HIKVISION

Anti-Corrosion Thermal Network Bullet Camera

Quick Start Guide

About this Manual

The Manual includes instructions for using and managing the Product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version of this Manual at the Hikvision website (http://www.hikvision.com/).

Please use this Manual with the guidance and assistance of professionals trained in supporting the Product.

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Regulatory Information

FCC Information

FCC compliance: This equipment has been tested and found to comply with the limits for Class A device, pursuant to part 15 of the

FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.

2. This device must accept any interference received, including interference that may cause undesired operation.

EU Conformity Statement

This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the EMC Directive 2014/30/EU, the RoHS Directive 2011/65/EU.

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

2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as

unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info

Industry Canada ICES-003 Compliance

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

이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

Symbol Conventions

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

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

Safety Instruction

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

Laws and Regulations

- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region.

Transportation

- Keep the device in original or similar packaging while transporting it.
- Keep all wrappers after unpacking them for future use. In case of any failure occurred, you need to return the device to the factory with the original wrapper. Transportation without the original wrapper may result in damage on the device and the company shall not take any responsibilities.
- DO NOT drop the product or subject it to physical shock. Keep the device away from magnetic interference.

Power Supply

- Please purchase the charger by yourself. Input voltage should meet the Limited Power Source (24 VAC or 12 VDC) according to the IEC62368 standard. Please refer to technical specifications for detailed information.
- Make sure the plug is properly connected to the power socket.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.
- DO NOT connect multiple devices to one power adapter, to avoid over-heating or fire hazards caused by overload.
- DO NOT touch the bare metal contacts of the inlets after the circuit breaker is turned off. Electricity still exists.
- + identifies the positive terminal(s) of equipment which is used

with, or generates direct current. - identifies the negative terminal(s) of equipment which is used with, or generates direct current.

Battery

- Risk of explosion if the battery is replaced by an incorrect type. Dispose of used batteries according to the instructions. Il y a risque d'explosion si la batterie est remplacée par une batterie de type incorrect. Mettre au rebut les batteries usagées conformément aux instructions.
- The built-in battery cannot be dismantled. Please contact the manufacture for repair if necessary.
- For long-term storage of the battery, make sure it is fully charged every half year to ensure the battery quality. Otherwise, damage may occur.
- This equipment is not suitable for use in locations where children are likely to be present.
- Improper replacement of the battery with an incorrect type may defeat a safeguard (for example, in the case of some lithium battery types).
- DO NOT dispose of the battery into fire or a hot oven, or mechanically crush or cut the battery, which may result in an explosion.
- DO NOT leave the battery in an extremely high temperature surrounding environment, which may result in an explosion or the leakage of flammable liquid or gas.
- DO NOT subject the battery to extremely low air pressure, which may result in an explosion or the leakage of flammable liquid or gas.

Installation

- Never place the equipment in an unstable location. The

equipment may fall, causing serious personal injury or death.

- This equipment is for use only with corresponding brackets. Use with other (carts, stands, or carriers) may result in instability causing injury.

System Security

- You acknowledge that the nature of Internet provides for inherent security risks, and our company shall not take any responsibilities for abnormal operation, privacy leakage or other damages resulting from cyber attack, hacker attack, however, our company will provide timely technical support if required.
- Please enforce the protection for the personal information and the data security as the device may be confronted with the network security problems when it is connected to the Internet. Please contact us when the device might exist network security risks.
- Please understand that you have the responsibility to configure all the passwords and other security settings about the device, and keep your user name and password.

Maintenance

- If the product does not work properly, please contact your dealer or the nearest service center. We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.
- A few device components (e.g., electrolytic capacitor) require regular replacement. The average lifespan varies, so periodic checking is recommended. Contact your dealer for details.
- Wipe the device gently with a clean cloth and a small quantity of ethanol, if necessary.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the device may be

impaired.

- To reduce the risk of fire, replace only with the same type and rating of fuse.
- The serial port of the equipment is used for debugging only.

Using Environment

- Make sure the running environment meets the requirement of the device. The operating temperature shall be - 40°C to 65 °C (-104 °F to 149 °F), and the operating humidity shall be 95% or less, no condensing.
- DO NOT expose the device to high electromagnetic radiation or dusty environments.
- DO NOT aim the lens at the sun or any other bright light.
- The equipment shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the equipment.
- No naked flame sources, such as lighted candles, should be placed on the equipment.
- Provide a surge suppressor at the inlet opening of the equipment under special conditions such as the mountain top, iron tower, and forest.
- Burned fingers when handling the parts with symbol ⚠. Wait one-half hour after switching off before handling the parts.

Emergency

- If smoke, odor, or noise arises from the device, immediately turn off the power, unplug the power cable, and contact the service center.

COMPLIANCE NOTICE: The thermal series products might be subject to export controls in various countries or regions, including without

limitation, the United States, European Union, United Kingdom and/or other member countries of the Wassenaar Arrangement. Please consult your professional legal or compliance expert or local government authorities for any necessary export license requirements if you intend to transfer, export, re-export the thermal series products between different countries.

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Table of Contents

1 Appearance Description

1.1 Camera Appearance

The overview of Anti-corrosion thermal network bullet camera and its components are shown below:
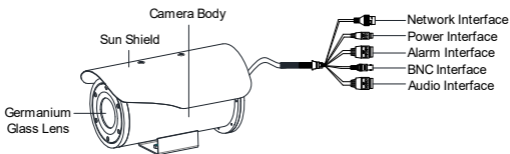

Figure 1-1 Type I Camera Overview

1.2 Cable Description

The bullet camera cables, including power cable, coaxial video cable, alarm cable, and audio cable are shown below.
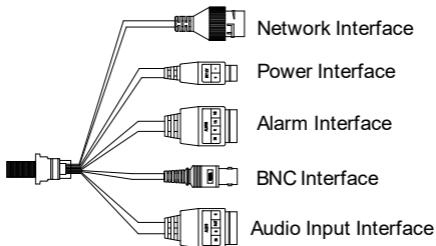

Figure 1-2 Cable Description

Table 1-1 Cable Description

Name	Description
Network Interface	Connect to the LAN. PoE+ supported.
Power Interface	12V DC power supply. Make sure that the positive/negative terminals are connected correctly.
Alarm Interface	Alarm In: IN and G, Alarm Out: 1A and 1B.
BNC Interface	Local video signal output
Audio Interface	Audio In: Pickup Audio Out: Loudspeaker

NOTE

- The cables may vary according to different models. Here we list all types of cables for reference. Take the actual product for the cables
- To reset the camera to default parameters, you need to press and hold the RESET button and power on the camera. After the power on of the camera, you must still press and hold the Reset button for about 10 seconds.

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 12V DC or 24V AC, please make sure your power supply matches your camera.
- Make sure all the related equipment is power-off during the installation.
- Check the specification for the installation environment.
- Make sure that the wall is strong enough to withstand eight times the weight of the camera and the bracket.
- Do NOT drag the camera with its waterproof cables, or the waterproof performance is affected.

2.1 Wide Range Coverage for Different Specifications

Select the proper installation site, and proper lens focal length according to the Wide Range Coverage list below:

Table 2-1 Wide Range Coverage

Lens (focal length)	7mm	10mm	15mm	25mm	35mm	50mm	75mm
Detection range (Vehicles)	631m	902m	1353m	2255m	3157m	4510m	6765m
Detection range (Humans)	206m	294m	441m	735m	1029m	1471m	2206m
Recognition range (Vehicles)	158m	225m	338m	564m	789m	1127m	1691m
Recognition range (Humans)	51m	74m	110m	184m	257m	368m	551m
Identification range (Vehicles)	79m	113m	169m	282m	395m	564m	846m
Identification range (Humans)	26m	37m	55m	92m	129m	184m	276m

Take human as 0.5 m (width) × 1.8 m (height), and limit length is 0.75 m. The vehicle limit length is 2.3 m.

- Detect target: The target should be at least 1.5 pixels on the image.
- Recognize target: The target should be at least 6 pixels on the image.
- Identify target: The target should be at least 12 pixels on the image.

NOTE

This table is for reference only, and the actual detection range may vary according to different camera settings, mounting condition, monitor and so on.

2.2 Installing Camera

The anti-corrosion camera installation adopts 12V DC power supply. Pick appropriate site for junction box installation to ensure the stable power and water-proof performance.

2.2.1 Wall Mounting

Steps:

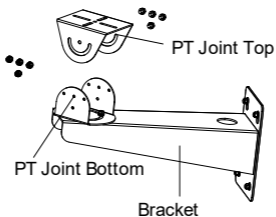1. Loosen the screws of the PT joint and separate the PT joint top from the PT joint bottom.

Figure 2-1 Separate PT Joint

2. Install the bracket.

   1). Drill four screw holes (Φ10 mm, depth: 55 mm) on the wall according to the bracket base.

   2). Loosen the M8 expansion bolt and insert the bolt into the wall.
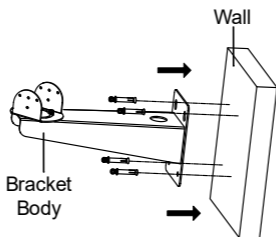
   3). Fix the bracket body with the expansion bolts.

Figure 2-2 Fix the Bracket Body

4). Adjust the bracket direction (pan range: - 45° to + 45°).
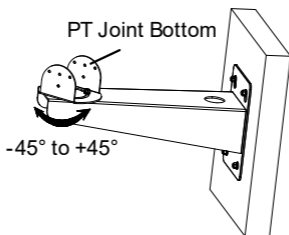

Figure 2-3 Adjust Bracket Direction

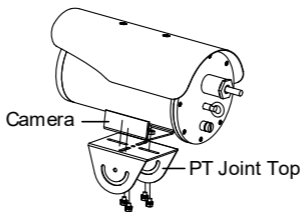3. Fix the PT joint top with the camera with the 1/4UNC×12 screw (with flat washer and spring washer).

Figure 2-4 Fix the PT Joint Top with Camera

4. Fix the PT joint top with the PT joint bottom with M6×12 screw (with flat washer and spring washer).

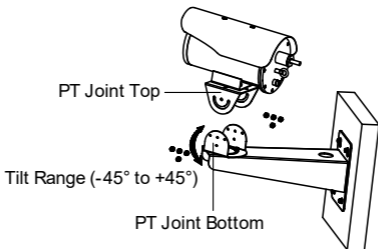5. Adjust the camera direction (tilt range: - 45° to + 45°).

Figure 2-5 Secure the PT Joint

6. Tighten the screws of the PT joint to secure the bullet camera onto it.
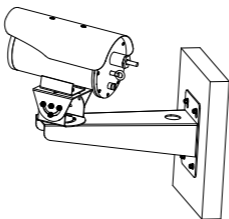
Figure 2-6 Finish the Installation

2.2.2 Installing Junction Box

Steps:

1. Attach the drill template (supplied) to the place where you want to fix the junction box, and then drill the screw holes in the wall according to the drill template.
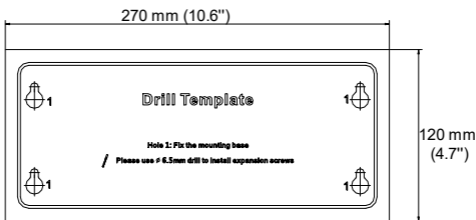

Figure 2-7 Drill Template (Junction Box)

2. Use the Allen wrench to loosen the four screws of the junction box cover.
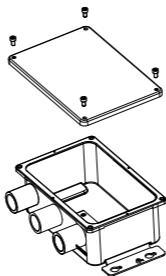

Figure 2-8 Disassemble Junction Box Cover

3. Align the screw holes to the drill template and install the junction box with four PA5×25 screws.

4. Connect the cables.

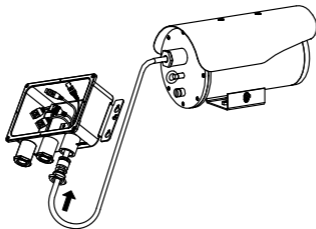   1) Loosen the waterproof nut with **camera** silk-screen on it, and take away the sealing ring.

Figure 2-9 Drill Template

2) Route the cables (including network cable, alarm cable, audio cable, power cable, etc.) into the cable hole.

NOTE

- Save the sealing ring for future usage.
- To ensure the sealing performance, we provide you with multiple sealing plugs. Select the appropriate sealing plug according to your cable type.
- You are highly recommended to route one cable through one sealing plug hole, or twist multiple cables to one strand and seal it with waterproof glue before you route it through the cable hole.

3) Loosen the rest two water-proof nuts, and take out the washer, sealing ring.

4) .Route the power cable (from the power supply end) and network cable (from the LAN interface) through the rest two cable holes. Make sure you cut the crystal plug before inserting the network cable.
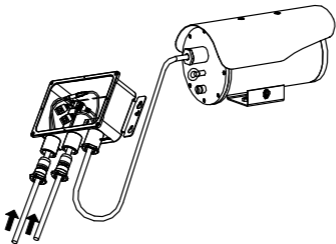

Figure 2-10 Install the Camera onto the Junction Box

5) Assemble the crystal plug of network cable inside the junction box, and then connect the network cable.

6) Connect the power cables and other cables with negative terminal and positive terminal correctly.

5. After the connection, install the sealing ring, washer, bolt, and tighten the water-proof screw.

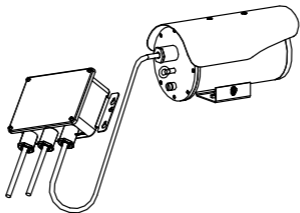6. Fix the junction box cover with the supplied screws.

Figure 2-11 Fix the Junction Box

2.3 Waterproof Measures (Optional)

Purpose:

If the camera is installed outdoor, you should use the waterproof accessory or tapes to waterproof the cables. Otherwise the cables might get wet or a short circuit might occur.

2.3.1 Install Network Cable Waterproof Jacket
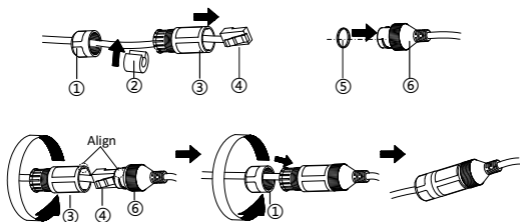

Figure 2-12 Install Waterproof Jacket

Steps:

1. Feed the network cable through ① and ③ in order.
2. Fix ② on the network cable between ① and ③.
3. Place ⑤ onto the end of ⑥, and plug the RJ45 male connector into RJ45 female connector.
4. Screw ③ to ⑥ clockwise.
5. Push ② into ③.
6. Secure ① with the ③ in clockwise direction.

2.3.2 Waterproof Other Cables

After routing and connecting the cables, use the waterproof tapes to wrap up the cables. Connected cables and spare cables both should be wrapped up as the figures below.
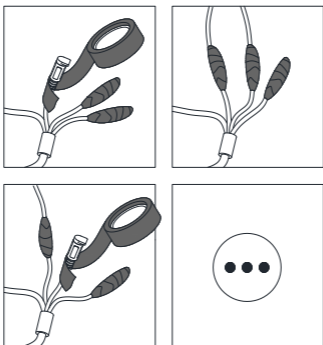

Figure 2-13 Waterproof Cable

3 Setting the Network Camera over the LAN

Note:

You shall acknowledge that the use of the product with Internet access might be under network security risks. For avoidance of any network attacks and information leakage, please strengthen your own protection. If the product does not work properly, please contact with your dealer or the nearest service center.

3.1 Wiring

Please connect to the camera to the network according to the following figures
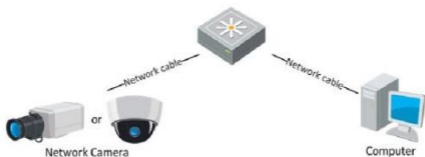

Figure 3-1 Connecting Directly

Figure 3-2 Connecting via a Switch or a Router

3.2 Activating the Camera

You are required to activate the camera first by setting a strong password for it before you can use the camera.

Activation via Web Browser, Activation via SADP, and Activation via Client Software are all supported. We will take activation via SADP software and Activation via Web Browser as examples to introduce the camera activation. Please refer to the User Manual of Network Camera for Activation via Client Software.

3.2.1 Activation via Web Browser

Steps:

2. Power on the camera, and connect the camera to the network.

3. Input the IP address into the address bar of the web browser, and click Enter to enter the activation interface.

   Notes:

   ● The default IP address of the camera is 192.168.1.64.

   ● For the camera enables the DHCP by default, you need to activate the camera via SADP software and search the IP address.
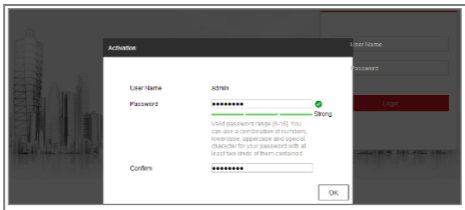

Figure 3-3 Activation Interface(Web)

4. Create a password and input the password into the password field.

> ⚠️ **STRONG PASSWORD RECOMMENDED**– *We highly recommend you create a strong password of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.*

5. Confirm the password.
6. Click **OK** to save the password and enter the live view interface.

3.2.2 Activation via SADP Software

SADP software is used for detecting the online device, activating the camera, and resetting the password.

Get the SADP software from the supplied disk or the official website, and install the SADP according to the prompts. Follow the steps to activate the camera, please refer to the User Manual of Network Camera for other two activation methods.

Steps:

1. Run the SADP software to search the online devices.
2. Check the device status from the device list, and select the inactive device.
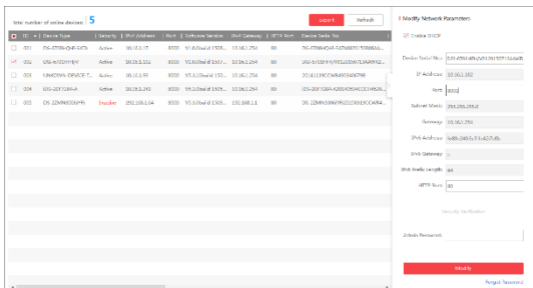
Figure 3-4 SADP Interface

Note:

The SADP software supports activating the camera in batch. Please refer to the user manual of SADP software for details.

3. Create a password and input the password in the password field, and confirm the password.

> ⚠ **STRONG PASSWORD RECOMMENDED**– *We highly recommend you create a strong password of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.*

4. Click **OK** to save the password.

You can check whether the activation is completed on the popup window. If activation failed, please make sure that the password meets the requirement and try again.

3.3 Modifying the IP Address

Purpose:

To view and configure the camera via LAN (Local Area Network), you need to connect the network camera in the same subnet with your PC. Then, install the SADP software or client software to search and change the IP of network camera. We will take modifying the IP Address via SADP software as an example to introduce the IP address modification.
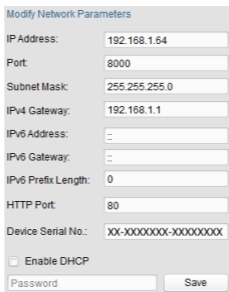
Steps:

1. Run the SADP 🔵 software.

2. Select an active device.

   Note:

   Please refer to Chapter 3.2 to activate the camera if the camera is inactive.

3. Change the device IP address to the same subnet with your computer by either modifying the IP address manually or checking the checkbox of Enable DHCP.

Modify Network Parameters	
IP Address:	192.168.1.64
Port:	8000
Subnet Mask:	255.255.255.0
IPv4 Gateway:	192.168.1.1
IPv6 Address:	::
IPv6 Gateway:	::
IPv6 Prefix Length:	0
HTTP Port:	80
Device Serial No.:	XX-XXXXXX-XXXXXXXX
☐ Enable DHCP	
Password	Save

Figure 3-5 Modify the IP Address

4. Input the password to activate your IP address modification.

The batch IP address modification is supported by the SADP; please refer to the User Manual of SADP for details.

4 Accessing via Web Browser

System Requirement:

Operating System: Microsoft Windows XP SP1 and above version.

CPU: 2.0 GHz or higher

RAM: 1G or higher

Display: 1024×768 resolution or higher

Web Browser: Internet Explorer 8.0 and above version, Apple Safari 5.0.2 and above version, Mozilla Firefox 5.0 and above version and Google Chrome 18 and above version

Steps:

1. Open the web browser.
2. In the browser address bar, input the IP address of the network camera, and press the **Enter** key to enter the login interface.

   Note:

   - The default IP address is 192.168.1.64.
   - If the camera is not activated, please activate the camera first according to Chapter 3.2.

3. Input the user name and password.

   The admin user should configure the device accounts and user/operator permissions properly. Delete the unnecessary accounts and user/operator permissions.

   Note:

   The device IP address gets locked if the admin user performs 7 failed password attempts (5 attempts for the user/operator).

4. Click **Login**.

Figure 3-6 Login Interface

5. Install the plug-in before viewing the live video and managing the camera. Please follow the installation prompts to install the plug-in.

You may have to close the web browser to finish the installation of the plug-in.

Please click here to download and install the plug-in. Close the browser when installing the plug-in.
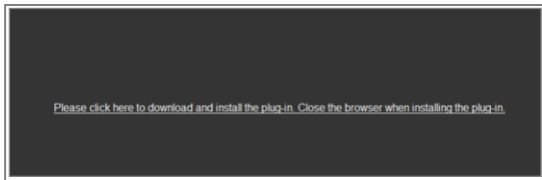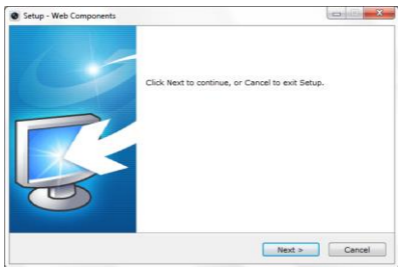
Figure 3-7 Download Plug-in
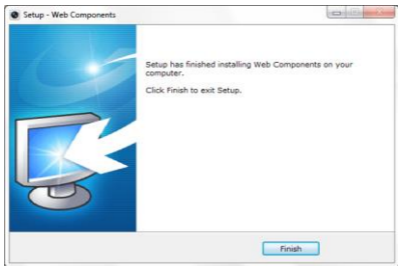
Figure 3-8 Install Plug-in (1)

Figure 3-9 Install Plug-in (2)

6. Reopen the web browser after the installation of the plug-in and repeat steps 2~4 to login.

NOTE

For detailed instructions of further configuration, please refer to the user manual of network camera.

Appendix

Frequently Asked Questions (FAQ)

Device Running Error

Question:

- The device fails to start up or reboots repeatedly.

Answer:

- Examine the power supply of the positioning system and see whether it meets the requirements.
- Select the power supply as close as possible.
- Examine the power cord and see whether it meets the requirements.

Device Upgrading

Question:

Device fails to upgrade.

Answer:

- Examine if the device upgrading fails because of the poor network.
- Examine if the upgrading program matches with the device type.

Others

Question:

The device live view is vague.

Answer:

- Examine if you removed the protective film.
- Examine if the lens is dirty or not.
- Examine if any obstruction is nearby, e.g. spider web.

Question:

Live view fails with good network connection.

Answer:

● Examine if the IE plug-in is well installed. Change the Website Blocker settings if necessary.

● For cross-domain routing, enable the UPnP of device, or set manual mapping to port No. 80, 8000, or 554.

● Examine if the live view channel amount exceeds the upper limit.

● Examine the network bandwidth.

Question:

Focus fails when you test outdoor device in indoor situation.

Answer:

● Restore the device to default settings.

Common Material Emissivity Reference

Material	Emissivity
Human Skin	0.98
PCB	0.91
Cement Concrete	0.95
Ceramics	0.92
Rubber	0.95
Paint	0.93
Wood	0.85
Asphalt	0.96
Brick	0.95
Sand	0.90
Soil	0.92
Cotton	0.98
Cardboard	0.90
White Paper	0.90
Water	0.96

See Far, Go Further