HIKVISION®

DS-2CD2D21G0/M-D/NF
Pinhole and Covert
Mini Network Cameras

Quick Start Guide

About this Manual

This Manual is applicable to 2Dxx Network Camera.

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. Find the latest version in the company Web site.

Use this user manual under the guidance of professionals.

Legal Disclaimer

REGARDING TO THE PRODUCT WITH INTERNET ACCESS, THE USE OF PRODUCT SHALL BE WHOLLY AT YOUR OWN RISKS. OUR COMPANY SHALL NOT TAKE ANY RESPONSIBILITIES FOR ABNORMAL OPERATION, PRIVACY LEAKAGE OR OTHER DAMAGES RESULTING FROM CYBER ATTACK, HACKER ATTACK, VIRUS INSPECTION, OR OTHER INTERNET SECURITY RISKS; HOWEVER, OUR COMPANY WILL PROVIDE TIMELY TECHNICAL SUPPORT IF REQUIRED.

SURVEILLANCE LAWS VARY BY JURISDICTION. CHECK ALL RELEVANT LAWS IN YOUR JURISDICTION BEFORE USING THIS PRODUCT IN ORDER TO ENSURE THAT YOUR USE CONFORMS THE APPLICABLE LAW. OUR COMPANY SHALL NOT BE LIABLE IN THE EVENT THAT THIS PRODUCT IS USED WITH ILLEGITIMATE PURPOSES.

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

Regulatory Information

FCC Information

FCC Compliance: This equipment has been tested and found to comply with the limits for 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

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.

Safety Instruction

These instructions are intended to ensure that 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 occur if any of the warnings are neglected.

Cautions: Injury or equipment damage may occur if any of the 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**

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

- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region. Refer to technical specifications for detailed information.

- Input voltage should meet both the SELV (Safety Extra Low Voltage) and the Limited Power Source with 24 VAC or 12 VDC

according to the IEC60950-1 standard. Refer to technical specifications for detailed information.

- Do not connect several devices to one power adapter as adapter overload may cause overheating or a fire hazard.

- Make sure that the plug is firmly connected to the power socket. When the product is mounted on wall or ceiling, the device shall be firmly fixed.

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

⚠️ **Cautions**

- If the camera fails to synchronize the local time with that of the network, you need to set up the camera time manually. Visit the camera (via a Web browser or client software) and enter the system settings interface for the time settings.

- 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, replace the lens cap to protect the sensor from dirt.

- Do not aim the camera at the sun or extra bright places. Blooming or smearing may occur otherwise (which is not a malfunction), and affect the sensor endurance at the same time.

- The sensor may be burned out by a laser beam, so when any laser equipment is in use, make sure that the surface of the sensor will not be exposed to the laser beam.

- Do not place the camera in extremely hot, cold (the operating temperature shall be -30° to +60° C if the camera model has an "H" in its suffix), dusty or damp locations, and do not expose it to high electromagnetic radiation.

- To avoid heat accumulation, good ventilation is required for the operating environment.

- Keep the camera away from liquid while in use.

- While in delivery, the camera shall be packed in its original packing or packing of the same texture.

- Regular part replacement: a few parts (e.g., electrolytic capacitor) of the equipment shall be replaced regularly according to their average enduring time. The average time varies because of differences between the operating environment and usage history, so regular checking is recommended for all users. Contact your dealer for more details.

- Improper use or replacement of the battery may result in hazard of explosion. Replace with the same or equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.

- If the product does not work properly, 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.)

Table of Contents

1 Appearance Description

There are four mini camera appearances available for this camera series. Refer to the following chapters for details.
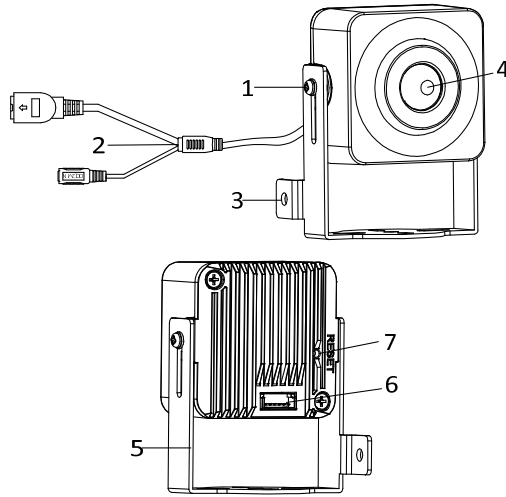
1.1 Type I, II

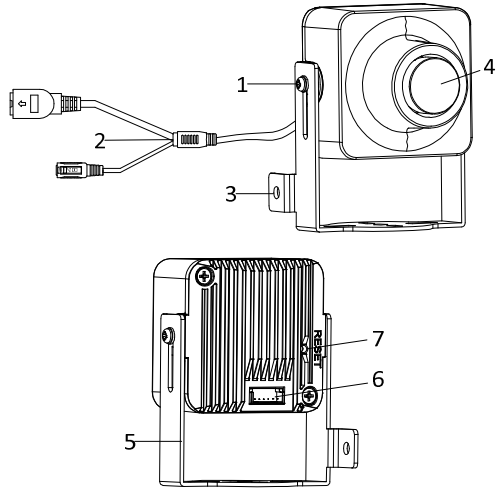Figure 1, Overview of Type I Mini Camera

Figure 2, Overview of Type II Mini Camera

Table 1-1 Description

No.	Description
1	Tilt adjust screw
2	Power cable (12 VDC) and network cable
3	Tieline buckle
4	Lens
5	Bracket
6	Complex cable serial interface
7	Reset button

Note:

Press RESET for 10s when the camera is powering on or rebooting, to restore the default settings, including the user name, password, IP address, port no., etc. You must activate the camera after restoring.
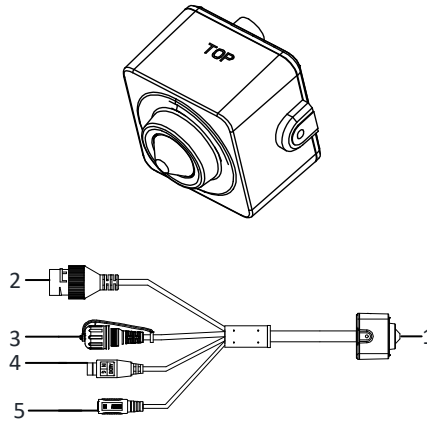
1.2 Type III, IV

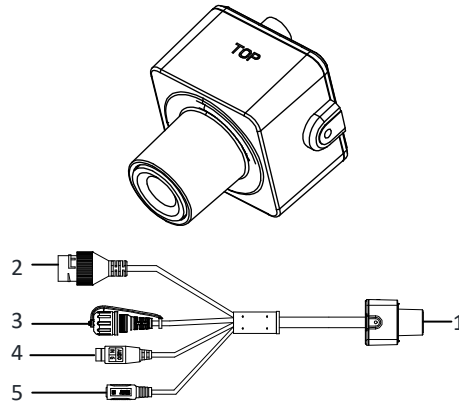Figure 3, Overview of Type III Mini Camera

Figure 4, Overview of Type IV Mini Camera

Table 1-2 Description

No.	Description
1	Lens
2	Network interface
3	Reset button
4	Audio interface (line in)
5	Power interface (12 VDC)

Note:

Press RESET for 10s when the camera is powering on or rebooting, to restore the default settings, including the user name, password, IP address, port no., etc. You are required to activate the camera after restoring.

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 24 VAC, make sure your power supply matches your camera.
- Make sure all the related equipment is powered 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 cameras that support 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.
- 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 the camera body so that the foam ring and the dome cover are attached seamlessly.

2.1 Type I, II

Note:

The installation steps for Type I and the Type II mini cameras are similar. The installation of Type I is taken as an example in the following instruction.

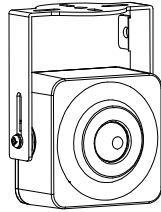1. Fix the camera to the mounting surface with the screws.

Figure 5, Fix the Camera

2. Adjust the camera position.

   1). If you use the no. 1 screw hole to secure the camera, slightly loosen the screw to adjust the camera to the right or the left.

   2). If you use the no. 2 screw hole to secure the camera, slightly loosen the screw to adjust the camera upwards or downwards.

   3). If you use the no. 3 screw hole to secure the camera, you can slightly loosen the screw to rotate the camera horizontally.
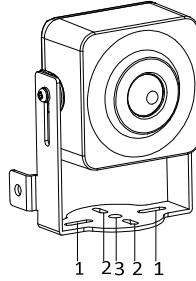

Figure 6, Adjust the Camera Position

3. Loosen the tilt adjust screw to adjust the camera surveillance angel, and tighten the screw if the angle adjustment is completed.
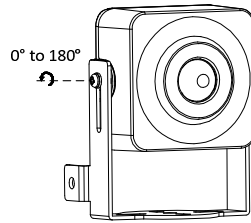

0° to 180°

Figure 7, Fix the Bracket

2.2 Type III, IV

2.2.1 Ceiling Mounting

Note:

The installation steps for Type III and Type IV mini cameras are similar. Here the installation of a Type III camera is used as an example to describe the steps.

Use the supplied bracket for ceiling mounting.

1. Fix the bracket to the mounting surface with screws.
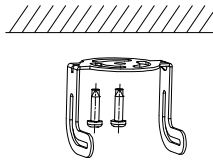

Figure 8, Fix the Bracket on the Ceiling

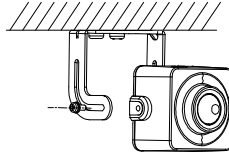2. Fix the camera to the bracket with the screws.

Figure 9, Fix the Camera to the Bracket

3. Route and connect the camera cables.
4. Loosen the horizontal and vertical adjusting screws to adjust the camera surveillance angle, and then tighten the screws.
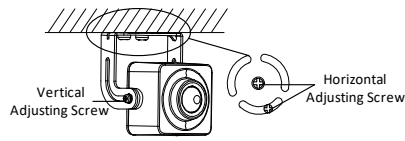

Figure 10, Adjust the Camera Angle

2.2.2 Wall Mounting

Note:

The installation steps for Type III and Type IV mini cameras are similar. Here the installation of Type IV cameras is used as an example to describe the steps.

Use the supplied bracket for the wall mounting.

1. Fix the bracket to the camera with the supplied screws.
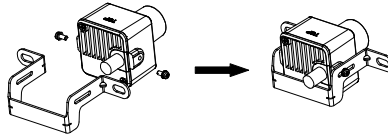
Figure 11, Fix the Bracket to the Camera

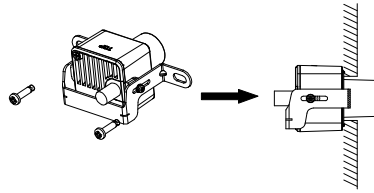2. Install the camera to the wall with the screws.

Figure 12, Install the Camera to the Wall

3. Route and connect the camera cables.
4. Refer to Step 4 in 2.2.1 to adjust the camera angle.

3 Set the Network Camera over a 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, strengthen your own protection.

If the product does not work properly, contact your dealer or the nearest service center for help.

3.1 Wiring

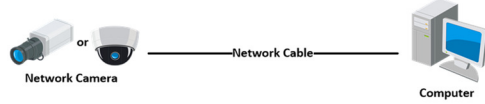Connect the camera to a network according to the following figures.
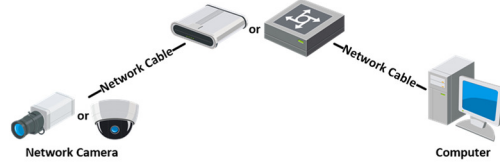

Figure 13, Connect Directly

Figure 14, Connect 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 use.

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 camera activation.

Note:

Refer to the network camera user manual for activation via client software.

3.2.1 Activation via Web Browser

Steps:

1. Power on the camera. Connect the camera to your computer or the switch/router that your computer connects to.

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

Notes:

- The default IP address of the camera is 192.168.1.64.
- The computer and the camera should be in the same subnet.
- For cameras with DHCP enabled by default, use the SADP software to search for the IP address.
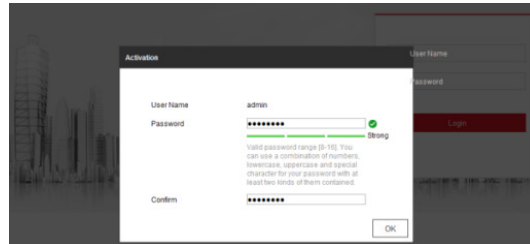

Figure 15, Activation Interface (Web)

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

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

4. Confirm the password.

5. 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 Web site, and install it according to the prompts. Follow the steps to activate the camera. Refer to the network camera user manual for the other two activation methods.

1. Run the SADP software to search for online devices.

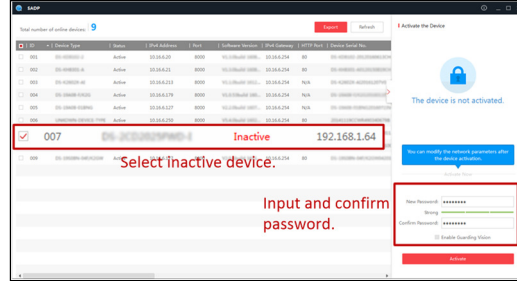2. Check device status from the device list, and select inactive device.

Figure 16, SADP Interface

Note:

The SADP software supports activating the camera in batch. Refer to the SADP software user manual for details.

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

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

Note:

You can enable the Hik-Connect service for the device during activation. Refer to Chapter 5.1 for detailed information.

4. Click **Activate**.

You can check whether the activation is completed on the pop-up window. If activation failed, 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 a LAN (Local Area Network), you need to connect the network camera in the same subnet as your PC.

Use the SADP software or client software to search and change the IP address of the device. We take modifying the IP address via SADP software as an example to introduce the IP address modification.

For IP address modification via client software, refer to the client software user manual.

1. Run the SADP software.

2. Select an activated device.

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

Modify Network Parameters

☐ Enable DHCP
☑ Enable Guarding Vision

Device Serial No.:	DS-2CD1121-I20161115AAWR679
IP Address:	10.16.6.89
Port:	8000
Subnet Mask:	255.255.255.0
Gateway:	10.16.6.254
IPv6 Address:	::
IPv6 Gateway:	::
IPv6 Prefix Length:	0
HTTP Port:	80

— Security Verification —

Admin Password: [ ]

Modify

Forgot Password

Figure 17, Modify the IP Address

Note:

You can enable the Hik-Connect service for the device during activation. Refer to Chapter 5.1 for detailed information.

4. Input the admin password and click **Modify**.

Batch IP address modification is supported by the SADP. Refer to the SADP user manual for details.

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4 Access via Web Browser

System Requirements:

Operating System: Microsoft Windows XP SP1 and later versions

CPU: 2.0 GHz or higher

RAM: 1 GB or higher

Display: 1024 × 768 resolution or higher

Web Browser: Internet Explorer 8.0 and later versions, Apple Safari 5.0.2 and later versions, Mozilla Firefox 5.0 and later versions, or Google Chrome 18 and later versions

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. You are recommended to change the IP address to the same subnet as your computer.

3. Input the user name and password.

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

   Note:

   The device IP address locks if the admin user performs seven failed password attempts (five attempts for a user/operator).

4. Click **Login**.

Figure 18, Login Interface

5. Install the plug-in before viewing the live video and managing the camera. 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.
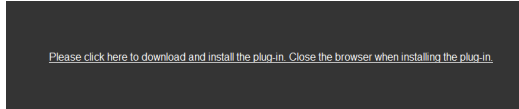
Figure 19, Download Plug-in

6. Reopen the Web browser after the installation of the plug-in and repeat steps 2 to 4 to log in.

   Note:

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

5 Operate via Hik-Connect App

Purpose:

Hik-Connect is an application for mobile devices. It lets you view live images of the camera, receive alarm notifications, etc.

> ***Note:***
>
> The Hik-Connect service is not supported by certain camera models.

5.1 Enable Hik-Connect Service on Camera

Purpose:

Hik-Connect service should be enabled on your camera before using the service.

You can enable the service through SADP software or a Web browser.

5.1.1 Enable Hik-Connect Service via SADP Software

1. Check **Enable Hik-Connect**:

   1). "Activate the Device" page during camera activation, refer to Chapter 3.2.2.

   2). Or "Modify Network Parameters" page during modifying IP address, refer to Chapter 3.3.

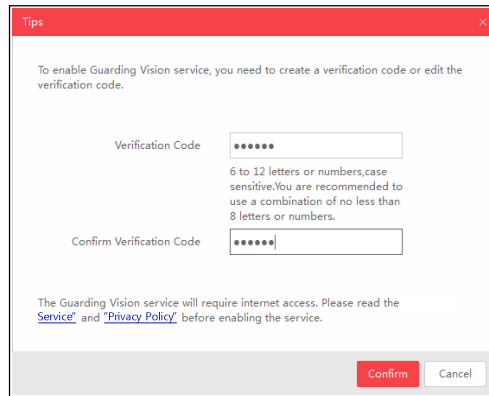2. Create a verification code or change the verification code.

Figure 20, Verification Code Setting (SADP)

> *Note:*
> The verification code is required when you add the camera to the Hik-Connect app.

3. Click and read "Terms of Service" and "Privacy Policy."
4. Confirm the settings.

5.1.2 Enable Hik-Connect Service via Web Browser

Before you start:

You need to activate the camera before enabling the service. Refer to Chapter 3.2.

*S*Access the camera through a Web browser. Refer to Chapter 4.

1. Enter the platform access configuration interface: **Configuration** > **Network** > **Advanced Settings** > **Platform Access**.

Figure 21, Platform Access Configuration (Web)

2. Select **Hik-Connect** from the **Platform Access Mode** drop-down list.
3. Check **Enable**.
4. Click and read "Terms of Service" and "Privacy Policy" in the pop-up window.
5. Create a verification code or change the verification code for the camera.

   Note:

   The verification code is required when you add the camera to the Hik-Connect app.
6. Save the settings.

5.2 Hik-Connect Setup

1. Download and install the Hik-Connect app by searching for "Hik-Connect" in the Apple App Store or Google Play™.
2. Launch the app and register for a Hik-Connect user account.
3. Log in to the Hik-Connect app after registration.

5.3 Add Camera to Hik-Connect

Before you start:

You need to enable the Hik-Connect service on the camera before adding it to your Hik-Connect account. Refer to Chapter 5.1.

1. Use a network cable to connect the camera to a router if the camera does not support Wi-Fi.
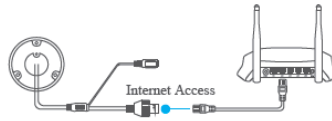

Figure 5-1 Connect a Router

Note:

After the camera is connected to the network, wait one minute before any operation on the camera using the Hik-Connect app.

2. In the Hik-Connect app, tap "+" on the upper-right corner, and then scan the QR code of the camera to add the camera.

You can find the QR code on the camera or on the cover of the Quick Start Guide of the camera in the package.
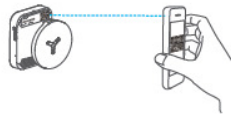

Figure 22, Scan QR Code

Note:

If the QR code is missing or too blurry to be recognized, you can also add the camera by tapping ▧ and inputting the camera's serial number.

3. Input the verification code of your camera.

Note:

- The verification code is the code you created or changed when you enabled the Hik-Connect service on the camera.
- If you forget the verification code, you can check the current verification code on the **Platform Access** configuration page via a Web browser.

4. Follow the prompts to set the network connection and add the camera to your Hik-Connect account.

Note:

For detailed information, refer to the Hik-Connect app user manual.

5.4 Initialize the Memory Card

Check the memory card status by tapping on **Storage Status** in the Device Settings interface.

If the memory card status displays as Uninitialized, tap to initialize it. The status will then change to Normal. Then, you can start recording in the camera such as video triggered by motion detection.