Foreword

General

This manual introduces the structure, operations and maintenance of the Mobile Portable Terminal (hereinafter referred to as "the Device").

Safety Instructions

The following categorized signal words with defined meaning might appear in the manual.

<table>
<thead>
<tr>
<th>Signal Words</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>DANGER</td>
<td>Indicates a high potential hazard which, if not avoided, will result in death or serious injury.</td>
</tr>
<tr>
<td>WARNING</td>
<td>Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.</td>
</tr>
<tr>
<td>CAUTION</td>
<td>Indicates a potential risk which, if not avoided, could result in property damage, data loss, lower performance, or unpredictable result.</td>
</tr>
<tr>
<td>NOTE</td>
<td>Provides additional information as the emphasis and supplement to the text.</td>
</tr>
</tbody>
</table>

Revision History

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Content</th>
<th>Release Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1.0.3</td>
<td>Added safety precautions for batteries and refine the whole manual.</td>
<td>June 2020</td>
</tr>
<tr>
<td>V1.0.2</td>
<td>Deleted the specification in the manual.</td>
<td>June 2019</td>
</tr>
<tr>
<td>V1.0.1</td>
<td>Updated the titles of several sections.</td>
<td>November 2018</td>
</tr>
<tr>
<td>V1.0.0</td>
<td>First release.</td>
<td>October 2017</td>
</tr>
</tbody>
</table>

About the Manual

- The manual is for reference only. If there is inconsistency between the manual and the actual product, the actual product shall prevail.
- We are not liable for any loss caused by the operations that do not comply with the manual.
- The manual would be updated according to the latest laws and regulations of related regions. For detailed information, see the paper manual, CD-ROM, QR code or our official website. If there is inconsistency between paper manual and the electronic version, the electronic version shall prevail.
- All the designs and software are subject to change without prior written notice. The product updates might cause some differences between the actual product and the manual. Please contact the customer service for the latest program and supplementary documentation.
- There still might be deviation in technical data, functions and operations description, or errors in print. If there is any doubt or dispute, please refer to our final explanation.
- Upgrade the reader software or try other mainstream reader software if the manual (in PDF format) cannot be opened.
- All trademarks, registered trademarks and the company names in the manual are the properties of their respective owners.
- Please visit our website, contact the supplier or customer service if there is any problem occurred when using the device.
- If there is any uncertainty or controversy, please refer to our final explanation.
Important Safeguards and Warnings

This section introduces the proper handling of the Device, hazard prevention, and property damage prevention. Read the manual carefully before using the Device, follow the instructions when using the Device, and keep the manual well for future reference.

Operating Requirements

- Do not place or install the Device in a place exposed to sunlight or near the heat source.
- Keep the Device away from dampness, dust or soot.
- Keep the Device installed horizontally on the stable place to prevent it from falling.
- Do not drop or splash liquid onto the Device, and make sure that there is no object filled with liquid on the Device to prevent liquid from flowing into it.
- Install the Device in a well-ventilated place, and do not block the ventilation.
- Use the Device within the rated range of power input and output.
- Do not disassemble the Device.
- Transport, use and store the Device under the allowed humidity and temperature range.

Power Requirements

- Improper battery use might result in fire, explosion, or inflammation.
- When replacing battery, make sure that the same model is used.
- Use the recommended power cables in the region and use them under the rated specification.
- Use the power adapter provided with the Device; otherwise it might result in people injury and device damage.
- The power source shall conform to the requirements of the Safety Extra Low Voltage (SELV) standard, and supply power with rated voltage which conforms to Limited Power Source requirements according to IEC60950-1. Note that the power supply requirement is subject to the device label.
- Connect the Device (type-I structure) to the power socket with protective earthing.
- The appliance coupler is a disconnection device. Keep a convenient angle when using it.

General Safety Precautions for Using Lithium-ion Battery

- The device and battery must be used within the specified temperature and humidity range; otherwise the device and battery might be damaged.
- Charge with the standard power adapter. Mixed use might cause damage to the battery.
- If any abnormality is found in use, such as serious heat, bulge, deformation and strange smell, stop using the battery immediately.
- Do not store the battery with other metals to avoid metal objects touching the battery anode and cathode, thus resulting in short circuit.
- Do not decompose the battery in any way.
- Do not charge the battery continuously for more than 24 hours.
Precautions for Lithium-ion Battery Maintenance

- If the device will not be used for a week or more, charge it to 60%, take the battery out of the device, and store it in a clean, dry and ventilated room with ambient temperature of 20±5°C.
- Charge the battery once every four months during storage.
- The battery is a consumable accessory. It is recommended to replace it after one year of use.
# Table of Contents

**Foreword** ............................................................................................................................... I  
**Important Safeguards and Warnings** ..................................................................................... III  
**1 Product Introduction** .............................................................................................................. 1  
  1.1 Overview ............................................................................................................................. 1  
  1.2 Scenario Applications .......................................................................................................... 1  
  1.3 Features .............................................................................................................................. 2  
**2 Structure** ............................................................................................................................... 3  
  2.1 Packing List ......................................................................................................................... 3  
  2.2 Structure ............................................................................................................................ 3  
  2.3 Indicator Status .................................................................................................................. 4  
  2.4 Back Clip and Shoulder Mark Clip Installation ................................................................. 4  
**3 Basic Operations** ................................................................................................................... 6  
  3.1 Powering On/Off ............................................................................................................... 6  
  3.2 Device Initialization .......................................................................................................... 6  
  3.3 Main Interface .................................................................................................................... 9  
  3.4 Settings ............................................................................................................................... 9  
    3.4.1 Network ....................................................................................................................... 9  
    3.4.2 Device ........................................................................................................................ 20  
    3.4.3 System ....................................................................................................................... 28  
  3.5 Video Recording .................................................................................................................. 35  
    3.5.1 Recording Videos ........................................................................................................ 35  
    3.5.2 One Tap to Record Videos ......................................................................................... 36  
    3.5.3 Zoom ........................................................................................................................ 37  
    3.5.4 Marking Important Videos ......................................................................................... 37  
  3.6 Snapshots ............................................................................................................................ 37  
    3.6.1 Taking Snapshots ....................................................................................................... 37  
    3.6.2 One Tap to Take Snapshots ...................................................................................... 38  
  3.7 Audio Recording .................................................................................................................. 38  
    3.7.1 Recording Audios ....................................................................................................... 38  
    3.7.2 One Tap to Record Audios ....................................................................................... 39  
  3.8 File Management ................................................................................................................ 39  
    3.8.1 Viewing Photos .......................................................................................................... 40  
    3.8.2 Video Playback .......................................................................................................... 42  
    3.8.3 Audio Playback .......................................................................................................... 44  
  3.9 Audio Talk (Optional) ........................................................................................................ 45  
  3.10 One Tap to Switch ............................................................................................................ 47  
  3.11 Record Video and Audio at the Same Time ...................................................................... 47  
  3.12 Laser Light ....................................................................................................................... 48  
  3.13 White Light ....................................................................................................................... 48  
  3.14 Data Transmission ........................................................................................................... 48  
  3.15 Emergency Alarms ........................................................................................................... 48  
    3.15.1 Adding Alarm Time Template ................................................................................... 49  
    3.15.2 Adding Alarm Scheme .............................................................................................. 51  
**4 Upgrade** ................................................................................................................................. 56
4.1 Upgrade by PCTool ................................................................. 56
4.2 Upgrade by Data Acquisition Station ..................................... 58
  4.2.1 Manual Upgrade ................................................................. 58
  4.2.2 Auto Upgrade ................................................................. 60

5 Platform Connection ................................................................. 62

6 Battery and Maintenance ......................................................... 65
  6.1 Install the SIM Card .............................................................. 65
  6.2 Replacing the Main Battery .................................................. 67

Appendix 1 Cybersecurity Recommendations ................................ 68
1 Product Introduction

1.1 Overview

The device is developed and designed based on the actual requirements of public security police and other law enforcement departments. It adopts forensic technology and integrates video and audio recording, and snapshot taking in one mobile portable terminal.

The device can make a digital record of the on-site conditions. It is light, compact, easy to wear, waterproof, shock-proof, and drop-proof. It is embedded with an infrared light to ensure the sharpness of pictures taken at night, which facilitates the work of public security police at night. The device not only supports on-site playback but also guarantees that files not to be falsified, thus ensuring the fairness and authority of recorded files. In addition, it provides valid on-site image files for case command, investigation, and inspection authorities to collect evidence.

1.2 Scenario Applications

Public security police, traffic police, and other police can record audios, record videos, and take snapshots by using the device, and can also upload records and photos to the data acquisition station to transmit and manage data.

Figure 1-1 shows the application scenario.

Figure 1-1 Scenario applications
1.3 Features

- 2.83-inch touchscreen
- 2K display, 1080P recording, and 34 megapixel camera
- Automatic switchover between laser positioning, LED fill light, and infrared mode
- H.265 coding
- 3G and 4G networks, Wi-Fi, Bluetooth V4.1, and wireless transmission of images
- Wide-angle lens: Horizontal field of view ≥ 120°; distortion < 20%
- Alarms for undervoltage battery and overflow storage.
- A super long battery life and standby time of about seven days
- 5 V, 2 A DC power supply, charging duration ≤ 2.5 hours
- Infrared viewing distance: Infrared coverage area within 3 meters ≥ 70%, making face clear in 5 meters, and contour clear in 10 meters
- One-tap to record videos, one-tap to record audios, one-tap to switch, and record video & audio.
- Voice broadcasting and time broadcasting.
2 Structure

2.1 Packing List

When you receive the product, check whether there is obvious damage to the packing box. Unpack the box and check whether the components are complete according to the packing list.

Table 2-1 Packing list

<table>
<thead>
<tr>
<th>Name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device</td>
<td>1</td>
</tr>
<tr>
<td>Shoulder mark clip</td>
<td>1</td>
</tr>
<tr>
<td>Back clip</td>
<td>1</td>
</tr>
<tr>
<td>USB cable</td>
<td>1</td>
</tr>
<tr>
<td>Micro USB to Mini USB cable</td>
<td>1</td>
</tr>
<tr>
<td>Battery</td>
<td>1</td>
</tr>
<tr>
<td>Power adapter</td>
<td>1</td>
</tr>
<tr>
<td>Quick Start Guide</td>
<td>1</td>
</tr>
<tr>
<td>QR code</td>
<td>1</td>
</tr>
</tbody>
</table>

2.2 Structure

Figure 2-1 Front and rear panel
2.3 Indicator Status

When the Device is in different working statuses, the indicator lights have different statuses.

<table>
<thead>
<tr>
<th>Working Status</th>
<th>Indicator Status</th>
<th>Working Status</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standby</td>
<td>Green light is on</td>
<td>Recording Audios</td>
<td>Yellow light flickers</td>
</tr>
<tr>
<td>Standby when the battery level is less than 5%</td>
<td>Red light is on</td>
<td>Charging</td>
<td>Red light is on</td>
</tr>
<tr>
<td>Recording videos</td>
<td>Red light flickers</td>
<td>Full charge</td>
<td>Green light is on</td>
</tr>
<tr>
<td>Taking snapshots</td>
<td>Red light flickers</td>
<td>Pull stream</td>
<td>Blue light flickers</td>
</tr>
</tbody>
</table>

2.4 Back Clip and Shoulder Mark Clip Installation

Step 1 Install the back clip.
Figure 2-4 Install back clip

Step 2 Install the shoulder mark clip.

Figure 2-5 Install shoulder mark clip

Step 3 Clip the installed shoulder mark clip onto the shoulder mark.
3 Basic Operations

3.1 Powering On/Off

- In this document, "press" indicates pressing a button once, and "press and hold" indicates pressing and holding a button for 2 to 3 seconds.

- When the Device is running, press and hold 🔄 for 10 seconds to force restart it.

Press the 🔄 on the top panel to power on or off, restart or hibernate the Device.

- When the Device has been shut down, press and hold 🔄 to start it.

- When the Device is running, press and hold 🔄, select Power off, and then click OK on the Power off interface, the Device will be shut down.

- When the Device is running, press and hold 🔄, select Reboot, and then click OK on the Reboot interface, the Device will be restarted.

- When the Device is running, press 🔄 to hibernate the Device. Press again to wake up the Device.

3.2 Device Initialization

For first usage, you need to set the login password and at least three security questions. If you forget the password, go to Settings > System > Modify Password, click Forgot password, and then answer the security questions to reset login password.

Step 1  When the Device has been shut down, press and hold 🔄 to start it.
Step 2  After selecting the language, click **Next**.

Step 3  Enter the new password, and then confirm it.

Step 4  Click **Set the security question**.
Figure 3-3 Security questions

Select at least three security questions, and then click Next.

Enter the answers to the security questions, and then click Save.

The system prompts Successfully set security answers, and then goes back to the Reset Password interface.

Click Complete on the Reset Password interface.

The system prompts Successfully modified password, and the live view interface is displayed.

Figure 3-4 Live view interface

Table 3-1 Live view interface description

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Displays the current time of the Device.</td>
</tr>
</tbody>
</table>
### 3.3 Main Interface

On the live view interface, tap 🏡 or 🚴 to go back to the main interface.

![Main Interface](image)

- The status bar is to display message, working status and the carrier. Tap the status bar and slide down to view the time, date and battery life. Tap 🛠️ to go to the **Settings** interface quickly.
- Slide left or right on the menu bar to go to the previous or next page.

### 3.4 Settings

Before using the device, set recording parameters, snapshot parameters, and network mode of the device.

#### 3.4.1 Network

On the main interface, tap 🛠️. The **Network** interface is displayed.

If there is no SIM card in the device, **Enable 4G** and **Cellular Net** settings become grey.
Tap the icon to access the corresponding setting interface.

- OFF indicates that the function is disabled.
- ON indicates that the function is enabled.

### 3.4.1.1 WLAN

After WLAN is enabled, you can search for or add WLAN network. Select **Network > WLAN**. The **WLAN** interface is displayed. Select the WLAN to be connected and enter the correct password to successfully connect the device to the network. To add a network, update the network list, or configure advanced WLAN, tap "WLAN".
3.4.1.1 Adding Network

Step 1  Tap  and then select **Add network**.

![Figure 3-8 Adding network](image)

Step 2  Configure parameters. For the parameter description, see Table 3-2.

**Table 3-2 Adding network parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network name</td>
<td>Enter the SSID (the name of the WLAN) of the router to be connected.</td>
</tr>
<tr>
<td>Security</td>
<td>Set the security of the connected WLAN.</td>
</tr>
<tr>
<td></td>
<td>● If you select <strong>None</strong>, you do not need to enter a password when logging in to the WLAN.</td>
</tr>
<tr>
<td></td>
<td>● If you select other options, you need to enter a password or certificate.</td>
</tr>
<tr>
<td>Advanced options</td>
<td>You can set a proxy and IP address after selecting <strong>Advanced options</strong>.</td>
</tr>
<tr>
<td>Proxy settings</td>
<td>Set the proxy information about the WLAN.</td>
</tr>
<tr>
<td></td>
<td>● If you select <strong>None</strong>, you do not need to set proxy server parameters.</td>
</tr>
<tr>
<td></td>
<td>● If you select <strong>Manual</strong>, you need to set proxy server parameters manually.</td>
</tr>
<tr>
<td></td>
<td>● If you select <strong>Proxy Auto-Config</strong>, the device sets proxy server parameters automatically.</td>
</tr>
<tr>
<td>IP settings</td>
<td>Set the IP address of the WLAN that the device connects to.</td>
</tr>
<tr>
<td></td>
<td>● If you select <strong>DHCP</strong>, the device searches for the IP address of the WLAN automatically.</td>
</tr>
<tr>
<td></td>
<td>● If you select <strong>Static</strong>, you need to set IP address, Gateway, Network prefix length, DNS 1, and DNS 2 for the WLAN manually.</td>
</tr>
<tr>
<td></td>
<td>◦ The IP address must be in the same network segment as that of the router.</td>
</tr>
<tr>
<td></td>
<td>◦ Keep other parameters the same as those of the router.</td>
</tr>
</tbody>
</table>

Step 3  Tap **Save** to complete the adding.
3.4.1.2 Checking Saved Networks

To check the networks that the device has been successfully connected to, tap and select **Saved networks**.

3.4.1.3 Updating the Network List

To update the network list, tap and select **Refreshing**.

3.4.1.4 Advanced Settings

**Step 1** Tap and select **Advanced**.

![Advanced WLAN](image)

**Step 2** Configure parameters. For the parameter description, see Table 3-3.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Notification</td>
<td>After it is enabled, the device is notified whenever a public network is available.</td>
</tr>
</tbody>
</table>
| Keep WLAN on during sleep  | Set the duration for keeping the WLAN on during sleep. The options are as follows:  
                                 |   - Always  
                                 |   - Only when plugged in  
                                 |   - Never |
| WLAN frequency band        | Set the WLAN frequency band. The options are as follows:  
                                 |   - Automatic  
                                 |   - 5 GHz only  
<pre><code>                             |   - 2.4 GHz only |
</code></pre>
<p>| Install certificates       | Upload the security certificate to the device, tap <strong>Install certificates</strong>, and then select the appropriate certificate to install. |</p>
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLAN Direct</td>
<td>Enable the device to send files through WLAN Direct.</td>
</tr>
<tr>
<td>WPS Push Button</td>
<td>After you tap <strong>WPS Push Button</strong>, the device enables WPS and automatically searches for the router that has enabled the WPS function. WPS stands for Wi-Fi Protected Setup. After you enable WPS, the router can quickly connect the device to the network.</td>
</tr>
<tr>
<td>WPS Pin Entry</td>
<td>After you tap <strong>WPS Pin Entry</strong> and enter a PIN code on the WLAN router that has enabled the WPS function, the device can quickly connect to the network.</td>
</tr>
<tr>
<td>MAC address</td>
<td>Displays the MAC address and IP address of the network adapter.</td>
</tr>
<tr>
<td>IP address</td>
<td></td>
</tr>
</tbody>
</table>

### 3.4.1.2 Bluetooth

After Bluetooth is enabled, the device is visible to nearby devices and you can receive files through Bluetooth.

Select **Network > Bluetooth**, select the Bluetooth device to be paired, and then select **Pair** to connect the device.

![Figure 3-10 Bluetooth](image)

To update the device list or perform other operations, tap 🔄.

- If you tap **Refresh**, the device searches for nearby Bluetooth devices that can be connected.
- If you tap **Rename this device**, you can rename the device.
- If you tap **Show received files**, the device displays the files received through Bluetooth.
3.4.1.3 Enabling 4G

Select **Network > Enable 4G**. After 4G is enabled, the device can provide better network service.

3.4.1.4 Cellular Network

Select **Network > Cellular net**. The **Cellular network settings** interface is displayed. For details about parameter configurations, see Table 3-4.

![Cellular network settings interface](image)

Table 3-4 Cellular network parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data roaming</td>
<td>After data roaming is enabled, the device connects to a cellular network while roaming.</td>
</tr>
<tr>
<td>Preferred network type</td>
<td>Set the preferred network type of the device.</td>
</tr>
<tr>
<td>System select</td>
<td>You can change the CDMA roaming mode as needed.</td>
</tr>
<tr>
<td>CDMA subscription</td>
<td>Set the source of accessing network information.</td>
</tr>
<tr>
<td>Access Point Names</td>
<td>The Access Point Name (APN) is a parameter that needs to be configured for a mobile phone to access a network. It determines the mode in which the device accesses a network. Configure the parameter as needed.</td>
</tr>
<tr>
<td>Network operator</td>
<td>Select a network operator as needed.</td>
</tr>
</tbody>
</table>

3.4.1.5 Location Information

Location information allows you to locate the device with the help of a satellite. If the device connects to the platform, it reports its location information to the platform.
Select **Network > Location**. The **Location** interface is displayed. For the parameter description, see Table 3-5.

![Location interface](image)

**Figure 3-12 Location**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
</table>
| Mode                       | ![Icon] When location is disabled, this setting becomes gray. Options are as follows:  
   | • **High accuracy**: The device is located with the help of satellite, WLAN, Bluetooth, or cellular network.  
   | • **Battery saving**: The device is located with the help of WLAN, Bluetooth, or cellular network.  
   | • **Device only**: The device is located with the help of a satellite. |
| Satellite System Options   | Set the satellite used for locating the device. Options are as follows:  
   | • **GPS&GLONASS**: Use the signal sources of Global Positioning System (GPS) and Global Navigation Satellite System (GLONASS).  
   | • **GPS&BEIDOU**: Use signal sources of GPS and BeiDou Navigation Satellite System.  
   | • **GPS&BEIDOU&GLONASS**: use signal sources of GPS, BeiDou Navigation Satellite System, and GLONASS.  
   | • **GPS ONLY**: Use signal source of GPS.  
   | **GPS&BEIDOU&GLONASS** is selected by default. |
| Location                   | After location is enabled, the current location source, latitude, and longitude of the device are displayed. |

### 3.4.1.6 Platform Settings

The device can connect to the DSS platform. You can manage the device remotely through the platform.
Step 1  Select **Network > Platform**.

Figure 3-13 Platform settings

Step 2  Select **DSS**.

Figure 3-14 Connecting to the DSS platform

Step 3  Configure parameters.

Table 3-6 Parameter description for the DSS platform

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device ID</td>
<td>Set the device ID the same as that of the platform.</td>
</tr>
<tr>
<td>Platform IP</td>
<td>Enter the IP address of the platform server.</td>
</tr>
<tr>
<td>Platform Port</td>
<td>Enter the port number of the Active Register Server (ARS) of the platform as needed.</td>
</tr>
<tr>
<td>Local Port</td>
<td>Enter the local port number of the device. The default value is 37777.</td>
</tr>
</tbody>
</table>

Step 4  Tap **OK**.
3.4.1.7 Uploading Files

Before uploading files, make sure that the device has connected to a platform. For detailed operations, see “3.4.1.6 Platform Settings.”

**Step 1** Select Network > File Upload.

![File Upload](image)

**Step 2** Select FTP Mode or DaHua Mode.
- **FTP Mode**: Supports uploading pictures, audios, and videos.
- **DaHua mode**: Supports uploading pictures.

**Step 3** Upload files to the platform.

3.4.1.8 More Settings

3.4.1.8.1 Airplane Mode

Select Network > More > Airplane Mode to enable the airplane mode.

3.4.1.8.2 NFC

Select Network > More > NFC. After Near Field Communication (NFC) is enabled, the device is allowed to exchange data with other devices.

- The NFC function allows the device to access data from TypeA and TypeB.
- Before enabling NFC, install the third-party software that supports NFC. If no third-party software is installed, a sound prompt is generated when the card gets close to the device.

3.4.1.8.3 Data Usage

Select Network > More > Data usage. The Data usage interface is displayed. You can view the data usage at specific dates and the data usage of all apps.
To restrict background data, display the WLAN traffic, configure network restriction, and set a cellular network, tap 

**Table 3-7 Data usage parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restrict background data</td>
<td>If you restrict background cellular data, some apps and services can work properly only when the device connects to a WLAN network.</td>
</tr>
<tr>
<td>Display WLAN traffic</td>
<td>Set whether to display WLAN traffic.</td>
</tr>
<tr>
<td>Network restriction</td>
<td>When background data is restricted, networks that are charged by traffic are regarded as cellular networks. Before you download large files over this kind of network, the device generates an alarm.</td>
</tr>
<tr>
<td>Cellular Network</td>
<td>Set a cellular network. For detailed operations, see &quot;3.4.1.4 Cellular Network.&quot;</td>
</tr>
</tbody>
</table>

**3.4.1.8.4 Tethering and Portable Hotspot**

You can connect the device to a nearby device network through USB tethering, WLAN hotspot, and Bluetooth tethering to share data.

Select **Network > More > Tethering & portable hotspot**. The **Tethering & portable hotspot** interface is displayed. For the parameter description, see Table 3-8.
Table 3-8 Tethering and portable hotspot parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>USB tethering</td>
<td>You can enable <strong>USB tethering</strong> after connecting a USB cable to the device to implement tethering.</td>
</tr>
<tr>
<td>WLAN hotspot</td>
<td>After <strong>WLAN hotspot</strong> is enabled, the device can be used as a wireless router. Nearby devices that support WLAN can access the WLAN of this device.</td>
</tr>
<tr>
<td>Set up WLAN hotspot</td>
<td>Tap <strong>Set up WLAN hotspot</strong> to set the network name, password, and AP frequency band of the WLAN hotspot.</td>
</tr>
<tr>
<td>Bluetooth tethering</td>
<td>After <strong>Bluetooth tethering</strong> is enabled, the device can connect to nearby Bluetooth devices to implement network connection and data sharing.</td>
</tr>
</tbody>
</table>

### 3.4.1.8.5 VPN

Select **Network > More > VPN**. The **VPN** interface is displayed.

- Tap + Set relevant information such as the VPN user name, password, and server address as needed.
- Tap and set an always-on VPN. The network is available only after the device connects to this VPN.
3.4.1.8.6 Cellular Network

Set a cellular network. For detailed operations, see "3.4.1.4 Cellular Network."

3.4.2 Device

You can set audio recording parameters, snapshot parameters, and video recording parameters on this interface.

On the main interface, tap , and then select the **Device** tab.

Figure 3-19 Device
3.4.2.1 Audio Settings

Select Device > Audio. The Audio interface is displayed. For the parameter description, see Table 3-9.

![Audio settings interface](image)

Table 3-9 Audio parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio Format</td>
<td>Set the audio format for audio recording.</td>
</tr>
<tr>
<td></td>
<td>● AAC</td>
</tr>
<tr>
<td></td>
<td>● G.711A</td>
</tr>
<tr>
<td></td>
<td>● AMR</td>
</tr>
<tr>
<td></td>
<td>When <strong>Video Format</strong> is set to <strong>MP4</strong>, <strong>Audio Format</strong> cannot be set to <strong>AMR</strong>.</td>
</tr>
<tr>
<td>File Type</td>
<td>Set the file type for audio recording.</td>
</tr>
<tr>
<td></td>
<td>● dav (selected by default)</td>
</tr>
<tr>
<td></td>
<td>● aac</td>
</tr>
</tbody>
</table>

3.4.2.2 Snapshot Settings

Select Device > Snap. The Snapshot interface is displayed. For the parameter description, see Table 3-10.
Table 3-10 Snapshot parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Quality</td>
<td>Set the image quality. The options are as follows:</td>
</tr>
<tr>
<td></td>
<td>● Normal</td>
</tr>
<tr>
<td></td>
<td>● Fine</td>
</tr>
<tr>
<td></td>
<td>● Superfine</td>
</tr>
<tr>
<td>Photo Resolute</td>
<td>Set the photo size. The options are as follows:</td>
</tr>
<tr>
<td></td>
<td>● 34M (7808 × 4400)</td>
</tr>
<tr>
<td></td>
<td>● 16M (5312 × 2992)</td>
</tr>
<tr>
<td></td>
<td>● 4M (2688 × 1512)</td>
</tr>
<tr>
<td></td>
<td>● 0.4M (864 × 480)</td>
</tr>
<tr>
<td>Continuous shot</td>
<td>Set the number of continuous shot. The options are as follows:</td>
</tr>
<tr>
<td></td>
<td>● OFF</td>
</tr>
<tr>
<td></td>
<td>● 2 Shots</td>
</tr>
<tr>
<td></td>
<td>● 3 Shots</td>
</tr>
<tr>
<td></td>
<td>● 5 Shots</td>
</tr>
<tr>
<td></td>
<td>● 10 Shots</td>
</tr>
<tr>
<td>Snap Sound</td>
<td>Set the snap sound. The options are as follows:</td>
</tr>
<tr>
<td></td>
<td>● OFF</td>
</tr>
<tr>
<td></td>
<td>● ON</td>
</tr>
</tbody>
</table>

3.4.2.3 Video Settings

You can set the video quality, encoding stream, and video format of the camera.

Select Device > Video. The Recorder interface is displayed. For the parameter description, see Table 3-11.
Table 3-11 Recorder parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
</table>
| Video Quality      | Set video resolution. The higher the resolution, the better the video quality, and the more space is occupied. The options are as follows:  
  - 2k@30 fps  
  - 1080P@60 fps  
  - 1080P@30 fps  
  - 720P@60 fps  
  - 720P@30 fps  
  - WVGA@30 fps  
  For example, if you set the video resolution to 1080P@30 fps, the resolution of the video recorded by the device is 1080P and the frame rate is 30 fps. |
| Encoding Stream    | Set the encoding stream. The options are as follows:  
  - High  
  - Middle  
  - Low |
| Record Encode Type | Set the record encoding type. The options are as follows:  
  - H.264  
  - H.265 |
| Video Format       | Set the video format. The options are as follows:  
  - Dav  
  - Mp4 |
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record File Pack Time</td>
<td>Set the time interval for saving record files. The options are as follows:</td>
</tr>
<tr>
<td></td>
<td>● 5min</td>
</tr>
<tr>
<td></td>
<td>10min</td>
</tr>
<tr>
<td></td>
<td>20min</td>
</tr>
<tr>
<td></td>
<td>30min</td>
</tr>
<tr>
<td></td>
<td>For example, if you set <strong>Record File Pack Time</strong> to 5min, each recorded file in the device is saved every 5 minutes after recording is enabled, and</td>
</tr>
<tr>
<td></td>
<td>each recorded file is named after the recording start time.</td>
</tr>
<tr>
<td></td>
<td>● To avoid small files, the packing time fluctuates. For example, if you set <strong>Record File Pack Time</strong> to 30min, and the recording start time is</td>
</tr>
<tr>
<td></td>
<td>10:26, then packing ends at 11:00. If the recording start time is 10:14, then packing ends at 10:30.</td>
</tr>
<tr>
<td></td>
<td>● The size of a single recorded file cannot exceed 2 GB. After the size limit is exceeded, the recording is packed into a new file.</td>
</tr>
<tr>
<td>Pre-Record</td>
<td>Set the pre-recording time. After the recording ends, the recorded file during the pre-recording time is saved automatically. The options are</td>
</tr>
<tr>
<td></td>
<td>as follows:</td>
</tr>
<tr>
<td></td>
<td>● OFF</td>
</tr>
<tr>
<td></td>
<td>15S</td>
</tr>
<tr>
<td></td>
<td>30S</td>
</tr>
<tr>
<td></td>
<td>60S</td>
</tr>
<tr>
<td></td>
<td>For example, if you set the pre-recording time to <strong>15S</strong>, the recorded video within 15 s before recording starts is saved automatically after recording</td>
</tr>
<tr>
<td></td>
<td>ends.</td>
</tr>
<tr>
<td>Post-Record</td>
<td>Set the post-recording time. After recording ends, the recorded file during the post-recording time is saved automatically. The options are</td>
</tr>
<tr>
<td></td>
<td>as follows:</td>
</tr>
<tr>
<td></td>
<td>● OFF</td>
</tr>
<tr>
<td></td>
<td>15S</td>
</tr>
<tr>
<td></td>
<td>30S</td>
</tr>
<tr>
<td></td>
<td>60S</td>
</tr>
<tr>
<td></td>
<td>For example, if you set the post-recording time to <strong>15S</strong>, the record within 15 s after recording ends is saved automatically.</td>
</tr>
<tr>
<td>Record Video&amp;Audio</td>
<td>After this function is enabled, if you press 🎥 or 🎧 during video recording or audio recording, the device records audio and video at the same time.</td>
</tr>
<tr>
<td>Rectification</td>
<td>After this function is enabled, distortion of the image can be corrected.</td>
</tr>
<tr>
<td></td>
<td>After you enable this function, the recording resolution options are 1080P@30 fps, 720P@30 fps, and WVGA@30 fps.</td>
</tr>
</tbody>
</table>
3.4.2.4 OSD Settings

After OSD is enabled, OSD content (including GPS and custom information) can be displayed on the images and videos.

After OSD is enabled, the GPS information is displayed at the upper-left corner of the live view interface, and the custom information is displayed at the lower-right corner of the live view interface.

Select **Device > OSD**. The **OSD** interface is displayed.

![OSD Settings Interface](image)

- To display GPS information, make sure that you have enabled **Location** and **GPS OSD**. Select **Settings > Network > Location** to enable location function, and select **Settings > Device > OSD > GPS OSD** to enable GPS function.
- Two pieces of customized OSD information can be displayed on the interface. Before this, you need to use PCTool to set OSD information and enable custom OSD information. Use USB cable to connect the Device and PC, run PCTool, enter and confirm the password, and then set the OSD information (the length shall be less than 40 bits). Select **Settings > Device > OSD > Custom Info** to enable or disable customized OSD information.

3.4.2.5 Net Transmit Settings

You can set the video quality, framerate, bitrate, bitrate type and record encoding type of sub stream when the platform acquires streams.

Select **Device > Net Transmit Setting**. The **Net Transmit** interface is displayed. For the parameter description, see Table 3-12.
Figure 3-24 Net transmit setting

![Net Transmit Interface]

Table 3-12 Net transmit setting

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video Quality</td>
<td>Set video resolution. The higher the resolution, the better the video quality, and the more space is occupied. The options are as follows:</td>
</tr>
<tr>
<td></td>
<td>● 720P (1280 × 720)</td>
</tr>
<tr>
<td></td>
<td>● WVGA (864 × 480)</td>
</tr>
<tr>
<td>Framerate</td>
<td>Set the frame rate of the video. The higher the frame rate, the smoother the video. The options include 30, 25, 20, 15, 10, and 5.</td>
</tr>
<tr>
<td>Bitrate</td>
<td>The bit rate range varies depending on the video resolution and framerate.</td>
</tr>
<tr>
<td>Bitrate Type</td>
<td>There are two options: <strong>CBR</strong> (constant bit rate) and <strong>VBR</strong> (variable bit rate).</td>
</tr>
<tr>
<td>Record Encode Type</td>
<td>Set the record encoding type. The options are as follows:</td>
</tr>
<tr>
<td></td>
<td>● H.264</td>
</tr>
<tr>
<td></td>
<td>● H.265</td>
</tr>
<tr>
<td>Net Transmission Type</td>
<td>You can select from <strong>Quality First</strong> and <strong>Fluency First</strong>.</td>
</tr>
</tbody>
</table>

### 3.4.2.6 Infrared Settings

You can enable or disable the infrared mode as needed.

⚠️

To force start the infrared mode, press ⬆️ and ⬇️ on the live view interface.

Select **Device > Infrared Setting**. The **Infrared Setting** interface is displayed. For the parameter description, see Table 3-13.
Table 3-13 Infrared setting parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrared Mode</td>
<td>Set the infrared mode (the night vision function) of the device as needed. The options are as follows:</td>
</tr>
<tr>
<td></td>
<td>AUTO</td>
</tr>
<tr>
<td></td>
<td>OPEN</td>
</tr>
<tr>
<td></td>
<td>CLOSE</td>
</tr>
<tr>
<td></td>
<td>AUTO is selected by default.</td>
</tr>
<tr>
<td>Infrared Level</td>
<td>Set the infrared brightness as needed. The options are as follows:</td>
</tr>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Middle</td>
</tr>
<tr>
<td></td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Middle is selected by default.</td>
</tr>
</tbody>
</table>

3.4.2.7 Sound Settings

You can set the media volume, notification volume, and audio talk volume.

- Media volume refers to the volume for playing back videos and audios.
- Notification volume refers to the volume of the button sound and snapshot success sound.
- Audio talk volume refers to the volume of voice talk.

Select Device > Sound. The Sound interface is displayed. You can adjust volume by dragging the volume bar.
3.4.2.8 Voice Prompt

You can enable or disable the voice prompt sound.

3.4.3 System

On the main interface, tap 🛠️, and then select the System tab. The System interface is displayed. To set and query relevant parameters, tap appropriate options.
3.4.3.1 Security

You can set the device to allow installation of apps from unknown sources.

**Step 1** Select **System > Security**.

![Security Settings](image)

**Figure 3-28 Security**

**Step 2** Tap **on** to enable the function.

A prompt is displayed.

![Prompt](image)

**Figure 3-29 Prompt**

**Step 3** Tap **OK**.

3.4.3.2 Display

You can adjust the screen brightness and hibernation time.
Select **System > Display**. The **Display** interface is displayed. For the parameter description, see Table 3-14.

![Figure 3-30 Display](image)

**Table 3-14 Display parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brightness</td>
<td>Tap <strong>Brightness level</strong> to adjust the brightness of the device screen.</td>
</tr>
</tbody>
</table>
| Sleep     | Set the hibernation time. The device hibernates automatically if no operation is performed within the period. The options are as follows:  
  - 1 minute  
  - 3 minutes  
  - 5 minutes  
  - Never |

### 3.4.3.3 Date and Time

You can select the automatic time correction mode.

Select **System > Date & time**. The **Date & time** interface is displayed. For the parameter description, see Table 3-15.
Table 3-15 Date & time parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic date &amp; time</td>
<td>The network, GPS, or platform can provide the date and time for the device.</td>
</tr>
<tr>
<td></td>
<td>• Before using a network to provide time, make sure that the device has connected to Internet, such as 3G network or 4G network.</td>
</tr>
<tr>
<td></td>
<td>• Before using a platform to provide time, make sure that the device has connected to a platform.</td>
</tr>
<tr>
<td></td>
<td>• The device can automatically correct time by connecting to the data acquisition station and PCTool host.</td>
</tr>
<tr>
<td>Select time zone</td>
<td>If <strong>Automatic time zone</strong> is disabled, you need to set the time zone manually.</td>
</tr>
<tr>
<td>Clock Striking</td>
<td>If this function is enabled, the device will strike the hour.</td>
</tr>
<tr>
<td>Date</td>
<td>Displays date and time.</td>
</tr>
<tr>
<td>Time</td>
<td></td>
</tr>
</tbody>
</table>

### 3.4.3.4 Language

Select **System > Language**, and then select **Chinese** or **English** as needed.

### 3.4.3.5 Restoring to Factory Default Settings

You can restore system configurations to factory defaults.
Factory data reset will erase all data from the internal storage of your device, such as system and app data and settings. The Device will retain some data, such as recorded videos, recorded audios, pictures, and serial numbers. Proceed with caution.

Select System > Factory data reset, tap Reset device, and then enter the device password. The device starts to restore to the factory default settings.

Figure 3-32 Restoring to factory default settings

3.4.3.6 System Maintenance

You can upload system logs to the platform.

Select System > Maintenance, and then tap Upload to upload system logs to the platform. You can obtain the logs uploaded from the device by using the FTP server (ftp://platform IP address/device serial number).
Before uploading system logs, make sure that the device has registered to the platform. For detailed operations, see "3.4.1.6 Platform Settings."

### 3.4.3.7 Modifying Password

You can modify the login password of the device.

**Step 1** Select System > Modify Password.

**Step 2** Enter **Old password**, **New password**, and **Confirm password**.

- The password should consist of 6 non-blank characters and contain at least two types of characters among uppercase, lowercase, and number.
- If you forget the old password, tap **Forgot password**. Then you can reset the password after answering security questions correctly.

**Step 3** Tap **OK**.

### 3.4.3.8 About Device

You can view the status, model number, serial number, and Android version of the device.

**Step 1** Select **System > About device**.

**Figure 3-35 About device**

**Step 2** Tap **Status**, and then you can view information such as the battery status, battery level, and SIM card status.

#### Table 3-16 Status parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery status</td>
<td>Displays the current battery status, such as discharging or being charged.</td>
</tr>
<tr>
<td>Battery level</td>
<td>Displays the current battery level.</td>
</tr>
<tr>
<td>SIM status</td>
<td>Displays the status of the SIM card.</td>
</tr>
<tr>
<td></td>
<td>- Network: Displays the current network, for example, CDMA.</td>
</tr>
<tr>
<td></td>
<td>- Signal strength: Displays the network signal strength.</td>
</tr>
<tr>
<td></td>
<td>- Cellular network type: Displays the type of the cellular network.</td>
</tr>
<tr>
<td></td>
<td>- Operator info: Displays the basic information about the operator.</td>
</tr>
<tr>
<td></td>
<td>- Service state: Displays whether the device is in service.</td>
</tr>
<tr>
<td></td>
<td>- Roaming: Displays whether the device is roaming.</td>
</tr>
<tr>
<td></td>
<td>- Cellular network state: Displays whether the cellular network is connected or disconnected.</td>
</tr>
<tr>
<td></td>
<td>- My phone number: Displays the mobile phone number of the SIM card in the device.</td>
</tr>
<tr>
<td></td>
<td>- IMEI: Displays the international mobile equipment identity (IMEI).</td>
</tr>
<tr>
<td></td>
<td>- IMEI SV: Displays the IMEI version.</td>
</tr>
<tr>
<td>IMEI information</td>
<td>Displays the IMEI information.</td>
</tr>
<tr>
<td>IP address</td>
<td>Displays the IP address of the connected router.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>WLAN MAC address</td>
<td>Displays the MAC address that connects to the WLAN.</td>
</tr>
<tr>
<td>Bluetooth address</td>
<td>Displays the connected Bluetooth address.</td>
</tr>
<tr>
<td>Serial number</td>
<td>Displays the serial number.</td>
</tr>
<tr>
<td>Up time</td>
<td>Displays the running time of the device.</td>
</tr>
</tbody>
</table>

### 3.5 Video Recording

#### 3.5.1 Recording Videos

After you power on the Device, the live view interface is displayed by default.

Press 🎥 to start recording; press 🎥 again to stop recording.

Figure 3-36 Live view interface

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tap the icon, and then enter the login password to manage files. For detailed operations, see &quot;3.8 File Management.&quot;</td>
</tr>
<tr>
<td>2</td>
<td>Displays video quality when recording videos.</td>
</tr>
<tr>
<td>2</td>
<td>Displays image resolution when taking snapshots.</td>
</tr>
<tr>
<td>No.</td>
<td>Description</td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| 3   | Tap the icon to set parameters.  
      - When recording videos, you can tap the icon to set video quality, pre-recording time, and post-recording time.  
      - When taking snapshots, you can tap the icon to set photo resolution, continuous shot, and snap sound. |
| 4   | Tap the icon to switch to the video recording mode.  
      In snapshot taking mode, tap 📡 to switch to the video recording mode. |
| 5   | Tap the icon to start recording videos; tap it again to stop recording.  
      In snapshot taking mode, tap 📡 to take snapshot. |
| 6   | Tap the screen, and the zoom slider is displayed. Drag the slider to zoom in or out 1.0 to 8.0 times. |
| 7   | Displays the remaining capacity/total capacity, and the remaining recording time.  
      - With different video resolution, the remaining recording period is not the same.  
      - Displays the remaining capacity/total capacity, and the remaining snapshot time in snapshot taking mode. |
| 8   | Displays the date, time, serial number, police officer number, and GPS information.  
      To display GPS information, make sure that you have enabled location function and GPS OSD. Go to Settings > Network > Location to enable location function, and go to Settings > Device > OSD > GPS OSD to enable GPS function. |
| 9   | Displays customized OSD information.  
      You can display two customized OSD information on the interface. Before this, you need to use the PCTool to set OSD information and enable custom OSD information.  
      - Use USB cable to connect the Device and PC, run PCTool, enter and confirm the password, and then set the OSD information (the length shall be less than 40 bits).  
      - Go to Settings > Device > OSD > Custom Info to enable or disable customized OSD information. |

### 3.5.2 One Tap to Record Videos

Press 📡 to start recording videos and enter live view interface when the Device has been hibernated. Press 📡 again to stop recording.
3.5.3 Zoom

On the live view interface or when recording videos, press and hold ⬆️ or ⬇️, or tap the screen, and the zoom slider is displayed. Drag the slider to zoom in or out 1.0 to 8.0 times.

3.5.4 Marking Important Videos

When recording videos, press and hold ⭐️ to mark important videos. The videos marked with stars will have "_IMP" filename extensions.

Yellow stars will be displayed at the top right corner of the screen.

Figure 3-37 Marking important videos

3.6 Snapshots

3.6.1 Taking Snapshots

On the live view interface, press 📸 or tap 📸, and you will hear the shutter sound. The working indicator flickers with red light, and then a snapshot is taken. For the parameter description, see Table 3-17.
3.6.2 One Tap to Take Snapshots

Press 📷 to start taking a snapshot when the device has been hibernated.

3.7 Audio Recording

3.7.1 Recording Audios

On any interface, press 📺 to start recording audios. Or tap 🎤 on the main interface. For the parameter description, see Table 3-18.
Table 3-18 Audio recording parameter description

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tap the icon, and then enter the password to manage files. For detailed operations, see &quot;3.8 File Management.&quot;</td>
</tr>
<tr>
<td>2</td>
<td>Tap the icon to set audio format and file type.</td>
</tr>
<tr>
<td></td>
<td>● Audio format: <strong>AAC</strong>, <strong>G.711A</strong>, and <strong>AMR</strong>.</td>
</tr>
<tr>
<td></td>
<td>● File type: <strong>dav</strong> and <strong>aac</strong>.</td>
</tr>
<tr>
<td></td>
<td>● When <strong>Video Format</strong> is set to <strong>MP4</strong>, <strong>Audio Format</strong> cannot be set to <strong>AMR</strong>.</td>
</tr>
<tr>
<td></td>
<td>● When you are recording audios, icon 1 and 2 are hidden.</td>
</tr>
<tr>
<td>3</td>
<td>Tap the icon to start recording audios; tap to stop recording. The system prompts <strong>Audio record is over and saved</strong>.</td>
</tr>
</tbody>
</table>

3.7.2 One Tap to Record Audios

Press to start recording audios when the Device has been hibernated. Press again to stop recording.

3.8 File Management

You can view the photos, videos, and audios saved in the device on this interface.
3.8.1 Viewing Photos

**Step 1** On the main interface, tap .

![Logging in to the File interface](image)

**Step 2** Enter the login password, and then tap Login.

![File management](image)

**Step 3** Select the folder to be viewed.

The system displays the file list on which files are listed in chronological order. The earliest file is at the bottom.
Selecting photos

- Press and hold a photo until ☑️ is displayed at the upper-right corner. The icon in blue means that the photo is selected. See Figure 3-42.

- Tap ☑️ All to select all the files displayed on the current page.

- When one file is selected, ☑️ is displayed at the upper-right corner of the interface. Tap ☐️, and the Details interface is displayed. See Figure 3-43. You can view details about the selected file, including the file type, size, and resolution. To mark the file, tap ☑️ after Important. To cancel the mark, tap ☐️ again.
Step 4  Tap the photo to be viewed.

Figure 3-44 Viewing photos

- To upload a selected photo to the platform, tap 

- To view the previous or next photo, swipe the screen left or right, or press or .

- To zoom in or out a photo by 1.0 to 8.0 times, press and hold or .

- To return to the photo list interface, tap .

- To view photo details, tap .

- To upload a selected photo to the platform, tap 

3.8.2 Video Playback

Step 1  On the file management interface, tap the VIDEO tab. The folder list interface is displayed.
Step 2  Select the folder to be reviewed.

The system displays the file list on which files are listed in chronological order. The earliest file is at the bottom.

Step 3  Tap the video to be played back.

- To play back the previous or next video in the folder, press 
  or 
  when playing back a video.
- To fast backward or fast forward a video, press and hold 
  or 
  or drag the slide bar on the interface when playing back a video.
- To play back a video record slowly or fast, tap 
  or 
- To pause video playback, tap 
  To set the playback volume, tap 
  and then drag the volume bar.
- To return to the video list interface, tap 

- To view video details, tap 📽️.
- To upload a selected video record to the platform, tap 🚪.

### 3.8.3 Audio Playback

**Step 1** On the file management interface, tap the AUDIO tab. The folder list interface is displayed.

![Figure 3-47 Audio tab](image)

**Step 2** Select the folder to be viewed. The system displays the file list on which files are listed in chronological order. The earliest file is at the bottom.

**Step 3** Tap the audio to be played back.

![Figure 3-48 Audio playback](image)
- To play back the previous or next audio in the folder, press 🔄 or ⏩ or tap ⏪ or ⏫ when playing back an audio.

- To fast backward or fast forward an audio, press and hold 🔄 or ⏩ or drag the slide bar on the interface when playing back the audio.

- To pause audio playback, tap 🕹️. To set the playback volume, tap 🎧 and then drag the volume bar.

- To return to the audio list interface, tap ⬅️.

- To view audio details, tap 📈.

- To upload a selected audio to the platform, tap ✈️.

### 3.9 Audio Talk (Optional)

Enable audio talk and then set corresponding parameters. The Device supports two-way talk with the platform.

Make sure that the Device has been registered to the platform. For detailed operations, see "3.4.1.6 Platform Settings."

**Step 1** Set audio talk parameters.

1) On the main interface, tap 📞

![Figure 3-49 Contacts](image)

2) Tap 📞
3) Tap to enable the audio talk function.
4) Set CMS IP as the IP address of the platform server, and then tap OK.
5) Set CMS Login Password as the login password of the user, and then tap OK.

**Step 2** Tap to return to the Contacts interface.

- After the Device has been registered to the platform successfully, it automatically obtains user information from the platform.
- Audio talk function is for online user only.
- To view the latest call history, tap.
- To view the information list, tap.

**Step 3** Tap a user to be called.
Details about the user are displayed.
Step 4  Tap Call to start the audio talk.
To stop the audio talk, tap Hang up.

3.10 One Tap to Switch

In video settings, Record Video&Audio is disabled by default, and you can switch between audio and video by one tap.

- When videos are recorded, press 📼 to stop recording videos and switch to audio recording.
- When audios are recorded, press 📼 to stop recording audios and switch to video recording.

3.11 Recording Video and Audio at the Same Time

Before using the function, you need to go to Device > Video, and then enable Record Video&Audio.

- When videos are recorded, press 📼 to start recording videos and audios at the same time.
- When audios are recorded, press 📼 to start recording audios and videos at the same time.
3.12 Laser Light

The laser light can help you to aim at the objects to be captured.

To enable the laser light, press on any interface except the playback interface. To disable the laser light, press again.

To ensure security, the laser light automatically turns off 10 seconds after it is turned on.

3.13 White Light

The white light helps brighten a totally dark or dim place.

To enable the white light, press on any interface. To disable the white light, press again.

The white light cannot be turned on if the battery level is lower than 5%.

3.14 Data Transmission

The Device can upload data through PCTool and acquisition station.

After USB communication starts, all wireless functions will stop, and white light and IR light will be turned off, and cannot be turned on again. Current audio or video recording will automatically stop. After stopping USB connection, audio or video recording will not automatically resume.

- When the Device is started, connect it to the PC through USB cable, and then run PCTool. Enter and confirm the password, and then you can download the data.
- When the Device is started, connect it to the USB port of the proper data acquisition station. The data on the Device can be automatically uploaded to data acquisition station. If the data on the Device is not properly displayed, disconnect and then connect them again.

3.15 Emergency Alarms

Tap on the top panel to trigger an alarm. After the Device is connected to the platform, the alarm information can be uploaded to the platform.

- Make sure that the Device has been connected to the platform. For detailed operations, see "5 Platform Connection."
After you connect the Device to the platform, configure alarm parameters on the platform, including adding alarm time template and alarm scheme.

### 3.15.1 Adding Alarm Time Template

After you add alarm time template and set the alarm time template for the alarm scheme, the system generates alarms based on the time defined in the template.

**Step 1** Log in to the DSS manager.

**Step 2** Select **Business > Alarm > Alarm Time Template**.

![Figure 3-52 Alarm time template](image)

**Step 3** Click ![Add](image).

![Figure 3-53 Add alarm time template (single period)](image)
Step 4 Configure parameters.

Table 3-19 Parameter description for adding alarm time template

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Template Name</td>
<td>Enter the name of the alarm time template.</td>
</tr>
<tr>
<td>Copy</td>
<td>Select the check box, select a completed alarm time template from the drop-down list displayed on the right, and then copy the time period in this alarm time template.</td>
</tr>
<tr>
<td>Single Period</td>
<td>Set the single alarm period and alarm linkage level. The system generates alarms only within the defined period. To add several alarm periods, click . To delete alarm periods, click . To view and set alarm linkage level, select Business &gt; Alarm &gt; Link Level. For detailed operations, see the DSS platform user's manual.</td>
</tr>
<tr>
<td>Cycle Period</td>
<td>Set cycle alarm period. The system generates alarms based on the defined alarm period, alarm linkage level, repeat time, start date, and end date. 1. For example, after you set the period to 8:00-10:00, Repeat Time to Mon, Start Date to 2017-4-1, and End Date to 2017-4-30, the system detects alarms from 8:00 to 10:00 on every Monday from 2017-4-1 to 2017-4-30. 2. After you select Cycle Period and select the Never Stop check box after End Date, the system detects alarms from 8:00 to 10:00 on every Monday since 2017-4-1. You can only set either Single Period or Cycle Period.</td>
</tr>
<tr>
<td>Memo</td>
<td>Enter the description about the alarm time template.</td>
</tr>
</tbody>
</table>

Step 5 Click OK.
3.15.2 Adding Alarm Scheme

After you set alarm scheme on the platform, the system performs the defined alarm linkage actions when an alarm is triggered.

Add alarm time template before you add alarm scheme. For detailed operations, see "3.15.1 Adding Alarm Time Template."

**Step 1** Log in to the DSS Client.
**Step 2** Select **Alarm Scheme**.

![Figure 3-55 Alarm scheme](image)

**Step 3** Click **New**.
1) Configure parameters.

Table 3-20 Global setting parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheme Name</td>
<td>Enter the name of the scheme.</td>
</tr>
<tr>
<td>Time</td>
<td>Set alarm time as needed.</td>
</tr>
</tbody>
</table>

2) Click Next.
3) Set parameters.
   Select alarm source as needed. Select **External Alarm** under **Alarm channel**.

4) Click **OK**.

5) Select the device to be linked, and then set **Stay Time**.
6) Click **OK**.
7) Repeat Step 3 to add multiple alarm sources and alarm linkage actions.

**Step 4** Click **Alarm Scheme**.

Figure 3-59 Scheme information

After you set alarm scheme, when an alarm is triggered, the alarm is displayed in the device status bar. The alarm information is displayed on the platform.

The figure for the alarm information on the platform is for reference only, and the actual interface shall prevail.
Swipe the device status bar downwards and tap the alarm. The **Alarm** interface is displayed. To clear the alarm, tap 🔄.

**Figure 3-61 Alarm**
4 Upgrade

You can upgrade the system by using PCTool, and data acquisition station.

4.1 Upgrade by PCTool

Procedure

Step 1  Install PCTool.
Follow the instructions by clicking Next to complete the installation process. After installation, there is a PCTool shortcut icon on the desktop.

Figure 4-1 Shortcut icon

Step 2  Start the device, and then use a USB cable to connect the device to the PC.
Step 3  Double-click the PCTool shortcut icon on the desktop, enter the device login password, and then click Confirm.

Figure 4-2 Upgrade (1)

Step 4  Select an upgrade package and then click Upgrade.
The interface shown in Figure 4-3 is displayed. When the upgrade progress reaches 100%, information shown in Figure 4-4 is displayed in the drop-down taskbar.

Figure 4-3 Upgrade (2)

Figure 4-4 Upgrade completed

Step 5 Tap **Upgrade System**. A prompt is displayed.
4.2 Upgrade by Data Acquisition Station

Start the device, and then use a Micro USB to Mini USB converter to connect the Device to the data acquisition station for system upgrade.

- After the Device connects to the data acquisition station and police officers are bound, data is automatically uploaded to the data acquisition station. The Device can be upgraded only after data transmission is completed.
- When the Device is being upgraded automatically, the data acquisition station prompts that the Device is being upgraded, and do not unplug the cable.

4.2.1 Manual Upgrade

Start the device, and then use a Micro USB to Mini USB converter to connect the Device to the data acquisition station. Bind the police officers and select the device you want to upgrade.

The interface shown in Figure 4-6 is displayed on the data acquisition station.

Step 6 Tap OK.

The system restarts and upgrades.
Step 2 Click . The upgrade interface is displayed.

Step 3 Click , and select the path where the upgrade package is saved.

Step 4 Click . The Device starts to upgrade.

After the upgrade is completed, the interface shown in Figure 4-7 is displayed on the data acquisition station. is displayed in the drop-down taskbar of the device.

Figure 4-7 Manual upgrade

Step 5 Tap . The system prompts that the system will restart and upgrade. Are you sure to upgrade?

Step 6 Tap OK. The system restarts and upgrades.
4.2.2 Auto Upgrade

⚠️

The upgrade package is stored in the installation directory of the data acquisition station for auto upgrade.

**Step 1** Start the device, and then use a Micro USB to Mini USB converter to connect the device to the data acquisition station. Bind police officers and select the device you want to upgrade.

The interface shown in Figure 4-8 is displayed on the data acquisition station.

**Figure 4-8 Selecting a device**

![Selecting a device](image)

**Step 2** Click . The upgrade interface is displayed.

**Step 3** Select **Auto upgrade**. The device starts to upgrade automatically.

The interface shown in Figure 4-9 is displayed on the data acquisition station.

**Figure 4-9 Auto upgrade**

![Auto upgrade](image)
After the upgrade is complete, is displayed in the drop-down taskbar of the Device.

**Step 4**  Click . The system prompts that the system will restart and upgrade. Are you sure to upgrade?

**Step 5**  Tap OK.

The system restarts and upgrades.
5 Platform Connection

You can remotely manage the Device on the platform after connecting the Device to the platform.

This chapter takes connecting the Device to DSS platform as an example.

Preparation

- The Device has been connected to the platform.
- Platform connection parameters have been configured. For detailed operations, see "3.4.1.6 Platform Settings."

Procedure

Step 1 Log in to the DSS manager.
Step 2 Select General > Device > Device > Encoder.

Figure 5-1 Log into DSS manager

Step 3 Click Add.
Step 4  Configure parameters.

Table 5-1 Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add Type</td>
<td>Select <strong>Auto Register</strong>.</td>
</tr>
<tr>
<td>Video Server</td>
<td>Select <strong>Platform Server</strong>.</td>
</tr>
<tr>
<td>Registration ID</td>
<td>Keep the value the same as that of device ID on the DSS interface.</td>
</tr>
<tr>
<td>Username</td>
<td>Keep the user name and password the same as those of the Device.</td>
</tr>
<tr>
<td>Password</td>
<td>The default username is <strong>admin</strong>, and the password is the login password that you set at the first startup of the Device.</td>
</tr>
<tr>
<td>Org</td>
<td>Select the organization to which the device needs to be added to.</td>
</tr>
<tr>
<td>Device Name</td>
<td>Customize the device name.</td>
</tr>
<tr>
<td>Device Type</td>
<td>Select <strong>MDVR</strong>.</td>
</tr>
<tr>
<td>Video channel</td>
<td></td>
</tr>
<tr>
<td>Alarm Input Channel</td>
<td>Set <strong>Channel Amount</strong> to 1 and keep the default values of other parameters.</td>
</tr>
<tr>
<td>Alarm Output Channel</td>
<td></td>
</tr>
</tbody>
</table>
Step 5  Click OK.

- After both the platform and Device are configured, is displayed in the status bar of the Device, which means that the Device has been connected to the platform.

- If is displayed in the status bar of the Device, it means that the Device is not connected to the platform. In this case, check the parameter settings on the Device and platform.
6 Battery and Maintenance

The Device supports 5V/2A DC power. When the battery is low, charge the Device in time.

- When the Device has the main battery, the voltage of the main battery is displayed on the interface.
- After the main battery is taken out, the system prompts "The main battery has been removed". In this case, the white light and IR light cannot be enabled. And the WLAN, location, Bluetooth, NFC settings become grey. After installing the main battery, the system prompts the battery restores.

⚠️

- Recharge the battery if the Device will not be in use for a long time.
- The system triggers low voltage alarm when the device voltage is ≤5%.
- The Device automatically shuts down when the power runs out.
- If the Device will not be used for a week or more, charge it to 60%, take the battery out of the Device, and store it in a clean, dry and ventilated room with ambient temperature of 20±5°C.
- Charge the battery once every four months during storage.
- The battery is a consumable accessory. It is recommended to replace it after one year of use.

6.1 Installing the SIM Card

⚠️

- The SIM card and external accessories do not support hot swapping. The operation comes into effect after the Device is restarted.
- Shut down the Device before installing the SIM card; otherwise it the Device might be damaged.

**Step 1** Use one hand to pull down the battery cover lock on the back of the Device, and use the thumb of the other hand to hold the tray on the any side of batter cover. Follow the directions on Figure 6-1 to remove the battery cover.
Step 1  Take out the battery cover

Figure 6-1 Take out the battery cover

Step 2  Take out the main battery.

Figure 6-2 Take out the main battery.

Step 3  Make sure that the metal contact of the SIM card is facing downwards. Follow the directions on Figure 6-3 to push the SIM card upwards to the tray until the SIM card is firm.
6.2 Replacing the Main Battery

For details, see Step 1, Step 2, Step 4 and Step 5 in "6.1 Installing the SIM Card."
Appendix 1 Cybersecurity Recommendations

Cybersecurity is more than just a buzzword: it’s something that pertains to every device that is connected to the internet. IP video surveillance is not immune to cyber risks, but taking basic steps toward protecting and strengthening networks and networked appliances will make them less susceptible to attacks. Below are some tips and recommendations on how to create a more secured security system.

Mandatory actions to be taken for basic equipment network security:

1. **Use Strong Passwords**
   Please refer to the following suggestions to set passwords:
   - The length should not be less than 8 characters;
   - Include at least two types of characters; character types include upper and lower case letters, numbers and symbols;
   - Do not contain the account name or the account name in reverse order;
   - Do not use continuous characters, such as 123, abc, etc.;
   - Do not use overlapped characters, such as 111, aaa, etc.;

2. **Update Firmware and Client Software in Time**
   - According to the standard procedure in Tech-industry, we recommend to keep your equipment (such as NVR, DVR, IP camera, etc.) firmware up-to-date to ensure the system is equipped with the latest security patches and fixes. When the equipment is connected to the public network, it is recommended to enable the “auto-check for updates” function to obtain timely information of firmware updates released by the manufacturer.
   - We suggest that you download and use the latest version of client software.

"Nice to have" recommendations to improve your equipment network security:

1. **Physical Protection**
   We suggest that you perform physical protection to equipment, especially storage devices. For example, place the equipment in a special computer room and cabinet, and implement well-done access control permission and key management to prevent unauthorized personnel from carrying out physical contacts such as damaging hardware, unauthorized connection of removable equipment (such as USB flash disk, serial port), etc.

2. **Change Passwords Regularly**
   We suggest that you change passwords regularly to reduce the risk of being guessed or cracked.

3. **Set and Update Passwords Reset Information Timely**
   The equipment supports password reset function. Please set up related information for password reset in time, including the end user’s mailbox and password protection questions. If the information changes, please modify it in time. When setting password protection questions, it is suggested not to use those that can be easily guessed.

4. **Enable Account Lock**
   The account lock feature is enabled by default, and we recommend you to keep it on to guarantee the account security. If an attacker attempts to log in with the wrong password several times, the corresponding account and the source IP address will be locked.

5. **Change Default HTTP and Other Service Ports**
We suggest you to change default HTTP and other service ports into any set of numbers between 1024~65535, reducing the risk of outsiders being able to guess which ports you are using.

6. **Enable HTTPS**
   We suggest you to enable HTTPS, so that you visit Web service through a secure communication channel.

7. **Enable Whitelist**
   We suggest you to enable whitelist function to prevent everyone, except those with specified IP addresses, from accessing the system. Therefore, please be sure to add your computer's IP address and the accompanying equipment's IP address to the whitelist.

8. **MAC Address Binding**
   We recommend you to bind the IP and MAC address of the gateway to the equipment, thus reducing the risk of ARP spoofing.

9. **Assign Accounts and Privileges Reasonably**
   According to business and management requirements, reasonably add users and assign a minimum set of permissions to them.

10. **Disable Unnecessary Services and Choose Secure Modes**
    If not needed, it is recommended to turn off some services such as SNMP, SMTP, UPnP, etc., to reduce risks.
    If necessary, it is highly recommended that you use safe modes, including but not limited to the following services:
    - **SNMP**: Choose SNMP v3, and set up strong encryption passwords and authentication passwords.
    - **SMTP**: Choose TLS to access mailbox server.
    - **FTP**: Choose SFTP, and set up strong passwords.
    - **AP hotspot**: Choose WPA2-PSK encryption mode, and set up strong passwords.

11. **Audio and Video Encrypted Transmission**
    If your audio and video data contents are very important or sensitive, we recommend that you use encrypted transmission function, to reduce the risk of audio and video data being stolen during transmission.
    Reminder: encrypted transmission will cause some loss in transmission efficiency.

12. **Secure Auditing**
    - Check online users: we suggest that you check online users regularly to see if the device is logged in without authorization.
    - Check equipment log: By viewing the logs, you can know the IP addresses that were used to log in to your devices and their key operations.

13. **Network Log**
    Due to the limited storage capacity of the equipment, the stored log is limited. If you need to save the log for a long time, it is recommended that you enable the network log function to ensure that the critical logs are synchronized to the network log server for tracing.

14. **Construct a Safe Network Environment**
    In order to better ensure the safety of equipment and reduce potential cyber risks, we recommend:
    - Disable the port mapping function of the router to avoid direct access to the intranet devices from external network.
    - The network should be partitioned and isolated according to the actual network needs.
    If there are no communication requirements between two sub networks, it is
suggested to use VLAN, network GAP and other technologies to partition the network, so as to achieve the network isolation effect.

- Establish the 802.1x access authentication system to reduce the risk of unauthorized access to private networks.
- It is recommended that you enable your device's firewall or blacklist and whitelist feature to reduce the risk that your device might be attacked.