HIKVISION

Thermographic Cube 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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IN THE EVENT OF ANY CONFLICTS BETWEEN THIS MANUAL AND THE APPLICABLE LAW, THE LATER PREVAILS.

Regulatory Information

FCC Information

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC compliance: This equipment has been tested and found to comply with the limits for a Class A digital 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

CE　　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 Convention

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 Instructions

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 (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 - 20 °C to 50 °C (-4°F to 122°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.

Scan the QR code to view the latest user manual of device on your mobile phone. Note that mobile data charges may apply if Wi-Fi is unavailable.

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.

Table of Contents

1 Overview

1.1 Camera Description

The Thermographic Cube Camera is able to measure object's temperature at a high accuracy in real time. It is applied to electric system, industrial automation, etc. for fire prevention. The pre-alarm system helps you discover unexpected events immediately and protects your property.

1.2 Main Function

- Real-time temperature detection and temperature alarm
- Fusion of thermal view and optical view
- Multiple palettes modes
- Audible alarm output`
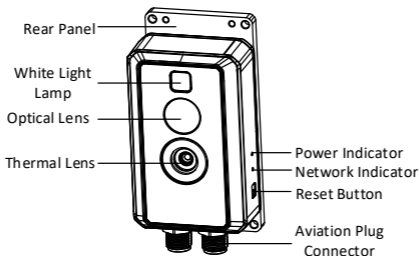- Compact size and light weight

1.3 Camera Appearance

Figure 1-1 Camera Appearance

Table 1-1 Indicator Status

Indicator	Color and Status
Power Indicator	Solid red: the camera is starting.
	Solid green: the camera is working normally.
Network Indicator	Solid yellow: the network is disconnected.
	Flashing yellow: the network is connected

[i] NOTE

- During normal use of the camera, if the power indicator turns red, the camera is working abnormally.

- To reset the camera to default parameters, you need to hold the reset button to power on the camera, and then you should still hold the reset button until the power indicator turns from red to green.

1.4 Camera Cable

The camera is equipped with 2 cables: an 8 pins cables and a 12 pins cable. The pictures of these two types of cable are shown below.
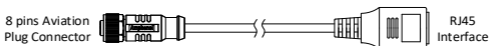
8 pins cable: Connect with network interface.

8 pins Aviation Plug Connector — RJ45 Interface

Figure 1-2 8 pins Cable

12 pins cable: Connect with power interface, and alarm interface, etc.

Power Interface

Serial Port

Alarm Interface

RS-485 Interface

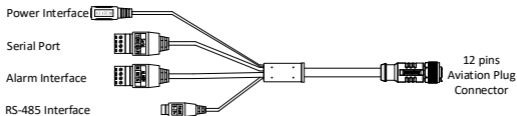12 pins Aviation Plug Connector

Figure 1-3 12 pins Cable

- Power Interface: 12 VDC is supported.

For 12 VDC power supply, make sure that the positive/negative terminals are connected correctly.

- Alarm Interface: alarm input and alarm output are supported. Alarm In: IN, and G; Alarm Out: OUT, and G.

- RS-485 Interface: Connect with RS-485+ and RS-485-.

- Serial Port: Debug interface. It is provided for debugging for technical person.

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, 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.

2.1 Magnet Adsorption

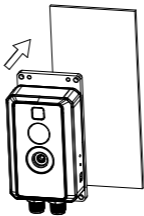The rear panel of camera is equipped with magnet, which can be attached to ferromagnetic objects directly.

Figure 2-1 Magnet Adsorption

2.2 Plate Mounting

Steps:

1. Attach the drill template on the wall/plate, and then drill screw
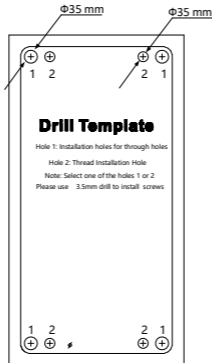   holes according to the drill template.

Figure 2-2 Drill Template

[i] NOTE

- If the camera is fixed with screws, drill 4 Φ3.5 mm holes at
  position 1.
- If the camera is fixed with screws and nuts, drill 4 Φ3.5 mm
  holes at position 2.

2. Align screw holes, and then fix the camera.

● For mounting with screws and nuts, align the holes of the camera with the holes of drill template at position 1. Fix the camera with 4 M3 × 15 screws and M3 nuts.
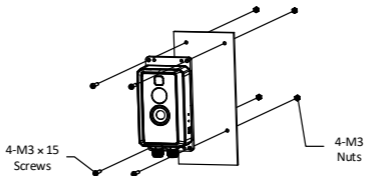

4-M3 × 15 Screws

4-M3 Nuts

Figure 2-3 Mounting with Screws and Nuts

● For mounting with screws, align the holes of the camera with the holes of drill template at position 2. Fix the camera with 4 M3 × 10 screws.
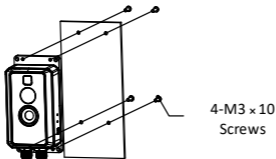

4-M3 × 10 Screws

Figure 2-4 Mounting with Screws

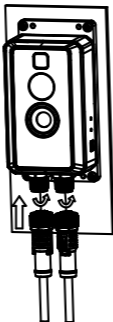3. Connect the camera with aviation cables. Turn the head of aviation cable clockwise to fix the cable.

Figure 2-5 Connect Aviation Cables

3 Set the Network Camera over the LAN

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
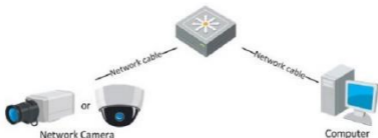

Figure 3-1 Connecting Directly

Figure 3-2 Connecting via a Switch or a Router

3.2 Activate 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:

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

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

[i] NOTE

- 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.
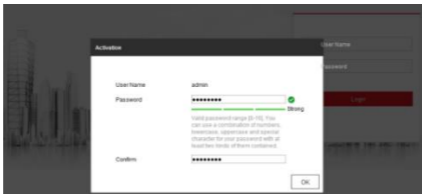
Figure 3-3 Activation Interface(Web)

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

⚠️ **WARNING**

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.

3. Confirm the password.

4. Click **OK**.

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.

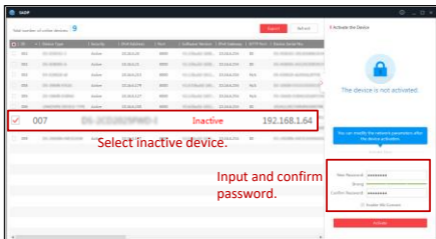2. Check the device status from the device list, and select the inactive device.

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. Input the password in the password field, and confirm it.

WARNING

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**.

   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 Modify 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.

   [i] **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 Enable DHCP.

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 Access 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 **Enter**.

   ☐**i** NOTE

   ● The default IP address is 192.168.1.64.

   ● If the camera is not activated, please activate the camera first.

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.

   ☐**i** 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.

📖 **NOTE**

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

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

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

UD22527B