Network Camera

Installation Manual

Thank you for purchasing our product. If there are any questions, or requests, please do not hesitate to contact the dealer.

There is variety of structures of network cameras in our company. Installing instructions of all these cameras are listed in this manual. Find the model of your camera in the following list.

	Model
Box Network Camera	Box Camera Type I
	Box Camera Type II
Dome Network Camera	Dome Camera Type I
	Dome Camera Type II
	Dome Camera Type III
	Dome Camera Type IV
	Dome Camera Type V
	Dome Camera Type VI
	Dome Camera Type VII
	Dome Camera Type VIII
	Dome Camera Type IX
	Dome Camera Type X
	Dome Camera Type XI
	Dome Camera Type XII
	Dome Camera Type XIII
Mini Dome Network Camera	Mini Dome Camera Type I
	Mini Dome Camera Type II
Turret Network Camera	Turret Camera Type I
	Turret Camera Type II
	Turret Camera Type III
	Turret Camera Type IV
	Turret Camera Type IX
Bullet Network Camera	Bullet Camera Type I
	Bullet Camera Type II
	Bullet Camera Type III
	Bullet Camera Type IV
	Bullet Camera Type V
	Bullet Camera Type VI
	Bullet Camera Type VII
	Bullet Camera Type VIII
	Bullet Camera Type IX
	Bullet Camera Type X
	Bullet Camera Type XI
	Bullet Camera Type XII
Covert Network Camera	Covert Camera

Cube Network Camera	Cube Camera Type I
	Cube Camera Type II
	Cube Camera Type III
Fisheye Network Camera	Fisheye Camera Type I
	Fisheye Camera Type II
	Fisheye Camera Type III
People Counting Network Camera	People Counting Network Camera

This manual may contain several technical incorrect places or printing errors, and the content is subject to change without notice. The updates will be added to the new version of this manual. We will readily improve or update the products or procedures described in the manual.

DISCLAIMER STATEMENT

“Underwriters Laboratories Inc. (“UL”) has not tested the performance or reliability of the security or signaling aspects of this product. UL has only tested for fire, shock or casualty hazards as outlined in UL’s Standard(s) for Safety, UL60950-1. UL Certification does not cover the performance or reliability of the security or signaling aspects of this product. UL MAKES NO REPRESENTATIONS, WARRANTIES OR CERTIFICATIONS WHATSOEVER REGARDING THE PERFORMANCE OR RELIABILITY OF ANY SECURITY OR SIGNALING RELATED FUNCTIONS OF THIS PRODUCT.”

Safety Instruction

These instructions are intended to ensure that the user can use the product correctly to avoid danger or property loss.

The precaution measure is divided into 'Warnings' and 'Cautions':

Warnings: Serious injury or death may be caused if any of these warnings are neglected.

Cautions: Injury or equipment damage may be caused if any of these cautions are neglected.

Warnings Follow these safeguards to prevent serious injury or death.	**Cautions** Follow these precautions to prevent potential injury or material damage.

Warnings:

- Please adopt the power adapter which can meet the safety extra low voltage (SELV) standard. And source with 12 VDC or 24 VAC (depending on models) according to the IEC60950-1 and Limited Power Source standard.
- If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the camera yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)
- To reduce the risk of fire or electrical shock, do not expose this product to rain or moisture.
- This installation should be made by a qualified service person and should conform to all the local codes.
- Please install blackouts equipment into the power supply circuit for convenient supply interruption.
- Please make sure that the ceiling can support more than 50(N) Newton gravities if the camera is fixed to the ceiling.
- If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the camera yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)

Cautions:

- Make sure the power supply voltage is correct before using the camera.
- Do not drop the camera or subject it to physical shock.
- Do not touch sensor modules with fingers. If cleaning is necessary, use a clean cloth with a bit of ethanol and wipe it gently. If the camera will not be used for an extended period of time, put on the lens cap to protect the sensor from dirt.
- Do not aim the camera lens at the strong light such as sun or incandescent lamp. The strong light can cause fatal damage to the camera.
- The sensor may be burned out by a laser beam, so when any laser equipment is being used, make sure that the surface of the sensor not be exposed to the laser beam.
- Do not place the camera in extremely hot, cold temperatures (the operating temperature should be between -30°C ~ 60°C, or -40°C ~ 60°C if the camera model has an “H” in its suffix), dusty or damp environment, and do not expose it to high electromagnetic radiation.
- To avoid heat accumulation, good ventilation is required for a proper operating environment.
- Keep out of water and any liquid.
- While shipping, the camera should be packed in its original packing.
- Improper use or replacement of the battery may result in hazard of explosion. Please use the manufacturer recommended battery type.

NOTE

For the dome camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Dust or grease on the dome cover will cause IR reflection. Please do not remove the dome cover film until the installation is finished. If there is dust or grease on the dome cover, clean the dome cover with clean soft cloth and isopropyl alcohol.
- Make certain the installation location does not have reflective surfaces of objects too close to the camera. The IR light from the camera may reflect back into the lens causing reflection.
- The foam ring around the lens (for dome cameras) must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDS. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

Table of Contents

CHAPTER 1 INTRODUCTION 9

1.1 APPLICATIONS 9
1.2 PREPARATIONS 9

CHAPTER 2 BOX CAMERA INSTALLATION 11

2.1 TYPE I BOX CAMERA 11
2.1.1 Camera Description 11
2.1.2 Installation 13
2.2 TYPE II BOX CAMERA 14
2.2.1 Camera Description 14
2.2.2 Installation 16

CHAPTER 3 DOME CAMERA INSTALLATION 21

3.1 TYPE I DOME CAMERA 21
3.1.1 Camera Description 21
3.1.2 Installation 22
3.2 TYPE II DOME CAMERA 28
3.2.1 Camera Description 28
3.2.2 Installation 29
3.3 TYPE III DOME CAMERA 38
3.3.1 Camera Description 38
3.3.2 Installation 39
3.4 TYPE IV DOME CAMERA 53
3.4.1 Camera Description 53
3.4.2 Installation 54
3.5 TYPE V DOME CAMERA 56
3.5.1 Camera Description 56
3.5.2 Installation 57
3.6 TYPE VI DOME CAMERA 61
3.6.1 Camera Description 61
3.6.2 Installation 63
3.7 TYPE VII DOME CAMERA 70
3.7.1 Camera Description 70
3.7.2 Installation 72
3.8 TYPE VIII DOME CAMERA 76
3.8.1 Camera Description of Type A Dome Camera 76
3.8.2 Installation of Type A Dome Camera 77
3.8.3 Camera Description of Type B Dome Camera 80
3.8.4 Installation of Type B Dome Camera 80
3.9 TYPE IX DOME CAMERA 83
3.9.1 Overview 83
3.9.2 Installing the SD Card 84

3.9.3 Installation 85
3.10 Type X Dome Camera 89
3.10.1 Overview 89
3.10.2 Installation 90
3.11 Type XI Dome Camera 97
3.11.1 Overview 97
3.11.2 Installation 98
3.12 Type XII Dome Camera 107
3.12.1 Overview 107
3.12.2 Installation 107
3.13 Type XIII Dome Camera 111
3.13.1 Overview 111
3.13.2 Installation 112

CHAPTER 4 MINI DOME CAMERA INSTALLATION 124

4.1 Type I Mini Dome Camera 124
4.1.1 Camera Description 124
4.1.2 Installation 125
4.2 Type II Mini Dome Camera 128
4.2.1 Camera Description 128
4.2.2 Installation 130

CHAPTER 5 TURRET CAMERA INSTALLATION 139

5.1 Type I Turret Camera 139
5.1.1 Camera Description 139
5.1.2 Installation 139
5.2 Type II Turret Camera 143
5.2.1 Camera Description 143
5.2.2 Installation 144
5.3 Type III Turret Camera 151
5.3.1 Camera Description 151
5.3.2 Installation 152
5.4 Type IV Turret Camera 158
5.4.1 Camera Description 158
5.4.2 Installation 158
5.5 Type IX Turret Camera 165
5.5.1 Camera Description 165
5.5.2 Installation 165

CHAPTER 6 BULLET CAMERA INSTALLATION 172

6.1 Type I Bullet Camera 172
6.1.1 Camera Description 172
6.1.2 Installation 173
6.2 Type II Bullet Camera 175
6.2.1 Camera Description 175

6.2.2 Installation 176
6.3 Type III Bullet Camera 178
6.3.1 Camera Description 178
6.3.2 Installation 179
6.4 Type IV Bullet Camera 180
6.4.1 Camera Description 180
6.4.2 Installation 181
6.5 Type V Bullet Camera 182
6.5.1 Camera Description 182
6.5.2 Installation 184
6.6 Type VI Bullet Camera 190
6.6.1 Camera Description 190
6.6.2 Installation 190
6.7 Type VII Bullet Camera 194
6.7.1 Overview 194
6.7.2 Installation 195
6.8 Type VIII Bullet Camera 198
6.8.1 Overview 198
6.8.2 Installation 199
6.9 Type IX Bullet Camera 202
6.9.1 Overview 202
6.9.2 Installation 203
6.10 Type X Bullet Camera 207
6.10.1 Overview 207
6.10.2 Installation 208
6.11 Type XI Bullet Camera 214
6.11.1 Overview 214
6.11.2 Installation 215
6.12 Type XII Bullet Camera 221
6.12.1 Overview 221
6.12.2 Installation 221

CHAPTER 7 COVERT CAMERA INSTALLATION 226

7.1 Camera Description 226
7.2 Installation 228
7.2.1 Installation of Main Unit 228
7.2.2 Installation of Block-Shaped Sensor Unit 230
7.2.3 Installation of Cylindrical Sensor Unit 233
7.2.4 Installation of Fixed Focal Unit 234

CHAPTER 8 CUBE CAMERA INSTALLATION 237

8.1 Type I Cube Camera 237
8.1.1 Camera Description 237
8.1.2 Installation 238
8.2 Type II Cube Camera 239

8.2.1 Camera Description 239
8.2.2 Remote Control Overview 241
8.2.3 Installation 241
8.3 Type III Cube Camera 244
8.3.1 Camera Description 244
8.3.2 Notice 245
8.3.3 Installation 247
CHAPTER 9 FISHEYE CAMERA INSTALLATION 249
9.1 Type I Fisheye Camera 249
9.1.1 Camera Description 249
9.1.2 Disassembling the Camera 250
9.1.3 Installation 250
9.2 Type II Fisheye Camera 257
9.2.1 Camera Description 257
9.2.2 Disassembling the Camera 258
9.2.3 Installation 258
9.3 Type III Fisheye Camera 262
9.3.1 Camera Description 262
9.3.2 Installing the SD Card 263
9.3.3 Installation 264
CHAPTER 10 PEOPLE COUNTING CAMERA INSTALLATION 275
10.1 Camera Description 275
10.2 Plan the Camera Number 276
10.3 Installation 278
10.3.1 Installation of Main Unit 278
10.3.2 Installation of Camera 279

Chapter 1 Introduction

The network camera is a kind of embedded digital surveillance product that combines the features of both traditional analog camera and the encoder. With a built-in video server, the network camera is capable of providing real-time video stream compression, processing, video analysis and transmission simultaneously. Adopting the latest processing chip and hardware platform, the network camera can be widely applied to various surveillance and image processing systems with high reliability and stability.

1.1 Applications

The network camera can be used in many surveillance scenes., e.g.:

- Network surveillance for over-the-counter activities in the banks, ATMs, supermarkets and factories.
- Remote surveillance systems for nursing homes, kindergartens and schools.
- Artificial Intelligent access control systems .
- Artificial Intelligent office building/residential compounds management systems.
- Unguarded power station and telecommunication base station surveillance systems.
- Pipelining and warehousing monitoring systems.
- Surveillance systems for airports, railway stations, bus stops, etc.

1.2 Preparations

- Make sure the device in the package is in good condition and all the assembly parts are included.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure the power supply is matched with your required voltage to avoid damage.
- If the product does not function properly, please contact your dealer or the nearest service center. Do not disassemble the camera for repair or maintenance by yourself.
- Make sure that the wall is strong enough to withstand three times the weight of the camera.

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Dust or grease on the dome cover will cause IR reflection. Please do not remove the dome cover film until the installation is finished. If there is dust or grease on the dome cover, clean the dome cover with clean soft cloth and isopropyl alcohol.

- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.
- The foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDS. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

Chapter 2 Box Camera Installation

2.1 Type I Box Camera

2.1.1 Camera Description

The overview of Type I box camera is shown below:

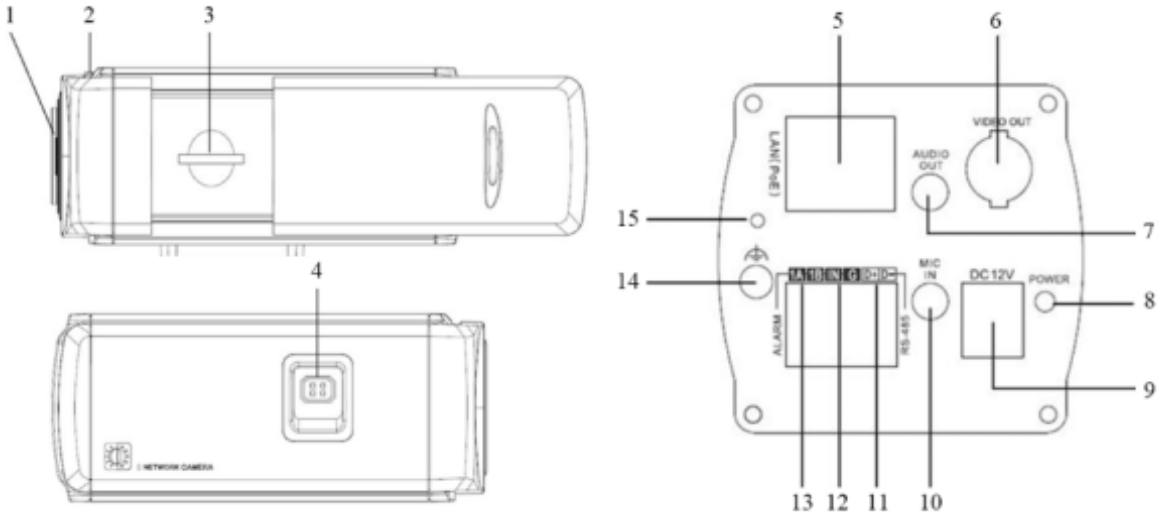


Figure 2-1 Overview

Table 2-1 Description

No.	Description
1	Lens Mount
2	Back Focus Ring
3	SD Card Slot
4	Auto-iris Interface
5	10M/100M Self-adaptive Ethernet Interface
6	VIDEO OUT: Video Output Interface
7	AUDIO OUT: Audio Output Interface
8	POWER: Power LED Indicator
9	Power Supply Interface
10	MIC IN: Audio Input Interface
11	D+, D-: RS-485 Interface

No.	Description
12	IN, G: Alarm Input Interface
13	1A, 1B: Alarm Output Interface
14	Grounding
15	RESET: Reset Button

Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

The type of auto-iris interface is shown as below figure:

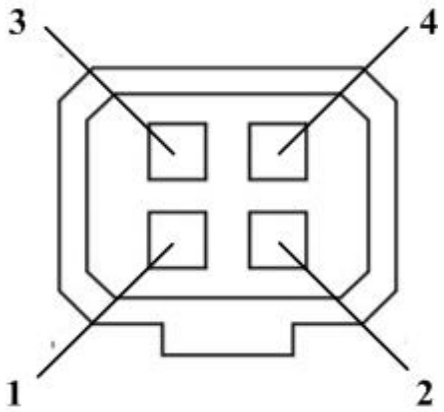


Figure 2-2 Auto-iris Interface

Table 2-2 Pins

No.	DC-driven
1	Damp-
2	Damp+
3	Drive+
4	Drive-

Power, Video and GND pins are used when the auto-iris is driven by video; And Damp+, Damp-, Drive+ and Drive- pins are used when the auto-iris is driven by DC.

2.1.2 Installation

Steps:

1. Fix the mounting bracket to the ceiling.

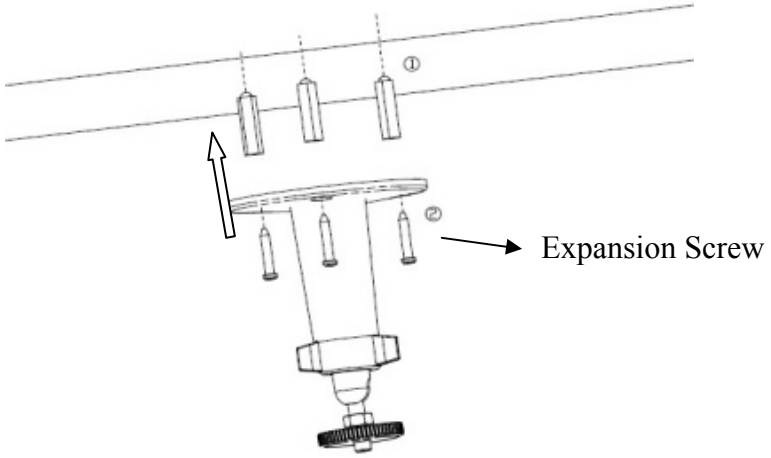


Figure 2-3 Fix Camera Mounting Bracket

2. Aim the screw hole on the camera at the bracket and rotate the camera tightly.
3. Adjust the camera to the desired surveillance angle and tighten the knob on bracket to secure the camera.

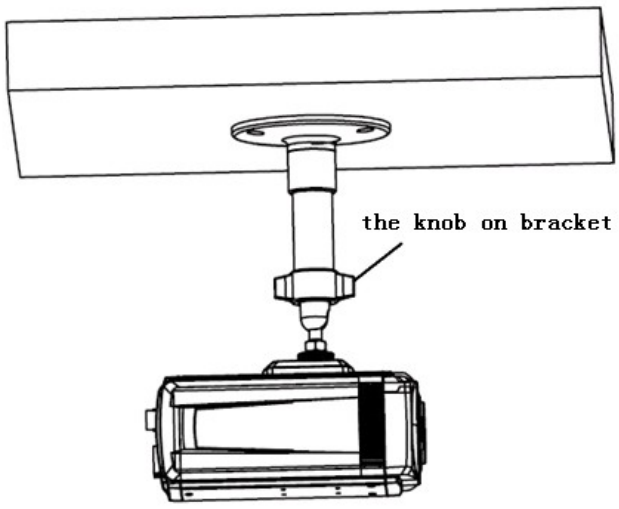


Figure 2-4 Fix the Camera

4. Install the lens.

1). Connect the VIDEO OUT interface of the camera to the debugging monitor.

2). Adjust the lens focus to obtain a perfect image on the monitor.

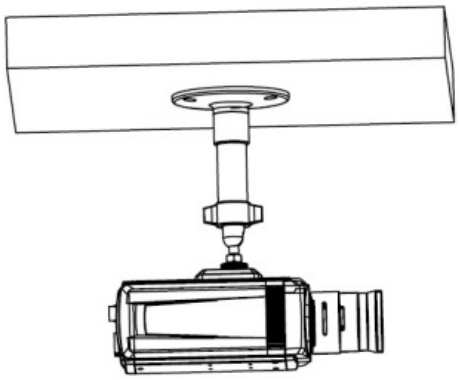


Figure 2-5 Install the Lens

2.2 Type II Box Camera

2.2.1 Camera Description

The overview of Type II box camera is shown below:

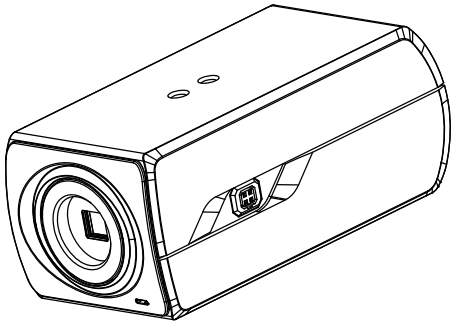


Figure 2-6 Overview (1)

The overview of the components and the interface are shown below:

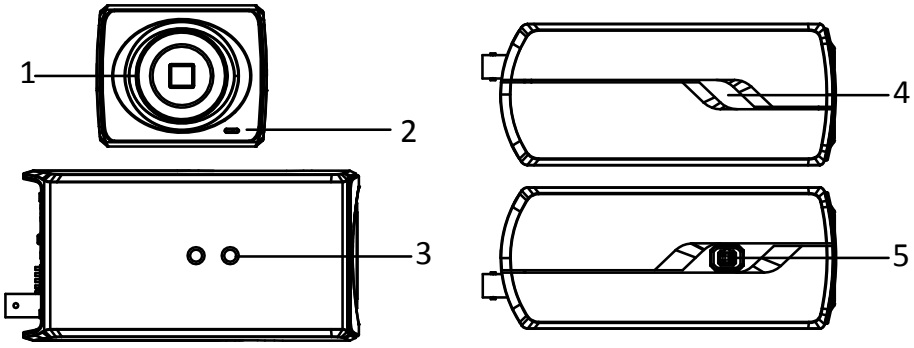


Figure 2-7 Overview (2)

The interfaces on the rear panel are shown below:

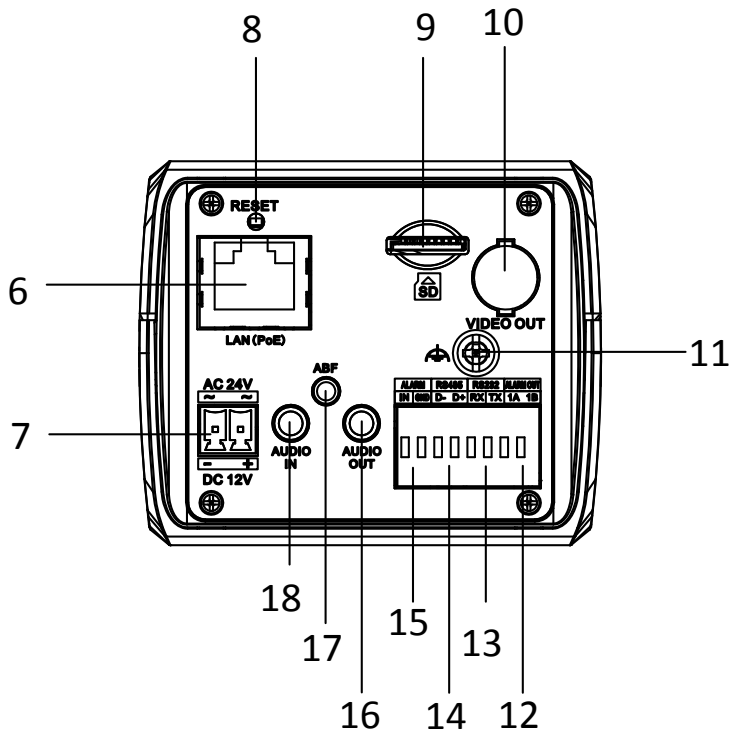


Figure 2-8 Overview (3)

Table 2-3 Description

No.	Description	No.	Description
1	Lens Mount	2	MIC
3	¼-20 UNC Screw Hole	4	Status Indicator
5	Auto-iris Interface	6	LAN(PoE)
7	Power Outlet	8	Reset
9	Micro SD Card Slot	10	Video Out
11	Grounding	12	Alarm Out
13	RS-232	14	RS-485
15	Alarm In	16	Audio Out
17	ABF	18	Audio In

NOTE

Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

The type of auto-iris interface is shown as below figure:

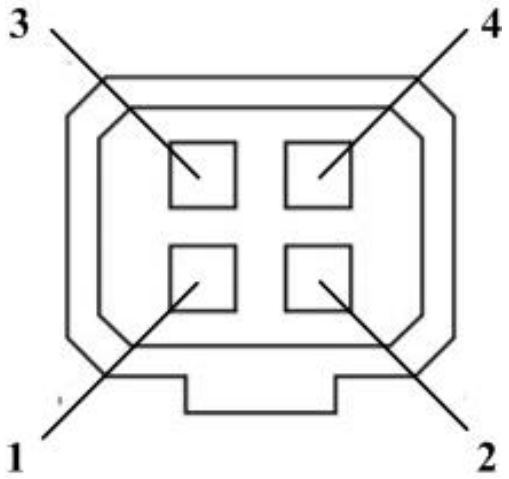


Figure 2-9 Auto-iris Interface

Table 2-4 Pins

No.	DC-driven
1	Damp-
2	Damp+
3	Drive+
4	Drive-

Power, Video and GND pins are used when the auto-iris is driven by video; Damp+, Damp-, Drive+ and Drive- pins are used when the auto-iris is driven by DC.

2.2.2 Installation

- **Ceiling Mounting**

Steps:

1. Install the ceiling mount to the ceiling with the supplied expansion screws.

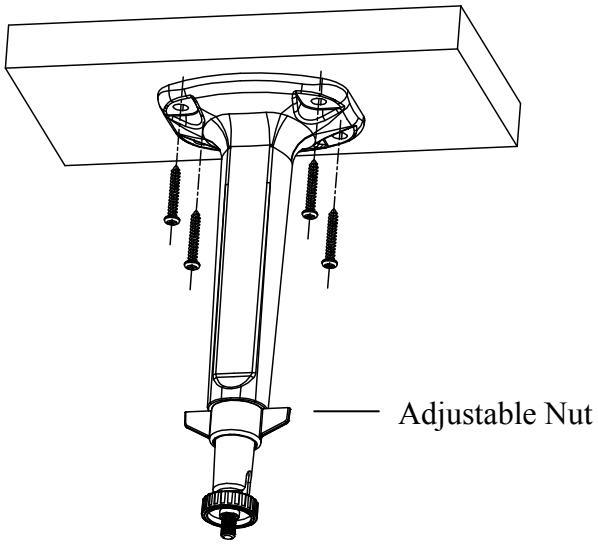


Figure 2-10 Install the Mount

2. Fit the lens (not supplied) to the camera and rotate it to get it tightened.

NOTE

- Install the adapter ring to the lens interface if a C-mount lens is used.
- A manual-iris lens can be directly installed to the camera without plugging the power cable of the auto-iris to the auto-iris interface.

3. Plug the auto-iris cable to the auto-iris interface.

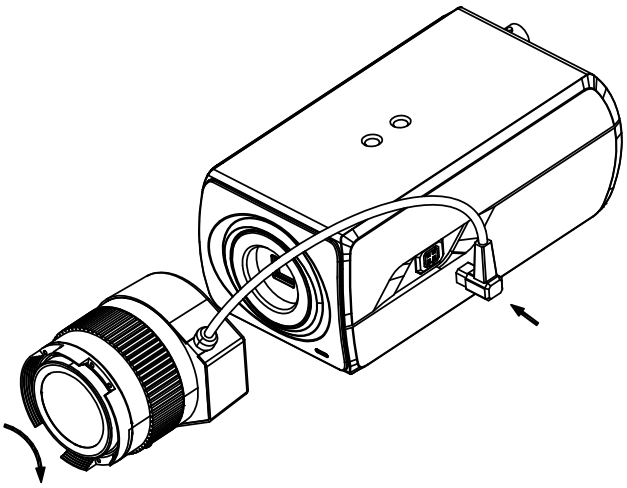


Figure 2-11 Install the Lens

4. Align the screw hole on the camera with the ceiling mount and rotate the camera to get it fixed.

5. Adjust the surveillance angle.

1). Loosen the pan nut to adjust the pan angle [0°-360°].

2). Loosen the knob on the ceiling mount to adjust the tilt angle [0°-90].

6. Adjust the Lens

1). Connect the VIDEO OUT interface of the camera to the debugging monitor.

2). Adjust the Zoom Lever and Focus Lever to obtain a perfect image on the monitor.

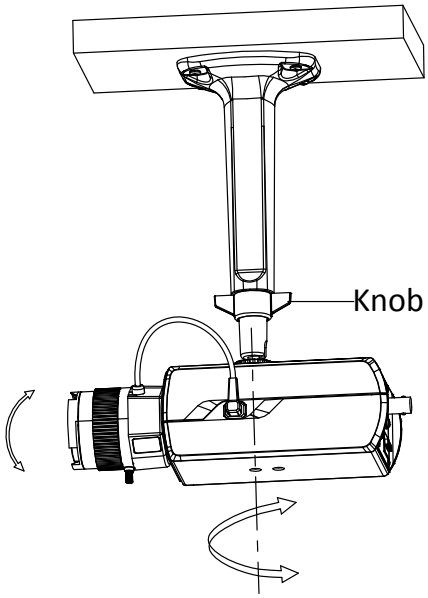


Figure 2-12 Install the Camera to the Mount and Adjust the Angle

- **Wall Mounting**

1. Install the lens (not supplied) to the camera and rotate it to get it tightened.

2. Plug the auto-iris cable to the auto-iris interface.

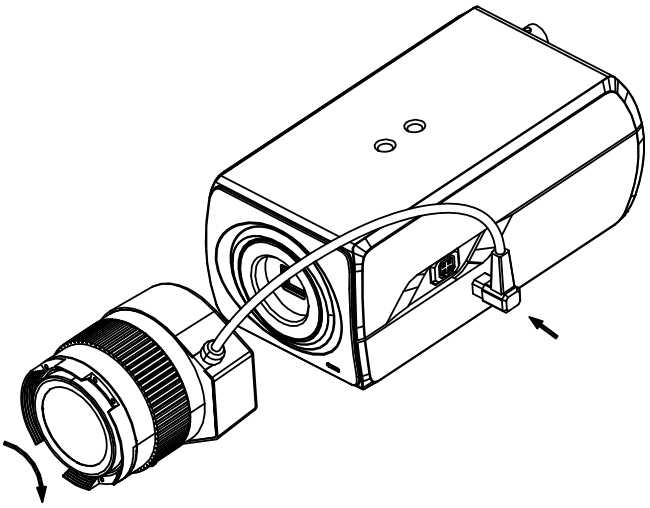


Figure 2-13 Install the Lens

3. Loosen the lock screw on the mount and remove the tilt adjust table from the wall mount.

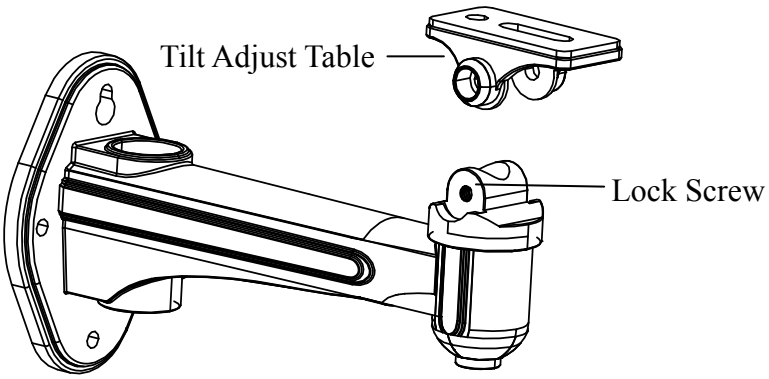


Figure 2-14 Remove the Tilt Adjust Table

4. Fit the removed tilt adjust table to the camera, and fix it with two screws.

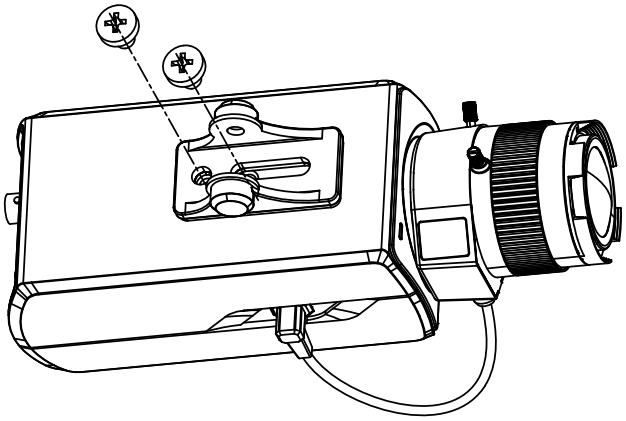


Figure 2-15 Install the Tilt Adjust Table

5. Secure the wall mount to the wall with the supplied expansion screws.

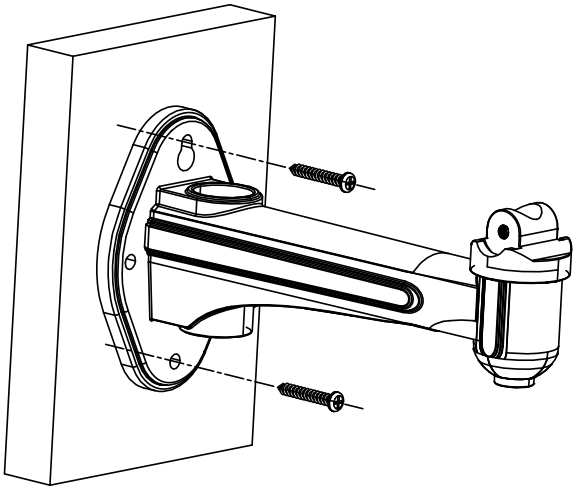


Figure 2-16 Install the Wall Mount

6. Install the camera to the wall mount and tighten the two lock screws.

7. Adjust the surveillance angle.

1). Loosen the pan nut to adjust the pan angle [0 °-360°].

2). Loosen the knob on the ceiling mount to adjust the tilt angle [0°-±45°].

8. Adjust the Lens

1). Connect the VIDEO OUT interface of the camera to the debugging monitor.

2). Adjust the focus lever to obtain a perfect image on the monitor.

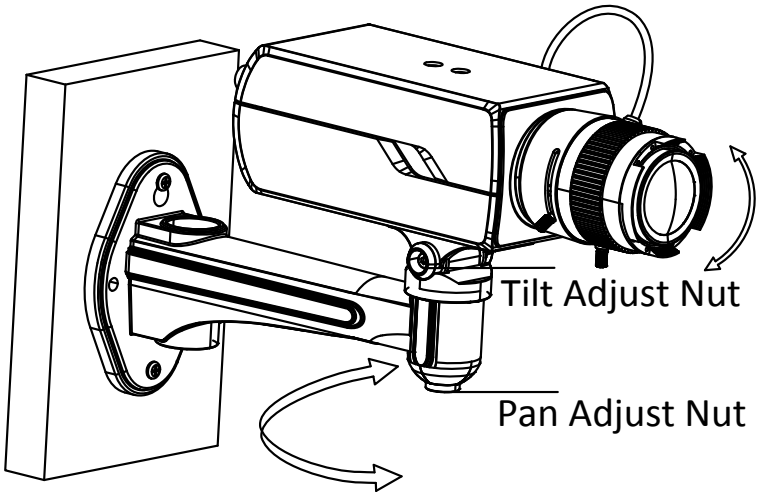


Figure 2-17 Adjust the Surveillance Angle

- **Installing the SD Card**

1) Insert the SD card to the SD card slot to get it installed.

2) Push the inserted SD card slightly to get it sprung by its built-in springing to remove it.

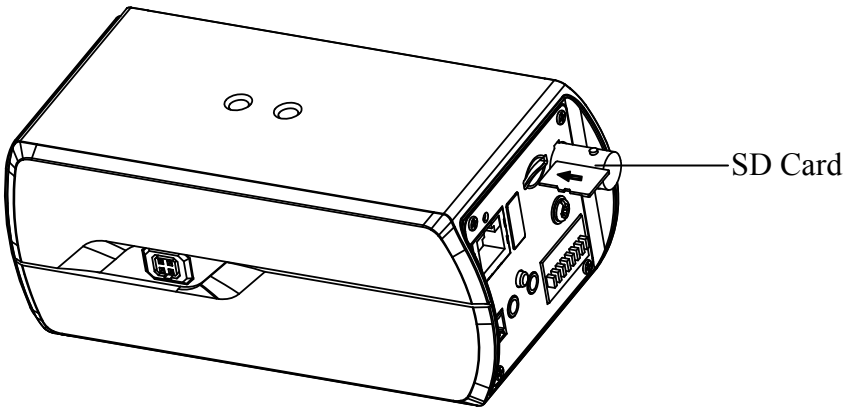


Figure 2-18 Install the SD Card

Chapter 3 Dome Camera Installation

3.1 Type I Dome Camera

3.1.1 Camera Description

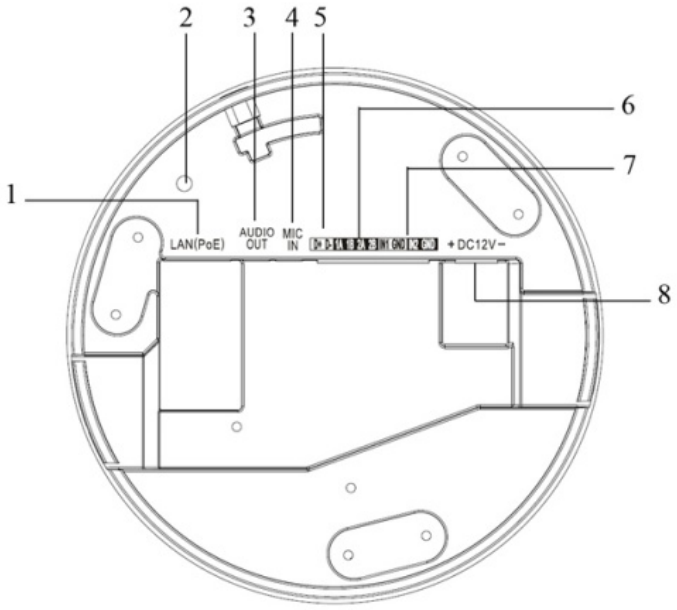


Figure 3-1 Overview

Table 3-1 Description

No.	Description
1	10M/100M self-adaptive Ethernet interface
2	Reset Button
3	AUDIO OUT: Audio output interface
4	MIC IN: Audio input interface
5	D+, D-: RS-485 interface
6	1A, 1B, 2A, 2B: Alarm output interface
7	IN1, GND, IN2, GND: Alarm input interface
8	Power Supply Interface

NOTE

Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

3.1.2 Installation

- **Ceiling Mounting**

Steps:

1. (Optional) use a plier to remove one clip or both two clips (marked in dotted line in Figure 3-2) on the side of the back box and then route cables through the opening to secure the cables on the ceiling.

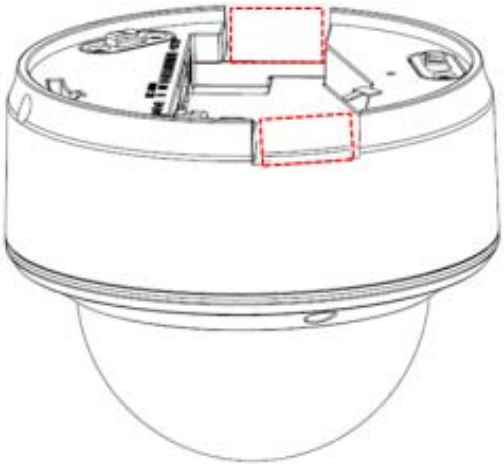


Figure 3-2 Side Clips

2. Drill the screw hole and the cable hole according to the supplied drill template.

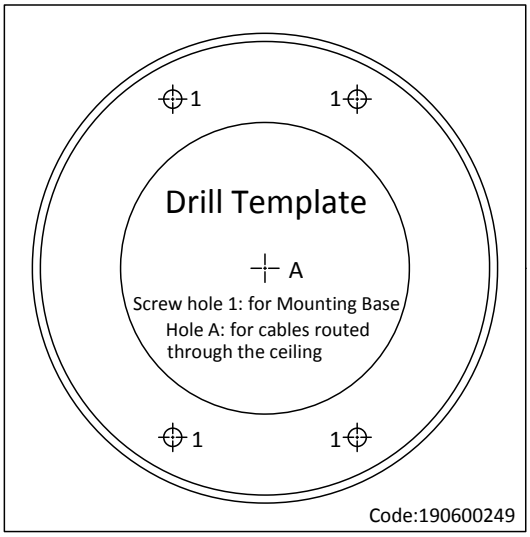


Figure 3-3 Drill Template

3. Fix the mounting base to the ceiling; rotate the back box counterclockwise to secure it to the mounting base; use the lock screw to secure the dome camera.

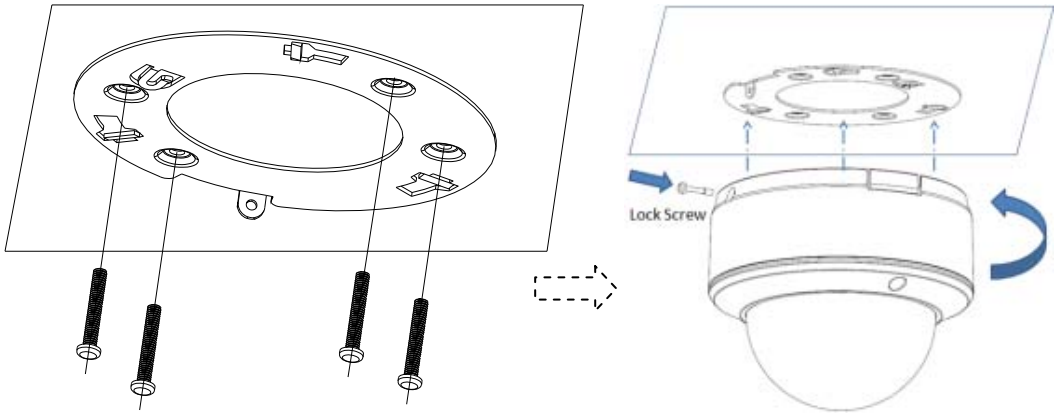


Figure 3-4 Mounting

4. Loosen the set screws with the hex key (supplied) to remove the bubble.

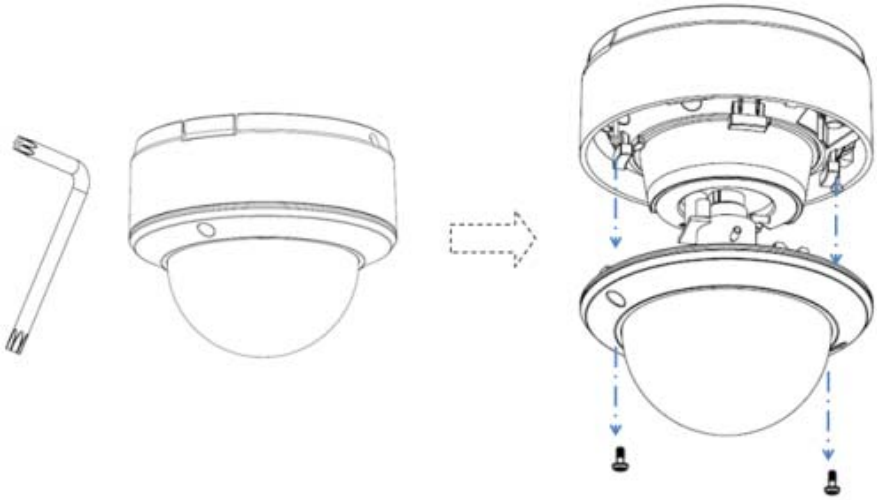


Figure 3-5 Disassembling

5. Connect the RCA analog video output with a monitor to view the image of the camera. Loosen the lens set screw to adjust the angle of pan, tilt and rotation direction.
6. Adjust the focus to obtain a perfect image. Fasten the lens set screw.

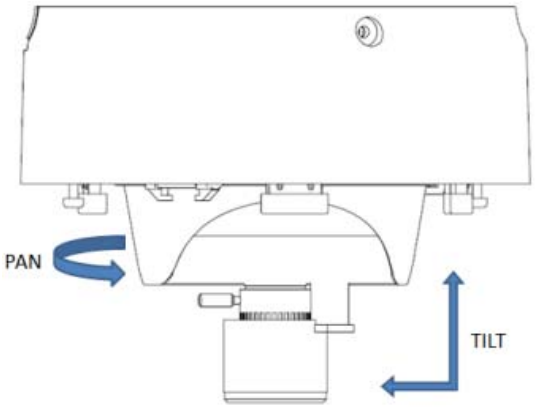


Figure 3-6 Image Adjusting

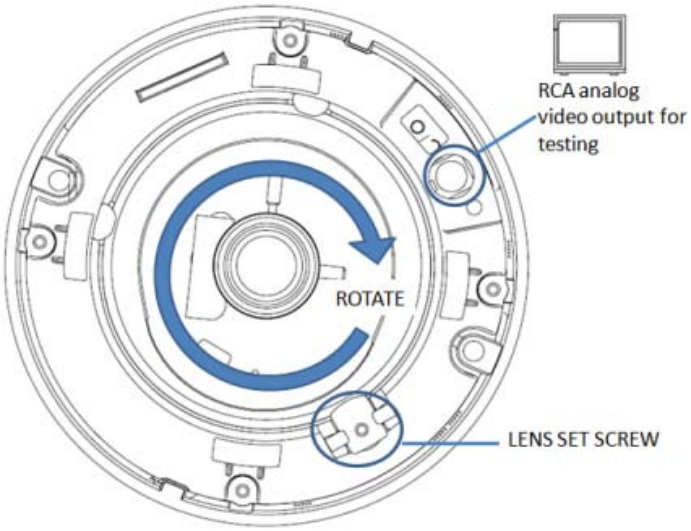


Figure 3-7 Image Adjusting

7. Reinstall the bubble and tighten the screws.

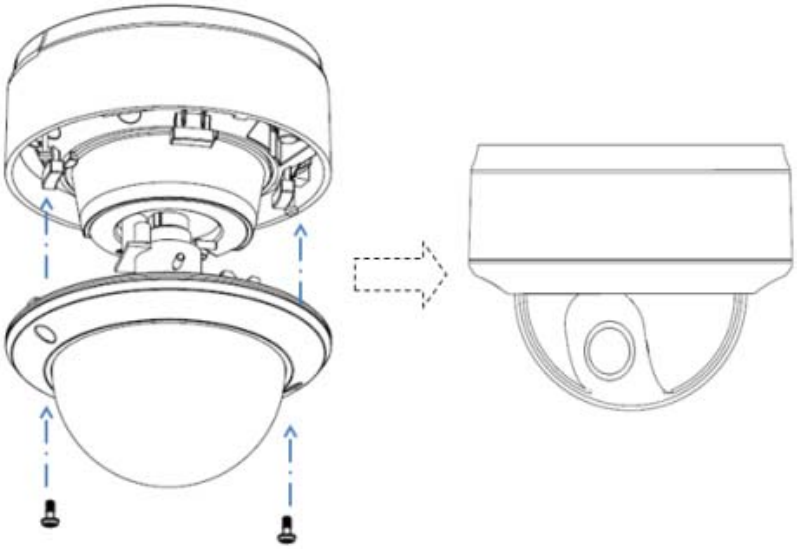


Figure 3-8 Reinstall

- **In-ceiling mounting**

Steps:

1. Secure the mounting base to the in-ceiling mounting base with screws.

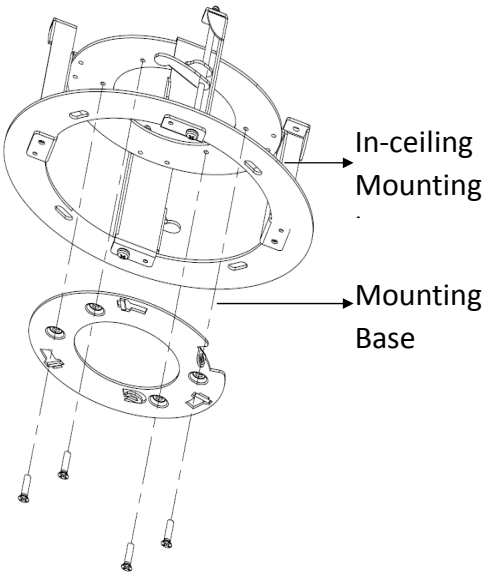


Figure 3-9 Mounting Base

2. Push the dome camera to the in-ceiling mounting base, rotate the dome camera for 10 degrees counterclockwise and then fasten the lock screws to fix the camera.

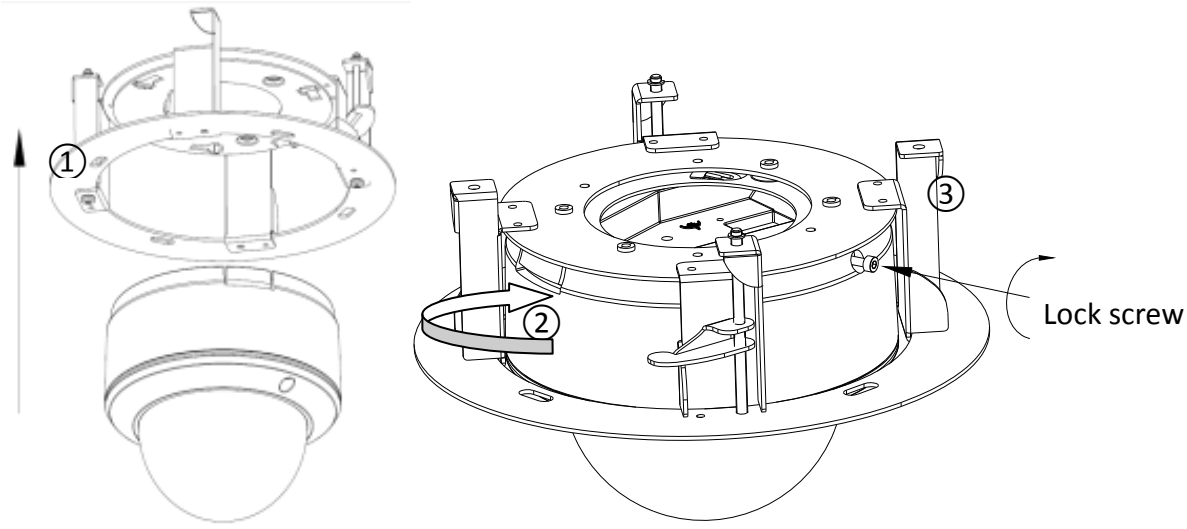


Figure 3-10 Camera and Mounting Base

3. Cut a 176~180 mm diameter hole in the ceiling and push the dome camera with in-ceiling mounting base to the hole.

NOTE

The thickness of the ceiling should be less than 30 mm.

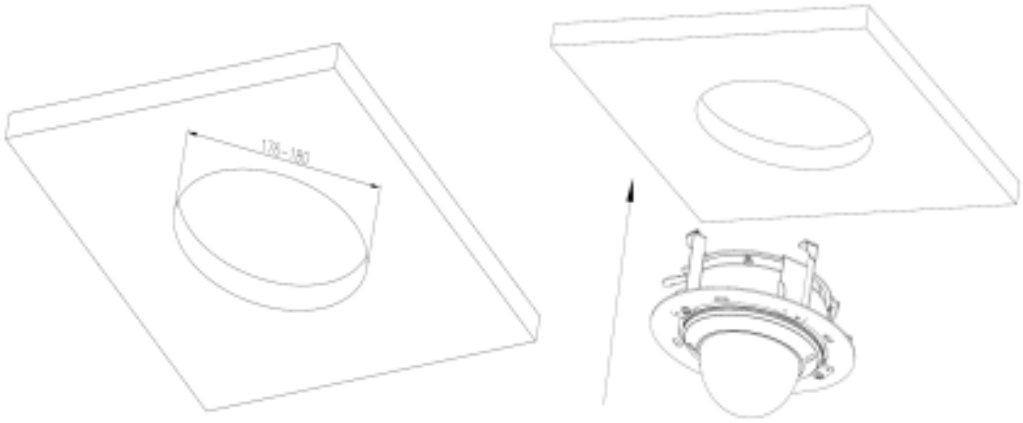


Figure 3-11 Installing

4. It is strongly recommended that you use a safety rope to secure the in-ceiling mounting base to the roof.

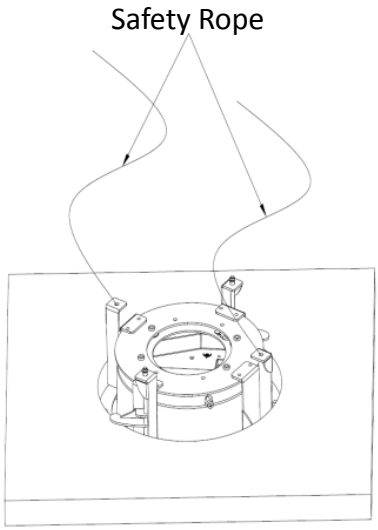


Figure 3-12 Safety Rope

5. Fasten the lock screws to secure the dome camera.

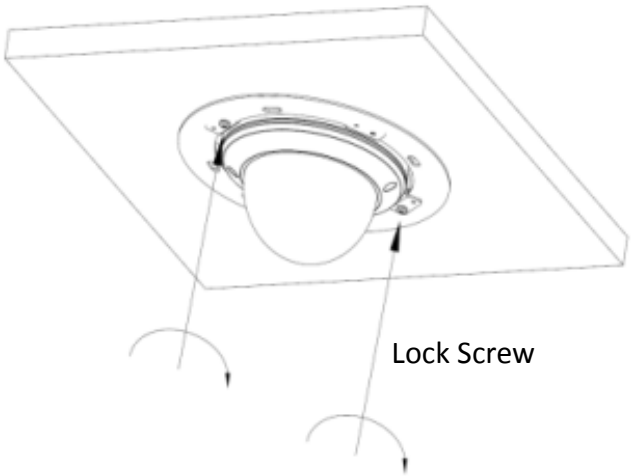


Figure 3-13 Fasten Screws

6. Remove the bubble and connect the RCA analog video output with a monitor to view the image of the camera. Loosen the lens set screw and pan, tilt or rotate the lens to get a desired surveillance angle. Adjust the lens focus to obtain a perfect image. Fasten the lens set screw. Reinstall the bubble.

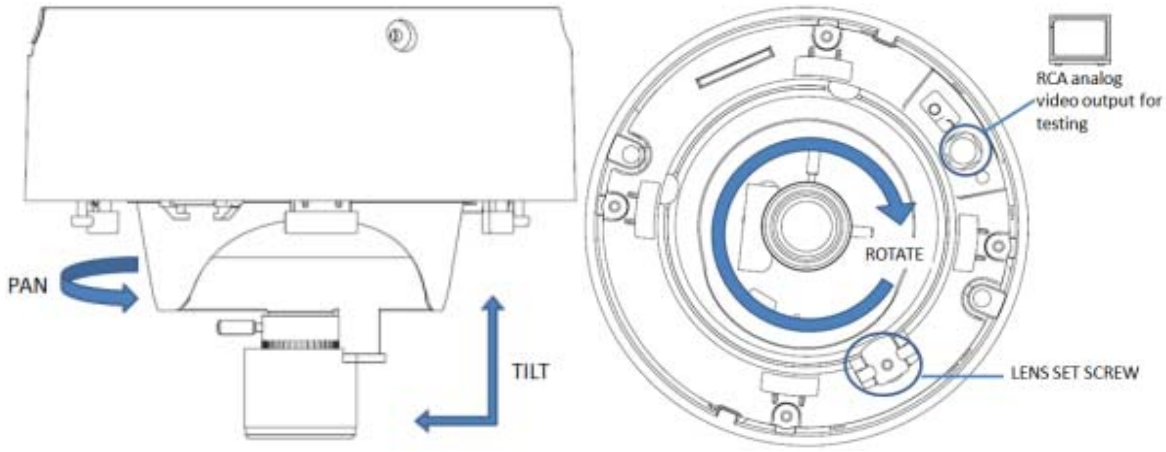


Figure 3-14 Image Adjusting

7. Install the trim plate with screws to finish the installation.

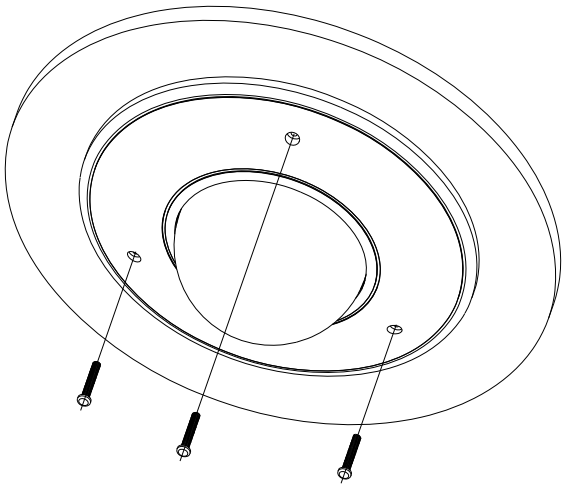


Figure 3-15 Trim Plate Installing

Figure 3-16 Complete the Installation

3.2 Type II Dome Camera

3.2.1 Camera Description

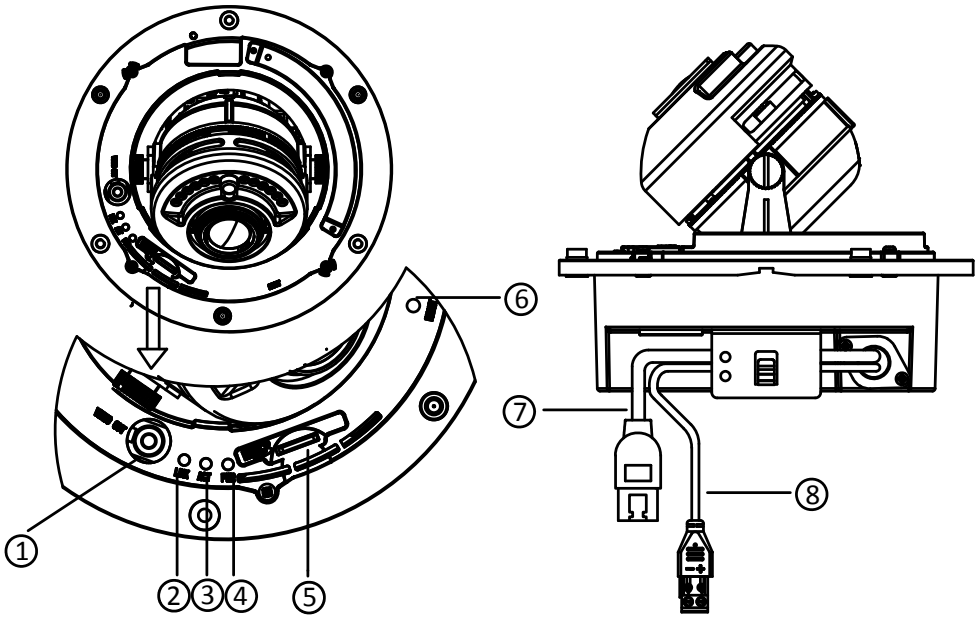


Figure 3-17 Overview

Table 3-2 Physical Description

No.	Description
1	Video output interface
2	LINK: Indicator is solid yellow when network is connected.
3	ACT: Indicator flashes blue when network connection is functioning properly.
4	PWR: Indicator is solid red when the device is powered on.
5	Micro SD slot
6	RESET: Reset the camera.
7	10M/100M self-adaptive Ethernet interface
8	Power supply interface

NOTE

- The extended interface can be connected to alarm input/output interface, audio input/output interface, RS-485 interface, etc.

- Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

3.2.2 Installation

- **Ceiling Mounting**

Steps:

1. Drill the screw holes on the ceiling with the supplied drilling template. If you need to route the cables from the bottom of the camera, cut a cable hole in the ceiling.

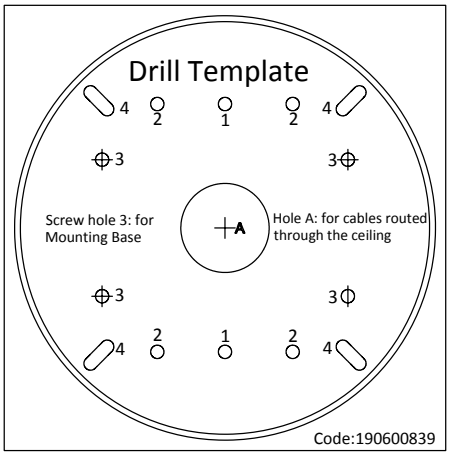


Figure 3-18 Drilling Template

2. Secure the back box to the ceiling with screws.

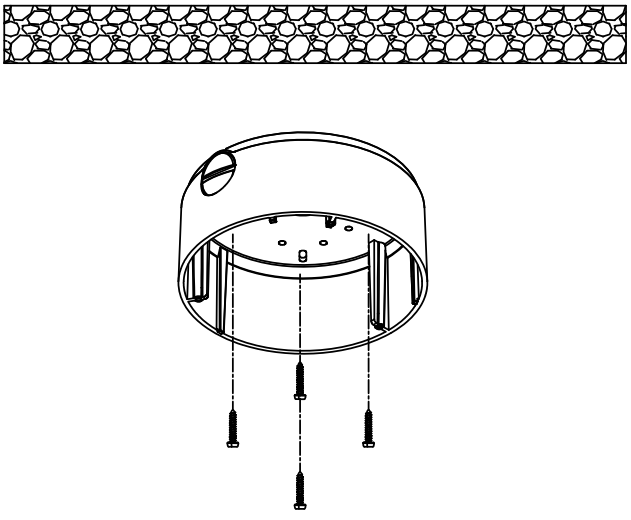


Figure 3-19 Mount Back Box

3. Loosen the set screws with the hex key (supplied) to remove the bubble; remove the black liner.

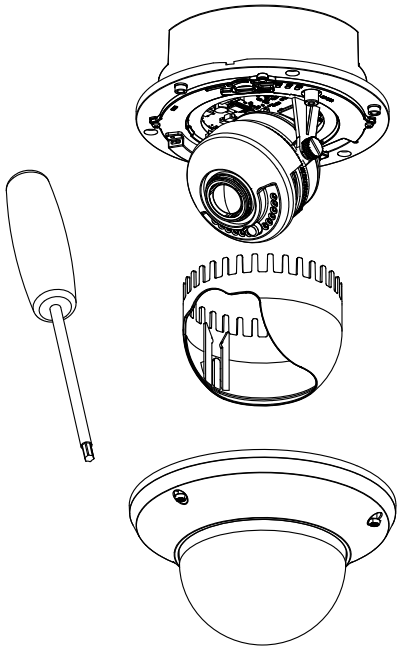


Figure 3-20 Disassembling

4. Install the dome drive to the back box and pull the cables through the cable outlet on the bottom of the back box.

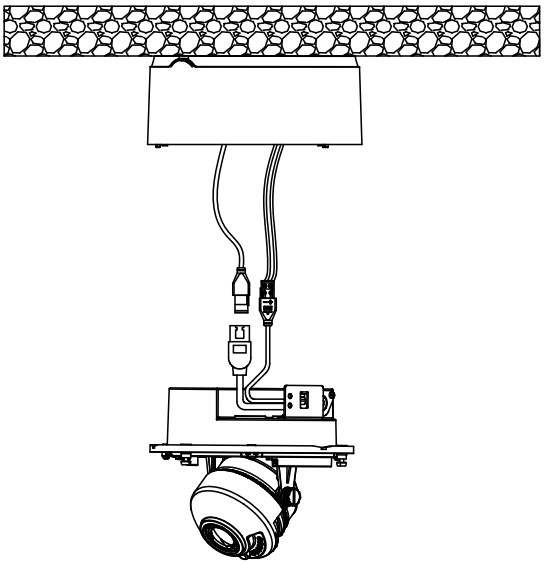


Figure 3-21 Dome Drive Installing

NOTE

If you need to pull the cable through the side outlet of the camera, please remove the cover and use water-proof joints and water-proof pipe to route the cables.

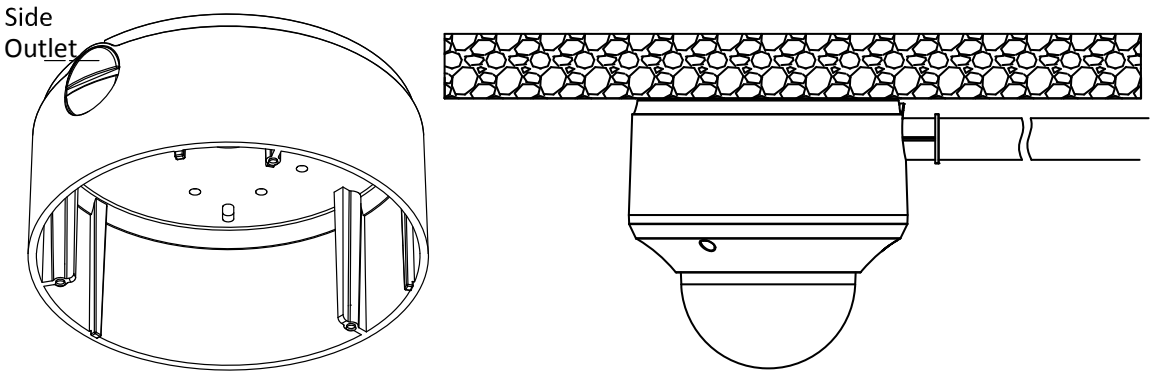


Figure 3-22 Side Cable Routing

5. After connecting the network cable and power cable, view the image of the camera over the network. Loosen the lock screws; adjust the panning position and tilting position and rotate the lens to get the desired surveillance angle; fasten the lock screws.

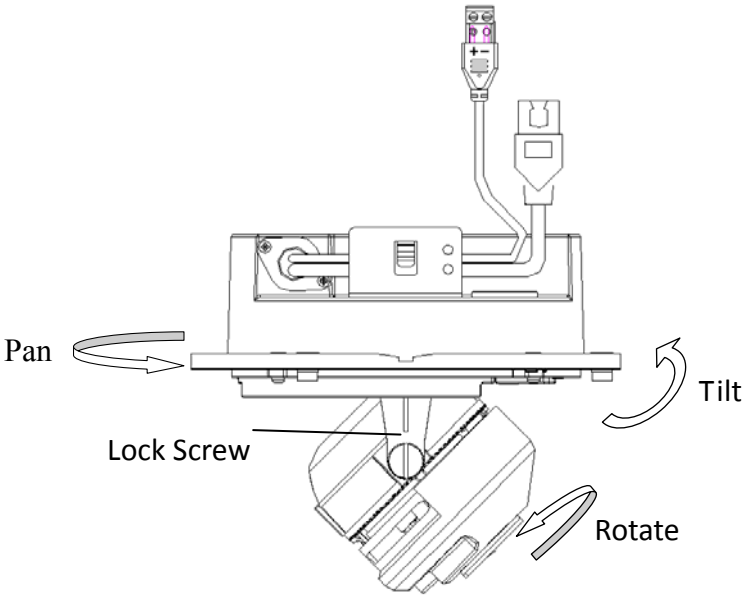


Figure 3-23 Angle Adjusting

6. Reinstall the black liner and bubble to finish the installation.

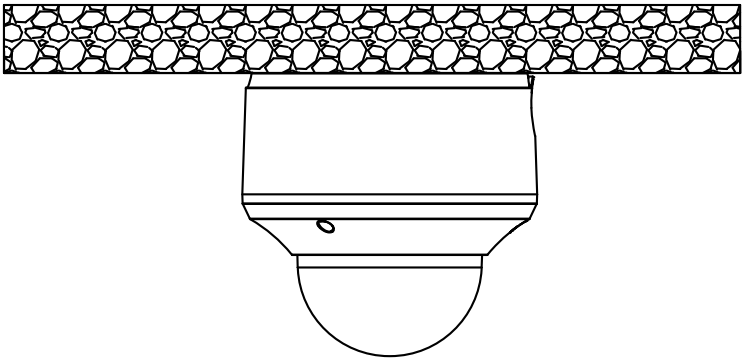


Figure 3-24 Reinstall

- **In-ceiling Mounting:**

Steps:

1. Drill the screw holes and the cable hole on the ceiling according to the supplied drill template.

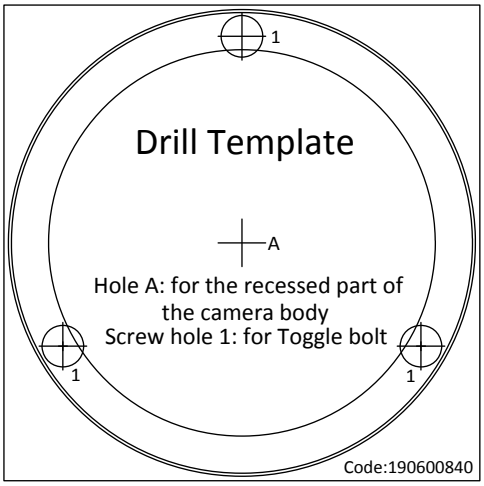


Figure 3-25 Drill Template

2. Loosen the set screws with the hex key (supplied) to remove the bubble; and remove the black liner.

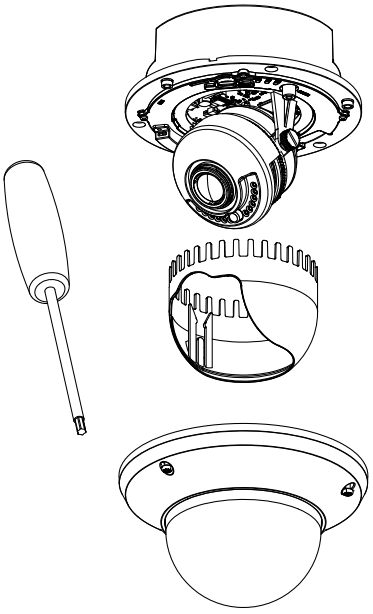


Figure 3-26 Disassembling

3. Rotate the toggle to remove it from the toggle bolt.
4. Insert the bolt into the toggle bolt hole on the dome drive and use the screw driver to rotate the bolt slightly but not tightly.
5. Reinstall the toggle and push the dome drive to the cable hole on the ceiling with toggle bolts aligned with the screw holes on the ceiling.

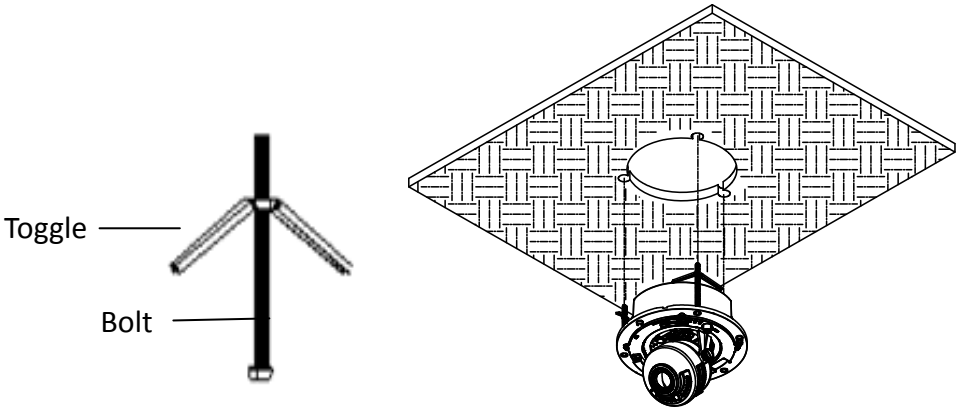


Figure 3-27 Dome Drive Installing

6. Fasten the toggle bolt and the toggle will automatically secure the dome drive to the ceiling.

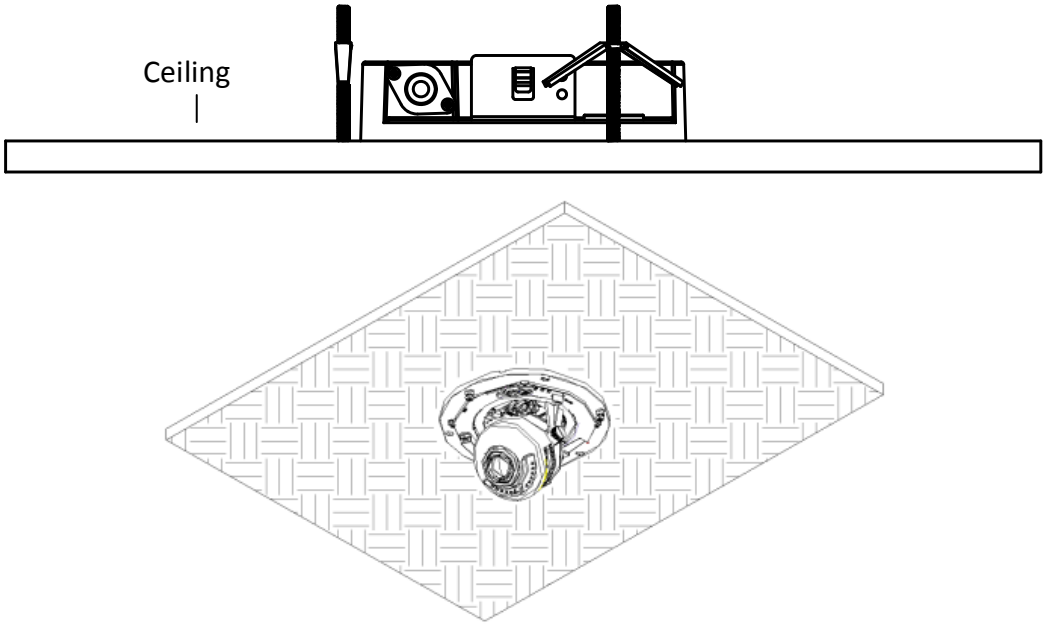


Figure 3-28 Fasten Toggle Bolt

7. Connecting the network cable and power cable.
8. View the camera image over the network.
9. Loosen the lock screws to adjust the panning position and tilting position and rotate the lens to get the desired surveillance angle.
10. Fasten the lock screws.

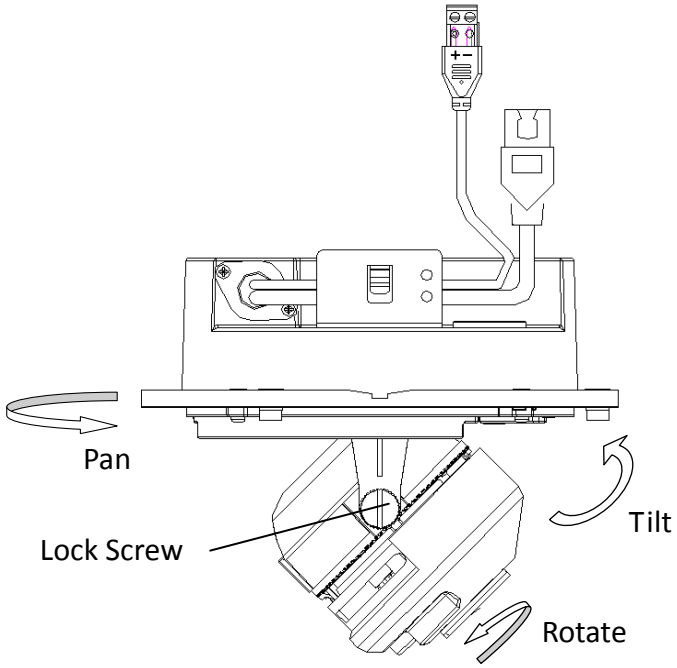


Figure 3-29 Angle Adjusting

11. Reinstall the black liner and dome drive to finish the installation.

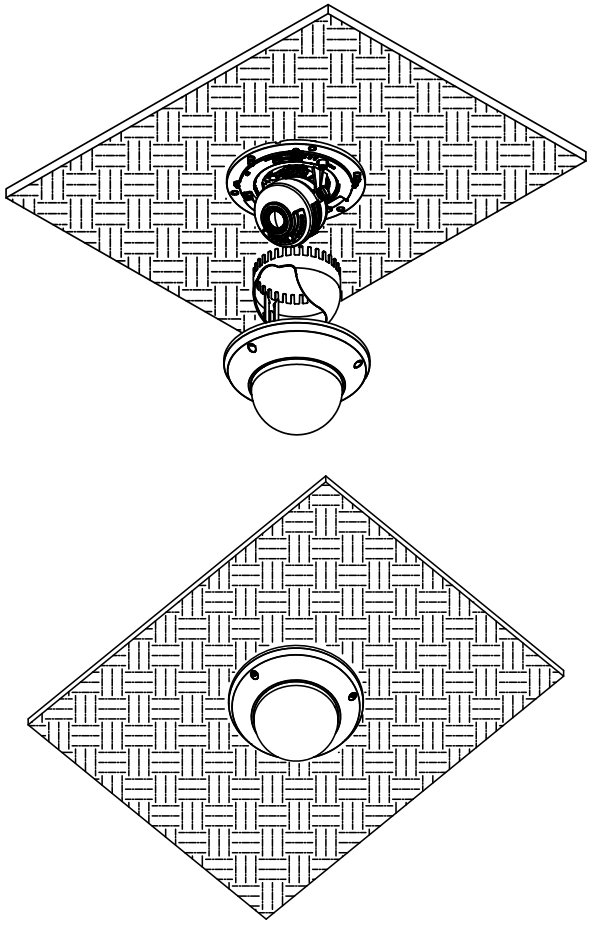


Figure 3-30 Complete the Installation

- **Wall mounting:**

Steps:

1. Drill the screw holes and the cable hole on the wall according to the supplied drill template.

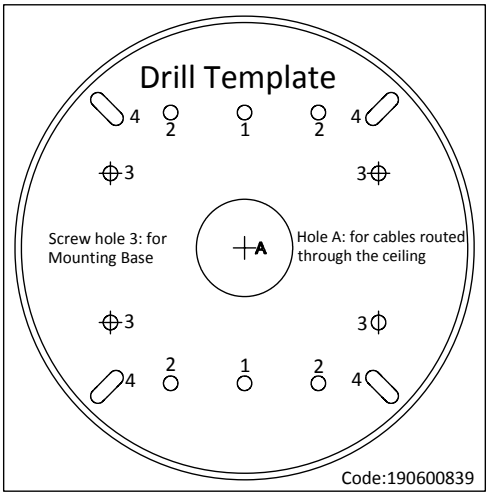


Figure 3-31 Drilling Template

2. Secure the back box to the wall with the supplied screws.

NOTE

Position the side cable outlet directly below to prevent moisture from getting inside the camera.

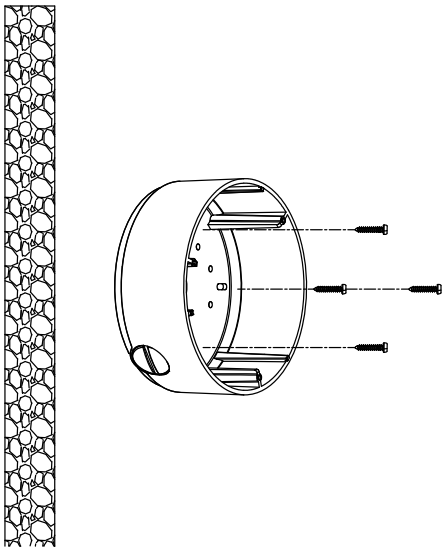


Figure 3-32 Secure Back box

3. Loosen the set screws with the hex key (supplied) to remove the bubble; remove the black liner.

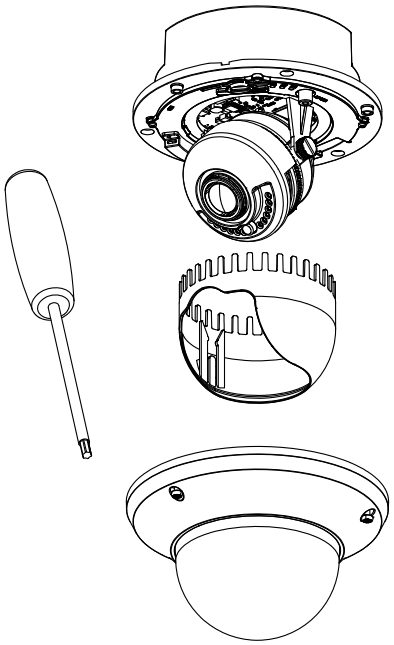


Figure 3-33 Disassembling

4. Install the dome drive to the back box and pull the cables through the side outlet on the bottom of the back box.

NOTE

If you need to pull the cable through the cable outlet from the side of the camera, please remove the cover and use water-proof joints and water-proof pipe to route the cables.

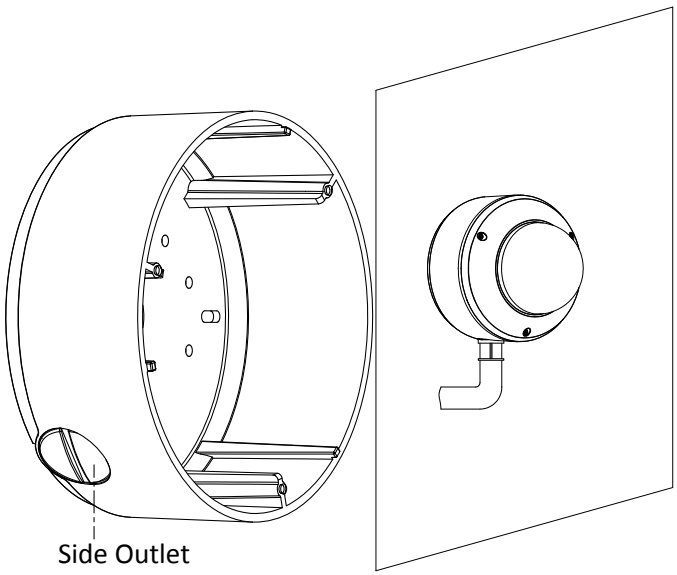


Figure 3-34 Side Cable Routing

5. Connecting the network cable and power cable.

6. View the camera image over the network.
7. Loosen the lock screws to adjust the panning position and tilting position, and rotate the lens to get the desired surveillance angle.
8. Fasten the lock screws.

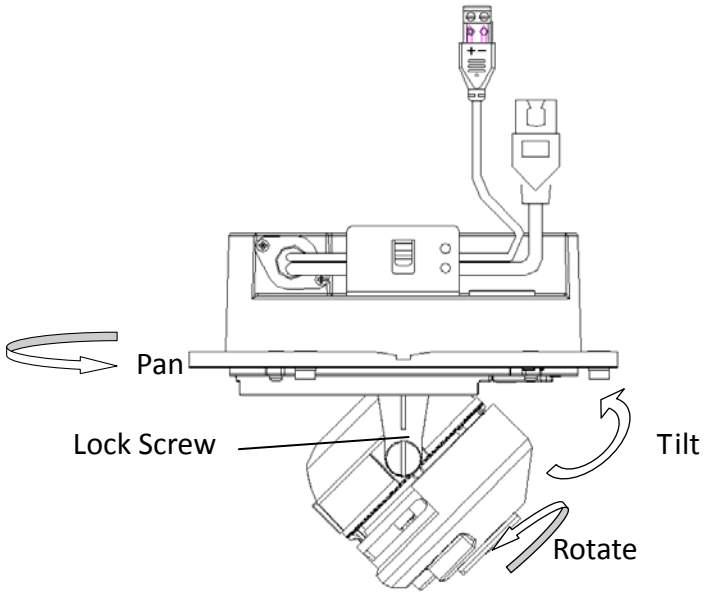
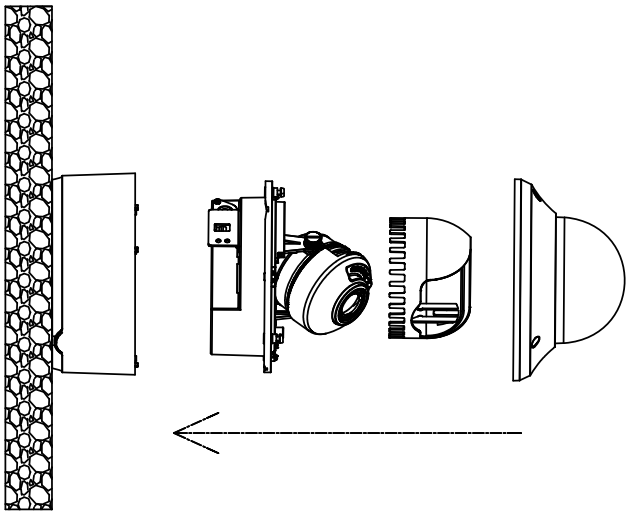


Figure 3-35 Angle Adjusting

9. Reinstall the black liner and bubble to finish the installation.



3.3 Type III Dome Camera

3.3.1 Camera Description

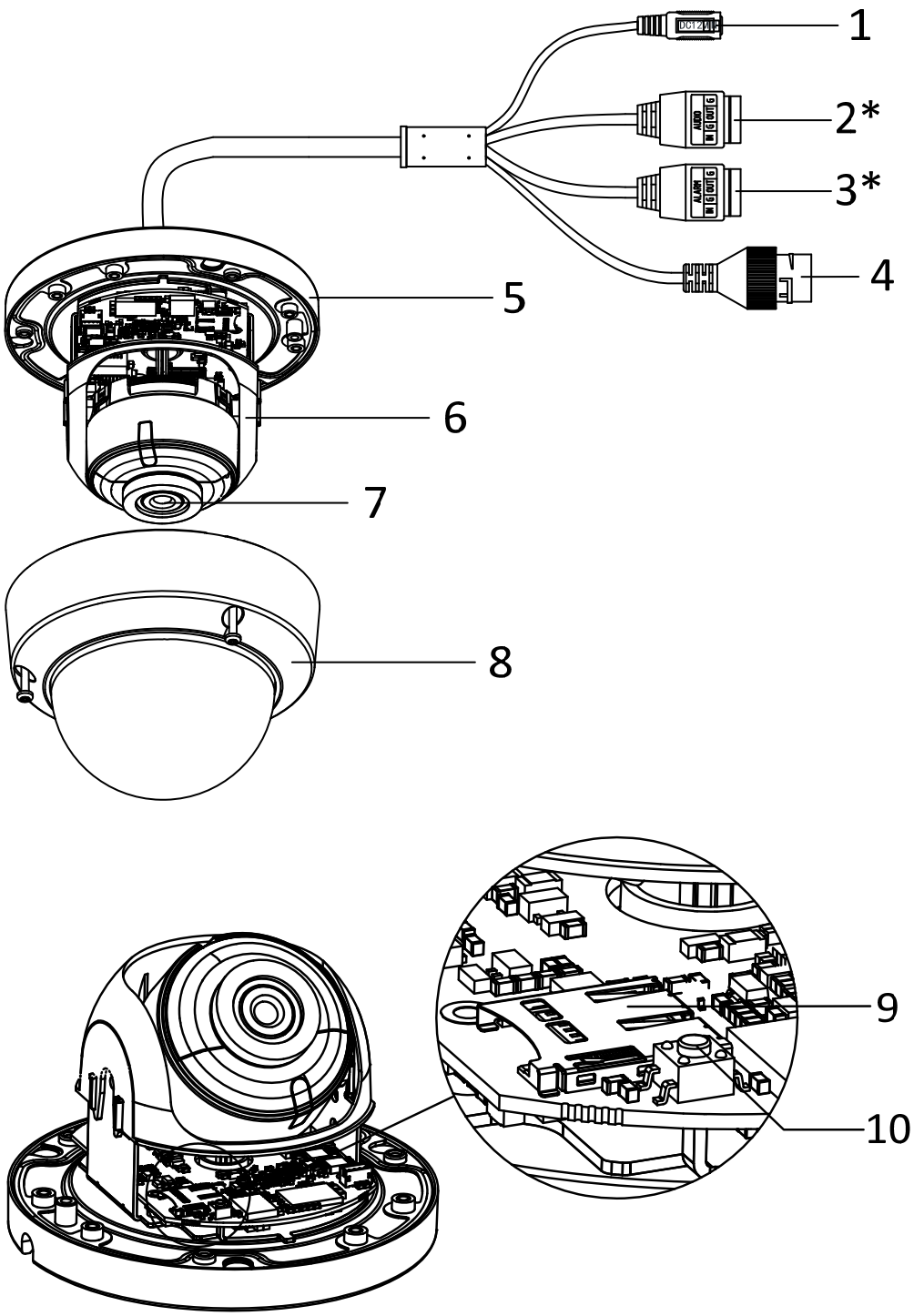


Figure 3-36 Overview

Table 3-3 Description

No.	Description
1	Power supply interface (12 VDC)
2*	Audio input and output interface(Optional)
3*	Alarm input and output interface(Optional)
4	RJ45 self-adaptive network interface (PoE)
5	Mounting base
6	Black liner
7	Lens
8	Bubble
9	Memory card slot
10	Reset button

- The items marked with the "*" are only supported by certain camera models.
- Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

3.3.2 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- The standard power supply is 12 VDC or PoE (802.3 af), please make sure your power supply matches with your camera.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure that the wall is strong enough to withstand four times the weight of the camera and the bracket.

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Dust or grease on the dome cover will cause IR reflection. Please do not remove the dome cover film until the installation is finished. If there is dust or grease on the dome cover, clean

the dome cover with clean soft cloth and isopropyl alcohol.

- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.
- The foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDS. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

3.3.2.1. Memory Card Installation

For camera models that support memory card as local storage, you can follow the steps to mount and unmount the memory card.
This camera series shares a similar structure, type III camera is used for demonstration.

Steps:

1. Loosen the screws on the bubble. Remove the bubble to expose the memory card slot.

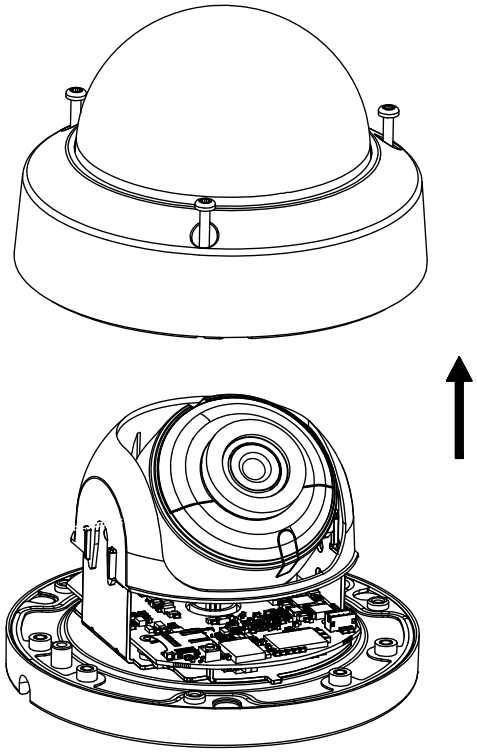


Figure 3-37 Remove Bubble

Notes:

- In case of losing, screws on bubble can not be screwed out thoroughly.
- The bubble is fastened to the camera with a safety rope.

2. Find the memory card slot to insert the memory card.

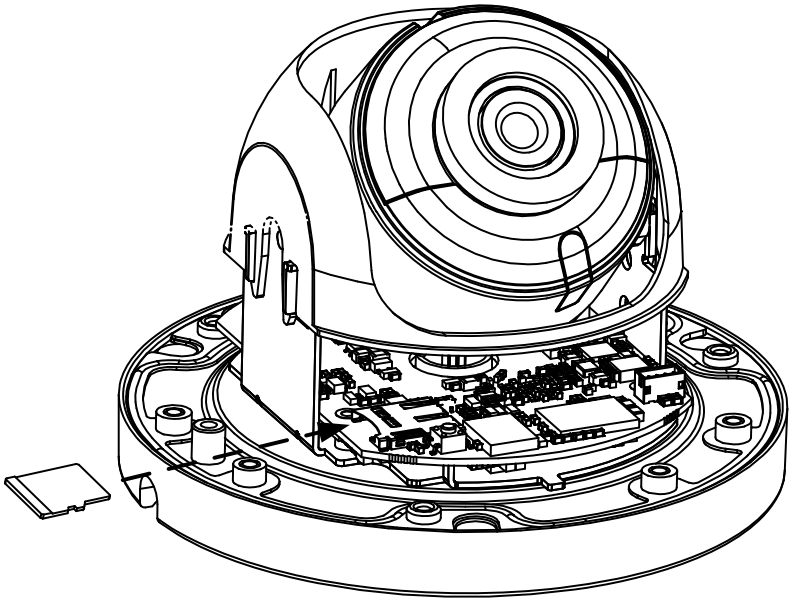


Figure 3-38 Insert Memory Card

3. To unmount the memory card, push to get it ejected.

3.3.2.2. Ceiling Mounting

This camera series shares a similar structure, type III camera is used for demonstration.

Steps:

1. Paste the drill template to desired mounting place.
2. Drill the screw holes on the ceiling according to the drill template.

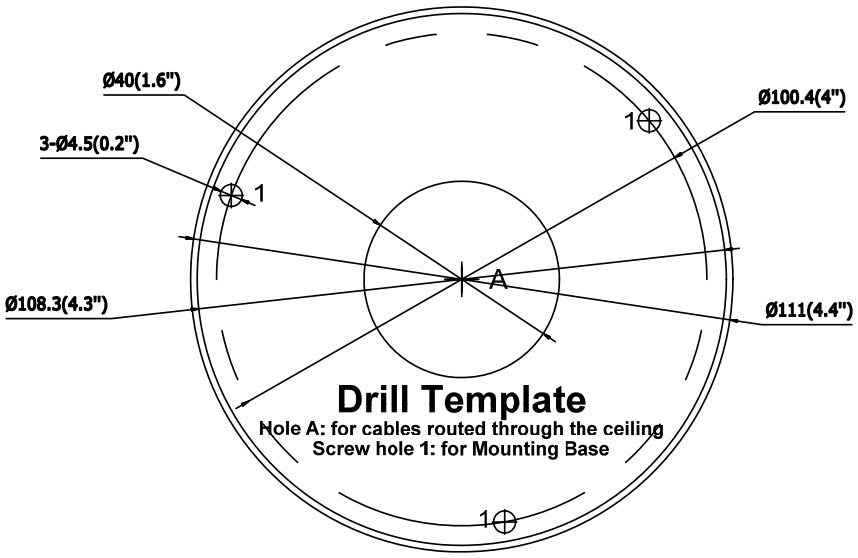


Figure 3-39 Drill Template

Notes:

- If you choose to route cable through the ceiling, cut a cable hole according to Hole A on drill template.
- You can also route cable from the side outlet.
- If you install the camera in outdoor, install the water-proof jacket to the network cable.

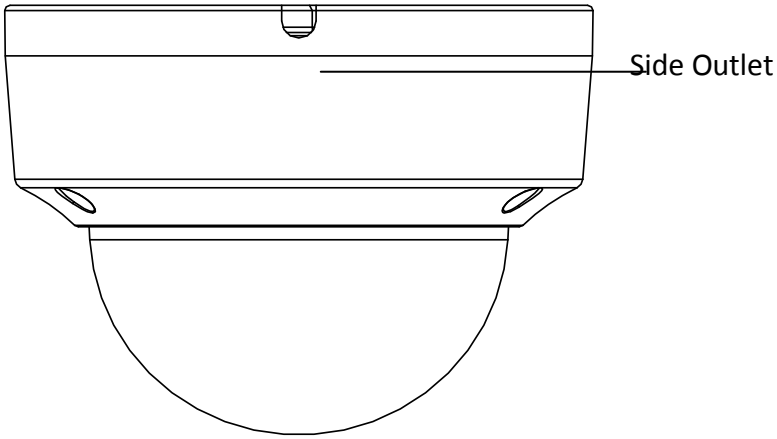


Figure 3-40 Side Outlet

3. Route the cables and fix the mounting base on the ceiling with three screws.

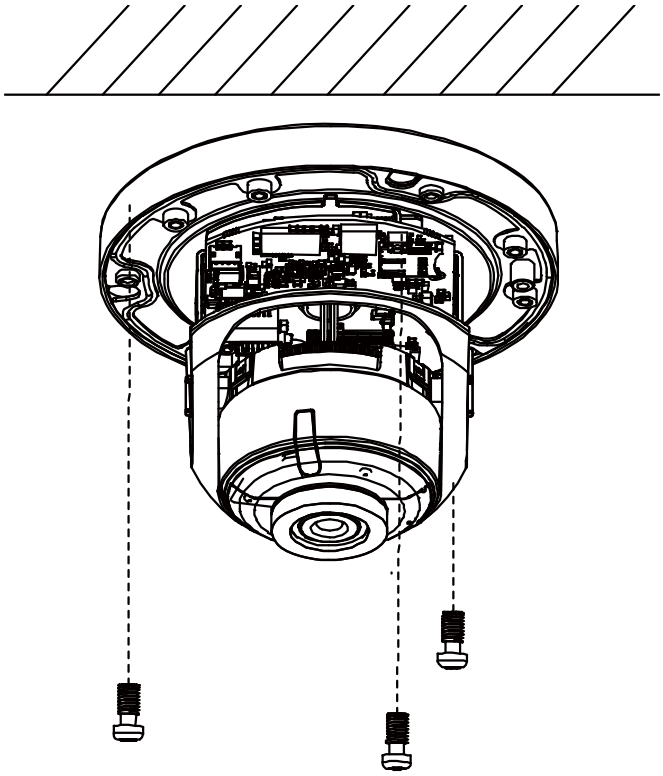


Figure 3-41 Fix the Mounting Base

4. Adjust surveillance angle. See the figure of each camera type for detailed angle adjustment range

1) Loosen one tilting adjust adjusting screw to adjust the tilting position. Tighten the screw after adjustment.
2) Hold the black liner to adjust the panning position.
3) Hold the lens to adjust the rotating position.

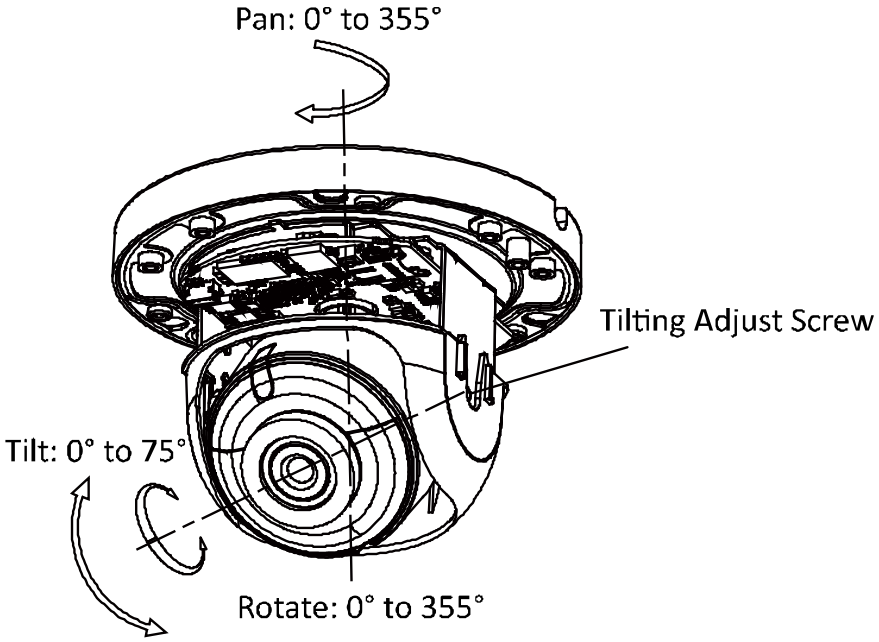


Figure 3-42 Angle Adjustment of Camera

5. Install the bubble back to the camera.

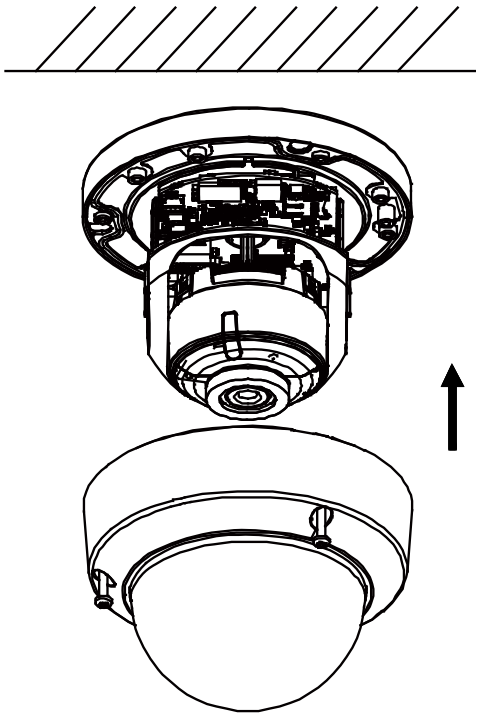


Figure 3-43 Install Bubble

3.3.2.3. Mounting with Brackets

This camera series supports mounting with wall mounting bracket, pendant mounting bracket, and incline mounting bracket.

❖ **Wall Mounting**

The wall mounting bracket is not included in the package. You need to prepare one, if you adopt this mounting type.

Steps:

1. Mark the screw holes on desired mounting place.

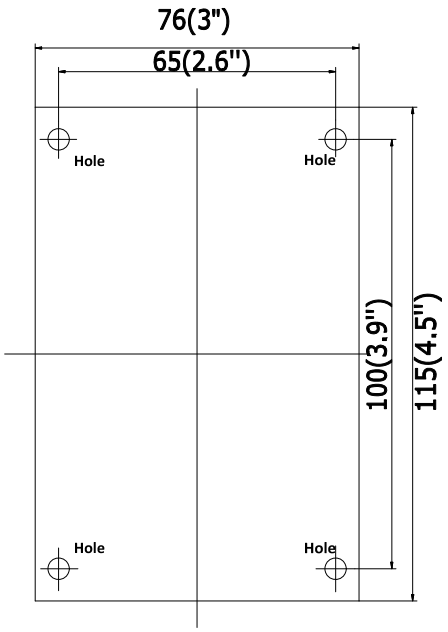


Figure 3-44 Mark Screw Hole

2. Drill 4 screw holes for expansion screws.
3. Unscrew the bubble of the camera.
4. Insert the memory card to the camera, if your camera supports memory card installation.
5. Route the cables and fix the camera to the cap of the wall mounting bracket with three supplied self-tapping screws.

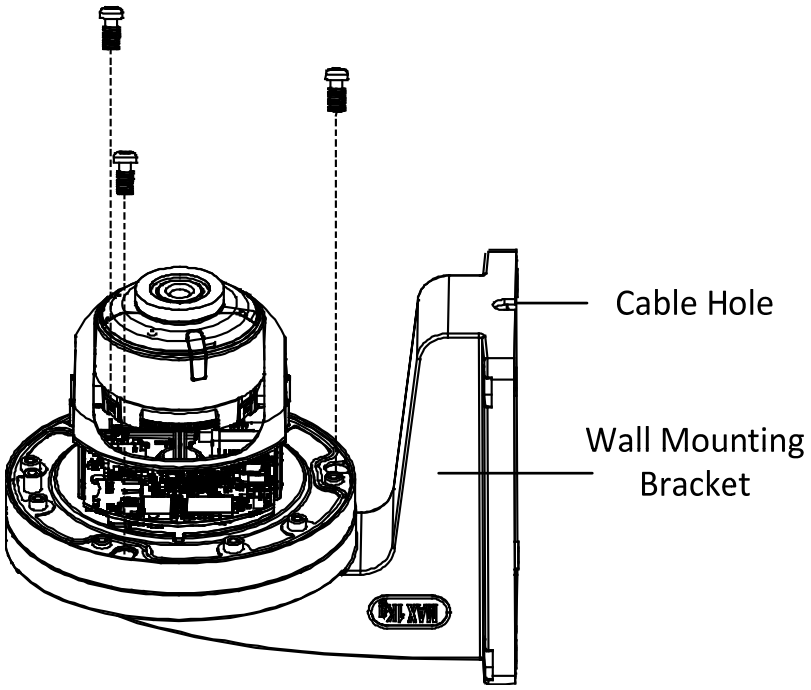


Figure 3-45 Fix the Camera to Wall Mounting Bracket

6. Align the wall mounting bracket to the screw holes and fix it to wall.

Note:

If you install the camera in outdoor, install the water-proof jacket to the network cable.

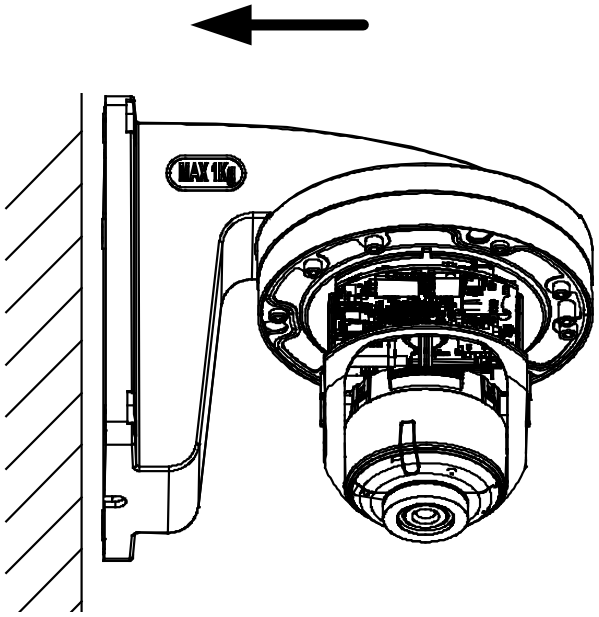


Figure 3-46 Fix the Wall Mounting Bracket to Wall

7. Adjust surveillance angle of camera.
8. Install the bubble back to the camera.

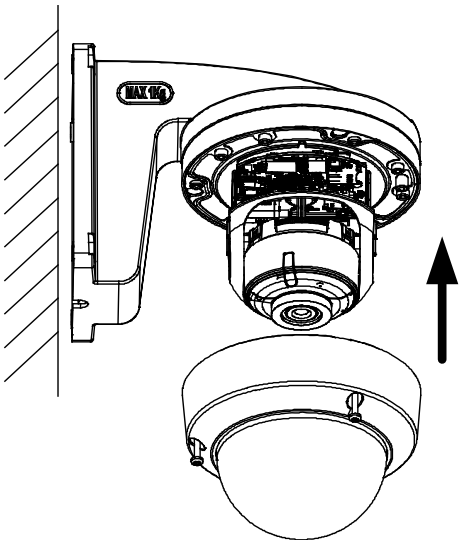


Figure 3-47 Install the Bubble

❖ **Wall Mounting with Junction Box**

The wall mounting bracket with junction box is not included in the package. You need to prepare one, if you adopt this mounting type.

Steps:

1. Mark the screw holes on desired mounting place.
2. Fix the bracket to the wall with four expansion bolts.

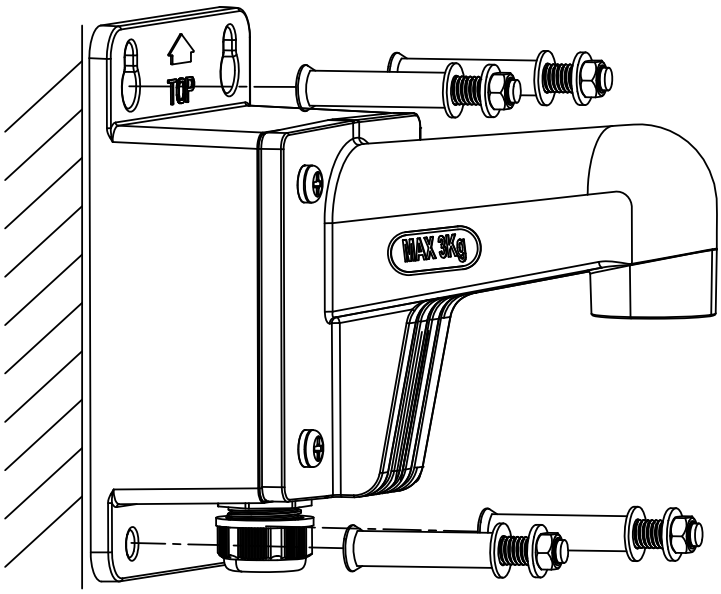


Figure 3-48 Fix the Bracket

3. Unscrew the junction box cover.

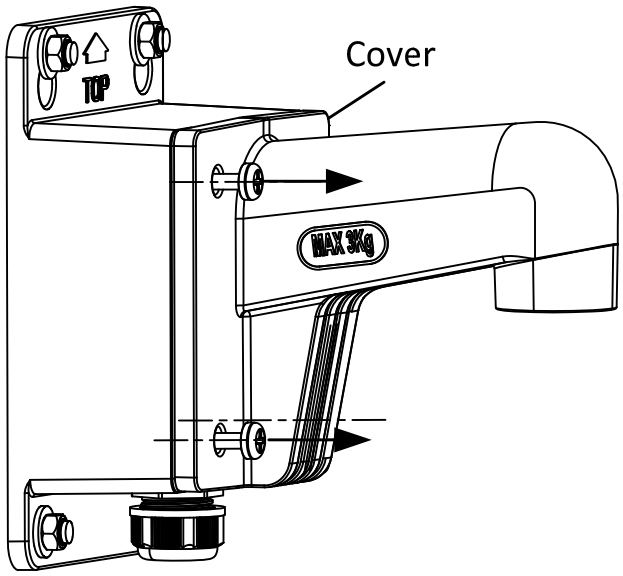


Figure 3-49 Unscrew the Cover

4. oute and connect the cables.

   Source cables of network, power, etc., go in from the side outlet of the junction box. Camera cables go in from the cap and the bracket.

   Note:

   If you install the camera in outdoor, install the water-proof jacket to the network cable.

5. Screw the cover back.

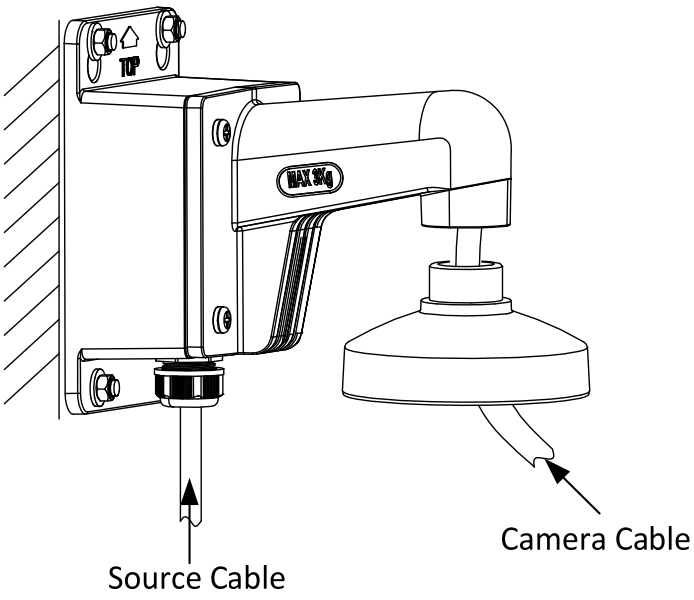


Figure 3-50 Cable Routing

6. Unscrew the bubble of the camera.
7. Insert the memory card to the camera, if your camera supports memory card installation.

8. Fix the camera to the cap of the wall mounting bracket with three supplied self-tapping screws.

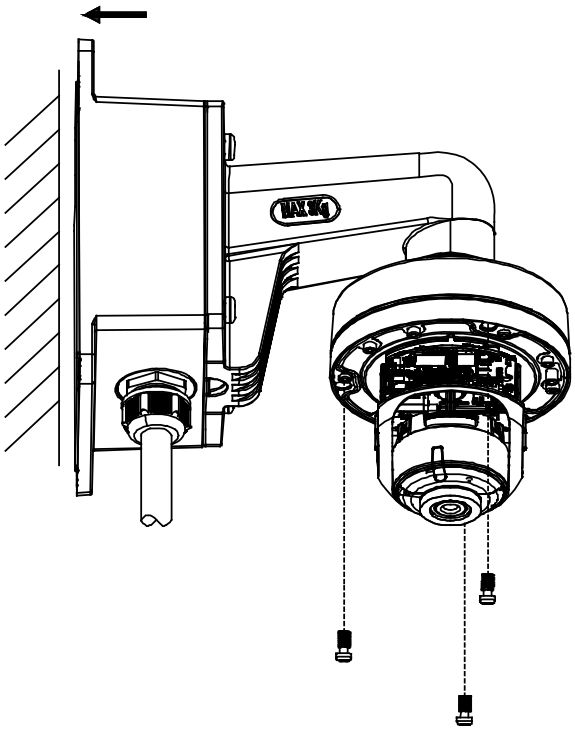


Figure 3-51 Fix the Camera to Wall Mounting Bracket

9. Adjust surveillance angle of camera.
10. Install the bubble back to the camera.

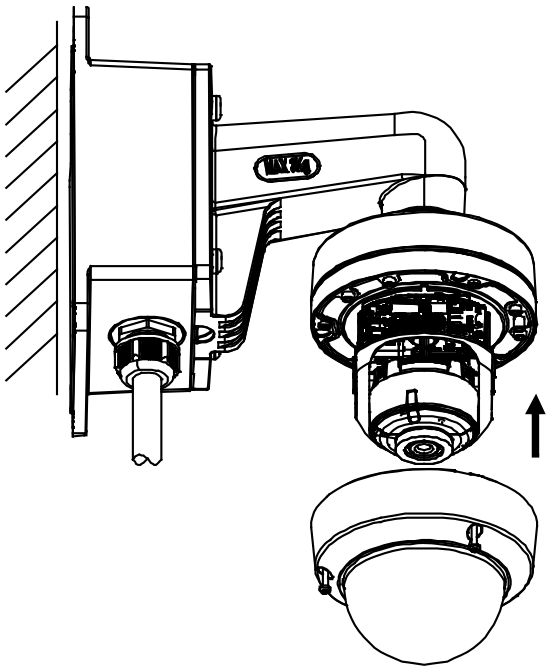


Figure 3-52 Install the Bubble

❖ **Pendant Mounting**

The pendant mounting bracket is not included in the package. You need to prepare one in advance, if you adopt this mounting type.

Steps:

1. Mark the screw holes on desired mounting place.
2. Drill three screw holes for expansion bolts.
3. Route the cables and fix the pendant mounting bracket to ceiling.

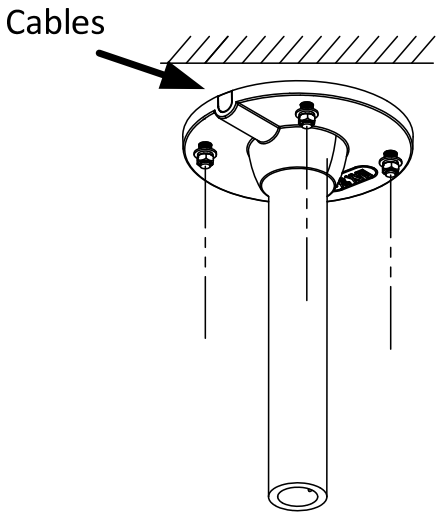


Figure 3-53 Fix Pendant Mount

4. Insert the memory card to the camera, if your camera supports memory card installation.
5. Fix the camera to the cap of the pendant mounting bracket with 3 supplied self-tapping screws.

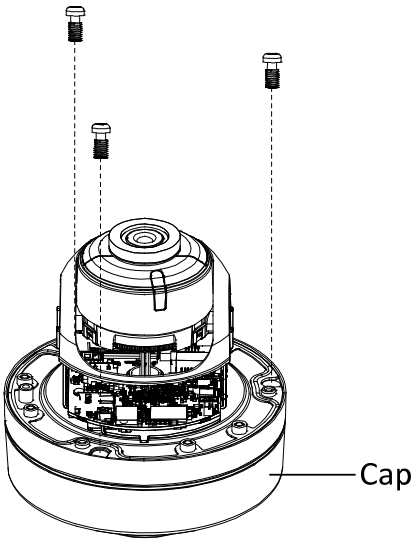


Figure 3-54 Fix the Camera to Cap

6. Screw the cap to the pendant mounting bracket.

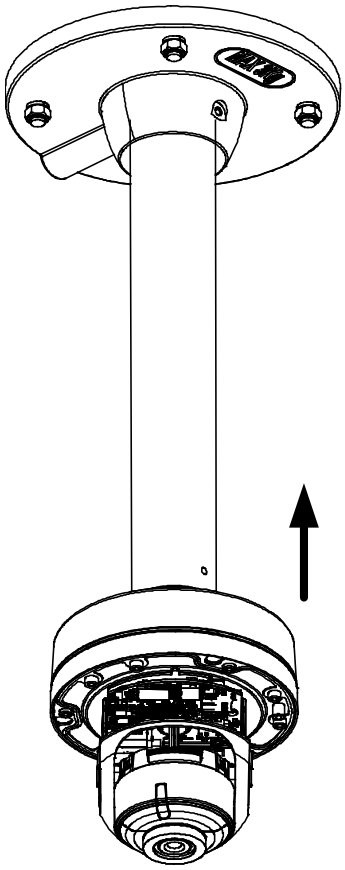


Figure 3-55 Install the Cap

7. Adjust surveillance angle of camera.
8. Install the bubble back to the camera

❖ **Incline Mounting**

The incline mounting bracket is not included in the package. You need to prepare one, if you adopt this mounting type.

Steps:

1. Paste the drill template to desired mounting place.

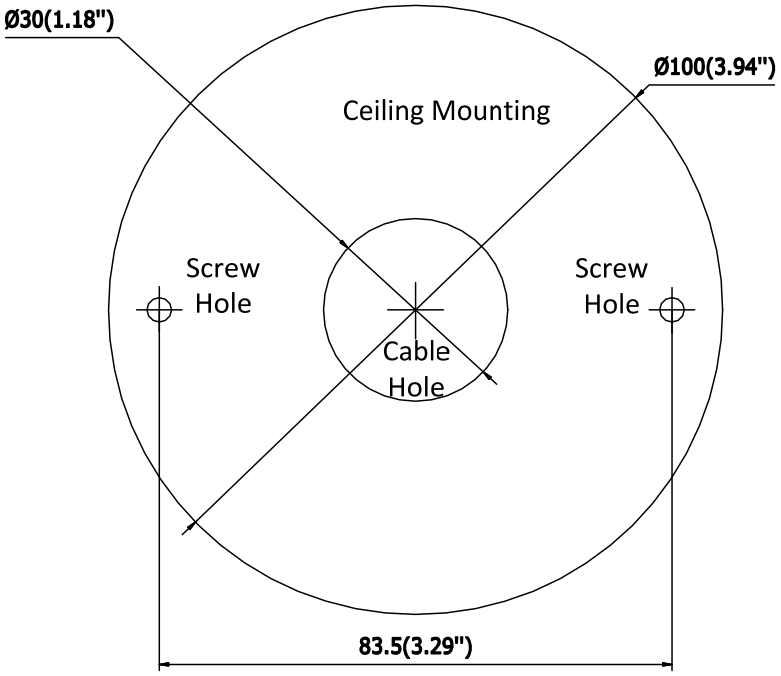


Figure 3-56 Drill Template

2. Drill two screw holes for expansion screws, and a cable hole according to the template.
3. Fix the incline mounting bracket to ceiling.

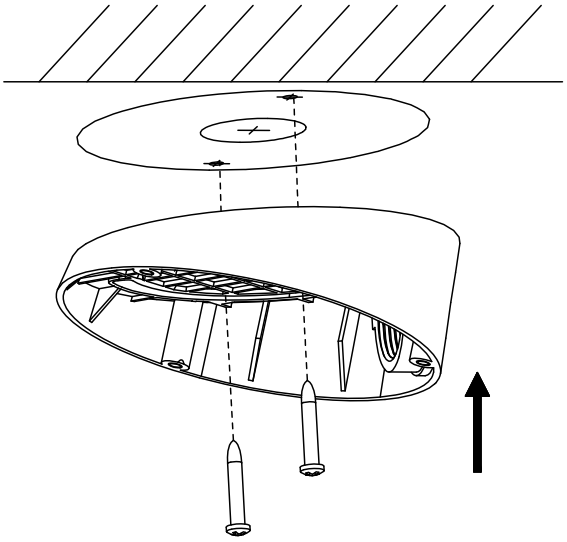


Figure 3-57 Fix Incline Mounting Bracket to Wall

4. Unscrew the bubble of the camera.
5. Insert the memory card to the camera, if your camera supports memory card installation.
6. Route the cables and fix the camera to the incline mounting bracket with three supplied self-tapping screws.

Note:

If you install the camera in outdoor, install the water-proof jacket to the network cable.

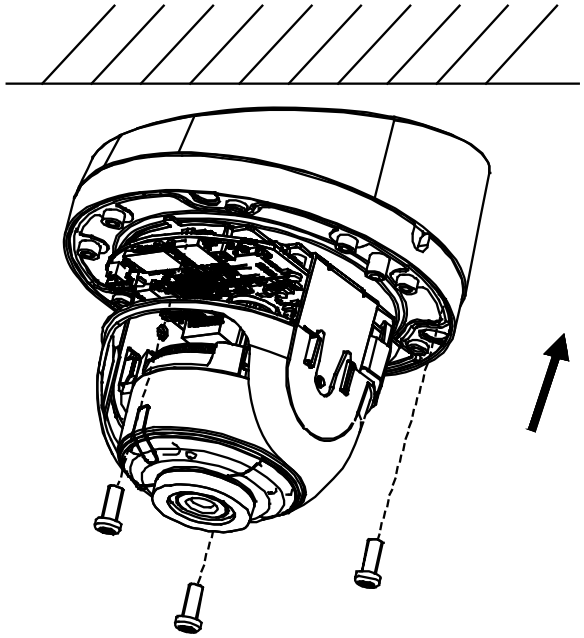


Figure 3-58 Fix the Camera to Wall Mounting Bracket

7. Adjust surveillance angle of camera.
8. Install the bubble back to the camera.

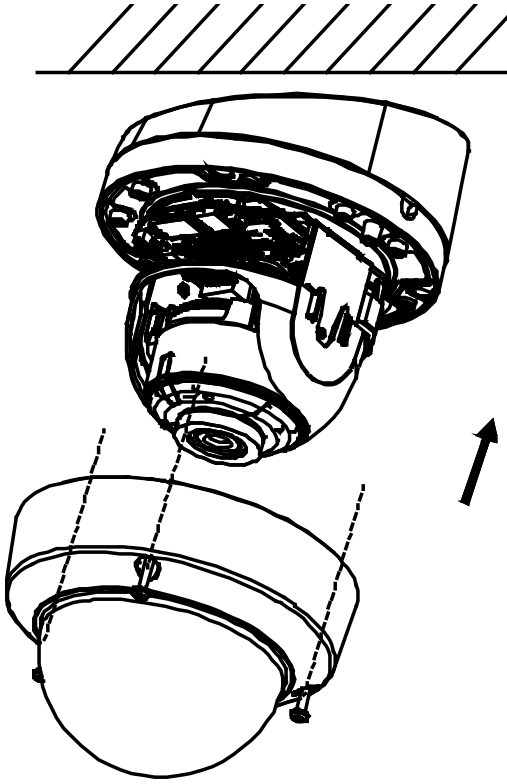


Figure 3-59 *Install the Bubble*

3.4 Type IV Dome Camera

3.4.1 Camera Description

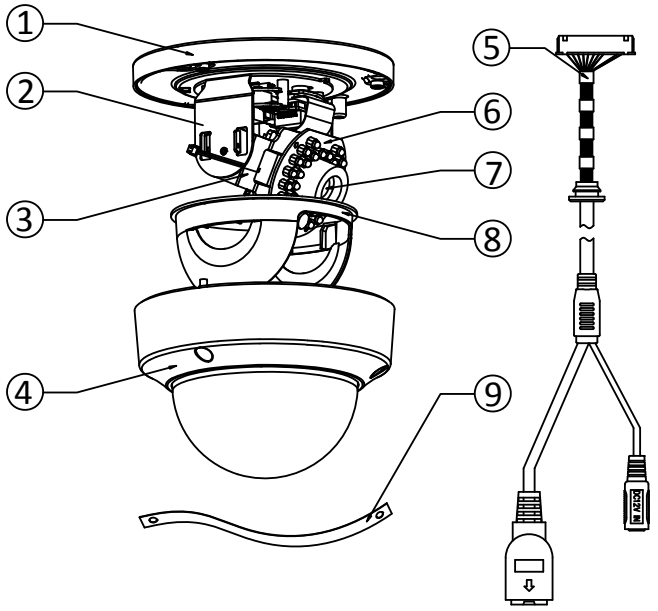


Figure 3-60 Overview

Table 3-4 Description

No.	Description
1	Mounting Base
2	Horizontal Stand
3	Vertical Stand
4	Bubble
5	Power/Network Cables
6	IR LED
7	Lens
8	Black Liner
9	Safety Rope

NOTE

Press RESET button about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

3.4.2 Installation

Steps:

1. Drill the screw holes on the ceiling according to the drill template.

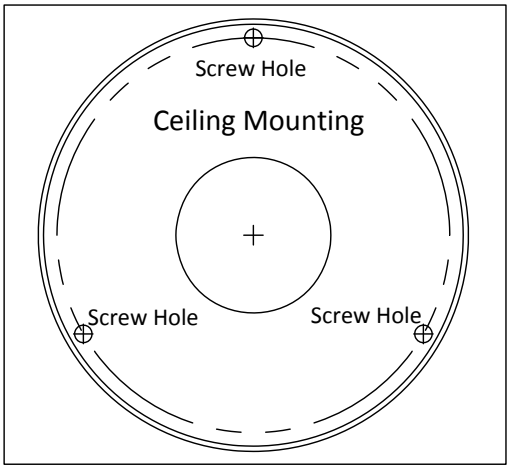


Figure 3-61 Drilling Template

2. Loosen the set screws with a hex key (supplied) to remove the bubble.

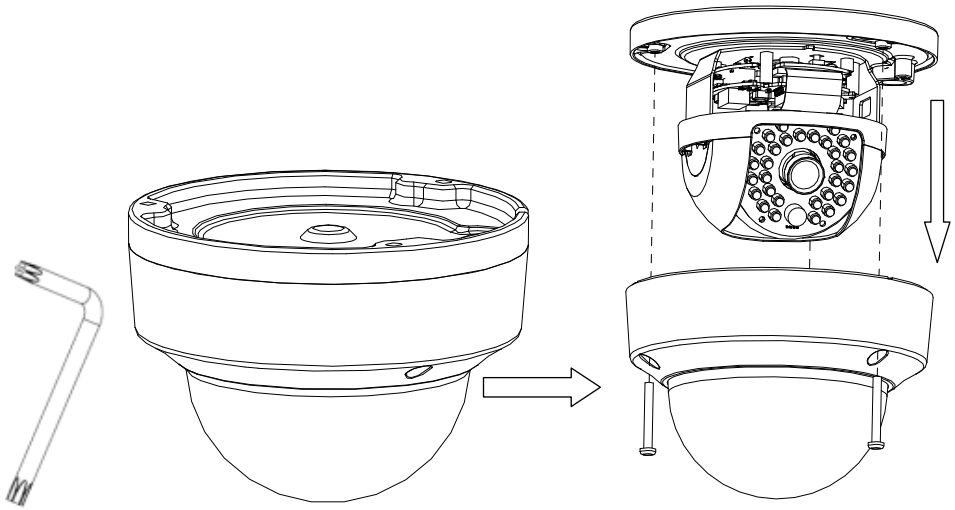


Figure 3-62 Remove the Bubble

3. Fix the mounting base on the ceiling with screws.

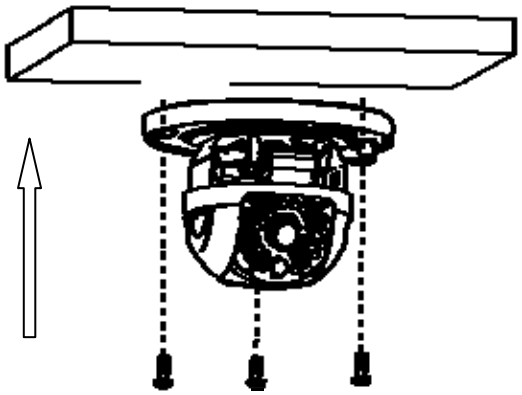


Figure 3-63 Fix the Mounting Base

If required, you can route cables through the side opening on the side of the mounting base.

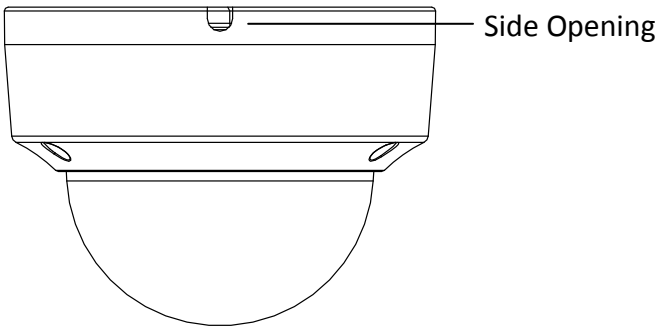


Figure 3-64 Side Opening

4. Loosen the tilt lock screws, adjust the tilting position in a range of 65 degrees, and tighten the tilt lock screws.
5. Rotate the black liner to adjust the panning position in a range of 180 degrees until you get the desired surveillance angle.

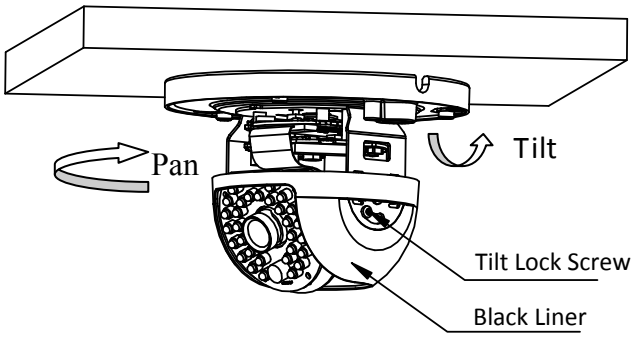


Figure 3-65 Surveillance Angle Adjustment

As the lens has already been factory adjusted to the best imaging effect, you just need to adjust the panning position and tilting position to get the desired surveillance angle.

6. Reinstall the bubble and tighten the screws.

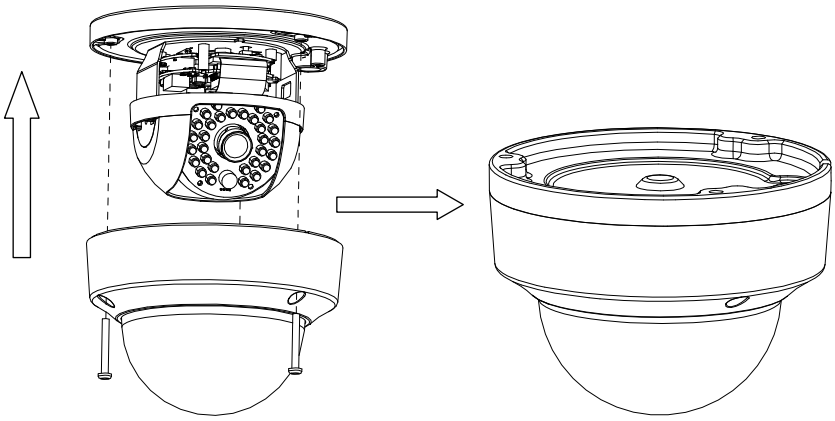


Figure 3-66 Bubble Reinstallation

3.5 Type V Dome Camera

3.5.1 Camera Description

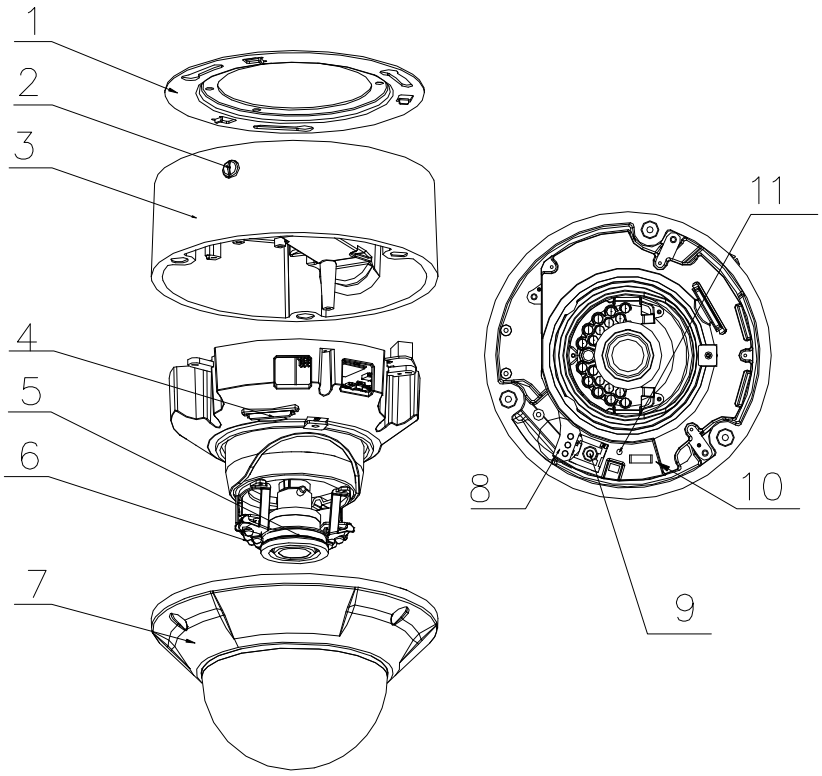


Figure 3-67 Overview

Table 3-5 Description

No.	Description
1	Ceiling Mount
2	Lock Button
3	Mounting Base
4	SD Card Slot
5	Lens
6	IR LED
7	Bubble
8	Status Indicator
9	RCA Analog Video Output
10	Debug
11	Reset

Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

3.5.2 Installation

Steps:

1. Drill the screw holes and the cable hole in the ceiling according to the supplied drill template.

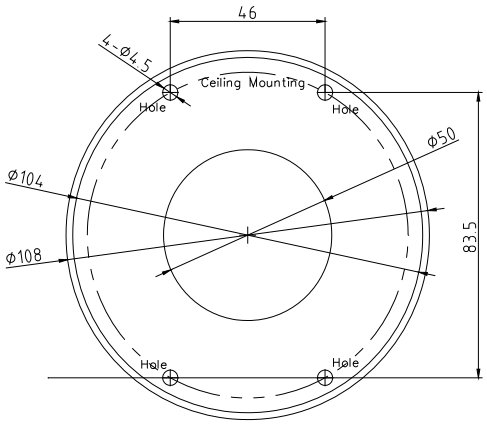


Figure 3-68 Drill Template

2. Fix the ceiling mount to the ceiling with screws.

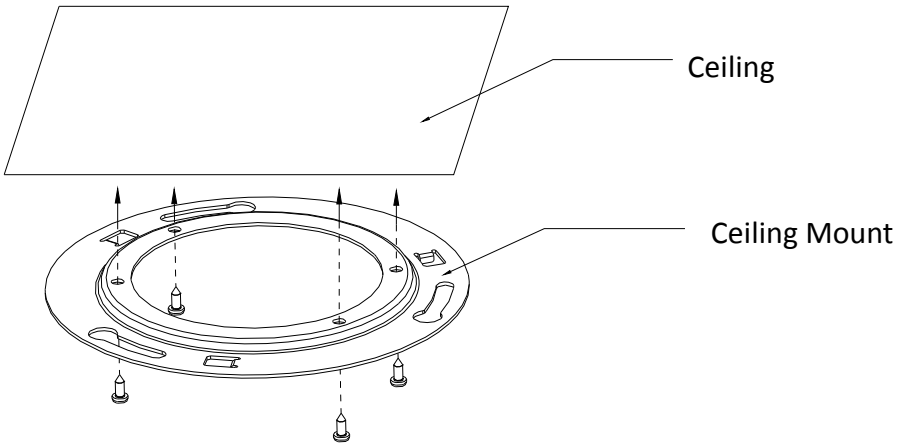


Figure 3-69 Fix the Ceiling Mount

3. Route the cables through the cable hole on the ceiling.

NOTE

If required, you can rotate the side outlet on the mounting base to remove it and route the cables through the side outlet.

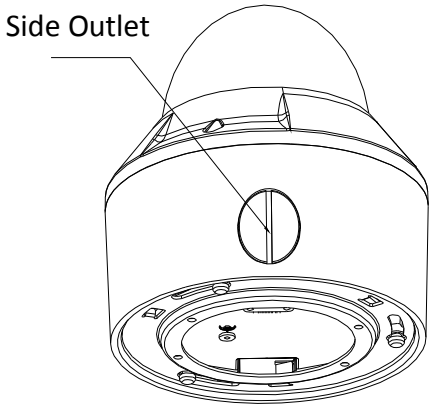


Figure 3-70 Side Outlet

4. Insert the three screws on the mounting base into the corresponding holes on the ceiling mount.
5. Rotate the mounting base clockwise to secure the dome camera to the ceiling mount.

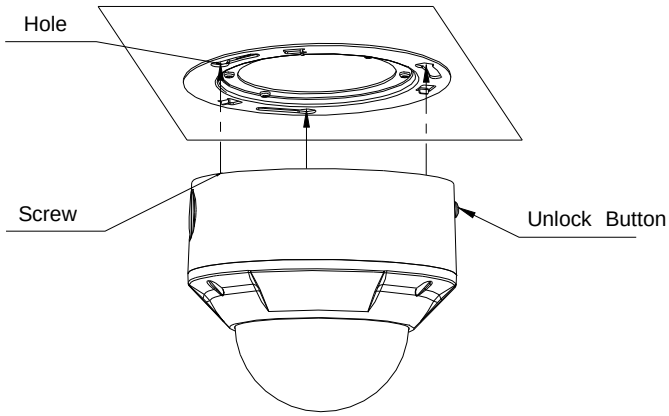


Figure 3-71 Install the Dome Camera

NOTE

To uninstall the dome camera, press the lock button and rotate the mounting base counterclockwise.

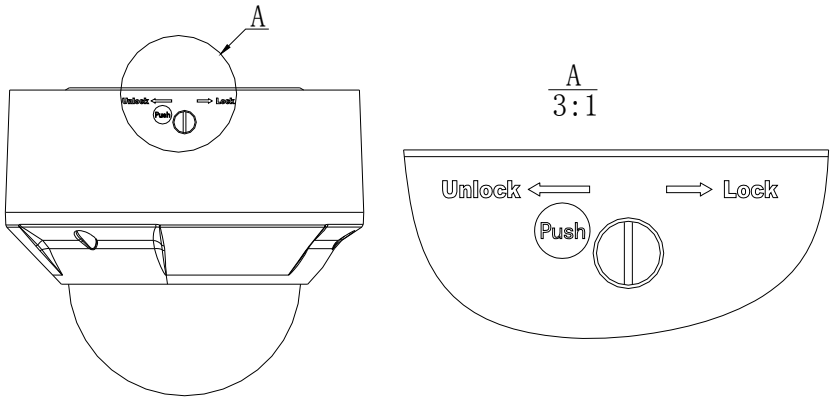


Figure 3-72 Uninstall the Dome Camera

6. Loosen the set screws with a hex key (supplied) to remove the bubble.

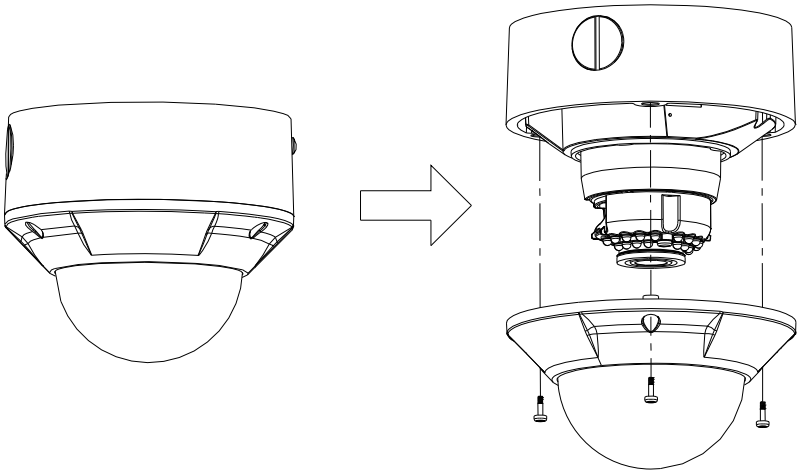


Figure 3-73 Remove the Bubble

7. Connect the RCA analog video output with a monitor to view the image.
8. Loosen the set screw and adjust the panning position and tilting position until you get the desired surveillance angle.
9. Loosen the zoom puller and focus puller and adjust the lens focus to obtain a perfect image.

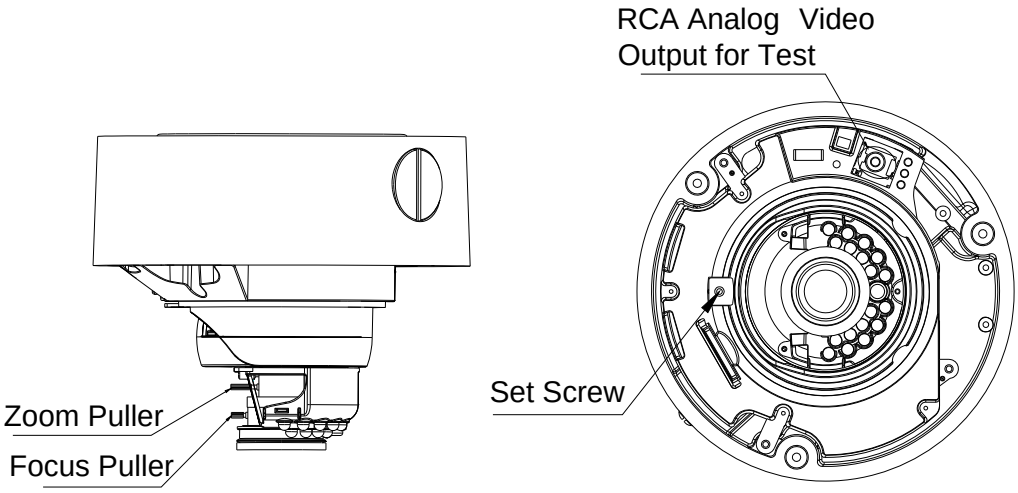


Figure 3-74 Image Adjusting

10. Reinstall the bubble and tighten the screws to complete the installation.

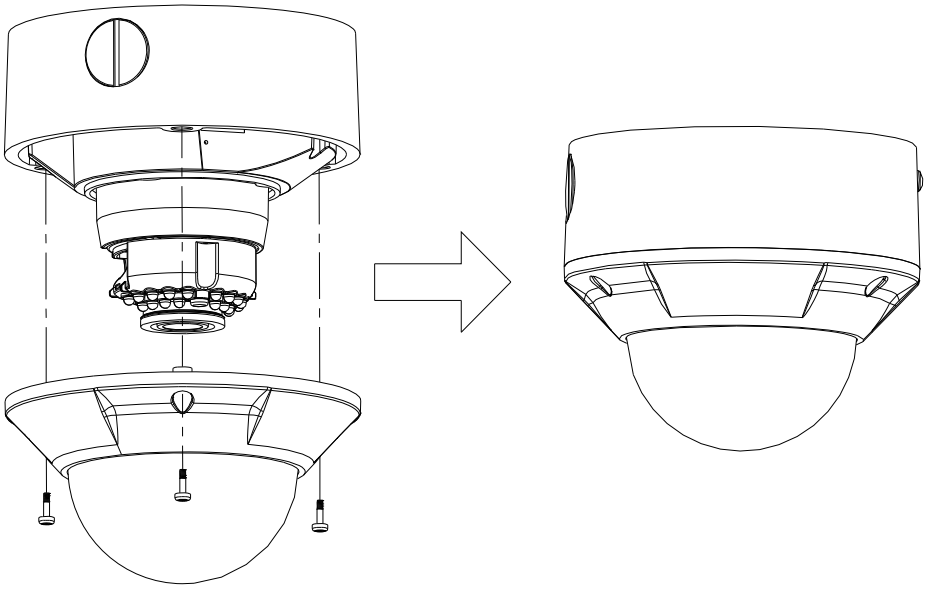


Figure 3-75 Reinstallation

3.6 Type VI Dome Camera

3.6.1 Camera Description

The overview of the network dome camera is shown below.

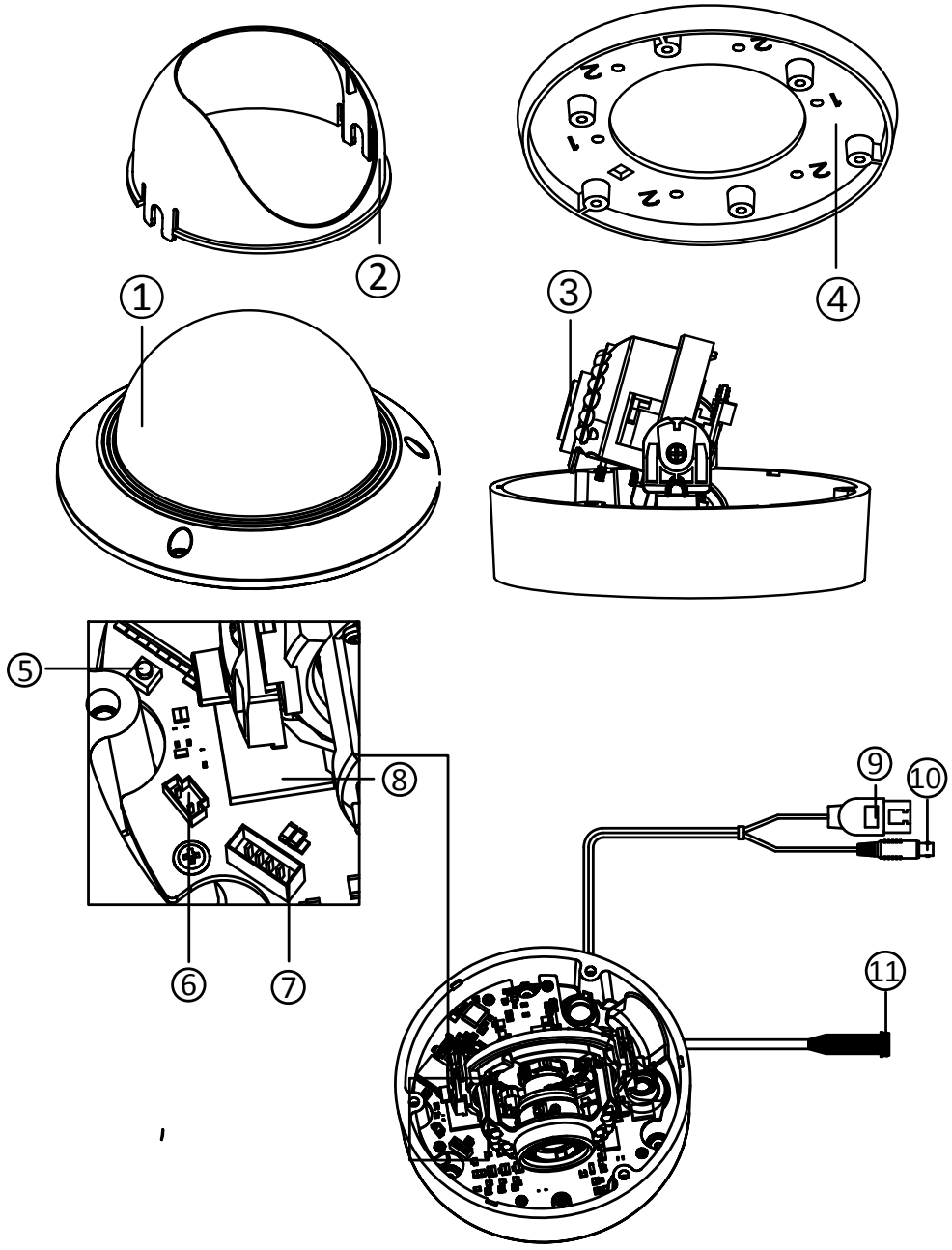


Figure 3-76 Overview

Table 3-6 Overview

No.	Description
1	Bubble
2	Black Liner
3	Lens
4	Mounting Base
5	Reset
6	Auxiliary Video Output
7	Serial Port
8	Micro SD Card Slot
9	Network Cable
10	Power Cable
11	Audio/Alarm Interface

NOTE

- Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.
- For the models which support audio and alarm functions, the interfaces are shown as follows.

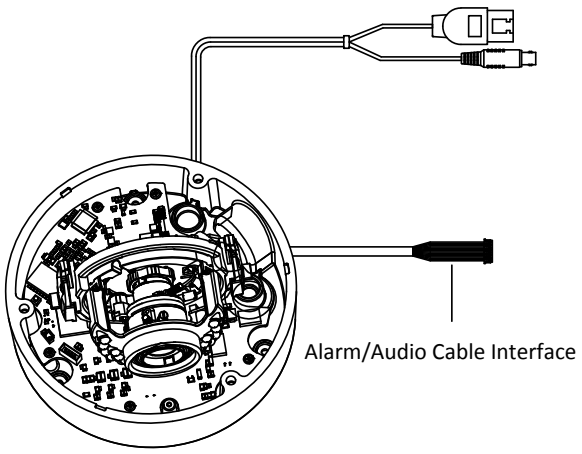


Figure 3-77 Audio and Alarm Interfaces

3.6.2 Installation

❖ Ceiling mounting

Steps:

1. Loosen the three screws on the edge of the bubble with the screw driver.
2. Open the bubble and remove the inner black liner.

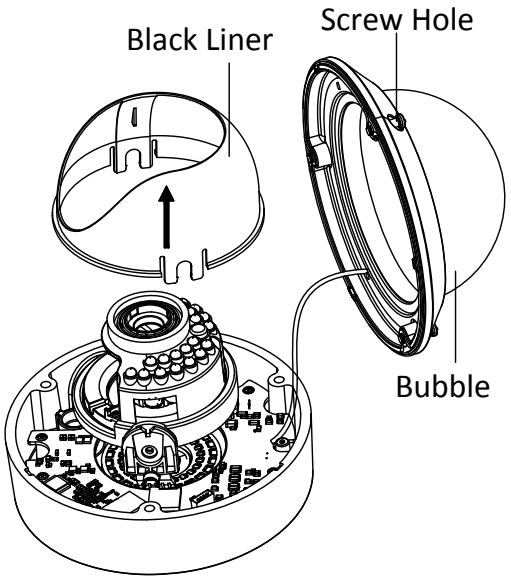


Figure 3-78 Remove the Bubble and Black Liner

3. Attach the drill template (supplied) to the place where you want to fix the camera.
4. According to the drill template as shown below, drill three screw holes in the ceiling.

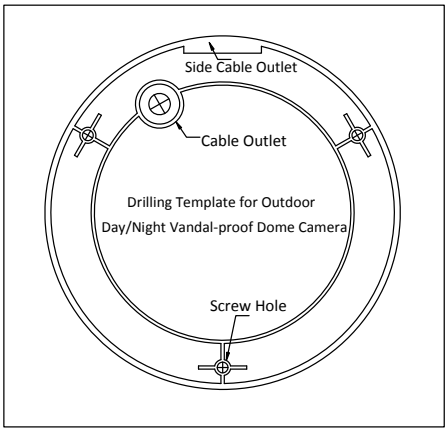


Figure 3-79 Drill Template

5. If you want to route the cables inside the ceiling, drill a cable hole in the ceiling according to the drill template. Skip this step if you want to route the cables on the surface of the ceiling. Refer to Conduit Installation on the Side for side cable routing.

6. Attach the camera to the ceiling by aligning the holes of the back box with the holes on the ceiling.

7. Secure the camera with the supplied screws as shown below.

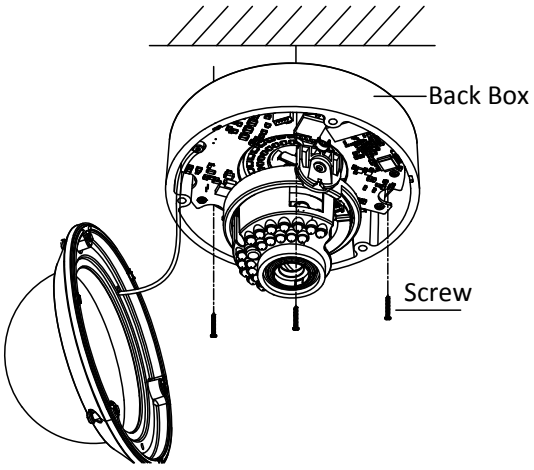


Figure 3-80 Secure the Camera

8. Route the cables through the cable hole.

9. Connect the video output connector to the monitor. Connect the power connector to the power supply.

10. Adjust the image and focus. Please refer to ***Image and Focus and Adjusting*** for more detailed information.

11. Install the inner black liner back to the camera.

12. Install the bubble back to the camera and secure it with screws as shown below.

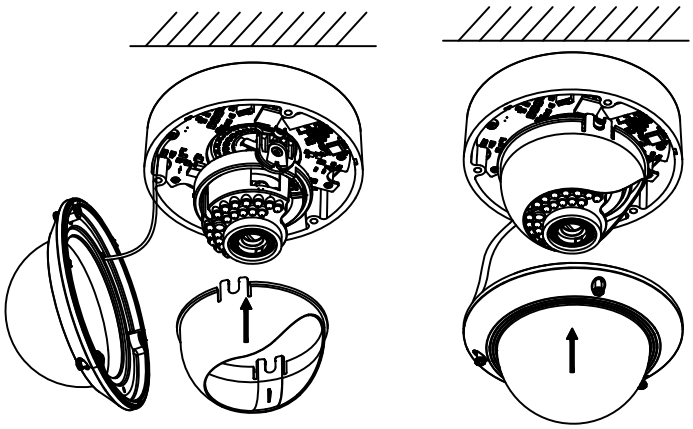


Figure 3-81 Secure Black Liner and Bubble

❖ Conduit Installation on the Side

If you want to route the cables from side of the camera, you need to follow the steps below to install a conduit for cable routing.

Steps:

1. Rotate the water-proof plug counterclockwise to remove it from the camera.

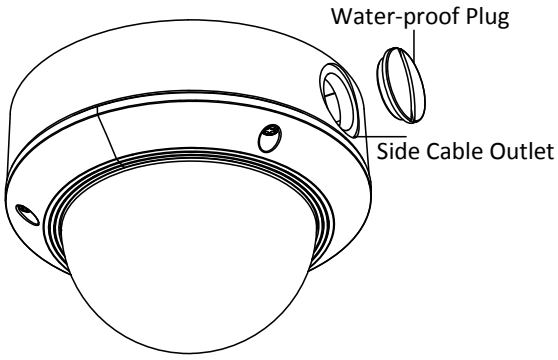


Figure 3-82 Remove the water-proof plug

2. Route the power cable and network cable through the side outlet to the conduit.
3. Align and rotate clockwise the conduit to the side outlet tightly.

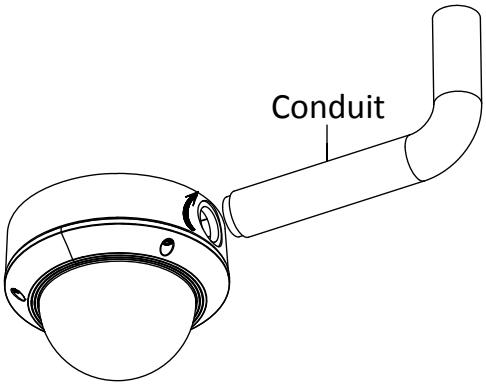


Figure 3-83 Install the Conduit to the Camera

NOTE

For wall mounting, position the side outlet directly downward for water-proof.

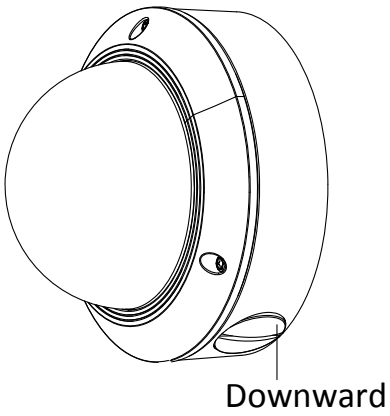


Figure 3-84 Side Outlet Direction

❖ Ceiling Mounting With Gang Box

Steps:

1. Disassemble the camera.
2. Install the gang box in the ceiling.
3. Attach the mounting base to the gang box with two screws.

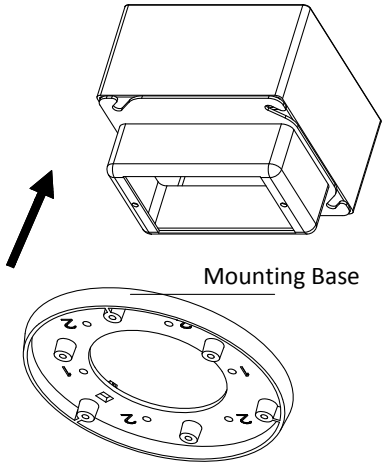


Figure 3-85 In-ceiling Mount

4. Route the cables through the hole in the center of the mounting base.
5. Align the camera with the mounting base.
6. Tighten the screws to secure the camera with the mounting base.
7. Connect the video output connector to the monitor. Connect the power connector to the power supply.
8. Adjust the image and focus. Please refer to the ***Image and Focus Adjusting*** for more detailed information.

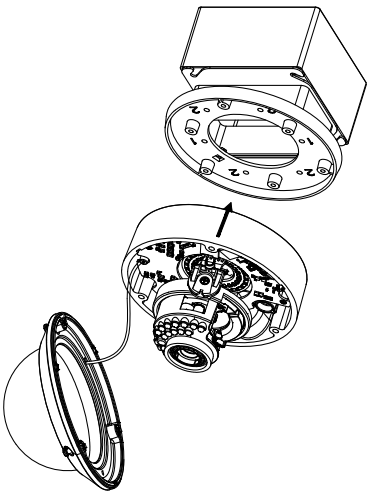


Figure 3-86 Secure Camera

9. Install the inner black liner back to the camera.
10. Align the bubble with the camera.
11. Tighten the screws to secure the bubble with the camera as shown below.

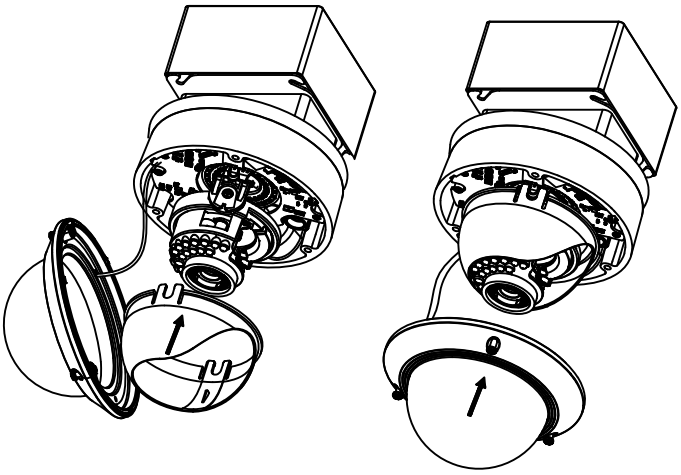


Figure 3-87 Secure the Bubble

❖ **Wall Mounting**

For the wall mounting, you have to purchase a wall mount.

Steps:

1. Disassemble the camera.
2. Install the wall mount and mounting adapter as shown below.
3. Align the screw holes of the mounting base with the corresponding screw holes of the mounting adapter.
4. Secure the mounting base to the mounting adapter with four screws.

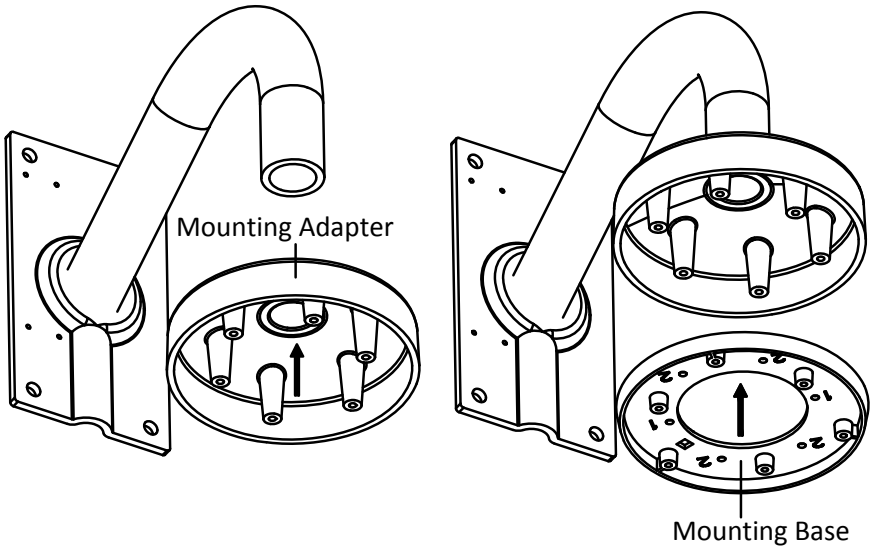


Figure 3-88 Secure Mounting Base

5. Route the cables through the hole in the center of the wall mount.
6. Align the camera with the mounting base.
7. Tighten the set screws to secure the camera with the mounting base.
8. Connect the video output connector to the monitor. Connect the power connector to the power supply.
9. Adjust the image and focus. Please refer to ***Image and Focus Adjusting*** for more detailed information.

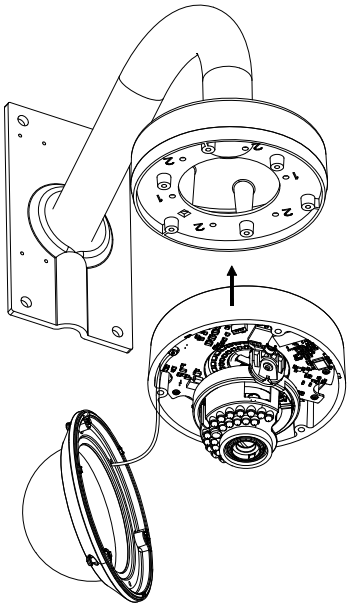


Figure 3-89 Secure Camera

10. Install the inner black liner back to the camera.
11. Align the bubble with the camera.
12. Tighten the screws to secure the bubble with the camera.

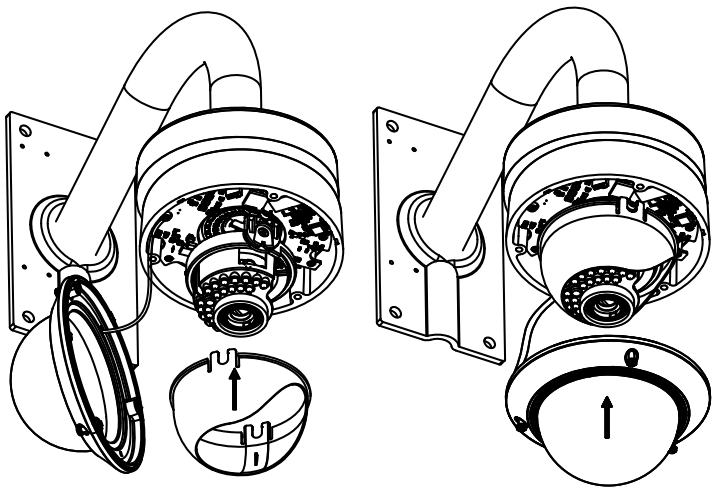


Figure 3-90 Secure Black Liner and Bubble

❖ Image and Focus Adjusting

Steps:

1. View the camera image using the monitor.
2. Rotate the panning table to adjust the panning position of the camera.
3. Rotate the tilting axes to adjust the tilting position of the camera.
4. Rotate the lens table to adjust the azimuth angle of the image.

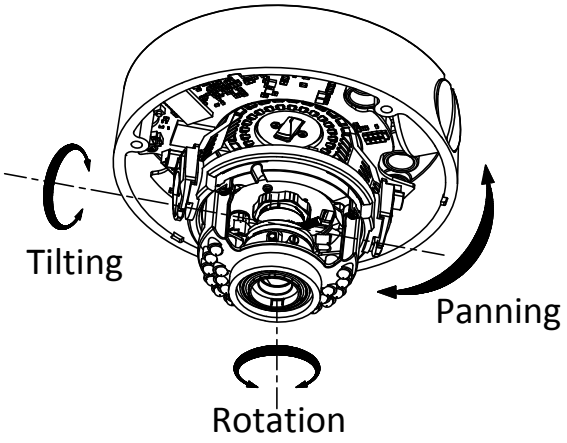


Figure 3-91 3-axis Adjustment

5. Zoom and focus adjustment.
   1). View the camera image using the monitor.
   2). Loosen the zoom lever and move the lever between T (Tele) and W (Wide) to obtain the appropriate angle of view.
   3). Tighten the zoom lever.
   4). Loosen the focus lever and move the lever between F (Far) and N (Near) to obtain the optimum focus.
   5). Tighten the focus lever.

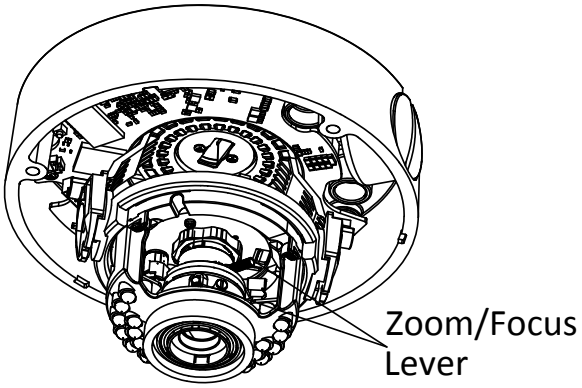


Figure 3-92 Lens Adjustment

3.7 Type VII Dome Camera

3.7.1 Camera Description

The overview of the dome camera is shown below:

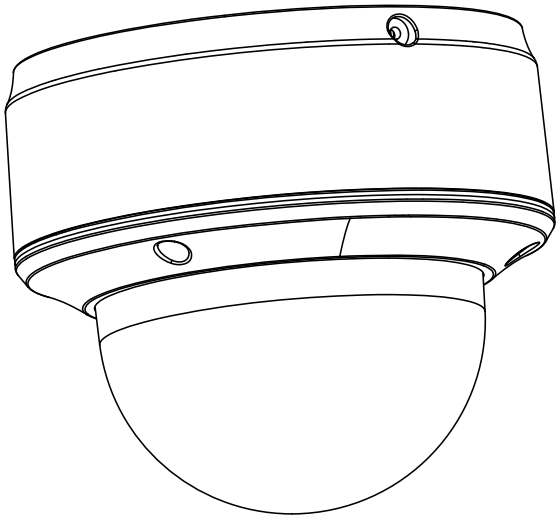


Figure 3-93 Overview

The overview of the components and the interface are shown below:

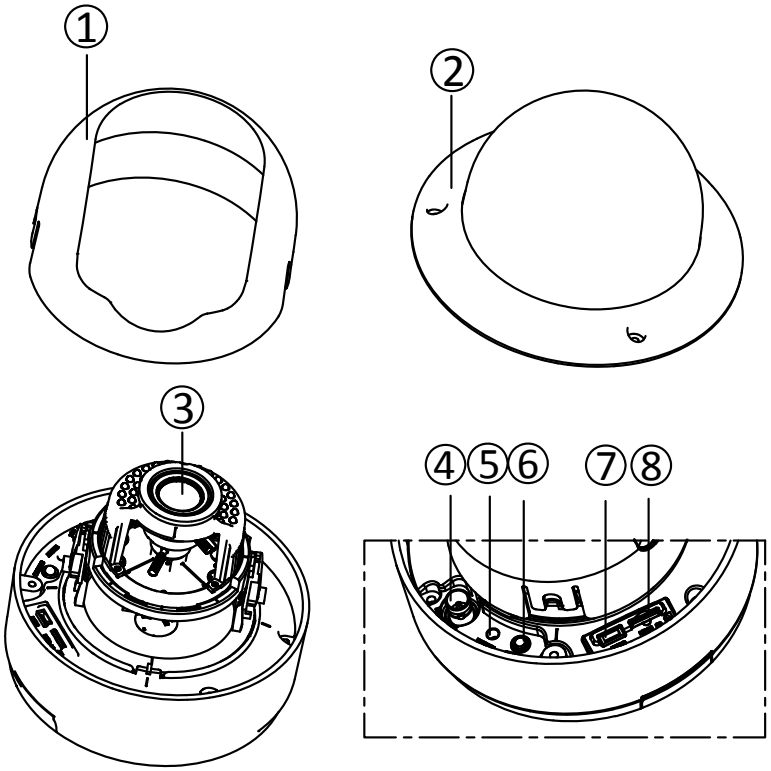


Figure 3-94 Overview (2)

The interfaces on the rear panel are shown below:

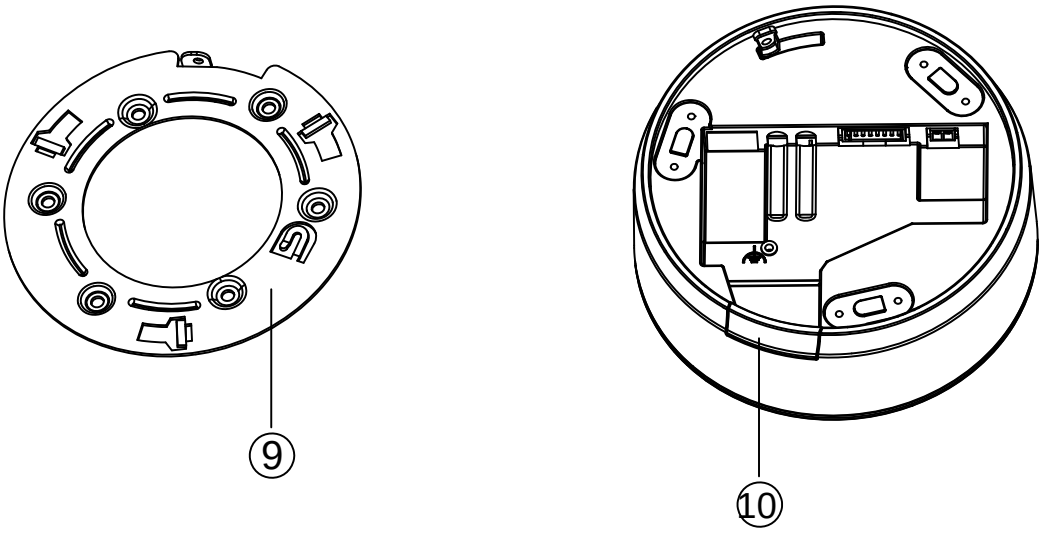


Figure 3-95 Overview (3)

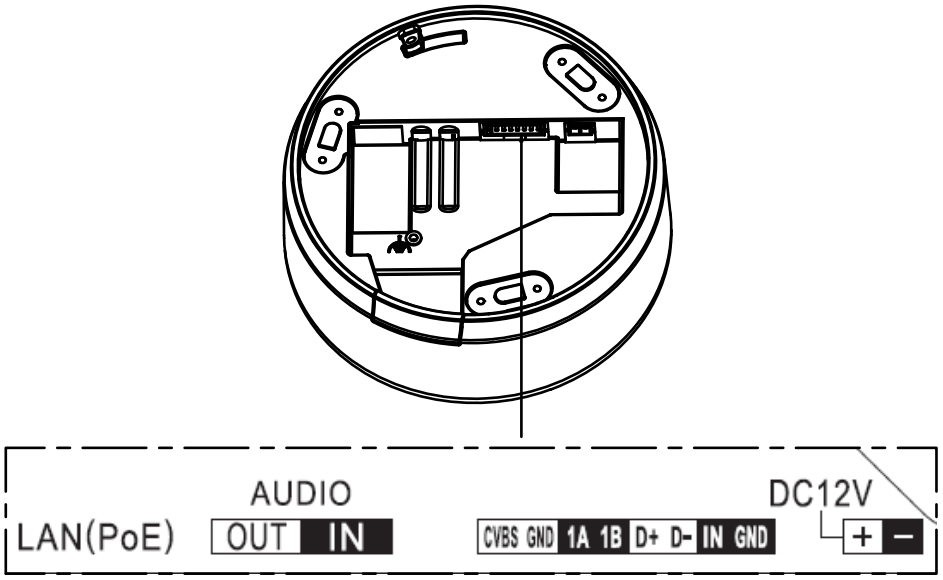


Figure 3-96 Overview (4)

Table 3-7 Description of Overview (2~3)

No.	Description	No.	Description
1	Black Liner	2	Bubble
3	Lens	4	BNC Interface
5	Reset	6	Status Indicator
7	Test Serial Port	8	Micro SD Card Slot
9	Adapter Plate	10	Side Outlet

Table 3-8 Description of Overview (4)

Name	Description
LAN （PoE）	10M/100M Self-adaptive Ethernet Port(PoE Supported)
AUDIO OUT/IN	Audio Out/In
CVBS，GND	Auxiliary video output
1A，1B	Alarm Out
D+，D-	RS-485 Interface
IN，GND	ALARM IN
DC12V	Power Supply Interface （12 VDC ）

NOTE

Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

3.7.2 Installation

Steps:

1. Drill the screw holes and the cable hole according to the supplied drill template.

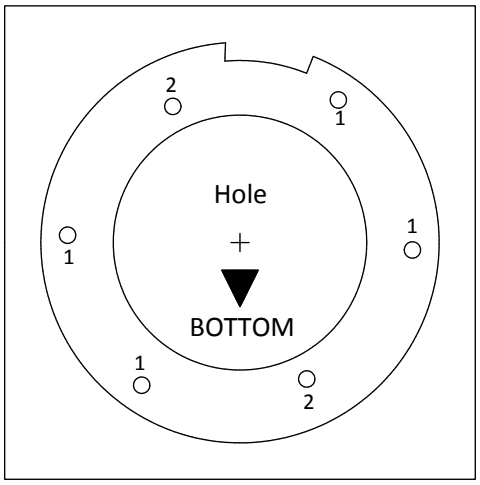


Figure 3-97 Drill Template

(Optional)Routing the cable from the side outlet instead of the cable hole drilled on the ceiling is supported. Use a plier to remove the part shown in the figure below, and you can route the cables from the side outlet.

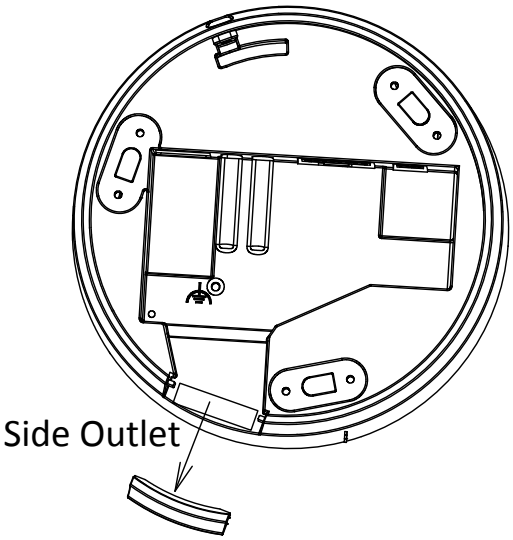


Figure 3-98 Side Outlet

2. Fix the adapter plate to the ceiling with the supplied screws.

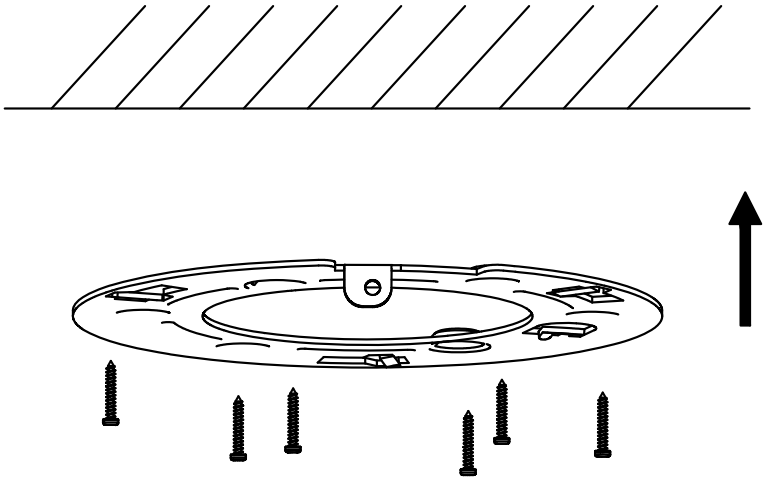


Figure 3-99 Install the Adapter Plate

3. Align the mounting base with the adapter plate and route the mounting base anticlockwise to get it fitted with the adapter plate, and then fix it by tightening the lock screw.

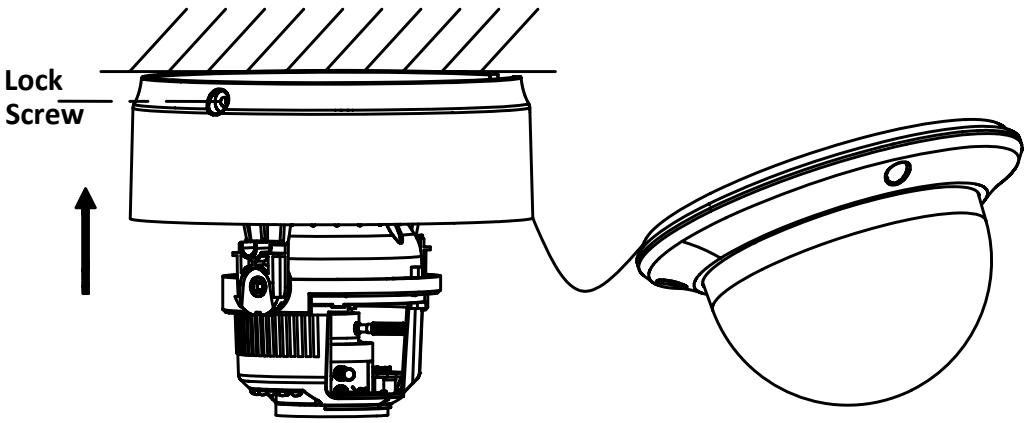


Figure 3-100 Install the Mounting Base

4. Adjust the surveillance angle according to the figure below. Panning angle [0~80°], tilting angle [0~355°], and azimuth angle of the lens [0~355°].

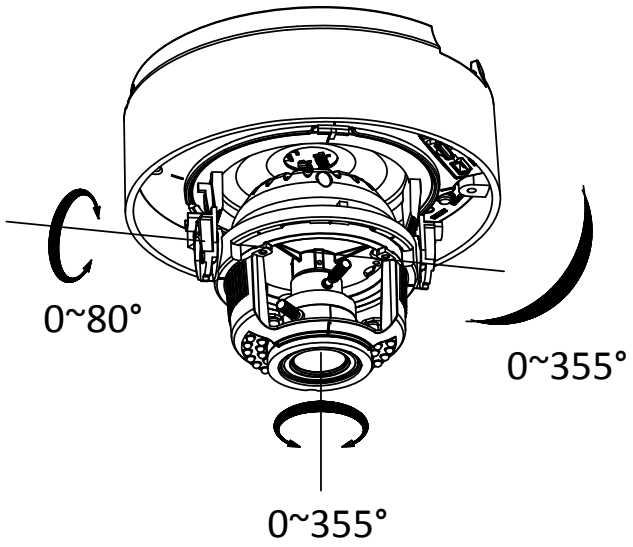


Figure 3-101 3-axis Adjustment

5. Adjust the focus and zoom.

1). Connect the VIDEO OUT interface of the camera to the debugging monitor.

2). Set the iris type to MANUAL first.

3). Adjust the No.1 Zoom Lever (T~W) to select a proper angle of view.

4). Adjust the NO.2 Focus Lever (F~N) to obtain a perfect image on the monitor.

5). Set the iris type as MANUAL if the environment has a good and stable illumination, and set the iris type as AUTO if the environment has a strong and changeable illumination.

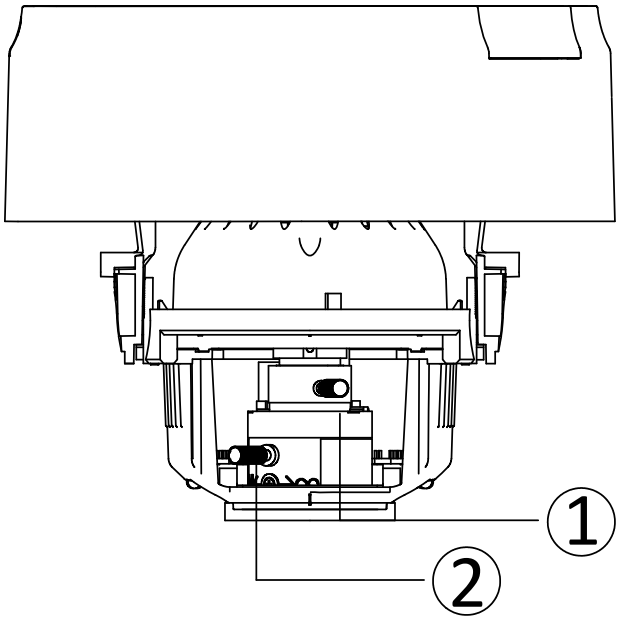


Figure 3-102 Adjust the Lens

For the camera adopts electronic lens, you can adjust the zoom and focus by visiting the device, and adjust it from the PTZ control interface.

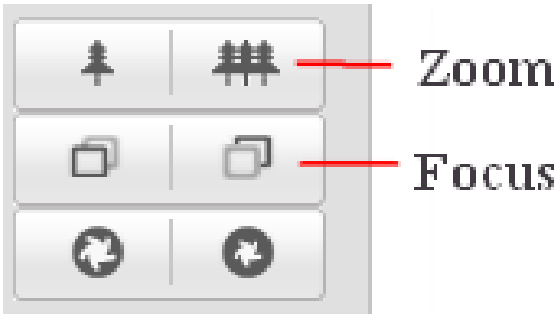


Figure 3-103 Zoom and Focus Adjustment of Electronic Lens

6. Attach the black liner to the dome drive.
7. Attach the bubble to the dome drive and rotate it to get tightened.

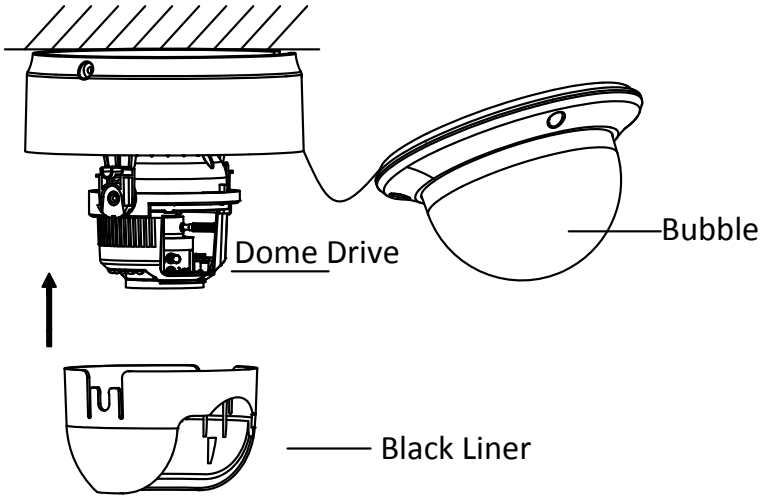


Figure 3-104 Install the Black Liner and Bubble

8. Tighten the lock screw to complete the installation.

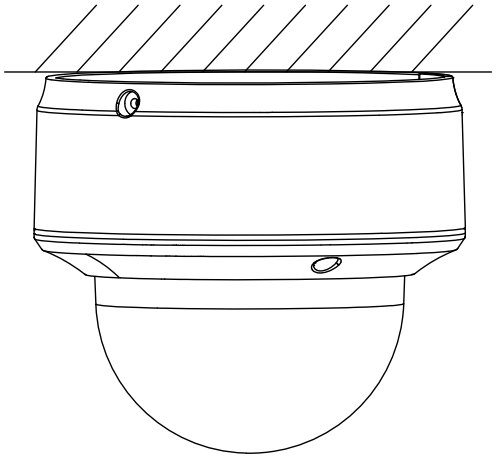


Figure 3-105 Complete the Installation

3.8 Type VIII Dome Camera

3.8.1 Camera Description of Type A Dome Camera

The overview of the outdoor dome camera is shown below:

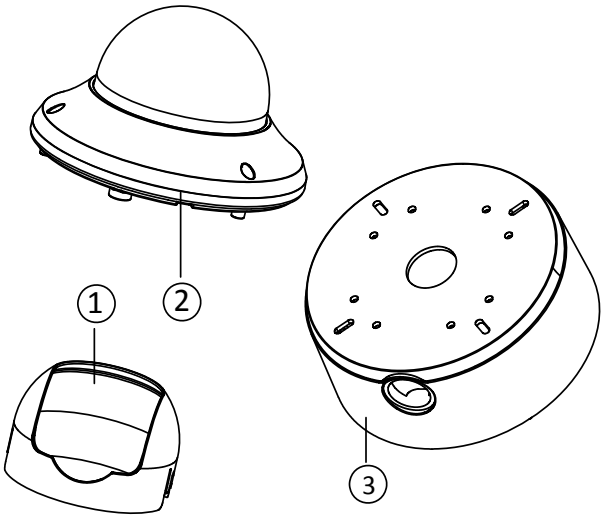


Figure 3-106 Overview (1)

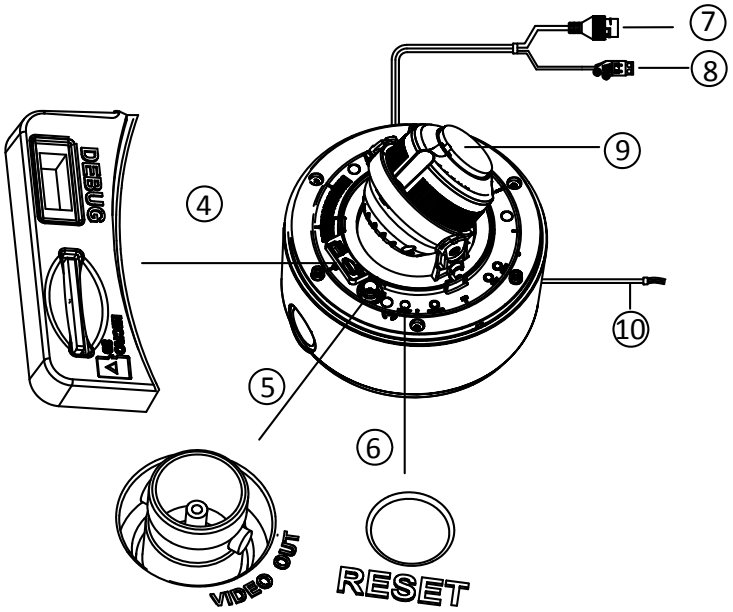


Figure 3-107 Overview (2)

Table 3-9 Description of Overview (1~2)

No.	Description	No.	Description
1	Black Liner	6	Reset
2	Bubble	7	Power Cable

3	Mounting Base	8	10/100M Self-adaptive Ethernet Interface
4	SD Card Slot	9	Lens
5	Video Out	10	Audio and Alarm Cables

3.8.2 Installation of Type A Dome Camera

Steps:

1. Drill the screw holes and the cable hole according to the supplied drill template.

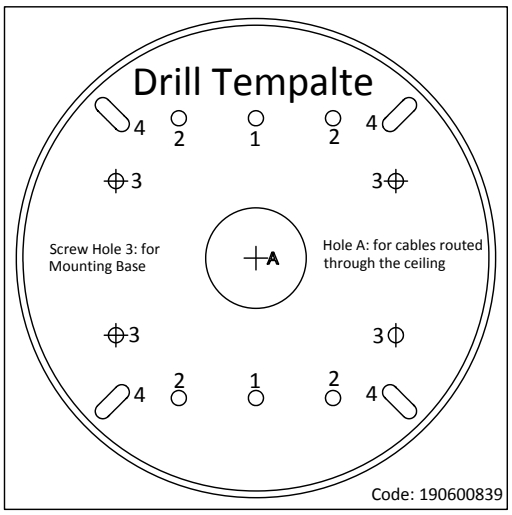


Figure 3-108 Drill Template

2. Install the mounting base to the ceiling with the supplied screws.

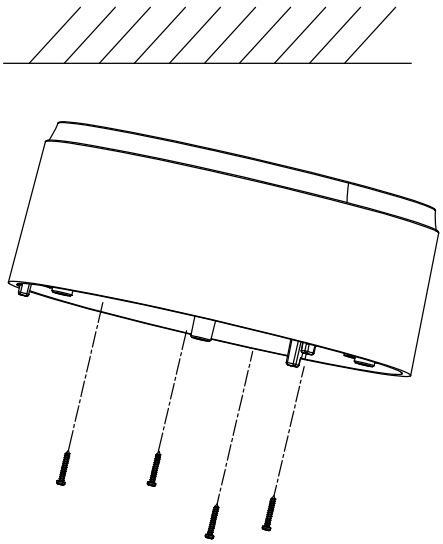


Figure 3-109 Install the Mounting Base

3. Connect the corresponding power cable, network cable, audio and alarm cables.
4. Install the dome drive to the mounting base.

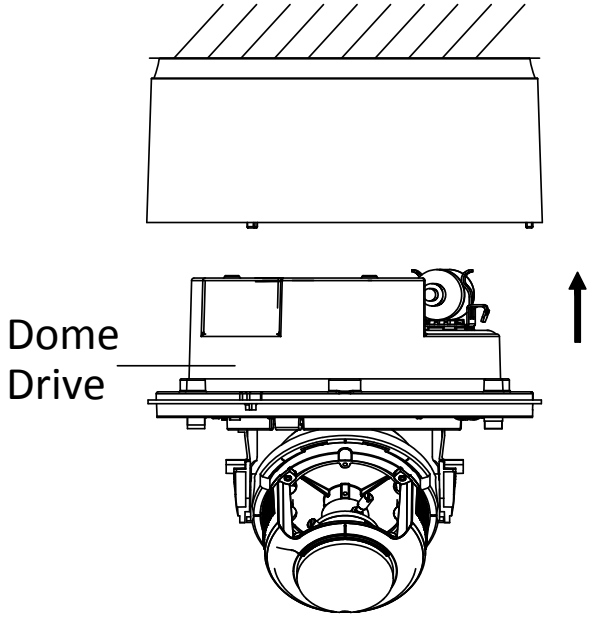


Figure 3-110 Install the Dome Drive

5. Adjust the surveillance angle.

1). Loosen the lock screw besides the lens.

2). Hold the plastic plate and rotate the camera to adjust the panning angle [0~350°].

3). Push the lens forward and backward to adjust the tilting angle [0~80°].

4). Rotate the lens to adjust the azimuth angle of the camera [0~350°].

5). Tighten the lock screw.

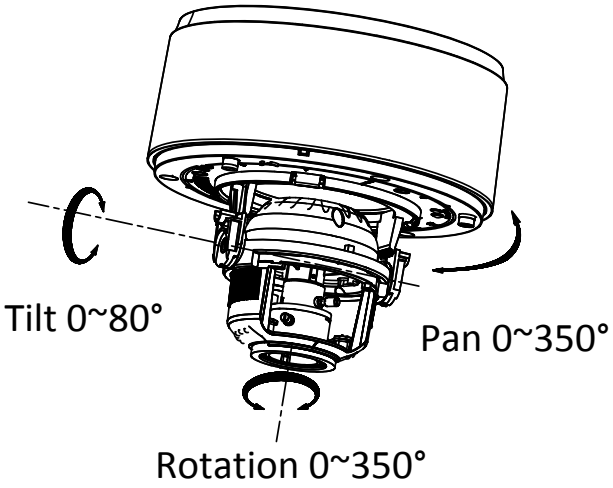


Figure 3-111 3-axis Adjustment

6. Adjust the Lens.

1). Connect the VIDEO OUT interface of the camera to the debugging monitor.

2). Set the iris type to MANUAL first.

3). Adjust the No.2 Zoom Lever (T~W) to select a proper angle of view.

4). Adjust the No.1 Focus Lever (F~N) to obtain a perfect image on the monitor.

5). Set the iris type as MANUAL if the environment has a good and stable illumination, and set the iris type as AUTO if the environment has a strong and changeable illumination.

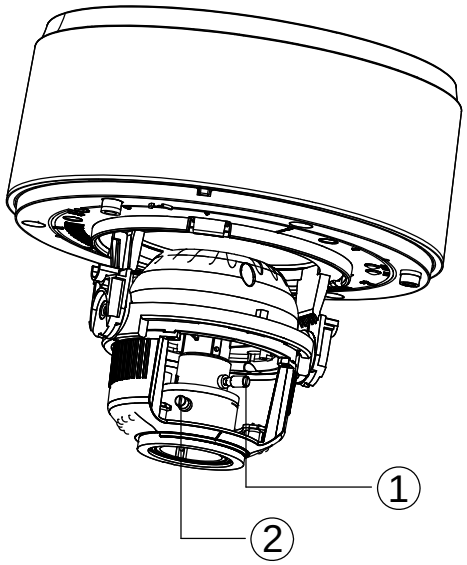


Figure 3-112 Adjust the Focus and Zoom

7. Fit the black liner back to the camera.
8. Align the bubble to camera and fix it by tightening the screws to complete the installation.

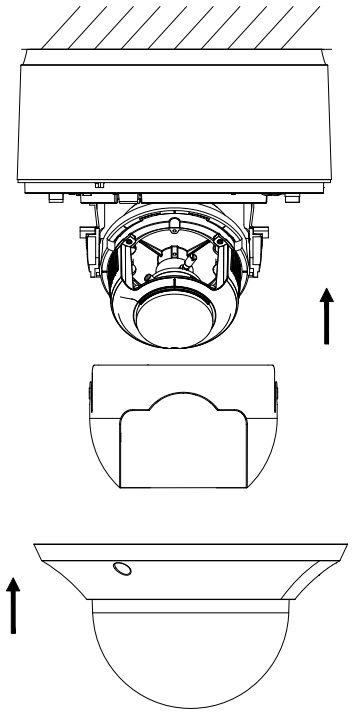


Figure 3-113 Install the Black Liner and Bubble

3.8.3 Camera Description of Type B Dome Camera

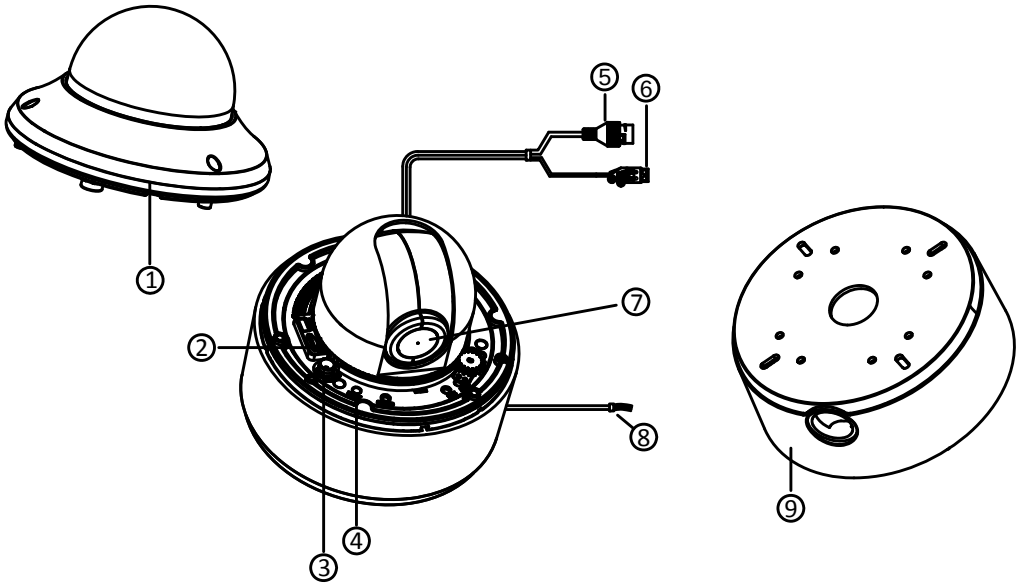


Figure 3-114 Overview of Type B Dome Camera

Table 3-10 Description of Type B Dome Camera

No.	Description	No.	Description
1	Bubble	6	10/100M Self-adaptive Ethernet Interface
2	SD Card Slot	7	Lens
3	Video Out Interface	8	Audio/Alarm Cables
4	Reset	9	Mounting Base
5	Power Cable	10	

NOTE

- The most distinguish difference between type A and type B dome camera is type B dome camera has an internal PT (Pan and Tilt) unit, and you can adjust the pan and tilt angle of the camera from the client software or via web browser.
- Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

3.8.4 Installation of Type B Dome Camera

Steps:

1. Drill the screw holes and the cable hole according to the supplied drill template.

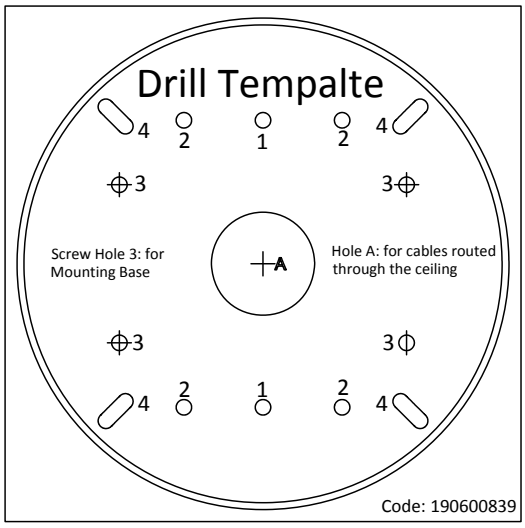


Figure 3-115 Drill Template

2. Install the mounting base to the ceiling with the supplied screws.

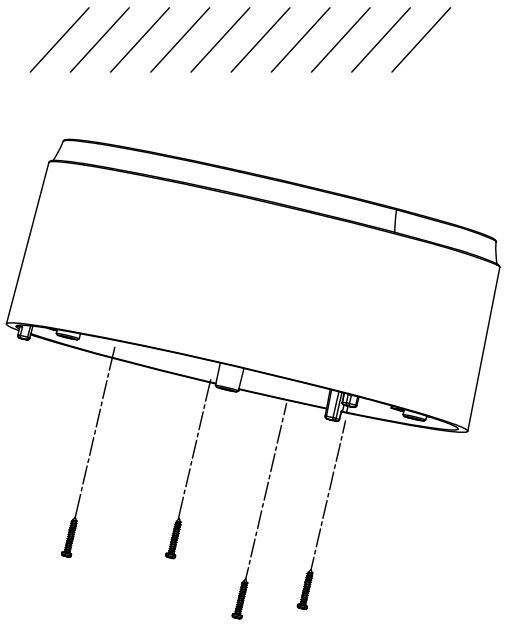


Figure 3-116 Install the Mounting Base

3. Connect the corresponding power cable, network cable, audio and alarm cables.
4. Install the dome drive to the mounting base.

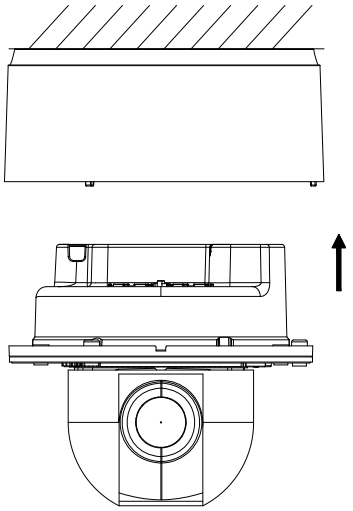


Figure 3-117 Install the Dome Drive

NOTE

The surveillance angle of the camera is well- adjusted by default. If the pan and tilt angle is required to adjusted according to the different installation environment, go to the live view interface via web browser or client software after the installation is completed. Please refer to the pan and tilt adjustment interface below.

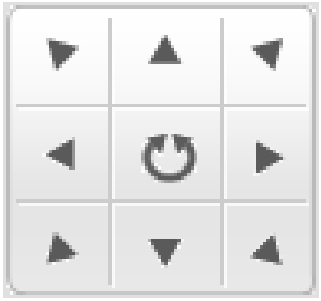


Figure 3-118 Pan and Tilt Adjustment Interface

5. Install the bubble to complete the installation.

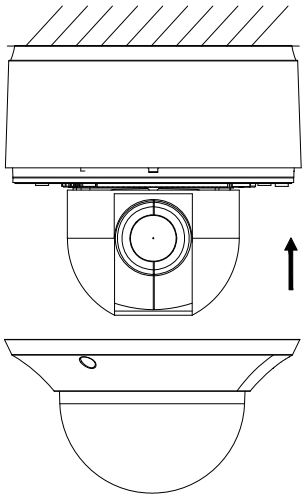


Figure 3-119 Install the Bubble

3.9 Type IX Dome Camera

3.9.1 Overview

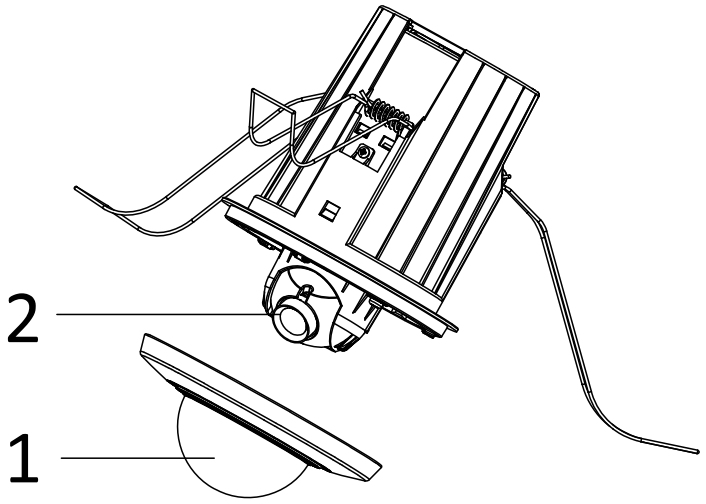


Figure 3-120 Overview(1)

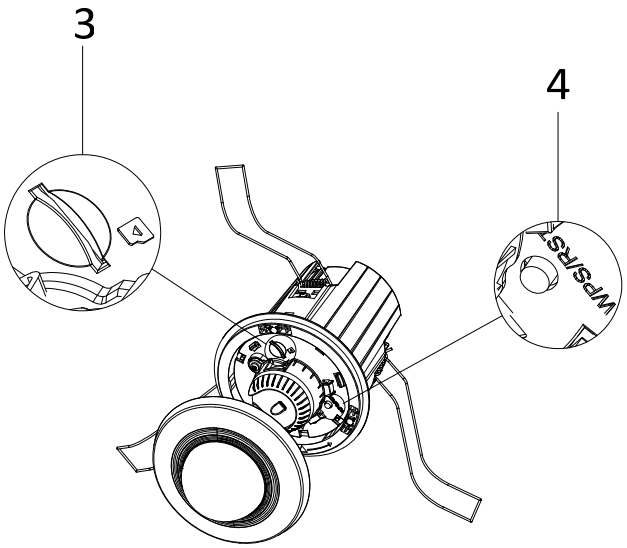


Figure 3-121 Overview(2)

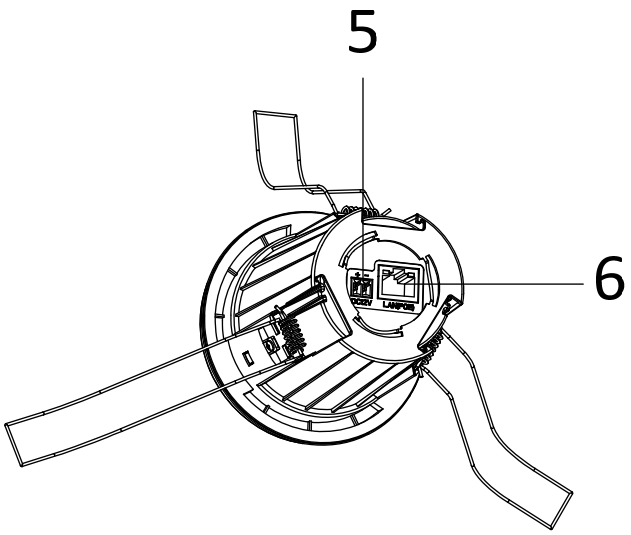


Figure 3-122 Overview(3)

Table 3-11 Description of Overview

No.	Description
1	Bubble
2	Lens
3	Micro SD Card Slot
4	WPS (Wi-Fi Protected Setup) / Reset Button
5	Power Supply Interface (12 VDC)
6	10M / 100M self-adaptive Ethernet interface & PoE

NOTE

The figures shown in this manual are for reference only. The appearance and interfaces of the camera are subject to the actual model.

3.9.2 Installing the SD Card

Steps:

1. Remove the bubble from the camera body, and you can see the micro SD card slot.
2. Insert the micro SD card into the micro SD card slot.
3. Re-install the bubble to the camera body.

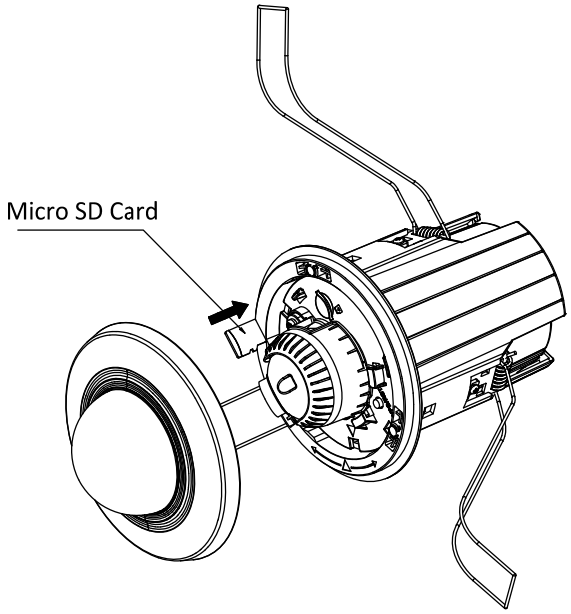


Figure 3-123 Install the SD Card

NOTE

- Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.
- A wireless router with the WPS function is required to enable the WPS function of the camera. Refer to the steps below.
  1) Press the WPS button on the router.
  2) Press the WPS button (about 2s) on the camera within 120s you enable the WPS of the router to join in the wireless network.

NOTE

- The WPS button works as a reset button only when you press it when the camera is powering on.
- Press the WPS button on the camera, and then press the WPS button on the router will work as well, and the expire time of WPS connection on the camera is 120s.
- The link indicator blinks if the wireless connection succeeded.

3.9.3 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure the power supply is matched with your required voltage to avoid damage.

- If the product does not function properly, please contact your dealer or the nearest service center. Do not disassemble the camera for repair or maintenance by yourself.
- Make sure that the wall is strong enough to withstand four times the weight of the camera.

NOTE

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Dust or grease on the dome cover will cause IR reflection. Please do not remove the dome cover film until the installation is finished. If there is dust or grease on the dome cover, clean the dome cover with clean soft cloth and isopropyl alcohol.
- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.
- The foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDS. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

Ceiling Mounting

Steps:

1. Drill the hole according to the supplied drill template.

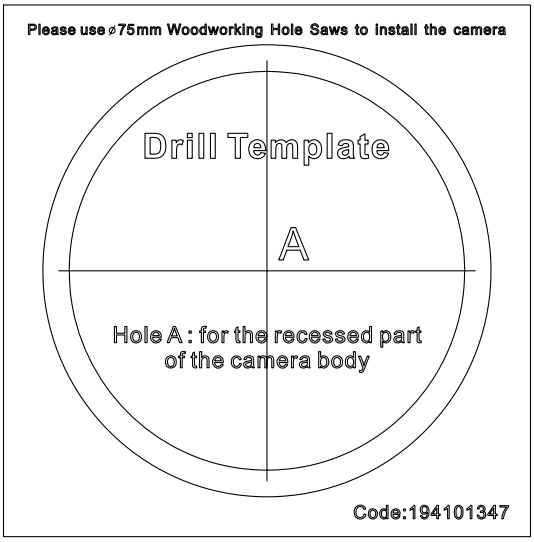


Figure 3-124 Drill Template

2. Hold and remove the bubble from the camera body.

NOTE

The bubble is attached to the camera body via magnetic force. Be gentle but firm when removing it.

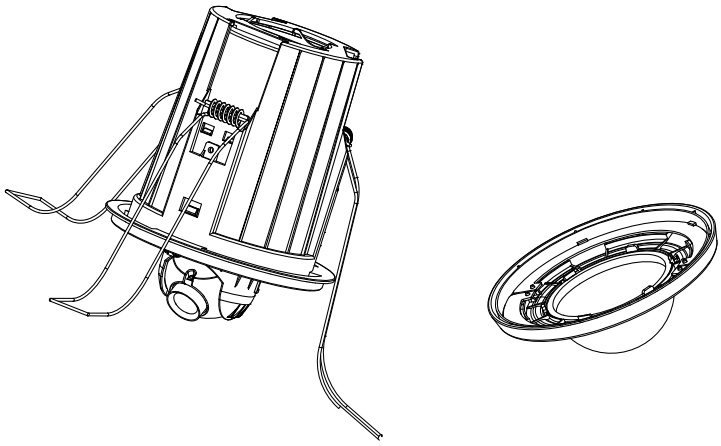


Figure 3-125 Remove the Bubble

3. Route the cables through the mounting hole and connect the corresponding cables including power cable, network cable, etc.
4. Gather together the brackets, as shown below, and push the brackets and camera body upward through the mounting hole.

   The brackets will automatically expand under the spring force and fix the camera body to the wall.

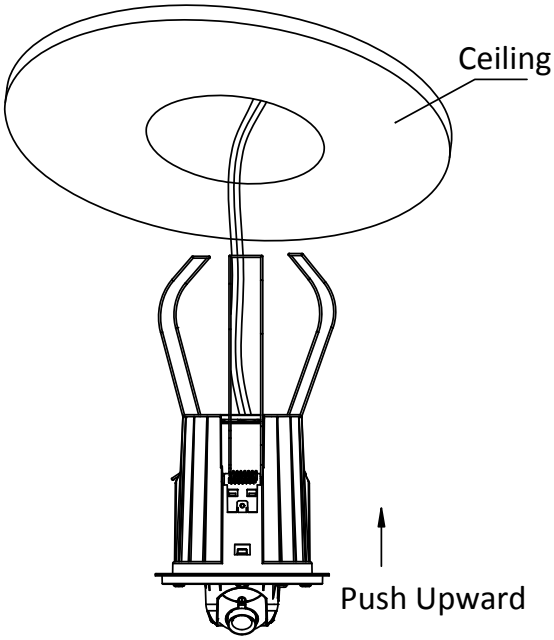


Figure 3-126 Fix the Camera Body

5. Adjust the view angle:
   1). Connect the cables and view the video of the camera on the monitor.
   2). Rotate the camera body in the pan direction (0°~355°) or rotate the lens in the tilt direction (0°~80°) to get the desired view angle.

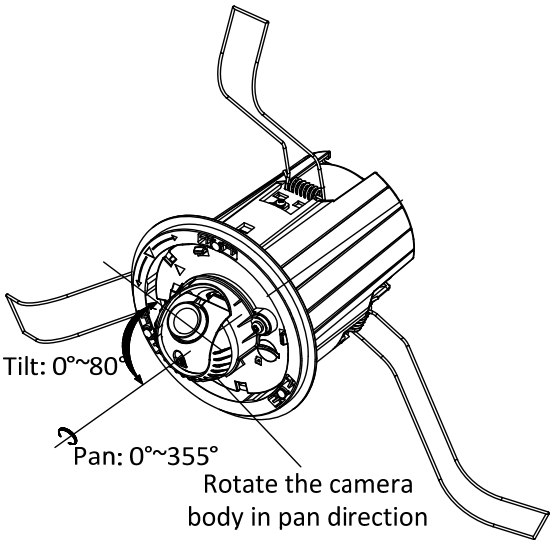


Figure 3-127 Adjust the View Angle

6. Re-install the bubble. The bubble will be automatically attached to the camera body under the magnetic force.

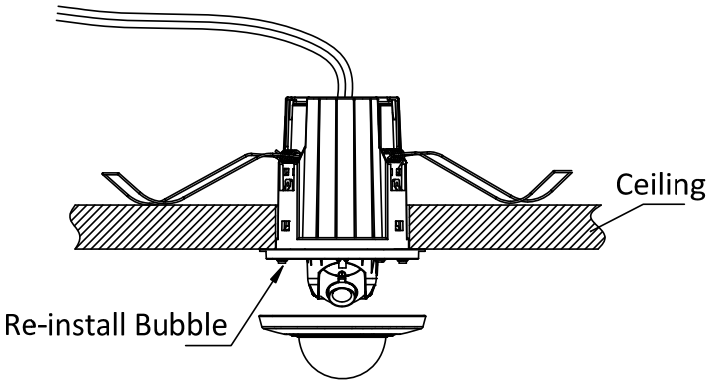


Figure 3-128 Re-install the Bubble

7. The installation is complete.

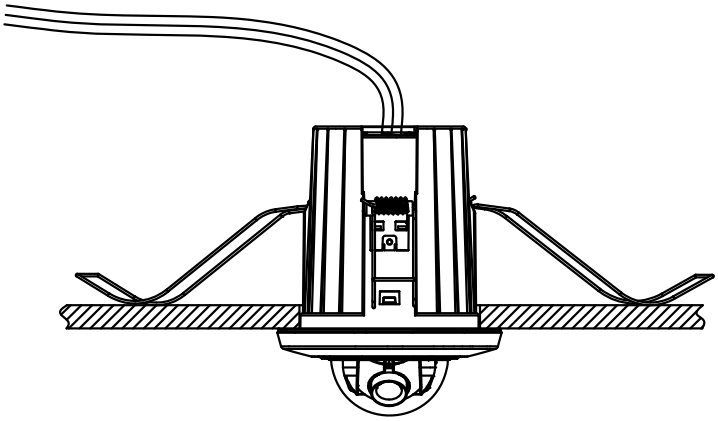


Figure 3-129 Complete the Installation

3.10 Type X Dome Camera

3.10.1 Overview

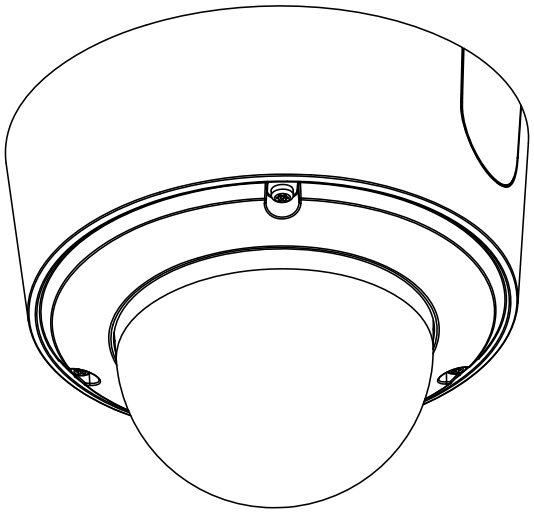


Figure 3-130 Overview

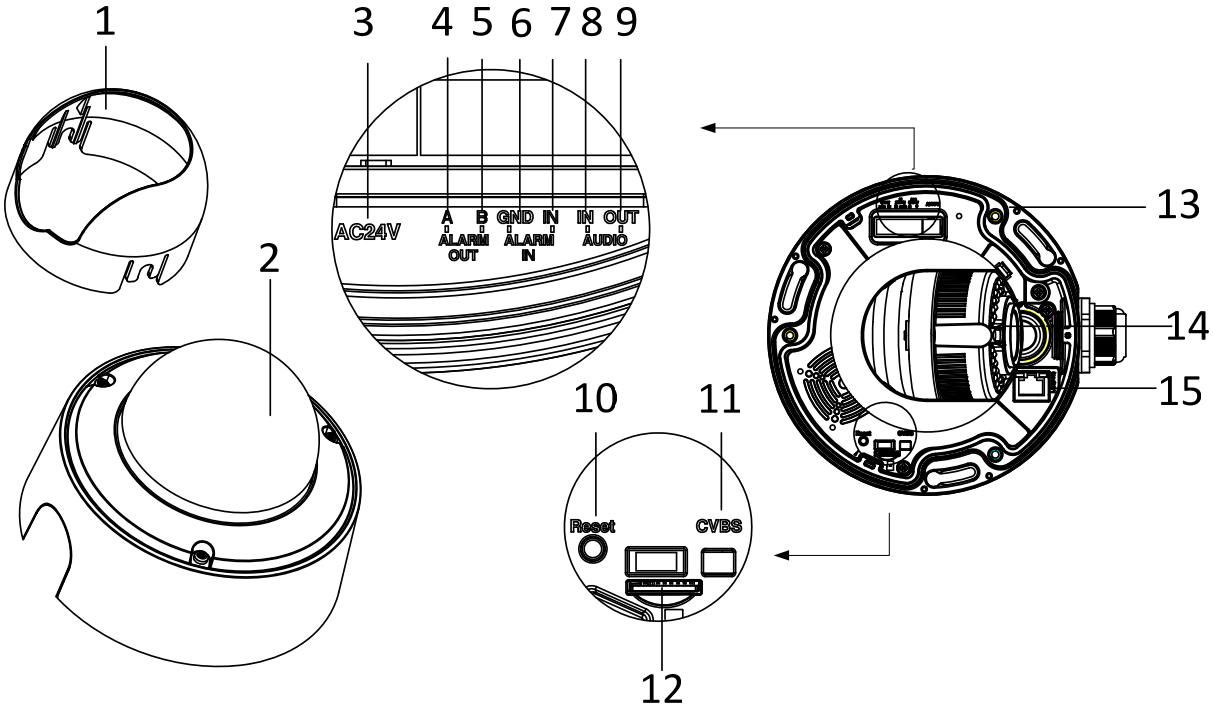


Figure 3-131 Detailed Components

Table 3-12 Description

No.	Description	No.	Description
1	Black Liner	9	Audio Out
2	Bubble	10	Reset Button
3	Power Interface	11	CVBS Interface
4	Alarm Output A	12	SD Card Slot
5	Alarm Output B	13	Mounting Base
6	Grounding	14	Lens
7	Alarm Input	15	Network Interface
8	Audio In		

- Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.
- This series of camera supports 12V DC, 24V AC, and PoE power supply. Please make sure your power supply meets the demands.

3.10.2 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure the power supply is matched with your required voltage to avoid damage.
- If the product does not function properly, please contact your dealer or the nearest service center. Do not disassemble the camera for repair or maintenance by yourself.
- Make sure that the wall is strong enough to withstand four times the weight of the camera and the bracket.

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Dust or grease on the dome cover will cause IR reflection. Please do not remove the dome cover film until the installation is finished. If there is dust or grease on the dome cover, clean the dome cover with clean soft cloth and isopropyl alcohol.
- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.

- The foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDS. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

Ceiling Mounting

Steps:

1. Drill the screw holes and the cable hole in the ceiling according to the supplied drill template.

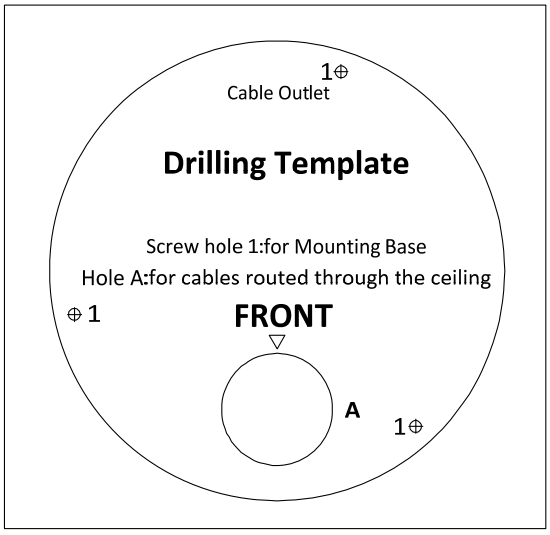


Figure 3-132 Drill Template

2. Hammer the supplied screws to the ceiling.

NOTE

Do not hammer the screws into the ceiling completely. It is recommended you hammer half of a screw into the ceiling, so as to hook the camera to the screws.

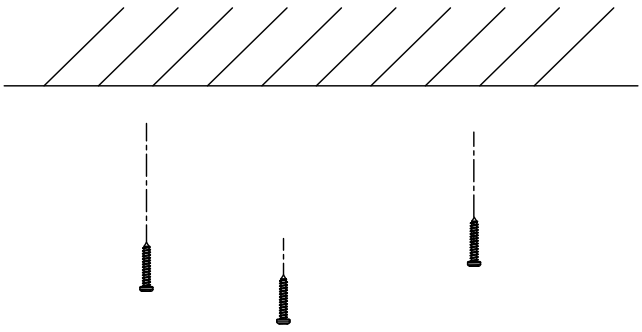


Figure 3-133 Hammer the Screws

3. Use a hexagonal screwdriver to loosen the lock screw on the bubble, and remove the black liner.
4. Route the cables from the cable hole, and connect the corresponding cables.

NOTE

You can select to route the cables from the side outlet instead of the cable hole in the ceiling. See Figure below.

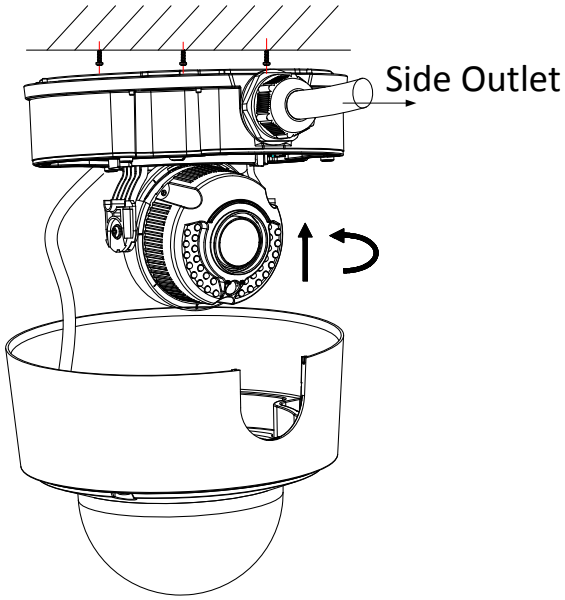


Figure 3-134 Route the Cables via Side Outlet

5. Align the screws holes on the camera to the inserted screw, and rotate the camera to hook the camera to the screws.
6. Tighten the screws.
7. Install the black liner and bubble back.

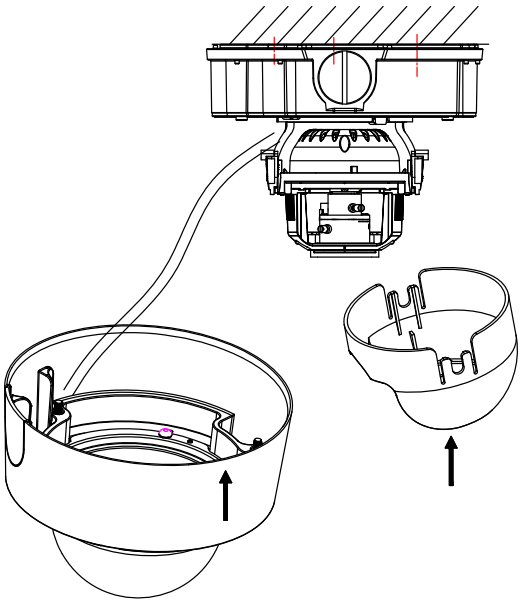


Figure 3-135 Install the Black Liner and Bubble

8. Tighten the lock screw on the bubble.

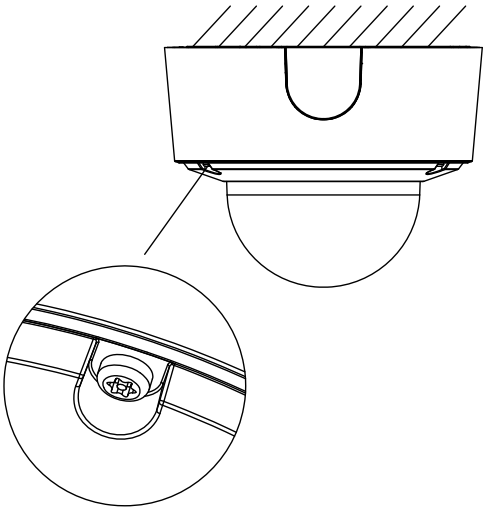


Figure 3-136 Tighten the Lock Screw

Wall Mounting

NOTE

You need to purchase a wall bracket separately if wall mounting is selected.

1. Fix the wall bracket to the wall with the screws.

   Please insert the expansion screws first if the camera is mounted to the cement wall, and you can use the self-tapping screws directly if camera is mounted to the wooden wall.

2. Install the bowl-shape cover to the wall bracket.

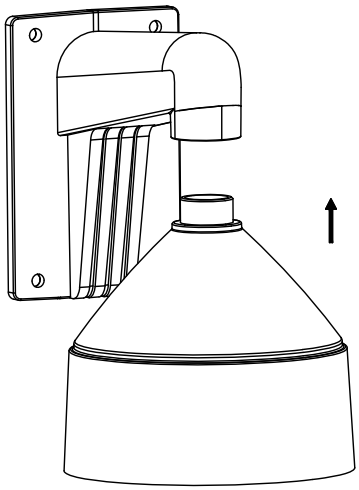


Figure 3-137 Install the Wall Bracket

3. Align the supplied rubber ring to the bowl-shape cover.
4. Insert the screws half-deep to the screws holes on the rubber ring.

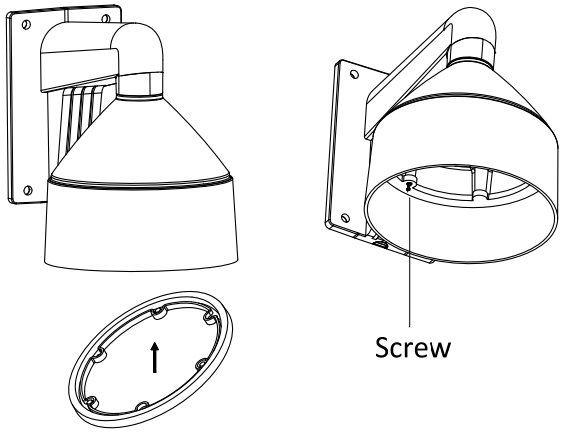


Figure 3-138 Install the Rubber Ring and Screws

5. Align the screws holes on the camera to the installed screws, and rotate the camera to hook to the camera to the screws.
6. Install the black liner and bubble.

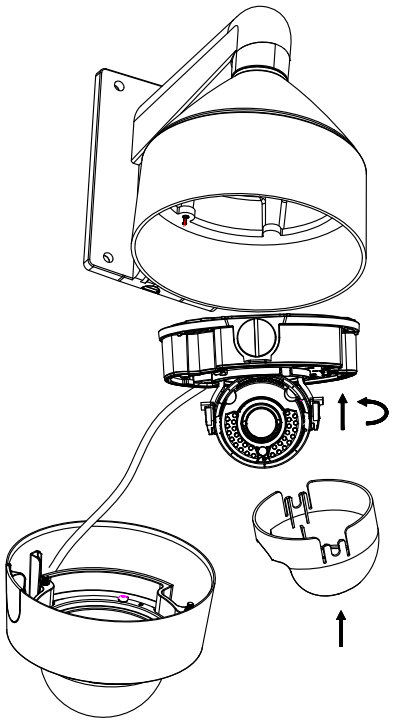


Figure 3-139 Install the Black Liner and Bubble

7. Tighten the lock screw on the bubble.

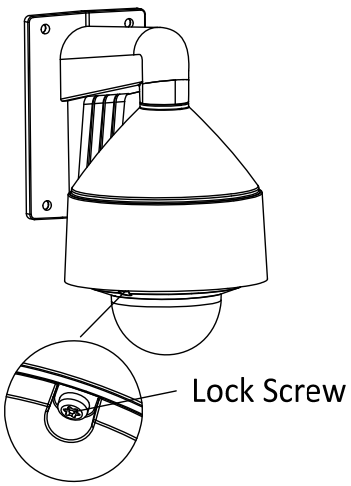


Figure 3-140 Tighten the Lock Screw

3-axis Adjustment and Lens Adjustment

3-axis Adjustment

This series of camera supports 3-axis adjustment, and you can adjust the camera to the desired surveillance angle after the black liner is installed.

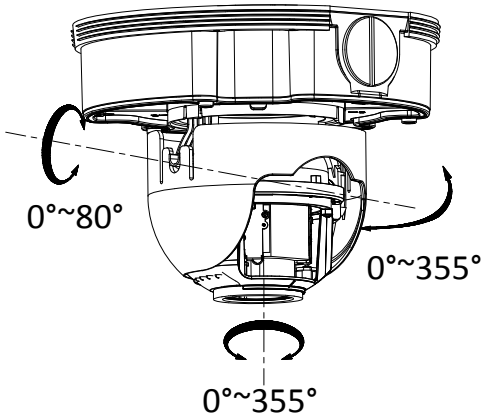


Figure 3-141 3-axis Adjustment

Lens Adjustment

The camera with letter “Z” in its model suffix support electronic lens. You can adjust the lens via the zoom button or focus button on the PTZ control interface after you login to a camera.

NOTE

Please refer to the chapter 3 and chapter 4 for details to login to the camera.

Figure 3-142 Zoom/Focus Adjustment Via PTZ Interface

And the camera without letter “Z” in its suffix asks you to adjust the lens after the black liner is installed.

Connect the camera to a debug monitor so as to get the live view, and adjust the zoom lever (T~W) to adjust the zoom, and adjust the focus lever (F~N) to adjust the focus till you get a clear view.

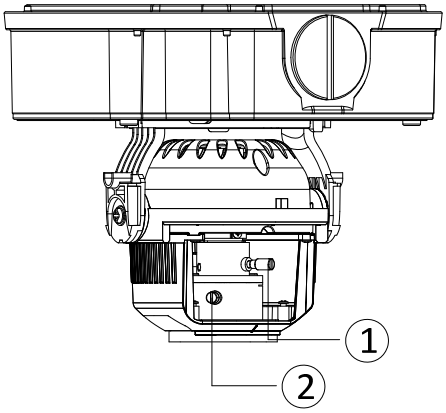


Figure 3-143 Lens Adjustment

3.11 Type XI Dome Camera

3.11.1 Overview

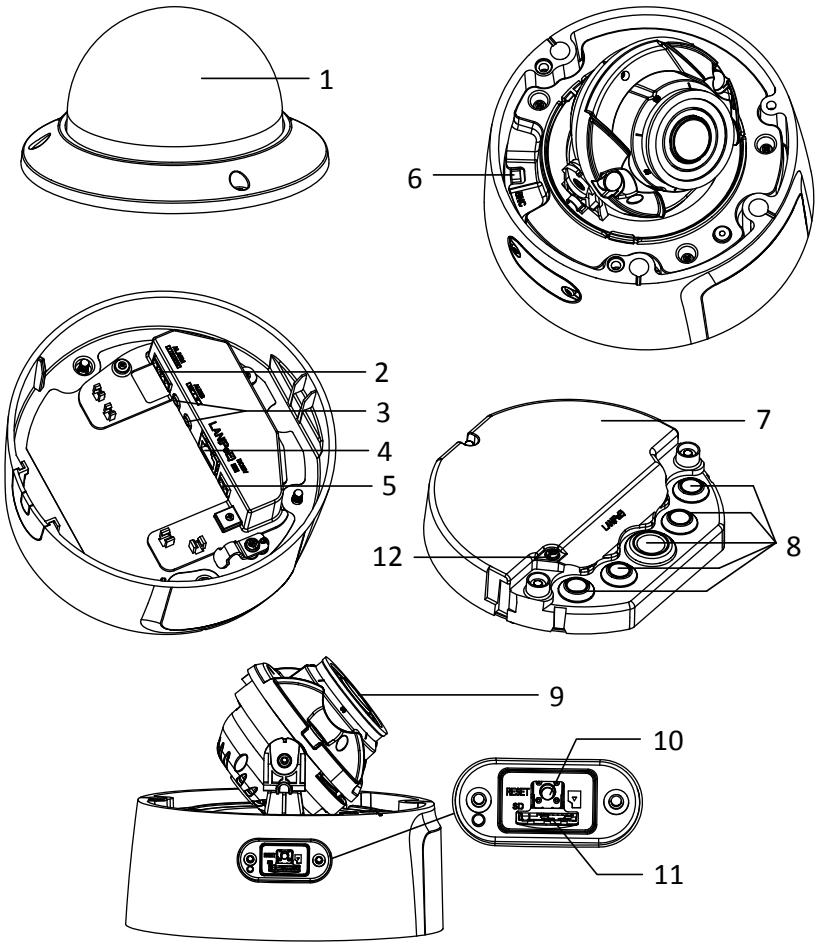


Figure 3-144 Detailed Components

Table 3-13 Description

No.	Description	No.	Description
1	Bubble	7	Junction box
2	Alarm input/output	8	Sealing plugs
3	Audio input/output	9	Lens
4	RJ45 Ethernet port (PoE)	10	Reset button
5	Power interface (12 VDC)	11	Memory card slot
6	Video Out (BNC)	12	Grounding screw

- Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.
- Standard power supply is 12 VDC or PoE (802.3af).

3.11.2 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- The standard power supply is 12VDC or PoE (802.3af).Make sure your power supply matches with your camera.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure that the wall is strong enough to withstand four times the weight of the camera and the bracket.

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Dust or grease on the dome cover will cause IR reflection. Please do not remove the dome cover film until the installation is finished. If there is dust or grease on the dome cover, clean the dome cover with clean soft cloth and isopropyl alcohol.
- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.
- The foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDS. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

3.11.2.1. Memory Card Installation

Steps:

1. Unscrew the memory card slot cover.

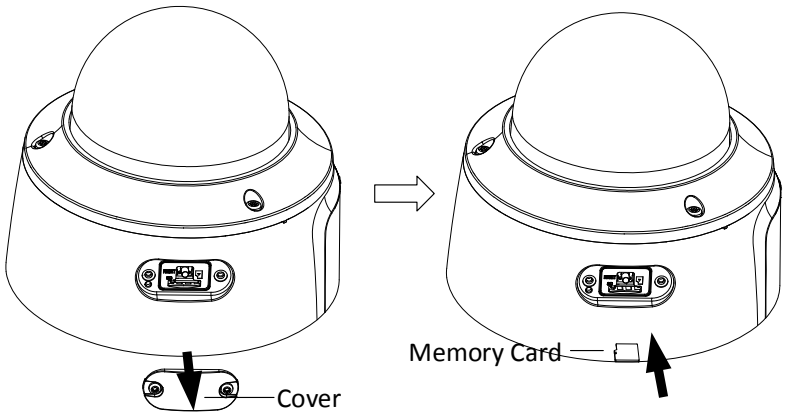


Figure 3-145 Install Memory Card

2. Insert the memory card into the memory card slot, and push to get it mounted.
3. (Optional) To unmount the memory card, push to eject it.
4. Screw the cover back.

3.11.2.2. Mounting Preparation

Purpose:

Disassemble the camera for camera mounting.

Steps:

1. Lift the camera body to separate the junction box and the adapter plate.
2. Separate the junction box and the adapter plate.
3. Unscrew the bubble.

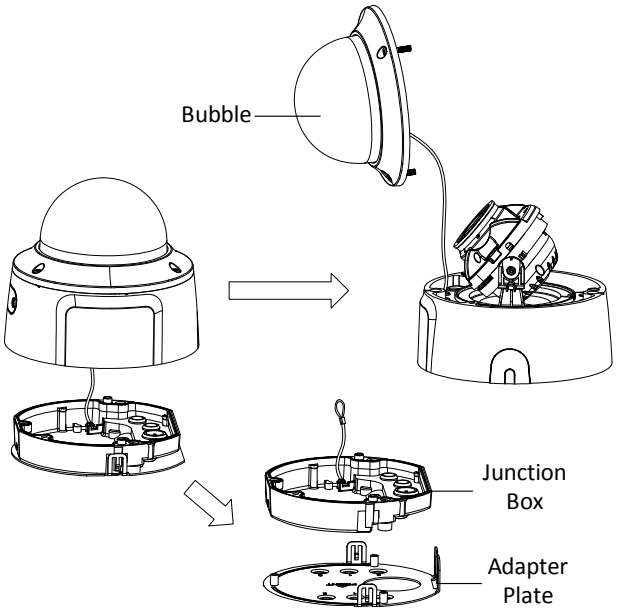


Figure 3-146 Disassemble the Camera

3.11.2.3. Camera Mounting

Ceiling Mounting

Before you start:

Plan the cable routing before installation.

This camera series supports cable-routing through the ceiling and through side outlet.

- Through the ceiling: you should cut a hole in ceiling and route the cables in advance.
- Through side outlet: you choose to route cables with or without a conduit.

Steps:

1. M ark 4 screw holes at desired mounting location according to No.2 screw holes on the adapter plate.

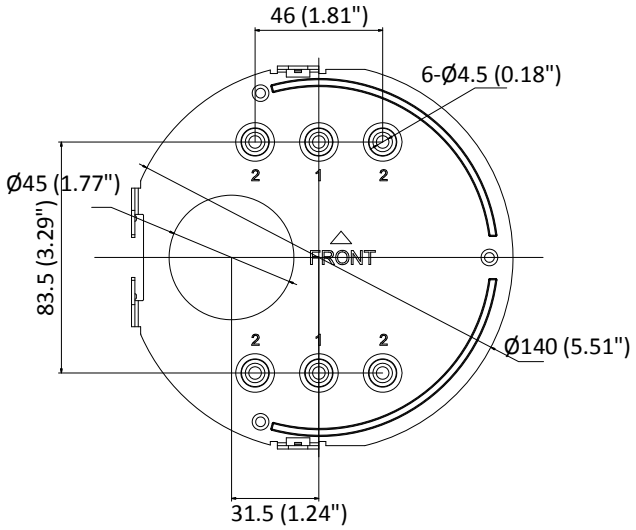


Figure 3-147 Adapter Plate

2. (Skip if not needed) Route cables through a conduit.
   1). Screw the supplied conduit joint to the conduit.

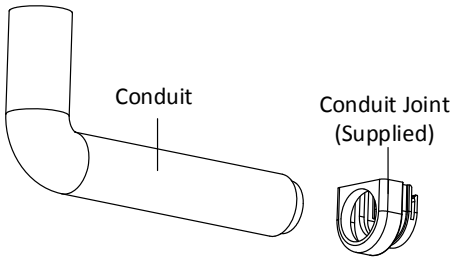


Figure 3-148 Connect the Conduit Joint to Conduit

   2). Fit the adapter plate into the conduit joint.

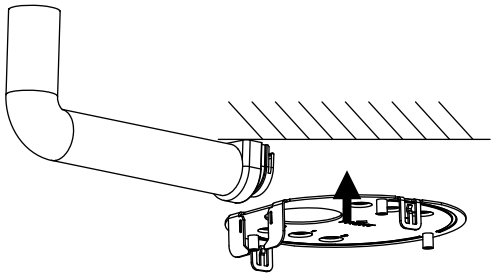


Figure 3-149 Install the Conduit

3. Secure the adapter plate to the ceiling with four supplied screws.

NOTE

Use expansion screws for cement ceiling, and self-tapping screws for wooden ceiling.

4. Route the cables through the junction box.
   1). Pierce the sealing plugs on junction box.
   2). Thread cables through the sealing plugs.

NOTE

For RJ45 network interface, use supplied cable routing tool.

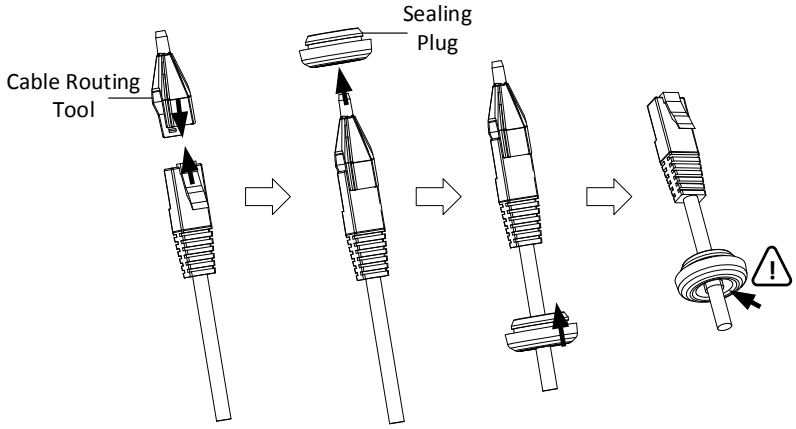


Figure 3-150 Route RJ45 Network Interface through Sealing Plug

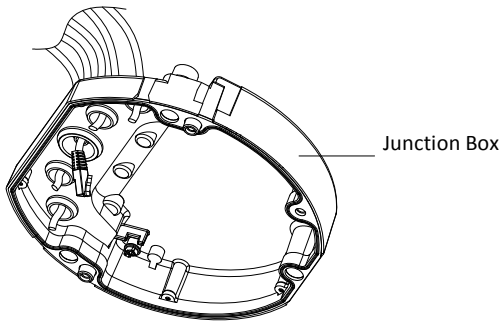


Figure 3-151 Route Cables through Junction Box

5. Align the “FRONT” marks on junction box and adapter plate. Secure the junction box to adapter plate with three screws.

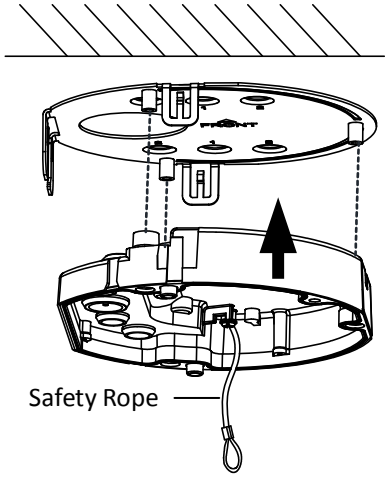


Figure 3-152 Install Junction Box

6. Hang the camera body on the safety rope.
7. Connect the cables to correspondent plugs on camera bottom.

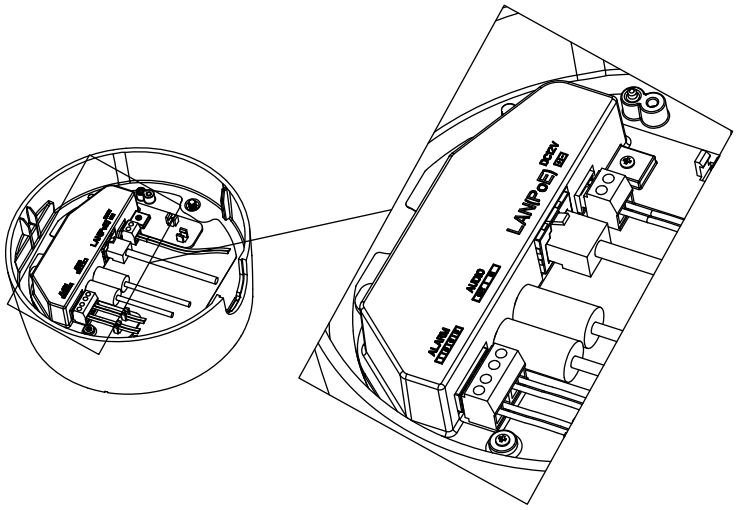


Figure 3-153 Connect Cables

8. Fix the camera body to the junction box with three screws.

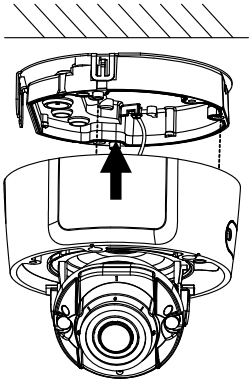


Figure 3-154 Fix the Camera Body

9. Adjust surveillance angle.

1). Use supplied BNC video out cable to connect the camera to a monitor. Power on the camera to obtain live image of the camera.

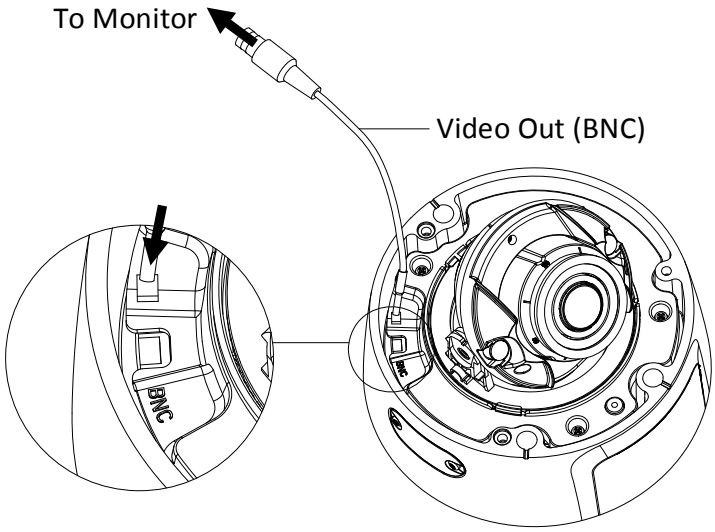


Figure 3-155 Connect Video Out

2). Hold the lens to adjust the panning, tilting, and rotating position.

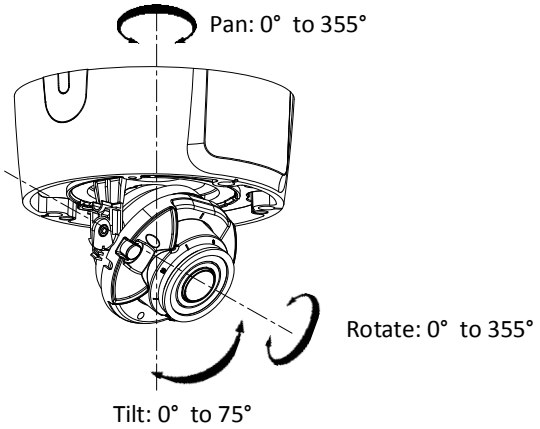


Figure 3-156 Adjust Surveillance Angle

10. Peel off the protective films and screw the bubble back to the camera body.

Wall Mounting

NOTE

When choosing a wall mounting bracket, you must pay attention to the size of the cap which should match the adapter plate of the camera.

Steps:

1. Route the cables and install the wall mounting bracket.
2. Install the cap to the bracket. Secure the cap with a fixing screw.

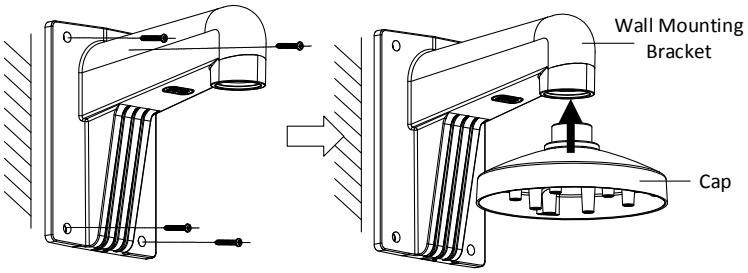


Figure 3-157 Install the Wall Bracket

3. Align the screws holes on the adapter plate with the correspondent screw holes of the cap.
4. Rout the cables through the cable hole on adapter plate and secure the adapter plate to the cap.

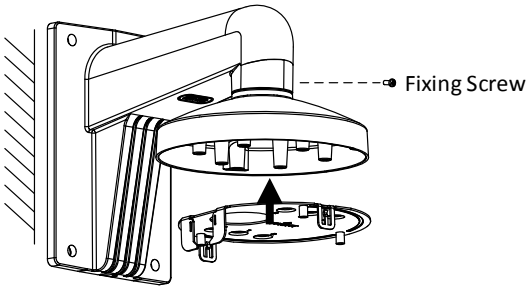


Figure 3-158 Install Adapter Plate to Bracket

5. Repeat step 4 to step 10 of *Section Ceiling Mounting* to complete camera installation.
6. Install the black liner and bubble.

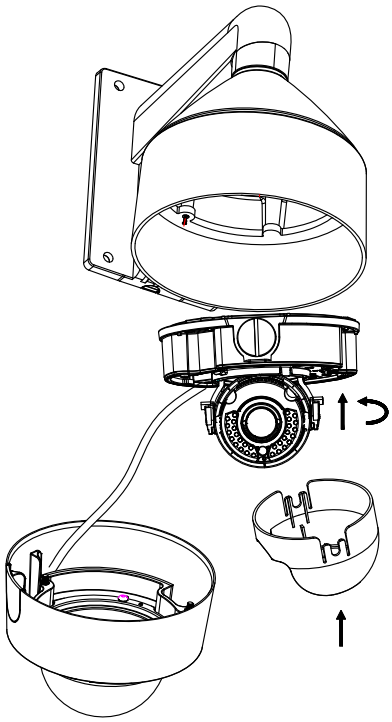


Figure 3-159 Install the Black Liner and Bubble

7. Tighten the lock screw on the bubble.

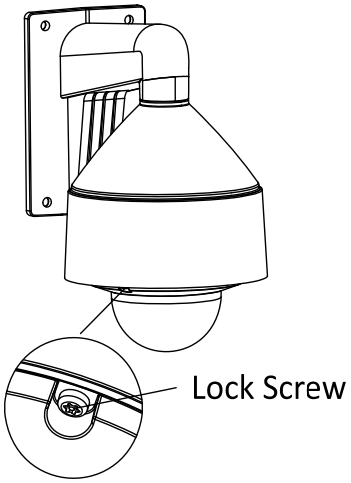


Figure 3-160 Tighten the Lock Screw

3-axis Adjustment and Lens Adjustment

3-axis Adjustment

This series of camera supports 3-axis adjustment, and you can adjust the camera to the desired surveillance angle after the black liner is installed.

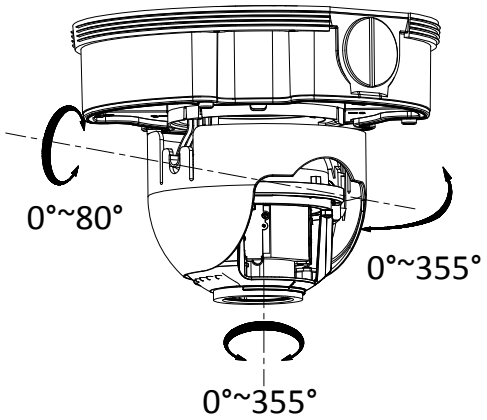


Figure 3-161 3-axis Adjustment

Lens Adjustment

The camera with letter “Z” in its model suffix support electronic lens. You can adjust the lens via the zoom button or focus button on the PTZ control interface after you login to a camera.

NOTE

Please refer to the chapter 3 and chapter 4 for details to login to the camera.

Figure 3-162 Zoom/Focus Adjustment Via PTZ Interface

And the camera without letter “Z” in its suffix asks you to adjust the lens after the black liner is installed.

Connect the camera to a debug monitor so as to get the live view, and adjust the zoom lever (T~W) to adjust the zoom, and adjust the focus lever (F~N) to adjust the focus till you get a clear view.

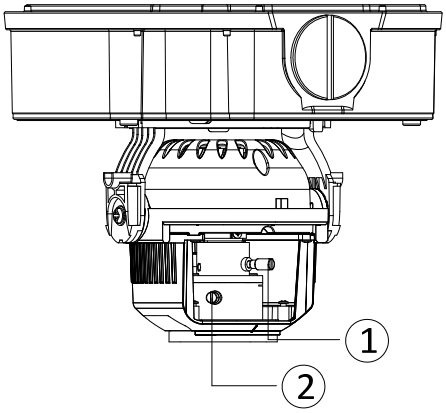


Figure 3-163 Lens Adjustment

3.12 Type XII Dome Camera

3.12.1 Overview

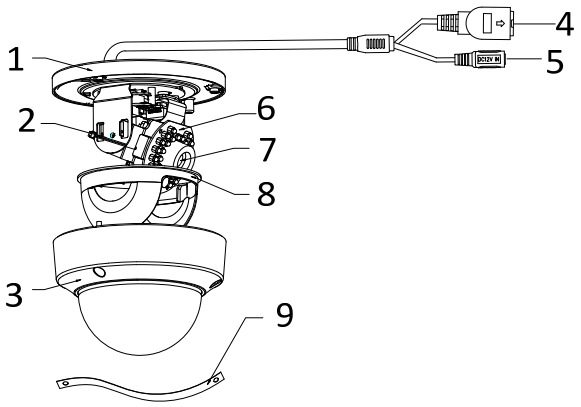


Figure 3-164 Detailed Components

Table 3-14 Description

No.	Description
1	Mounting Base
2	Tilt Adjusting Screw
3	Bubble
4	Network Interface
5	Power Interface
6	IR LED
7	Lens
8	Black Liner
9	Safety Rope

NOTE

Power on the camera when pressing the RESET button, and press button for another 10 seconds to restore the default settings, including the user name, password, IP address, port No., etc..

3.12.2 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are

included.

- The standard power supply is 12VDC or PoE (802.3af).Make sure your power supply matches with your camera.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure that the wall is strong enough to withstand four times the weight of the camera and the bracket.

NOTE

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Dust or grease on the dome cover will cause IR reflection. Please do not remove the dome cover film until the installation is finished. If there is dust or grease on the dome cover, clean the dome cover with clean soft cloth and isopropyl alcohol.
- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.
- The foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDS. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

Steps:

1. Attach the dill template to the ceiling.
2. Drill the screw holes and cable hole (optional)in the ceiling according to the drill template.

Note: Cable hole is required when you adopt ceiling outlet to route the cables.

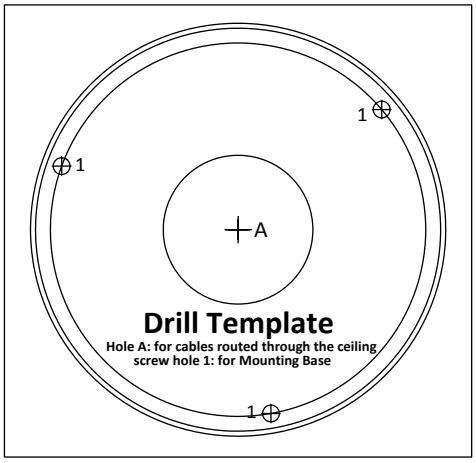


Figure 3-165 Drill Template

3. Loosen the set screws with a hex wrench (supplied) to remove the bubble.

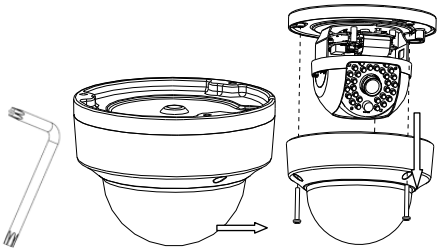


Figure 3-166 Remove the Bubble

4. Fix the mounting base on the ceiling with supplied screws.

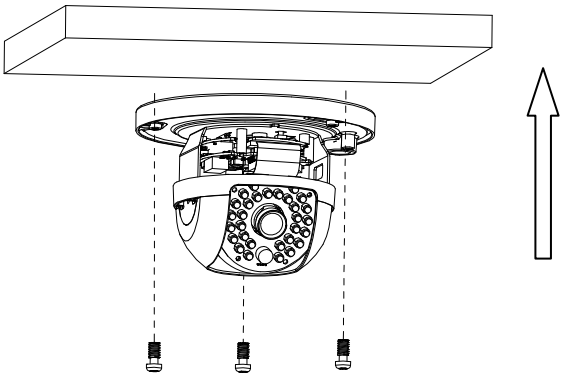


Figure 3-167 Fix the Mounting Base

5. Route the cables through the cable hole.
Note: If required, you can route cables through the side opening on the side of the mounting base.

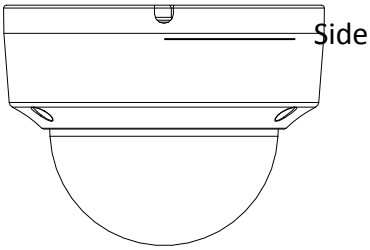


Figure 3-168 Side Opening

6. Connect the corresponding cables, such as power cable and network cable.
7. Power on the camera to check whether the image on the monitor is gotten from the optimum angle. If not, adjust the camera to get an optimum angle

Notes:

The camera supports 3-axis adjustment. Loosen the tilt adjusting screw to adjust the tilt angle [0° to 75°], hold the black liner to adjust the pan angle [0° to 355°], and hold the lens to rotate the camera [0° to 355°]. See the figure below.

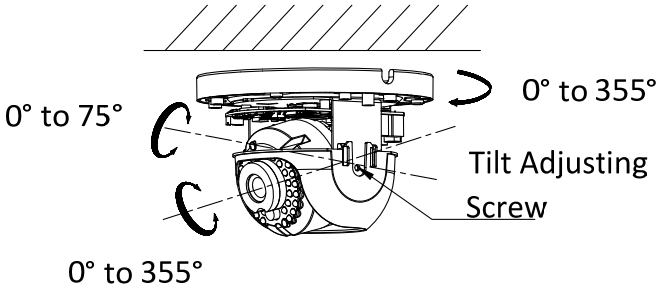


Figure 3-169 Type II Camera 3-Axis Adjustment

8. Reinstall the bubble, and tighten the screws.

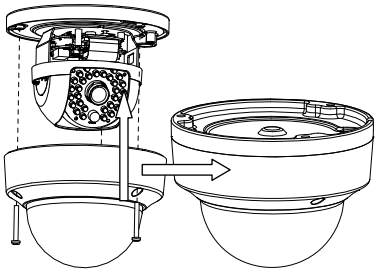


Figure 3-170 Bubble Reinstallation

3.13 Type XIII Dome Camera

3.13.1 Overview

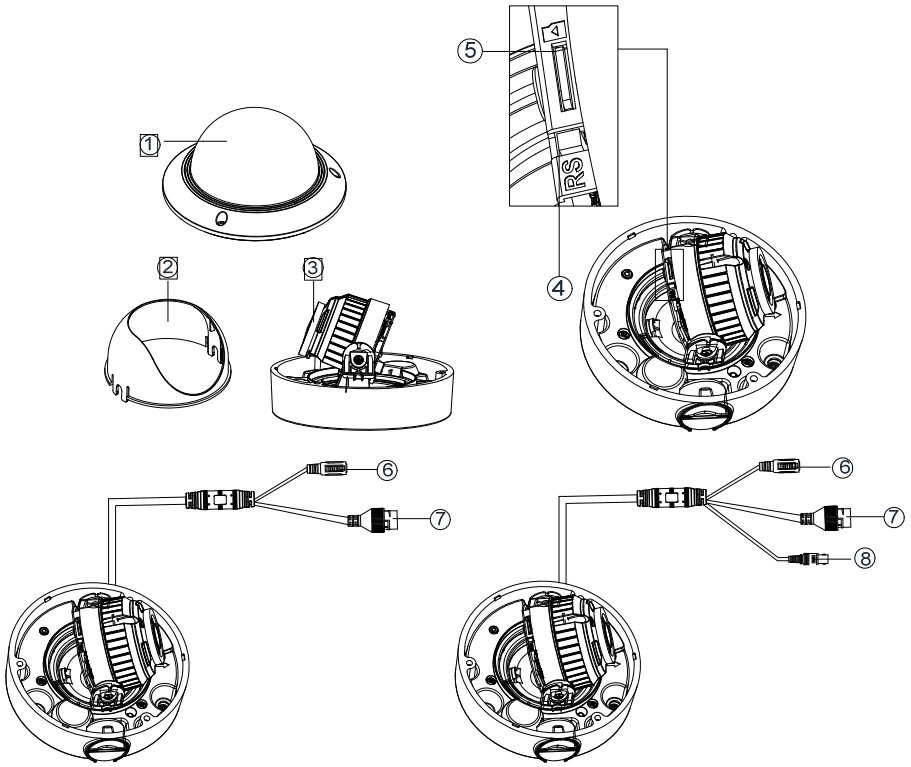


Figure 3-171 Detailed Components

Table 3-15 Description

No.	Description
1	Bubble
2	Black Liner
3	Lens
4	Reset
5	Memory Card Slot
6	Power Supply Interface
7	Network Interface
8	Video Output Interface

NOTE

Power on the camera when pressing the REST button, and press button for another 10 seconds

to restore the default settings, including the user name, password, IP address, port No., etc RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

3.13.2 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- The standard power supply is 12VDC or PoE (802.3af).Make sure your power supply matches with your camera.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure that the wall is strong enough to withstand four times the weight of the camera and the bracket.

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Dust or grease on the dome cover will cause IR reflection. Please do not remove the dome cover film until the installation is finished. If there is dust or grease on the dome cover, clean the dome cover with clean soft cloth and isopropyl alcohol.
- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.
- The foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDS. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

3.13.2.1. Disassembling

Steps:

1. Loosen the three screws on the edge of the bubble with the screw driver
2. Lift and put aside the bubble.
3. Remove the inner black liner.

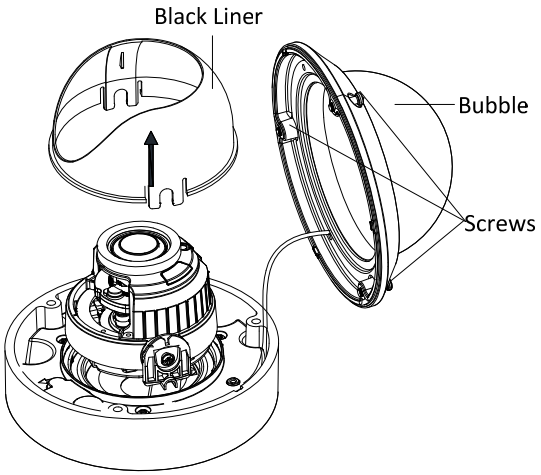


Figure 3-172 Remove the Bubble and Black Liner

3.13.2.2. Memory Card Installation

Steps:

1. Rotate the camera body to completely expose the memory card slot.
2. Insert the memory card into the memory card slot, and push to get it mounted.

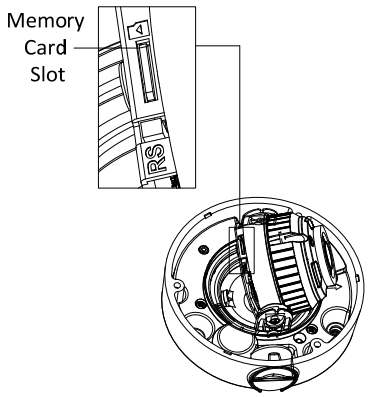


Figure 3-173 Install the Memory Card

3. (Optional) To unmount the memory card, push to eject it.

3.13.2.3. Camera Mounting

Ceiling Mounting

Steps:

1. Attach the drill template (supplied) to the place where you want to fix the camera.
2. Drill three screw holes and cable hole (optional) in the ceiling according to the drill template.

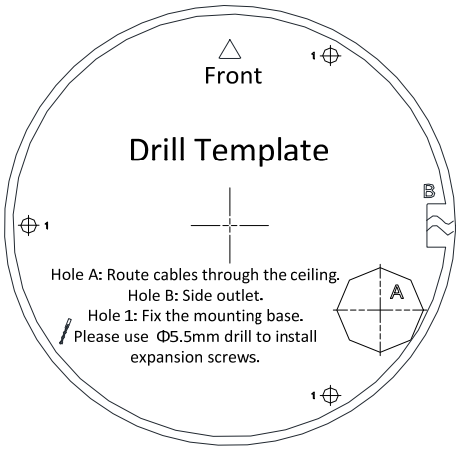


Figure 3-174 The Drill Template

NOTE

- The drill template varies according to the different camera models as the figures below. Please refer to the actual device.
- If you want to route the cables inside the ceiling, drill a cable hole in the ceiling according to the drill template. Route and connect the cables before next step.

3. Align the holes of the back box with the drilled screw holes on the ceiling. And secure the camera with the supplied screws.

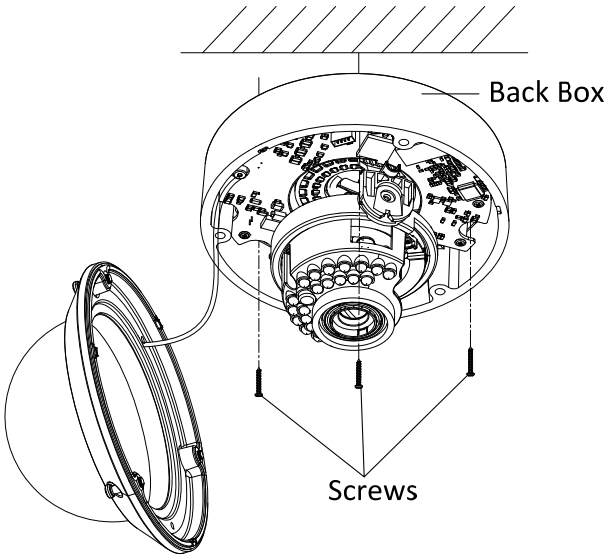


Figure 3-175 Secure the Camera

4. Adjust the surveillance angle, zoom and focus level. Refer to the Image and Focus Adjusting for detailed information.
5. Install the inner black liner back to the camera.
6. Install the bubble back to the camera and secure it with screws.

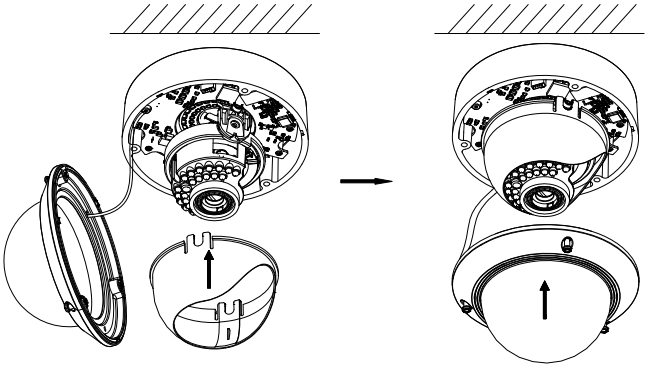


Figure 3-176 Secure Black Liner and Bubble

Conduit Installation on the Side

If you want to route the cables from side of the camera, you need to install a conduit for cable routing.

Steps:

1. Rotate the water-proof plug counterclockwise to remove it from the camera.

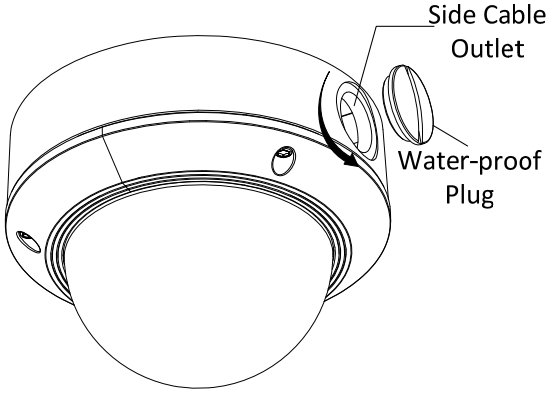


Figure 3-177 Remove the Water-proof Plug

2. Route the cables through the side outlet to the conduit.
3. Align and rotate the conduit clockwise to the side outlet tightly.

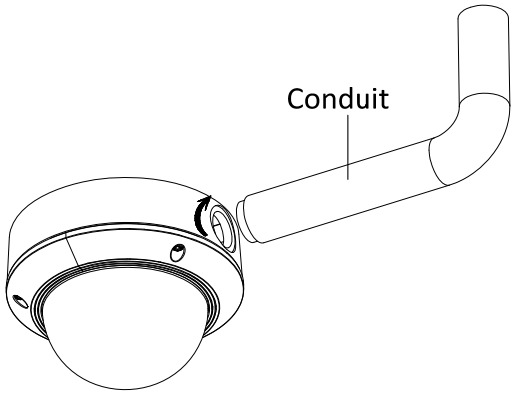


Figure 3-178 Install the Conduit to the Camera

NOTE

For wall mounting, position the side outlet directly downward for waterproofing.

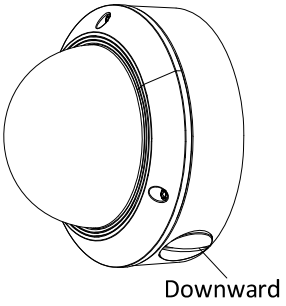


Figure 3-179 Side Outlet Direction

Mounting with Wall Mounting Bracket

Before you start:

Wall mounting bracket is not included in package. If you choose this mounting type, you have to prepare a bracket first. The wall mounting bracket shown below is only for demonstration.

NOTE

When choosing a wall mounting bracket, you must pay attention to the size of the cap which should match the mounting base of the camera.

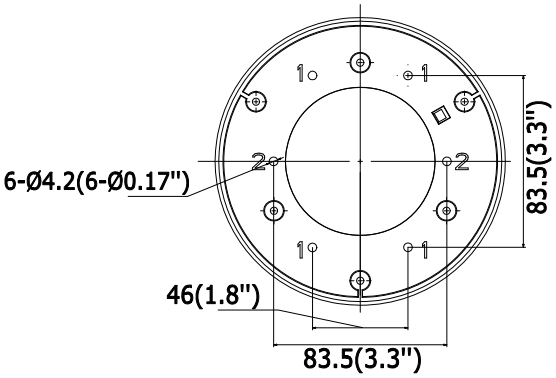


Figure 3-180 Size of the Mounting Base

Steps:

1. Route the cables, install the wall mounting bracket, and secure the cap on the bracket.

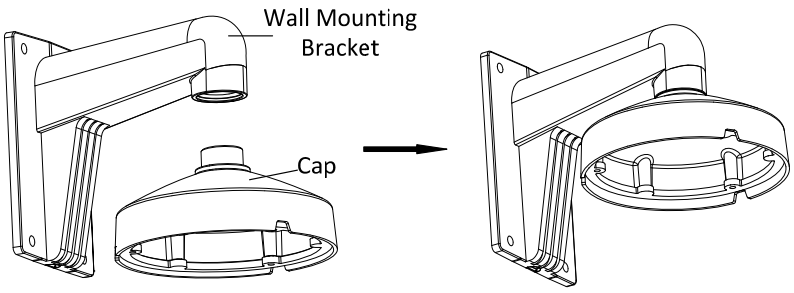


Figure 3-181 Install Wall Mounting Bracket

2. Align the screw holes of the mounting base with the corresponding screw holes of the cap.
3. Secure the mounting base to the cap with screws.

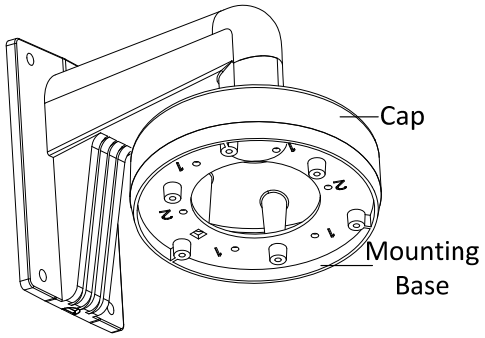


Figure 3-182 Install Mounting Base

4. Align the camera with the mounting base, and secure the camera with screws.

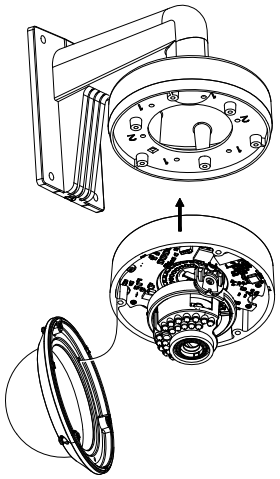


Figure 3-183 Secure the Camera

5. Connect the video output connector to the monitor. Connect the power connector to the power supply.
6. Adjust the image and focus. Refer to the Chapter Image and Focus Adjusting for more detailed information.
7. Install the inner black liner back to the camera.
8. Secure the bubble to the camera with screws.

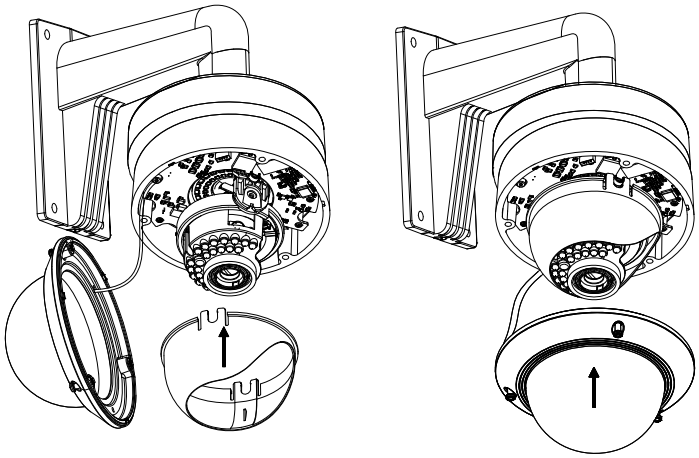


Figure 3-184 Secure Black Liner and Bubble

Mounting with Pendant Mounting Bracket

Before you start:

Pendant mounting bracket is not included in package. If you choose this mounting type, you have to prepare a bracket first. The pendant mounting bracket shown below is only for demonstration.

NOTE

When choosing a pendant mounting bracket, you must pay attention to the size of the cap which should match the mounting base of the camera.

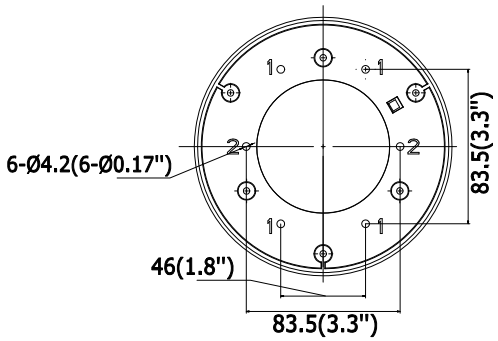


Figure 3-185 Size of the Mounting Base

Steps:

1. Route the cables and Install the pendant mounting bracket. Secure the cap on the bracket.

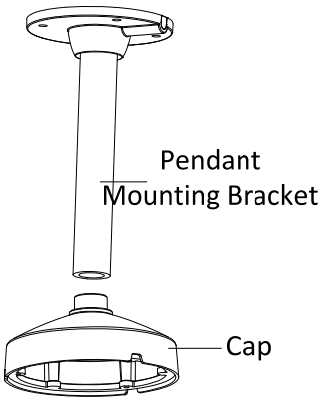


Figure 3-186 Install the Pendant Mounting Bracket

2. Align the screw holes of the mounting base with the corresponding screw holes of the cap.
3. Secure the mounting base to the cap with screws.

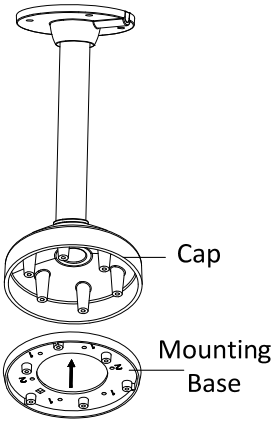


Figure 3-187 Install the Mounting Base

4. Align the camera with the mounting base, and secure the camera with screws.

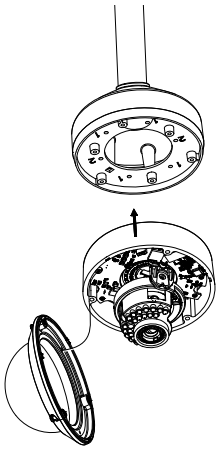


Figure 3-188 Secure the Camera

5. Adjust the image and focus. Refer to the Chapter Image and Focus Adjusting for more detailed information.

6. Install the inner black liner back to the camera.
7. Secure the bubble to the camera with screws.

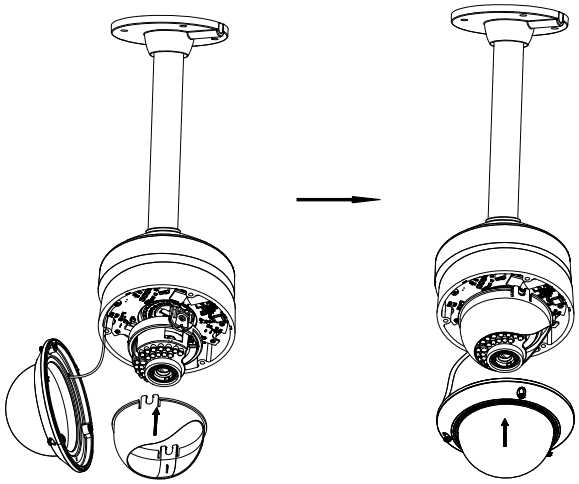


Figure 3-189 Secure Black Liner and Bubble

Mounting with Junction box

Steps:

1. Install the junction box in the ceiling or the wall.
2. Attach the mounting base to the junction box with screws.

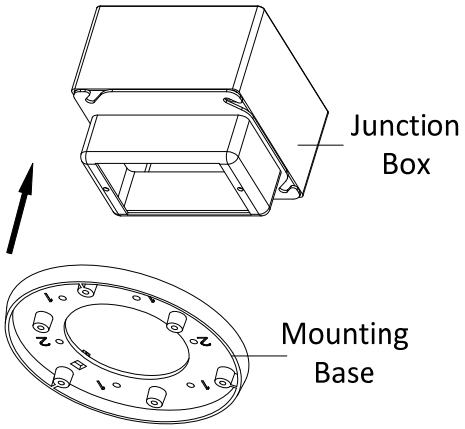


Figure 3-190 Install the Mounting Base

3. Route the cables through the hole in the center of the mounting base.
4. Align the camera with the mounting base. And secure the camera with screws.

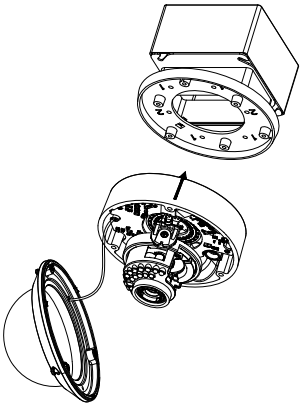


Figure 3-191 Secure Camera

5. Adjust the image and focus. Refer to the Chapter Image and Focus Adjusting for more detailed information.
6. Install the inner black liner back to the camera.
7. Secure the bubble to the camera with screws

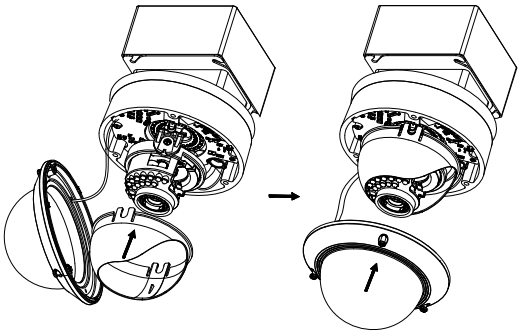


Figure 3-192 Secure the Black Liner and Bubble

Image and Focus Adjusting

Before you start:

Connect the camera to a monitor with supplied auxiliary video output cable, and power on the camera.

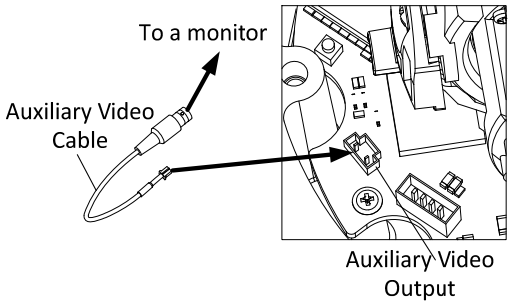


Figure 3-193 Connect Camera to a Monitor

NOTE

For certain camera models, the auxiliary video cable is not included in the package. Instead, you can connect the video out interface of the camera to a monitor for image and focus adjustment.

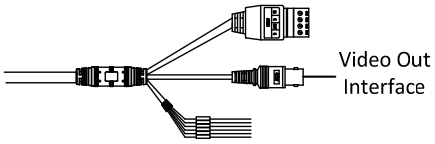


Figure 3-194 Video Out Interface of the Camera

3-axis Adjustment

Steps:

1. View the camera image using the monitor.
2. Loosen the tilt adjusting screw to adjust the tilt angle [0° to 90°]/[0° to 70°], hold the black liner to adjust the pan angle [0° to 355°], and hold the lens to rotate the camera [0° to 355°].

NOTE

The tilting angle varies according to the different models as the figures below. Please refer to the actual device.

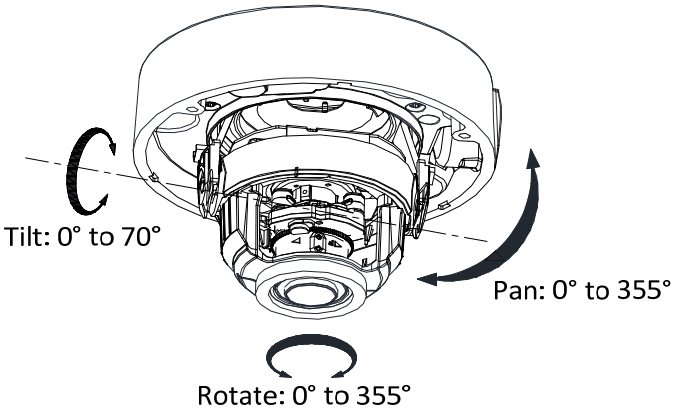


Figure 3-195 3-axis Adjustment

Zoom and Focus Adjustment

Manually Adjustment:

Some camera models of this series have the lens that zoom and focus levels must be manually adjusted via zoom/focus lever and you can use zoom lever and focus lever to adjust the lens.

Steps:

1. View the camera image using the monitor.
2. Loosen the zoom lever and move the lever between T (Tele) and W (Wide) to obtain the appropriate angle of view.

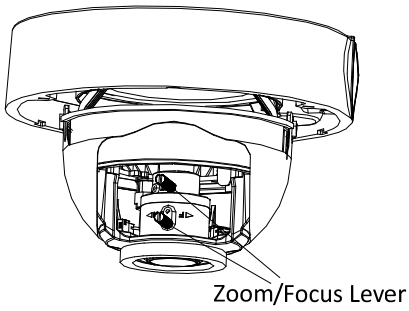


Figure 3-196 Zoom/Focus Lever

3. Tighten the zoom lever.
4. Loosen the focus lever and move the lever between F (Far) and N (Near) to obtain the optimum focus.
5. Tighten the focus lever.

Motor-driven Lens:

Some camera models of this series are equipped with a motor-driven lens. You can adjust the zoom and focus level on PTZ control panel by visiting the camera via web browser or client software.

The camera with letter “Z” in its model suffix support electronic lens. You can adjust the lens via the zoom button or focus button on the PTZ control interface after you login to a camera.

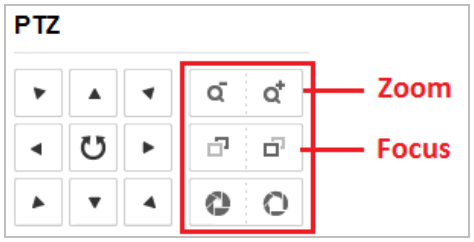


Figure 3-197 Zoom/Focus Adjustment Via Web Browser

Chapter 4 Mini Dome Camera Installation

4.1 Type I Mini Dome Camera

4.1.1 Camera Description

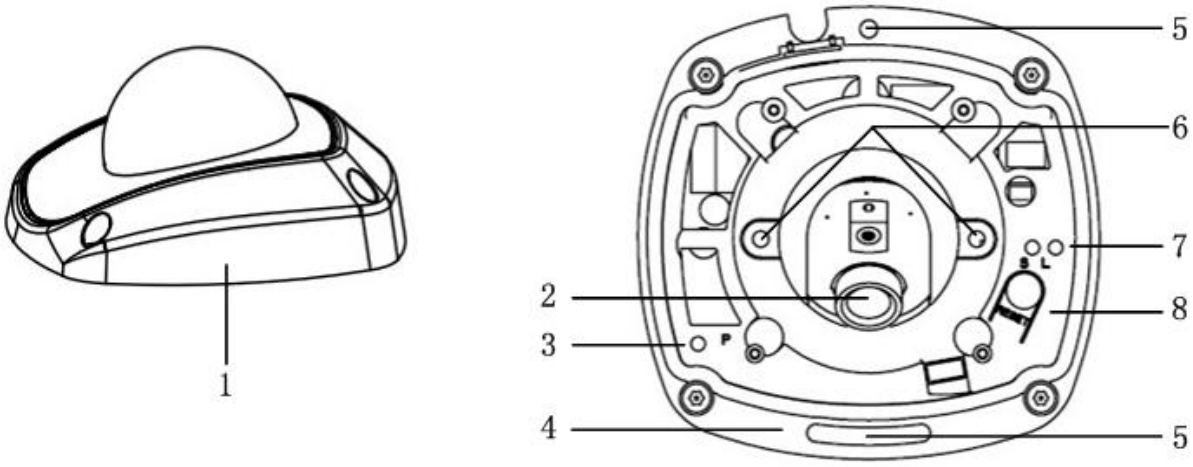


Figure 4-1 Overview

Table 4-1 Physical Description

No.	Description
1	Cover
2	Lens
3	Power LED indicator, It turns solid red when power is connected.
4	Base plate
5	Set screw hole
6	Set screw of lens
7	S & L: Network status indicator. When the network is connected, the “S” LED is solid yellow, while the “L” LED flashes orange.
8	RESET Button

NOTE

Press RESET button about 10s when the camera is powering on or rebooting to restore the default

settings, including the user name, password, IP address, port No., etc.

4.1.2 Installation

Steps:

1. (Optional) Use a plier to remove the clip (marked in dotted line in 0) on the side of the back box and then route the cables through the opening instead of the cable hole.

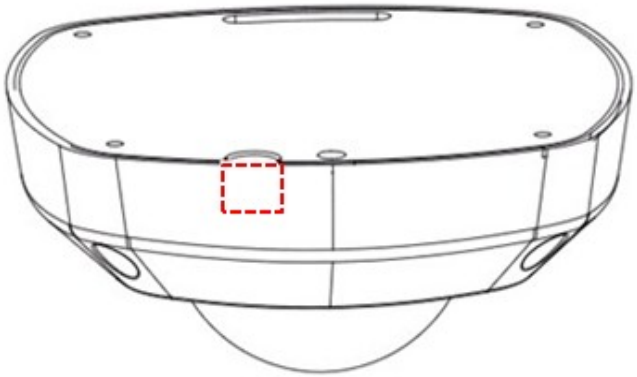


Figure 4-2 Side Clip

2. Loosen the set screws with a hex key (supplied) to remove the cover.

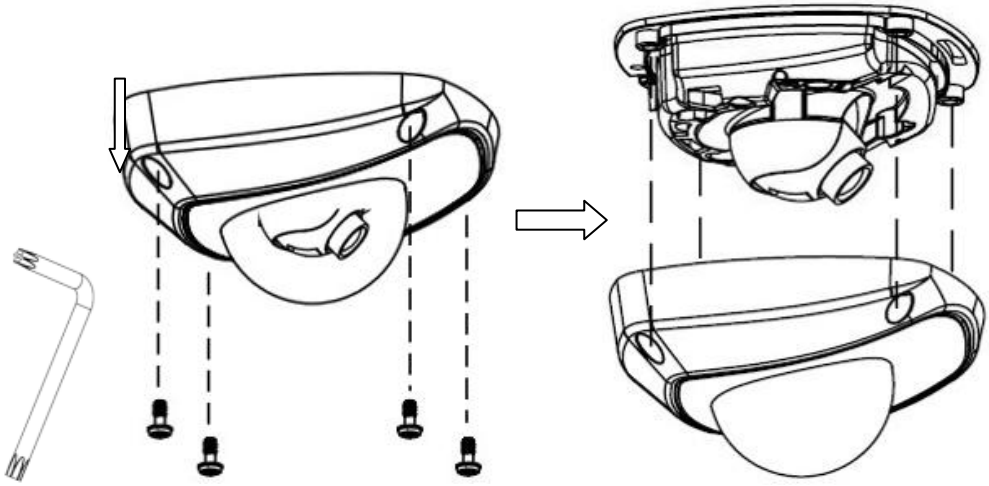


Figure 4-3 Remove the Cover

3. Fix the camera to the ceiling with the supplied screws.

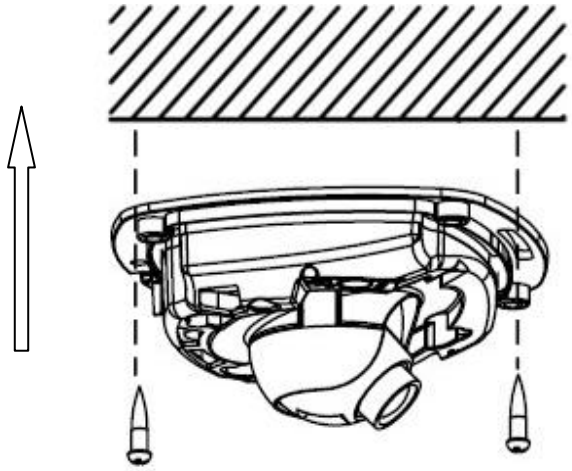


Figure 4-4 Fix the Camera

3. View the video image of the camera over the network.
4. Loosen the lens set screws.

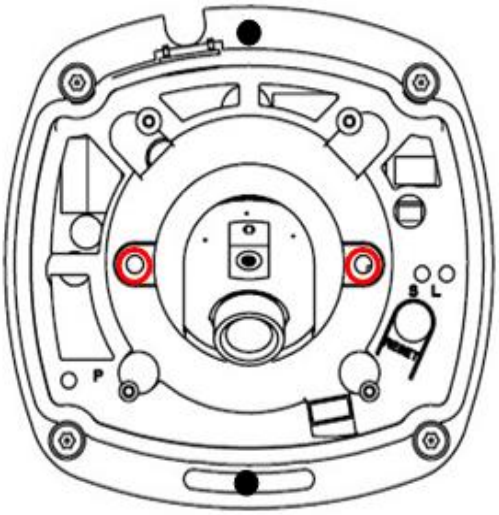


Figure 4-5 Loosen the Lens Set Screws

5. Insert the hex key into the hole marked in the picture and rotate the hex key to adjust the panning position and tilting position until getting the desired surveillance angle. Tighten the set screws.

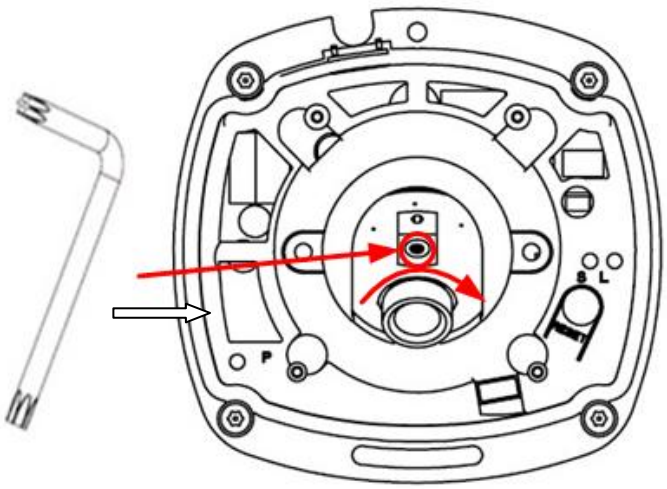


Figure 4-6 Adjust Panning Position

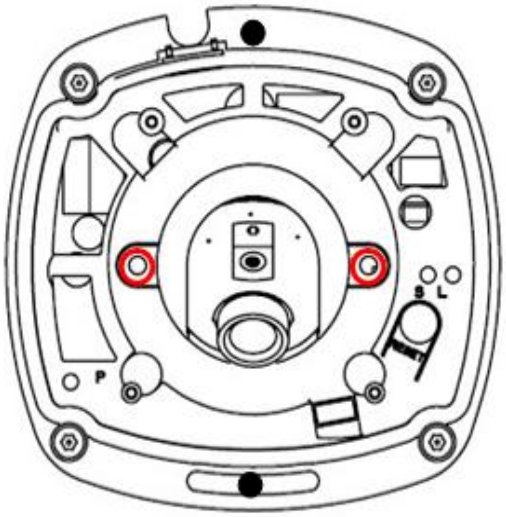


Figure 4-7 Adjust Tilting Position

NOTE

As the lens of camera has already been factory adjusted to the best imaging effect, you just need to adjust the panning position and tilting position to get the desired surveillance angle.

6. Reinstall the cover before viewing the image so that you can get the same surveillance effect as the installation is done.
7. Install the cover, and tighten the set screws.

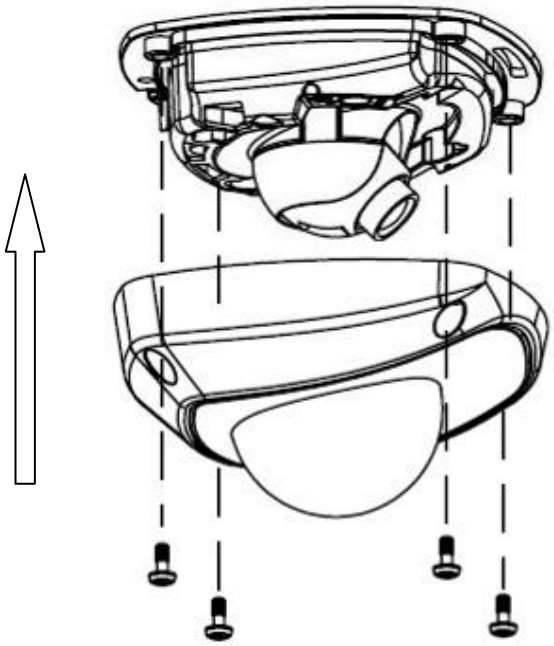


Figure 4-8 Install the Back Box

4.2 Type II Mini Dome Camera

4.2.1 Camera Description

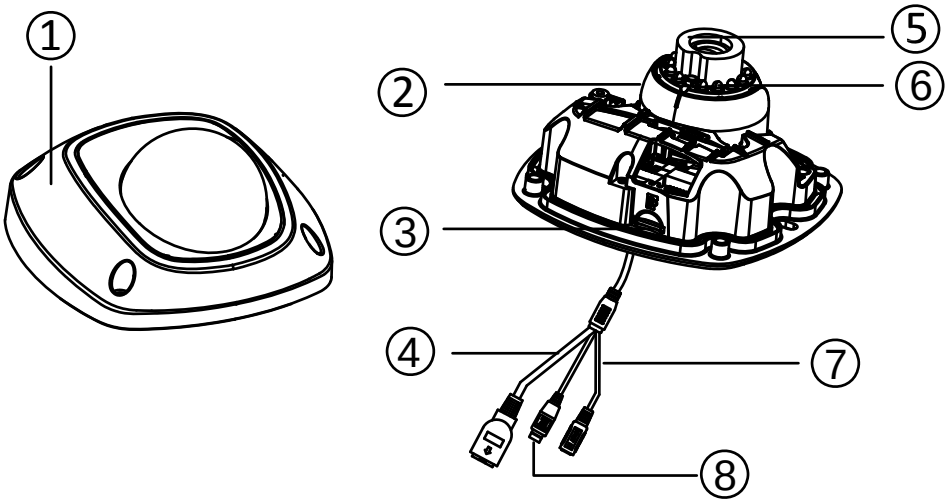


Figure 4-9 Overview (1)

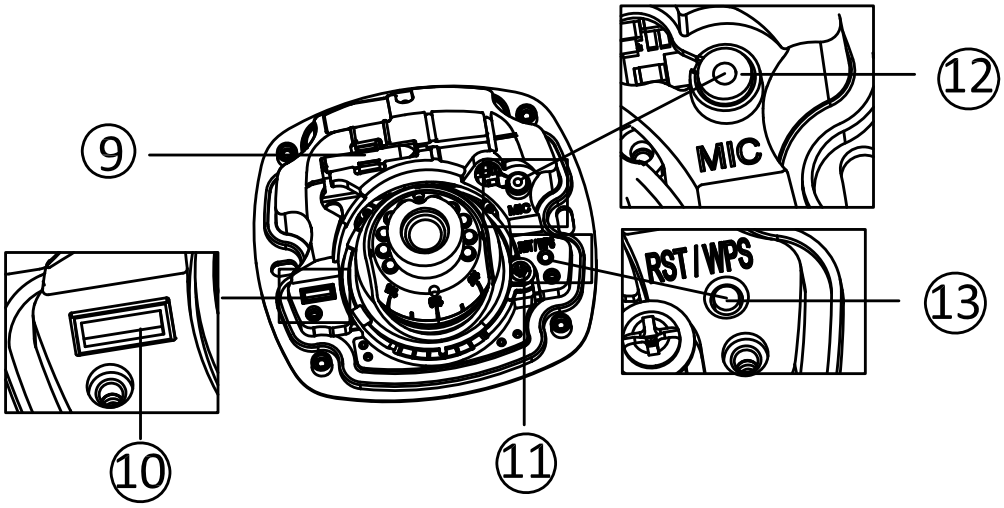


Figure 4-10 Overview (2)

Table 4-2 Physical Description

No.	Description
1	Front Cover
2	Dome Drive
3	Micro SD Card Slot
4	Network Cable
5	Lens
6	IR LED
7	Power Cable
8	Audio/Alarm Cables
9	Wi-Fi Antenna
10	Serial Port Interface
11	Hex Screw
12	MIC
13	RESET/WPS Button

NOTE

- Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.
- No.8 is the audio/alarm cable interface, of which the “I” mark connects to the alarm input, the “o” mark connects to the alarm output, the “GND” mark connects the grounding, and the “A” mark connects the audio output.

- WPS (Wi-Fi Protected Setup, also known as AOSS or QSS) is a computing standard that attempts to allow easy establishment of a secure wireless network. Refer to user manual for details.
- A wireless router with the WPS function is required to enable the WPS function of the camera. Refer the steps below.

Steps:

1. Press the WPS button on the router.
2. Press the WPS button (about 2s) on the camera within 120s you enable the WPS of the router to join in the wireless network.

NOTE

- The WPS button works as a reset button only when you press it when the camera is powering on.
- Press the WPS button on the camera, and then press the WPS button on the router will establish a connection as well, and the expire time of WPS connection on the camera is 120s.
- The link indicator blinks if the wireless connection is succeeded.

4.2.2 Installation

Steps:

1. Drill the screw holes and the cable hole in the ceiling according to the supplied drill template.

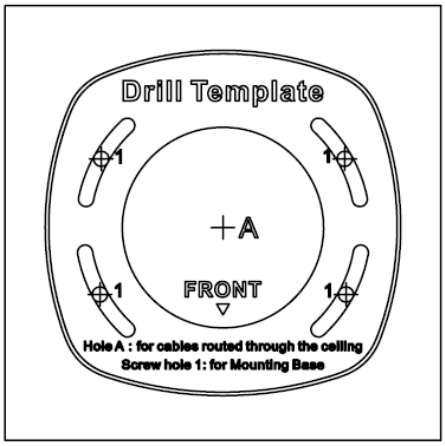


Figure 4-11 Type I Drill Template

NOTE

A different type of drill template might be provided because of the different batches of products. And also, the contained adapter plate matches with type II drill template differs as well. See figure below.

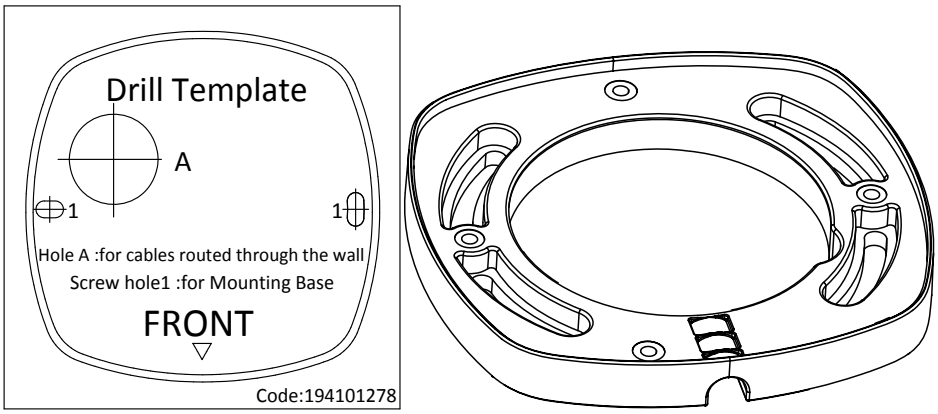


Figure 4-12 Type II Drill Template/Adapter Plate

2. Loosen the set screw on the front cover to disassemble the camera with the supplied Allen key.

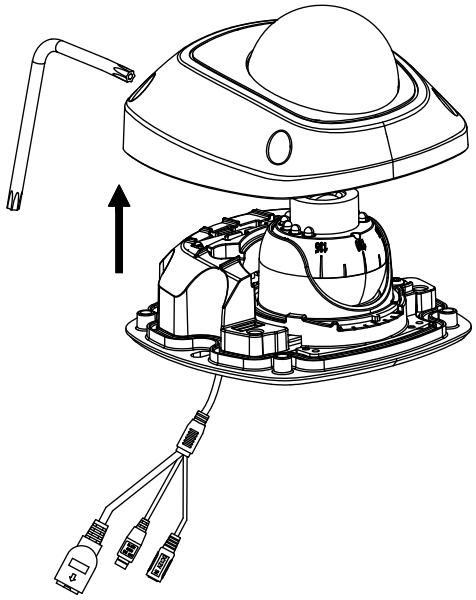


Figure 4-13 Disassemble the Camera

3. Fix the adapter plate to the ceiling with the supplied expansion screws.

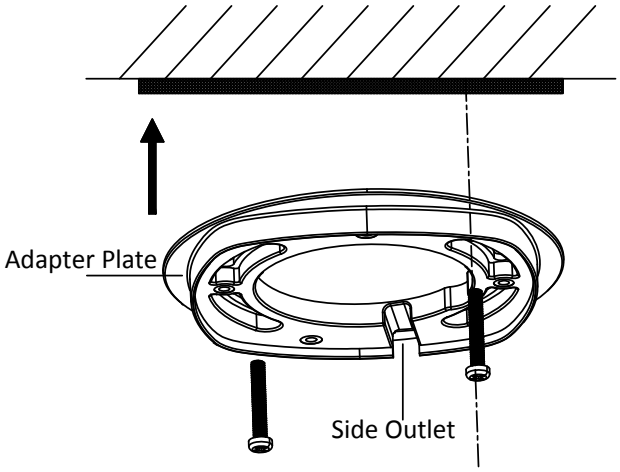


Figure 4-14 Fix the Adapter Plate

If the supplied drill template is type II drill template, you can skip step 3 and go straight to step 4.

4. Fix the dome drive with the supplied PM4x8 screws.

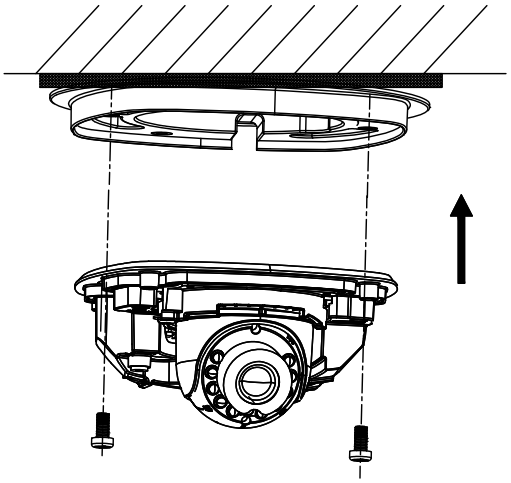


Figure 4-15 Fix the Dome Drive

5. Connect the power cable, network cable, and the alarm/audio cable.

Use a plier to remove the removable part and route the cables via side outlet (as shown in Figure 4-14) if no cable hole is drilled in step 1, and connect the corresponding cables.

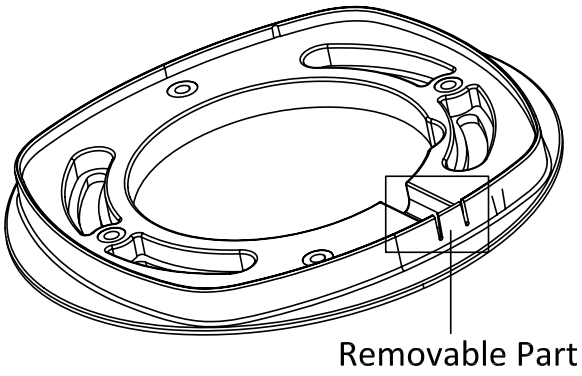


Figure 4-16 Remove the Removable Part

6. View the image via the web browser.

7. Slightly loosen the hex screw beside the WPS/RESET button to adjust the surveillance angle.

8. Use the supplied adjusting tool to adjust the pan [±30°], tilt [0~80°], and rotation direction [0~360°].

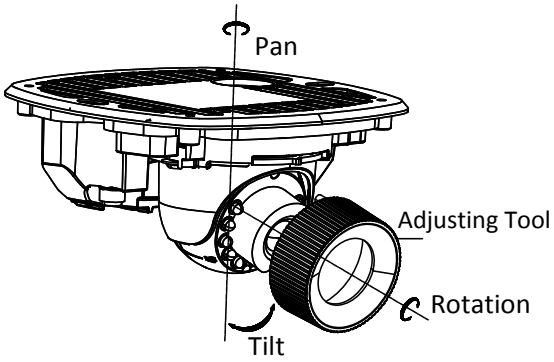


Figure 4-17 3-axis Adjustment

9. Tighten the hex screw to fix the well-adjusted surveillance angle.

10. Align the front cover to the dome drive and tighten the set screws on the front cover to complete the installation.

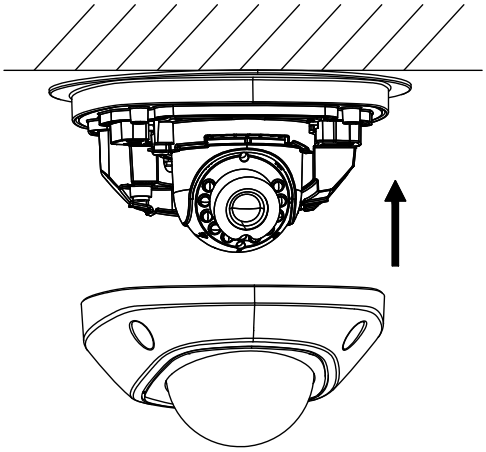


Figure 4-18 Install the Front Cover

- **Ceiling Mounting with a Gang Box**

Steps:

1. Fix the adapter plate to the gang box with the supplied PM4x8 screws.

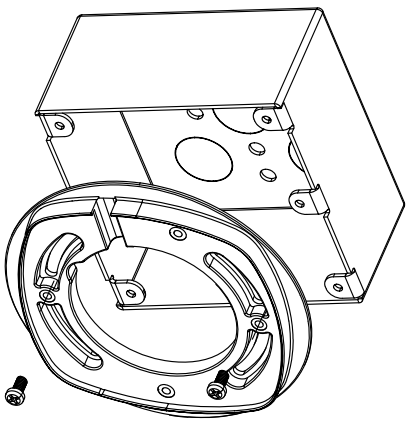


Figure 4-19 Fix the Adapter Plate

2. Fix the dome drive to the adapter plate with the supplied PM4x8 screws.

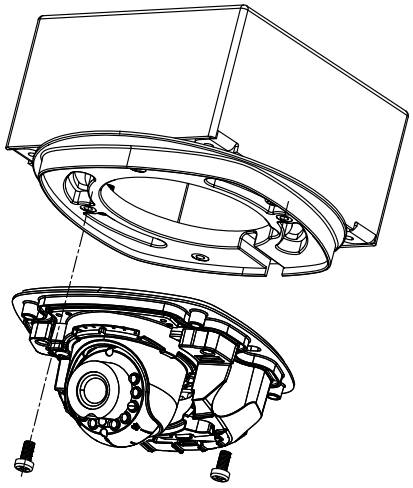


Figure 4-20 Fix the Dome Drive

3. Connect the power cable, network cable, and the alarm/audio cables.

4. Align the front cover to the dome drive and tighten the set screws on the front cover to complete the installation.

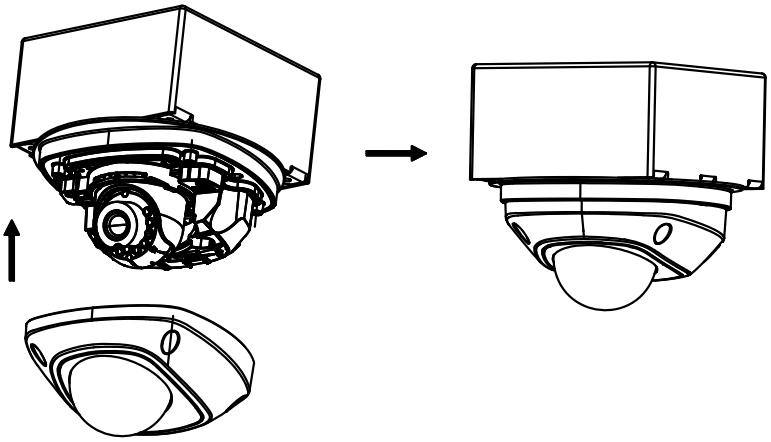


Figure 4-21 Install the Front Cover

- **Ceiling Bracket Mounting**

Steps:

1. Install the bracket to the ceiling with the supplied screws in the ceiling bracket package.

NOTE

You need to purchases the matched ceiling bracket separately if ceiling bracket mounting is adopted.

2. Fix the adapter plate to the ceiling bracket with the supplied PM4x8 screws.

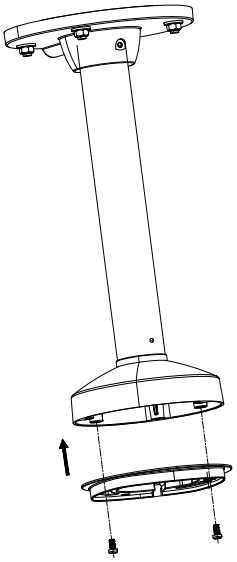


Figure 4-22 Fix the Adapter Plate

3. Install the dome drive to the adapter plate.

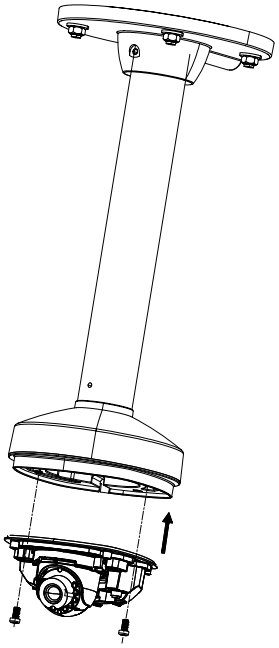


Figure 4-23 Fix the Dome Drive

4. Align the front cover to the dome drive and tighten the set screws on the front cover to complete the installation.

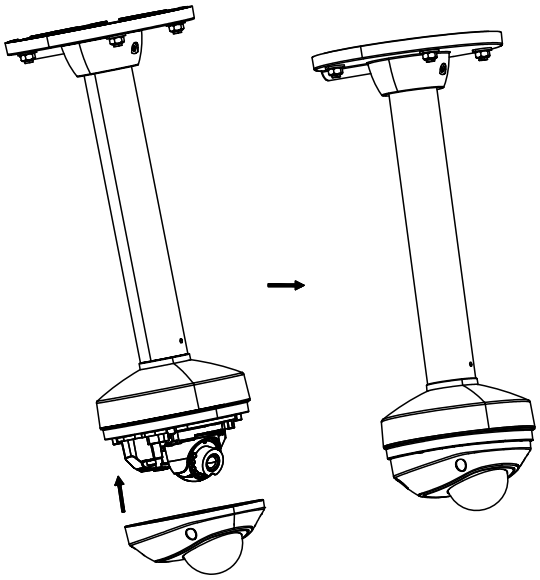


Figure 4-24 Install the Front Cover

- **Wall Bracket Mounting**

Steps:

1. Install the wall bracket to the wall with the supplied screws in the wall bracket package.

NOTE

You need to purchases the matched ceiling bracket separately if wall bracket mounting is adopted.

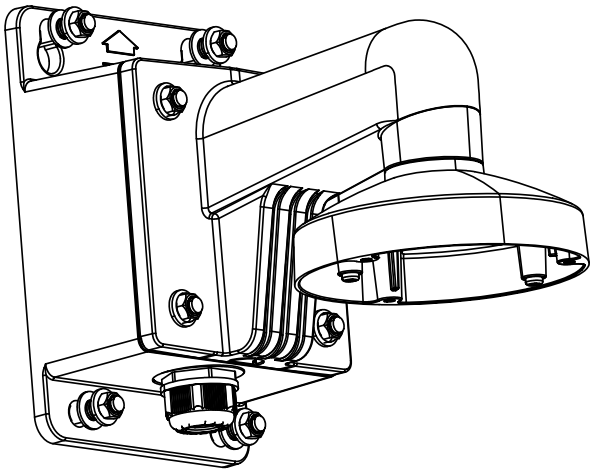


Figure 4-25 Install Wall Bracket

2. Fix the adapter plate to the wall bracket.

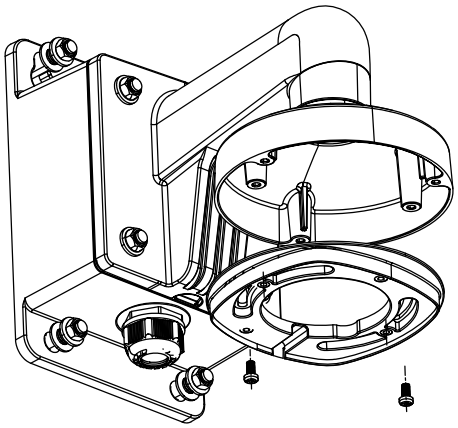


Figure 4-26 Fix the Adapter Plate

3. Fix the dome drive to the wall bracket with the supplied screws.

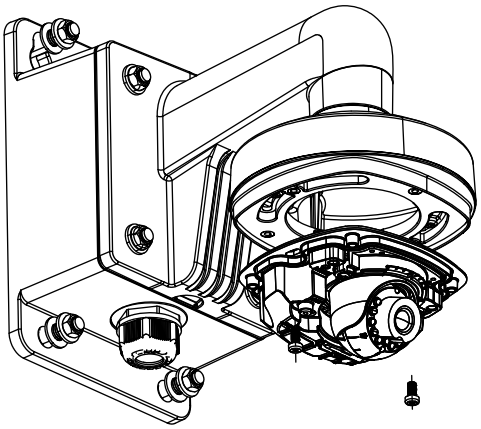


Figure 4-27 Fix the Camera

4. Align the front cover to the dome drive and tighten the set screws on the front cover to complete the installation.

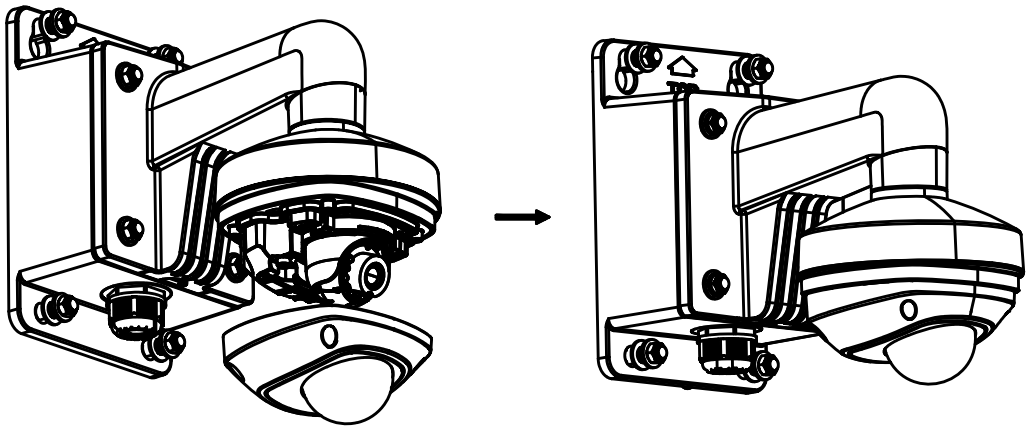


Figure 4-28 Install the Front Cover

- **Install the Micro SD Card**

This series of camera supports local storage, please refer to the following steps to install the micro SD card.

Steps:

1. Remove the front cover by loosening the set screws on it.

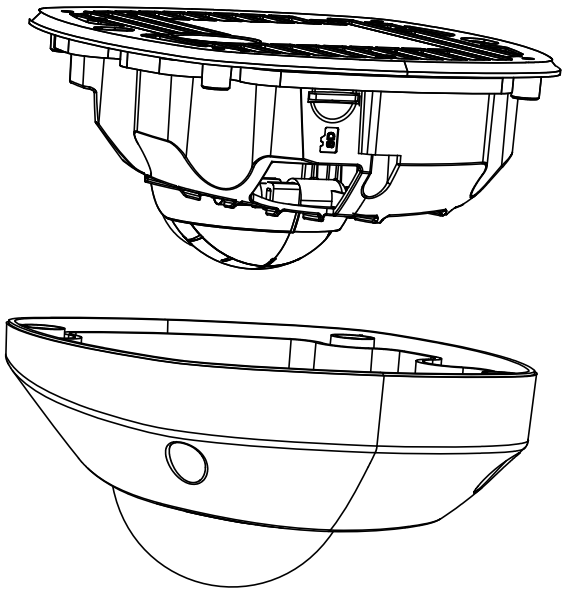


Figure 4-29 Remove the Front Cover

2. Insert the micro SD card to the card slot until you hear a click.

3. (Optional)Slightly push the inserted micro SD card to uninstall it from the camera.

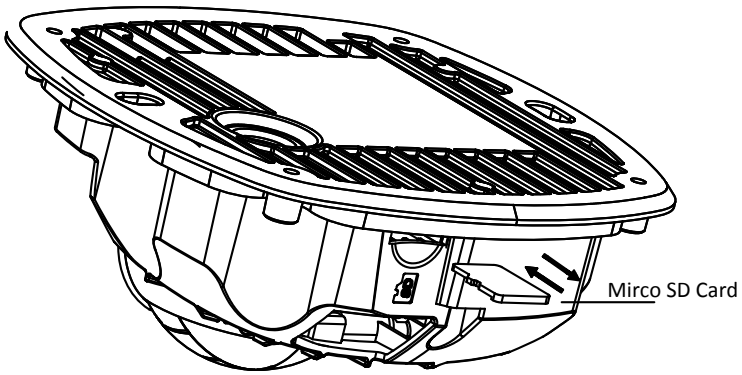


Figure 4-30 Install and Uninstall Micro SD Card

Chapter 5 Turret Camera Installation

5.1 Type I Turret Camera

5.1.1 Camera Description

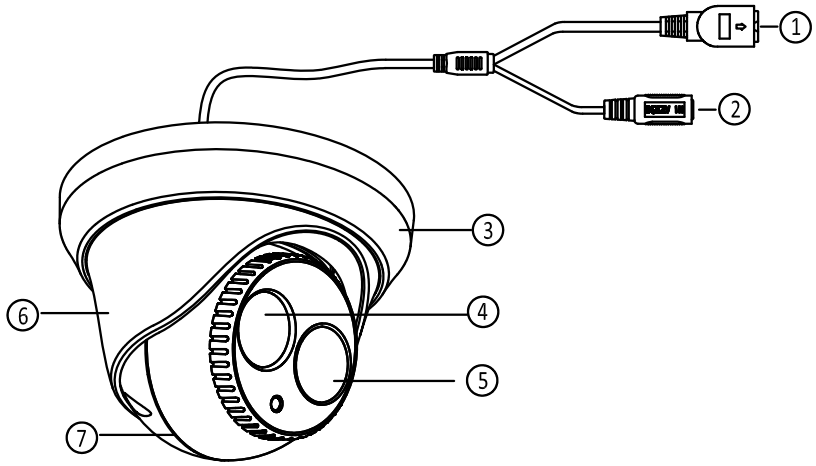


Figure 5-1 Overview

Table 5-1 Description

NO.	Description
1	10M/100M self-adaptive Ethernet interface
2	Power Cable
3	Trim Ring
4	Lens
5	IR LED
6	Enclosure
7	Dome Drive

NOTE

Please make sure that the power adapter is compatible with the camera. This series of camera supports Power over Ethernet (PoE), and the standard power supply is 12 VDC.

5.1.2 Installation

Steps:

9. Rotate the trim ring counterclockwise to remove it from the camera.

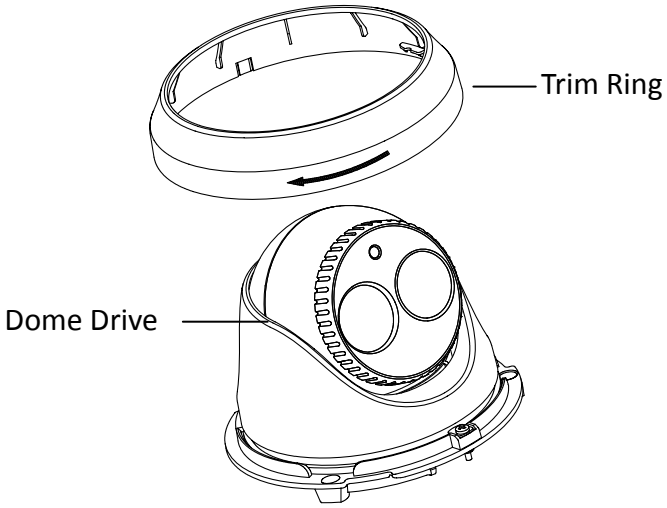


Figure 5-2 Dissemble the Camera

3. Drill the screw holes and the cable hole on the ceiling according to the drill template.

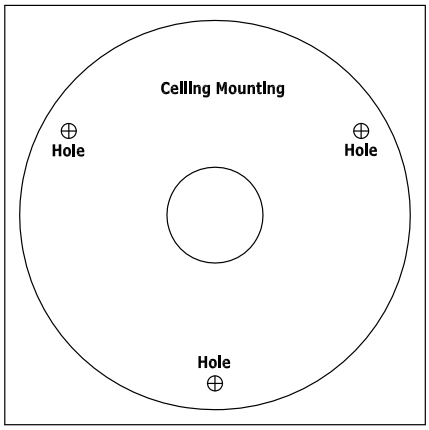


Figure 5-3 The Drill Template

There are two cable outlet methods. One is to route the cables through the cable hole, and the other is to route the cables through the side outlet shown below.

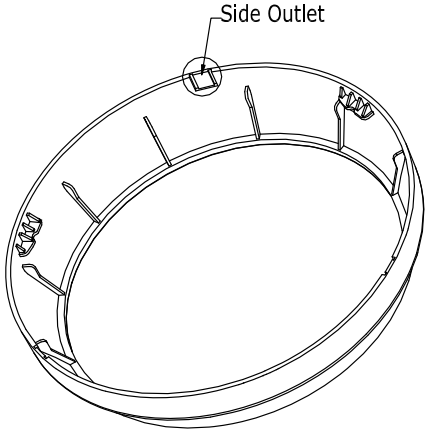


Figure 5-4 Side Outlet

Three side outlets on the enclosure are selectable, which makes routing the cables easier instead of drilling a cable hole on the ceiling. Use a plier to remove the plastic and route the cables through the hole.

4. Connect the corresponding power/network cable.
5. Fix the camera to the ceiling with the supplied expansion screws.

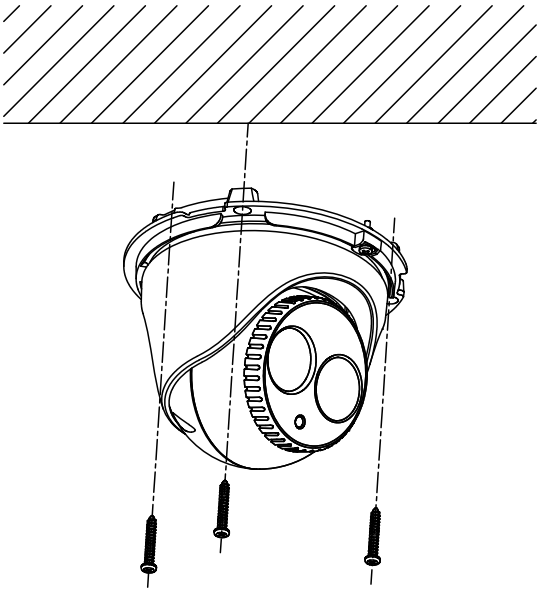


Figure 5-5 Secure the Camera to the Ceiling

6. Adjust the Lens.
   1). Loosen the lock screw.
   2). Rotate the enclosure to adjust the pan angle; rotate the camera to adjust the tilt angle.
   3). Tighten the lock screw to fix the optimum surveillance angle.

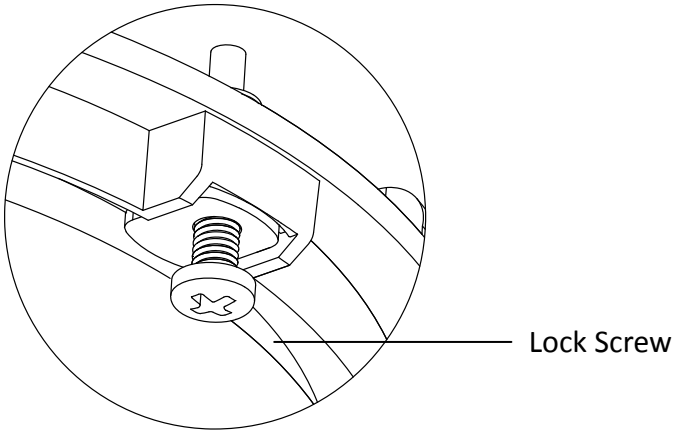


Figure 5-6 Lock Screw

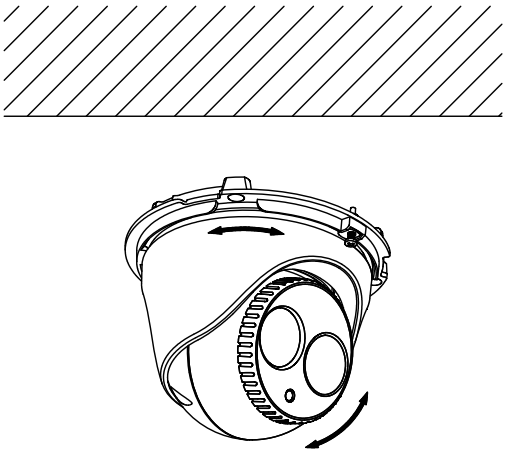


Figure 5-7 Adjust the Lens

7. Attach the trim ring to the camera and rotate the trim ring clockwise to get it secured.

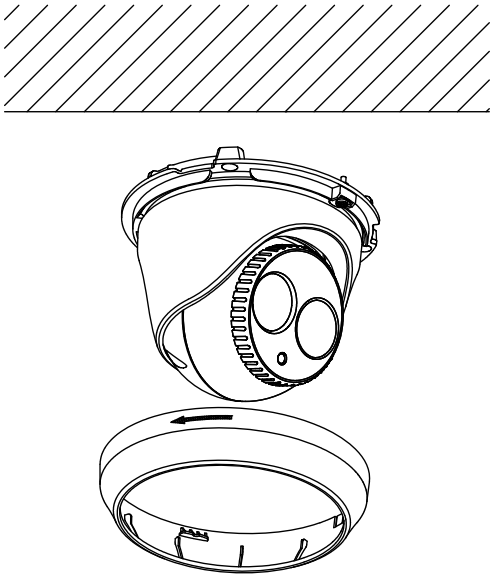


Figure 5-8 Install the Trim Ring

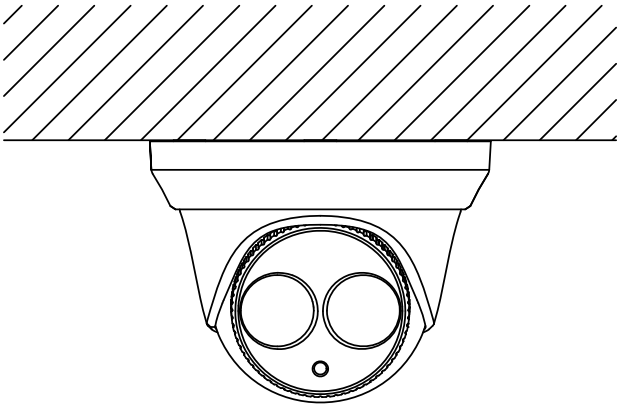


Figure 5-9 Complete the Installation

5.2 Type II Turret Camera

5.2.1 Camera Description

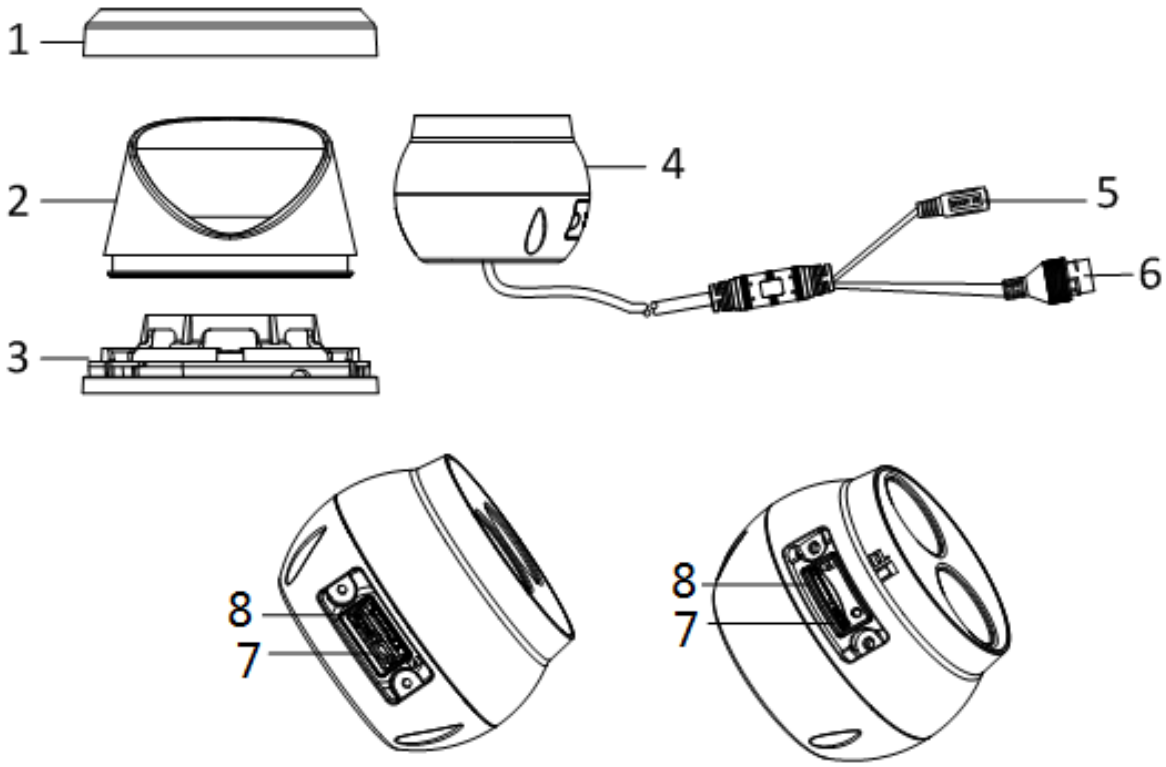


Figure 5-10 Type II Turret Camera

Table 5-2 Description

No.	Description	No.	Description
1	Trim Ring	5	Power Cord
2	Enclosure	6	10M/100M self-adaptive Ethernet interface (PoE)
3	Mounting Base	7	RST (Reset) Button(Different Models)
4	Camera	8	Memory Card Slot(Different Models)

Notes:

- For this camera, the layout of memory card slot and reset button may be different from model to model.
- Press Reset button about 10s when the camera is power on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

5.2.2 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- The standard power supply is 12 VDC, please make sure your power supply matches with your camera.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure that the wall is strong enough to withstand four times the weight of the camera and the bracket.

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.

5.2.2.1. Ceiling Mounting

Steps:

1. Disassemble the camera.
   1) Rotate the trim ring anticlockwise to take it off from the camera.
   2) Loosen the fixing screw. Take the mounting base off from the camera and the enclosure.
   3) Separate the camera and the enclosure.

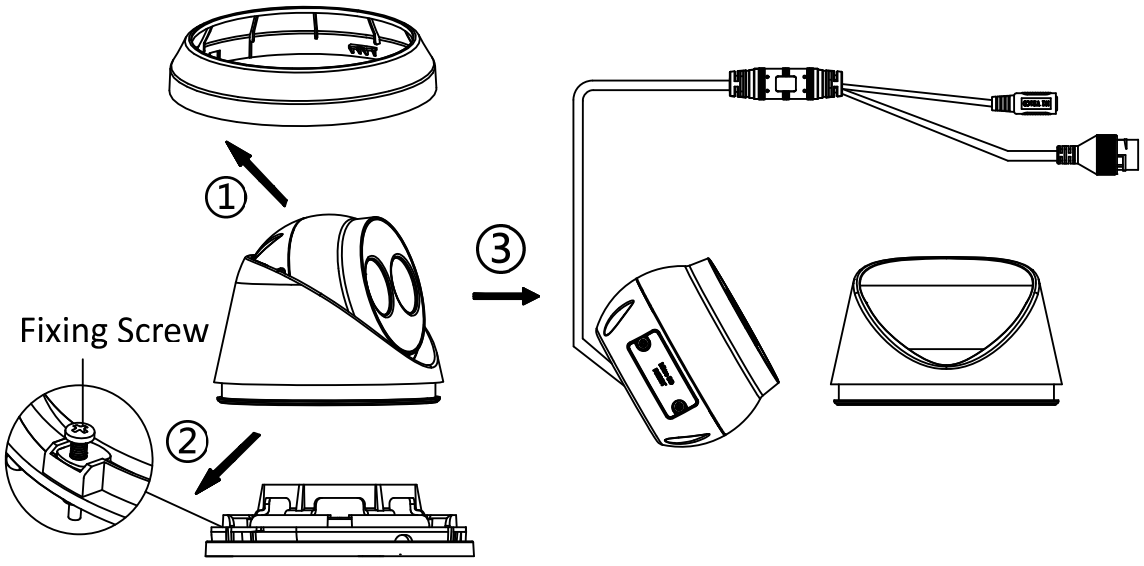


Figure 5-11 Disassemble the Camera

2. Install memory card.
   1) Unscrew the memory card slot cover.
   2) Insert the memory card.

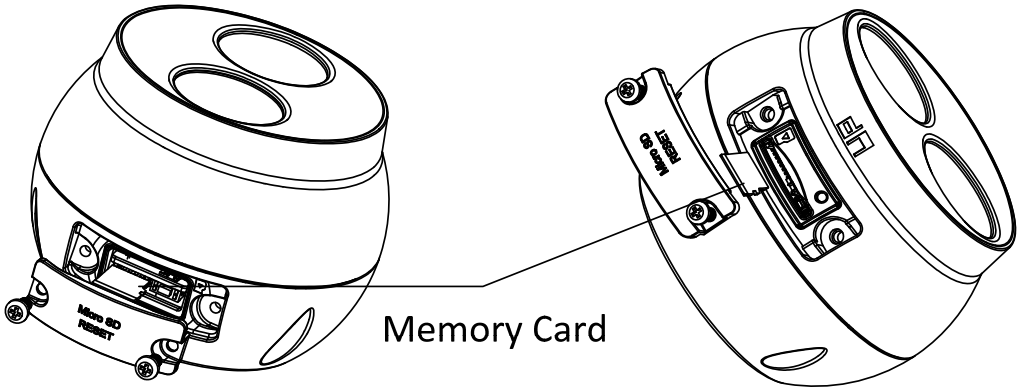


Figure 5-12 Install Memory Card

   3) (Optional) To unmount the memory card, push to get it ejected.
   4) Screw the memory card slot cover back.
3. Paste the drill template to desired mounting place.
4. Drill the screw holes (for expansion screws) and the cable hole on the ceiling according to the drill template.

Note:

If the camera is installed to a wooden wall, use self-tapping screws instead of expansion screws

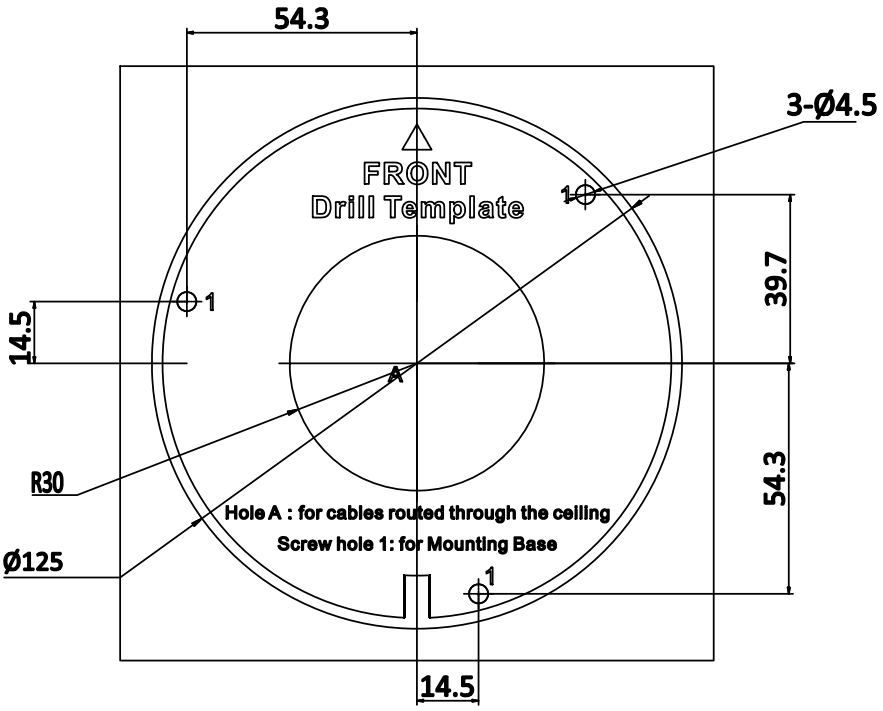


Figure 5-13 Drill Template

5. Fix the mounting base to the ceiling with two supplied screws.

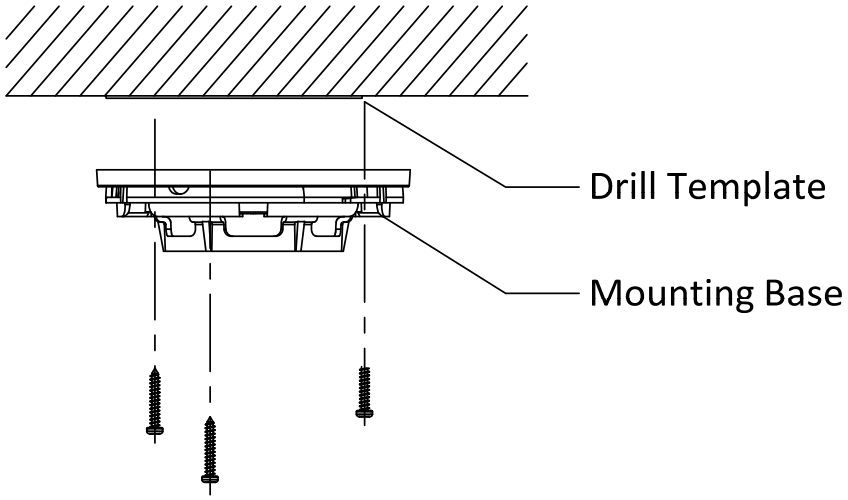


Figure 5-14 Fix Mounting Base

6. Connect the corresponding power/network cable. Refer to the section 2.3 for the water-proof accessory installation if the camera is installed in the outdoor.
7. Install the camera along with the enclosure to the mounting base.

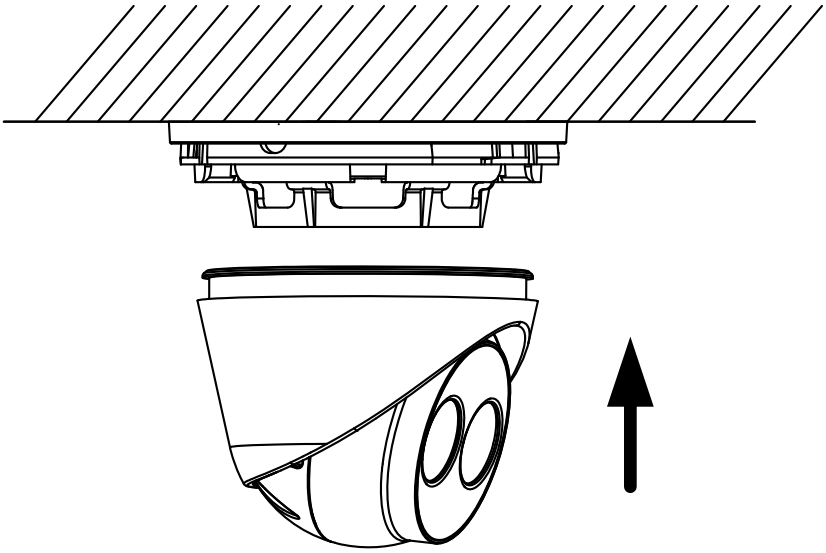


Figure 5-15 Install the Camera

8. Adjust the surveillance angle of the camera. Secure the fixing screw after adjustment.

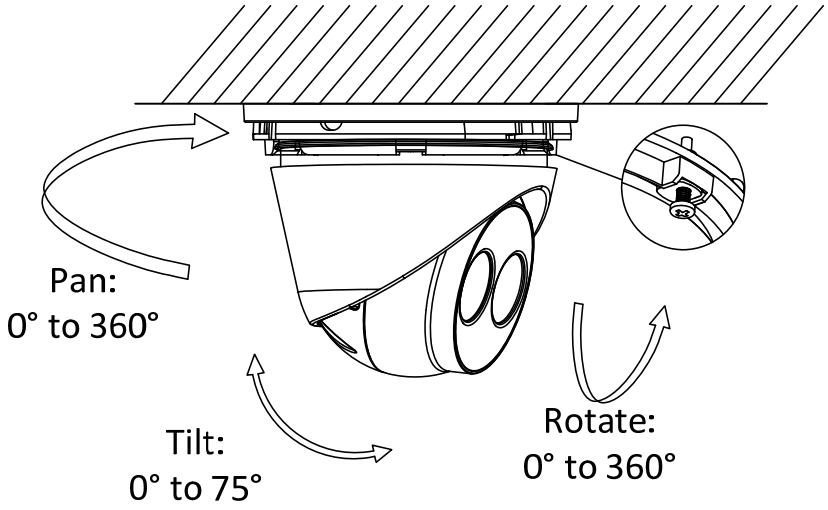


Figure 5-16 Adjust Surveillance Angle

9. Attach the trim ring to the camera and rotate the trim ring clockwise to get it secured.

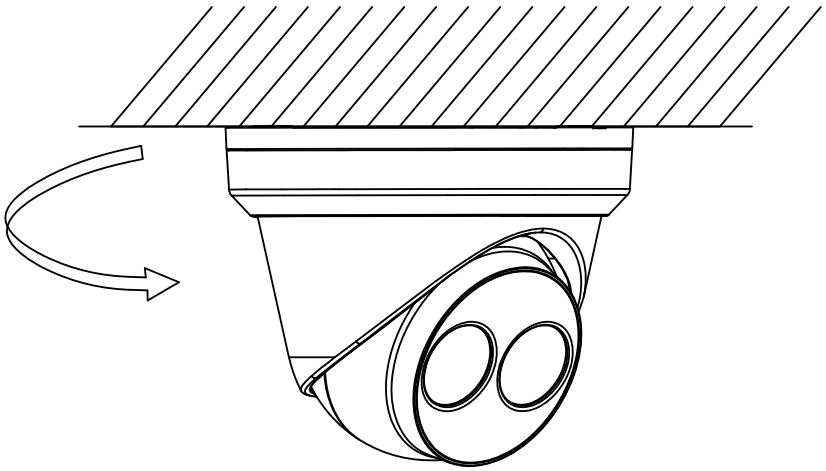


Figure 5-17 Install Trim Ring

5.2.2.2. Mounting with Brackets

This camera series supports mounting with wall mounting bracket and pendant mounting bracket. We take Type IV camera as the demonstration example.

❖ **Wall Mounting**

The wall mount is not included in the package. You need to prepare one, if you adopt this mounting type.

Steps:

1. Mark the screw holes on desired mounting place.

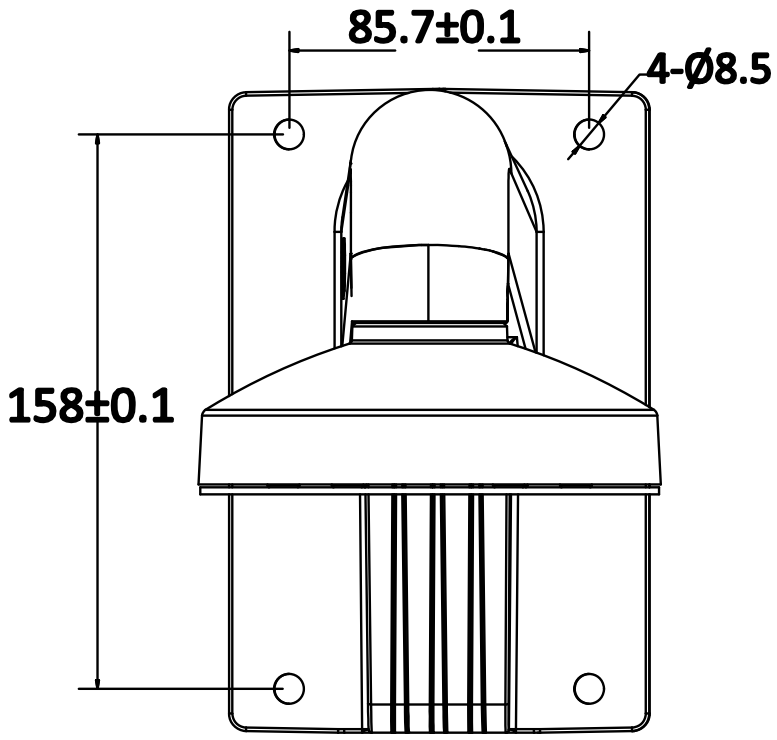


Figure 5-18 Dimension of Demonstrated Wall Mounting Bracket

2. Drill four screw holes with a Φ10 mm drill.
3. Route the cables and fix the bracket with four M6 expansion bolts.
4. Disassemble the camera.
5. Refer to step 1 in ceiling mounting of each camera type.
6. Fix the mounting base to the cap of wall mount with 3 supplied self-tapping screws.

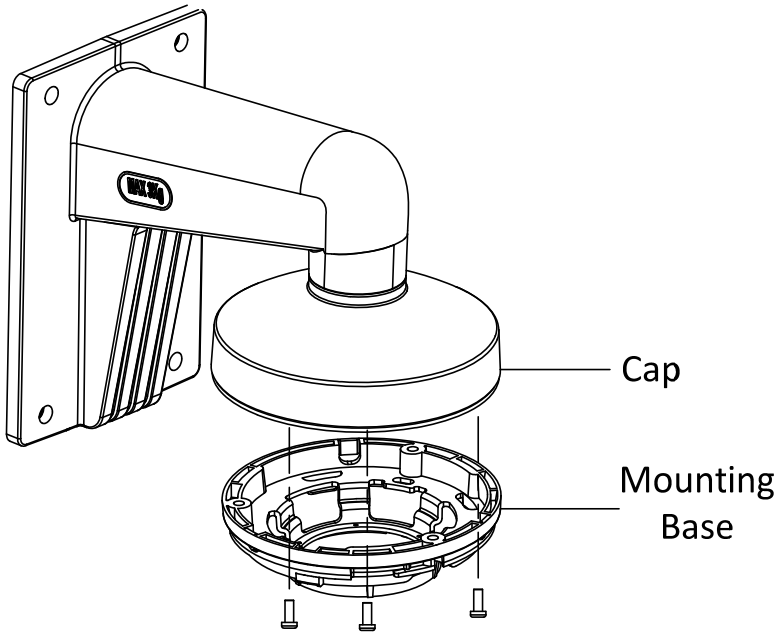


Figure 5-19 Fix Mounting Base

7. Connect the corresponding power/network cable.
8. Install the camera and the enclosure to the mounting base, adjust the surveillance angle, and fix the trim ring.

   Refer to corresponding steps in ceiling mounting of camera.

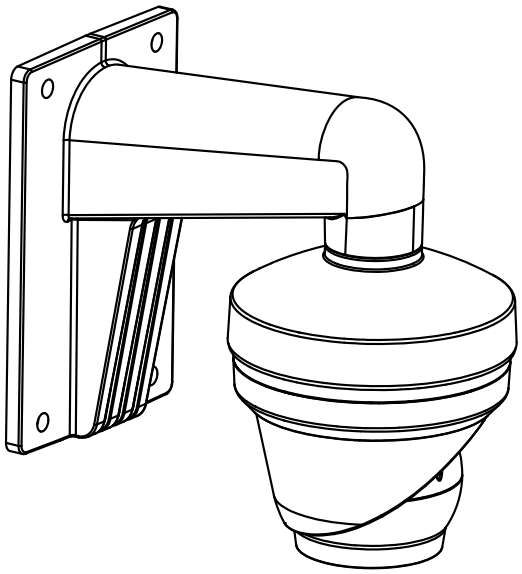


Figure 5-20 Wall Mounting

❖ **Pendant Mounting**

The pendant mounting bracket is not included in the package. You need to prepare one in advance, if you adopt this mounting type.

Steps:

1. Mark the screw holes on desired mounting place.
2. Drill three screw holes for expansion bolts.
3. Route the cables and fix the pendant mounting bracket to ceiling.

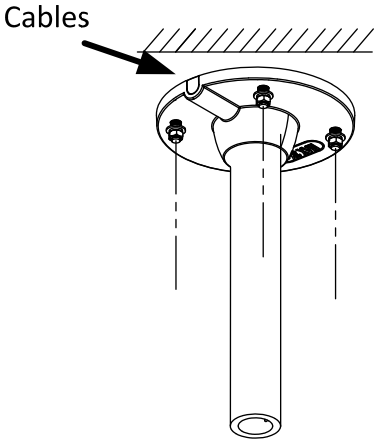


Figure 5-21 Fix Pendant Mount

4. Disassemble the camera.

   Refer to step 1 in ceiling mounting of camera.

5. Fix the mounting base to the cap of the pendant mounting bracket with 3 supplied self-tapping screws.

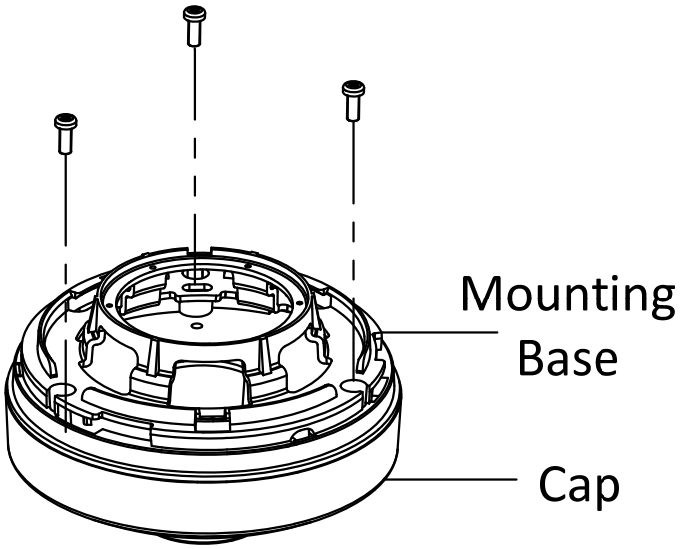


Figure 5-22 Fix Mounting Base

6. Screw the cap to the pendant mount.

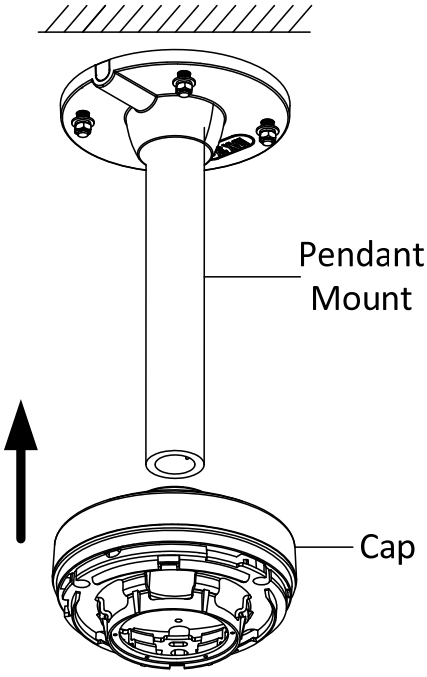


Figure 5-23 Install the Cap

7. Connect the corresponding power/network cable.

8. Install the camera and the enclosure to the mounting base, adjust the surveillance angle, and fix the trim ring.

   Refer to corresponding steps in ceiling mounting of camera.

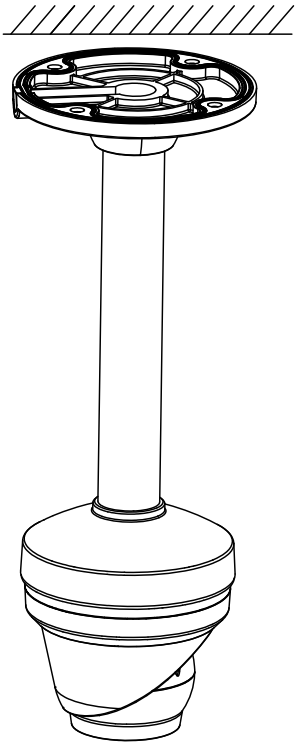
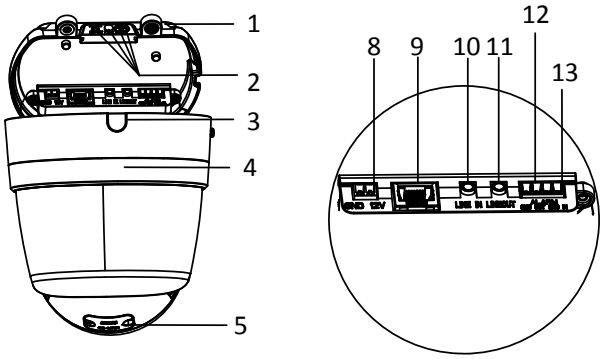


Figure 5-24 Pendant Mounting

5.3 Type III Turret Camera

5.3.1 Camera Description



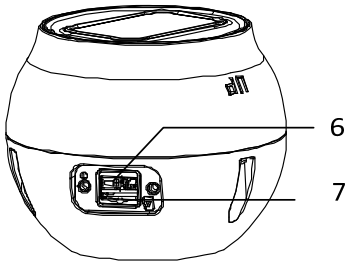


Figure 5-25 Type III Turret Camera

Table 5-3 Description

No.	Description
1	Bottom Cover
2	Sealing Plug
3	Side Outlet Cover
4	Decoration Ring
5	Cover
6	Reset Button
7	Memory Card Slot
8	Power Interface
9	RJ 45 Network Interface
10	Audio Input Interface
11	Audio Output Interface
12	Alarm Output Interface
13	Alarm Input Interface

Notes:

- Press Reset button about 10s when the camera is power on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

5.3.2 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- The standard power supply is 12 VDC, please make sure your power supply matches with your camera.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure that the wall is strong enough to withstand four times the weight of the camera and

the bracket.

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.

5.3.2.1. Memory Card Installation

Steps:

1. Rotate to remove the decoration ring.

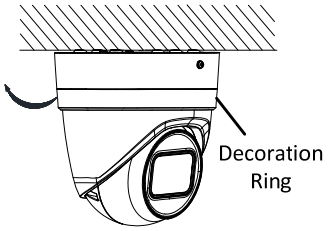


Figure 5-26 Remove the Decoration Ring

2. Loosen the adjusting screw.

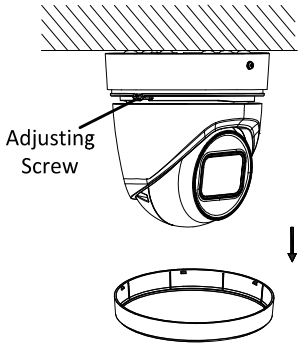


Figure 5-27 Loosen the Adjusting Screw

3. Rotate the camera to the position as shown in the figure.

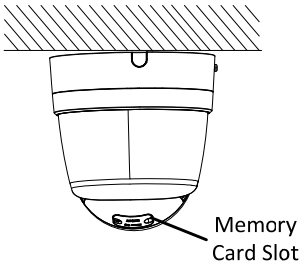


Figure 5-28 Rotate the Camera

4. Loosen the screws to remove the cover of the memory card slot.
5. Insert the memory card into the slot.

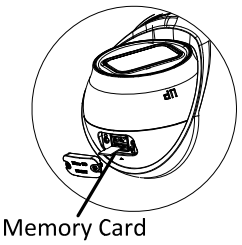


Figure 5-29 Insert the Memory Card

6. Replace the slot cover with the screws.

5.3.2.2. Ceiling Mounting

Steps:

1. (Optional) For the cement ceiling, drill screw holes according to the hole 1 on the supplied adapter using a drill (Φ5.5 mm).

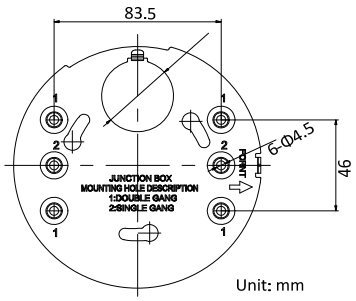


Figure 5-30 Drill Holes in the Ceiling

2. Secure the adapter to the ceiling with the supplied screws (PA4X25).

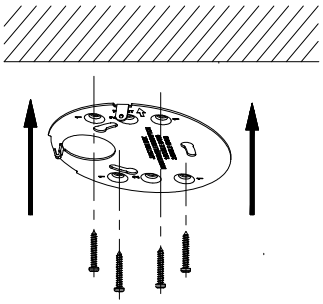


Figure 5-31 Secure the Adapter to the Ceiling

3. Hook the camera to the adapter with the safety rope. And loosen the screws and rotate to open the bottom cover.

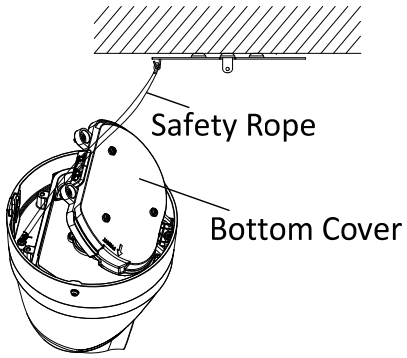


Figure 5-32 Hook the Camera to the Adapter

4. Take out the sealing plugs on the bottom cover and route the cables.

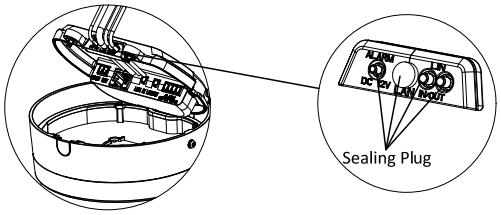


Figure 5-33 Route the Cables

Note:

When routing the cables, take out the sealing plug of the corresponding interface as required. Otherwise, keep the sealing plug intact.

5. Replace the bottom cover to the camera with screws. And rotate clockwise to secure the camera to the adapter with the screw.

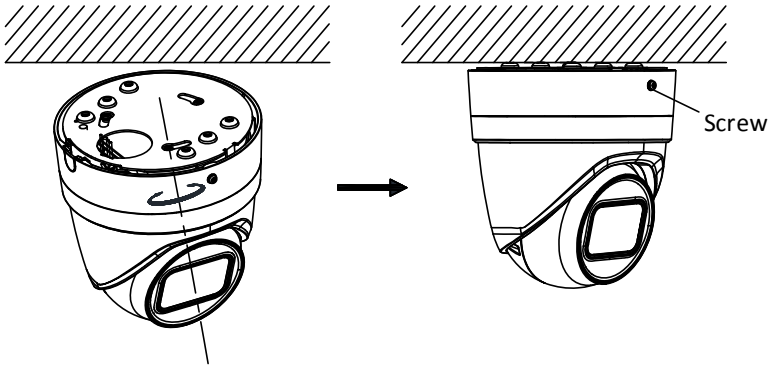


Figure 5-34 Secure the Camera

6. Adjust the view angle.

   Follow the steps below to adjust the view angle.

Steps:

1) Rotate to remove the decoration ring and loosen the adjusting screw.

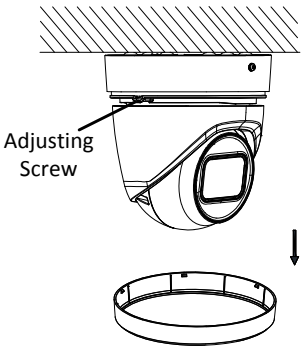


Figure 5-35 Loosen the Adjusting Screw

2) Adjust the camera to the desired surveillance angle.

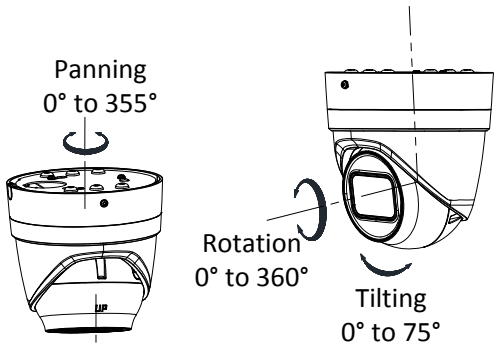


Figure 5-36 Adjust the View Angle

3) Tighten the adjusting screw and replace the decoration ring.

7. Adjust zoom and focus.

The camera is equipped with a motorized vari-focal lens. You can adjust the zoom and focus level on PTZ control panel by visiting the camera via web browser or client software.
For detailed steps, refer to the User Manual of Network Camera.

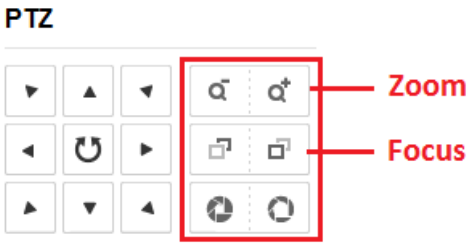


Figure 5-37 Zoom and Focus Adjustment via Web Browser

5.3.2.3. Wall Mounting

Before you start:

The wall mount is not included in the package. You need to prepare one, if you adopt this mounting type.

Steps:

1. Secure the wall mount bracket on the wall with the screws (M6).

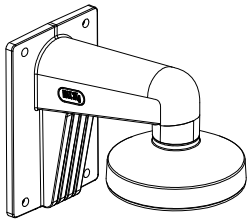


Figure 5-38 Secure the Bracket

2. Secure the adapter to the bracket with screws (PM4X10).

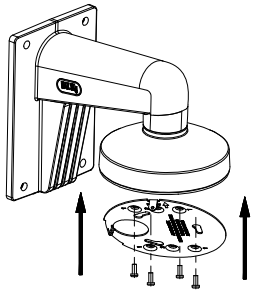


Figure 5-39 Secure the Adapter

3. The following steps are similar to the ceiling mount and are omitted here. You can refer to the step 3 to 8 in section Ceiling Mounting for details.

5.4 Type IV Turret Camera

5.4.1 Camera Description

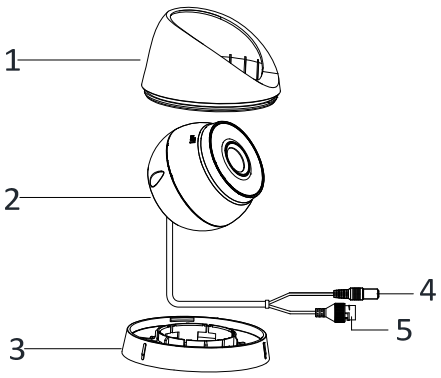


Figure 5-40 Type IV Turret Camera

Table 5-4 Description

No.	Description
1	Enclosure
2	Camera Body
3	Mounting Base
4	Power Cord
5	Network Cable

Notes:

For cameras support power over Ethernet (PoE), the power is passed along with data on Ethernet cabling. And a switch supports PoE function is required.

5.4.2 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- The standard power supply is 12 VDC, please make sure your power supply matches with your camera.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure that the wall is strong enough to withstand four times the weight of the camera and

the bracket.

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.

5.4.2.1. Ceiling Mounting

Before you start:

Both wall mounting and ceiling mounting are suitable for the turret camera. Ceiling mounting will be taken as an example in this section. And you can take steps of ceiling mounting as a reference for wall mounting.

Steps:

1. Paste the drill template (supplied) to the desired mounting position on the ceiling.
2. Drill the screw holes and the cable hole in the ceiling according to the drill template.

Note:

Drill the cable hole, if adopting ceiling outlet to route the cable.

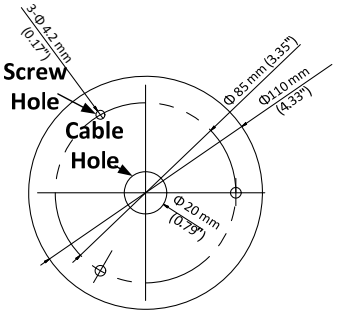


Figure 5-41 The Drill Template

3. Disassemble the camera.
   1) Rotate the camera to align the notch to one of the marks.
   2) Pry the mounting base to remove the mounting base with the camera body with a flat object, e.g., a coin.

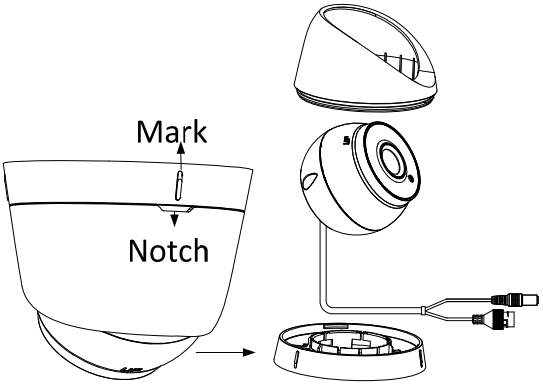


Figure 5-42 Disassemble the Camera

4. Fix the mounting base to the ceiling with supplied screws.

Notes:

- In the supplied screw package, both self-tapping screws, and expansion bolts are contained.
- If the ceiling is cement, expansion bolts are required to fix the camera. If the ceiling is wooden, self-tapping screws are required.

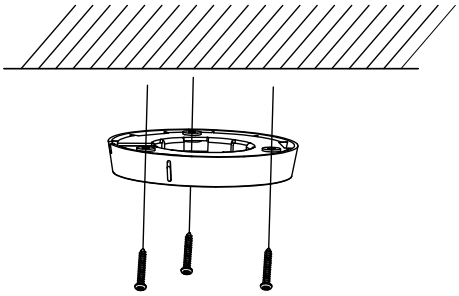


Figure 5-43 Fix the Mounting Base

5. Route the cables through the cable hole or the side opening.
6. Install the camera body back to the mounting base.

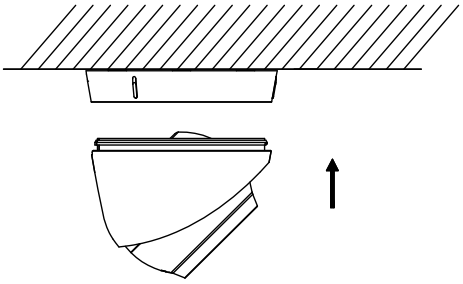


Figure 5-44 Install the Camera Body

7. Connect the power cord and network cable.
8. Power on the camera, and set the network configuration (for details, refer to 3 Setting the Network Camera over the LAN and 4 Accessing via Web Browser)to check whether the image is gotten from the optimum angle. If not, adjust the surveillance angle.

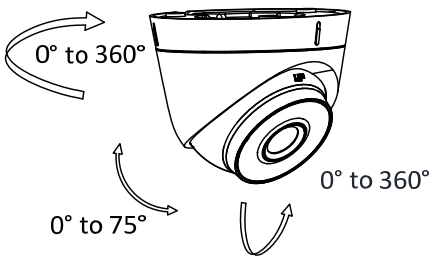


Figure 5-45 Adjust Surveillance Angle

1) Hold the camera body and rotate the enclosure to adjust the pan angle [0° to 360°].

2) Move the camera body up and down to adjust the tilt angle [0° to 75°].

3) Rotate the camera body to adjust the rotation angle [0° to 360°].

5.4.2.2. Mounting with Junction Box

Before you start:

- You need to purchase a junction box separately if you adopt the mounting with a junction box.
- Both wall mounting and ceiling mounting are suitable for the turret camera. Wall mounting will be taken as an example in this section. And you can take steps of wall mounting as a reference for the ceiling mounting.

Steps:

1. Paste the drill template (supplied) to the desired mounting position on the wall.
2. Drill the screw holes and the cable hole in the wall according to the drill template.

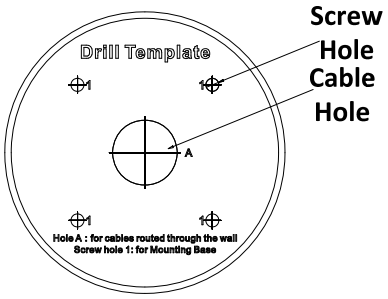


Figure 5-46 Drill Template

3. Take apart the junction box, and fix the camera's mounting base with three MP4 screws on the junction box's cover.

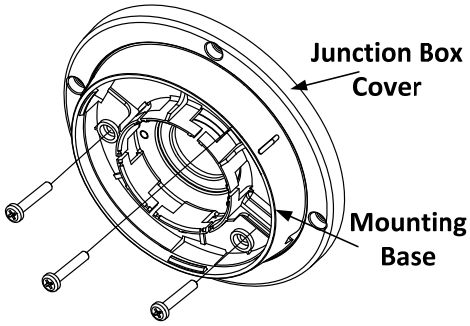


Figure 5-47 Fix screws on the junction box's Cover

4. Secure the junction box's body on the wall with four PA4 × 25 screws.

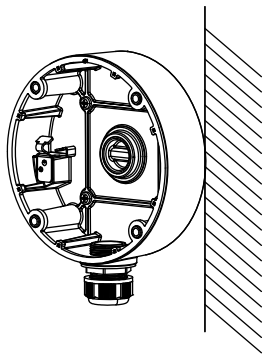


Figure 5-48 Secure the Junction Box's Body on the Ceiling/Wall

5. Combine the junction box's cover with its body with supplied screws.
6. Repeat steps 5 to 8 of Ceiling Mounting to complete the installation.

5.4.2.3. Mounting with Inclined Base

Before you start:

- You need to purchase an inclined base separately if you adopt the mounting with an inclined base.
- Both wall mounting and ceiling mounting are suitable for the turret camera. Wall mounting will be taken as an example in this section. And you can take steps of wall mounting as a reference for the ceiling mounting.

Steps:

1. Paste the drill template to the wall.
2. Drill screw holes and the cable hole (optional) on the wall according to the supplied drill template.

Note:

Drill the cable hole, when adopting ceiling outlet to route the cable

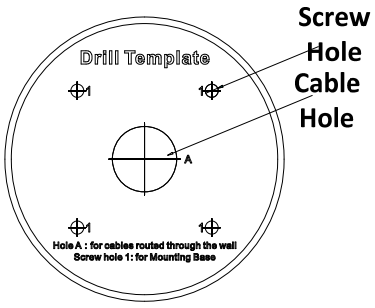


Figure 5-49 Drill Template

3. Disassemble the inclined base by the screw driver.
4. Install the turret camera's mounting base on the inclined base cover with three PM4 screws.

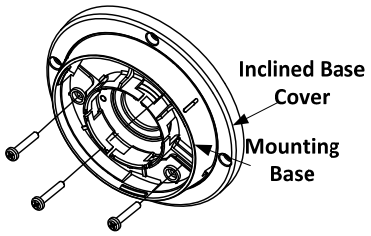


Figure 5-50 Fix Camera's Mounting Base

5. Install the inclined base's body on the ceiling/wall with four PA4×25 screws.

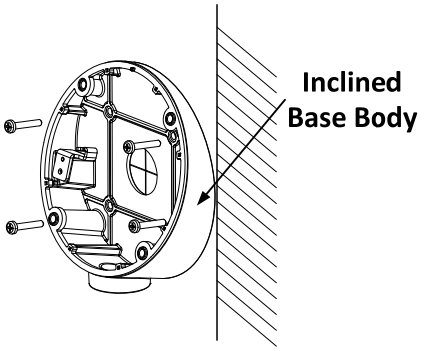


Figure 5-51 Fix the Inclined Base's boy on Ceiling/Wall

6. Combine inclined base's cover with its body with supplied screws.
7. Repeat steps 5 to 8 of Ceiling Mounting to complete the installation.

5.4.2.4. Wall Mounting

Note:

You need to purchase a wall mounting bracket separately.

Steps:

1. Drill four screw holes in the wall according to the holes of the bracket.
2. Install the bracket to the wall by aligning the four screw holes of the bracket with expansion screws on the wall.
3. Secure the bracket with four hex nuts and washers.

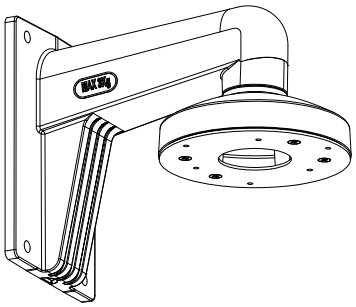


Figure 5-52 Install the Wall Mounting Bracket

4. Install the mounting base of the turret camera to the wall mounting bracket and secure them with supplied screws.

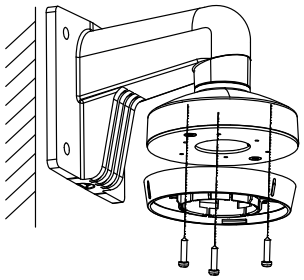


Figure 5-53 Install the Mounting Base on the Wall Mounting Bracket

5. Repeat steps 5 to 8 of Ceiling Mounting to complete the installation.

5.5 Type IX Turret Camera

5.5.1 Camera Description

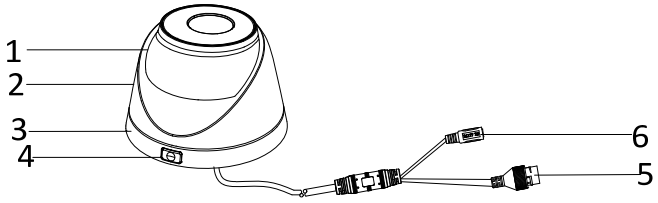


Figure 5-54 Type IX Turret Camera

Table 5-5 Description

No.	Description
1	Camera Body
2	Enclosure
3	Mounting Base
4	Lock Button
5	Network Cable
6	Power Cord

5.5.2 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- The standard power supply is 12 VDC, please make sure your power supply matches with your camera.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure that the wall is strong enough to withstand four times the weight of the camera and the bracket.

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.

5.5.2.1. Ceiling Mounting

Before you start:

Both wall mounting and ceiling mounting are suitable for the turret camera. Ceiling mounting will be taken as an example in this section. And you can take steps of ceiling mounting as a reference for wall mounting.

Steps:

1. Paste the drill template (supplied) to the desired mounting position on the ceiling.
2. Drill the screw holes and the cable hole in the ceiling according to the drill template.

Note:

Drill the cable hole, if adopting ceiling outlet to route the cable.

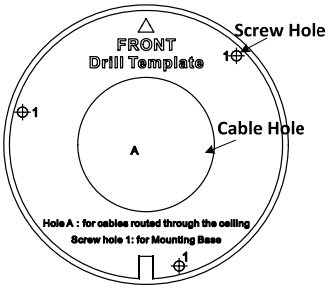


Figure 5-55 The Drill Template

3. Disassemble the camera.
   3) Rotate the camera to align the notch to one of the marks.
   4) Pry the mounting base to remove the mounting base with the camera body with a flat object, e.g., a coin.

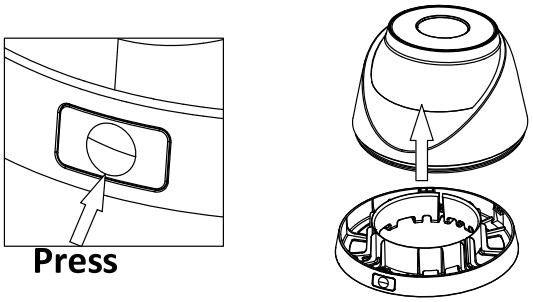


Figure 5-56 Disassemble the Camera

4. Fix the mounting base to the ceiling with supplied screws.

Notes:

- In the supplied screw package, both self-tapping screws, and expansion bolts are contained.
- If the ceiling is cement, expansion bolts are required to fix the camera. If the ceiling is wooden, self-tapping screws are required.

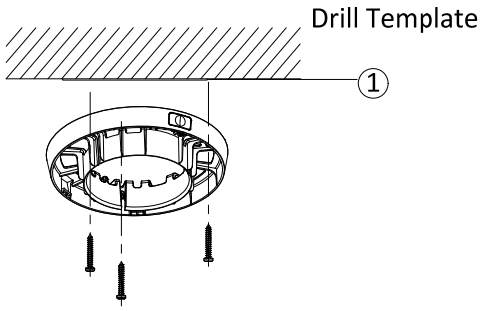


Figure 5-57 Fix the Mounting Base

5. Route the cables through the cable hole or the side opening.
6. Install the camera body back to the mounting base.

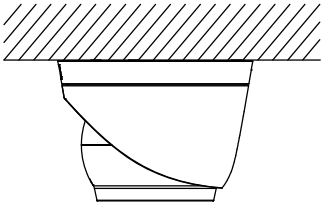


Figure 5-58 Install the Camera Body

7. Connect the power cord and network cable.
8. Power on the camera, and set the network configuration (for details, refer to 3 Setting the Network Camera over the LAN and 4 Accessing via Web Browser)to check whether the image is gotten from the optimum angle. If not, adjust the surveillance angle.

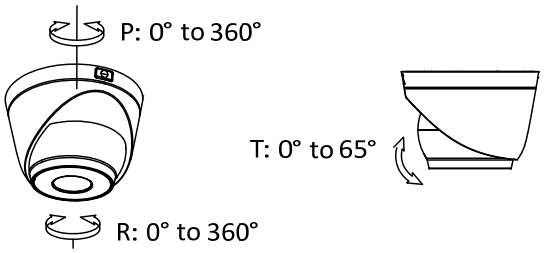


Figure 5-59 Adjust Surveillance Angle

4) Hold the camera body and rotate the enclosure to adjust the pan angle [0° to 360°].
5) Move the camera body up and down to adjust the tilt angle [0° to 65°].
6) Rotate the camera body to adjust the rotation angle [0° to 360°].

5.5.2.2. Mounting with Junction Box

Before you start:

- You need to purchase a junction box separately if you adopt the mounting with a junction box.
- Both wall mounting and ceiling mounting are suitable for the turret camera. Wall mounting will

be taken as an example in this section. And you can take steps of wall mounting as a reference for the ceiling mounting.

Steps:

1. Paste the junction box's drill template (supplied) to the desired mounting position on the wall.
2. Drill the screw holes and the cable hole in the wall according to the drill template.

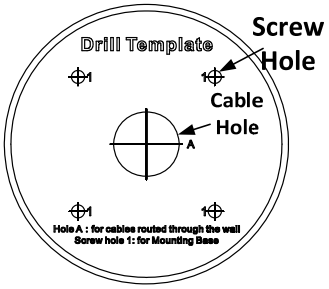


Figure 5-60 Drill Template

3. Take apart the junction box, and fix the camera's mounting base with three MP4 screws on the junction box's cover.

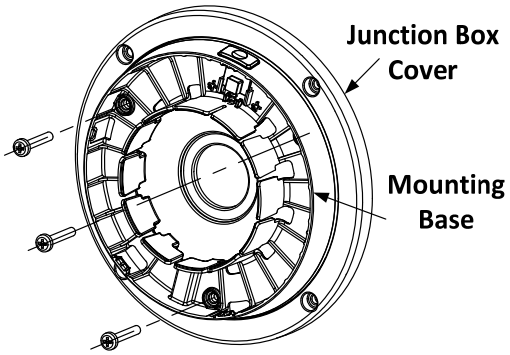


Figure 5-61 Fix screws on the junction box's Cover

4. Secure the junction box's body on the wall with four PA4 × 25 screws.

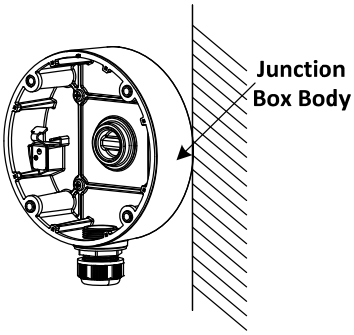


Figure 5-62 Secure the Junction Box's Body on the Ceiling/Wall

5. Combine the junction box's cover with its body with supplied screws.
6. Repeat steps 5 to 8 of Ceiling Mounting to complete the installation.

5.5.2.3. Mounting with Inclined Base

Before you start:

- You need to purchase an inclined base separately if you adopt the mounting with an inclined base.
- Both wall mounting and ceiling mounting are suitable for the turret camera. Wall mounting will be taken as an example in this section. And you can take steps of wall mounting as a reference for the ceiling mounting.

Steps:

1. Paste the inclined base's drill template to the wall.
2. Drill screw holes and the cable hole (optional) on the wall according to the supplied drill template.

Note:

Drill the cable hole, when adopting ceiling outlet to route the cable

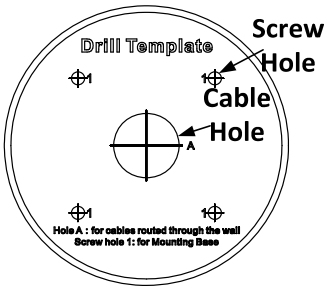


Figure 5-63 Drill Template

3. Disassemble the inclined base by the screw driver.
4. Install the turret camera's mounting base on the inclined base cover with three PM4 screws.

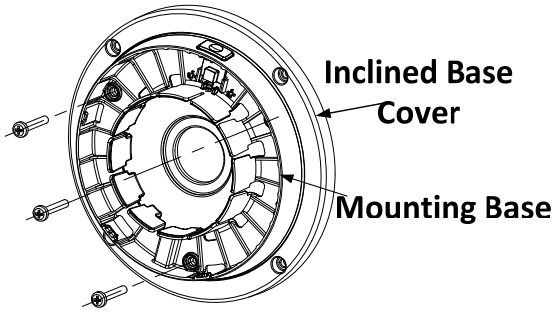


Figure 5-64 Fix Camera's Mounting Base

5. Install the inclined base's body on the wall with four PA4×25 screws.

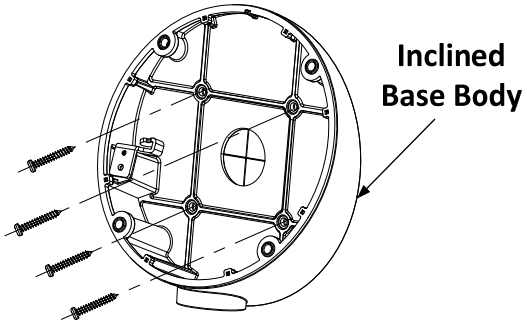


Figure 5-65 Fix the Inclined Base's boy on Ceiling/Wall

6. Combine inclined base's cover with its body with supplied screws.

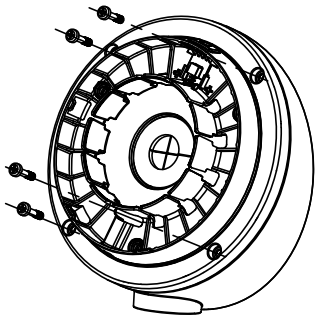


Figure 5-66 Combine the Cover with the Body

7. Repeat steps 5 to 8 of Ceiling Mounting to complete the installation.

5.5.2.4. Wall Mounting

Note:

You need to purchase a wall mounting bracket separately.

Steps:

1. Drill four screw holes in the wall according to the holes of the bracket.
2. Install the bracket to the wall by aligning the four screw holes of the bracket with expansion screws on the wall.
3. Secure the bracket with four hex nuts and washers.

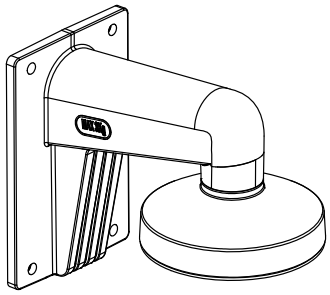


Figure 5-67 Install the Wall Mounting Bracket

4. Install the mounting base of the turret camera to the wall mounting bracket and secure

them with supplied screws.

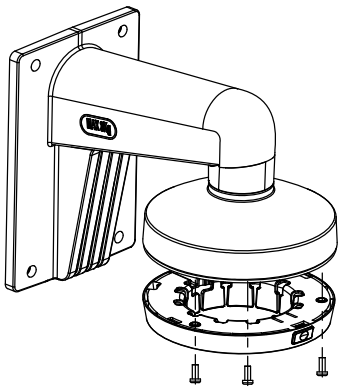


Figure 5-68 Install the Mounting Base on the Wall Mounting Bracket

5. Repeat steps 5 to 8 of Ceiling Mounting to complete the installation.

Chapter 6 Bullet Camera Installation

6.1 Type I Bullet Camera

6.1.1 Camera Description

Two types of camera rear panel are shown in Figure 6-1 and Figure 6-2. Choose the right figure according to your purchased product.

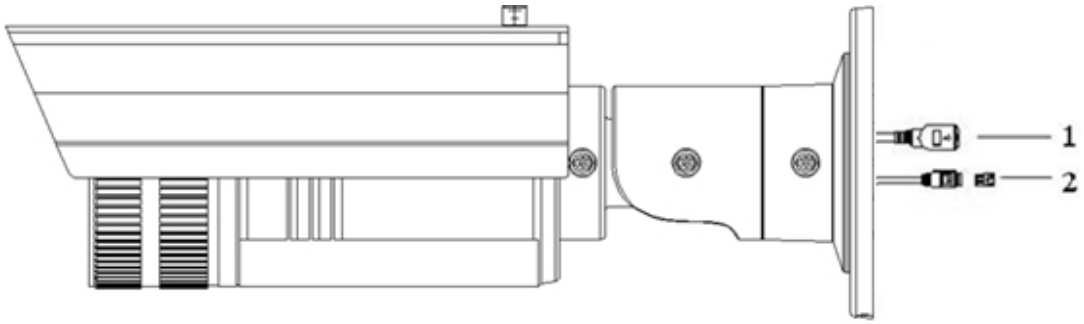


Figure 6-1 Overview

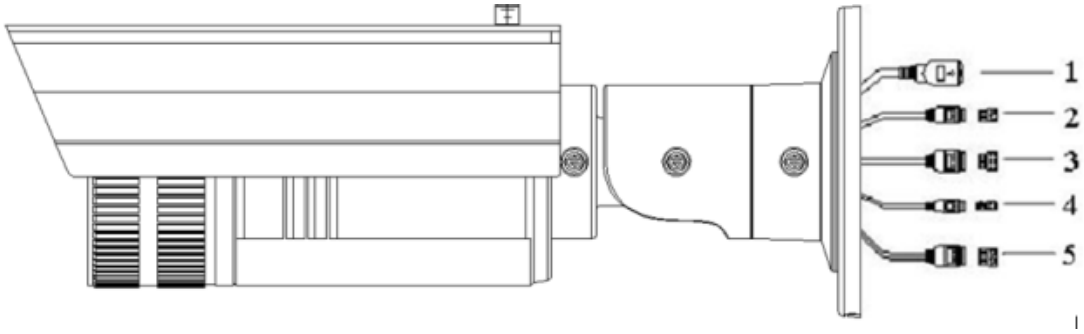


Figure 6-2 Overview

Table 6-1 Physical Description

No.	Description
1	10M/100M Self-adaptive Ethernet Interface
2	Power Supply Interface
3	IN, G: Alarm input interface 1A, 1B: Alarm output interface
4	D+, D-: RS-485 interface
5	AUDIO IN, G: Audio input interface AUDIO OUT, G: Audio output interface

6.1.2 Installation

Steps:

1. Fix the mounting base to the wall.

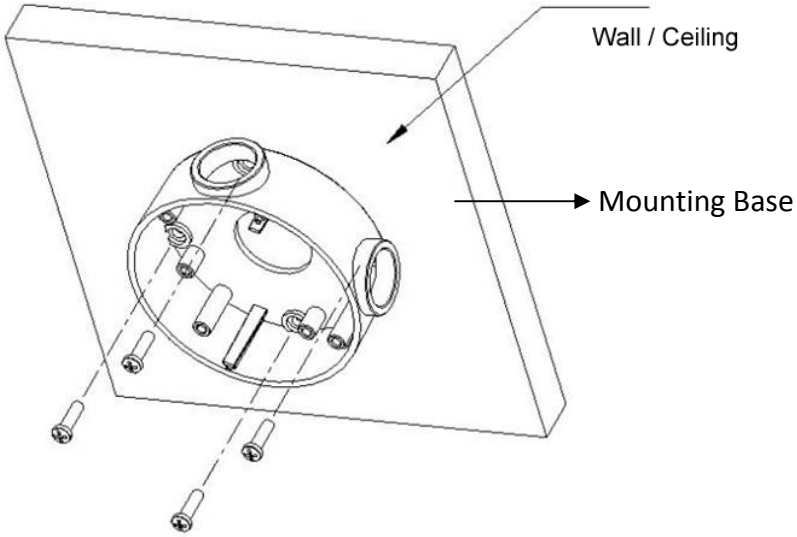


Figure 6-3 Fix the Mounting Base

2. Fix the mounting bracket with the camera to the mounting base.

NOTE

The “bottom” mark on the mounting base should align with the “bottom” mark on the mounting bracket.

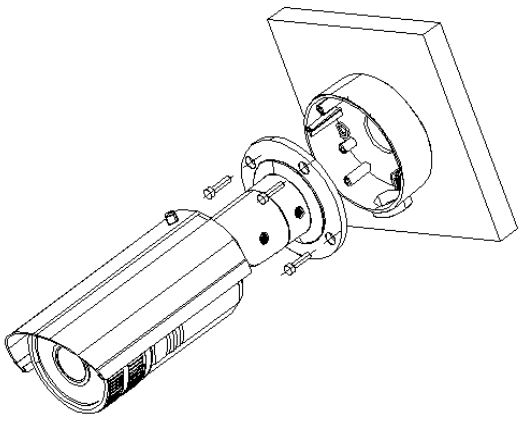


Figure 6-4 Fix the Camera

3. View the image of the camera over the network.

4. Loosen the screws on the bracket slightly.

Please loosen the screws slightly until you can adjust the camera and do not remove the screws from the bracket.

5. Adjust the camera to the desired surveillance angle and then tighten the screws on bracket to fix the camera.

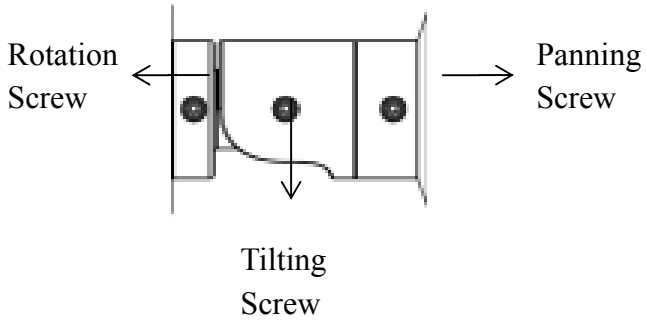


Figure 6-5 Adjust Monitoring Angle

6. Loosen the lock screw on the sun shield and slide the sun shield until you can remove it. Remove the sun shield.

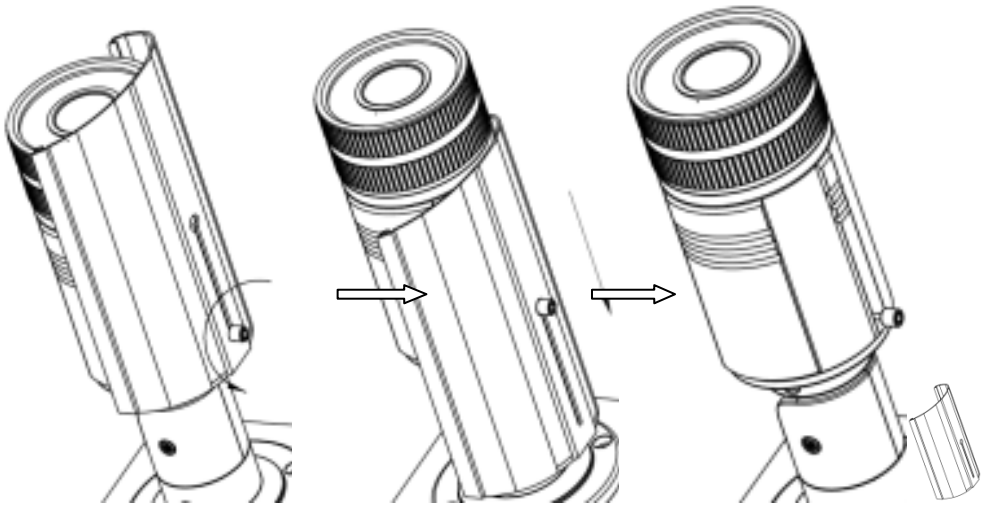


Figure 6-6 Remove the Sun Shield

7. Rotate to remove the front cover from camera and adjust the lens to get a clear image.

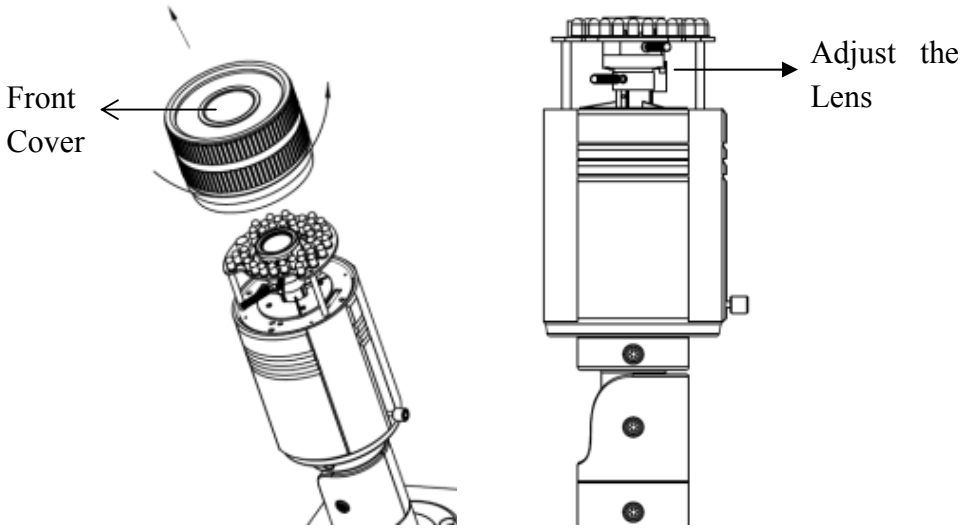


Figure 6-7 Adjust the Lens

8. Fix the lens; reinstall the front cover and the sun shield to finish the installation.

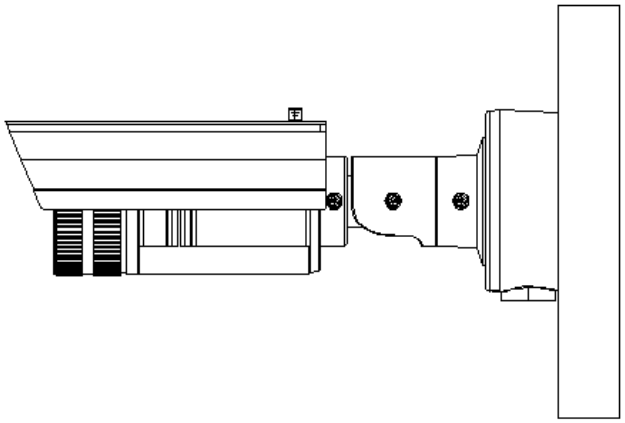


Figure 6-8 Complete the Installation

6.2 Type II Bullet Camera

6.2.1 Camera Description

The camera overview is shown as follows:

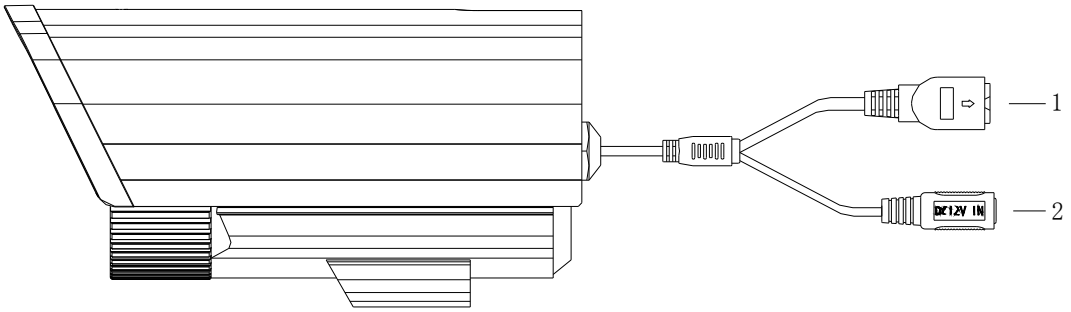


Figure 6-9 Overview

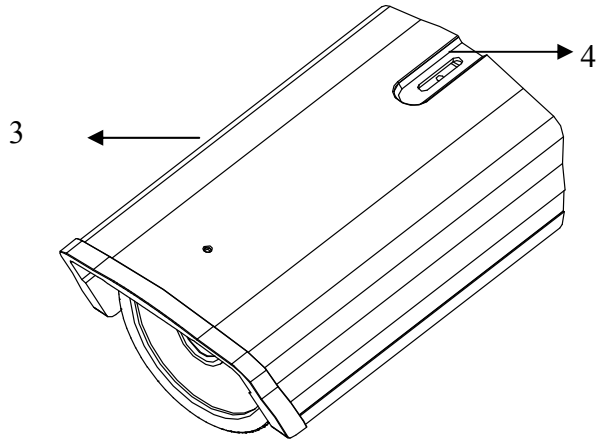


Figure 6-10 Overview

Table 6-2 Description

No.	Description
1	10M/100M self-adaptive Ethernet interface
2	Power Supply
3	Sun Shield
4	Adjusting Screw

6.2.2 Installation

Steps:

1. Attach the wall mount (not provided) to the wall and tighten the screws to fix it.

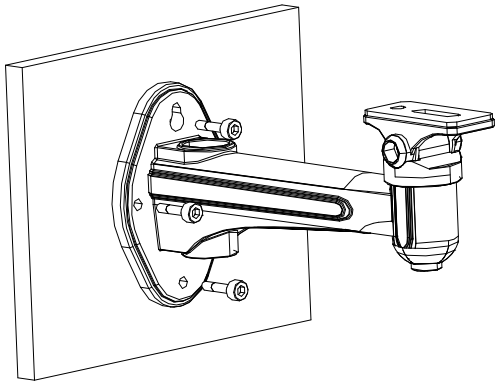


Figure 6-11 Install the Wall Mount

2. Secure the camera to the wall mount with set screws.

3. Route the cables for the camera as shown follows.

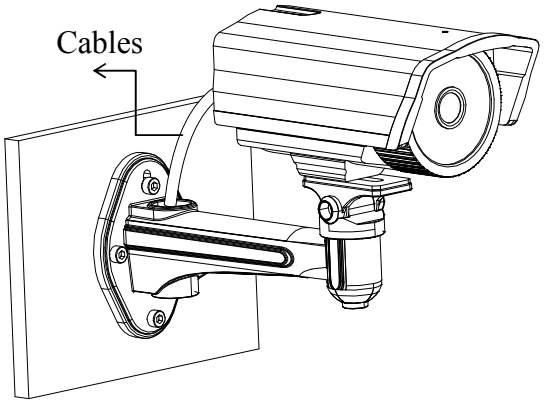


Figure 6-12 Mount the Camera

4. Loosen the panning lock screw to adjust the panning angle [0~360°].

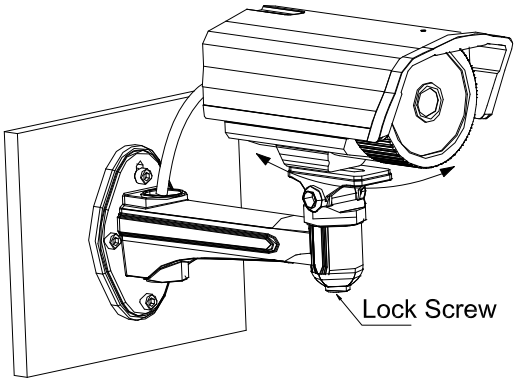


Figure 6-13 Panning

5. Loosen the tilting lock screw to adjust the tilting angle [0~90°].

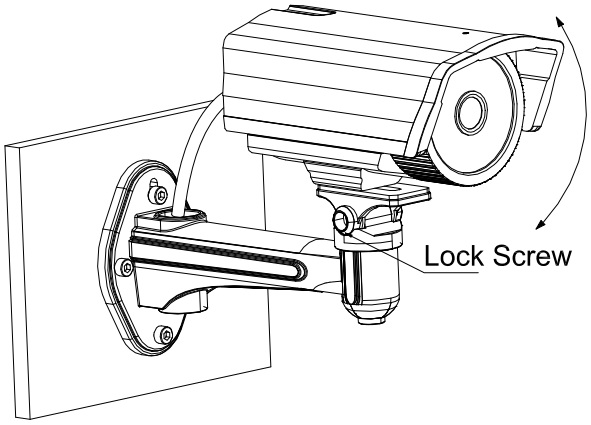


Figure 6-14 Tilting

6.3 Type III Bullet Camera

6.3.1 Camera Description

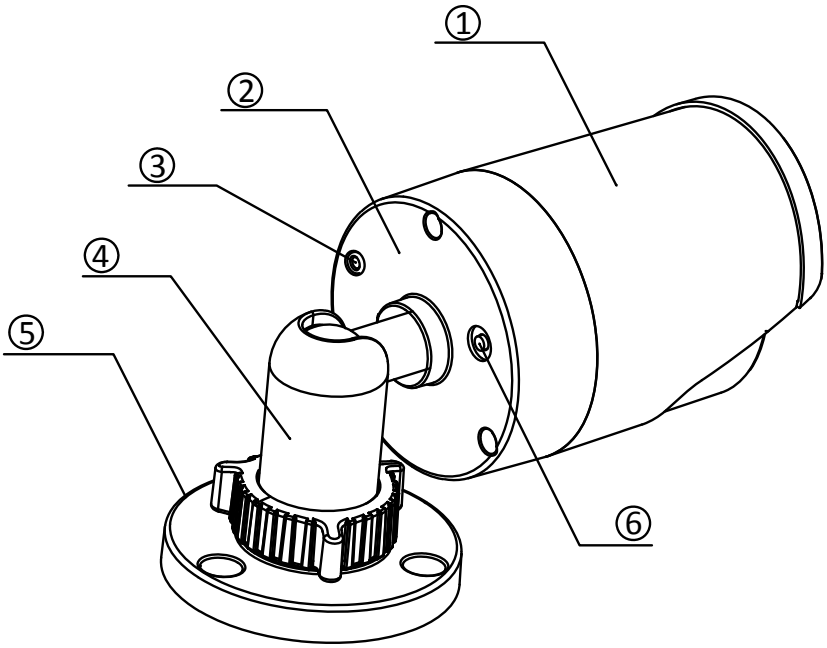


Figure 6-15 Bullet Camera Overview

Table 6-3 Description

No.	Description
1	Sun Shield
2	Back Box
3	Grounding Screw

4	Adjustable Bracket
5	Mounting Base
6	Reset

6.3.2 Installation

Steps:

1. Attach the drill template on the wall.

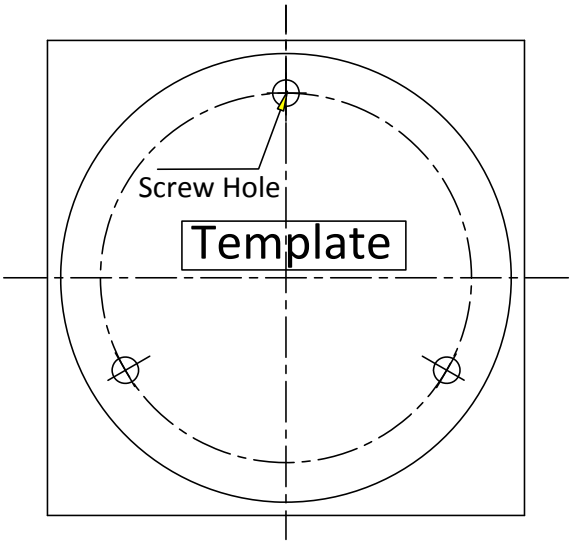


Figure 6-16 Attach the template

9. Secure the camera to the ceiling with the supplied expansion screws.

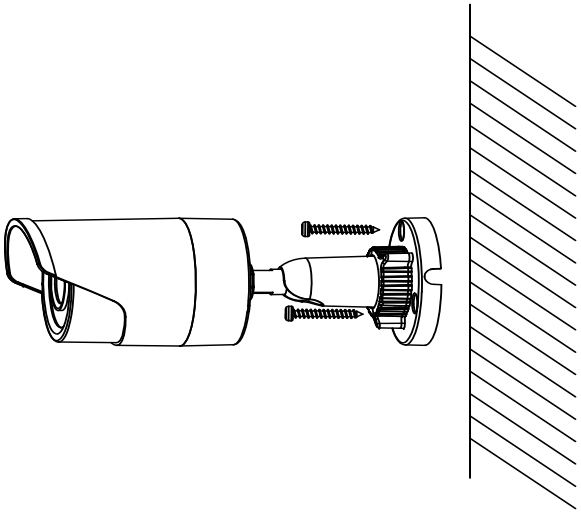


Figure 6-17 Secure the Camera to the Ceiling

10. Adjust the Lens.

1). Loosen the adjustable nut on the bracket.

2). Adjust the panning angle [0~360°] of the camera.

3). Adjust the tilting angle [0~90°] of the camera.

4). Rotate 0~360° to adjust azimuth angle of the image.

5). Tighten the adjustable nut to complete the installation.

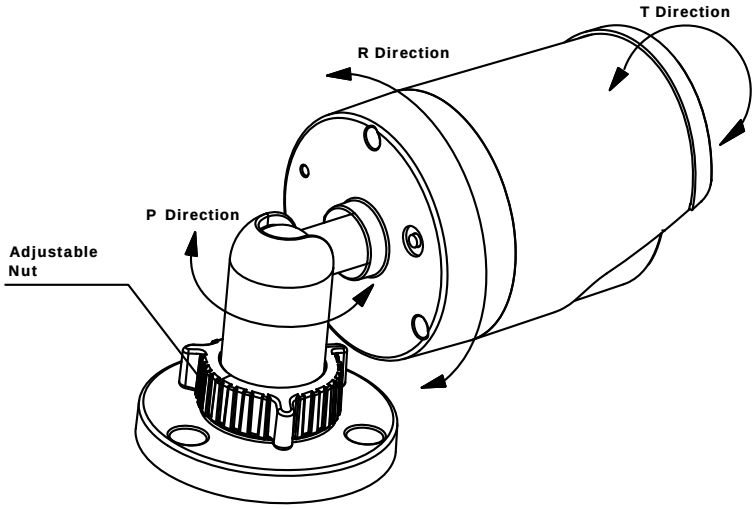


Figure 6-18 3-axis Adjustment

6.4 Type IV Bullet Camera

6.4.1 Camera Description

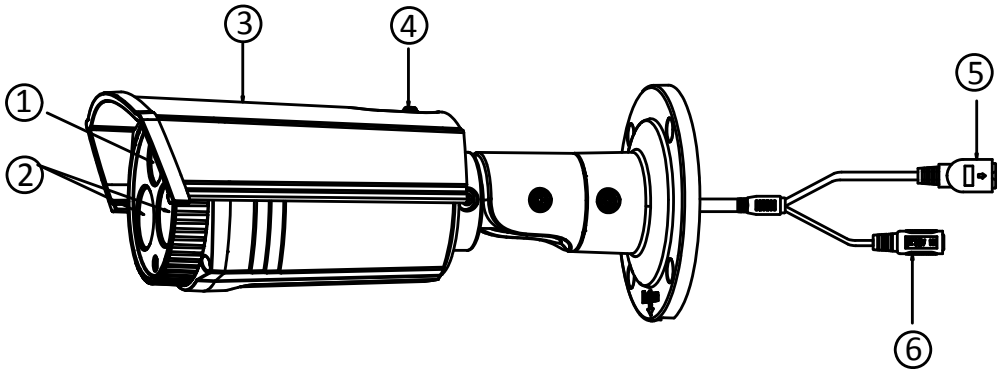


Figure 6-19 Bullet Camera Overview

Table 6-4 Description

No.	Description
1	Lens

2	IR LED
3	Sun Shield
4	Adjusting Screw
5	Network Cable
6	Power Cable

6.4.2 Installation

Steps:

1. Drill the cable hole and the screw hole in the ceiling according to the supplied drill template.

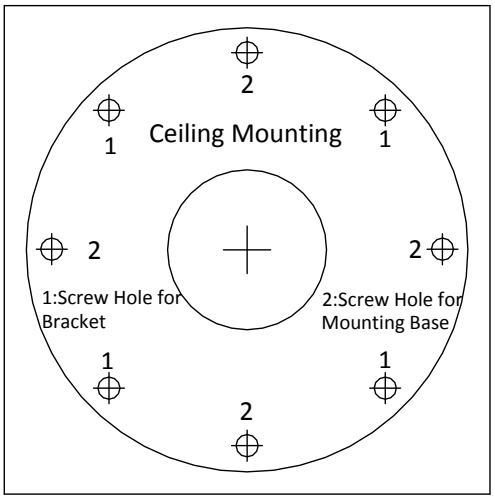


Figure 6-20 The Drill Template

2. Hammer the supplied plastic expansion bolt into the screw holes.
3. Route the cables to the cable hole and connect the corresponding power cable and video cable
4. Fix the camera to the wall with the supplied screws

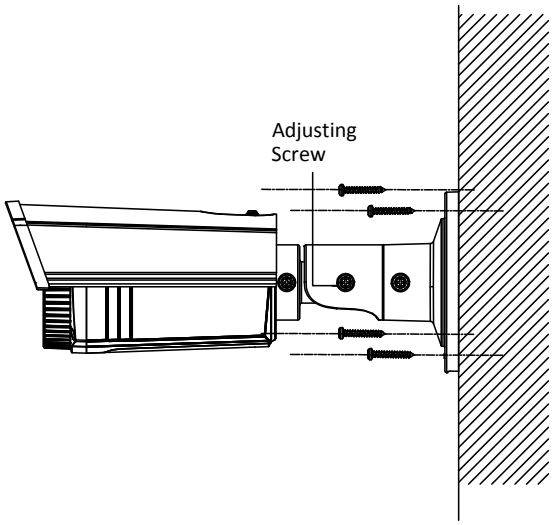


Figure 6-21 Fix the Camera to the Ceiling

5. Adjust the surveillance angle.

1). Loosen No.1 adjusting screw to adjust the panning position [0° ~ 360°].

2). Tighten No.1 adjusting screw.

3). Loosen the No.2 adjusting screw to adjust the tilting position [0° ~ 100°].

4). Tighten No.2 adjusting screw.

5). Loosen No.3 adjusting screw to adjust the azimuth angle [0° ~ 360°].

6). Tighten No.3 adjusting screw.

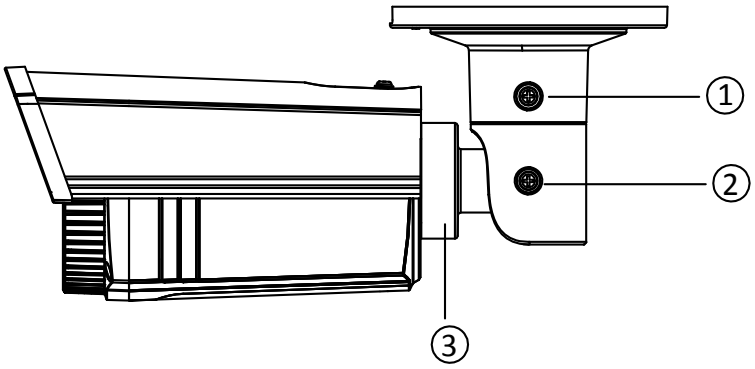


Figure 6-22 3-axis Adjustment

6.5 Type V Bullet Camera

6.5.1 Camera Description

The overview of the network bullet camera is shown below.

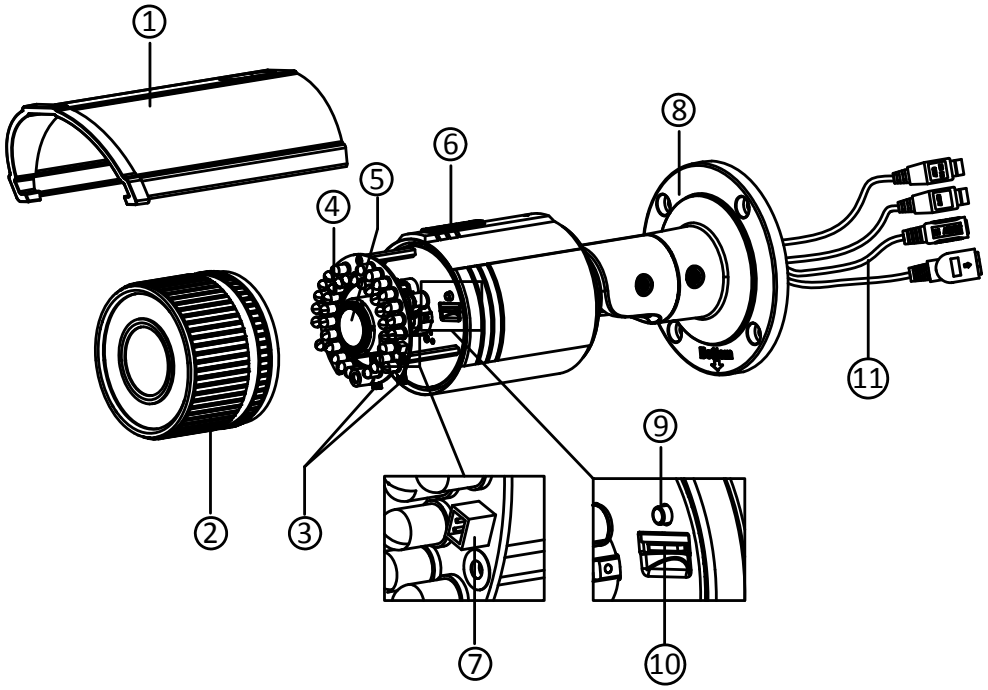


Figure 6-23 Overview

Table 6-5 Overview

No.	Description
1	Sun Shield
2	Front Cover
3	Zoom and Focus Lever
4	IR LED
5	Lens
6	Air Vent
7	Video Output Interface
8	Integrated Bracket
9	Reset Button
10	Micro SD Card Slot
11	Power Interface
12	Network Interface

NOTE

- Press RESET button about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.
- Some of the models support audio and alarm functions. The interfaces are shown as follows.

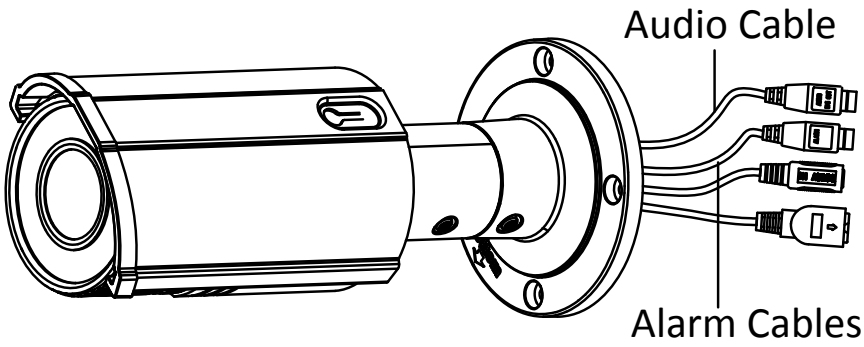


Figure 6-24 Audio and Alarm Interfaces

6.5.2 Installation

- **SD Card Installation**

Steps:

1. Loosen the lock screw on the sun shield to slide the sun shield according to the arrow direction as shown in Figure 6-25 (left).
2. Remove the sun shield according to the arrow direction as shown in Figure 6-25 (right).
3. Remove the front cover by rotating it counterclockwise as shown in Figure 6-25 (right).

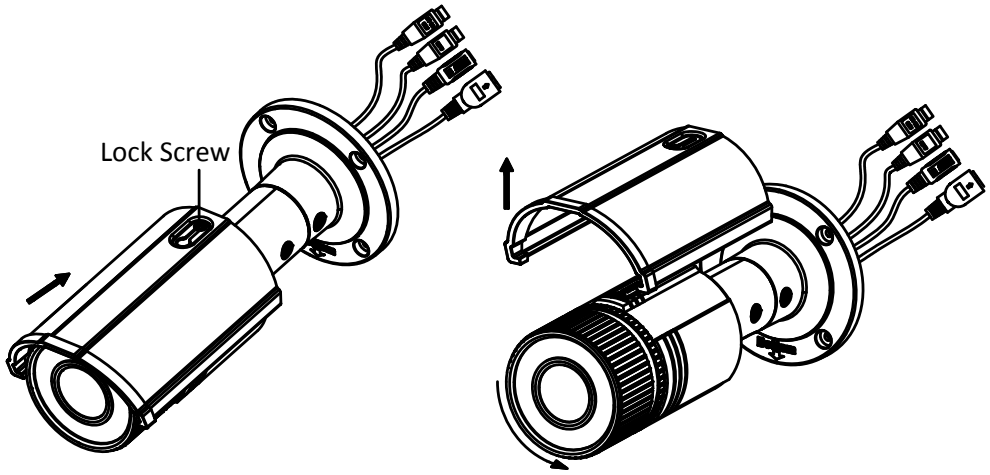


Figure 6-25 Disassemble the Camera

4. Insert the micro SD card to the micro SD card slot.
5. Rotate the front cover clockwise to install the sun shield according to the arrow direction as shown in Figure 6-26(right).

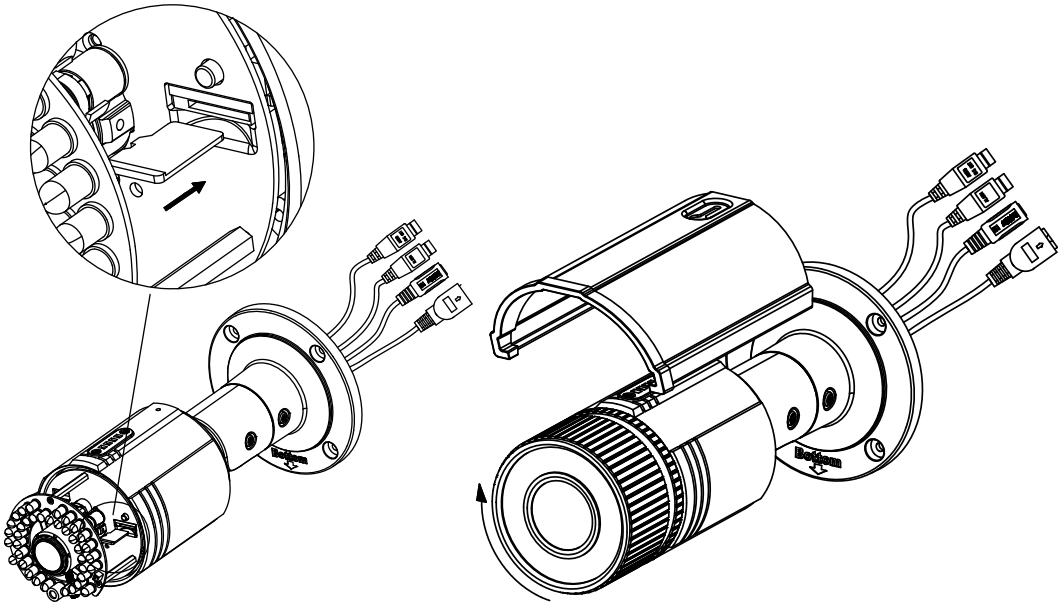


Figure 6-26 Install the SD Card

6. Slide the sun shield according to the arrow direction as shown in Figure 6-27(left).

7. Tighten the lock screw on the sun shield.

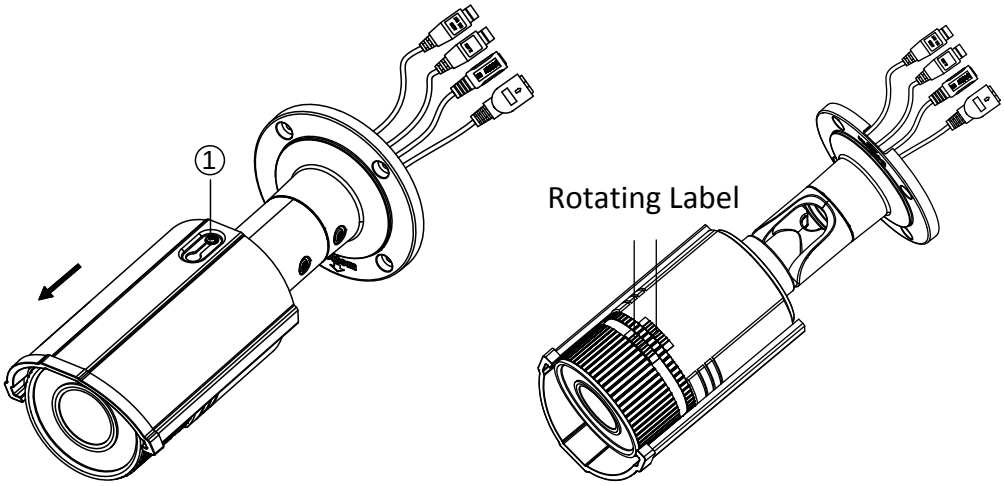


Figure 6-27 Assemble the Camera

NOTE

For water-proof, please align the rotating label on the front cover with that on the camera when you rotate the front cover clockwise. Refer to Figure 6-27 (right).

- **Wall Mounting**

Steps:

1. Attach the drill template (supplied) to the wall where the camera is to be mounted.

2. Drill screw holes in the wall according to the No.1 hole of the drill template.

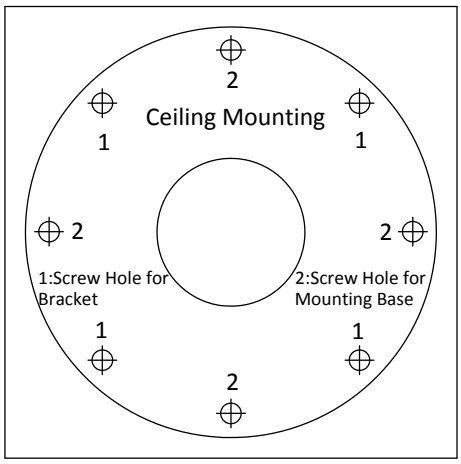


Figure 6-28 Drilling Holes in the Wall

3. If you need to route cables through the wall (or ceiling), cut a cable hole according to the drill template. Skip this step, if you want to route the cables on the surface of the ceiling.
4. Route the cables of the camera.
5. Secure the camera to the wall (or ceiling) with expansion screws. Refer to the Figure 6-29.

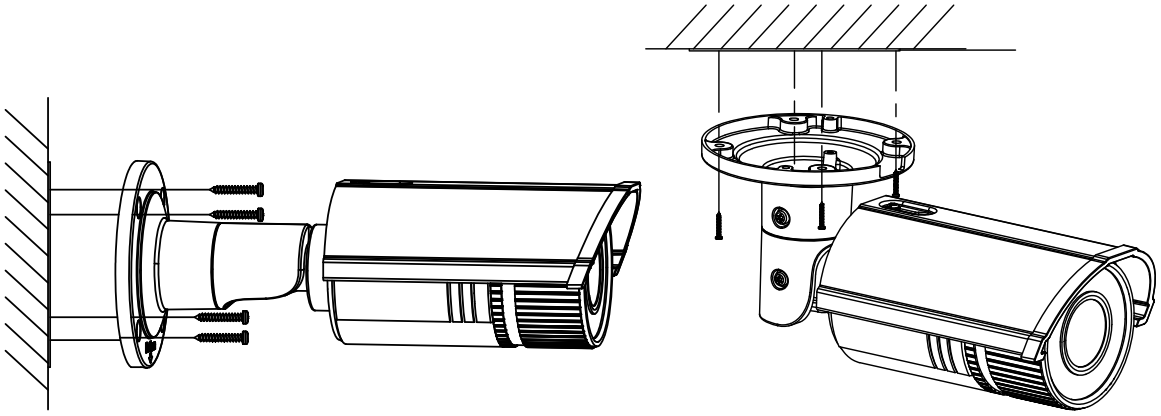


Figure 6-29 Secure the Camera

- **Wall Mounting with a Junction Box**

Before you start:

For mounting with a junction box, you have to purchase a junction box.

Steps:

1. Attach the drill template (supplied) to the wall where the camera is to be mounted.
2. Drill holes in the wall according to the No.2 holes of the drill template. Refer to the Figure 6-28.
3. If you need to route cables through the wall (or ceiling), cut a cable hole according to the drill template. Skip this step, if you want to route the cables on the surface of the ceiling.
4. Secure the junction box to the wall with expansion screws.
5. Route the cables of the camera.

6. Connect the video output connector to the monitor. Connect the power connector to the power supply.
7. Adjust the image and focus. Please refer to ***Zoom and Focus Adjusting*** for more detailed information.
8. Hook the camera to the junction box with the safety rope. Refer to the Figure 6-30.
9. Secure the camera to the junction box with screws.

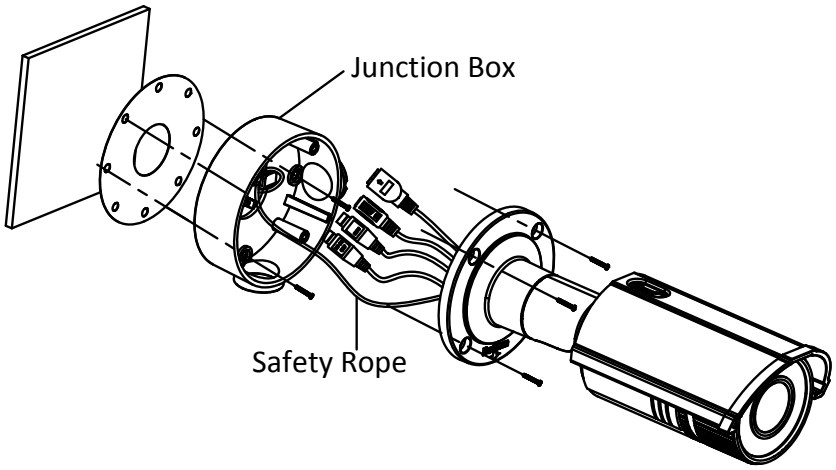


Figure 6-30 Secure the Camera

- **Wall Mounting with a Gang Box**

Before you start:

For mounting with a gang box, you have to purchase a gang box.

Steps:

1. Secure the camera attachment to a gang box with screws.
2. Route the cables of the camera.
3. Secure the camera to the camera attachment with screws. Refer to the Figure 6-31.

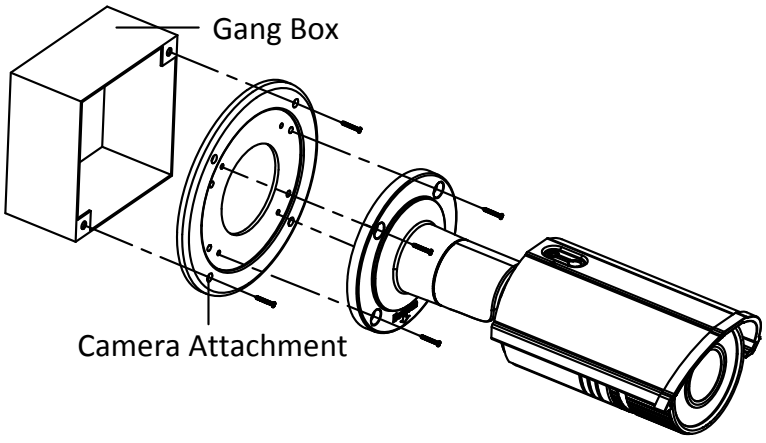


Figure 6-31 Secure the Camera

- **View Angle Adjusting**

Purpose:

3-axis (pan/tilt/rotation) adjusting allows adjustment for optimum camera rotation and placement.

Pan Adjustment

Steps:

1. Loosen the lock screw-1.
2. Adjust the panning position of the camera. The adjusting range is from 0 degrees to 360 degrees.
3. Tighten the lock screw-1.

Tilt Adjustment

Steps:

1. Loosen the lock screw-2.
2. Adjust the tilting position of the camera. The adjusting range is from 0 degrees to 90 degrees.
3. Tighten the lock screw-2.

Rotation Adjustment

Steps:

1. Loosen the lock screw-3.
2. Rotate the rotation position to adjust the azimuth angle of the image. The adjusting range is from 0 degrees to 360 degrees.
3. Tighten the lock screw-3.

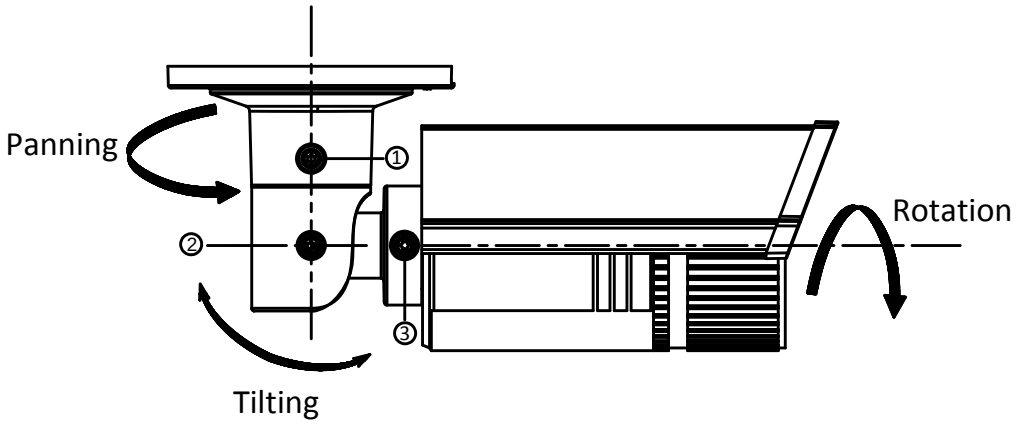


Figure 6-32 Lens Adjustment

- **Zoom and Focus Adjusting**

Purpose:

You can use the zoom lever and focus lever to adjust the zoom value and focus value.

Steps:

1. Disassemble the camera.
2. View the camera image using the monitor.
3. Loosen the zoom lever and move the lever between T (Tele) and W (Wide) to obtain the appropriate angle of view.
4. Tighten the zoom lever.
5. Loosen the focus lever and move the screw between F (Far) and N (Near) to obtain the optimum focus.
6. Tighten the focus lever.
7. Assemble the camera.

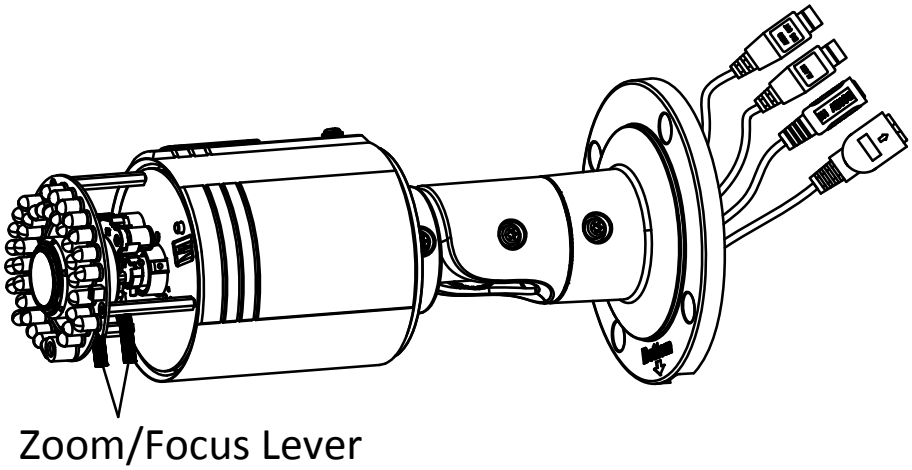


Figure 6-33 Zoom and Focus Adjustment

6.6 Type VI Bullet Camera

6.6.1 Camera Description

The overview of the network bullet camera is shown below:

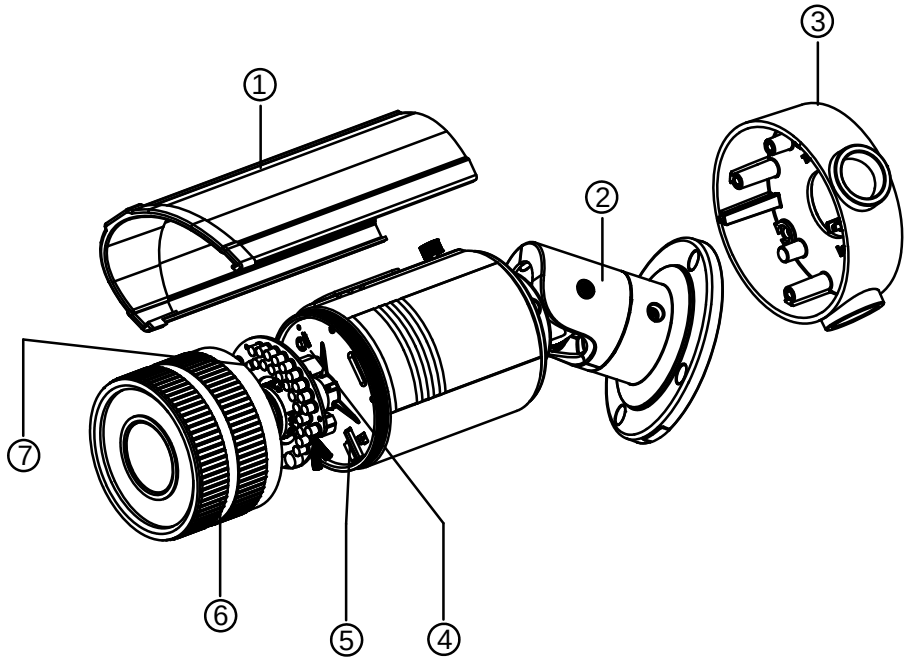


Figure 6-34 Overview

Table 6-6 Description

No.	Description	No.	Description
1	Sun Shield	2	Bracket
3	Junction Box	4	Reset
5	SD Card Slot	6	Front Box
7	Analog Video Output		

6.6.2 Installation

Steps:

1. Drill four screw holes in the wall according to the No.2 holes of the supplied drill template.

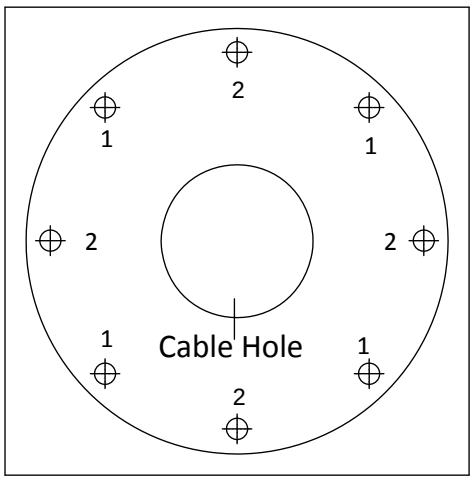


Figure 6-35 Drill Template

2. Drill one cable hole according to the sign shown on the drill template.

NOTE

If you want to route the cables through the side of the junction box, you can skip this step.

3. Fix the junction box to the wall with the expansion screws.

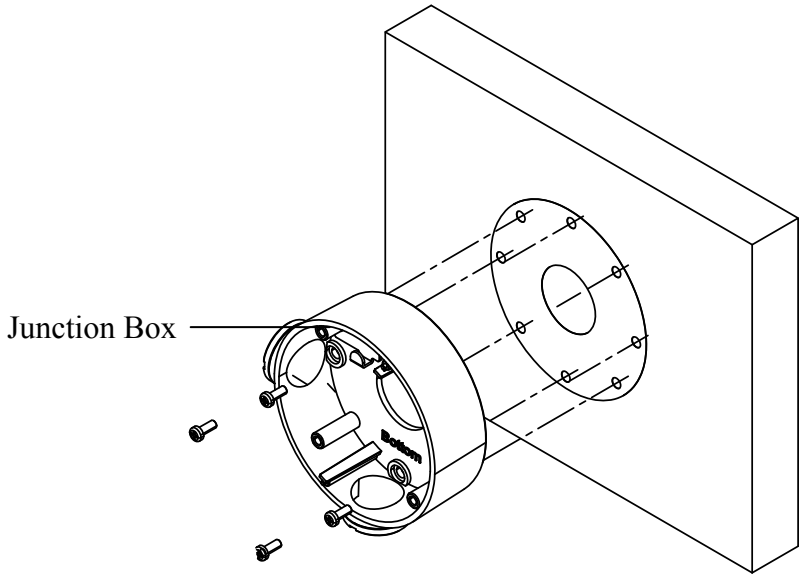


Figure 6-36 Install the Junction Box

4. Route the cables of the camera.
   - Route the cables through the junction box and the cable hole if there is a cable hole drilled on the ceiling.
   - Route the cables through the side outlet of the junction box to the surface of the ceiling if there is no cable hole drilled on the ceiling.
5. Hook the camera to the junction box with the safety rope.

6. Tighten the screws to fix the camera to the junction box.

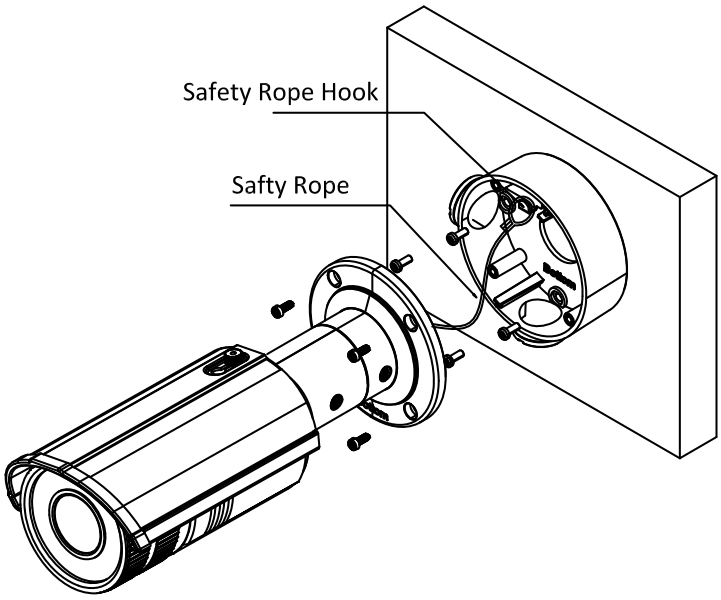


Figure 6-37 Fix the Camera to the Junction Box

7. Adjust the camera to the desired surveillance angle and then tighten the screws on bracket to fix the camera.

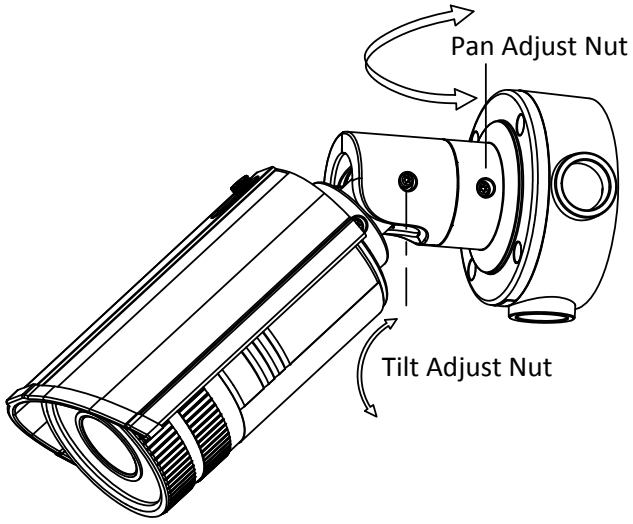


Figure 6-38 Adjust Monitoring Angle

NOTE

- Please loosen the screws slightly until you can adjust the camera and do not remove the screws from the bracket.
- After the monitoring angle is adjusted, you may need to install a water-proof rubber case (purchased separately) to the foldable position of the bracket to protect it from water.

8. Loosen the lock screw on the sun shield and remove the sun shield.

9. Rotate to remove the front box from camera and adjust the zoom lever and focus lever to get a clear image.

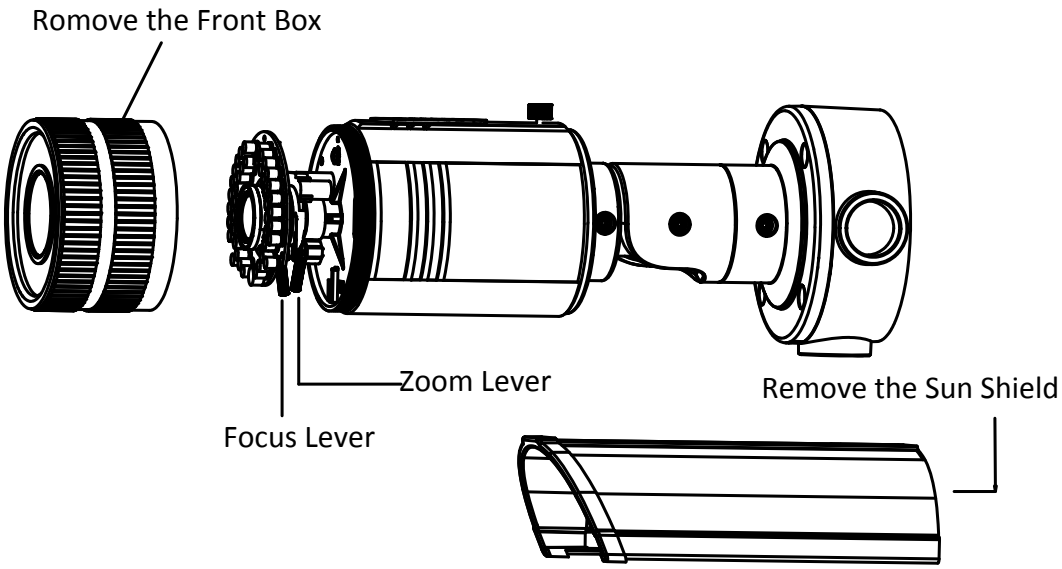


Figure 6-39 Lens Adjustment

10. Reinstall the front box and the sun shield to finish the installation.

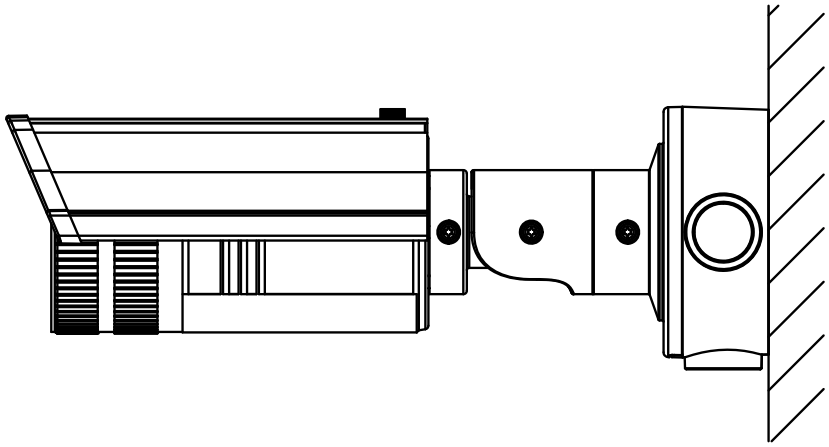


Figure 6-40 Installation Complete

6.7 Type VII Bullet Camera

6.7.1 Overview

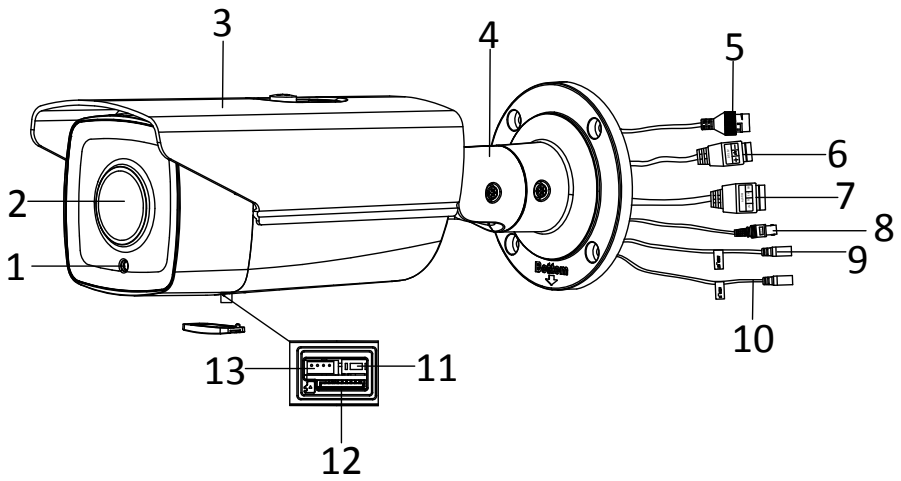


Figure 6-41 Overview

Table 6-7 Description

No.	Description
1	Photoresistor
2	Lens
3	Sun Shield
4	3-axis Bracket
5	Network Cable Interface
6	Power Cable Interface
7	Alarm Cable Interface (Optional)
8	Video Cable Interface
9	Audio Out (Optional)
10	Audio In (Optional)
11	Reset Button
12	Micro SD Card Slot
13	Serial Port

NOTE

- The standard power supply is 12V DC or 24V AC, please make sure your power supply matches with your camera.
- Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

6.7.2 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure the power supply is matched with your required voltage to avoid damage.
- If the product does not function properly, please contact your dealer or the nearest service center. Do not disassemble the camera for repair or maintenance by yourself.
- Make sure that the wall is strong enough to withstand four times the weight of the camera and the bracket.

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Dust or grease on the dome cover will cause IR reflection. Please do not remove the dome cover film until the installation is finished. If there is dust or grease on the dome cover, clean the dome cover with clean soft cloth and isopropyl alcohol.
- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.
- The foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDS. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

Ceiling Mounting

Steps:

1. Drill the screw holes and the cable hole in the ceiling according to the supplied drill template.

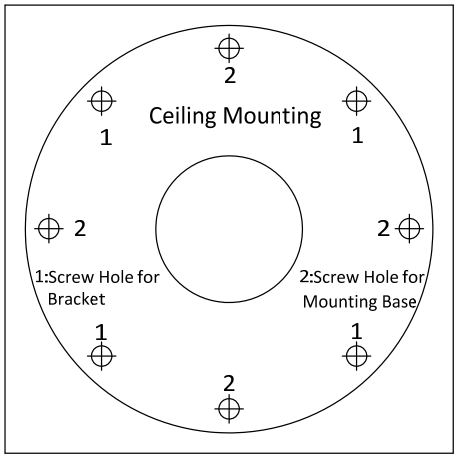


Figure 6-42 Drill Template

2. Fix the camera to the wall with the supplied screws.

NOTE

Please insert the expansion screws first if the camera is mounted to the cement ceiling. And you can use the self-tapping screws directly if camera is mounted to the wooden ceiling.

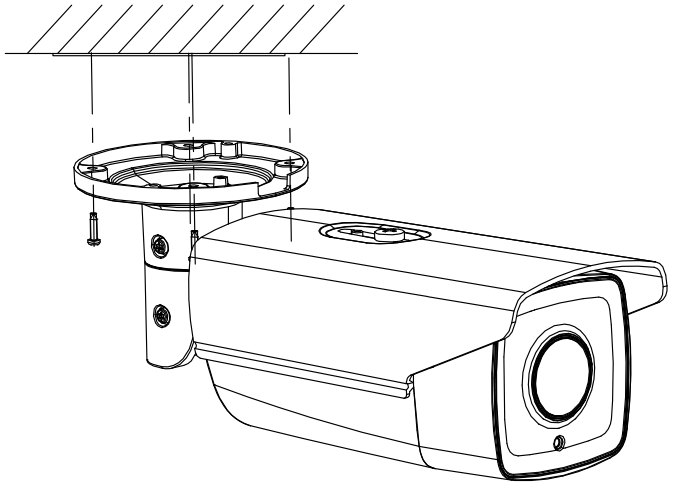


Figure 6-43 Install the Camera

3. Adjust the surveillance angle.

   1). Loosen No.1 lock screw to adjust the tilt angle [0 °~100°].

   2). Loosen No.2 lock screw to adjust the pan angle [0°~360°].

   3). Loosen No.3 lock screw to rotate the camera [0°~360°].

   4). Tighten the lock screws.

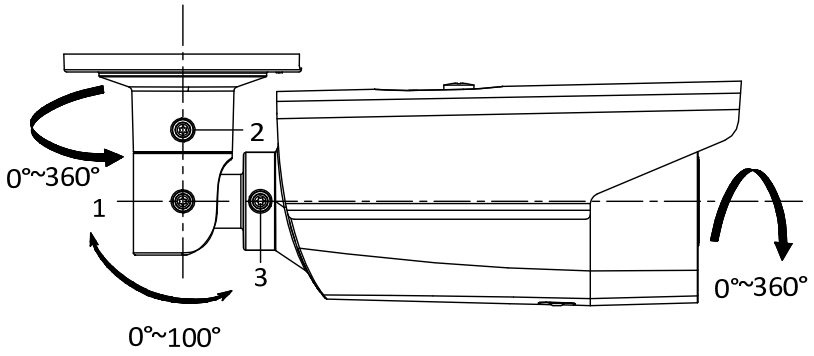


Figure 6-44 Adjust the Surveillance Angle

Wall Mounting with a Junction Box

Steps:

1. Drill the screw hole and cable hole according to the supplied drill template.
2. Align the screw holes of the junction box to the drill template, and fix the junction box to the wall with screws.
3. Route the cables.
4. Fix the camera to the junction box with screws.
5. Adjust the surveillance angle.

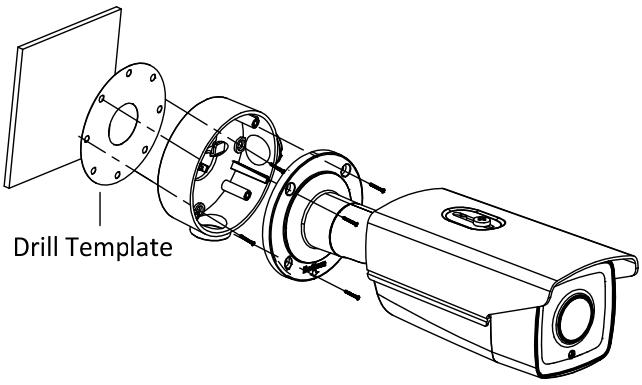


Figure 6-45 Installation with a Junction Box

Wall Mounting with a Gang Box

NOTE

An adapter plate should be purchased separately if you mount the camera to a gang box.

Steps:

1. Install the adapter plate to the gang box.
2. Route the cables.
3. Fix the camera to the adapter plate with screws.

4. Adjust the surveillance angle.

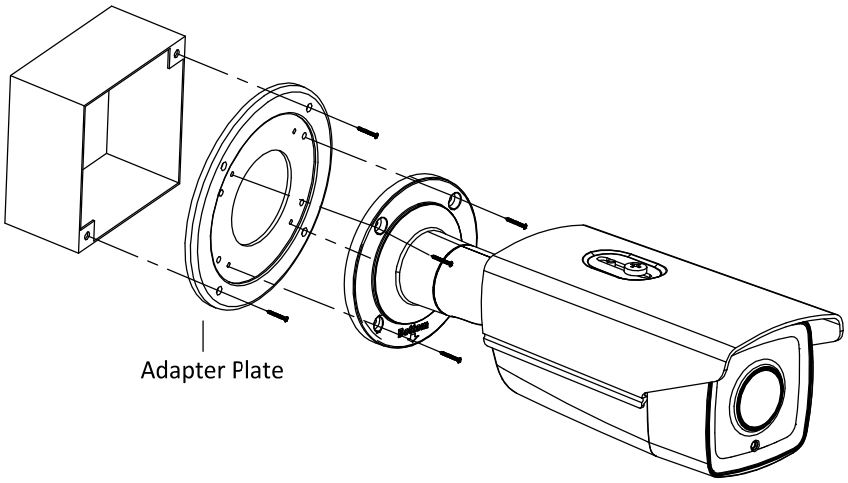


Figure 6-46 Installation with a Gang Box

6.8 Type VIII Bullet Camera

6.8.1 Overview

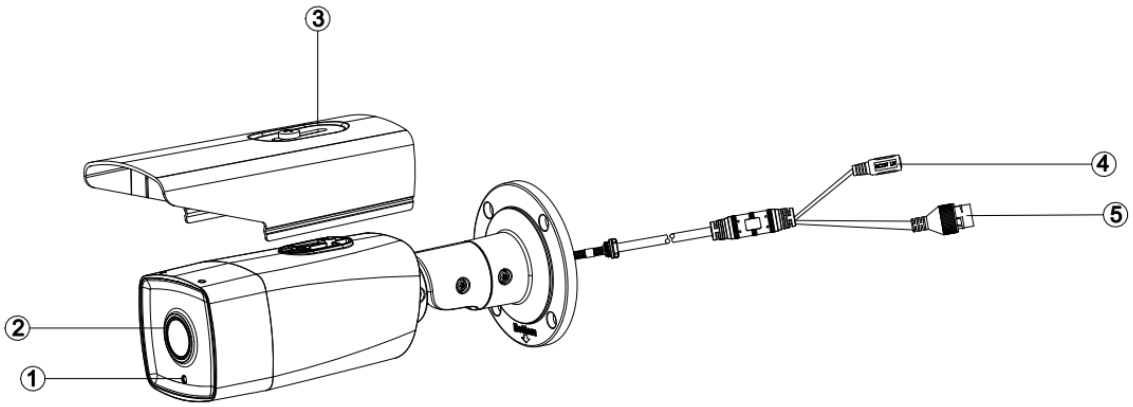


Figure 6-47 Overview

Table 6-8 Description

No.	Description
1	ICR
2	Lens
3	Sun Shield
4	Power Cable
5	Network Cable

6.8.2 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure the power supply is matched with your required voltage to avoid damage.
- If the product does not function properly, please contact your dealer or the nearest service center. Do not disassemble the camera for repair or maintenance by yourself.
- Make sure that the wall is strong enough to withstand three times the weight of the camera.

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Dust or grease on the dome cover will cause IR reflection. Please do not remove the dome cover film until the installation is finished. If there is dust or grease on the dome cover, clean the dome cover with clean soft cloth and isopropyl alcohol.
- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.
- The foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDS. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

Steps:

1. Drill the cable hole and the screw hole in the ceiling according to the supplied drill template.

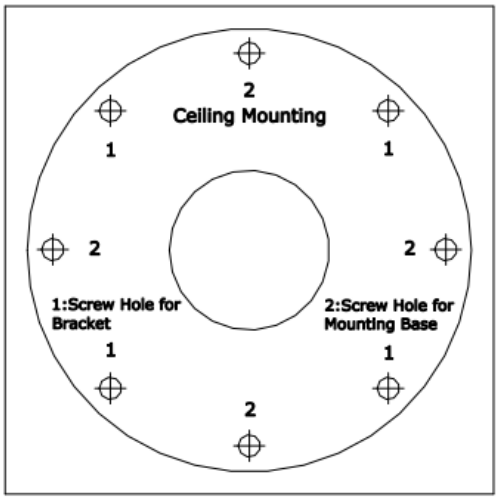


Figure 6-48 The Drill Template

2. Hammer the supplied plastic expansion bolt into the screw holes.
3. Route the cables to the cable hole and connect the corresponding power cable and video cable
4. Fix the camera to the wall (or ceiling) with the supplied screws

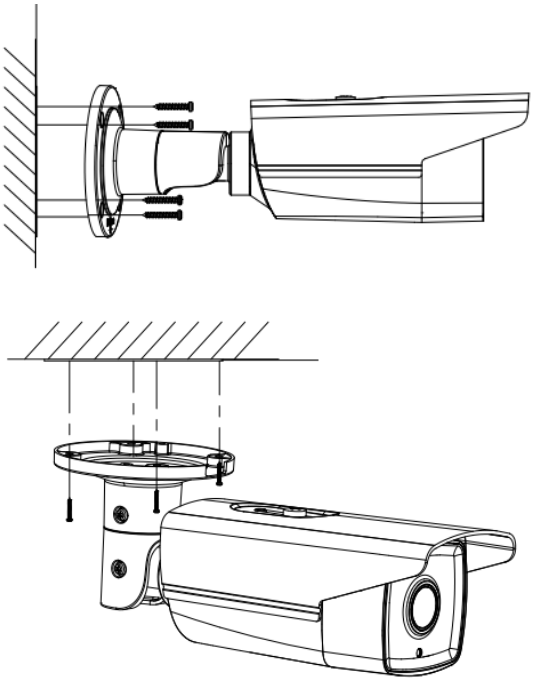


Figure 6-49 Fix the Camera

5. Adjust the surveillance angle.

   1). Loosen No.1 adjusting screw to adjust the panning position [0° ~ 360°].

   2). Tighten No.1 adjusting screw.

3). Loosen the No.2 adjusting screw to adjust the tilting position [0° ~ 100°].

4). Tighten No.2 adjusting screw.

5). Loosen No.3 adjusting screw to adjust the azimuth angle [0° ~ 360°].

6). Tighten No.3 adjusting screw.

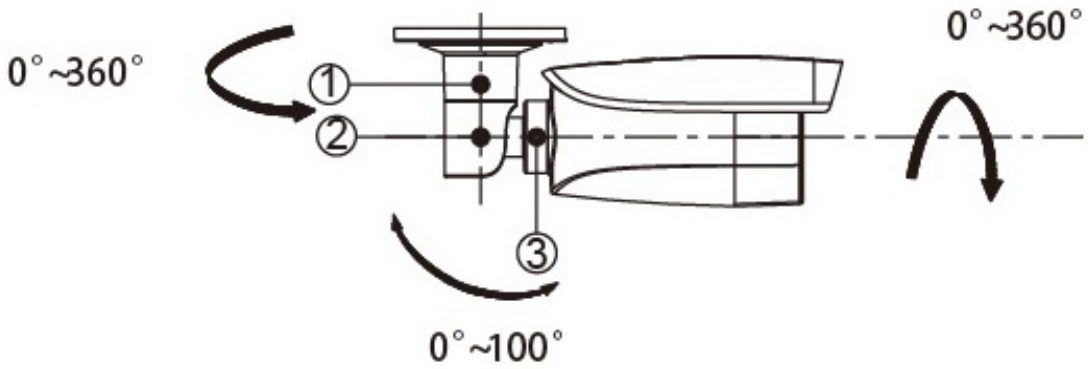


Figure 6-50 3-axis Adjustment

6.9 Type IX Bullet Camera

6.9.1 Overview

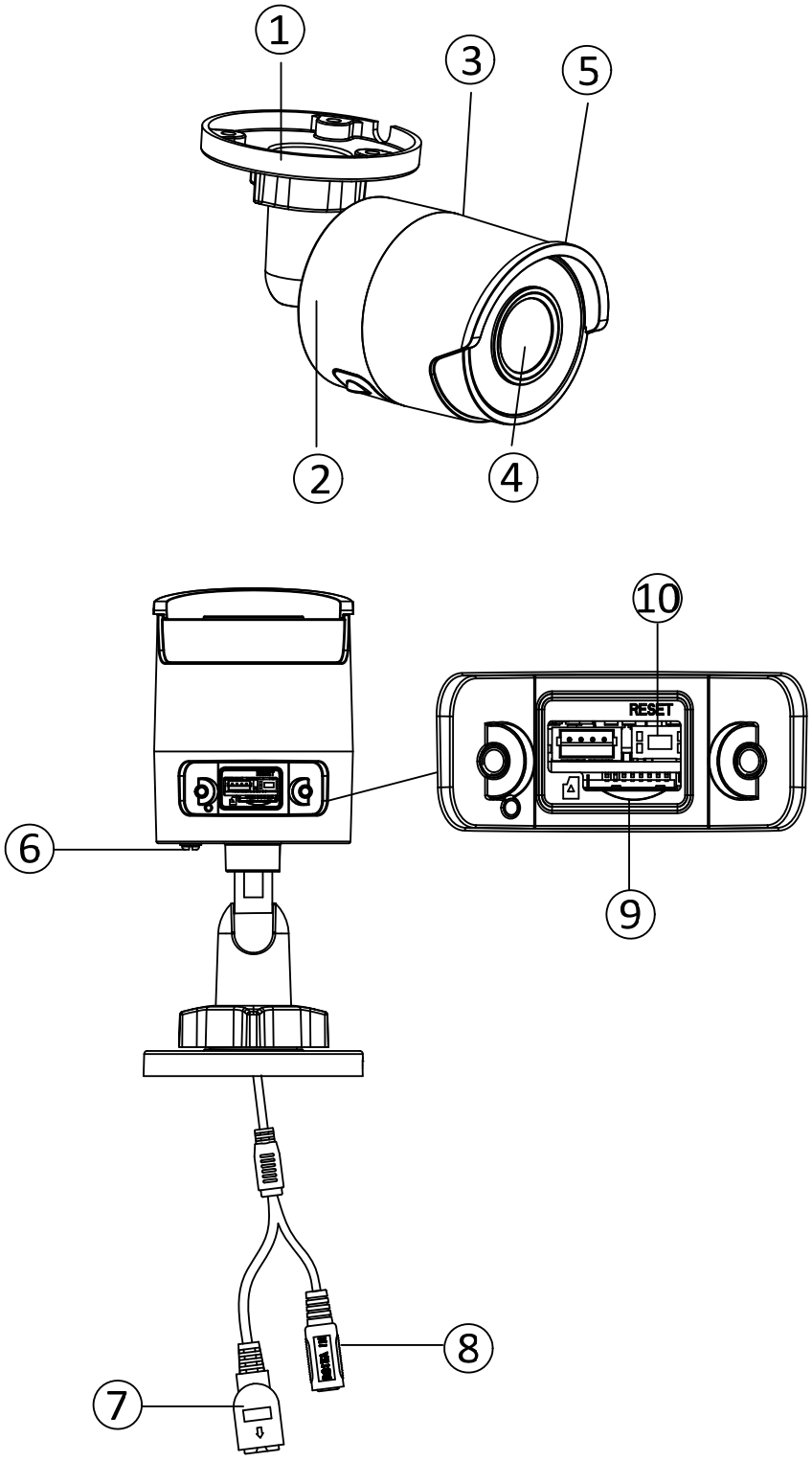


Figure 6-51 Overview

Table 6-9 Description

No.	Description	No.	Description
1	Mounting Base	6	Grounding Screw
2	Back Case	7	10/100M Self-adaptive Ethernet Interface (PoE)
3	Front Case	8	Power Supply (DC 12V)
4	Lens	9	Memory Card Slot
5	Sun Shield	10	Reset Button

Note:

- This type of bullet camera supports PoE power supply. You can power the camera by connecting both DC 12V interface and the Ethernet interface. Or you can connect the Ethernet interface only.
- Press and hold the reset button about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

6.9.2 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- The standard power supply is 12 VDC, please make sure your power supply matches with your camera.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure that the wall is strong enough to withstand four times the weight of the camera and the bracket.

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Dust or grease on the dome cover will cause IR reflection. Please do not remove the dome cover film until the installation is finished. If there is dust or grease on the dome cover, clean the dome cover with clean soft cloth and isopropyl alcohol.
- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.
- The foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDS. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

6.9.2.1. .Memory Card Installation

Steps:

1. Unscrew the cover to expose the memory card slot.

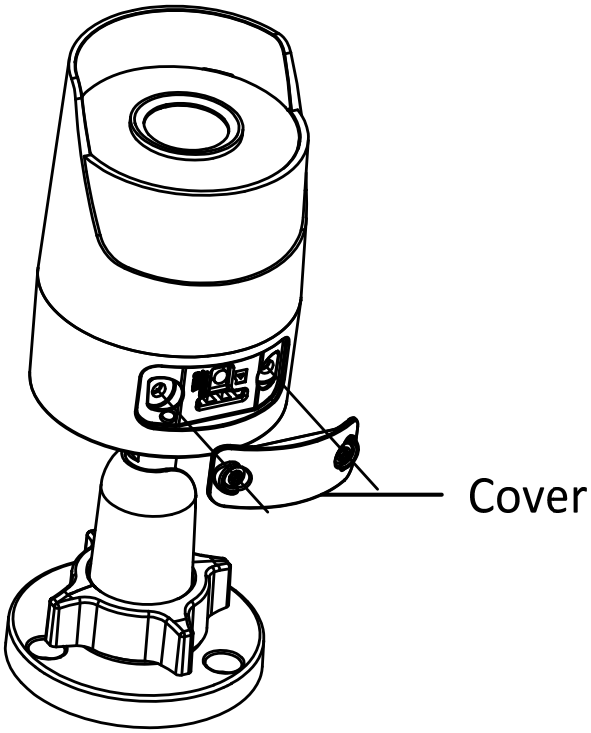


Figure 6-52 Expose Memory Card Slot

2. Insert the memory card.

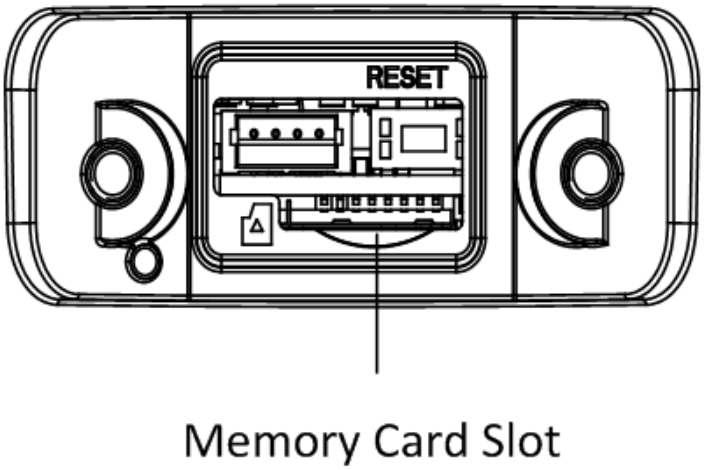


Figure 6-53 Insert Memory Card

3. To unmount the memory card, push to get it ejected.
4. Screw the cover back to the camera when installation is finished.

6.9.2.2. Installation of Bullet Camera

Note:

Both wall mounting and ceiling mounting are suitable for the bullet camera. Wall mounting will be taken as an example in this section. You can take steps of wall mounting for reference if ceiling mounting is adopted.

Steps:

1. Drill the screw holes in the wall according to the drill template.

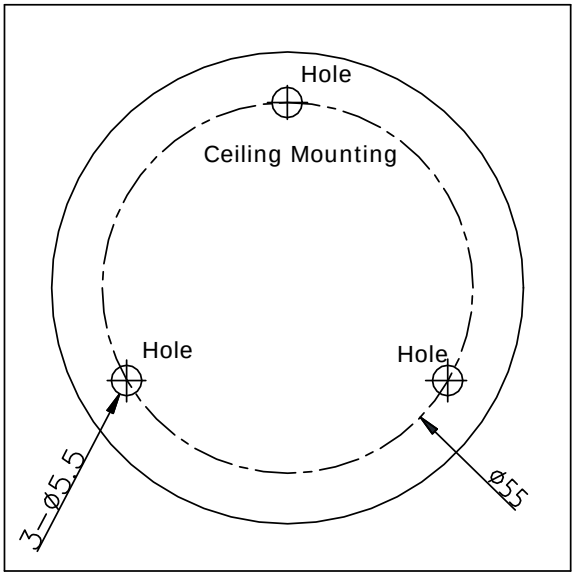


Figure 6-54 Drill Template

2. Route the corresponding cables.
3. Secure the camera to the wall with the supplied Screws.

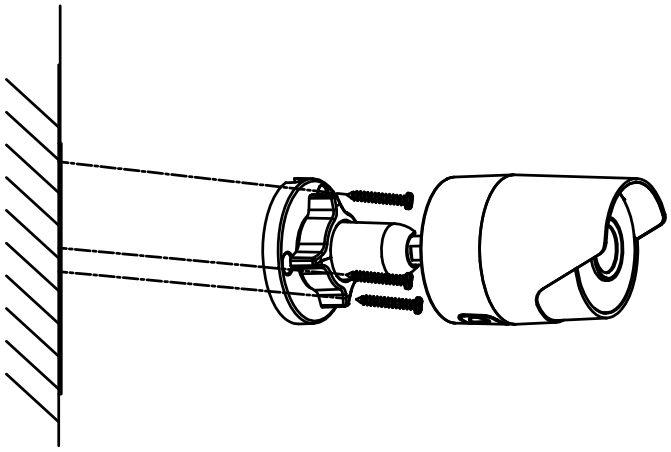


Figure 6-55 Secure the Camera to the Ceiling

4. Connect the cables and power on the camera to view live view image.
5. Adjust the surveillance angle.

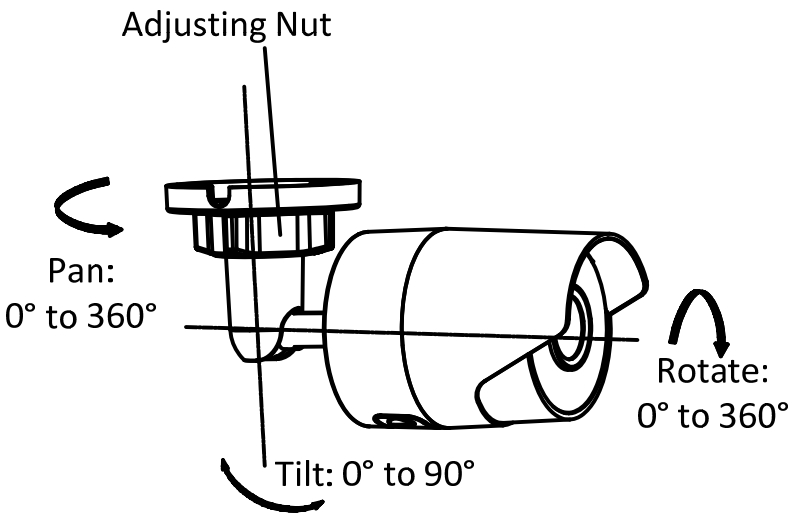


Figure 6-56 3-axis Adjustment

1) Loosen the adjusting nut.
2) Adjust the pan direction [0° to 360°].
3) Adjust the tilt direction [0° to 90°].
4) Rotate the camera [0° to 360°] to adjust the lens to the desired surveillance angle.
5) Tighten the adjusting nut to complete the installation.

6.10 Type X Bullet Camera

6.10.1 Overview

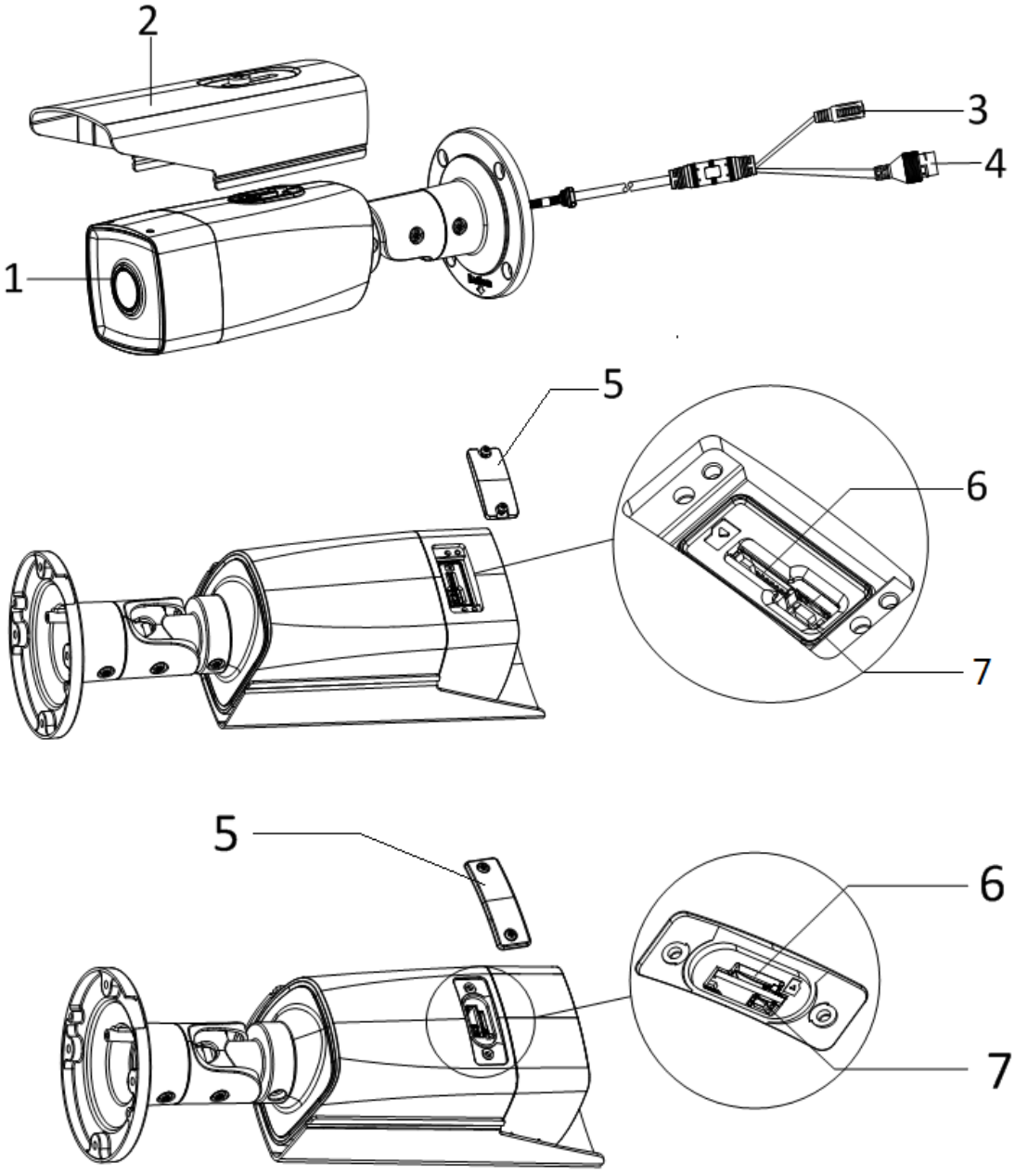


Figure 6-57 Overview

Table 6-10 Description

No.	Description
1	Lens
2	Sun Shield
3	Power Interface
4	Network Interface (PoE)
5	Memory Card Slot Cover
6	Memory Card Slot(Different Models)
7	Reset Button(Different Models)

Note:

Use reset button to reset the camera: Press and hold the reset button about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

6.10.2 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- The standard power supply is 12 VDC, please make sure your power supply matches with your camera.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure that the wall is strong enough to withstand four times the weight of the camera and the bracket.

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection

6.10.2.1. Memory Card Installation

Steps:

1. Unscrew the cover to expose the memory card slot.

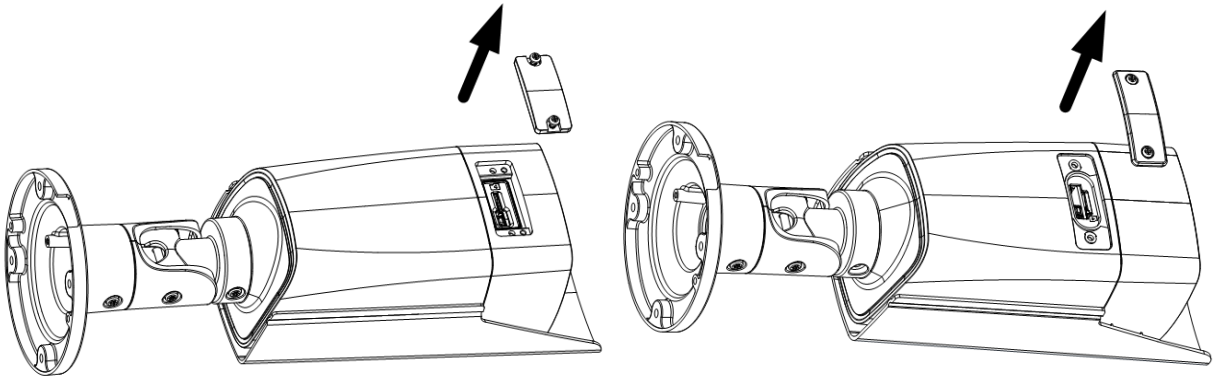


Figure 6-58 Expose Memory Card Slot

2. Insert the memory card.

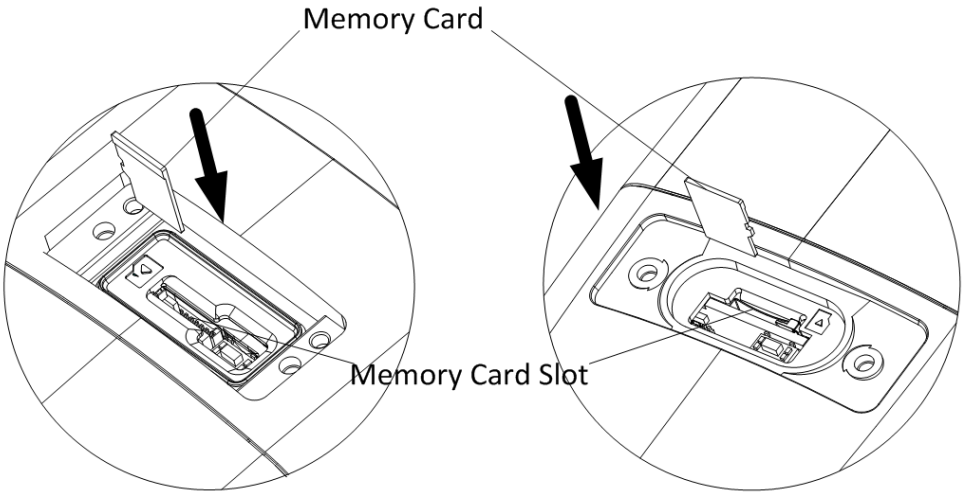


Figure 6-59 Insert Memory Card

3. To unmount the memory card, push to get it ejected.
4. Screw the cover back to the camera when installation is finished.

6.10.2.2. Direct Mounting

Steps:

1. Drill 4 screw holes (hole 1 on drill template) and the cable hole in the ceiling/wall.

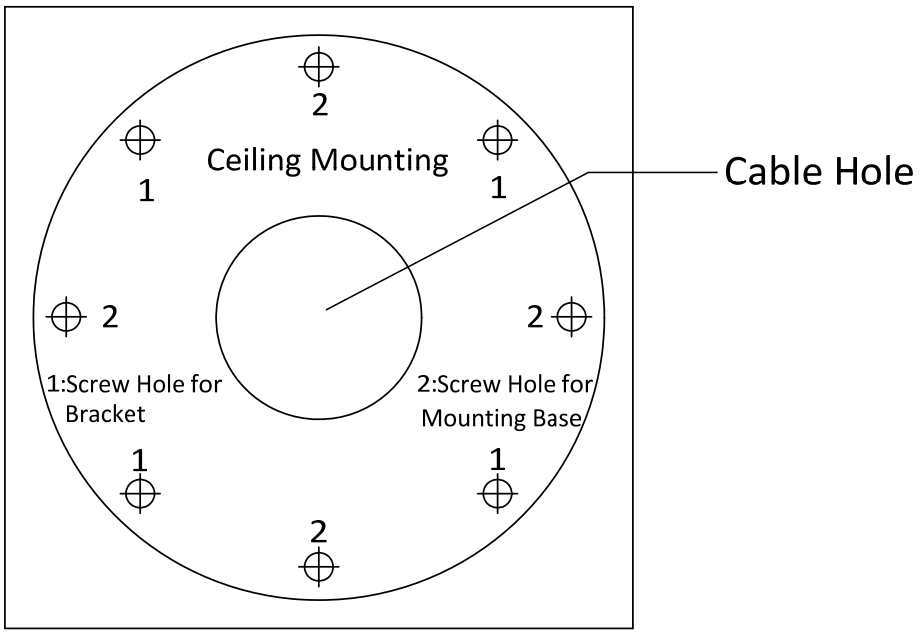


Figure 6-60 Drill Template

2. Fix the camera to the wall/ceiling with the supplied screws.

Note:

Please insert the expansion screws first if the camera is mounted to the cement wall/ceiling. And you can use the self-tapping screws directly if camera is mounted to the wooden wall/ceiling.

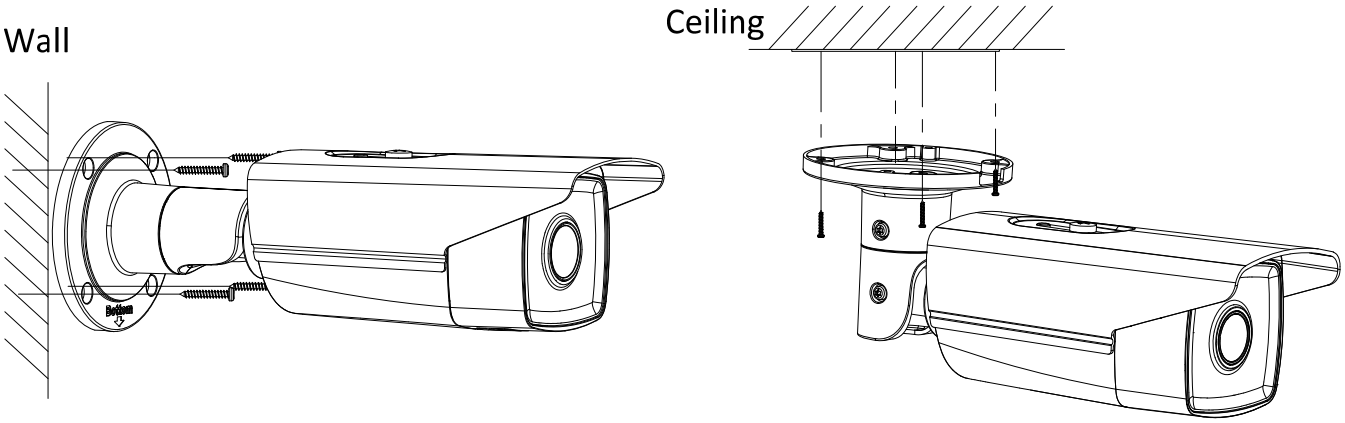


Figure 6-61 Install the Camera

3. Adjust the surveillance angle.
   1) Loosen No.1 lock screw to adjust the tilt angle [0 ° to 100°].
   2) Loosen No.2 lock screw to adjust the pan angle [0° to 360°].
   3) Loosen No.3 lock screw to rotate the camera [0° to 360°].

4) Tighten the lock screws.

Note:

A wrench is supplied to loosen and tighten the screws.

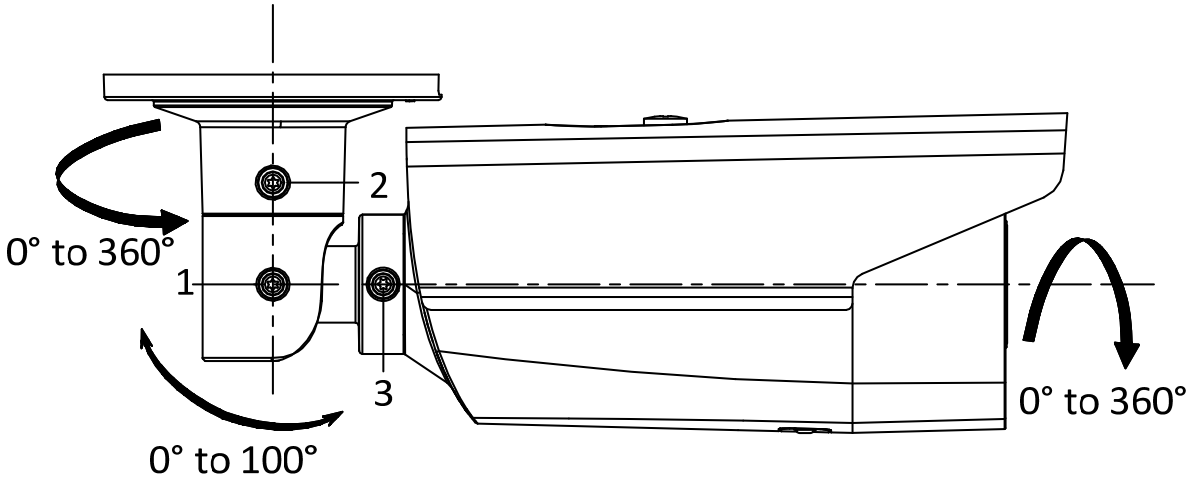


Figure 6-62 Adjust the Surveillance Angle

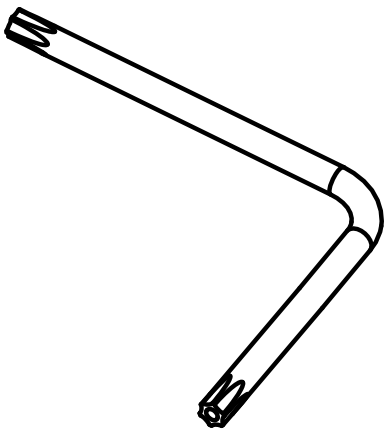


Figure 6-63 Supplied Wrench

4. (Optional) Install the water-proof jacket for network interface. Refer to Network Cable Water-proof Jacket Installation (Optional).

Note:

It is recommended to adopt the water-proof jacket (supplied) for the network interface, especially when the camera is installed outdoor.

6.10.2.3. Mounting with a Junction Box

Before You Start:

Junction box is not included in package. You need to prepare one in advance if you adopt this mounting type. The shown junction box is for demonstration.

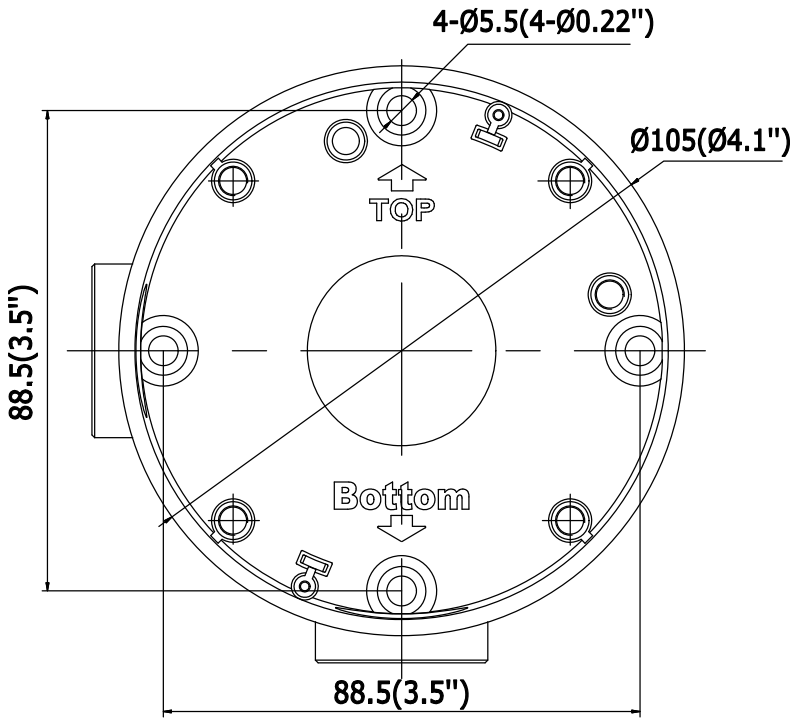


Figure 6-64 Dimension of Junction Box

Steps:

1. Paste the drill template to desired mounting place. Drill the screw hole and cable hole according to the supplied drill template.
2. Align the screw holes of the junction box to the drill template, and fix the junction box to the wall with screws.
3. Hang the camera with the safety rope of junction box.
4. Route the cables.
5. Fix the camera to the junction box with screws.
6. Adjust the surveillance angle.
7. Install the water-proof jacket.

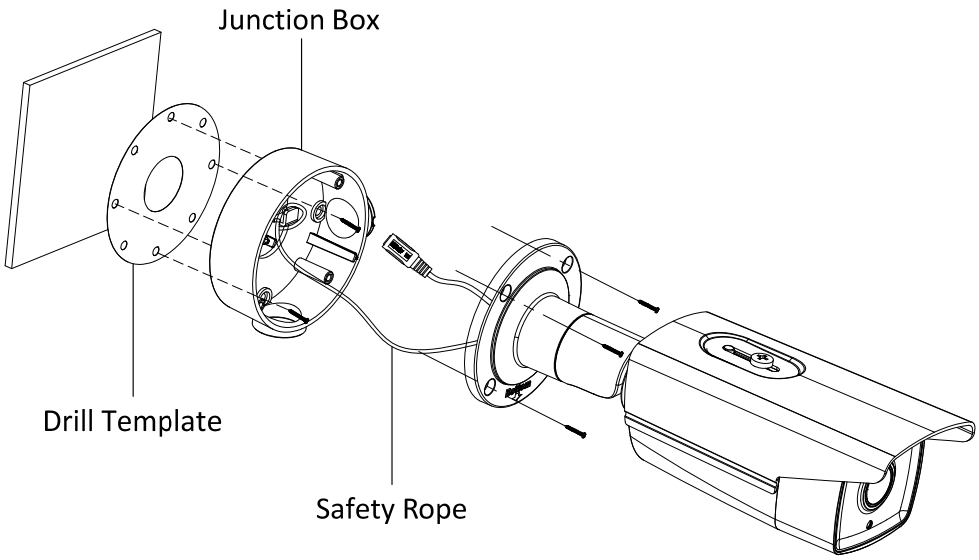


Figure 6-65 Installation with a Junction Box

6.10.2.4. Mounting with a Gang Box

Before You Start:

An adapter plate should be purchased separately if you mount the camera to a gang box.

Steps:

1. Install the adapter plate to the gang box.
2. Route the cables.
3. Fix the camera to the adapter plate with screws.
4. Adjust the surveillance angle.
5. Install the water-proof jacket.

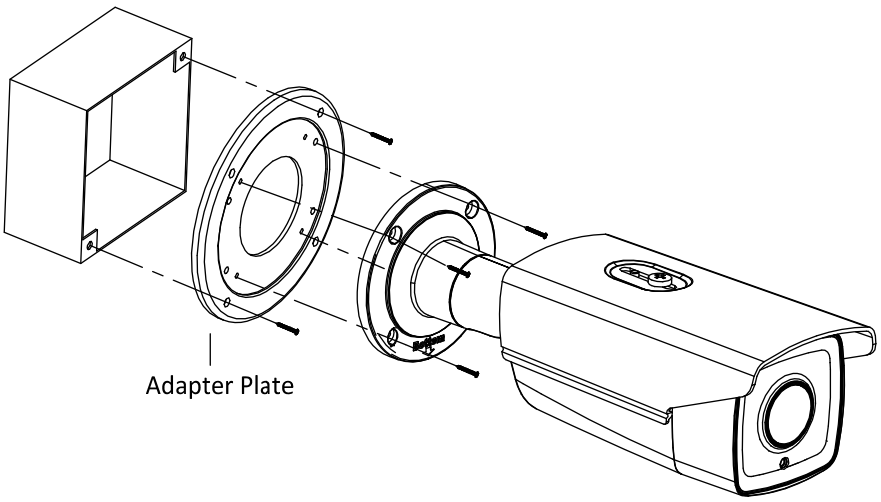


Figure 6-66 Installation with a Gang Box

6.11 Type XI Bullet Camera

6.11.1 Overview

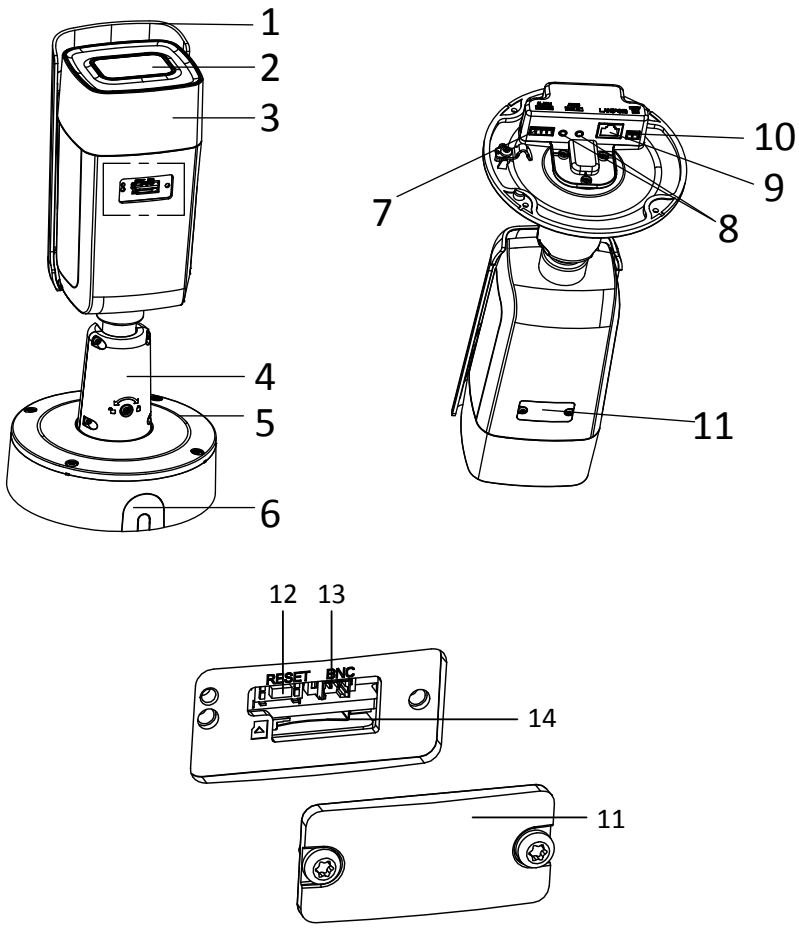


Figure 6-67 Overview

Table 6-11 Description

No.	Description
1	Sun Shield
2	Lens
3	Front Cover
4	Three-axis Adjustment Bracket
5	Junction Box
6	Side Outlet Cover
7	Alarm Interface
8	Audio Interface
9	RJ 45 Network Interface
10	Power Interface
11	Cover
12	Reset Button
13	Video Out (BNC)
14	Memory Card Slot

Note:

Hold RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc

6.11.2 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- The standard power supply is 12 VDC, please make sure your power supply matches with your camera.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure that the wall is strong enough to withstand four times the weight of the camera and the bracket.

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection

6.11.2.1. Memory Card Installation

Steps:

1. Unscrew the cover to expose the memory card slot.

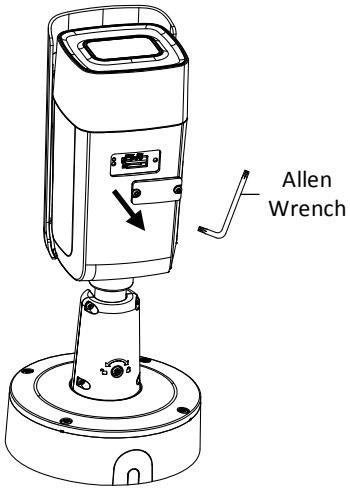


Figure 6-68 Expose Memory Card Slot

2. Insert the memory card.

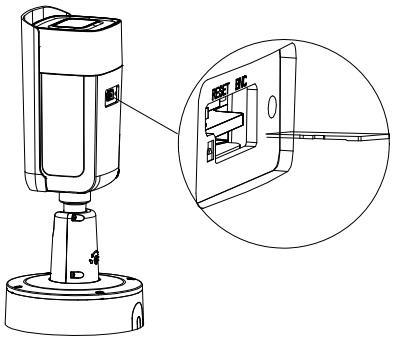


Figure 6-69 Insert Memory Card

3. Tighten the screws to replace the slot cover.

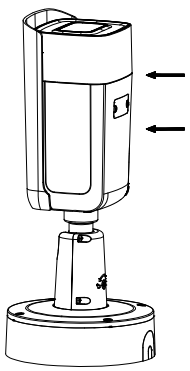


Figure 6-70 Replace the Slot Cover

6.11.2.2. Ceiling/Wall Mount

Steps:

1. Drill screw holes in the wall/ceiling according to the holes 1 on the supplied adapter.

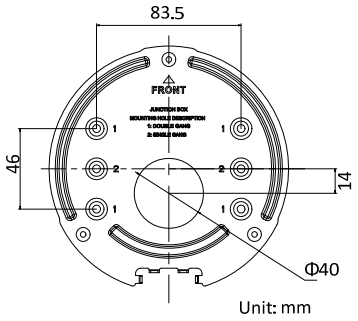


Figure 6-71 Drill Holes in the Wall/Ceiling

2. Secure the adapter to the wall/ceiling with the screws.

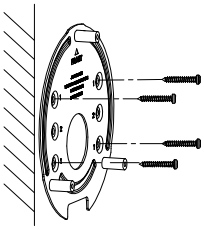


Figure 6-72 Install the Adapter

3. Loosen the screws to remove the junction box.

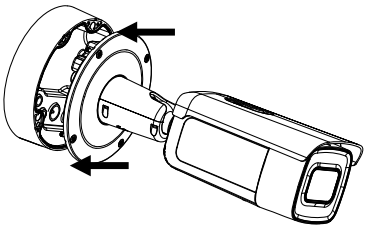


Figure 6-73 Remove the Junction Box

4. Route the cables through the sealing plugs in the junction box.
   1) Pierce the sealing plugs on the junction box.
   2) Thread cables through the sealing plugs.

Note:

- For RJ45 network interface, use the supplied cable routing tool.
- For the audio interface, first thread the audio cable through the sealing plug and then connect the audio connector to the cable.

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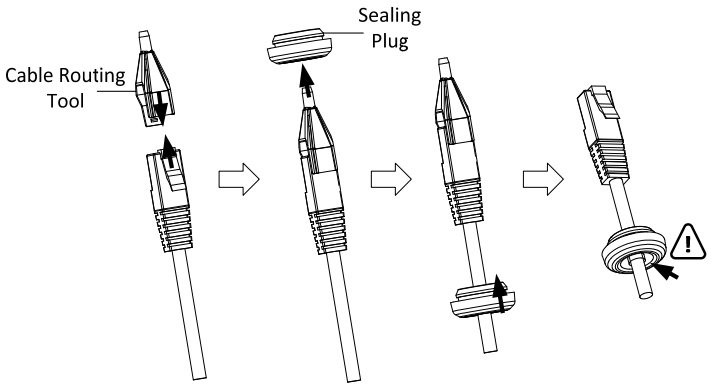


Figure 6-74 Route the RJ45 Network Cable through Sealing Plug

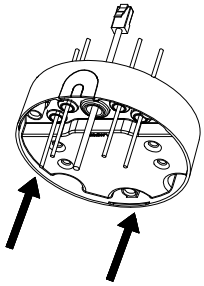


Figure 6-75 Route the Cables through the Junction Box

5. Secure the junction box in the wall/ceiling with screws.

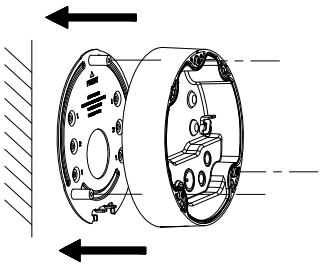


Figure 6-76 Secure the Junction Box

6. Hook the camera to the junction box with the safety rope and connect the cables to the camera.

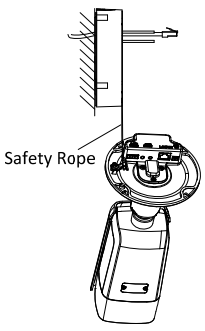


Figure 6-77 Hook the Camera to the Junction Box

7. Secure the camera to the junction box with the screws.

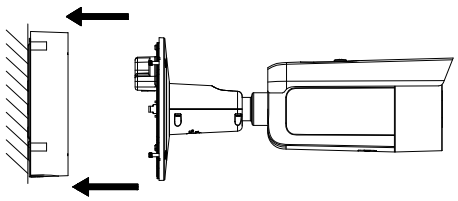


Figure 6-78 Secure the Camera

8. Adjust the view angle.

3-axis (pan/tilt/rotation) adjusting allows adjustment for optimum camera rotation and placement. Follow the steps below to adjust the view angle.

Steps:

1) Loosen the lock screw using the supplied Allen wrench.
2) Adjust the view angle of the camera. The adjusting range of the panning is from 0° to 360°, the tilting is from 0° to 90° and the rotation is from 0° to 360°.
3) Tighten the lock screw.

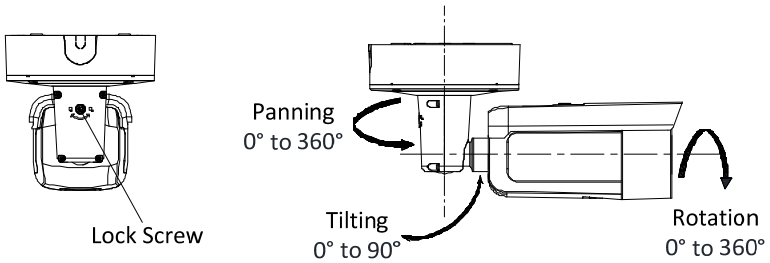


Figure 6-79 Adjust the View Angle

9. Adjust zoom and focus.

You can adjust the zoom and focus level on PTZ control panel by visiting the camera via web browser or client software.

For detailed steps, refer to the *User Manual of Network Camera.*

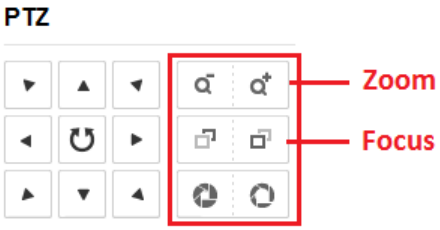


Figure 6-80 Zoom and Focus Adjustment via Web Browser

6.11.2.3. Mounting with a Gang Box

Before You Start:

An adapter plate should be purchased separately if you mount the camera to a gang box.

Steps:

1. Secure the adapter to a gang box with the screws.
2. Route the cables.
3. Secure the junction box and the camera to the adapter.
4. Adjust the surveillance angle.
5. Adjust zoom and focus.

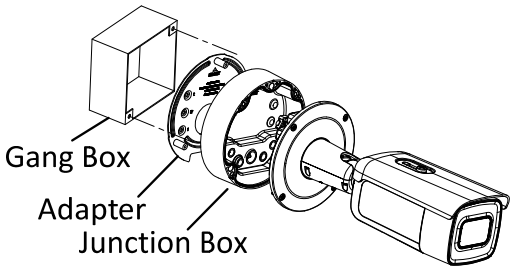


Figure 6-81 Installation with a Gang Box

6.12 Type XII Bullet Camera

6.12.1 Overview

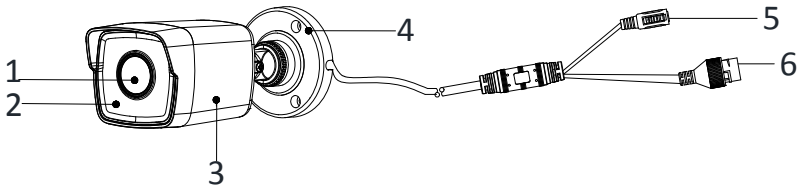


Figure 6-82 Overview

Table 6-12 Description

No.	Description
1	Lens
2	Front Cover
3	Back Cover
4	Mounting Base
5	Power Cord
6	Network Cable

6.12.2 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- The standard power supply is 12 VDC, please make sure your power supply matches with your camera.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure that the wall is strong enough to withstand four times the weight of the camera and the bracket.
- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection

6.12.2.1. Ceiling Mounting

Before you start:

Both wall mounting and ceiling mounting are suitable for the bullet camera. Ceiling mounting will be taken as an example in this section. And you can take steps of ceiling mounting as a reference for wall mounting.

Steps:

1. Paste the drill template (supplied) to the desired mounting position on the ceiling.
2. Drill the screw holes in the ceiling according to the supplied drill template.

Note:

Drill the cable hole, if adopting ceiling outlet to route the cable.

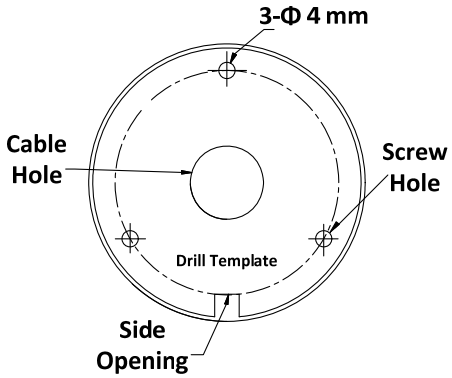


Figure 6-83 The Drill Template

3. Route the cables through the cable hole (optional), or the side opening.
4. Fix the camera on the ceiling with supplied screws.

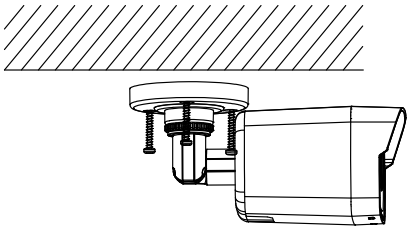


Figure 6-84 Fix the Camera on the Ceiling

Note:

- In the supplied screw package, both self-tapping screws, and expansion bolts are contained.
- If the ceiling is cement, expansion bolts are required to fix the camera. If the ceiling is wooden, self-tapping screws are required.

5. Connect the corresponding power cord, and network cable.
6. Power on the camera, and set the network configuration (for details, refer to 3 Setting the Network Camera over the LAN and 4 Accessing via Web Browser) to check whether the image is gotten from the optimum angle. If not, adjust the surveillance angle.
   1) Loosen the No.1 adjusting screw to adjust the rotation position [0° to 360°].
   2) Tighten the No.1 adjusting screw.

3) Loosen the No.2 adjusting screw to adjust the tilting position [-90°to 90°].

4) Tighten the No. 2 adjusting screw.

5) Loosen the No.3 adjusting screw to adjust the pan position [0° to 360°].

6) Tighten the No.3 adjusting screw.

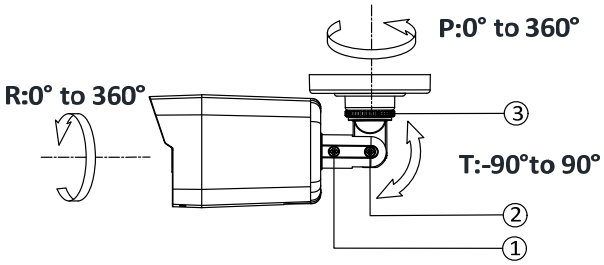


Figure 6-85 3-aix Adjustment

7. (Optional) Install the water-proof jacket. Refer to Installation of Water-proof Jacket for details.

6.12.2.2. Wall Mounting with Junction Box

Before You Start:

- Both wall mounting and ceiling mounting are suitable for the bullet camera. Wall mounting will be taken as an example in this section. And you can take steps of wall mounting as a reference for ceiling mounting.
- You need to purchase a junction box first.

Steps:

1. Paste the drill template (supplied) to the desired mounting position on the wall.
2. Drill the screw holes and the cable hole (optional) in the wall according to the drill template.

Note:
Drill the cable hole, if adopting ceiling outlet to route the cable.

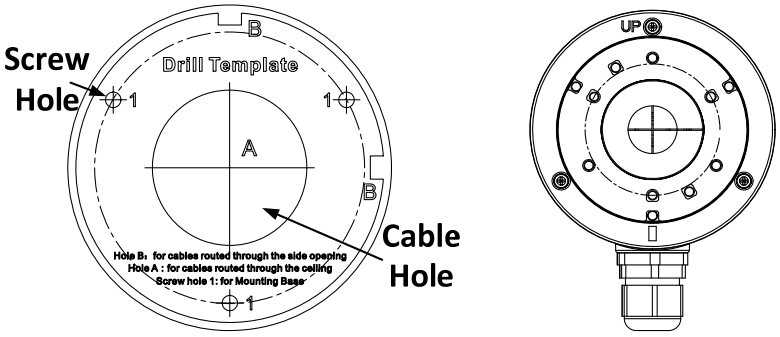


Figure 6-86 The Drill Template

3. Take apart the junction box, and align the screw holes of the bullet camera with those on the junction box' cover.

4. Fix the camera on the junction box's cover with three PM4 × 10 screws.

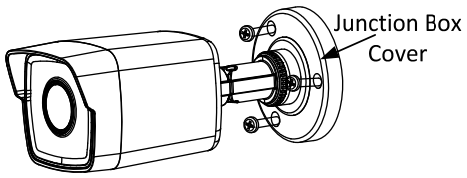


Figure 6-87 Fix the Camera on Junction Box's Cover

5. Secure the junction box's body with three supplied screws on the wall.

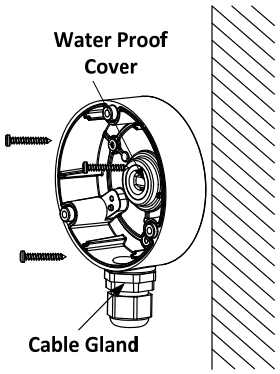


Figure 6-88 Fix the Junction Box on the Wall

6. Route the cables through the cable hole. Here we take bottom cable hole as the example to describe the installation.
   1) Separate the water proof cover and the cable gland from the junction box.
   2) Route the cable through the bottom cable hole and the cable gland.
   3) Screw the cable gland back on the bottom cable hole.
   4) Screw the water proof cover back on the side cable hole.
7. Combine the junction box cover with its body with three screws on the junction box's cover.

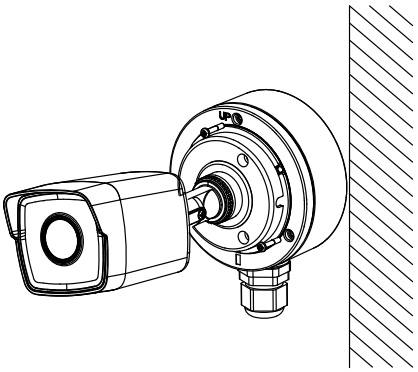


Figure 6-89 Combine Junction Box's Cover with its Body

8. Repeat steps 5 to 7 of Ceiling Mounting to complete the installation.

6.12.2.3. Installation of Water-proof Jacket

Purpose:

It is recommended to adopt the water-proof jacket (supplied) for the network interface when the camera is installed outdoor.

Steps:

1. If the network cable has been settled down, cut off the plug of the network cable first.
2. Route the network cable through the following components in sequence: fix nut, water-proof ring, and the main body of the water-proof jacket, as shown in the figure below.
3. Insert the water-proof ring into the main body of the water-proof jacket, to increase the sealing ability of the components.
4. Wire the plug and network cables up.
5. Fix the O-ring to the network interface of the camera, and then connect the network cables.
6. Wrap the network interface with the main body of the water-proof jacket, and then rotate the fix nut clockwise to assemble it to the main body of the water-proof jacket.

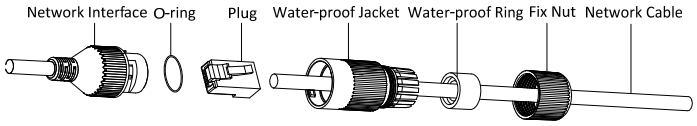


Figure 6-90 Components of Water-proof Jacket

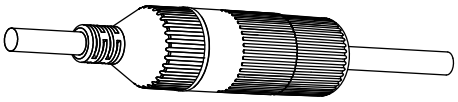


Figure 6-91 Install Water-proof Jacket

Chapter 7 Covert Camera Installation

7.1 Camera Description

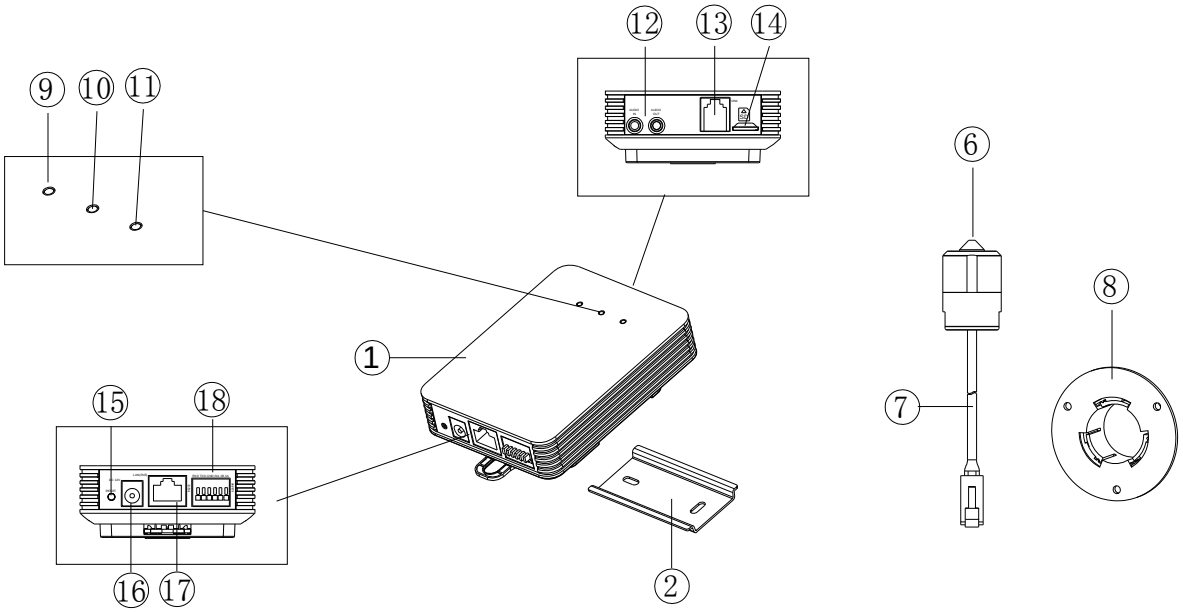


Figure 7-1 The Overview of Covert Camera with Cylindrical Sensor Unit

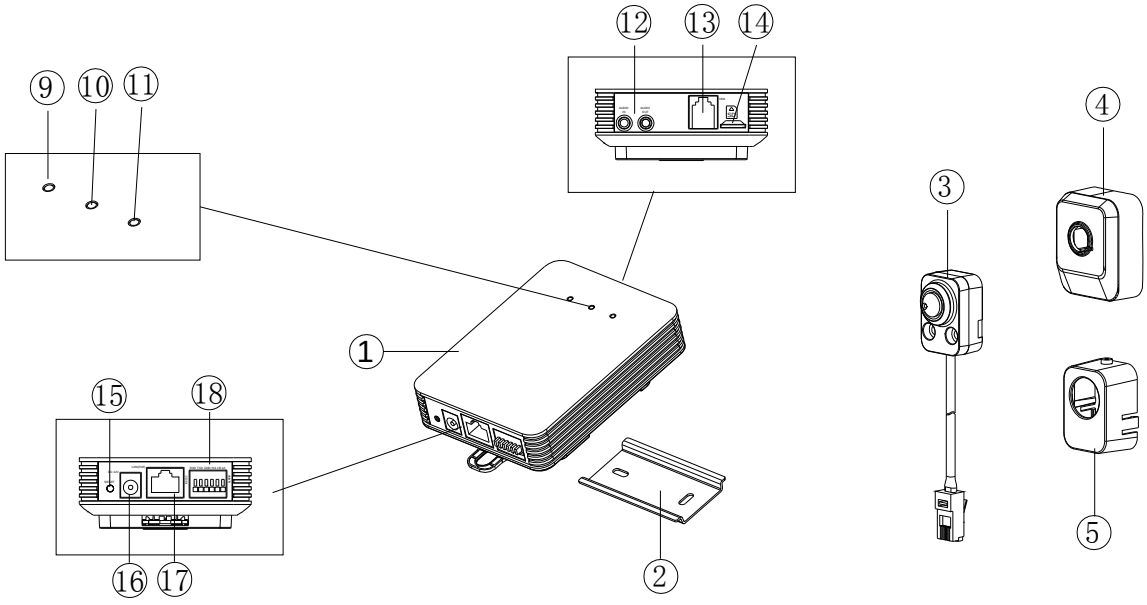


Figure 7-2 The Overview of Covert Camera with Block-shaped Sensor Unit

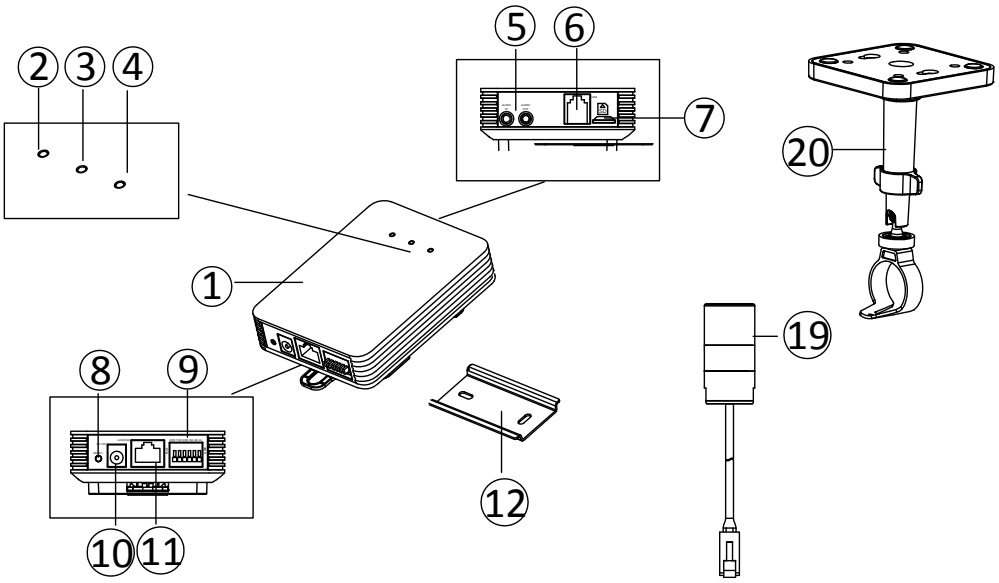


Figure 7-3 The Overview of Covert Camera with Fixed Focal Unit

Table 7-1 Description of the Camera

No.	Description	No.	Description
1	Main Unit	11	PoE & Network
2	Power Indicator LED	12	Mounting Rail
3	Status Indicator LED	13	Block-Shaped Sensor Unit
4	Link Indicator Led	14	Decorative Cover
5	Audio Interface	15	Straight Mounting Bracket
6	RJ-12 Cable	16	Cylindrical Sensor Unit
7	Micro SD Card Slot	17	RJ-12 Interface
8	RESET Button	18	Round Rail Mounting Bracket
9	RS-232 &Alarm Interface	19	Fixed Focal Camera
10	Power Interface	20	Ceiling Mounting Bracket

Table 7-2 LED Indicator

LED	Color& Status	Indicator
POWER	Solid red	On normal operation
	Unlit	Power Off
STATUS	Solid green	Camera works properly
	Unlit	Camera does not work properly.
LINK	Flashing amber	Network connection is functioning properly
	Unlit	No network connection

7.2 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure the power supply is matched with your required voltage to avoid damage.
- If the product does not function properly, please contact your dealer or the nearest service center. Do not disassemble the camera for repair or maintenance by yourself.
- Make sure that the wall is strong enough to withstand three times the weight of the camera.

NOTE

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Dust or grease on the dome cover will cause IR reflection. Please do not remove the dome cover film until the installation is finished. If there is dust or grease on the dome cover, clean the dome cover with clean soft cloth and isopropyl alcohol.
- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.
- The foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDS. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

7.2.1 Installation of Main Unit

Steps:

1. Fix the standard mounting rail on the mounting surface. As shown in figure below.

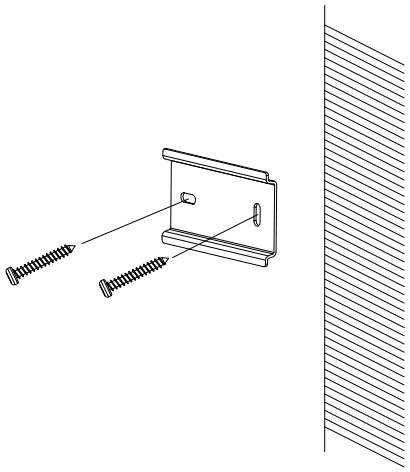


Figure 7-4 Fix the Standard Mounting Rail

NOTE

- For cement surface mounting, you need to use the expansion screw to fix the camera.
- For wooden surface mounting, you can just use the self-tapping screw to fix the camera.

2. Hang the hook which is on upper-side of the main unit onto the rail, press a little harder on the lower part of the main unit, and then the elastic clasp will be automatically buckled. As shown in figure below.

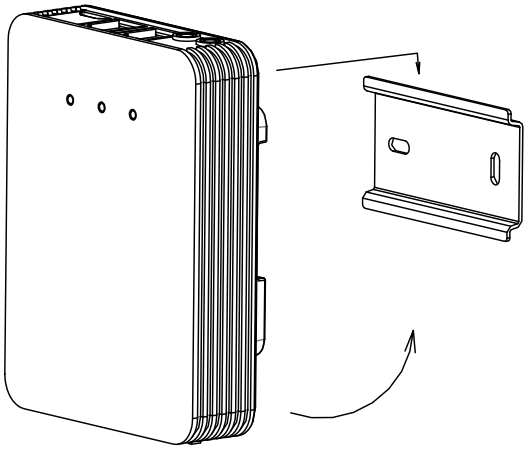


Figure 7-5 Buckle the Main Unit

NOTE

If you already had a standard rail installed, you can buckle the main unit onto the installed rail directly. As shown in figure below.

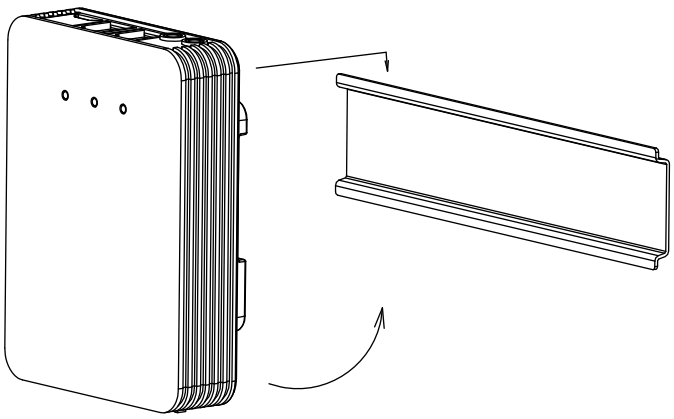


Figure 7-6 Buckle the Main Unit onto Standard Rail

7.2.2 Installation of Block-Shaped Sensor Unit

This series of camera support concealed mounting and exposed mounting with a decorative cover.

- **Concealed Mounting**

NOTE

Please make sure that the mounting surface is suitable for adhesive pasting.

Steps:

1. Drill on the mounting surface. As shown in figure below.

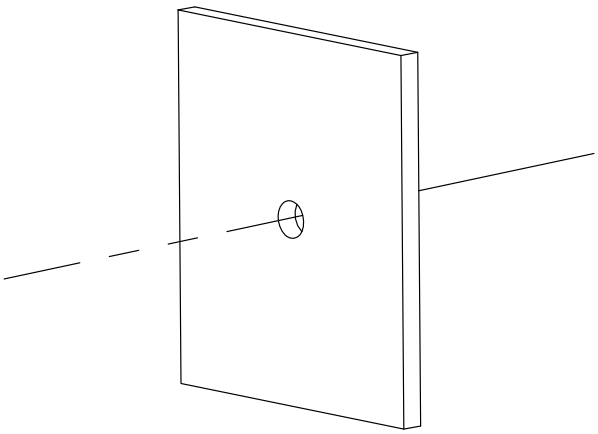


Figure 7-7 Drill on the Surface

NOTE

Make sure the drilling hole is big enough for the camera lens.

2. Remove a side of the adhesive tape on the bracket. Paste the bracket on mounting surface by aligning with the drilled hole.

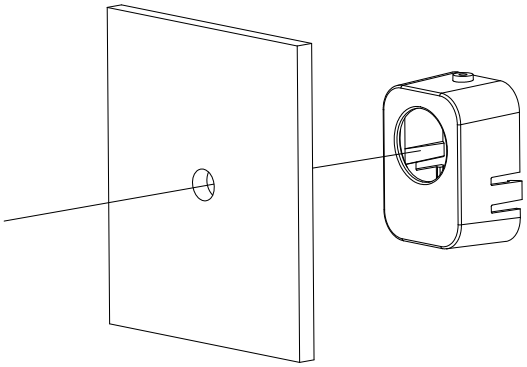


Figure 7-8 Paste the Bracket

3. Install the block-shaped sensor unit into the bracket and make it to be buckled.

4. Tighten the fastening screw on the top of the bracket.

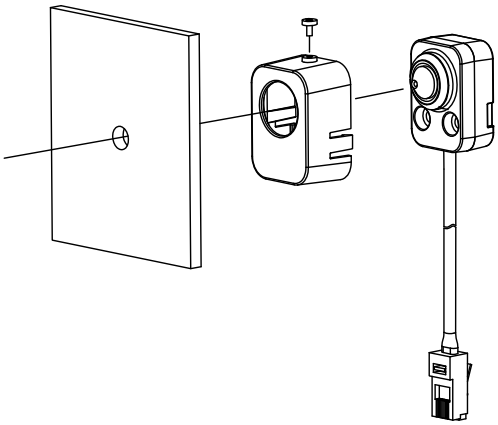


Figure 7-9 Insert the Block-shaped Sensor Unit

- **Exposed Mounting**

Steps:

1. Fix the Block-shaped sensor unit on the mounting surface with screws. As shown in figure below.

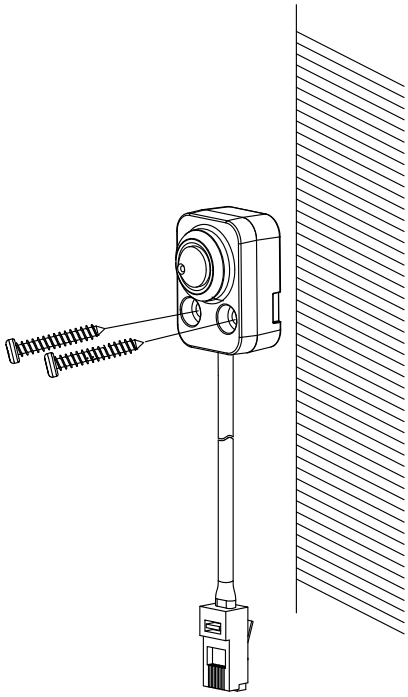


Figure 7-10 Fix the Block-shaped Sensor Unit

NOTE

- For cement surface mounting, you need to use the expansion screw to fix the camera.
- For wooden surface mounting, you can just use the self-tapping screw to fix the camera.

2. Shield the sensor unit with the decorative cover. As shown in figure below.

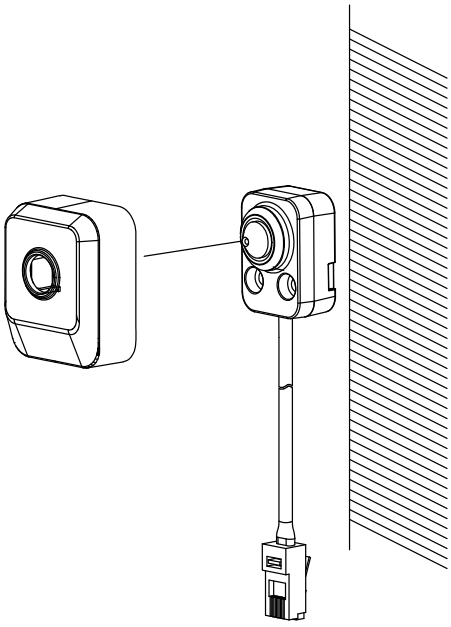


Figure 7-11 Hood the Cover

7.2.3 Installation of Cylindrical Sensor Unit

This series of camera only support concealed mounting.

Please make sure that the mounting surface is suitable for adhesive pasting.

Steps:

1. Drill on the mounting surface. As shown in figure below.

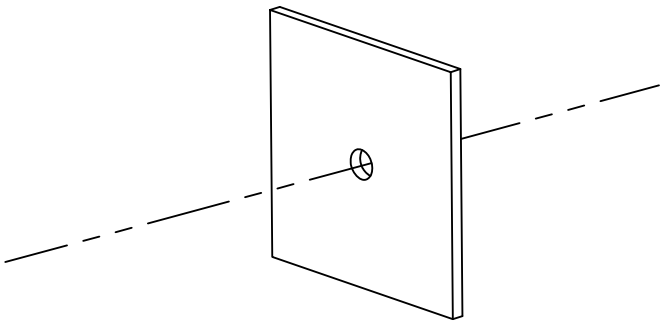


Figure 7-12 Drill on the Surface

Make sure that the drilling hole is big enough for the camera lens.

2. Remove a side of the adhesive tape on the bracket. Paste the bracket on the mounting surface with aligning with the drilling hole. As shown in figure below.

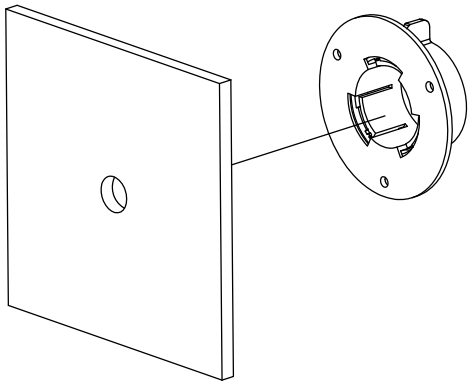


Figure 7-13 Paste the Bracket

3. Install the cylindrical sensor into the mounting hole in the round rail bracket.
4. Turn the locking sleeve to fix the sensor.

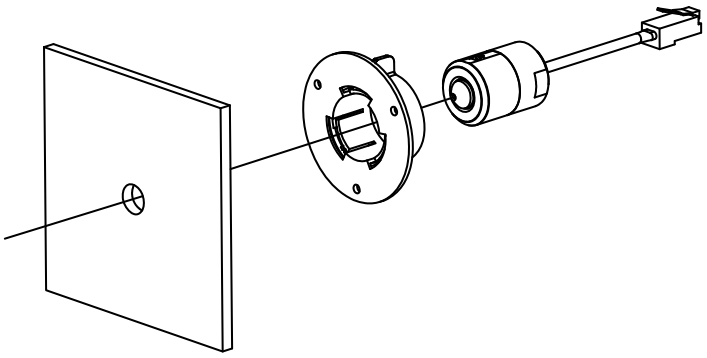


Figure 7-14 Install the Cylindrical Sensor

7.2.4 Installation of Fixed Focal Unit

Steps:

1. Fix the mounting base of the bracket to the ceiling with the supplied screws.

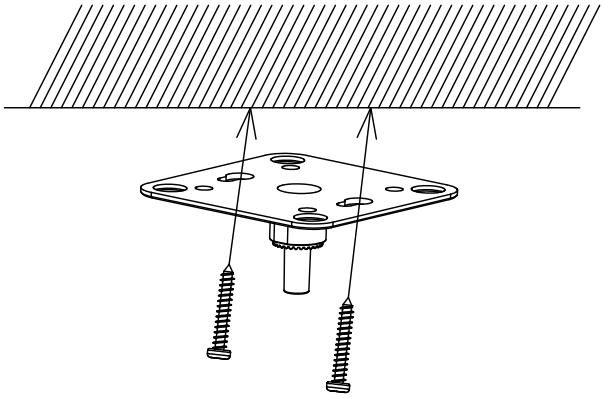


Figure 7-15 Fix the Ceiling Mounting Bracket

2. Hood the bracket cover to the mounting base.

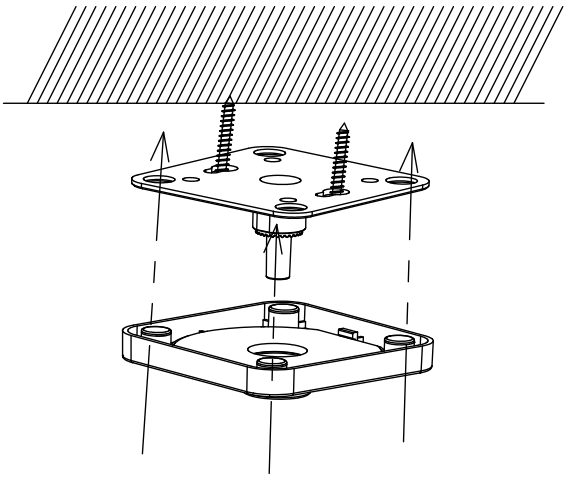


Figure 7-16 Hood the Bracket Cover

3. Screw the bracket to the mounting base.

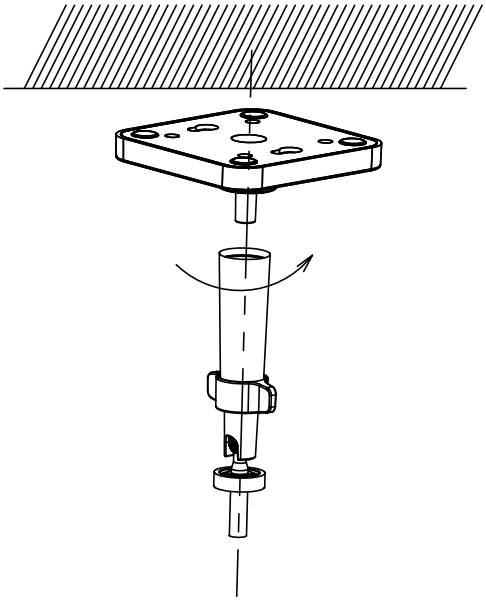


Figure 7-17 Screw the Bracket

NOTE

Another shorter bracket is also selectable, please select the bracket according to your demand.

4. Loop the fixed focal unit with the loop of the bracket, and tighten it with the supplied screw.

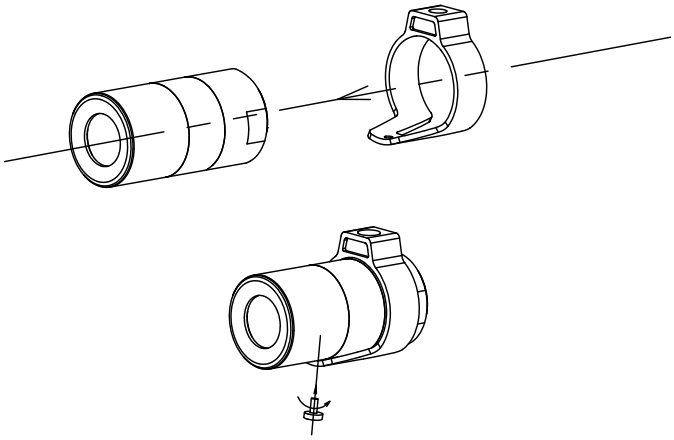


Figure 7-18 Loop the Fixed Focal Unit

5. Align the assembled fixed focal unit to the bracket, and rotate the unit to tighten the unit with the bracket.

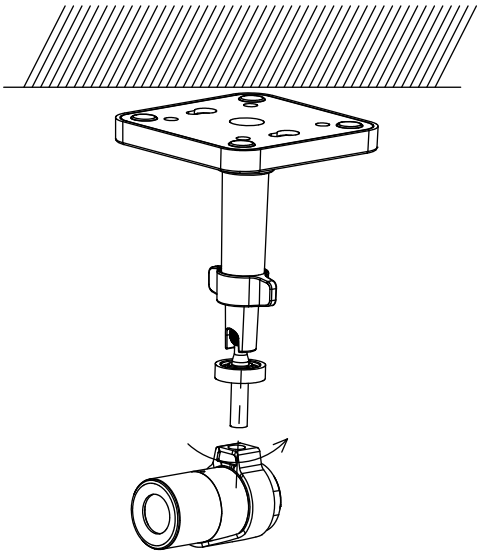


Figure 7-19 Install the Fixed Focal Unit to the Bracket

6. Loosen the knob to adjust the surveillance angle, and then tighten the lock nut to complete the installation.

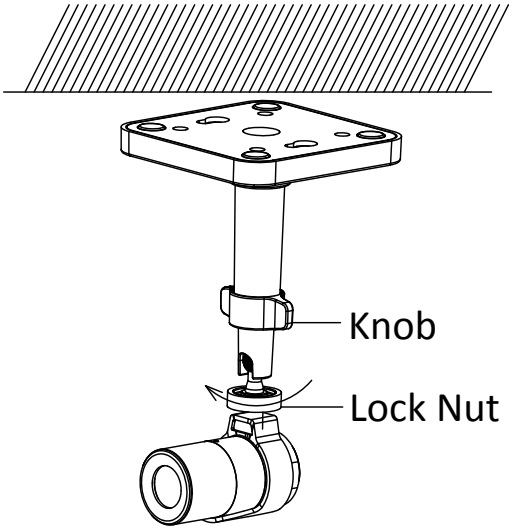


Figure 7-20 Complete the Installation

Chapter 8 Cube Camera Installation

8.1 Type I Cube Camera

8.1.1 Camera Description

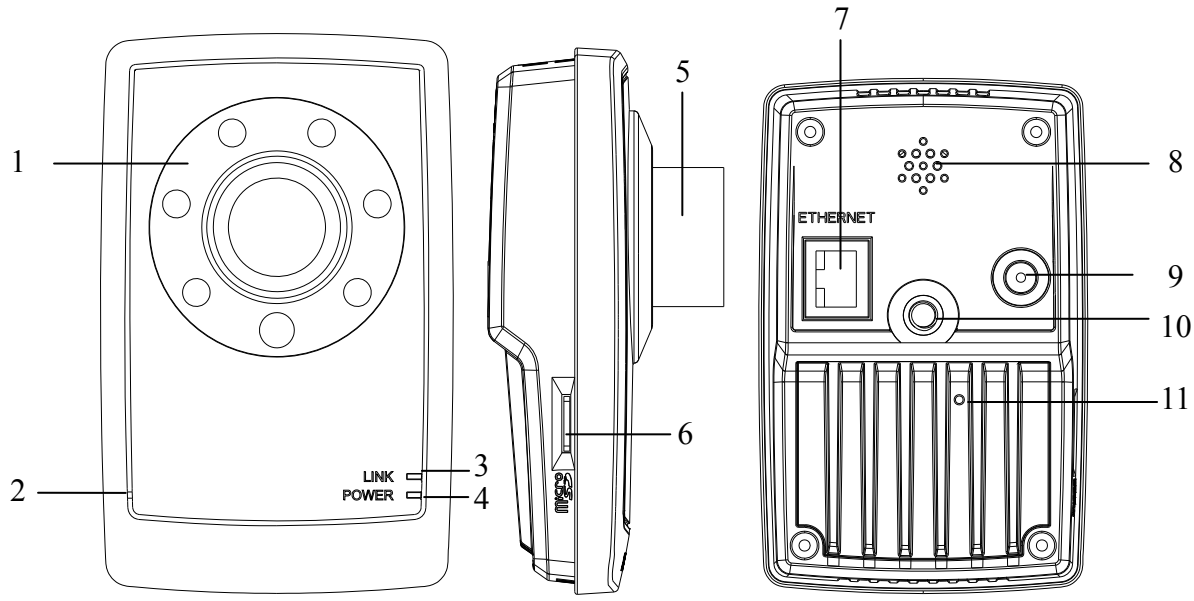


Figure 8-1 Overview

Table 8-1 Description

No.	Description
1	IR LED
2	Microphone
3	LINK: Network Status LED Indicator. LED indicator is solid yellow when network connection is functioning properly.
4	Power LED Indicator. It is solid red when power is applied to the unit.
5	Lens
6	Micro SD Card Slot
7	Ethernet: 10M / 100M self-adaptive Ethernet Interface
8	Speaker
9	Power Supply Interface
10	Screw hole, used to fix the camera to the bracket
11	Reset Button

Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

8.1.2 Installation

Steps:

1. Fix the mounting bracket to the ceiling.

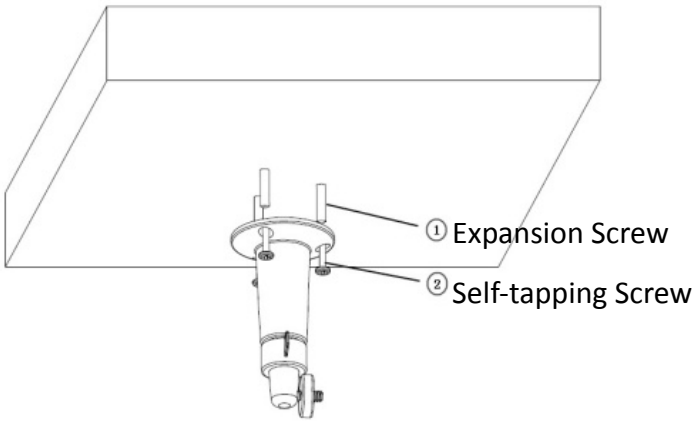


Figure 8-2 Fix the Bracket

2. Aim the screwed hole on the camera at the bracket and rotate the camera tightly.

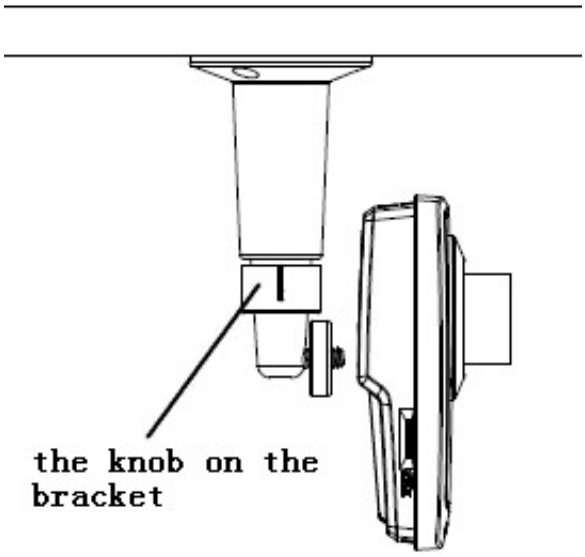


Figure 8-3 Fix the Camera

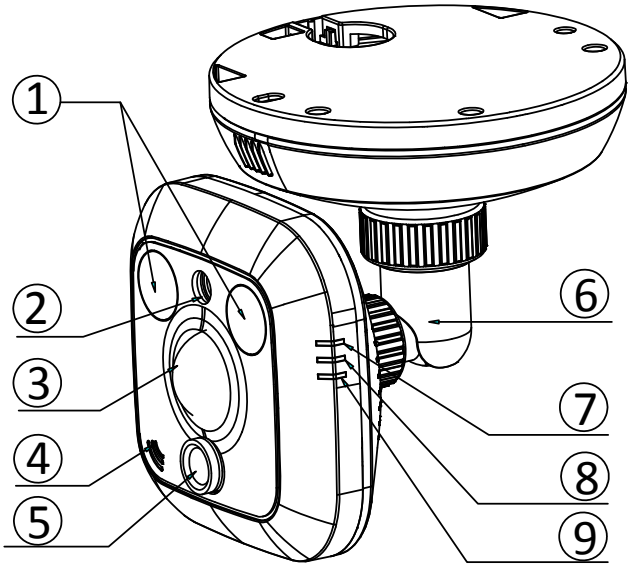
3. View the video image over the network. Loosen the knob on the bracket and adjust the camera lens to get the desired surveillance angle. Tighten the knob on bracket to secure the camera.

Figure 8-4 Installation Completes

8.2 Type II Cube Camera

8.2.1 Camera Description

The overview of the network cube camera is shown below.



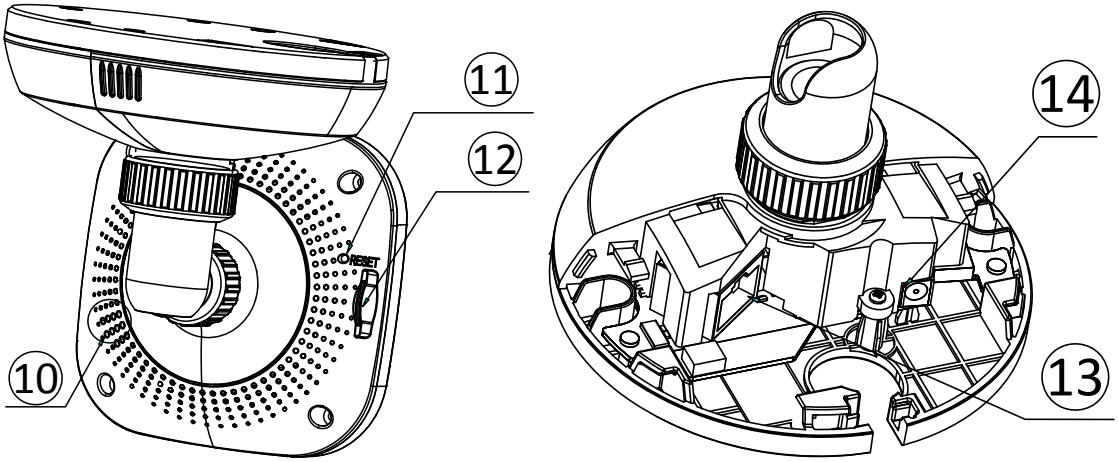


Figure 8-5 Overview

Table 8-2 Description

No.	Description
1	IR LED
2	Photosensitive Resistance
3	PIR sensor
4	Microphone
5	Lens
6	3-axis Adjustment Bracket
7	Alarm Indicator: Indicator goes solid red (camera armed) or solid blue (camera unarmed).
8	Status Indicator: Indicator flashes blue when any movement or presence is detected
9	Link Indicator: Indicator flashes orange when network connection is functioning properly.
10	Speaker
11	RESET
12	Micro SD card slot
13	Power supply interface
14	10M / 100M self-adaptive Ethernet interface & PoE

NOTE

Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

8.2.2 Remote Control Overview

A remote control is included in the package to provide a convenient operation. Please refer to the figure below.

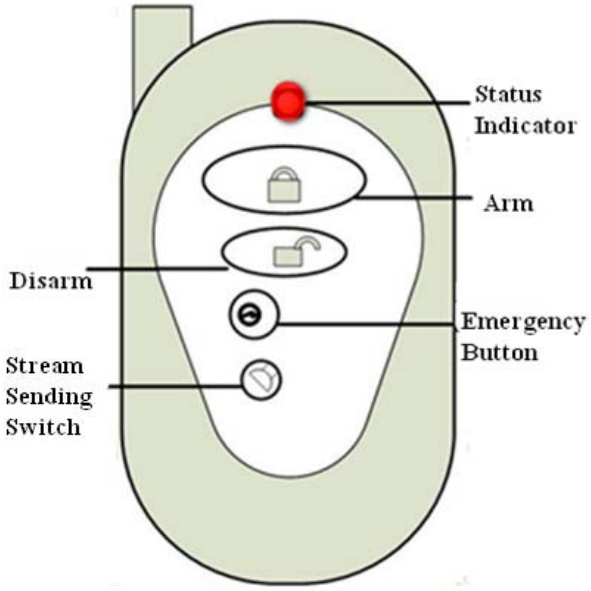


Figure 8-6 Remote Control

Table 8-3 Remote Control Button Description

Button Name	Description
Status Indicator	Indicating the status of the remote control; when you press any button, the indicator flashes red.
Arm Button	Press the button to arm the camera. In arming status, the alarm function, such as the wireless alarm and the PIR alarm is enabled.
Disarm Button	Press the button to disarm the camera. In the disarming status, the alarm linkage is disabled.
Emergency Button	Press the button to trigger the emergency alarm. The emergency alarm has the highest priority.
Stream Sending Switch	Switch for the video stream transmitting. Press the button to stop or start video stream sending. When the video stream is stopped, you can't see the live view or get the record stream on the remote client or web browser.

8.2.3 Installation

Steps:

1. Slide the right cover to remove it from the camera. Remove the fixator.

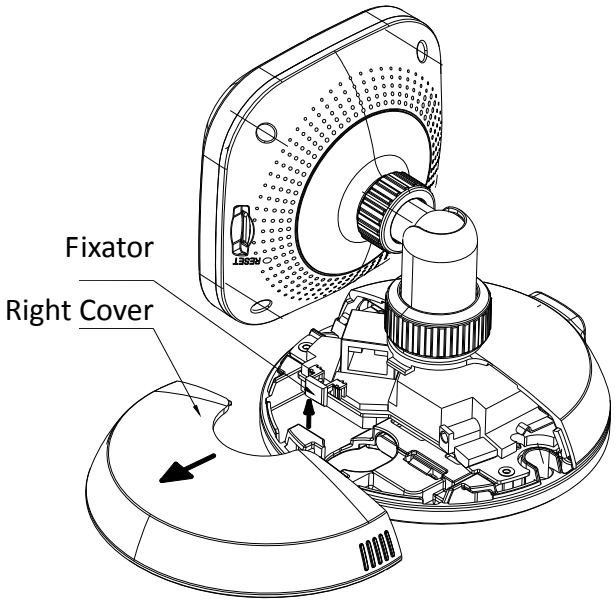


Figure 8-7 Remove the Cover and Fixator

2. Drill the screw holes and the cable hole according to the supplied drill template.

NOTE

Drill no cable hole if you intend to route the cables through the side outlet of the camera.

3. Fix the camera to the ceiling with the supplied expansion screws.

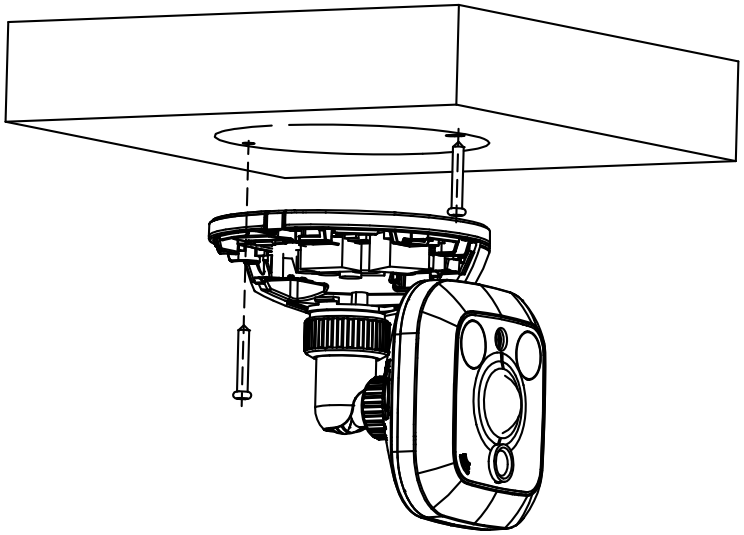


Figure 8-8 Fix the Camera

4. Connect the coresponding power cable and the network cable through the drilled cable hole. Or pull the cable through the side outlet of the camera.

5. Reinstall the right cover and fixator.

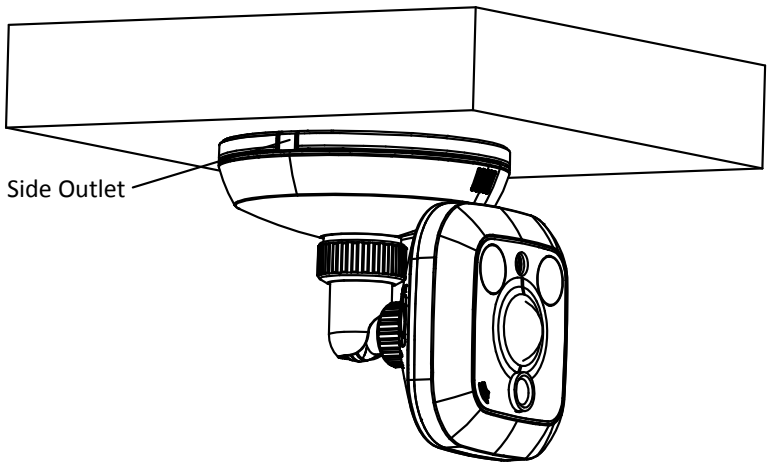


Figure 8-9 Reinstall the cover and Fixator

6. 3-axis Adjustment.

1). View the image of the camera over the network.

2). Loosen the lock nut 1 to adjust the panning position and tilting position.

3). Fasten the lock nut 1.

4). Loosen the lock nut 2 to rotate the camera.

5). Fasten the lock nut 2.

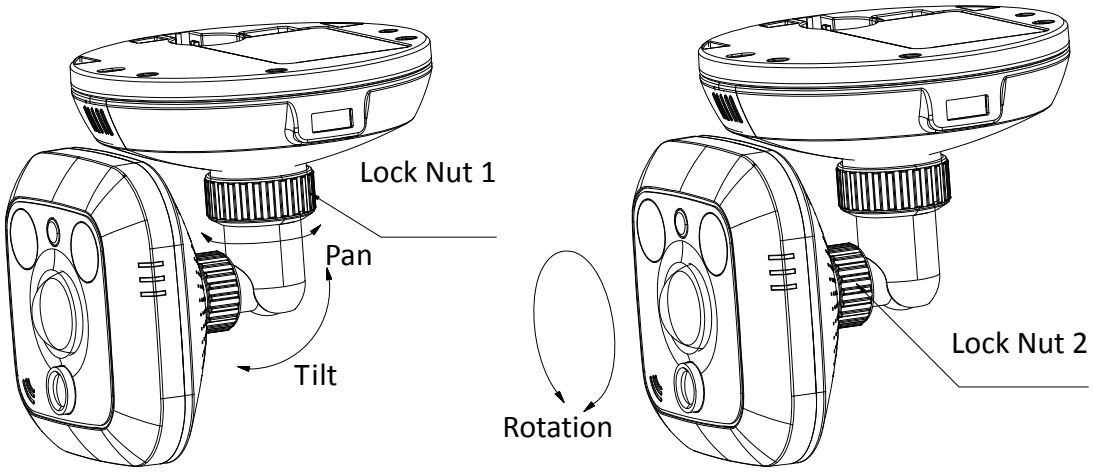


Figure 8-10 Adjust the Camera

8.3 Type III Cube Camera

8.3.1 Camera Description

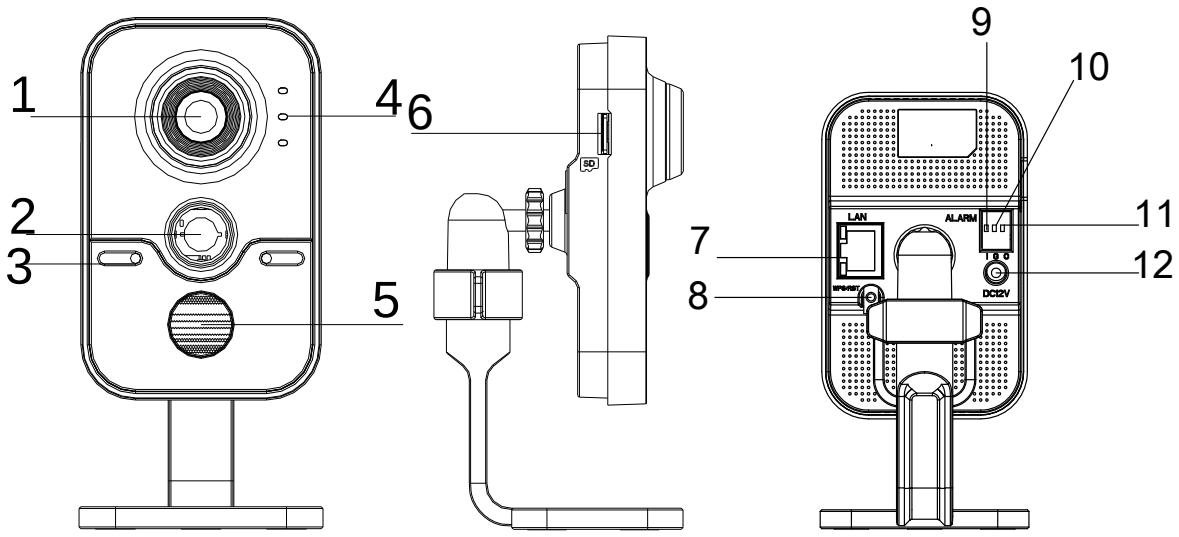


Figure 8-11 Overview

Table 8-4 Description

No.	Description	
1	Lens	
2	PIR(Passive Infrared) sensor	
3	Microphone	
4	Indicators	Alarm: Solid red when the camera is armed; Solid blue when the camera is unarmed.
		Status: Reserved
		Link: Flashing amber when network is connected; Unlit when network is disconnected
5	IR LED	
6	SD Card Slot	
7	10M / 100M self-adaptive Ethernet interface & PoE	
8	WPS (Wi-Fi Protected Setup)/Reset Button	
9	Alarm Input Interface	
10	Grounding	
11	Alarm Output Interface	
12	Power Supply Interface (12 VDC)	

NOTE

- Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.
- A wireless router with the WPS function is required to enable the WPS function of the camera. Refer the steps below.

Steps:

1. Press the WPS button on the router.
2. Press the WPS button (about 2s) on the camera within 120s you enable the WPS of the router to join in the wireless network.

NOTE

- The WPS button works as a reset button only when you press it when the camera is powering on.
- Press the WPS button on the camera, and then press the WPS button on the router will work as well, and the expire time of WPS connection on the camera is 120s.
- The link indicator blinks if the wireless connection is succeeded.

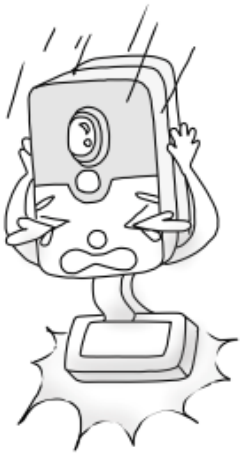
8.3.2 Notice

- Do not install the camera in the extreme whether condition.

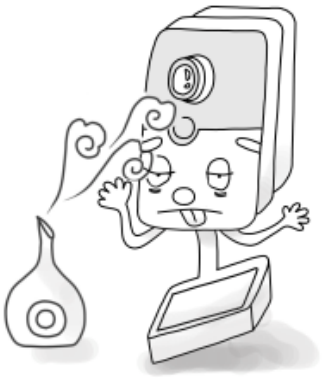
- Do not touch the lens with your finger.

- Do not install the camera towards the strong light or in the unstable lightening condition.
- Do not subject the camera to vibration, shock or heavy pressure.

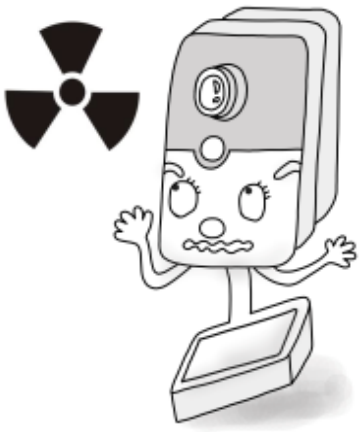
- High humidity may damage the camera hardware; put it in dry and well-ventilated place.



- Under no circumstances should you submerge the camera in any type of liquid.



- Electromagnetic radiation may affect the video data transmission and the image quality. Do not install the camera near



8.3.3 Installation

Steps:

1. Open the cover on the mounting base from the bracket.

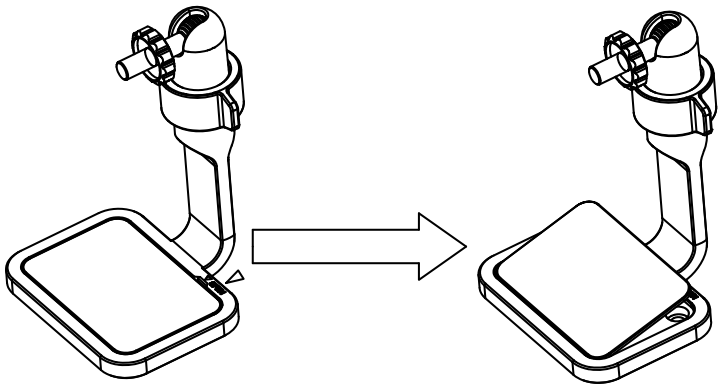


Figure 8-12 Open the Cover

2. Drill the screw holes according to the drill template.

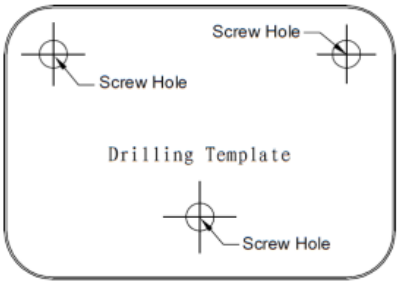


Figure 8-13 Drill Template

3. Use 3 screws to fix the bracket to the ceiling and the screw hole on the bracket should align with the mounting hole on the drill template.

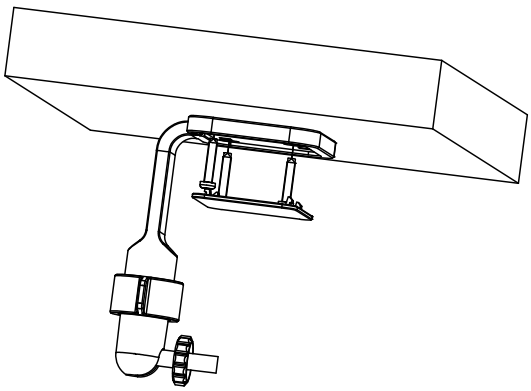


Figure 8-14 Fix the Bracket

4. Install the mounting base cover and attach the camera on the bracket.

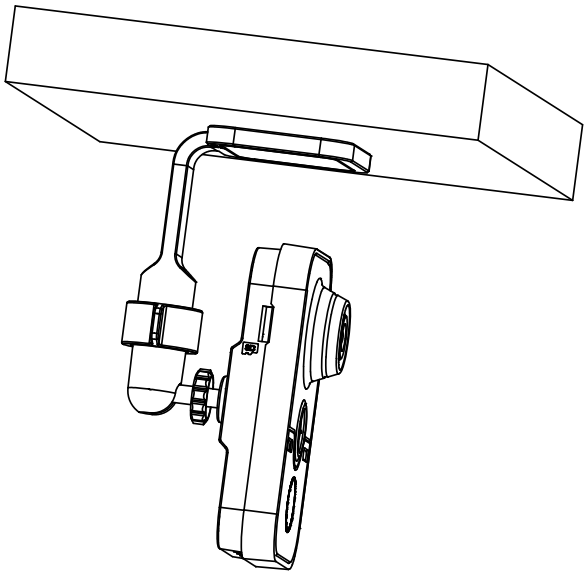


Figure 8-15 Install the Cover and Camera

5. Adjust surveillance angel

1). Loosen the knob to adjust the panning position and tilting position.

2). After adjusting the angle of the camera to the desired position, fasten the knob.

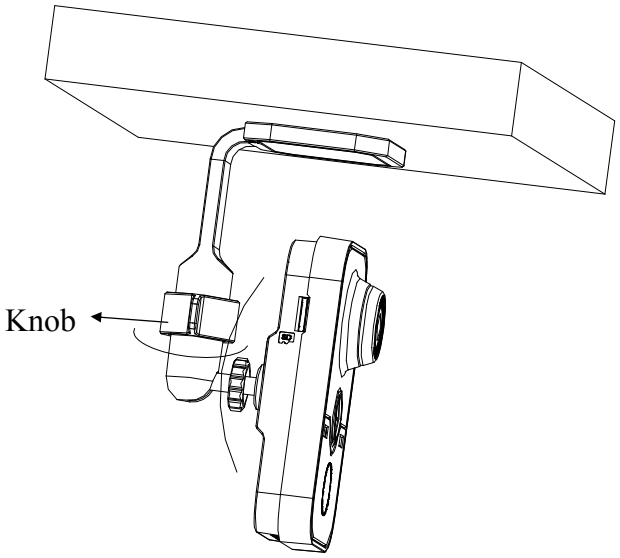


Figure 8-16 Adjust the Camera

Chapter 9 Fisheye Camera Installation

9.1 Type I Fisheye Camera

9.1.1 Camera Description

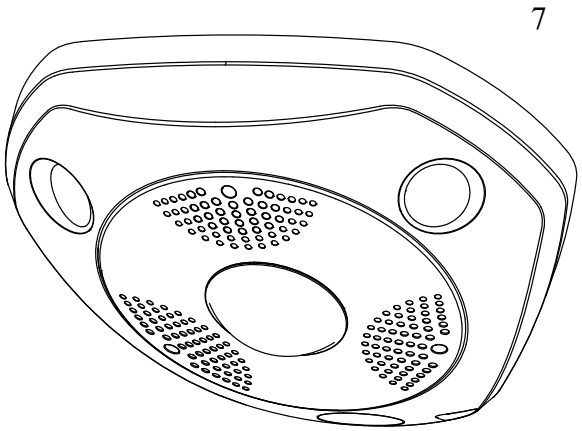


Figure 9-1 Overview of the Fisheye Camera

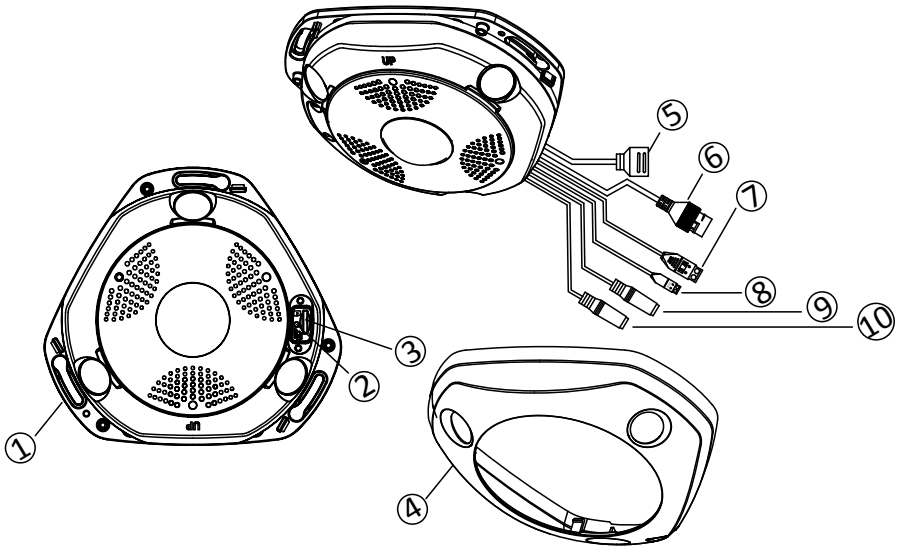


Figure 9-2 Disassemble of Fisheye Camera

Table 1-1 Description of Overview

No.	Description	No.	Description
1	Camera Body	6	Ethernet Interface
2	Reset	7	RS-485 Interface
3	Micro SD Card Slot	8	Power Interface
4	Camera Cover	9	Audio In
5	Alarm Interfaces	10	Audio Out

9.1.2 Disassembling the Camera

Steps:

1. Loosen the lock screw on the camera cover.
2. Remove the camera cover, and you can see the oval dismountable sheet.
3. Loosen the two screws on the dismountable part.
4. Move the oval sheet aside, and you can see the reset button and the micro SD card slot.

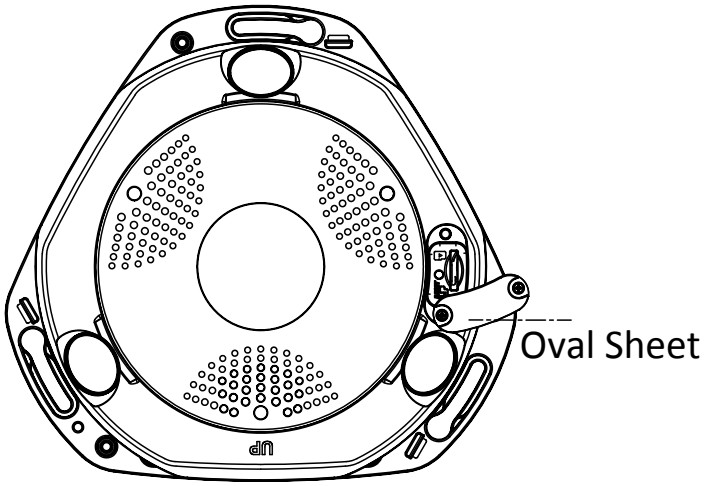


Figure 9-3 Move the Oval Sheet Aside

NOTE

Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

9.1.3 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure the power supply is matched with your required voltage to avoid damage.
- If the product does not function properly, please contact your dealer or the nearest service center. Do not disassemble the camera for repair or maintenance by yourself.
- Make sure that the wall is strong enough to withstand three times the weight of the camera.

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Dust or grease on the dome cover will cause IR reflection. Please do not remove the dome cover film until the installation is finished. If there is dust or grease on the dome cover, clean the dome cover with clean soft cloth and isopropyl alcohol.
- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.
- The foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDS. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

- **Ceiling Mounting**

Steps:

1. Drill three screw holes and the cable hole according to the supplied drill template.

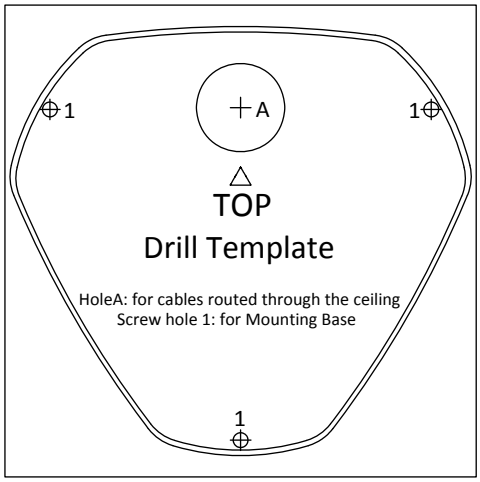


Figure 9-4 Drill Template

2. Fix the three supplied screws half-deep to the ceiling, leaving enough space to hook the camera body.

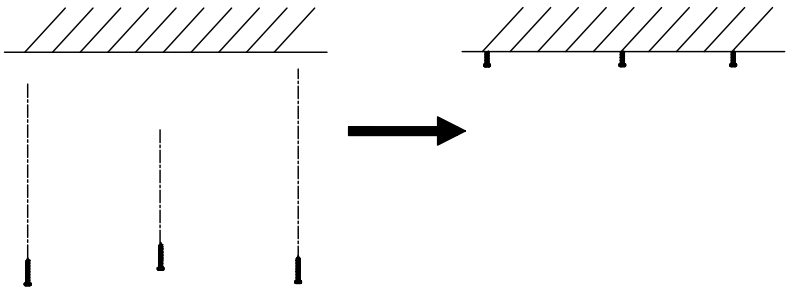


Figure 9-5 Fix the Screws

3. Connect the corresponding power cable, network cable, audio and alarm cables.
4. Align the screw holes to the inserted screws, hook the camera body to the screws, and route the camera body to secure the camera with the screws.
5. Hammer the half-deep screws into the ceiling totally.
6. Install the camera cover to the camera body, and fix them by tightening the lock screw on the camera cover.

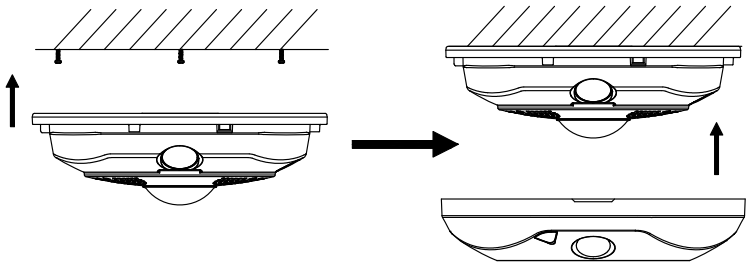


Figure 9-6 Install the Camera

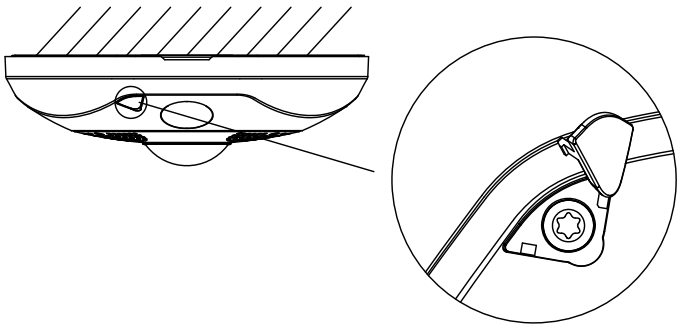


Figure 9-7 Tighten the Lock Screw on the Camera Cover

- **Wall Mounting with a Slant Mounting Base**

The wall mounting with a slant mounting base provides a wider surveillance view compared to the wall mounting. And you need to purchase a slant mounting base separately if this mounting method is selected.

Steps:

1. Fix the slant mounting base to the wall with the screws.

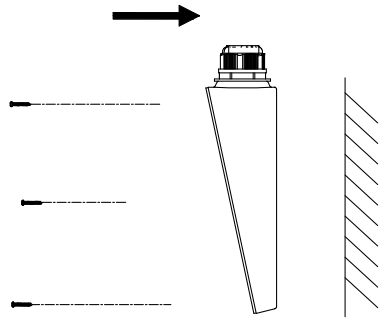


Figure 9-8 Fix the Slant Mounting Base

2. Screw the three screws half-deep to the mounting base.

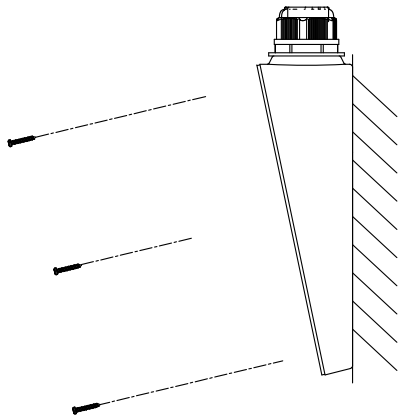


Figure 9-9 Hammer the Screws

3. Connect the corresponding power cable, network cable, audio and alarm cables.
4. Align the screw holes to the inserted screws, hook the camera body to the screws, and route the camera body to secure the camera with the screws.
5. Screw the half-deep screws into the wall totally.
6. Install the camera cover to the camera body, and fix them by tightening the lock screw on the camera cover.

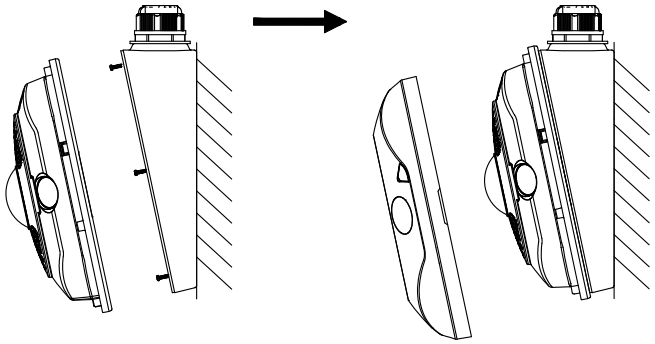


Figure 9-10 Install the Camera Body and Cover

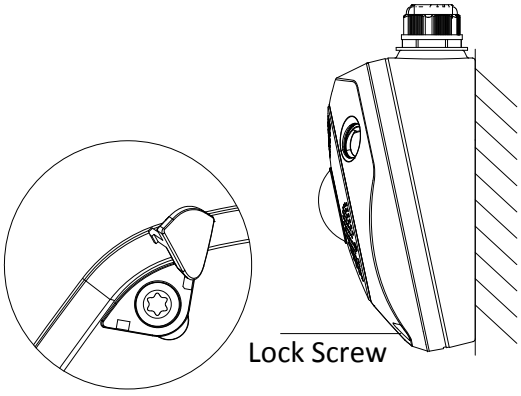


Figure 9-11 Tighten the Lock Screw on the Camera Cover

- **Wall Mounting with a Junction Box**

NOTE

You have to purchase a junction box separately if this mounting method is selected.

Steps:

1. Fix the junction box to the wall with screws.

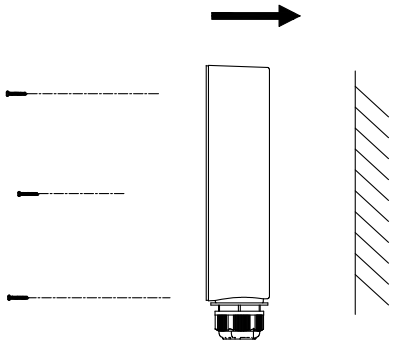


Figure 9-12 Fix the Junction Box

2. Screw the three supplied screws half-deep to the junction box.
3. Connect the corresponding power cable, network cable, audio and alarm cables.
4. Align the screw holes to the inserted screws, hook the camera body to the screws, and route the camera body to secure the camera with the screws.
5. Screw the half-deep screws into the wall totally.
6. Install the camera cover to the camera body, and fix them by tightening the screw on the camera cover.

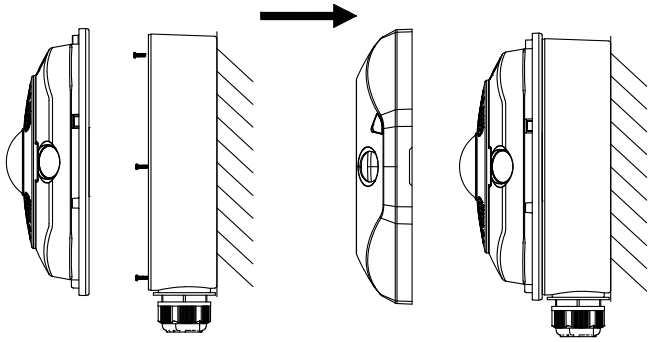


Figure 9-13 Install the Camera Body and Cover

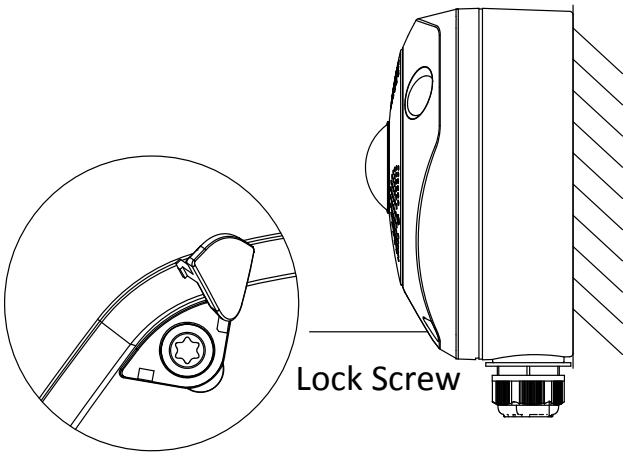


Figure 9-14 Tighten the Lock Screw on the Camera Cover

- **Wall Mounting with a Bracket**

NOTE

You have to purchase the bracket separately if this mounting method is selected.

Steps:

1. Install the bracket to the wall.
2. Install the mounting base to the bracket.
3. Screw the three supplied screws half-deep to the mounting base.

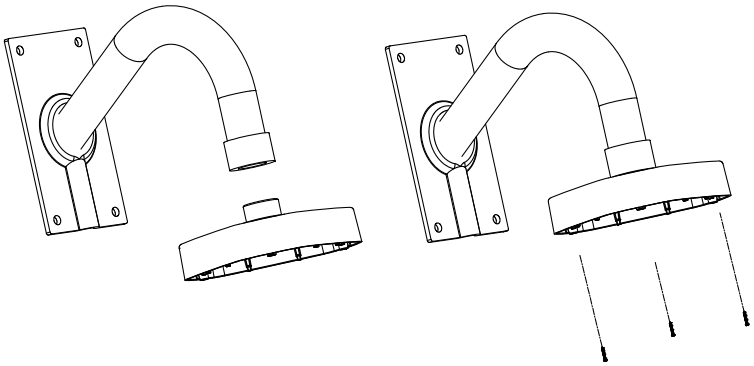


Figure 9-15 Install the Bracket

4. Connect the corresponding power cable, network cable, audio and alarm cables.
5. Align the screw holes to the inserted screws, hook the camera body to the screws, and route the camera body to secure the camera with the screws.
6. Screw the half-deep screws into the mounting base totally.
7. Install the camera cover to the camera body, and fix them by tightening the screw on the camera cover.

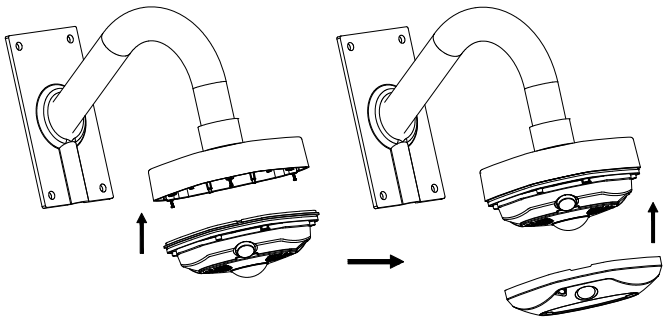


Figure 9-16 Install the Camera Body and Cover

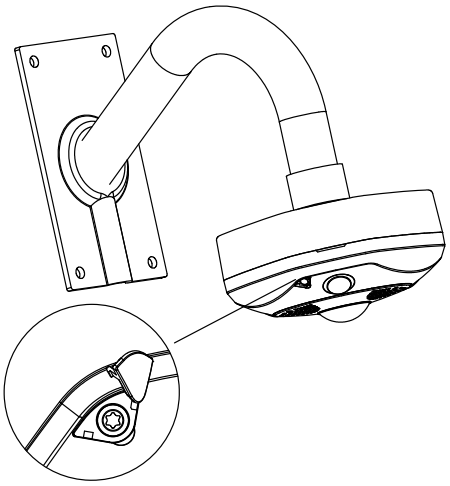


Figure 9-17 Tighten the Screw on the Camera Cover

9.2 Type II Fisheye Camera

9.2.1 Camera Description

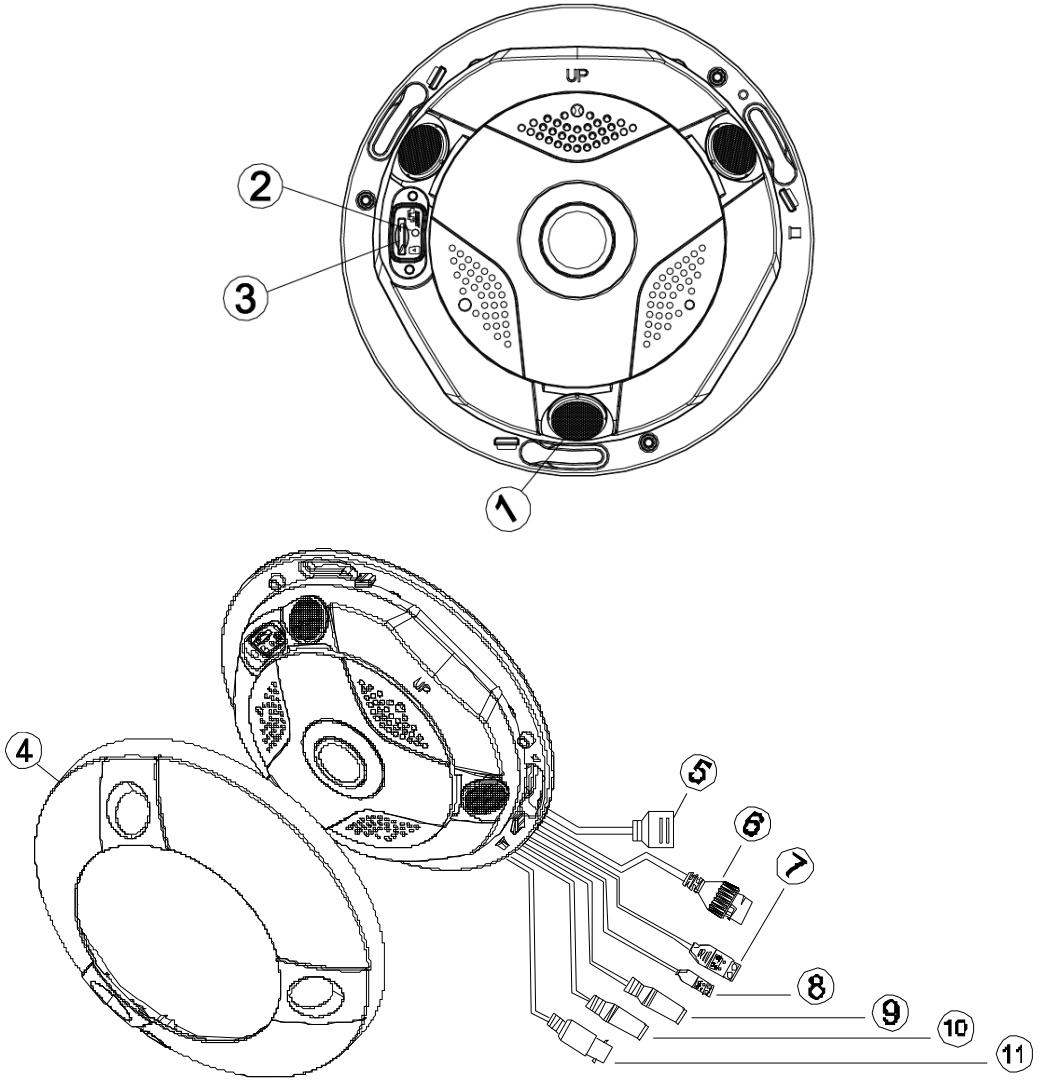


Figure 9-18 Disassemble of Fisheye Camera

Table 1-2 Description of Overview

No.	Description	No.	Description
1	Camera Body	6	Ethernet Interface
2	Reset	7	Power Interface
3	Micro SD Card Slot	8	RS-485 Interface
4	Camera Cover	9	Audio In
5	Alarm Interfaces	10	Audio Out
		11	Video Out

9.2.2 Disassembling the Camera

Steps:

1. Loosen the lock screw on the camera cover.
2. Remove the camera cover.

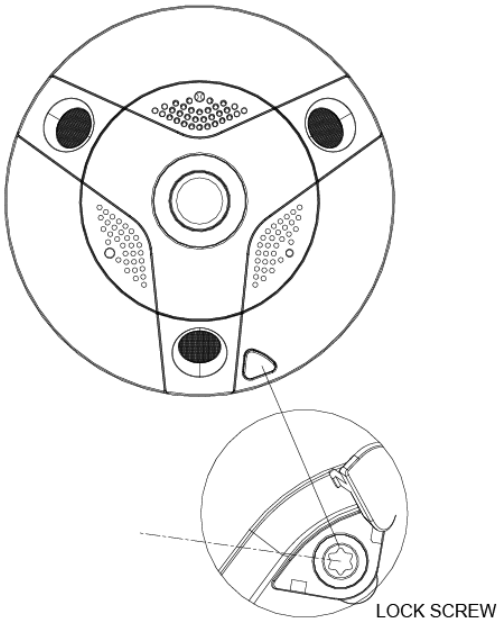


Figure 9-19 Loosen the lock screw

NOTE

Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

9.2.3 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure the power supply is matched with your required voltage to avoid damage.
- If the product does not function properly, please contact your dealer or the nearest service center. Do not disassemble the camera for repair or maintenance by yourself.
- Make sure that the wall is strong enough to withstand three times the weight of the camera.

For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Dust or grease on the dome cover will cause IR reflection. Please do not remove the dome cover film until the installation is finished. If there is dust or grease on the dome cover, clean the dome cover with clean soft cloth and isopropyl alcohol.
- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.
- The foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDS. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

- **Ceiling Mounting**

Steps:

1. Drill three screw holes and the cable hole according to the supplied drill template.

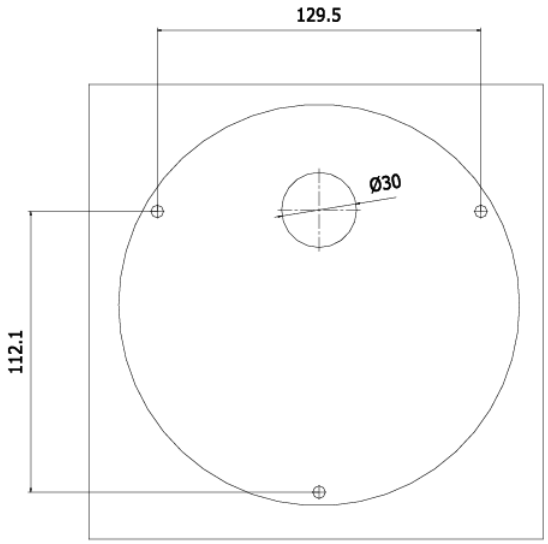


Figure 9-20 Drill Template

2. Fix the three supplied screws half-deep to the ceiling, leaving enough space to hook the camera body.

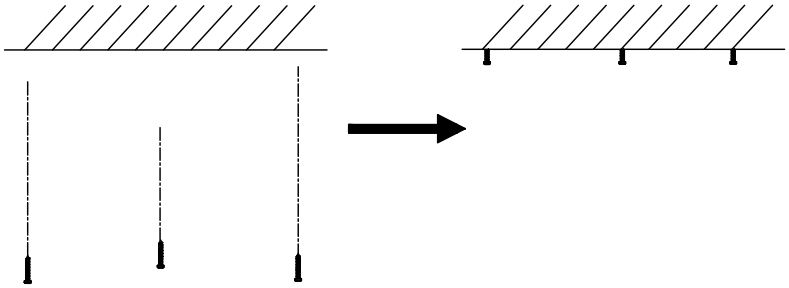


Figure 9-21 Fix the Screws

3. Connect the corresponding power cable, network cable, audio and alarm cables.
4. Align the screw holes to the inserted screws, hook the camera body to the screws, and route the camera body to secure the camera with the screws.
5. Hammer the half-deep screws into the ceiling totally.
6. Install the camera cover to the camera body, and fix them by tightening the lock screw on the camera cover.

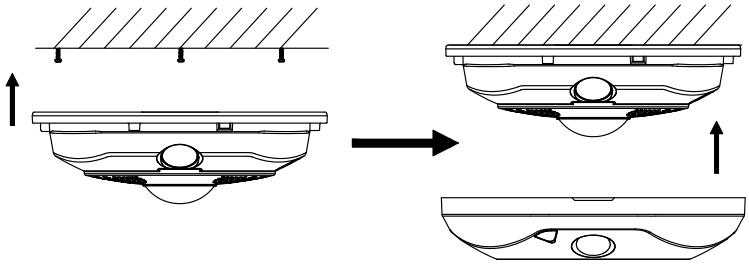


Figure 9-22 Install the Camera

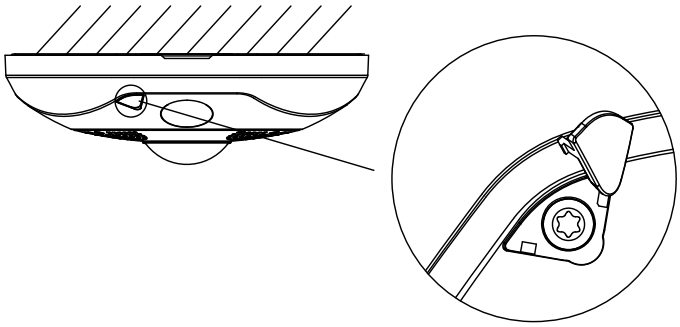


Figure 9-23 Tighten the Lock Screw on the Camera Cover

- **Wall Mounting with a Bracket**

NOTE

You have to purchase the bracket separately if this mounting method is selected.

Steps:

1. Install the bracket to the wall.
2. Install the mounting base to the bracket.
3. Screw the three supplied screws half-deep to the mounting base.

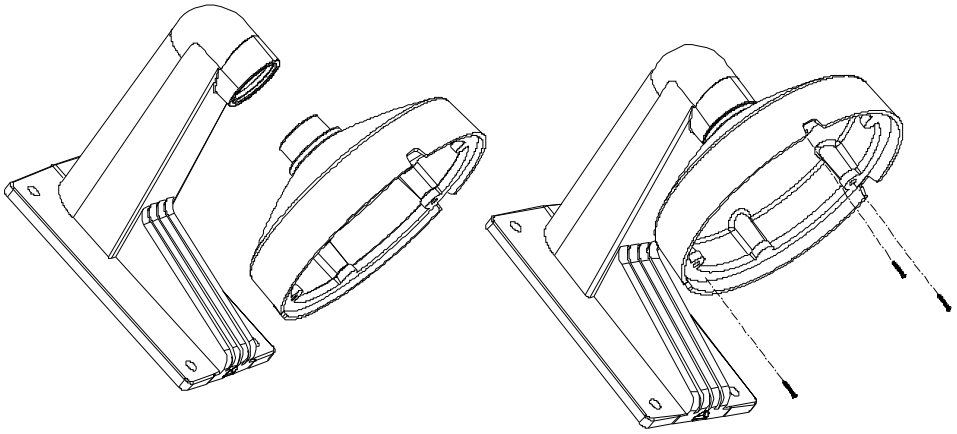


Figure 9-24 Install the Bracket

4. Connect the corresponding power cable, network cable, audio and alarm cables.
5. Align the screw holes to the inserted screws, hook the camera body to the screws, and route the camera body to secure the camera with the screws.
6. Screw the half-deep screws into the mounting base totally.
7. Install the camera cover to the camera body, and fix them by tightening the screw on the camera cover.

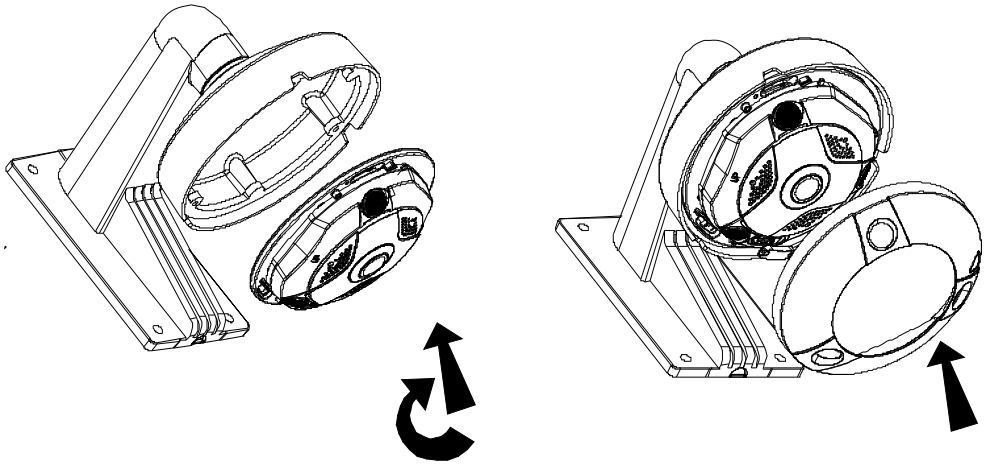


Figure 9-25 Install the Camera Body and Cover

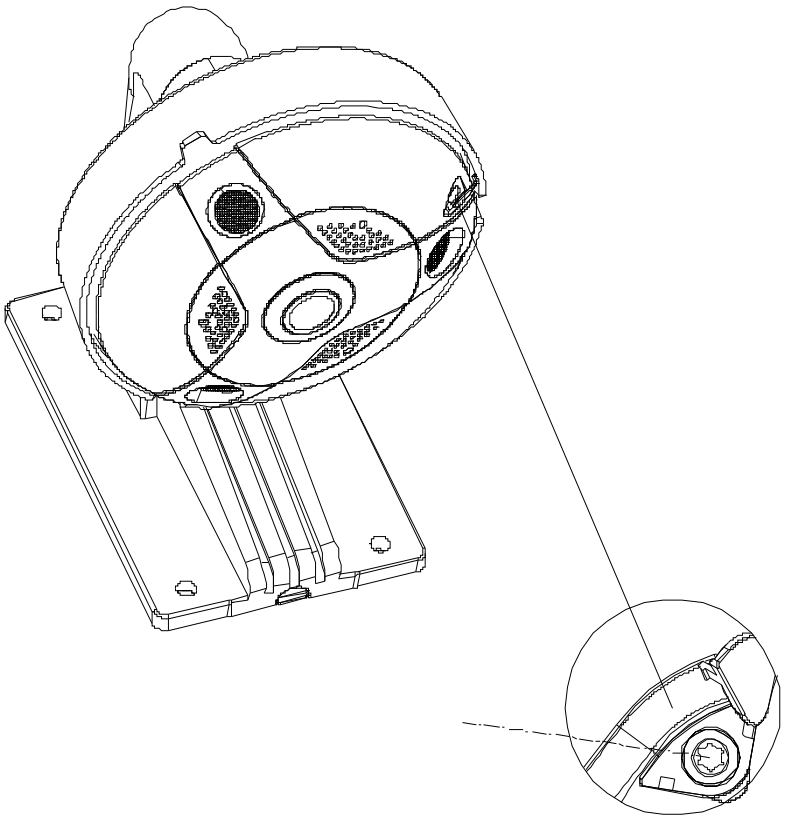
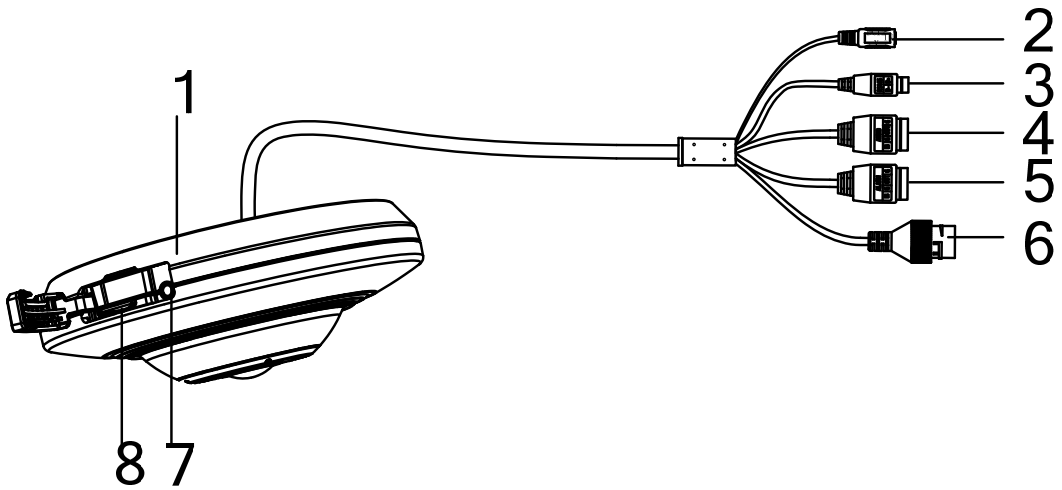


Figure 9-26 Tighten the Screw on the Camera Cover

9.3 Type III Fisheye Camera

9.3.1 Camera Description



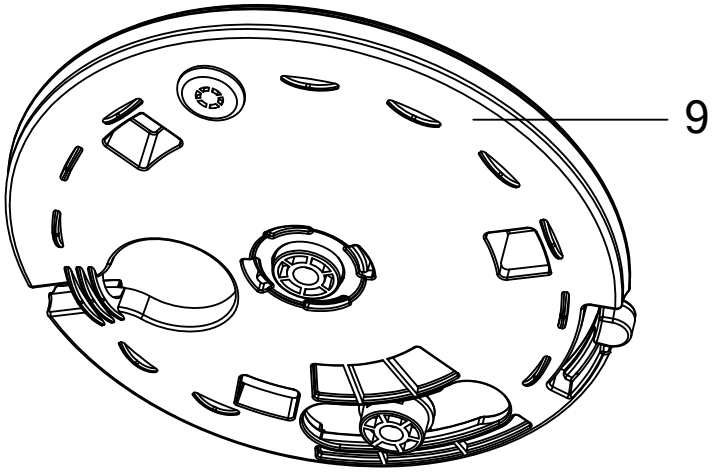


Figure 9-27 Overview of the Fisheye Camera

Table 1-3 Description of Overview

No.	Description
1	Camera Body
2	Power Interface
3	RS-485 Interface
4	Audio Interfaces: Audio In / Audio Out
5	Alarm Interfaces: Alarm In / Alarm Out
6	Ethernet Interface
7	Reset Button
8	Micro SD Card Slot
9	Base Plate

NOTE

The figures shown in this manual are for reference only. The appearance and interfaces of the camera are subject to the actual model.

9.3.2 Installing the SD Card

Steps:

1. Move the Micro SD / Reset Cover aside, and you can see the reset button and the micro SD card slot.
2. Insert the micro SD card into the micro SD card slot.
3. Re-cover the reset button and micro SD card slot.

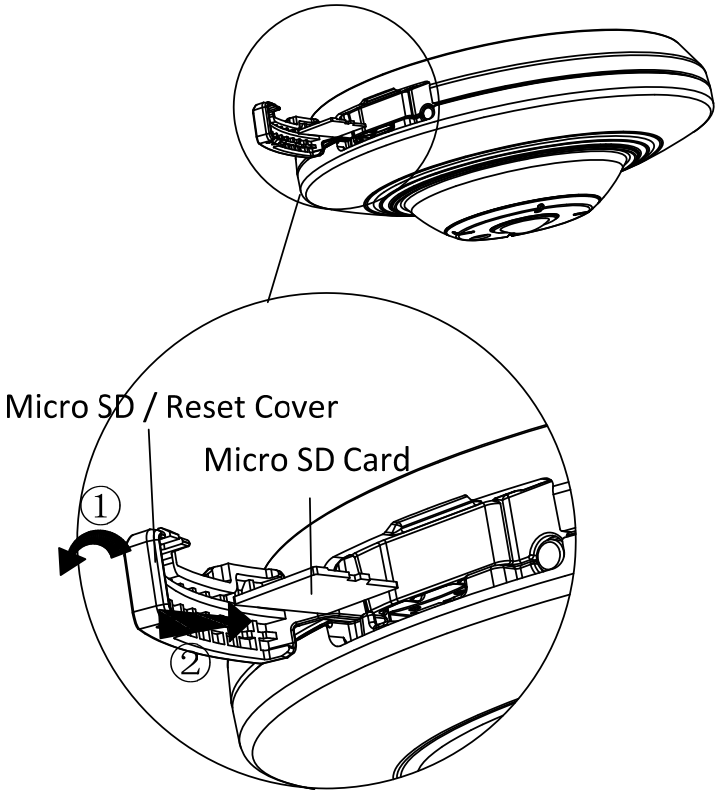


Figure 9-28 Install the SD Card

NOTE

Press RESET about 10s when the camera is powering on or rebooting to restore the default settings, including the user name, password, IP address, port No., etc.

9.3.3 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure the power supply is matched with your required voltage to avoid damage.
- If the product does not function properly, please contact your dealer or the nearest service center. Do not disassemble the camera for repair or maintenance by yourself.
- Make sure that the wall is strong enough to withstand four times the weight of the camera.

NOTE

- For the camera that supports IR, you are required to pay attention to the following precautions to prevent IR reflection:
- Dust or grease on the dome cover will cause IR reflection. Please do not remove the dome cover film until the installation is finished. If there is dust or grease on the dome cover, clean the dome cover with clean soft cloth and isopropyl alcohol.
- Make sure that there is no reflective surface too close to the camera lens. The IR light from the camera may reflect back into the lens causing reflection.
- The foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDS. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

- **Ceiling Mounting**

Steps:

1. Drill two screw holes and the cable hole according to the supplied drill template A.

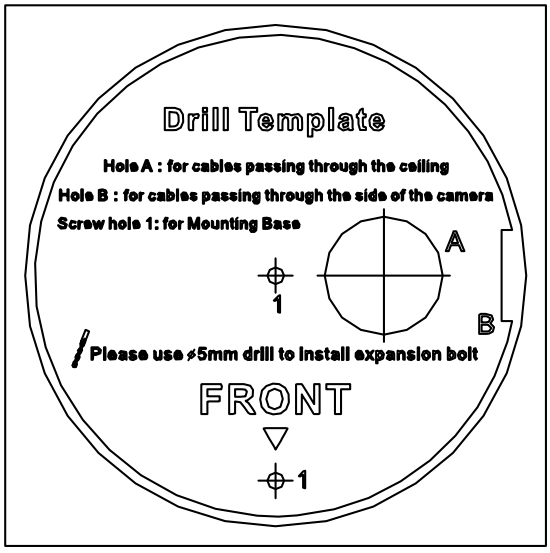


Figure 9-29 Drill Template A

2. Align the screw holes and cable hole on the drill template and the base plate, and then fix the base plate to the ceiling with the two supplied screws.

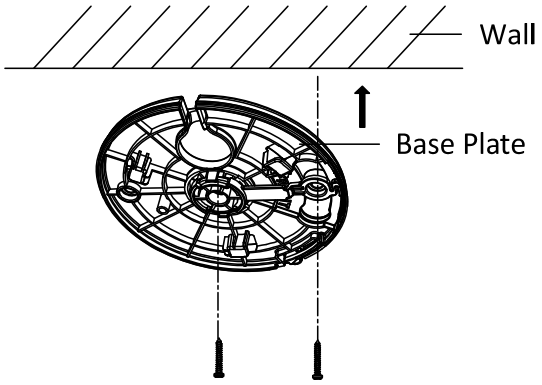


Figure 9-30 Fix the Base Plate

NOTE

- For cement wall, you need to use the expansion screw to fix the mount.
- For wooden wall, you can just use the self-tapping screw to fix the mount.

3. Route the cables through the cable hole or the side opening according to the actual needs, and connect the corresponding cables including power cable, network cable, audio and alarm cables, etc.

4. Align the triangle mark on the camera and base plate, and then rotate the camera clockwise until it is locked up by the three bayonet joints on the base plate.

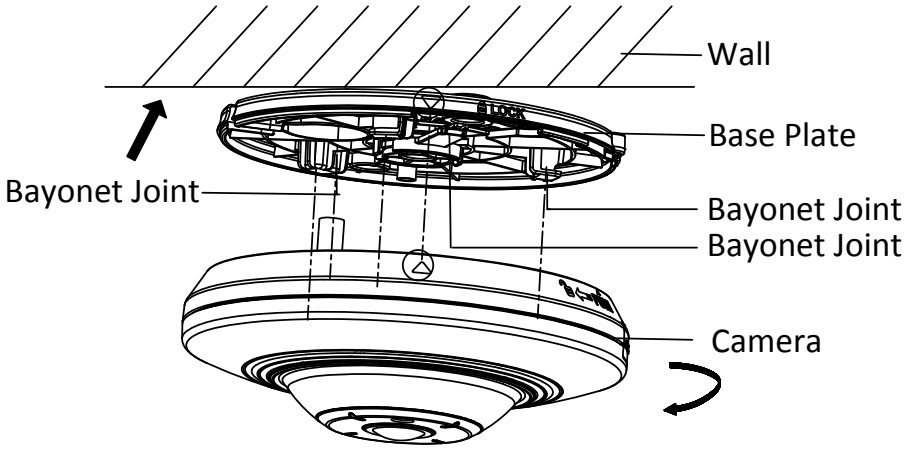


Figure 9-31 Install the Camera

5. To disassemble the camera: Press the **Push** button on the base plate, rotate the camera anticlockwise, and then you can remove the camera from the base plate.

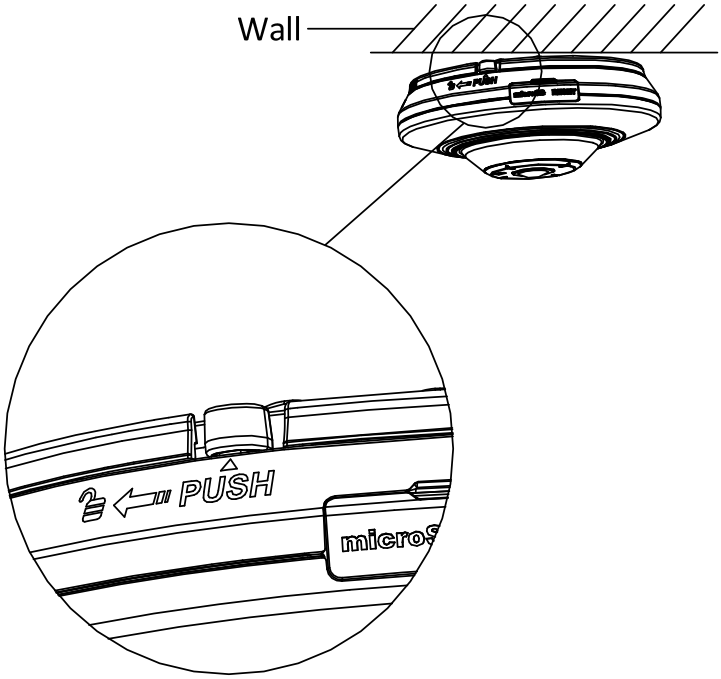


Figure 9-32 Disassemble the Camera

6. To adjust the view angle: Rotate the camera body clockwise or anticlockwise with the base plate, and then you can adjust the camera to the desired view angle.

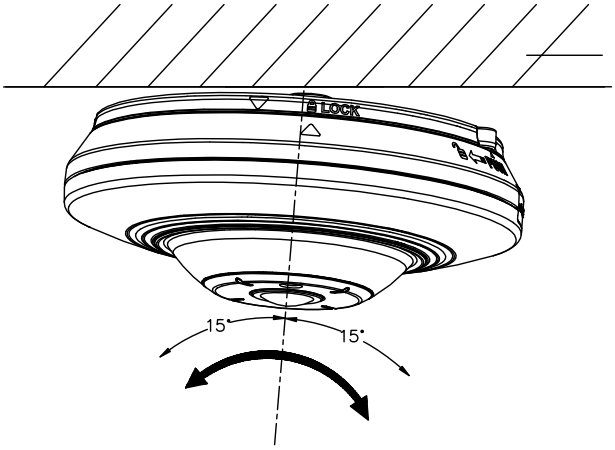


Figure 9-33 Adjust View Angle

7. To install the water-proof jacket for network interface (optional):

NOTE

It is recommended to adopt the water-proof jacket (supplied) for the network interface when the camera is installed outdoor.

1) If the network cable has been settled down, cut off the plug of the network cable first.

2) Route the network cable through the following components in sequence: fix nut, water-proof ring, and the main body of the water-proof jacket, as shown in the figure.

3) Insert the water-proof ring into the main body of the water-proof jacket, to increase the sealing ability of the components.

4) Wire the plug and network cables up.

5) Fix the O-ring to the network interface of the camera, and then connect the network cables.

6) Wrap the network interface with the main body of the water-proof jacket, and then rotate the fix nut clockwise to assemble it to the main body of the water-proof jacket.

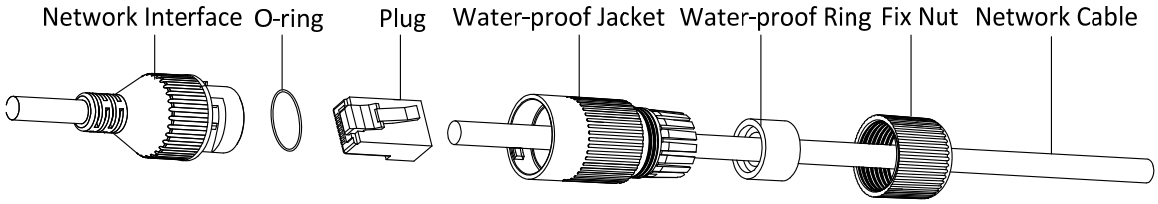


Figure 9-34 Install Water-proof Jacket

- **Wall Mounting with a Slant Mounting Base**

The wall mounting with a slant mounting base provides a wider surveillance view compared to the wall mounting.

NOTE

You need to purchase a slant mounting base separately if this mounting method is selected.

Steps:

1. Drill two screw holes and the cable hole according to the supplied drill template B.

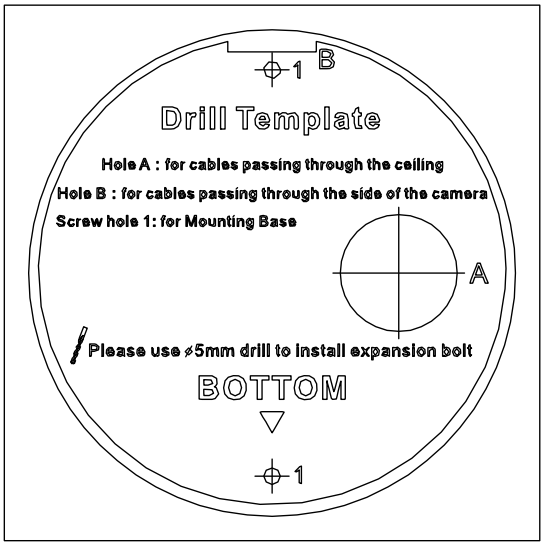


Figure 9-35 Drill Template B

2. Fix the slant mounting base to the wall with the screws.

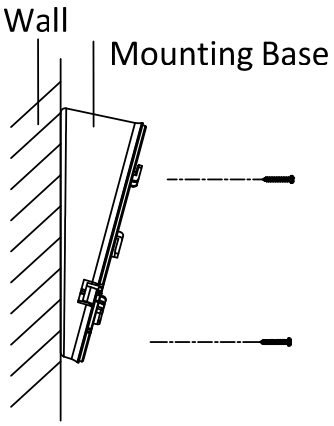


Figure 9-36 Fix the Slant Mounting Base

3. Align the screw holes on the slant mounting base and the base plate, and then secure the base plate on the slant mounting base with the two supplied screws.
4. Route the cables through the cable hole or the side opening according to the actual needs, and connect the corresponding cables including power cable, network cable, audio and alarm cables, etc.
5. Align the triangle mark on the camera and mounting base, and then rotate the camera clockwise until it is locked up.

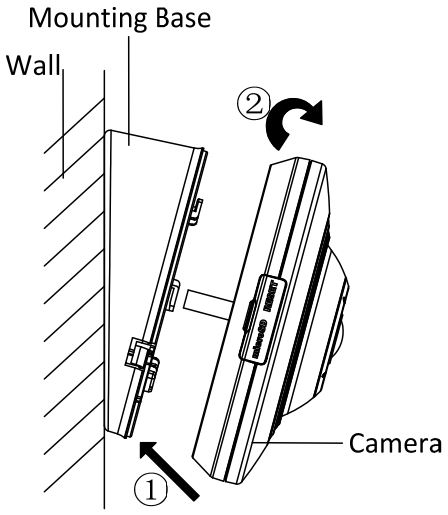


Figure 9-37 Fix the Camera

6. The installation is complete.

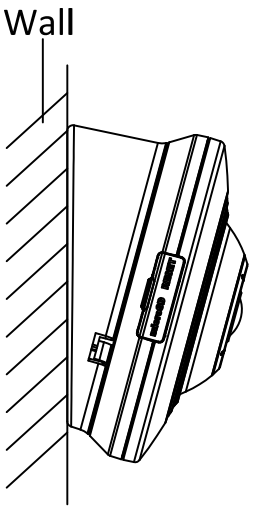


Figure 9-38 Complete the Installation

7. To disassemble the camera: Press the Push button on the base plate, rotate the camera anticlockwise, and then you can remove the camera from the base plate.

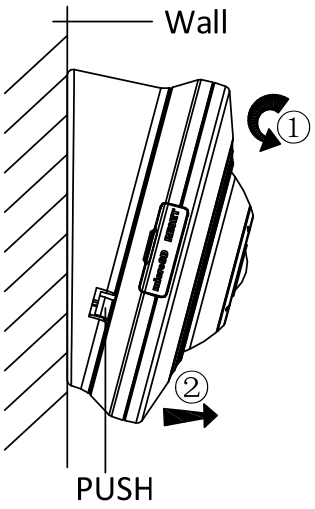


Figure 9-39 Disassemble the Camera

8. To install the water-proof jacket for network interface (optional), refer to the Step 7 in Section **Ceiling Mounting.**

- **Wall Mounting with a Bracket**

NOTE

You need to purchase the bracket separately if this mounting method is selected.

Steps:

1. Unfasten and remove the screw marked in the figure, and then disassemble the bracket.

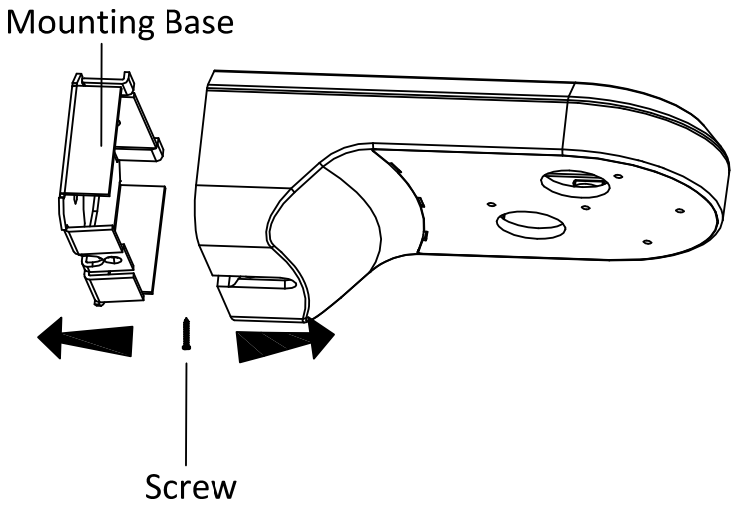


Figure 9-40 Disassemble the Bracket

2. Align the screw holes on the bracket and the base plate, and then secure the base plate on the bracket with the two supplied screws.

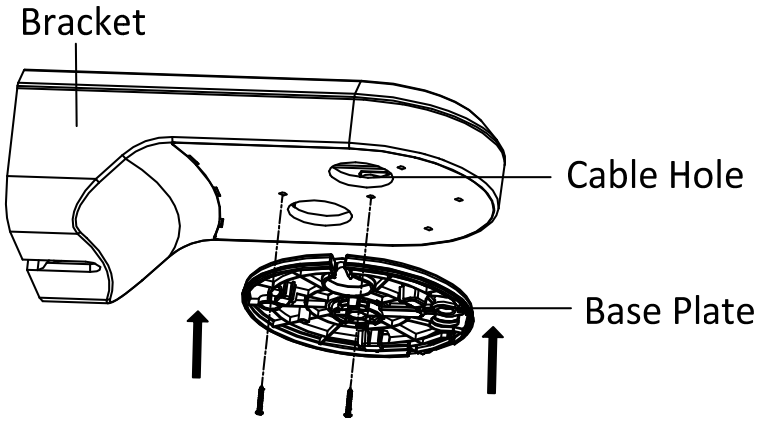


Figure 9-41 Secure the Base Plate

3. Route the cables through the cable hole according to the actual needs, and connect the corresponding cables including power cable, network cable, audio and alarm cables, etc.

4. Align the triangle mark on the camera and base plate, and then rotate the camera clockwise until it is locked up by the three bayonet joints on the base plate.

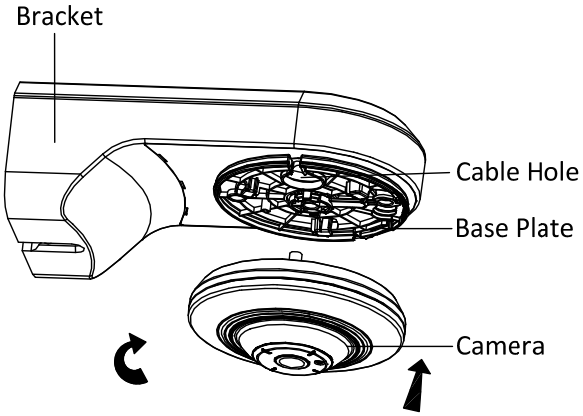


Figure 9-42 Fix the Camera

5. Fix the mounting base to the wall with the screws.

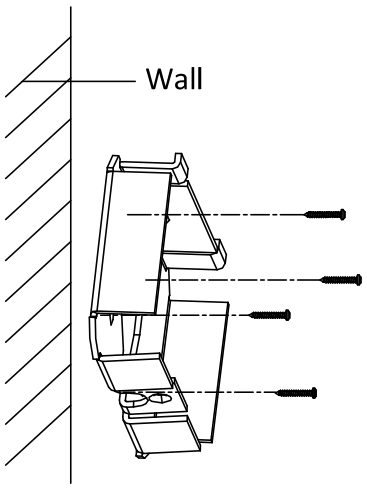


Figure 9-43 Fix the Mounting Base

6. Re-install the main body of the bracket to the mounting base, and fix it with the screw.

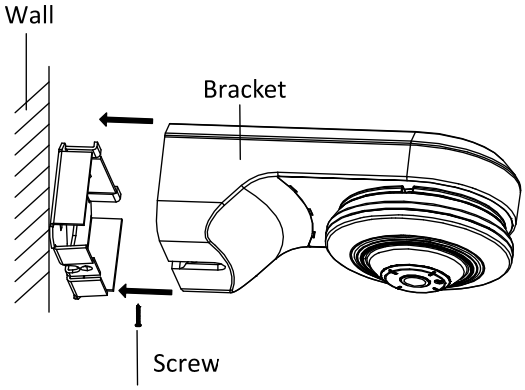


Figure 9-44 Re-install the Bracket

7. To disassemble the camera, refer to the Step 5 in Section **Ceiling Mounting.**

8. To adjust the view angle, refer to the Step 6 in Section **Ceiling Mounting.**

9. To install the water-proof jacket for network interface (optional), refer to the Step 7 in Section **Ceiling Mounting.**

- **Pendant Mounting with a Bracket**

NOTE

You have to purchase the bracket separately if this mounting method is selected.

1. Fix the pendant bracket to the wall with the supplied screws.

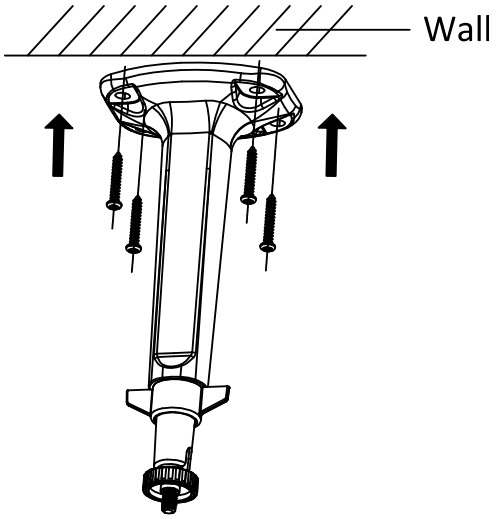


Figure 9-45 Fix the Bracket

2. Aim the screwed hole on the camera at the top of the pendant bracket, and then rotate the camera until it is secured tightly.

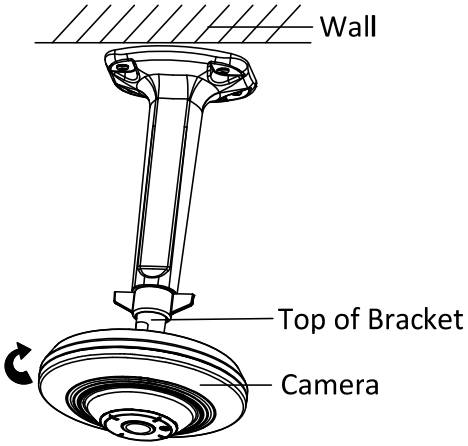


Figure 9-46 Secure the Camera

3. Loosen the knob on the bracket and adjust the camera body to get the desired surveillance angle. Tighten the knob on bracket to secure the camera.

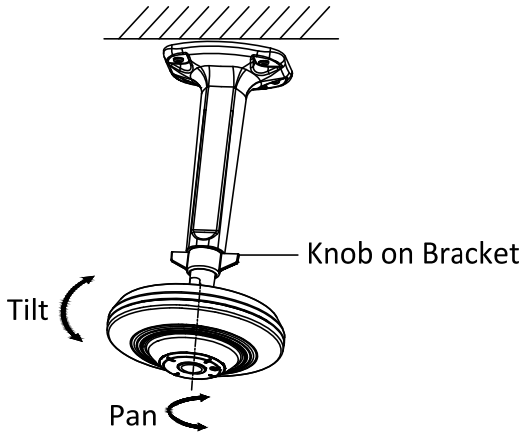


Figure 9-47 Adjust the Angle

4. To install the water-proof jacket for network interface (optional), refer to the Step 7 in Section **Ceiling Mounting.**

Chapter 10 People Counting Camera Installation

10.1 Camera Description

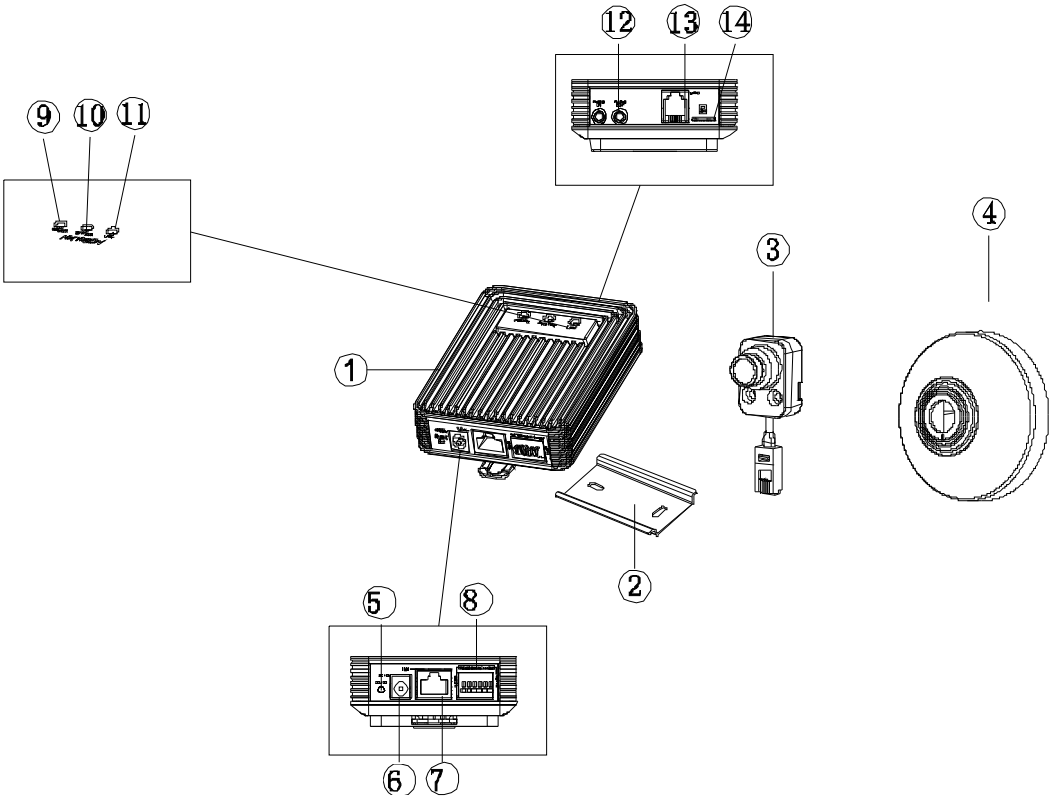


Figure 10-1 The Overview of People Counting Camera

Table 10-1 Description of the Camera

No.	Description	No.	Description
1	Main Unit	8	RS232/Alarm Interface
2	Mounting Rail	9	Power Indicator LED
3	Covert Camera	10	Status Indicator LED
4	Decorative Cover	11	Link Indicator Led
5	RESET Button	12	Audio Interface
6	Power Interface	13	RJ-12 Interface
7	Ethernet interface	14	Micro SD Card Slot

10.2 Plan the Camera Number

- Plan the camera number according to the following conditions:

A standard-sized entrance/exit door with a width of 2~3m requires one camera. If the target door is wider than the camera's coverage, it's better to plan the camera numbers according to the actual detection area. As shown in the figures below, the right figure is more reasonable and is of better counting accuracy.

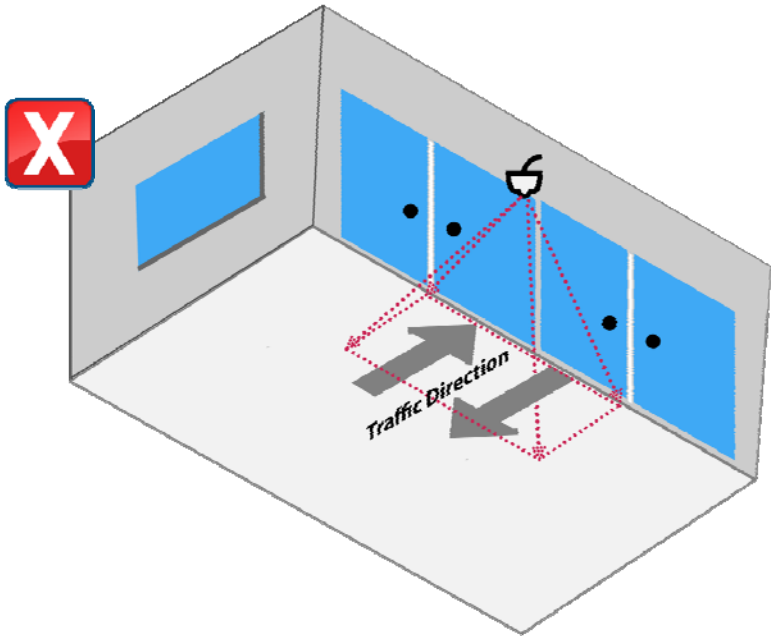


Figure 10-2 Not recommended. The target door is wider than the coverage

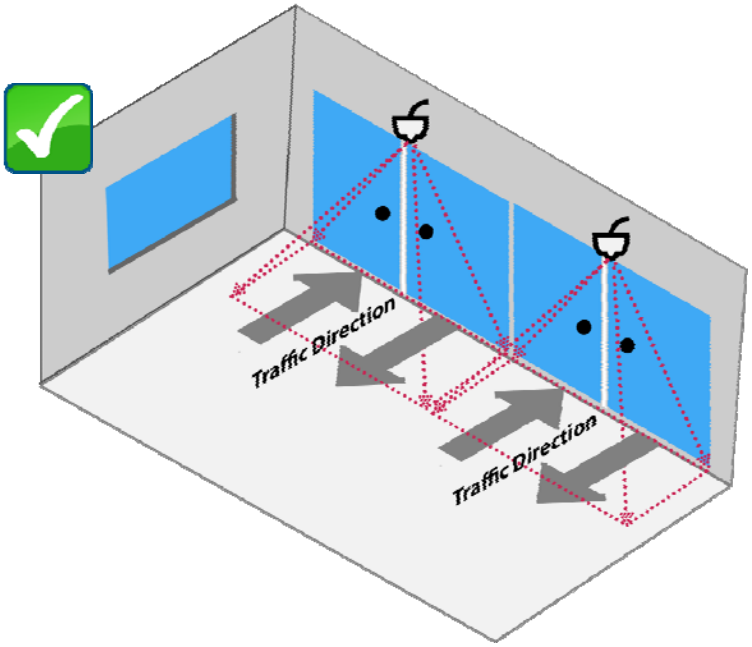


Figure 10-3 Recommended. Camera numbers is well planned.

- If there are obstacles in the camera's detection coverage, including an anti-theft detector, turnstile, etc., that obstruct the visibility of the people to be counted, you need to increase the camera numbers.

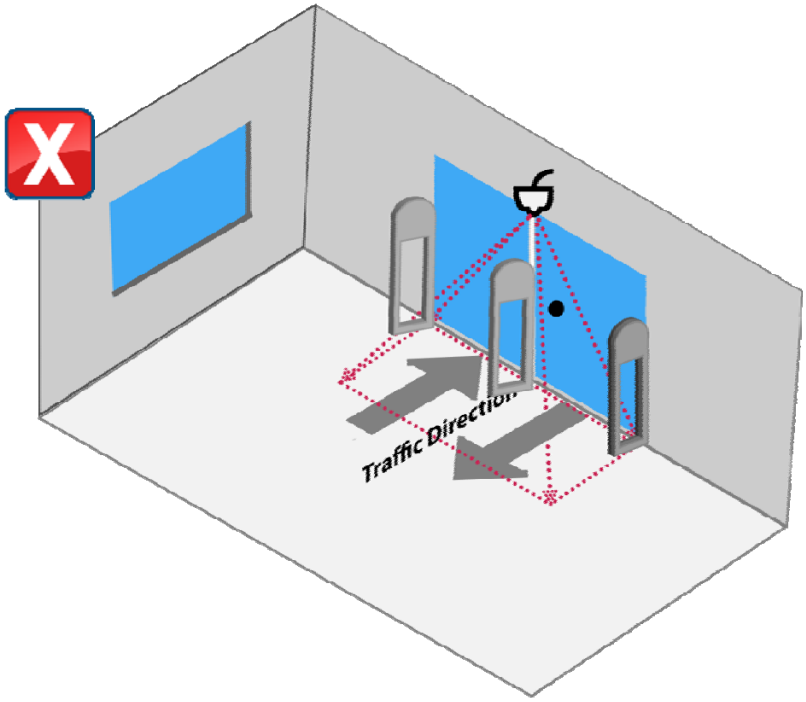


Figure 10-4 Not recommended. There are obstacles in the detection area

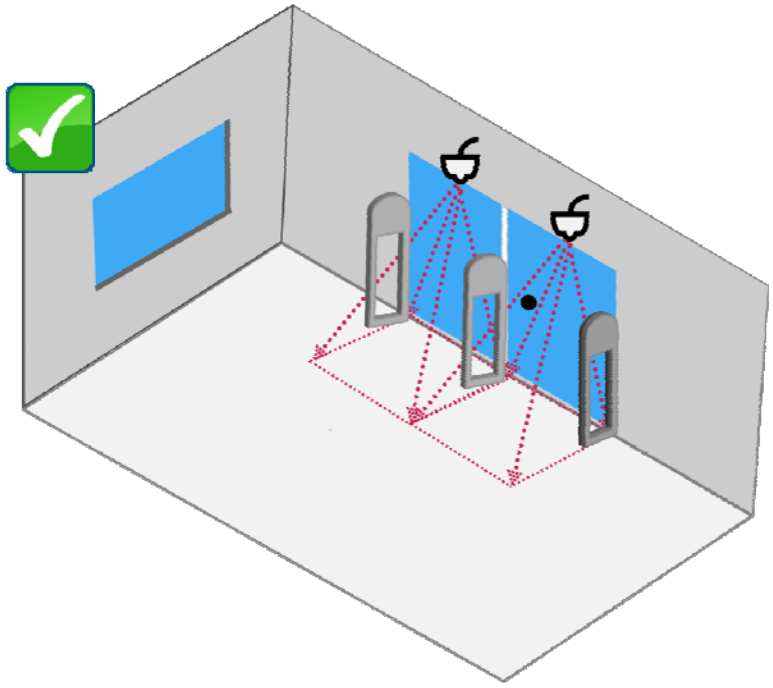


Figure 10-5 Recommended. No obstacle in the detection area

10.3 Installation

Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure the power supply is matched with your required voltage to avoid damage.
- If the product does not function properly, please contact your dealer or the nearest service center. Do not disassemble the camera for repair or maintenance by yourself.
- Make sure that the wall is strong enough to withstand three times the weight of the camera.

10.3.1 Installation of Main Unit

Steps:

1. Fix the standard mounting rail on the mounting surface. As shown in figure below.

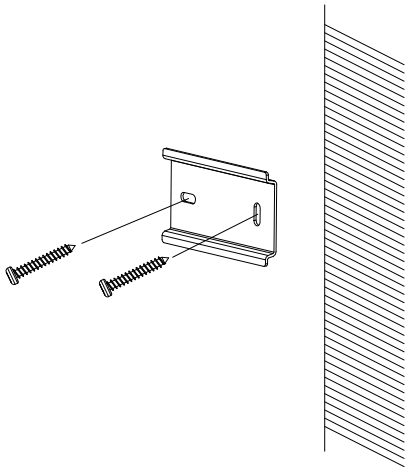


Figure 10-6 Fix the Standard Mounting Rail

NOTE

- For cement surface mounting, you need to use the expansion screw to fix the camera.
- For wooden surface mounting, you can just use the self-tapping screw to fix the camera.

2. Hang the hook which is on upper-side of the main unit onto the rail, press a little harder on the lower part of the main unit, and then the elastic clasp will be automatically buckled. As shown in figure below.

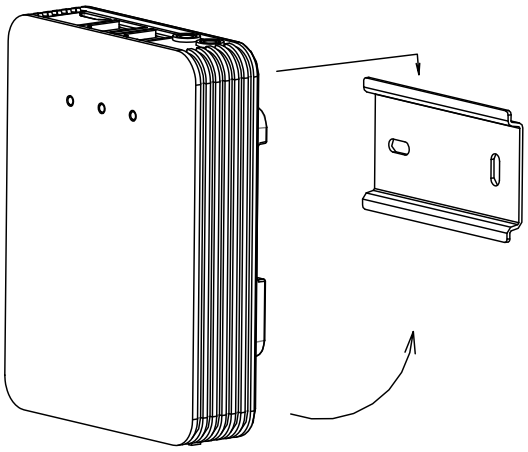


Figure 10-7 Buckle the Main Unit

NOTE

If you already had a standard rail installed, you can buckle the main unit onto the installed rail directly. As shown in figure below.

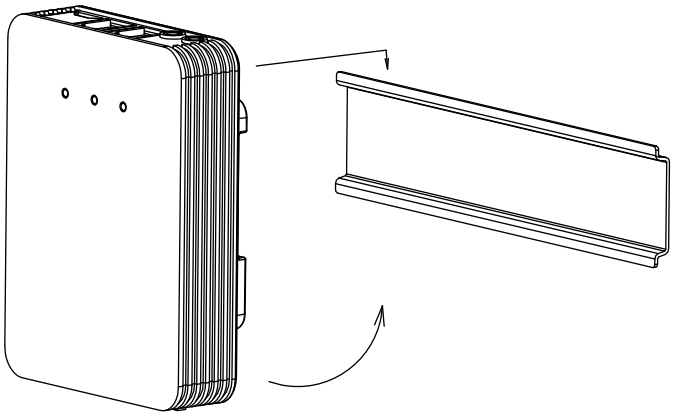


Figure 10-8 Buckle the Main Unit onto Standard Rail

10.3.2 Installation of Camera

Steps:

1. Place the double-sided adhesive tape on the back of lens unit.

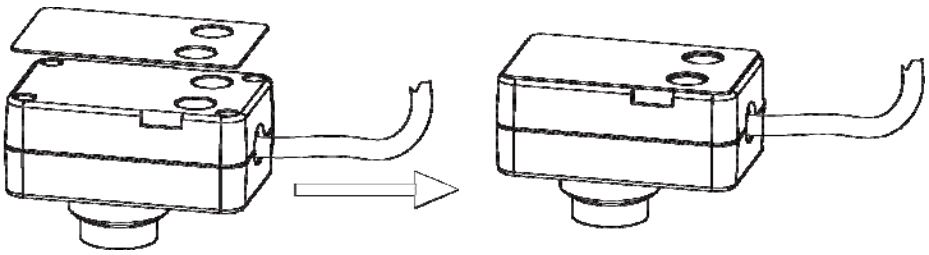


Figure 10-9 Place double-sided adhesive tape

2. Affix it to the ceiling.

Please note that the lens direction should be in accordance with the direction of traffic, as the image here shows.

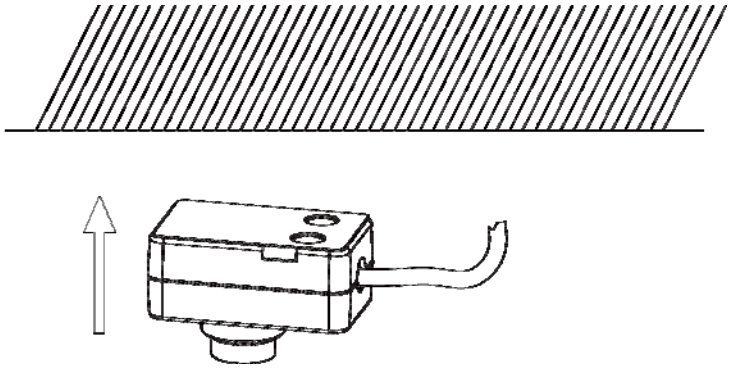


Figure 10-10 Affix it to the ceiling

3. Drill a hole with diameter of 18mm on the ceiling surface.

It is recommended to keep the hole between 5-17mm so that the lens cover can cover the hole completely.

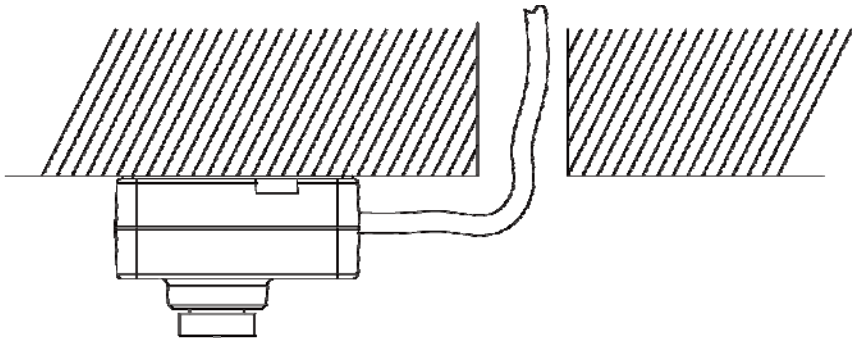


Figure 10-11 Drill a hole

4. Attach the screws to finish the lens installation

Please note that it is important to keep the lens clean when drilling holes or inserting the screws.

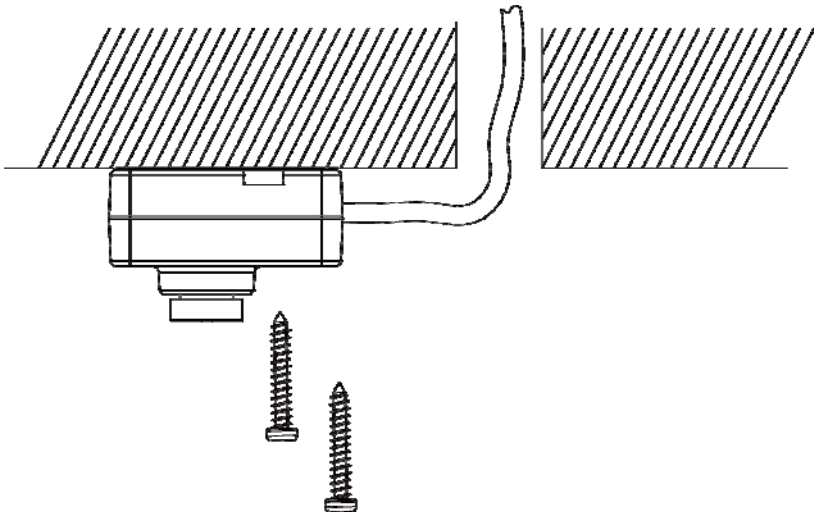


Figure 10-12 Attach the screws

5. After the lens is affixed, attach the lens cover on the unit.

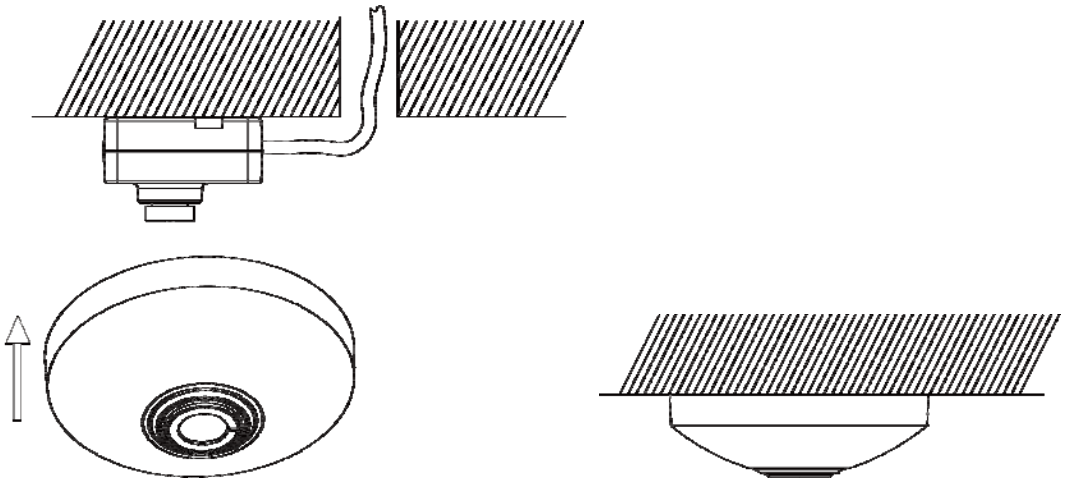


Figure 10-13 Attach the lens cover

NOTE

The camera should be centered above the entrance/exit door. And it is also recommended that you position the camera as close as possible to the doorway without any obstacles.

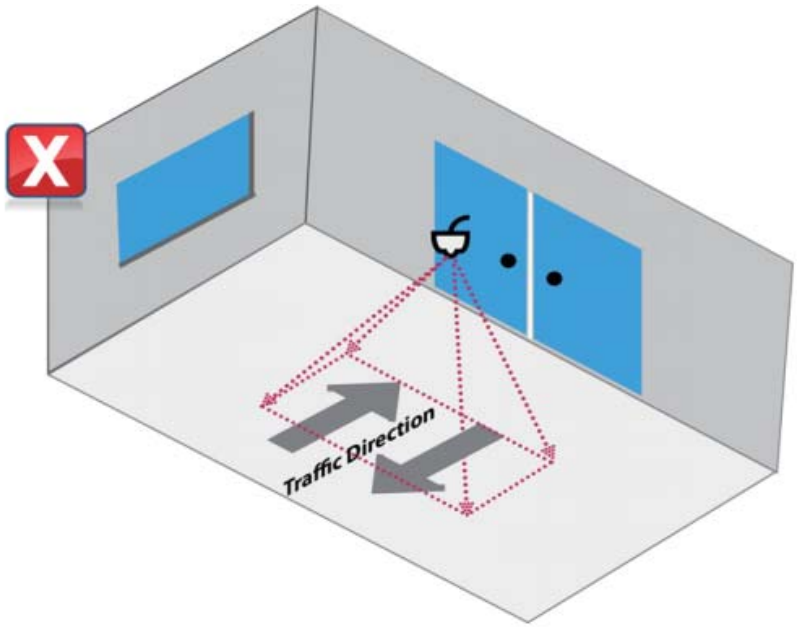


Figure 10-14 Not recommended. Camera is too far from the entrance/exit door.

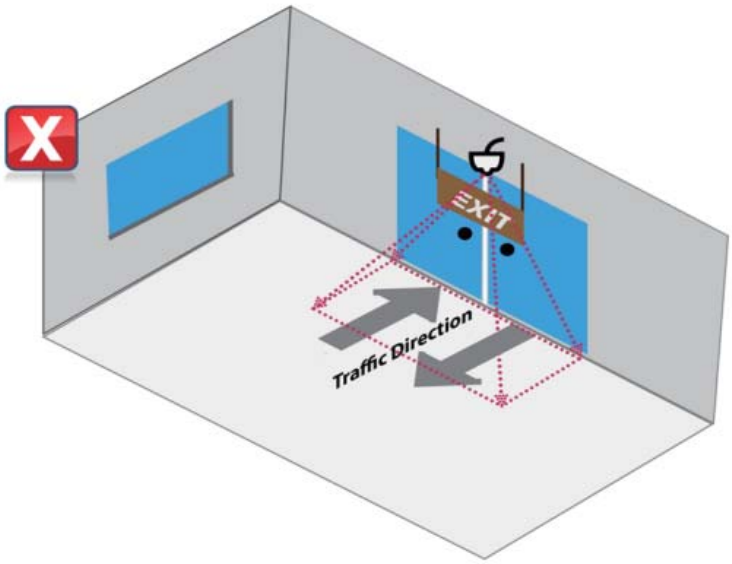


Figure 10-15 Not recommended. An obstacle (Exit sign) in the detection area.

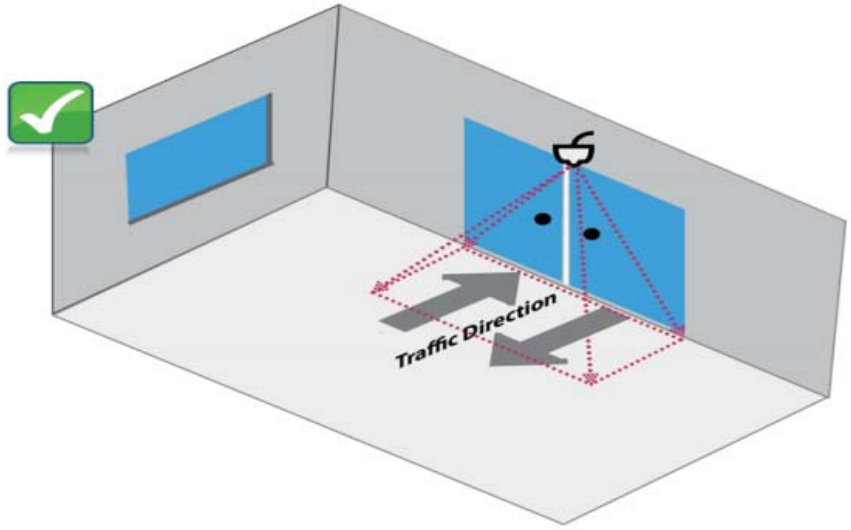


Figure 10-16 Recommended. Close enough and no obstacles.