



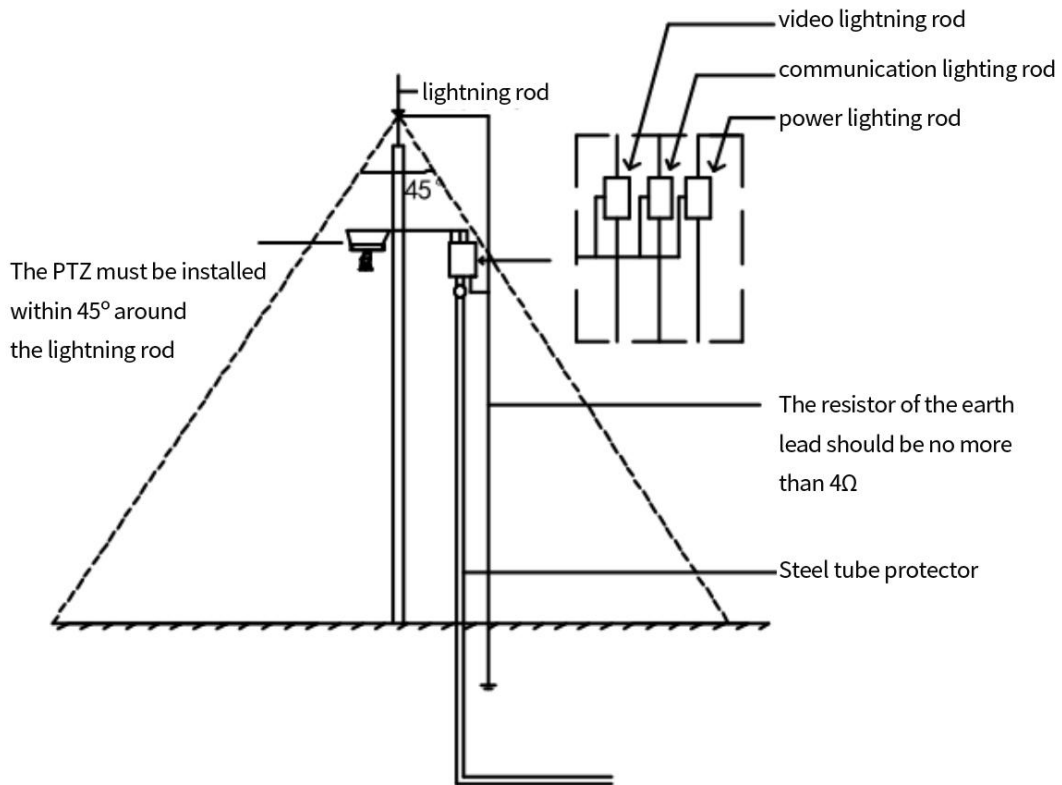
3. Camera Installation

3.1 Lightning Protection Instructions

This product adopts plate lightning protection technology, which can effectively prevent damage to equipment caused by instantaneous lightning

strikes and surges. However, when the product is installed at a high place, it is necessary to add external lightning protection device.

- Specifications of lightning arrester: Rated voltage DC48V and recommended nominal discharge current at least 10KA.
- Signal transmission lines must be kept at least 50m away from high-voltage equipment or high-voltage cables.
- Outdoor wiring should be routed under the eaves as far as possible.
- For open areas, the steel pipe must be buried for wiring, and the steel pipe must be grounded at a single point. Overhead wiring is strictly prohibited.
- For outdoors installation, take necessary protective measures and add power surge protectors according to the actual situation to ensure electrical safety.
- For application in areas with strong thunderstorms or high induced voltages (such as high-voltage substations), additional measures such as installing high-power lightning protection equipment and installing lightning rods must be taken.
- The lightning protection and grounding of outdoor devices or cables must be designed according to the lightning protection requirements of buildings, and meet the requirements of relevant national standards and industry standards.
- The system must be grounded equipotentially. The grounding device must meet the requirements of anti-interference and electrical safety, and must not be short-circuited or mixed with the neutral line of the strong



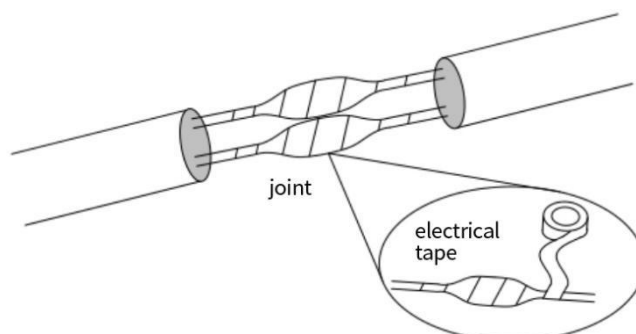
3.2 Waterproof Instructions

Before waterproofing, be sure to connect all necessary cables and cut the copper wires off at the unused ends.

Please use self-adhesive waterproof tape (some devices come with it, if not, you need to buy it by yourself) for waterproof treatment

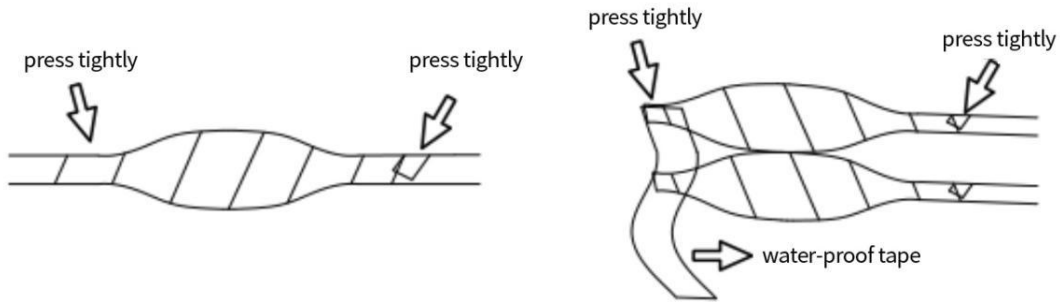
The network cable needs to be protected by a waterproof kit. If the power cable is not used, please waterproof it separately, and the video output cable does not need to be treated.

1. Wrap the cable joint with electrical tape (purchased by yourself).



2. Waterproof the cable with self-adhesive waterproof tape

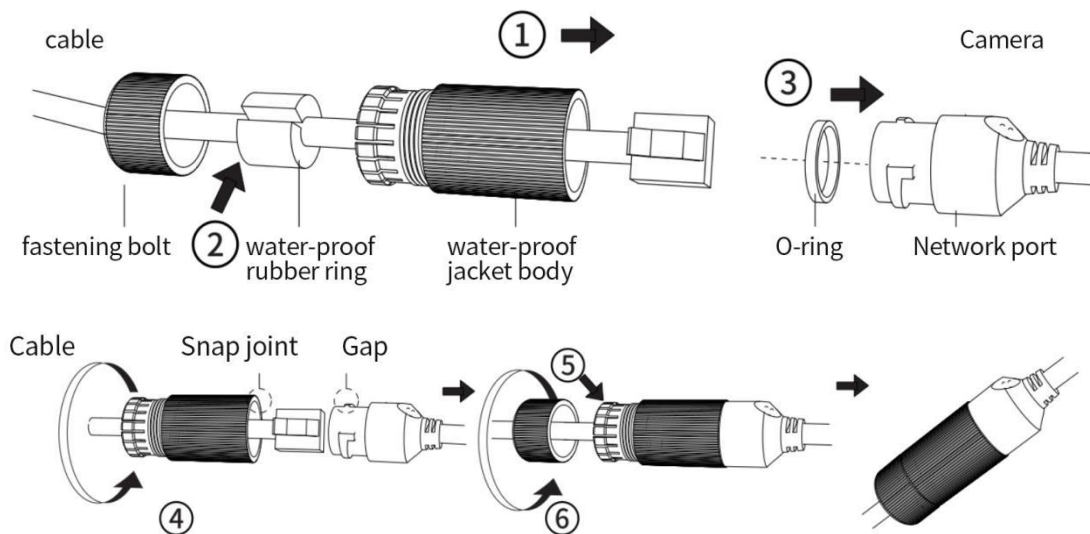
- (1) Stretch both ends of the self-adhesive waterproof tape until it is tight.
- (2) Wrap the stretched tape tightly at the joint or end of the cable. Please keep the waterproof tape in a tight state during the wrapping process.
- (3) Press the waterproof tape on both sides of the cable to achieve insulation seal.



The used tail cables should be wrapped separately

The unused tail cables should be integrally wrapped.

3. Place the attached waterproof kit on the network cable in turn as shown in the picture.



4. (Optional) Store the waterproof cable in a waterproof junction box (purchased by yourself).

3.3 PTZ Protocol and Address

The default protocol of PTZ: visible light is PELCO-D 9600, address is 001; infrared is PELCO-D 9600, and address is 011.

3.4 PT Installation

Installation steps:

Step 1 Place the shield on the brackets on both sides of PTZ according to the indication labels.

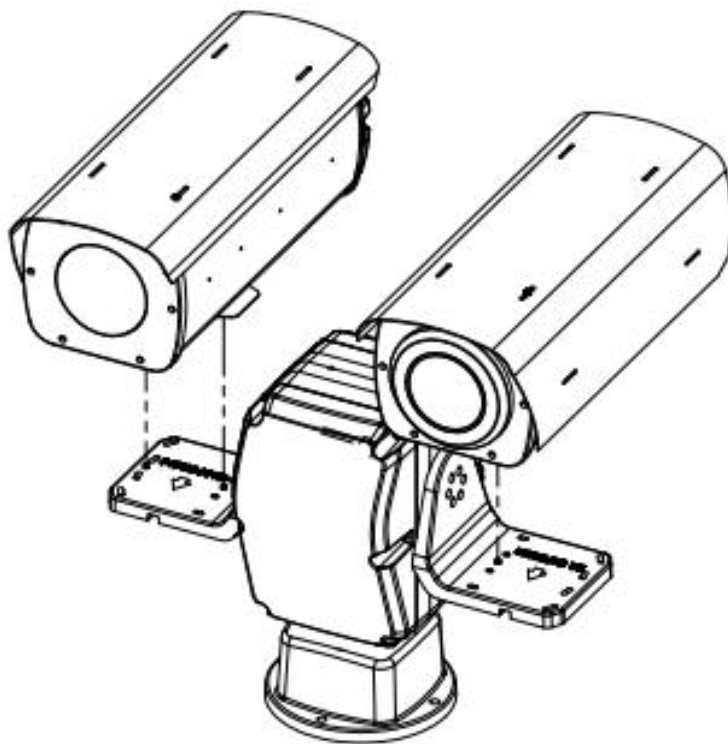


Figure 3-1 Installation Diagram

Step 2 Fix the shield on the PTZ.

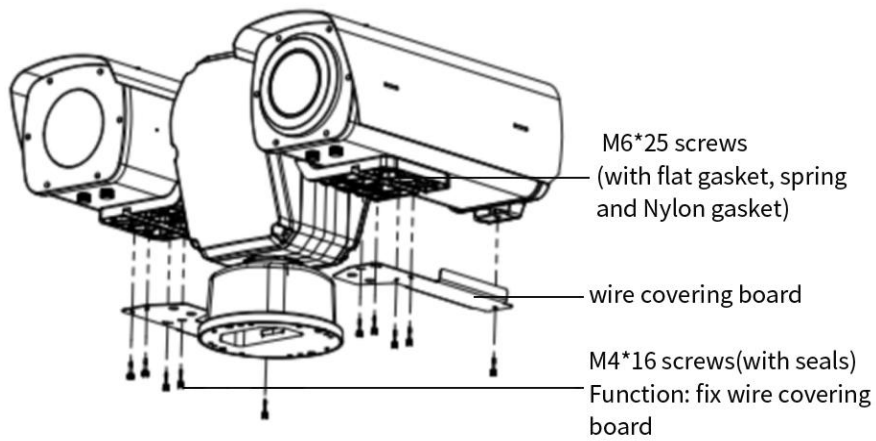


Figure 3-2 Installation Diagram

Note: The wire covering board of thermal part should be fixed after the coaxial adjustment of the visible image and the thermal image stated in 4.3.

Step 3 Fasten the sunshade to the hood.

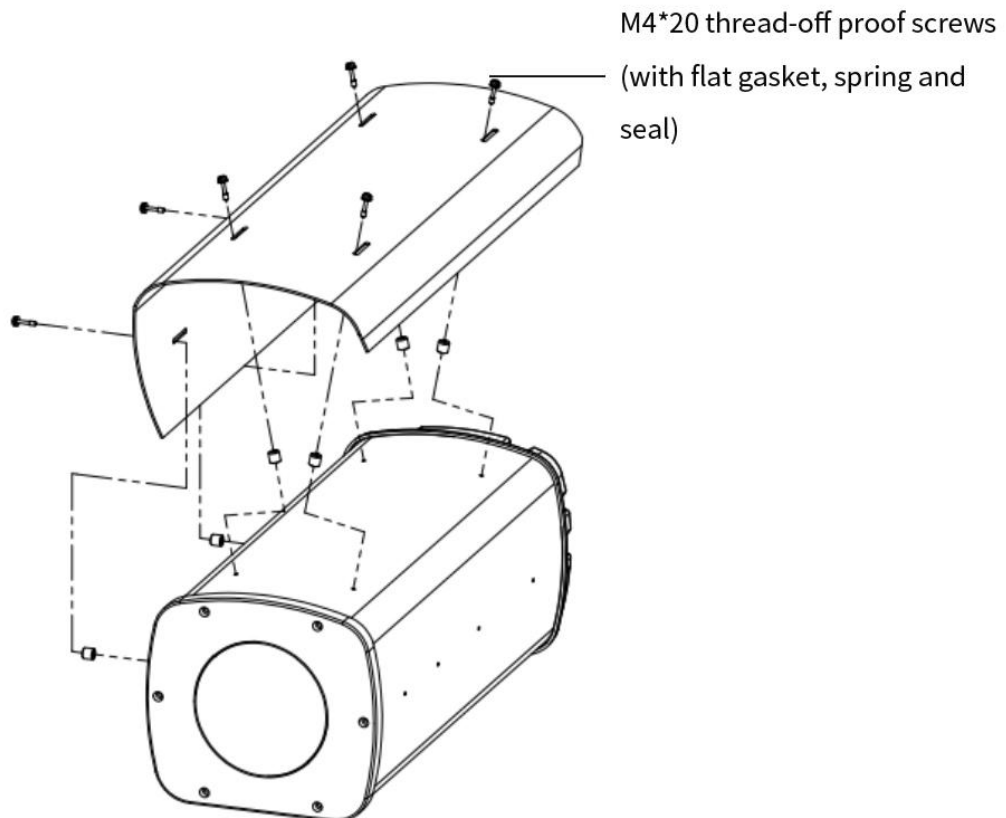


Figure 3-3 Installation Diagram

Step 4 Connect the cables of PTZ. Please refer to 2.1 Cable Instructions for details.

4. Debugging Instructions

After completing the installation, check that the line connection is correct, and then carry out the power-on test. Every time, the entire system will conduct a self-inspection to test whether the basic functions are normal. If the self-inspection is successful, the equipment will stay at a fixed position. System self-test track: rotate left and right, up and down, and detect the zoom, focus and thermal imaging of the lens at the same time. Stay at the last power-off position of the PTZ. Only after the self-inspection is completed, can other operations be carried out on the equipment.

4.1 Preparations

1. The default IP address of the device: 192.168.1.108(visible), 192.168.1.109(thermal).
2. The subnet mask is 255.255.255.0, and the IP address of the PT can be modified. If you change the device address to 192.168.1.194, change your computer's IP address to the same network segment with the network video server, and the same subnet mask. Such as 192.168.1.120;
3. Support browsers such as IE/360.

4.2 Login System

1. Enter the IP address of the PTZ in the address bar of IE browser to log in, and the login page is as shown below (Install plugin for the first login).

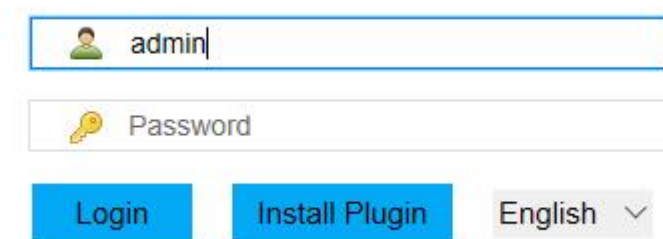


Figure4-1 Installation Diagram

2. Enter the user name: admin (defaulted, administrator user).
3. Enter the password: admin (defaulted, administrator password).
4. Click *Login* icon to enter the preview screen of the video server. As shown below:

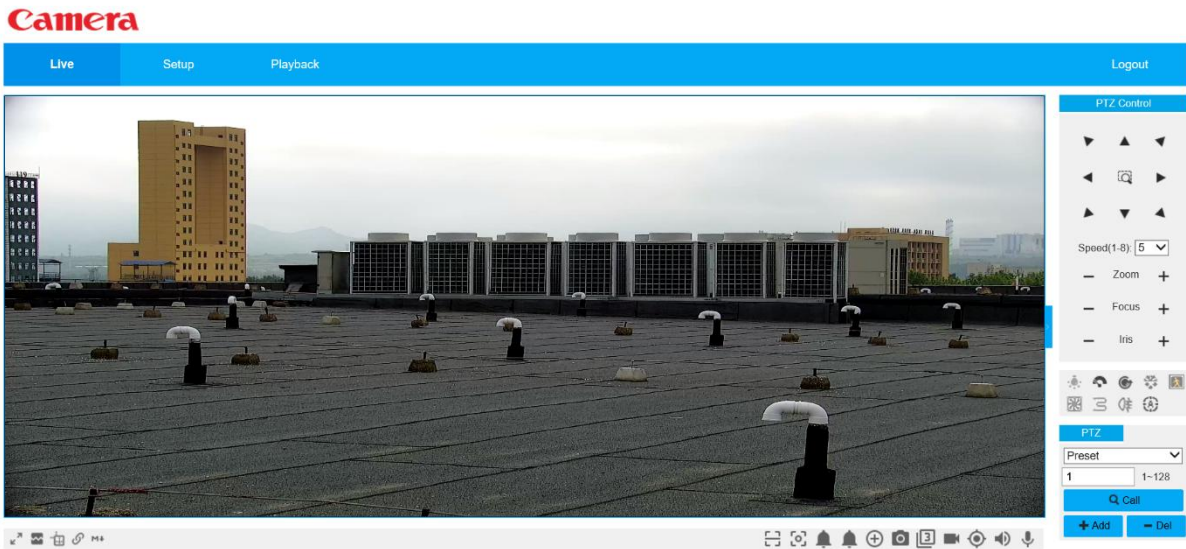


Figure 4-2 Live Visible Image

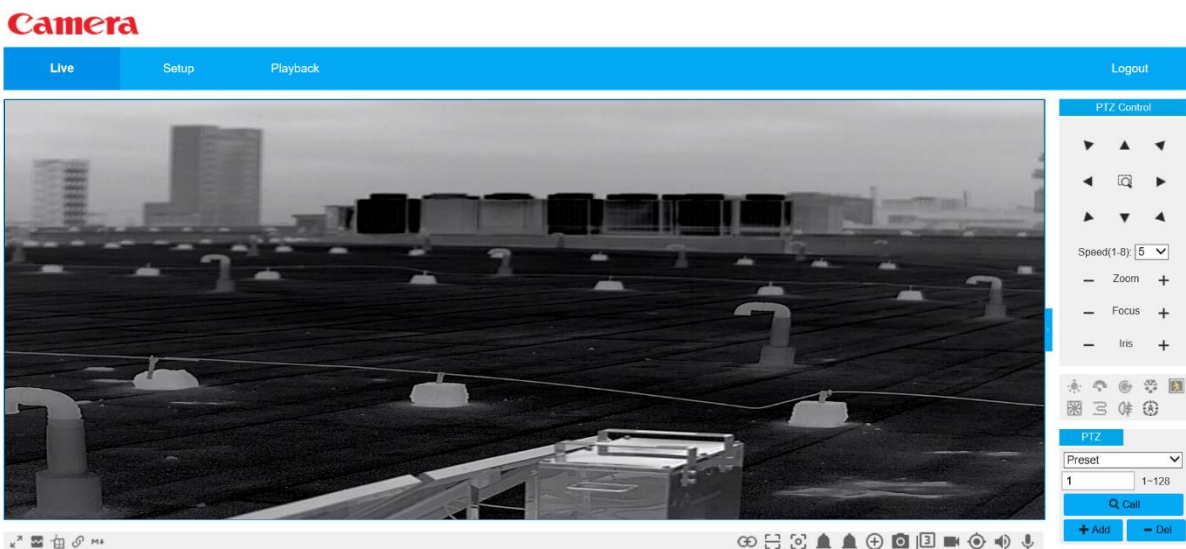


Figure 4-3 Live Thermal Image

4.3 Coaxial Adjustment of Visible Image and Thermal Image

1. Preview visible light image and thermal image, and overlay the image with the crosshair in the center of the screen. Select *Crosshair* from *Setup>Camera>Encoding Setting> Overlay>Picture*.

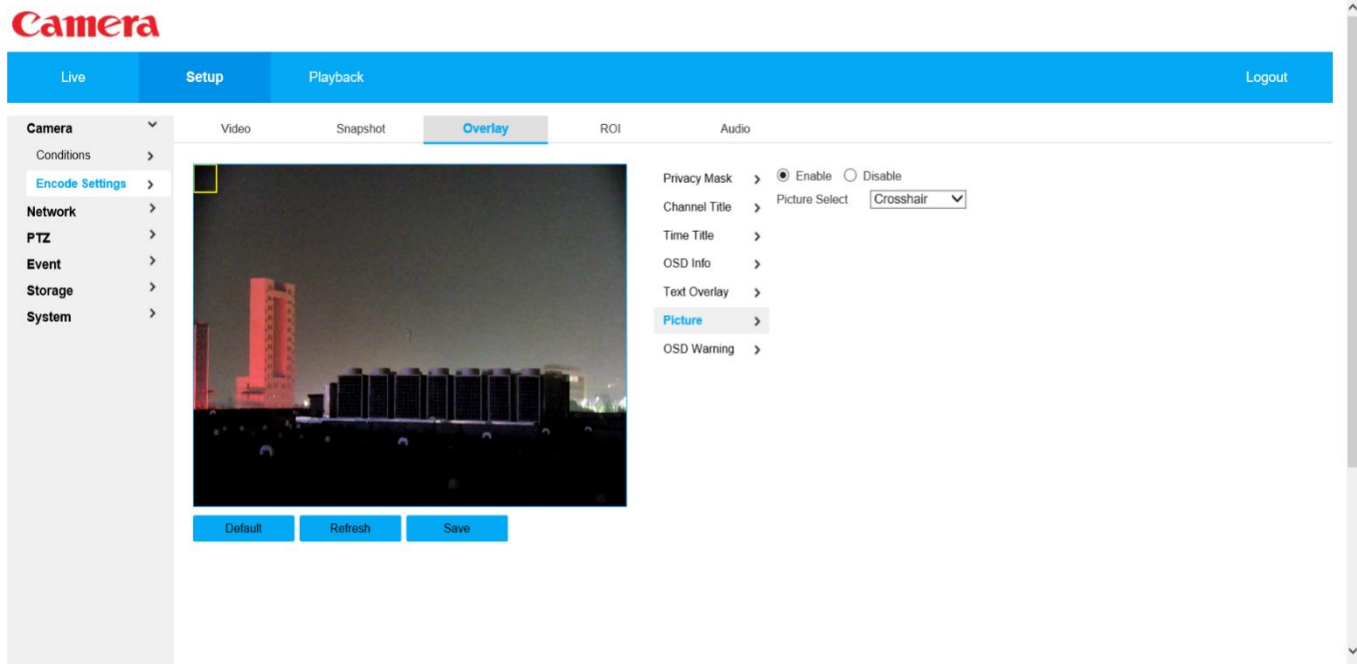
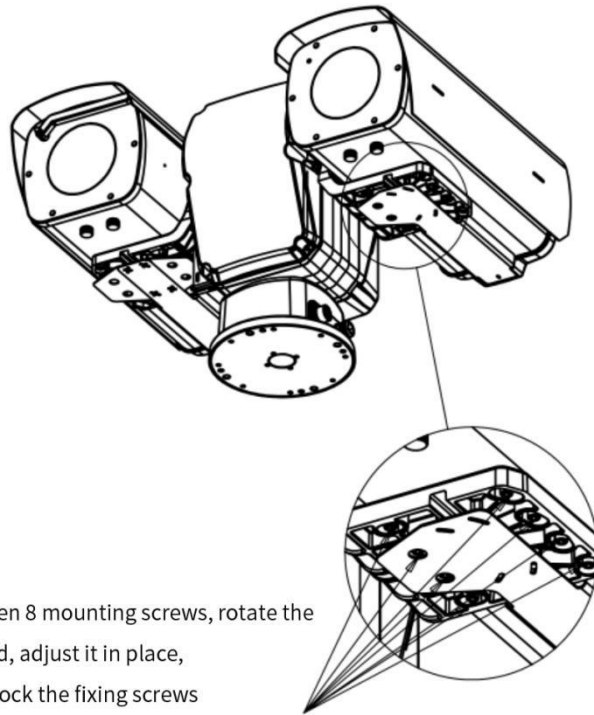


Figure 4-4 Coaxial Adjustment of Visible Light and Thermal Image

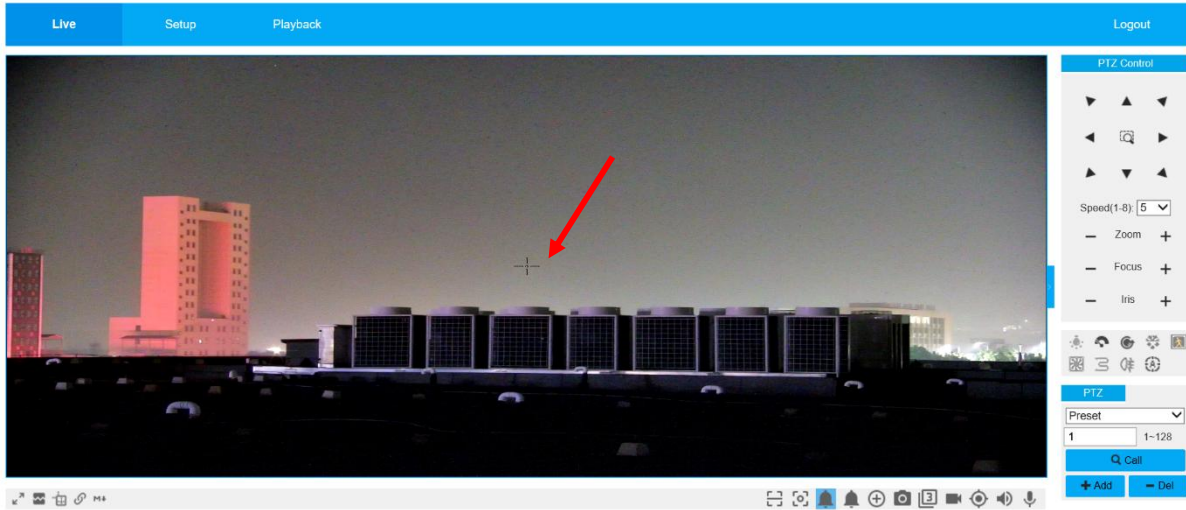
2. Zoom visible light and thermal image to the maximum.
3. The reticle of visible light is aimed at the target more than 2Km away.
4. The vertical coaxial direction has been preset in the factory.
5. Adjust the horizontal direction: loosen the screws of the thermal imaging shield, and turn the shield to align the cross with that of visible light.



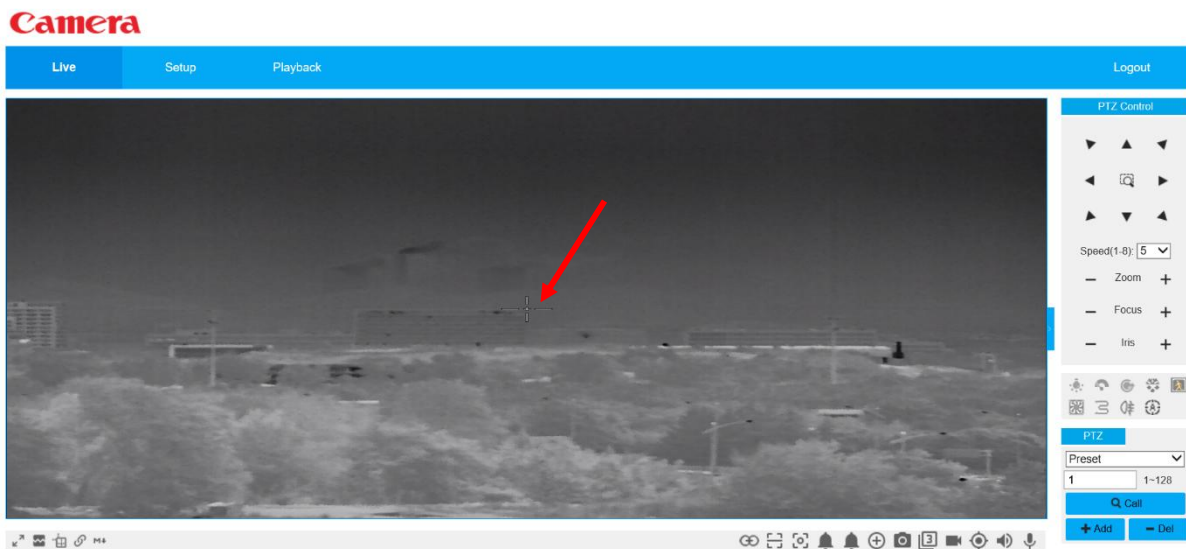
Loosen 8 mounting screws, rotate the shield, adjust it in place, and lock the fixing screws

E.G.
Visible images

Camera



Thermal images



6. Lock the thermal imaging shield.