

Officiële handleiding Dahua DMSS app (Engels)

DMSS App

User's Manual






Foreword

General

This manual introduces the functions and operations of DMSS App (hereinafter referred to as "the App").

Safety Instructions

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

Signal Words	Meaning
 CAUTION	Indicates a potential risk which, if not avoided, could result in property damage, data loss, lower performance, or unpredictable result.
 TIPS	Provides methods to help you solve a problem or save you time.
 NOTE	Provides additional information as the emphasis and supplement to the text.

Revision History

Version	Revision Content	Release Time
V1.1.0	1. Reorganize manual structure. 2. Update and optimize descriptions for all chapters. 3. Update figures.	January 2020
V1.0.0	First release.	July 2019

Privacy Protection Notice

As the device user or data controller, you might collect personal data of others such as face, fingerprints, car plate number, email address, phone number, GPS and so on. You need to be in compliance with the local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures include but not limited to: providing clear and visible identification to inform data subject the existence of surveillance area and providing related contact.

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.
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1 Overview

1.1 Introduction

DMSS App is a mobile monitoring software that is designed for professional security surveillance. It has functions such as live view, video playback, alarm notification push, and cloud storage. Various devices can be added and used with cellular data or Wi-Fi, such as cameras, video recorders, video intercoms, doorbells, access control devices, and alarm devices.

1.2 Features

- Multiple-channel live view (up to 16 windows), and maximum 4-channel playback.
- Play back videos by fast, slow, or frame mode.
- Snapshot and video recording. Corresponding files are stored locally.
- PTZ control by gestures.
- Automatically play the last-time played video on live interface.
- Video image and bit stream adjustment.
- Support voice call.
- Alarm message subscription and push.
- Device management of remote configuration, alarm output control, password modification, and more.
- Support video intercoms and access control devices.
- Detector control and protection mode switch in Alarm function module.

1.3 Applicable Mobile Phone Model

The App can be installed on Android system of 5.0 or later.

2 Basic Operations

You can do the operations such as device initialization, live view, video playback, remote configuration, push notifications, video talk, and more.

You can use the App after logging in or use it without logging in, and the functions and types of added devices (divided as account devices and local devices) might vary. For example, cloud storage and cloud upgrade are available only after login. This manual takes operations after login as an example.



Interfaces might vary with different added devices, and the actual interface shall prevail.

Account Device

Account devices have following features in general:

- Added after login.
- Have "From ****" below the device name.

Figure 2-1 Account device



- Bound to the account, cannot be used after logout, and cannot be added by other accounts, but can be shared with other users.

Local Devices

Local devices have following features in general:

- Added without login, or added after login but does not have "From ****" below the device name.
- Can only be used on the current mobile phone, cannot be shared, but can be added on multiple mobile phones.

2.1 Login

Step 1 Search for DMSS in Google Play, download, and then install the App.

Step 2 On your mobile phone, tap .

Step 3 Select your region, and then tap **Done**.



You can change your region in **Me > Change Region**.

Step 4 Read *User Service Agreement* and *Privacy Policy*.

Step 5 Tap **Sign up**, enter email address and password, select *I have read and agree to* check box, and then tap **Get verification code**.

Step 6 Enter verification code and then tap **Log in**.

Step 7 Tap **Home**.

Figure 2-2 Home

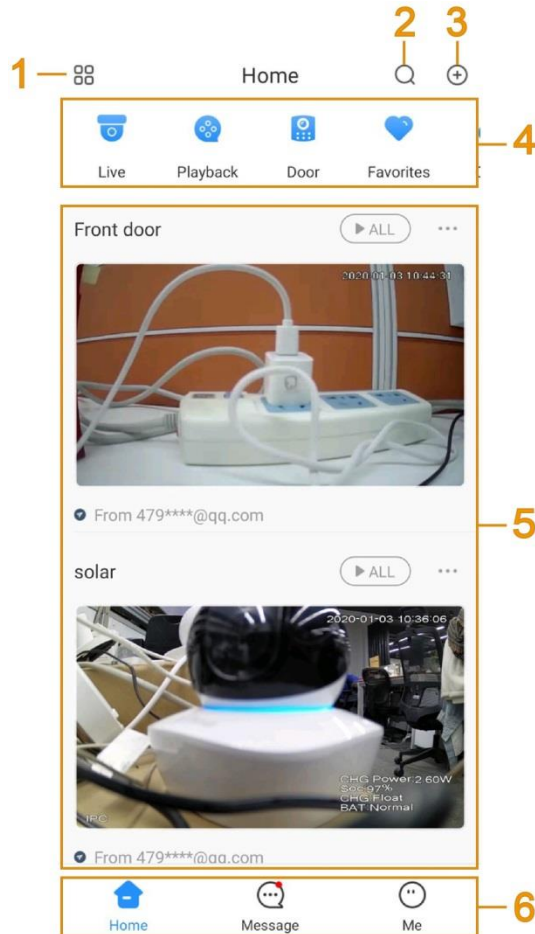




Table 2-1 Home interface descriptions

No.	Function	Description
1	Display mode	Tap to switch between displaying devices in list mode or picture mode.
2	Search	Tap to search devices or channels with keywords.
3	Add devices	Tap to add devices.
4	Function modules	Display the main function modules. Tap and drag the icon to change its place.

No.	Function	Description
5	Devices	Display the added devices. <ul style="list-style-type: none"> • Tap a thumbnail under the device name to play a single channel. If a device has several channels, slide thumbnails to the left to view more. • Tap  to play all channels under this device. • Tap  to view device details and top the device or move down.
6	Navigation bar	Three tabs: Home , Message , and Me .

2.2 Adding Devices

Before operating on the App, you need to add devices such as cameras, video recorders, video intercoms, alarm devices, and access control devices.

Before adding devices, make sure that the device is connected to power, and is in the same LAN as your mobile phone.


- Wi-Fi connection: Connect the device to the same Wi-Fi as the mobile phone.
- Wired connection: Connect the device to the same network as the mobile phone.
- AP configuration: Turn on device hotspot, and connect the mobile phone to the hotspot.

2.2.1 Adding Uninitialized Devices

You need to initialize the device for the first-time use or after it is reset. This section takes adding an uninitialized wireless camera through Wi-Fi as an example.



- Uninitialized devices can only be added through scanning device QR code, or manually entering device SN.
- The on-screen instructions might vary depending on the device you add, and the actual interface shall prevail.

Step 1 On the **Home** interface, tap , and then select **SN/Scan**.

Step 2 Scan device QR code, or manually enter device SN, and then the system will identify the device type automatically.



If the device type cannot be identified by the system, you need to select the device type.

Step 3 Follow on-screen instructions to connect the device, and then tap **Next**.

Step 4 Enter the Wi-Fi password connected by the mobile phone, and then tap **Next**.




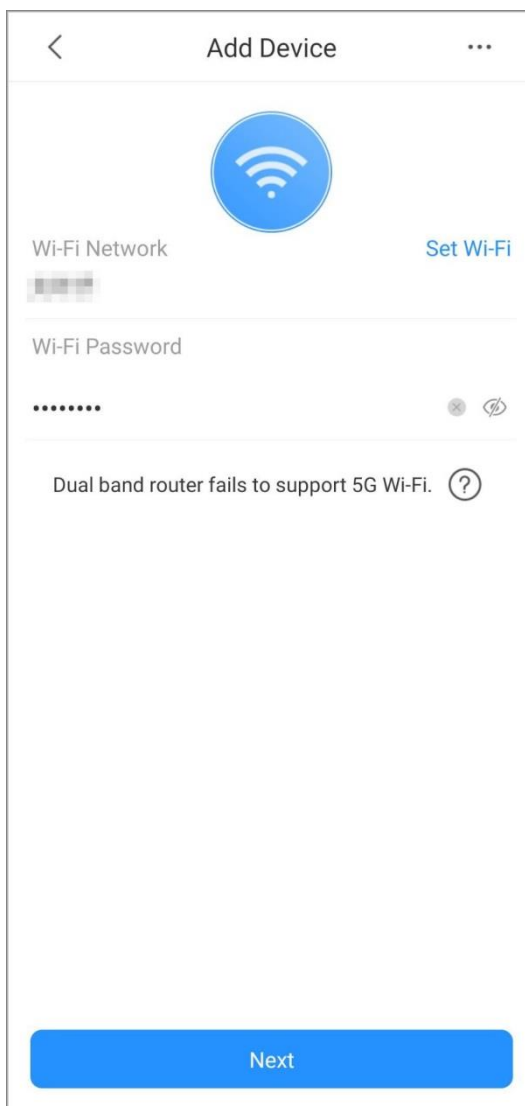
Tap  at the upper-right corner to switch network configuration by Wi-Fi, wire, or AP.

Figure 2-3 Enter Wi-Fi password



Step 5 Set device username, device password, enter email address as needed, and then tap **OK**.

Step 6 On the **Cloud Update Configuration** interface, read **Cloud Access** and **Auto-check items**, select them as needed, and then tap **OK**. The device is initialized.



The **Cloud Update Configuration** only displays when you add uninitialized devices.

Step 7 Enter device name, and then save settings.

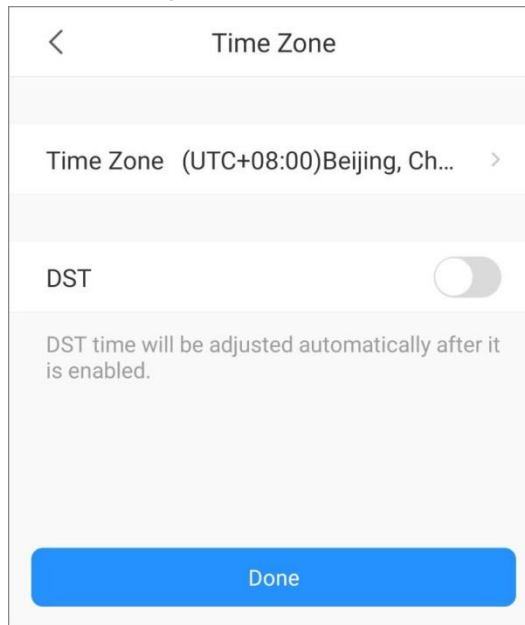
Step 8 Configure time zone as needed, and then tap **Completed**.

The live view is displayed and the device is added.



Time zone configuration is available on account devices.

Figure 2-4 Time zone




2.2.2 Adding Initialized Devices

You can add initialized devices through scanning device QR code, manually enter device SN, entering IP/domain, or searching online devices. This section takes adding an initialized wireless camera as an example.

2.2.2.1 Adding by SN/QR Code

You can add device by scanning device QR code or manually entering device SN.

Step 1 On the **Home** interface, tap , and then select **SN/Scan**.

Step 2 Scan device QR code, or manually enter device SN, and then the system will identify the device type automatically.



If the device type cannot be automatically identified by the system, you need to select the device type.

Step 3 Enter device name, device password, and save settings.

The live view is displayed and the device is added.

Figure 2-5 Add initialized device (SN/scan)

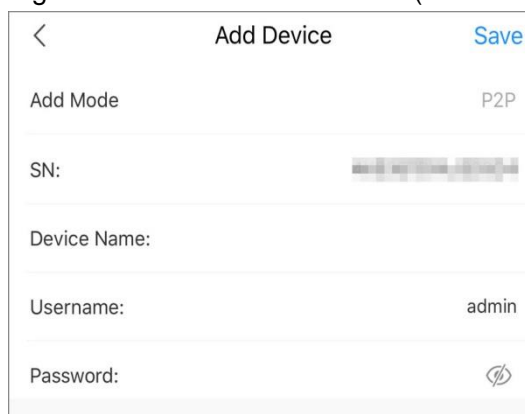


Figure 2-8 Add initialized device (search online)

<	Add Device	Save
Add Mode	IP/Domain	>
Port:	37777	
Address:	[blurred]	
Device Name:		
Username:	admin	
Password:	[masked]	[show/hide icon]

Step 4 Enter information as needed, and then save settings.
The live view is displayed and the device is added.

2.3 Managing Devices


You can configure devices, subscribe alarm messages, configure devices remotely, set video streams, configure alarm output, and more.




Configurations of different devices might vary, and the actual interface shall prevail.

2.3.1 Device Configuration

You can view device information such as adding mode and SN, modify device information such as device name, device password, and username.

Step 1 On the **Home** interface, tap , and then tap **Device Details**.



You can also tap the device or channel, and then tap  on the interface to go to device management interface.

Step 2 Tap **Device Configuration**, and then you can view and modify device information.

Figure 2-9 Device configuration

<	[blurred]	Save
Add Mode:		P2P
SN:		4H05CFEYAZ6C4DA
Device Name:		[blurred]
Username:		admin
Device Password:	 🔒
Modify Device Password		>

Step 3 Tap **Save**.

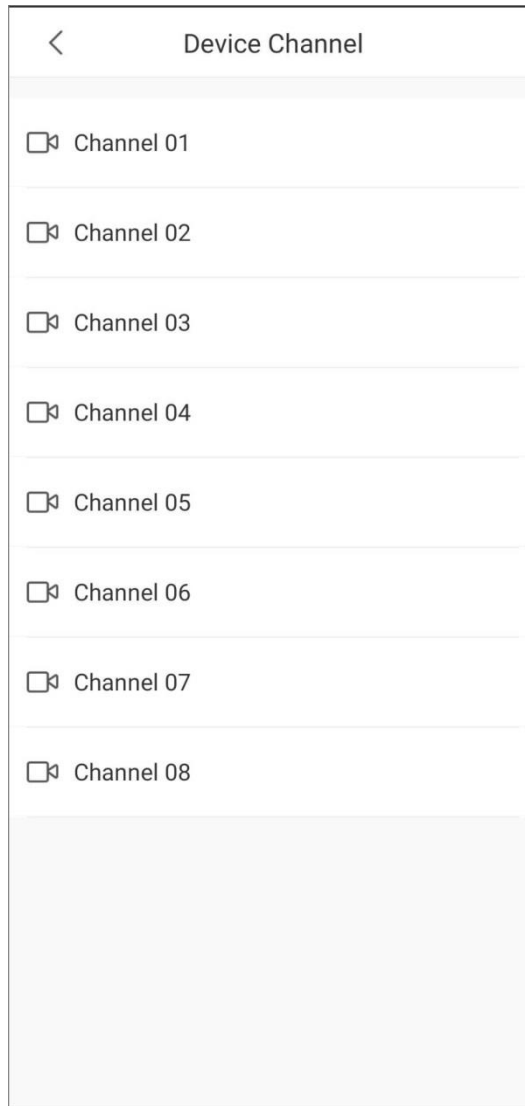
2.3.2 Alarm Subscription

You need to subscribe alarm messages, and then the alarm notification can be pushed to App when the alarm is triggered. For details, see "11.1 Subscribing Alarm Messages."

2.3.3 Device Channel

If a device has more than one channel (such as a network video recorder), you can view the names of those channels under the device.

Figure 2-10 Device channels



2.3.4 Stream Setting

Select video streams from **Sub** or **Main** for live view or video playback.

2.3.5 Remote Configuration

You can remotely configure the device including video detection, alarm setting, camera setting, storage management, and image adjustment.

2.3.5.1 Video Detection

In case of occurrence of moving object within defined conditions and shielded video image, the system performs alarm linkage actions.

Motion Detection

Alarm linkage action is performed when a moving object appears on the image and its moving speed reaches the preset sensitivity.

Step 1 On the **Home** interface, tap *******, and then tap **Device Details**.

Step 2 Tap **Remote Configuration > Video Detection > Motion Detection**.

Step 3 Select the device channel you want to configure.

Step 4 Enable **Advanced Configuration** to configure other parameters.

Figure 2-11 Advanced configuration (motion detection)

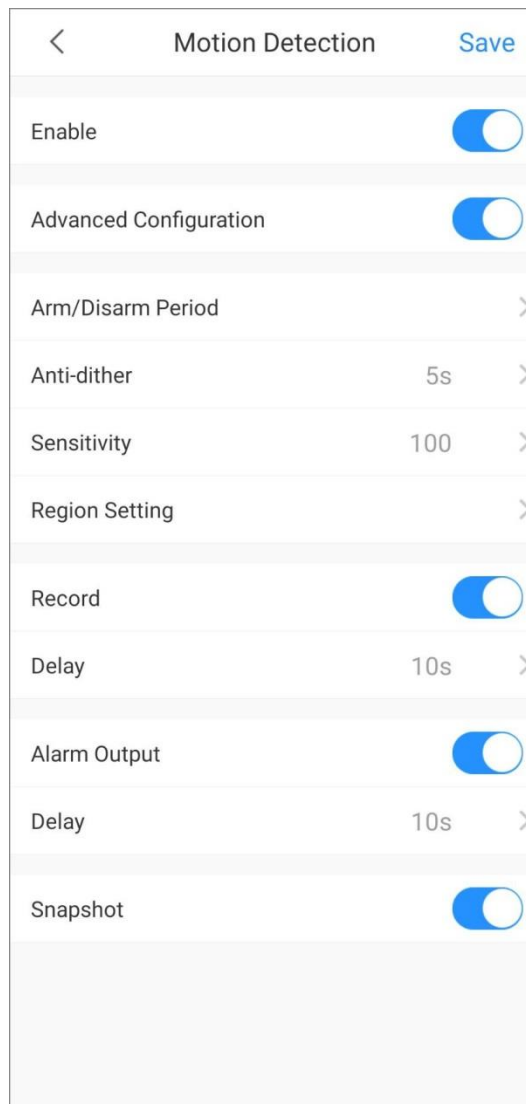




Table 2-2 Advanced configuration (motion detection)

Function	Description
Arm/Disarm Period	<p>Set arming periods, and the alarm can only be triggered when it occurs during the defined period.</p> <p>Tap , select the date, and then set the start time and end time of the period (up to 6 periods can be set each date). See Figure 2-12.</p> <p></p> <p>Tap Copy, select other days as needed, and then the set arming period will apply to the selected days.</p>




Function	Description
Anti-dither	Set anti-dither period from 0 s to 600 s. Only one motion detection event is recorded during the period.
Sensitivity	Set sensitivity value from 0 to 100. It is more easier to trigger the alarm with higher sensitivity.
Region Setting	<p>Set motion detection region. The whole video image is the effective area for motion detection by default. See Figure 2-13.</p> <ul style="list-style-type: none"> • Tap  to set motion detection region. • Tap  to clear the zone you have set. • Tap , and then pinch or stretch out with fingers to zoom out or zoom in the image.
Record	By enabling Record , the system record automatically when the alarm is triggered.
Delay	The alarm record keeps for the defined time after the alarm is ended.
Alarm Output	By enabling Alarm Output , the connected alarm output device will be linked when the alarm is triggered.
Delay	The alarm keeps output for the defined time after the alarm is ended.
Snapshot	By enabling Snapshot , the system automatically captures pictures when the alarm is triggered.

Figure 2-12 Arm/Disarm period

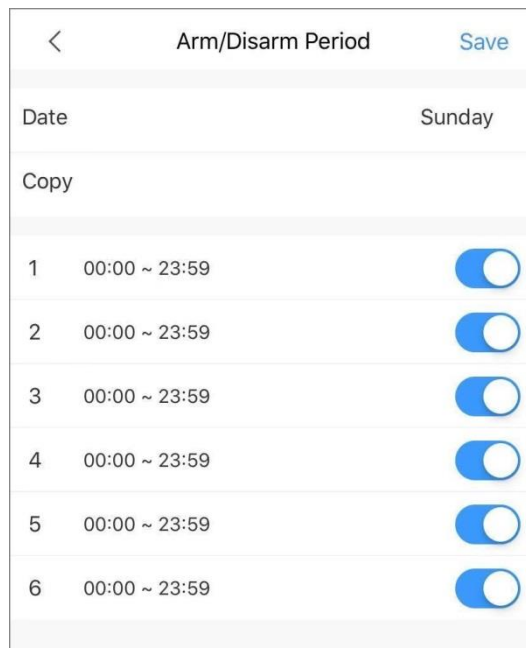
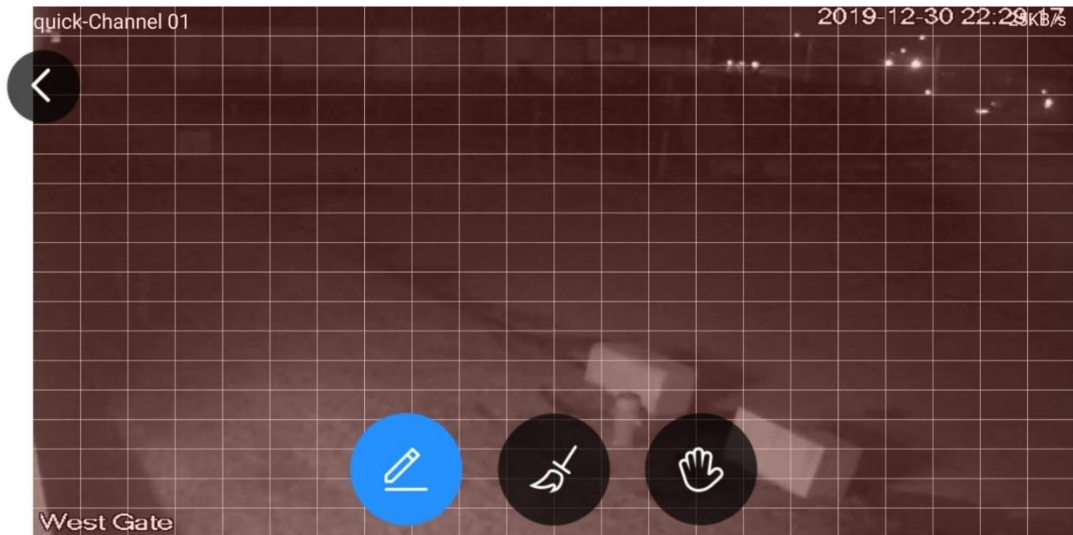


Figure 2-13 Region setting



Step 5 Tap **Save**.

Video Mask

Alarm is triggered when the monitoring image is shielded and the output video is in single color.

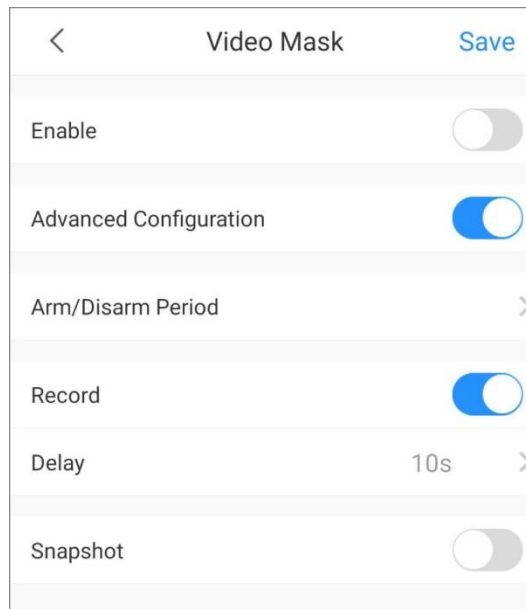
Step 1 On the **Home** interface, tap **...**, and then tap **Device Details**.

Step 2 Tap **Remote Configuration > Video Detection > Video Mask**.

Step 3 Select the device channel you want to configure.

Step 4 Enable **Advanced Configuration** to configure other parameters. For details, see Table 2-2.

Figure 2-14 Advanced configuration (video mask)



2.3.5.2 Alarm Setting

When the alarm is triggered, alarm action is linked such as recording, snapshot, and alarm output.

Alarm types (mainly for network video recorders) include local alarm, network alarm, IPC external alarm, IPC offline alarm, and PIR alarm.

Table 2-3 Alarm setting

Alarm Type	Description
Local Alarm	Connect the alarm device to the alarm input port of the added device. When the alarm is triggered, alarm linkage action performs.
Network Alarm	Alarm linkage action performs when alarm signal is transmitted to the device through network.
IPC External Alarm	Connect the IPC to the alarm input device. When the alarm is triggered, alarm linkage action performs.
IPC Offline Alarm	Alarm linkage action performs when the added device and IPC are disconnected.
PIR Alarm	The alarm is triggered when an object is detected by a PIR-based motion detector.

This section takes setting local alarm as an example.

Step 1 On the **Home** interface, tap **...**, and then tap **Device Details**.

Step 2 Tap **Remote Configuration > Alarm Setting > Local Alarm**.

Step 3 Select the device channel you want to configure.

Step 4 Enable **Advanced Configuration** to configure other parameters.

Figure 2-15 Advance configuration (local alarm)

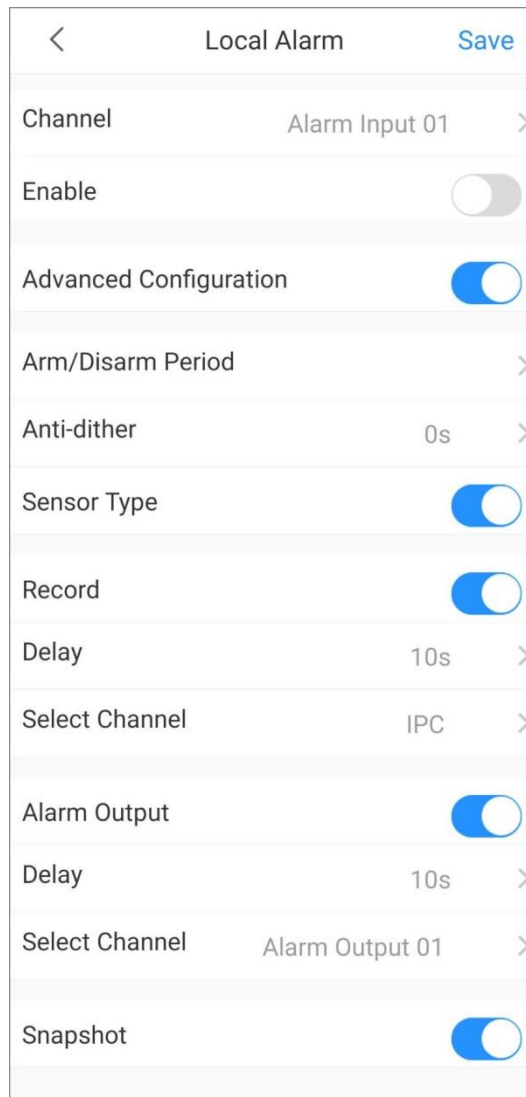


Table 2-4 Advanced configuration (local alarm)

Function	Description
Arm/Disarm Period	See Table 2-2.
Anti-dither	
Sensor Type	Set sensor type as normally open or normally closed.
Record	See Table 2-2.
Delay	
Select Channel	Select the channel to record videos.
Alarm Output	See Table 2-2.
Delay	
Select channel	Select one or multiple channels to output the alarm.
Snapshot	See Table 2-2.

Step 5 Tap **Save**.

2.3.5.3 Camera Settings

You can set video stream parameters such as encoding mode, resolution, frame rate, bit rate type, and bitrate.

Step 1 On the **Home** interface, tap **...**, and then tap **Device Details**.

Step 2 Tap **Remote Configuration > Camera Setting > Video Stream**.

Step 3 Select the device channel you want to configure.

Step 4 (Optional) Set channel name.



It is recommended to set a channel name that is easy to be recognized. You can set according to device installation place.

Step 5 Select main stream or sub stream.

Figure 2-16 Video stream (main)

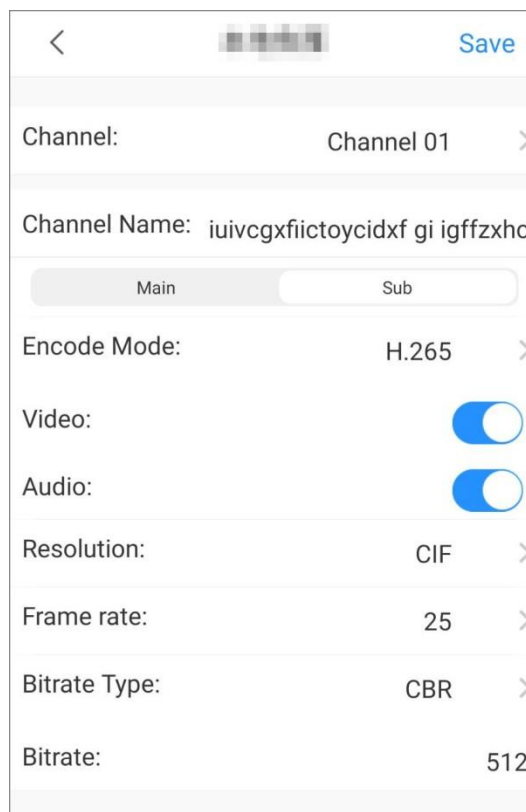



Table 2-5 Video stream parameters

Function	Description
Main/Sub	<ul style="list-style-type: none"> • Main stream: Large bit stream, small compression image, and high resolution, but also requires large bandwidth. • Sub stream: Smaller bit steam, smoother video, and requires smaller bandwidth. Used to replace main stream when the bandwidth is insufficient.
Encode Mode	<ul style="list-style-type: none"> • MJPEG: The image requires high bit rate to ensure clarity. It is recommended to set the Bitrate value to the biggest for a better image. • H.264: Main Profile encode mode. • H.264H: High Profile encode mode; use smaller bandwidth than H.264 with the same image quality.
Video	This parameter can be set only when you select sub stream. By enabling Video , the video stream type is sub stream.
Audio	Set the audio stream type as main stream or sub stream.
Resolution	<p>Set video stream resolution. The higher the resolution is, the better the video quality, but the bigger the bandwidth will be.</p>  <p>Resolutions supported by the device might vary, and the actual interface shall prevail.</p>
Frame rate	Set frame rate from 1 to 30. The higher the frame rate is, the more vivid and fluent the video, but the bigger the bandwidth will be.
Bitrate Type	<ul style="list-style-type: none"> • CBR (Constant Bit Rate): The bit rate changes little and keeps close to the defined bit rate value. When the scene is complicated, the image might not be clear; when the scene is simple, the bandwidth might be wasted. • VBR (Variable Bit Rate): The bit rate changes along with monitoring scene, so as to make image clear under complicated scene and the bandwidth is small under simple scene.
Quality	This parameter can be configured only when the Bitrate Type is set as VBR . The better the quality is, the larger the bandwidth will be.
Bitrate	Set video bitrate. The higher the bitrate is, the faster the data is transmitted.

Step 6 Tap **Save**.

2.3.5.4 Storage Manager

Configure the device recording period and recording type.

Step 1 On the **Home** interface, tap **...**, and then tap **Device Details**.

Step 2 Tap **Remote Configuration > Storage Manager > Schedule**.

Step 3 Select the device channel you want to configure.

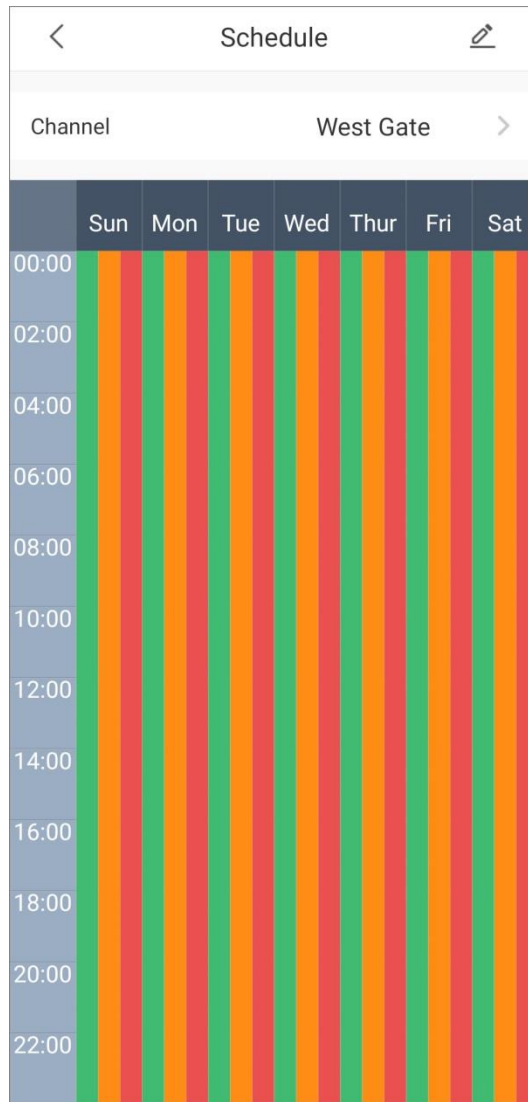



Different recording types have different colors.

- Green: Normal video recordings.
- Orange: Record when motion detection alarm is triggered.

- Red: Alarm recording. Record when alarm is triggered.

Figure 2-17 Schedule



Step 4 Tap , select the date, and then set the start time and end time of the period (up to 6 periods can be set for each day).



Tap **Copy**, select other days as needed, and then the set arming period will apply to the selected days.

Figure 2-18 Set recording

Record		Save
Date	Sun	>
Copy		>
1	00:00:00-23:59:00	>
<input checked="" type="checkbox"/> Nor...	<input checked="" type="checkbox"/> Moti...	<input checked="" type="checkbox"/> Alarm
2	00:00:00-23:59:00	>
<input type="checkbox"/> Nor...	<input type="checkbox"/> Moti...	<input type="checkbox"/> Alarm
3	00:00:00-23:59:00	>
<input type="checkbox"/> Nor...	<input type="checkbox"/> Moti...	<input type="checkbox"/> Alarm
4	00:00:00-23:59:00	>
<input type="checkbox"/> Nor...	<input type="checkbox"/> Moti...	<input type="checkbox"/> Alarm
5	00:00:00-23:59:00	>
<input type="checkbox"/> Nor...	<input type="checkbox"/> Moti...	<input type="checkbox"/> Alarm
6	00:00:00-23:59:00	>

Step 5 Tap **Save**.

2.3.5.5 Image Adjustment

Adjust live video image such as focus, zoom, brightness, contrast, and image quality.

Step 1 On the **Home** interface, tap **...**, and then tap **Device Details**.

Step 2 Tap **Remote Configuration > Image Adjustment**.

Step 3 Select the device channel you want to configure, and then the system goes to live interface.

Figure 2-19 Image adjustment

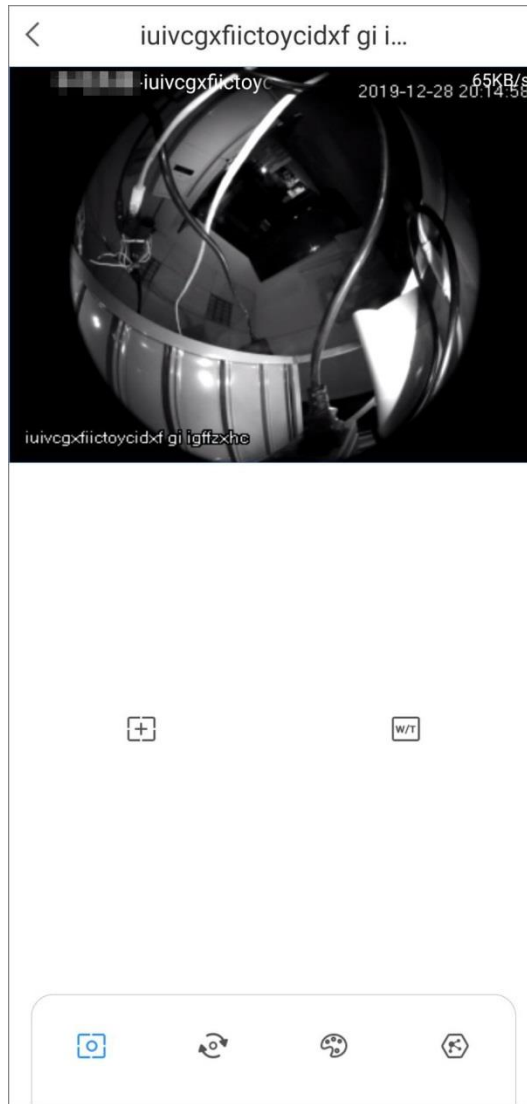























Table 2-6 Function icon descriptions

Function	Description
Focus/Zoom	<p>Tap , and then you can:</p> <ul style="list-style-type: none"> • Tap  to adjust focus to make the image clearer. • Tap  to zoom out or zoom in the image. <p></p> <p>Tap + or – on the image to adjust focus or zoom effect.</p>
Rotate/Flip	<p>Tap  to rotate or flip the image.</p> <ul style="list-style-type: none"> • Tap  to flip horizontally. • Tap  to flip vertically. • Tap  to rotate 90° anticlockwise. • Tap  to rotate 90° clockwise.

Function	Description
	<ul style="list-style-type: none"> • Tap  to rotate 180°.
Image effect	<p>Tap  to adjust image effect.</p> <ul style="list-style-type: none"> • Tap  to adjust brightness. • Tap  to adjust contrast. • Tap  to adjust hue. • Tap  to adjust saturation. • Tap  to restore to default.
Video quality	<p>Tap  to adjust live video quality.</p> <ul style="list-style-type: none"> • Tap  to switch to real-time mode. • Tap  to switch to fluent mode. • Tap  to switch to auto mode.

2.3.6 Alarm Output

You can set alarm output mode as close, manual, or automatic. When the added device has connected to alarm output device, and **Alarm Output** is enabled in **Video Detection** or **Alarm Setting**, you need to set alarm output mode to make alarm linkage actions work.

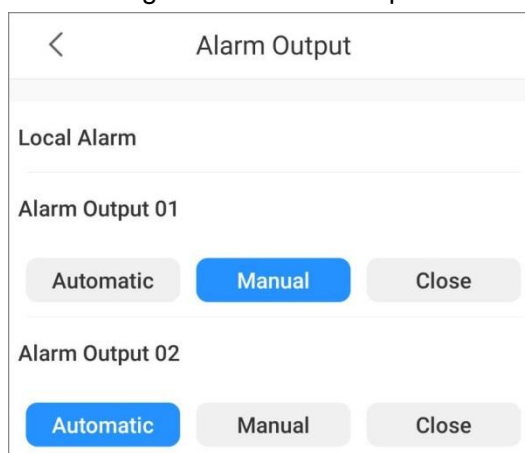
Step 1 On the **Home** interface, tap , and then tap **Device Details**.

Step 2 Tap **Alarm Output**.

Step 3 Set alarm output mode.

- **Automatic:** Alarm is triggered only when the alarm event occurs.
- **Manual:** Alarm is always on.
- **Close:** Alarm is disabled.

Figure 2-20 Alarm output



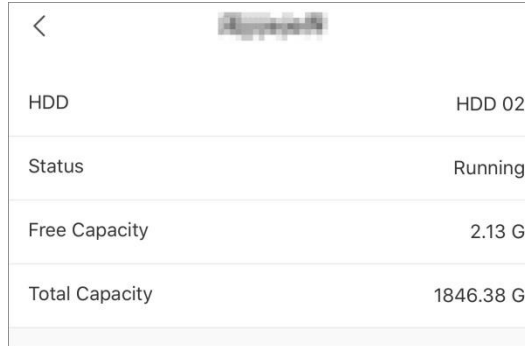
2.3.7 HDD Management

You can view HDD name, status, and capacity.

Step 1 On the **Home** interface, tap **...**, and then tap **Device Details**.

Step 2 Tap **HDD Manager**.

Figure 2-21 Hardware management



HDD 02	
HDD	HDD 02
Status	Running
Free Capacity	2.13 G
Total Capacity	1846.38 G

2.3.8 Time Zone

When your region has Daylight Saving Time (DST), you can select the time zone and set DST.



The function is available on account devices.

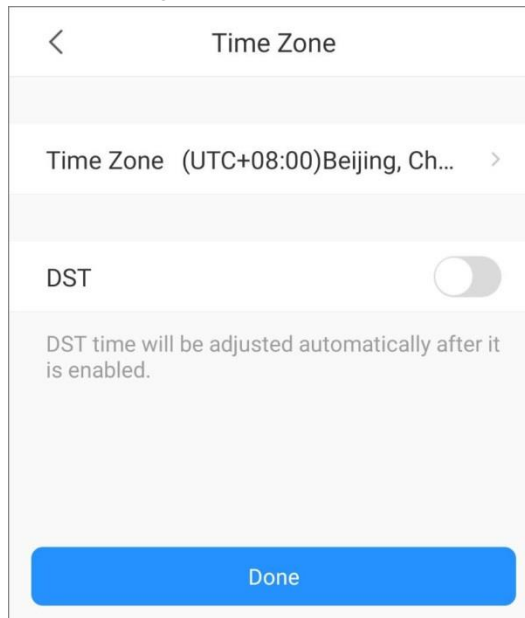
Step 1 On the **Home** interface, tap **...**, and then tap **Device Details**.

Step 2 Tap **Time Zone**.

Step 3 Select the time zone that the device is at.

Step 4 (Optional) Enable DST, and then set start time and end time of the DST.

Figure 2-22 Time zone



2.3.9 Custom Audio and Video Encryption

After enabling **Custom Audio and Video Encryption**, you need to enter password for live view and playback (cloud videos included).



The function is available on account devices.

Step 1 On the **Home** interface, tap **☰**, and then tap **Device Details**.

Step 2 Tap **Custom Audio and Video Encryption**.

Step 3 Enable the function and set password.

2.3.10 Sharing Devices

You can share devices with up to 6 DMSS users.



The function is available on account devices.

Step 1 On the **Home** interface, tap **☰**, and then tap **Device Details**.

Step 2 Tap **Device Sharing**.

Step 3 Tap **+**, and then enter DMSS account to be shared with.

2.3.11 Cloud Update

You can view the current device version and upgrade the device when a new version is discovered by the system.



The function is available on account devices.

Step 1 On the **Home** interface, tap **☰**, and then tap **Device Details**.

Step 2 Tap **Cloud Update**, and then follow on-screen instructions to upgrade the device.

2.3.12 Other Parameters

You can view the information of the connected solar power system, such as its electricity generation power, status of the solar power panel, the battery, the load, and the controller.

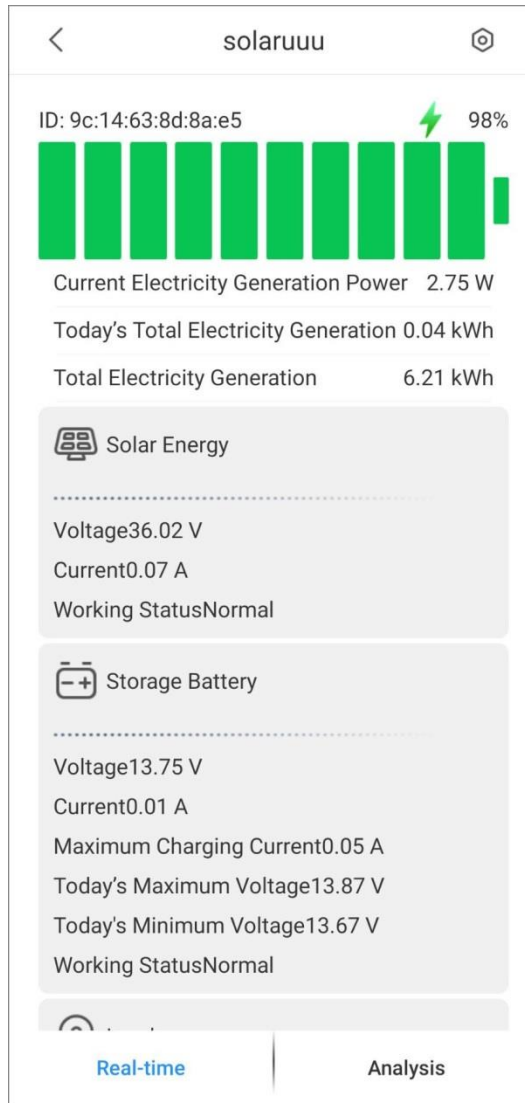
Step 1 On the **Home** interface, tap **☰**, and then tap **Device Details**.

Step 2 Tap **Other Parameters**.

Step 3 Tap the solar power system you want to view.

Step 4 Tap **Real-time** or **Analysis** to view real-time or history data of the solar power system.


Figure 2-23 Solar power system



2.3.13 Creating Device Card

You can quickly add devices by scanning the device card.

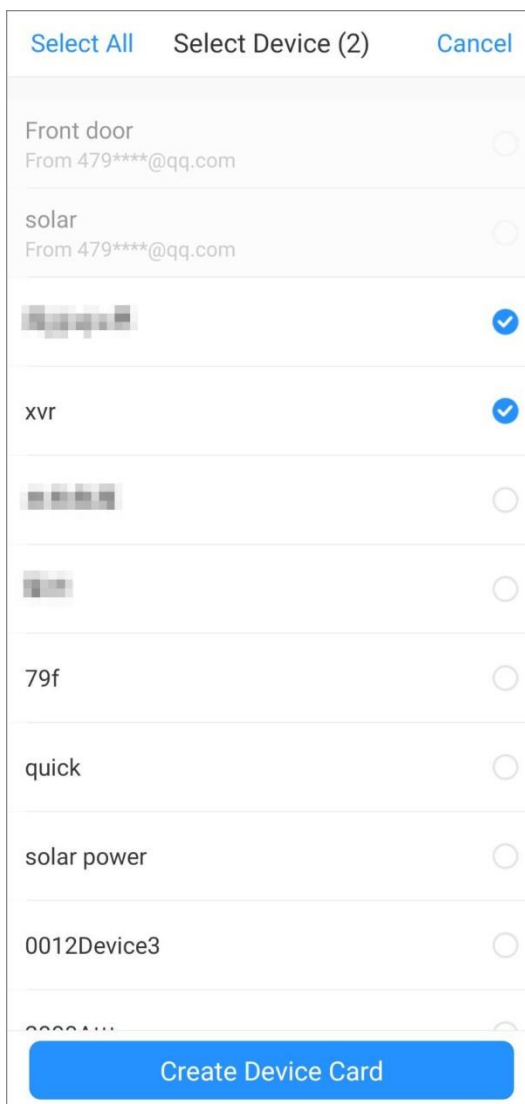
Step 1 On the **Home** interface, tap  to display devices in list mode.

Step 2 Tap , select devices (up to 10), and then tap **Create Device Card**.



You cannot create device card for account devices.

Figure 2-24 Create device card



Step 3 (Optional) Enter password, and then tap OK.



You need to enter the password when you import devices by scanning the device card.

Step 4 Save the QR code of the device card to your album.

2.3.14 Deleting Device

You can delete added devices as needed.

Step 1 On the **Home** interface, tap **☰**, and then tap **Device Details**.

Step 2 Tap **Delete**.

3 Live View

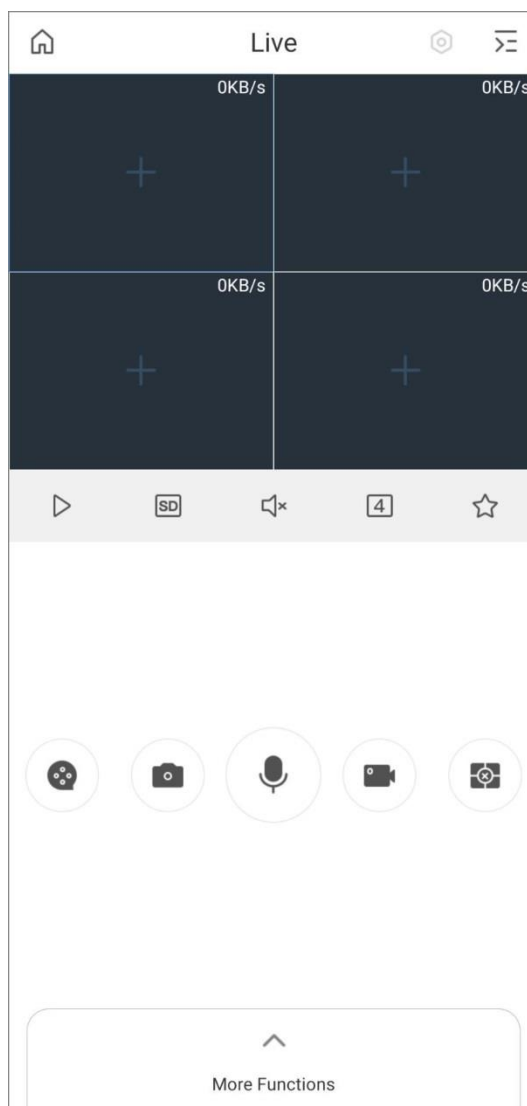
You can view the monitoring channels and do the operations such as taking snapshots, recording videos, and adding channels to favorites.

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





On the **Home** interface, tap a thumbnail under the device to play the selected channel.

Figure 3-1 Live



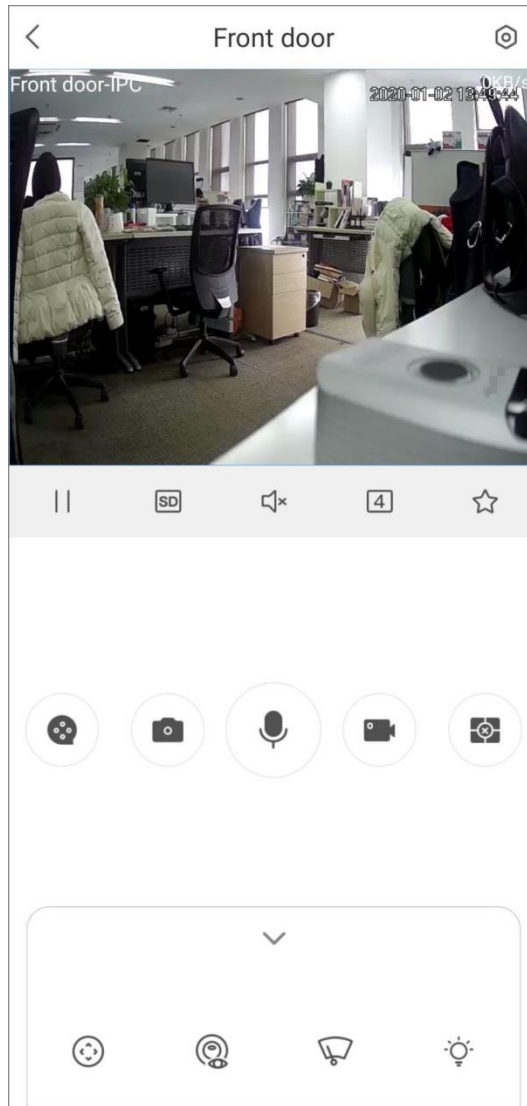
Step 2 Play a channel or multiple channels.

- Play a channel: Tap  in the window, and then select a channel in the device list to be played.
- Play multiple channels: Tap , select channels in the device list as needed.












When displayed channels exceed the maximum number of displaying window you set, swipe left or right to view other live videos.

















Figure 3-2 Live view of a single channel














Tap **More Functions** at the bottom to display the hide functions.

Table 3-1 Live view function icons

Function	Description
Device details	Tap  to go to the device details interface, and then you can configure your device. For details, see "2.3 Managing Devices."  You can also tap  of a device on the Home to view its details.
Play/Pause	Tap  to pause playing and tap  to play.
Video stream	Tap  to switch between SD and HD video quality.
Mute/Unmute	Tap  to mute the video. Tap  to unmute.
Window split	Tap  to change window split modes. You can display in 1, 4, 9, or 16 windows.

Function	Description
Favorites	Tap  to create a favorites group and add the selected channel to the Favorites or to the existing favorites group. See "9 Favorites."
Recording playback	Tap  to go to video playback interface and today's recording will be automatically played if it exists.
Snapshot	<p>Select a video, and then tap  to take snapshot.</p> <p></p> <ul style="list-style-type: none"> You can configure the capture mode in Me > Setting. For more details, see "12.1 Setting." Snapshots are saved in the File. You can also tap the captured image at the lower-left corner on Live interface to go to File. For more details, see "10 File."
Video recording	<p>Select a video, and then tap  to start recording. Tap the icon again to stop recording.</p> <p></p> <p>Recorded videos are saved in the File. You can also tap the video at the lower-left corner on Live interface to go to File. For more details, see "10 File."</p>
Voice call	<ul style="list-style-type: none"> Select a video, and then tap  to enable two-way voice call if the function is supported. Tap and hold the icon till the Voice Call interface is displayed. Tap the device to which the channel belongs to enable device talk if the function is supported. <p></p> <p>If a device has many channels, tap  on Live interface is talking to the played channel, and device talk means directly talking to the device.</p>
Memory play/Close videos	<ul style="list-style-type: none"> Memory play: Tap  (a tick in the center) to play the channels that have been played last time. Close videos: Tap  (a cross in the center) to close all the played videos.
PTZ control	<p>Select a video, tap More Functions, and then tap  to control PTZ.</p> <ul style="list-style-type: none"> Tap  to zoom in or zoom out the image. Tap  to adjust the brightness of the video. Tap , select the preset point, and then tap  to turn the PTZ to the monitoring target.


Function	Description
	<ul style="list-style-type: none"> Use  to control PTZ directions: Left, right, up, down, upper-left, upper-right, lower-left, and lower-right are supported.  <p>You can also use gestures to control PTZ.</p> <ul style="list-style-type: none"> Swipe on the screen to control the PTZ direction. Pinch or stretch out with fingers on the screen to zoom out or zoom in.  <ul style="list-style-type: none"> Only one window is displayed during PTZ control. PTZ function is available on select models.
Fisheye	<p>Select a video, tap More Functions, and then tap  to enable fisheye. Swipe on the screen to adjust the display effect of video image.</p>  <p>The function is available on select models.</p>
Wiper	<p>Select a video, tap More Functions, tap , and then the wiper control interface is displayed.</p> <ul style="list-style-type: none"> Tap Single, the wiper works one time, and then stop. Tap Enable, then configure time interval, the wiper works after each time interval. Tap Stop, the wiper stops working.  <p>The function is available on select models.</p>
Spotlight/Buzzer	<p>Tap , and then select  to enable white light; select  to enable buzzer.</p>  <p>The function is available on select models.</p>
Full screen	<p>Turn off the portrait orientation lock. Hold your mobile phone horizontally, and then the video is displayed in full screen.</p>
Change video place	<p>Tap and hold a video, and then you can move it to the target window.</p>
Enlarge window	<p>Double tap the window to enlarge it. Double tap again to restore.</p>
Help	<p>If the video is not properly played, tap Help in the window to solve the problem.</p>
Delete video	<p>Tap and hold a video till the trash bin appears at the top of the interface. Drag the video to the trash bin, and then release.</p>



4 Video Playback

You can search and play back videos according to time, video type, and channels.



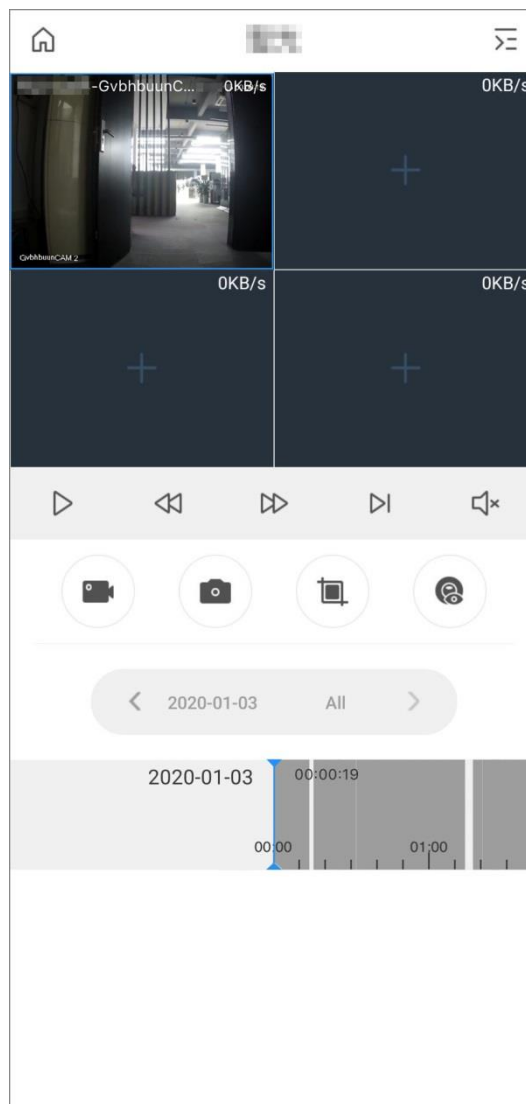
Before playing back videos, you need to set alarm rules and record plan of the channel.

Step 1 On **Home** interface, tap .

Step 2 Tap  or  to select a channel or multiple channels.

Today's video will be played back if it is recorded.

Figure 4-1 Video playback




Step 3 Tap  to change date and record type. The date with a blue dot means it has videos.

Figure 4-2 Playback conditions

Select Search Criteria Cancel

< 2020/1 >

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2 [🔔]	3 [🔔]	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Record Type

All

Regular

Alarm

Motion

Smart




OK

Record types are as follows.

- **All (grey)**: Play all types of records by default.
- **Regular (green)**: Normal recordings.
- **Alarm (red)**: Record when alarm is triggered, such as audio alarm and local alarm.
- **Motion Detection (orange)**: Record when motion detection alarm is triggered.
- **Smart Recording (yellow)**: Record when smart event alarm is triggered such as face detection and recognition, IVS, video metadata, and more.

Table 4-1 Video playback function icons

Function	Description
Play back videos	<p>Select a video, and then you can:</p> <ul style="list-style-type: none"> ● : Pause playing; : Continue playing ● : Play slowly; : Play fast; : Play by frame ● : Mute the video; : Unmute the video.

Function	Description
Clip	Select a video, and then tap  to clip the video. Drag time bar, tap  to set a start point, and then tap  to set a stop point.
Snapshot	See "Table 3-1 Live view function icons."
Video recording	
Fisheye	
Time bar	<ul style="list-style-type: none"> • The color block indicates recorded videos with different types. Grey means all videos; green means regular videos; red means alarm videos; orange means motion detection videos; yellow means smart videos. • Drag the time bar to view the record of any time frame. Pinch or stretch out to zoom the bar.

5 Video Call

You can view the live video of the added video intercoms, realize video call between the device and App, lock/unlock the door, and more.

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

Step 2 Tap  or  to select a channel.

Figure 5-1 Door

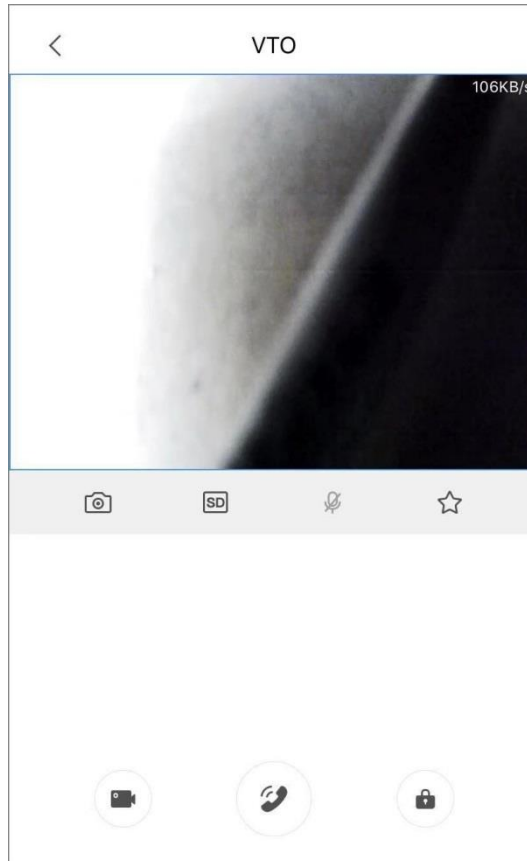















Table 5-1 Video call function icons

Function	Description
Snapshot	See "Table 3-1 Live view function icons."
Video stream	Tap  to switch between SD and HD video quality.
Two-way audio	During talk, tap  to disable two-way audio.
Favorites	Tap  to create a favorites group and add the selected channel to the Favorites or to the existing favorites group. See "9 Favorites."
Record	See "Table 3-1 Live view function icons."

Function	Description
Answer/End the call	<p data-bbox="486 159 539 197"></p> <p data-bbox="486 212 1433 286">Enable Alarm Subscription of the VTO, and then you can answer the call on App when VTO is called.</p> <ul data-bbox="486 315 1433 488" style="list-style-type: none"> <li data-bbox="486 315 1433 360">• App calls VTO: Tap  to call the TVO; tap  to hang up the call. <li data-bbox="486 398 1433 488">• App answers the call from VTO: Tap  to answer the call; tap to  decline or hang up the call.
Unlock	<p data-bbox="486 517 847 562">Tap  to unlock the door.</p> <p data-bbox="486 584 539 622"></p> <p data-bbox="486 651 1433 696">VTO that has two locks can be added to the App. Tap , and then select</p> <p data-bbox="486 734 863 779"> or  to unlock the door.</p>

6 Alarm Control

You can manage the added alarm hub and its detectors such as switching protection mode, setting arm or disarm, and deleting devices.

6.1 Protection Mode


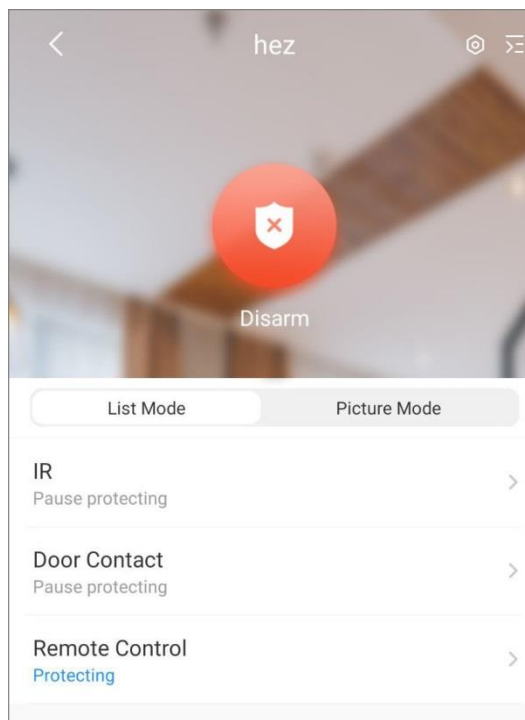
On the **Home** interface, tap .

Figure 6-1 Alarm control




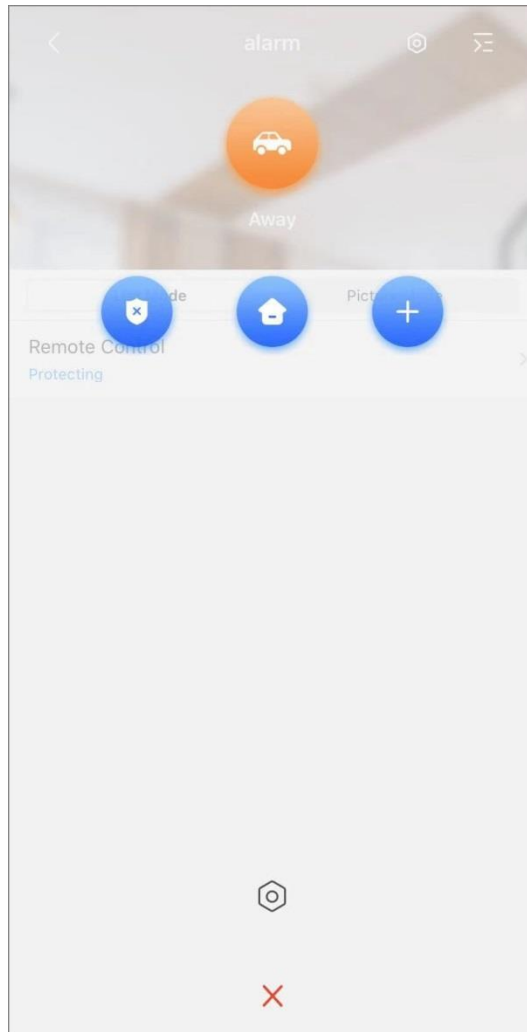
- Tap  to select another alarm device.
- Tap the protection mode icon, and then you can switch modes.

Figure 6-2 Switch protection mode








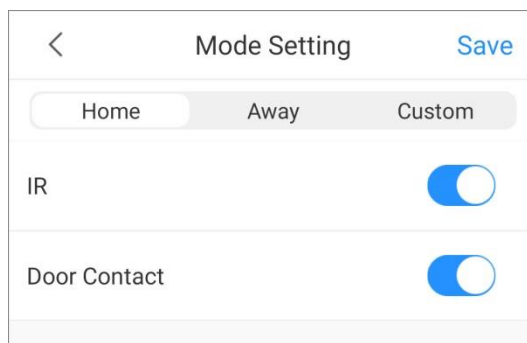
- ◇  : Disarm mode. All detectors are disabled by default and you can set as needed.
 - ◇  : Stay mode. All detectors are disabled by default and you can set as needed.
 - ◇  : Away mode. All detectors are disabled by default and you can set as needed.
 - ◇  : Custom mode. Set as needed.
- Tap the protection mode icon, tap , and then you can enable or disable detectors under different protection modes.

Figure 6-3 Mode setting



6.2 Configuring Alarm Devices



Configuration interfaces might vary with different devices, and the actual interface shall prevail.

Configuring Alarm Hubs

You can view and modify device configuration, enable alarm subscription, and set alarm volume and arm/disarm period.

On the **Home** interface, tap **...** of the alarm hub, and then tap **Device Details**.

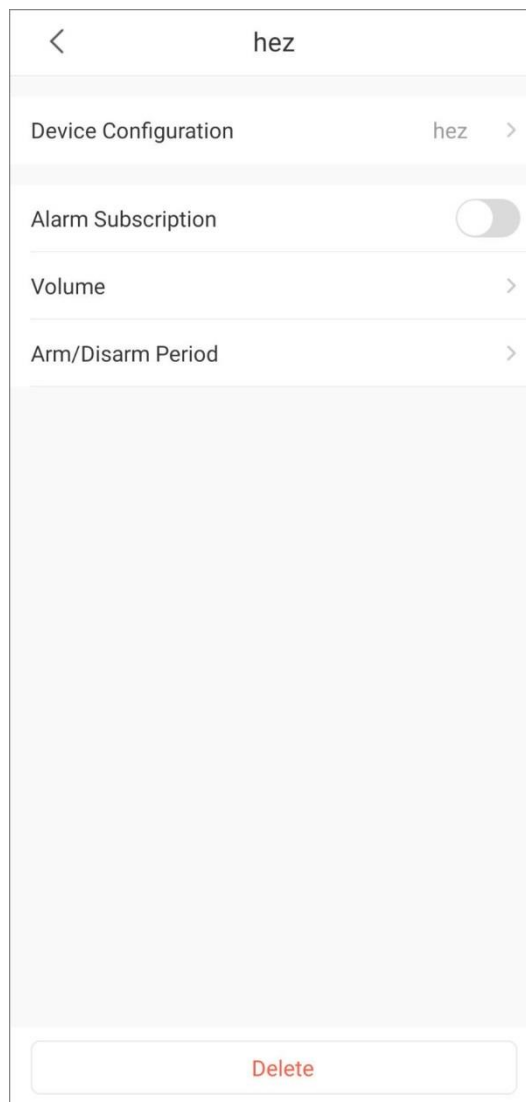


You can also tap the alarm detector under an alarm hub on the **Home** interface, and then tap



to go to device details interface.

Figure 6-4 Configure the alarm hub



Configuring Alarm Detectors

On the **Home** interface, tap the alarm detector under an alarm hub, and then tap the detector.

- Select a linked channel, and then tap **Live View of Linked Channel**, you can view live video of that channel.
- By enabling the siren, it will give a sound when the alarm is triggered.

Figure 6-5 Configure the alarm detector

The screenshot displays the configuration interface for a 'Remote Control' device. At the top, there is a navigation bar with a back arrow, the title 'Remote Control', and a 'Save' button. Below this, the configuration details are listed:

- Name:** Remote Control
- SN:** 156071805CCD9DC
- Linked Channel:** Channel 01 (with a right-pointing arrow indicating a selection menu)
- Enable Siren:** A toggle switch that is currently turned on (blue).

At the bottom of the screen, there are two prominent buttons: a blue button labeled 'Live View of Linked Channel' and a white button with a red border labeled 'Delete'.

7 Access

You can view door status, unlock records, remotely unlock the door, watch live video of the access control device, and more.

On the **Home** interface, tap .

Figure 7-1 Access control device

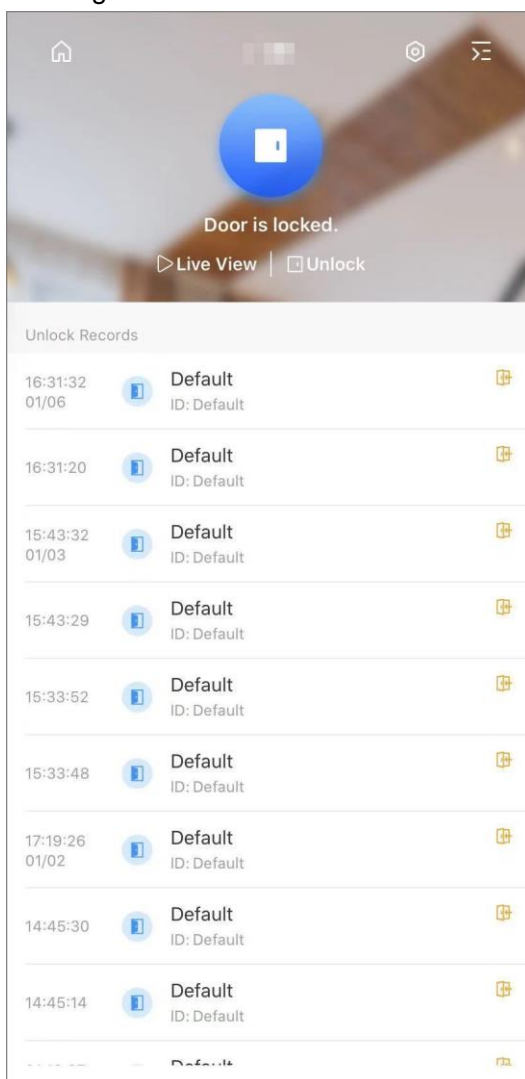




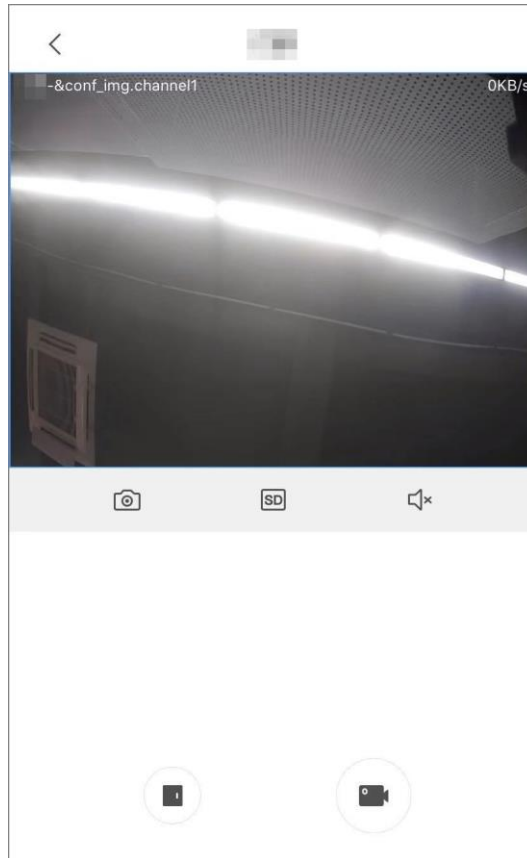


Table 7-1 Function icon description

Function	Description
Switch device	Tap  to select another access control device.
Device details	Tap  to go to device details interface, and then you can view device configuration, and view unlock records within 7 days.  You can also tap  of the access control device on the Home interface, and then tap Device Details .

Function	Description
Door status	<ul style="list-style-type: none"> : The door is locked. : The door is unlocked.
Unlock	Tap Unlock to unlock the door.
Unlock records	<p>Display person name, ID, unlocking time, and unlocking methods.</p> <ul style="list-style-type: none"> : Remotely unlock the door on App. : Unlock by card. : Unlock by fingerprint. : Unlock by password. : Unlock by key. : Unlock by face. : Duress unlock. : Unlock methods combination. : Unlock by group combination. : Failed to unlock the door.
More	Tap More at the bottom of the interface to view unlock records within 7 days.
Live view	<p>Tap Live View to go to live view of the device. See Figure 7-2.</p> <ul style="list-style-type: none"> Tap for snapshot. Tap to switch between SD and HD video quality. Tap to mute the video; tap unmute the video. Tap to unlock the door. Tap to record videos.

Figure 7-2 Access (live)



8 Cloud Storage

Recorded videos and snapshots of account devices are stored in **Cloud Storage**, and you can view them on different mobile clients.



The function is available on devices supporting cloud storage.


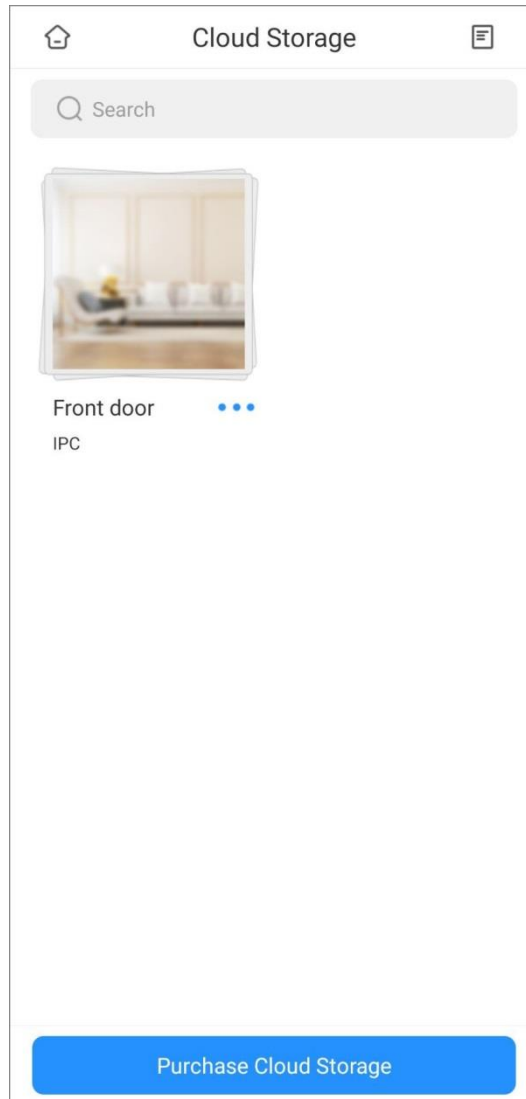


Step 1 On **Home** interface, tap .

Figure 8-1 Cloud storage




- Tap , and then you can view information about your cloud storage plan such as paid, cancelled, and unpaid orders.
- Tap search bar, and then you can enter keywords to search the device.
- Tap **Purchase Cloud Storage** to purchase cloud storage.
- Tap  of a device to view its cloud storage details.

Step 2 Tap the video files of a device in the list.

Step 3 Tap one video to play back.




Tap  to select the date on the calendar. The date with a blue dot means it has cloud record.

9 Favorites

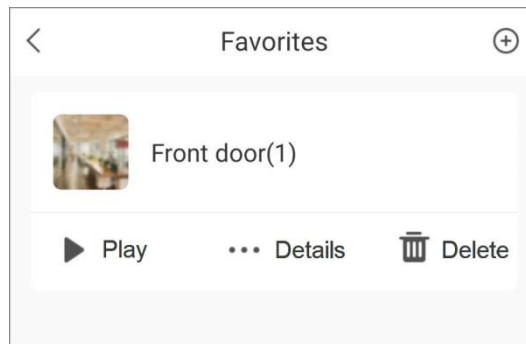
You can save channels to **Favorites** so as to find them and go to live view quickly when needed.




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

Step 2 Tap , select one or multiple channels from the same device type, and then tap **Next**.

Step 3 Enter favorites name to create the favorites.

Figure 9-1 Favorites created



- Tap  to play channels in this favorites group simultaneously.
- Tap  to view details of the channels, delete channels, or rename the favorites.
- Tap  to delete the favorites.

10 File

You can view, manage, share, and export the recorded videos and snapshots in **File**.

On the **Home** interface, tap .





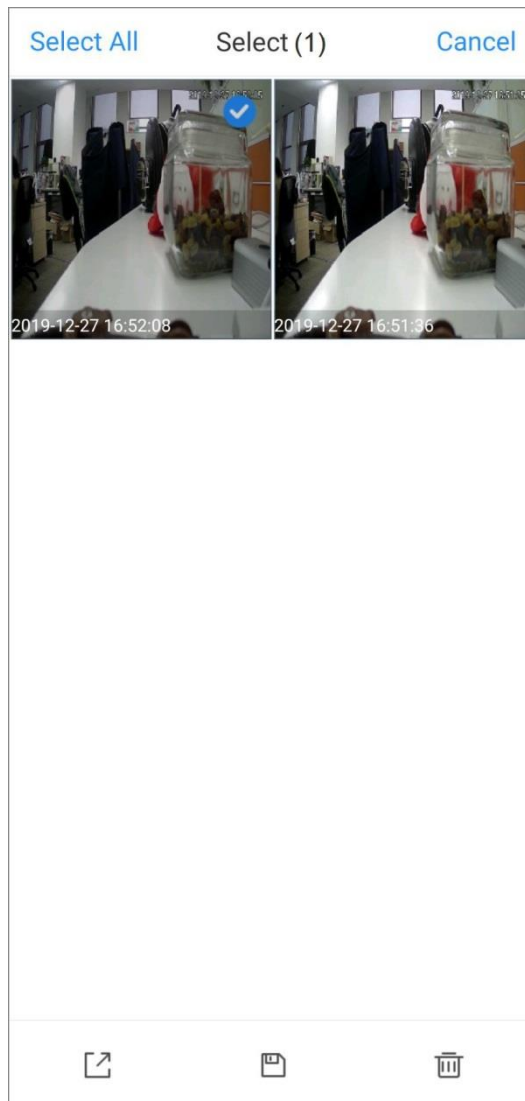
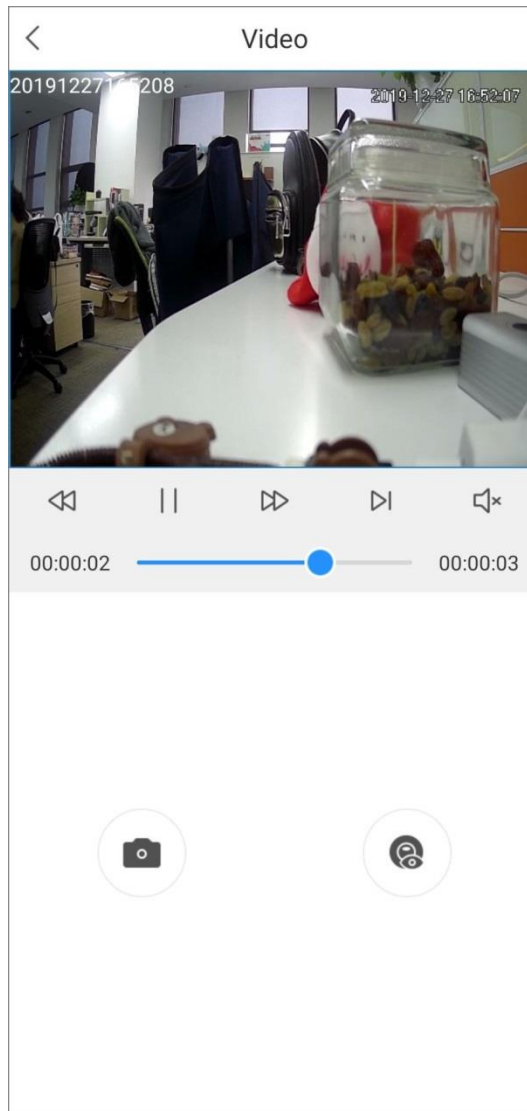
Tap , select one or multiple files, and then tap  to share; tap  to save files on your album; tap  to delete files.

Figure 10-1 Files



Tap a video or a snapshot to view details, and for detailed function icon descriptions on video playback interface, see Table 4-1.

Figure 10-2 Recorded videos



11 Message

Alarm messages generated by added devices can be pushed to the App. You can view recorded videos, live video, and picture playback of alarm events.



You need to set alarm rules and enable alarm function of the device or channel.

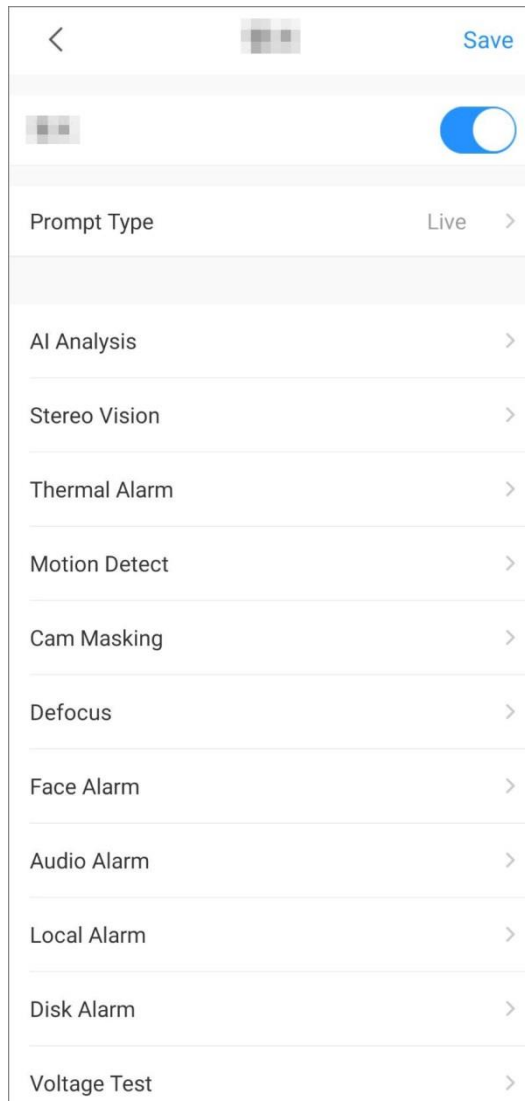
11.1 Subscribing Alarm Messages

You need to subscribe alarm messages, and then the alarm notification can be pushed to App when the alarm is triggered.

Step 1 On the **Home** interface, tap **...**, and then tap **Device Details**.



Step 2 Tap **Alarm Subscription**, and then enable the alarm subscription.

Figure 11-1 Enable alarm subscription



Step 3 Set **Prompt Type** and alarm types as needed. Multiple alarm types can be selected simultaneously.

Table 11-1 Configure alarm subscription

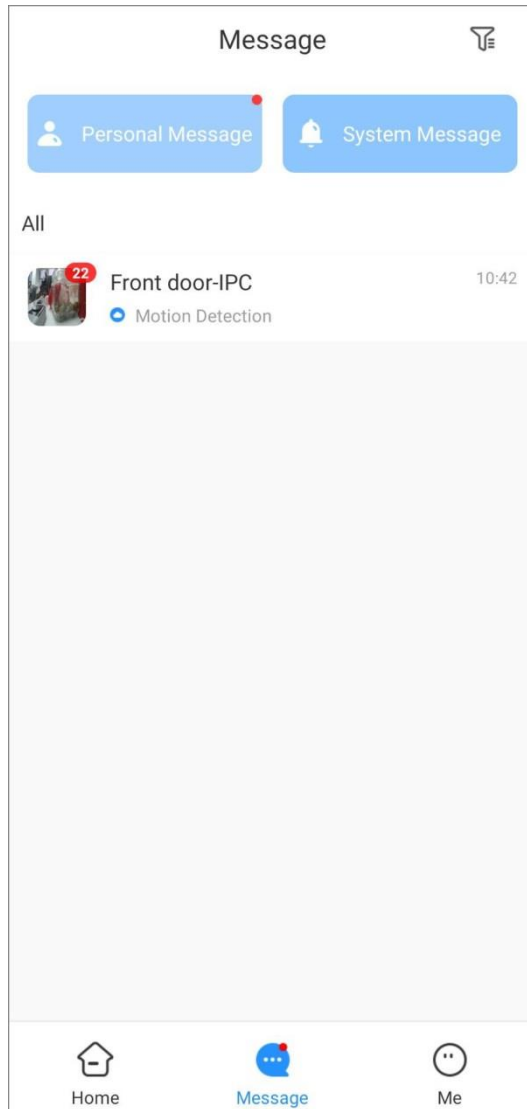
Name	Description
Prompt type	<ul style="list-style-type: none"> ● Live: Live video is pushed when the alarm is triggered. ● Video: The recorded alarm video will be pushed when the alarm is triggered.  <p>You need to install storage device and configure video plan of the device first.</p>
Alarm type	<p>Select alarm types and its specific alarm event, and then alarm notification will be pushed when the alarm events happened.</p> <ul style="list-style-type: none"> ● AI analysis: The alarm is triggered when the set rules are broken such as Tripwire, Intrusion, Abandoned Object, and Scene Changing. ● Stereo Vision: Defined behaviors will be detected and alarmed such as Fall Detection, People Approaching, and People Stay. ● Thermal Alarm: The alarm is triggered when there is abnormal temperature change in the image such as Fire Alarm, Temperature Contrast Alarm, Hot Spot Alarm, and Smoking Alarm.  <p>Thermal imaging alarm is supported by thermal cameras.</p> <ul style="list-style-type: none"> ● Motion Detect: The alarm is triggered when there is abnormal moving object in the image. ● Cam Masking: The alarm is triggered when the camera is covered abnormally. ● Defocus: The alarm is triggered when the camera cannot focus on the target or has softened or blurred image. ● Face Alarm: The alarm is triggered when human faces are detected in the image and alarm is triggered under defined conditions including face detection and face recognition. ● Audio Alarm: Sound in the video is detected and alarm is triggered under conditions such as abnormal audio output and intensity change. ● HDD Alarm: The alarm is triggered when no disk, low space or disk error occur. ● Voltage Test: The alarm is triggered when the device voltage is too low or too high. ● Network Alarm Type: Notification is pushed when network alarm, and IPC offline alarm occur. ● Sensor Alarm: The alarm is triggered when there is alarm information from the connected sensors such as IPC External Alarm, and Accessory Alarm. ● Battery Alarm: The alarm is triggered with low battery or low solar energy.

Step 4 Save settings.

11.2 Viewing Messages


Tap **Message** at the bottom of the interface.


Figure 11-2 Message



Function	Description
Personal message	Display messages such as sharing devices, and deleting devices.
System message	Display messages such as system maintenance and declaration.
Alarm message	Display messages when alarm events happened.

Personal and system messages can only be viewed after login.

Tap  at the upper-right corner to select alarm message sources from cameras, video intercoms, alarm devices, or all devices.

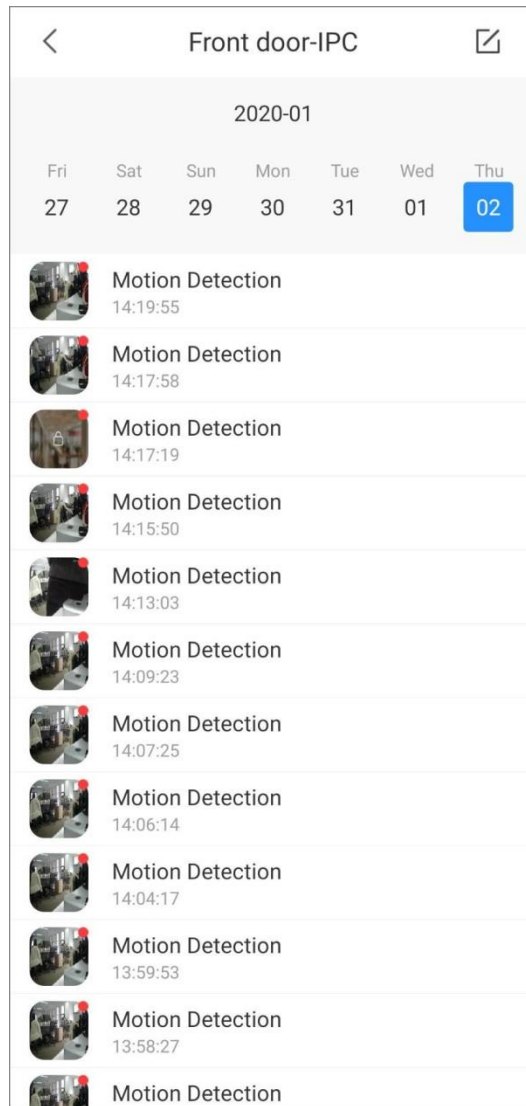
Tap  to stop the alarm sound from detectors.

Step 1 On the **Message** interface, tap an alarm event to view its alarm messages.



Tap  to stop the alarm sound from detectors.

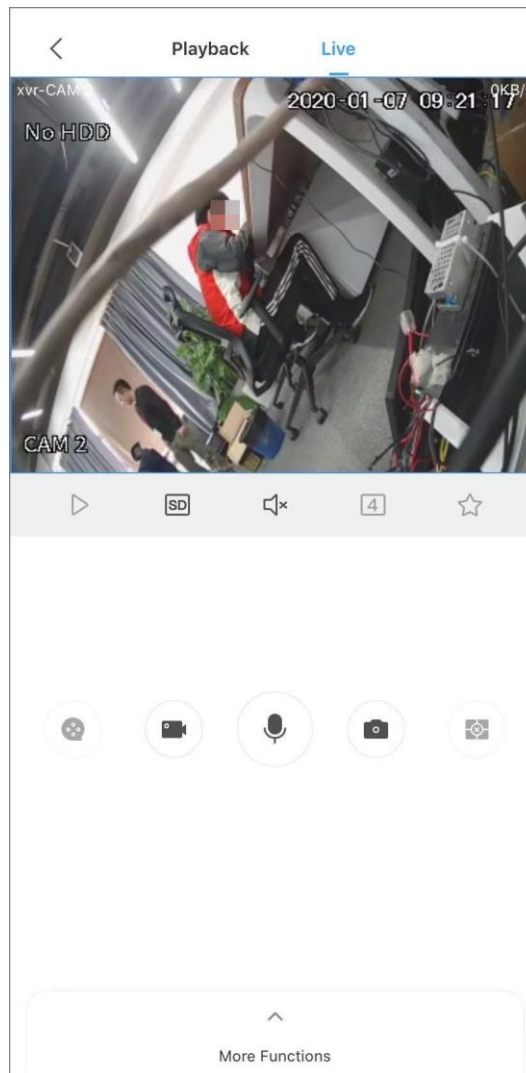
Figure 11-3 Alarm messages



The message with red point is unprocessed.

Step 2 Tap the alarm message as needed, and then the message is displayed as the prompt type you set. For detailed function icon descriptions, see Table 3-1 and Table 4-1.


Figure 11-4 Display the alarm message



11.3 Marking Alarm Messages

Step 1 Tap **Message** at the bottom of the interface.

Step 2 Tap an alarm event to view its alarm messages.

Step 3 Tap , select one or multiple messages with red dot, and then tap **Mark as read** to mark the selected messages as read.

11.4 Deleting Alarm Messages

Step 1 Tap **Message** at the bottom of the interface.

Step 2 Tap an alarm event to view its alarm messages.

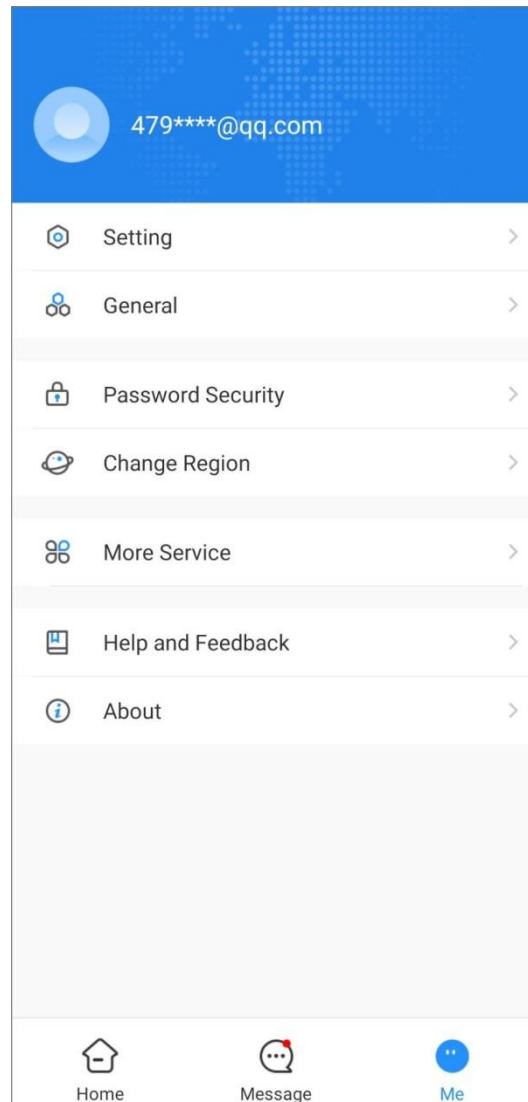
Step 3 Tap , select one or multiple messages, and then tap **Delete**.

12 System Configuration

On **Me** interface, you can set PTZ speed, snapshot capturing mode, enable password protection, view help files, and more.

Tap **Me** at the bottom of the interface.

Figure 12-1 Me



12.1 Setting

On **Me** interface, tap **Setting**.

Figure 12-2 Setting

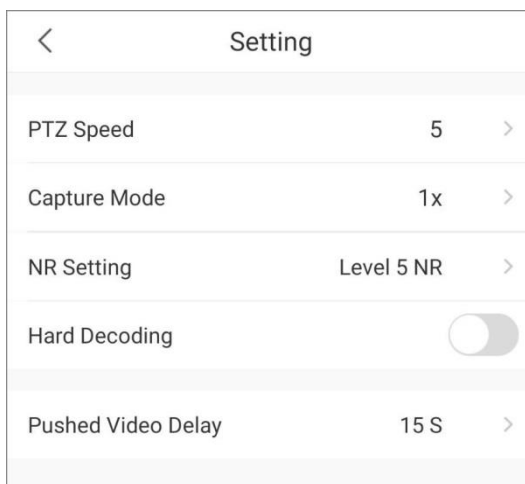



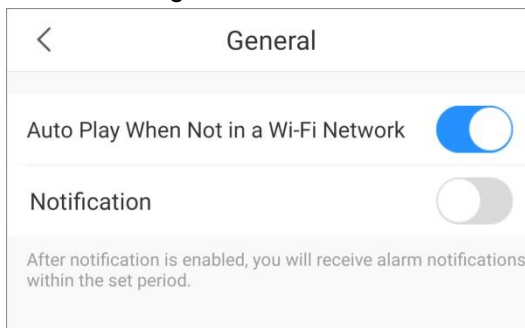
Table 12-1 Setting introduction

Function	Description
PTZ Speed	Select the speed for PTZ camera from 1 to 8. The higher the value is, the faster the PTZ moves.  The function is available on cameras supporting PTZ.
Capture Mode	Set quantity of manual snapshot for a single time.
NR Setting	The higher the NR level is, the better the noise reduction will be.
Hard Decoding	By enabling Hard Decoding , the performance of video stream is improved.
Pushed Video Delay	Set delay of pushed recordings. Total pushed video duration=10 s before recording started + recording duration + delay time you set

12.2 General

On **Me** interface, tap **General Settings**.

Figure 12-3 General



- By enabling **Auto Play When Not in a Wi-Fi Network**, videos can be automatically played with other network such as cellular data.
- By enabling **Notification** and set push period, notifications can only be pushed within the defined period. Period setting is only supported by account devices.

12.3 Password Security

On **Me** interface, tap **Password Security**.

Figure 12-4 Password security



- By enabling **Password Protection**, set password, and then you need to enter password every time you log in to the App or return to App from any interruption.
- **Modify Password**: The function appears after you enable **Password Protection**, and you can modify the protection password.
- **Reset Device Password**: Follow on-screen instructions to scan the QR code and reset device password as needed.

12.4 Changing Region

On **Me** interface, tap **Change Region**, and then you can reselect your region.

12.5 More Service

You can connect to Alexa and Google Home assistant to DMSS App, and control devices on the DMSS with Alexa or Google assistant. Follow on-screen instructions to finish configuration.

12.6 Help and Feedback

On **Me** interface, tap **Help and Feedback**.

- **Help**: You can view brief function introduction and operation instructions with Help files.
- **Feedback**: You can send your feedback to us.

12.7 About

On **Me** interface, tap **About**.

You can view information about the App such as the version, privacy policy, user agreement, declaration, and user data protection guideline, and join user experience plan.

13 Account Management

You can modify the account password, delete account, export account information, and log out.

On **Me** interface, tap .

Figure 13-1 Account management

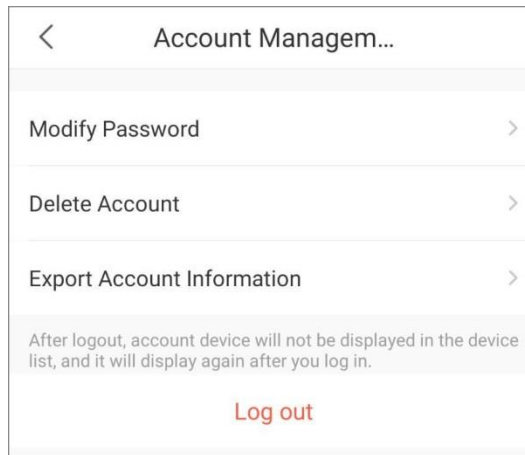



Table 13-1 Account management introduction

Function	Description
Modify Password	Modify login password.
Delete Account	By tapping Apply for Deletion , and then enter verification code, you can delete the registered account.  Information of account, ID, third party authorization, and transaction records will be cleared and cannot be restored. Be careful.
Export Account Information	Export personal and device information to the designated email.
Log out	Tap Log out to log out the device.

14 FAQ

1. Invalid username/Incorrect password/Forgot password

Please confirm the username and password. If you forget the password, reset the device, and then log in to the App again.

2. Locked account

- Account is locked due to multiple times of incorrect input. Please wait until lock period ends or you can reboot the device to unlock.
- Make sure that the password is correct or enter it again. If you forget the password, reset the device, and then log in to the App again.

3. Device connection failed/Login timeout

- Make sure that the device has connected to the network.
- Make sure that the port and IP are correct. Default IP/domain port is 37777.
- Use another device port in case that it is shielded by the Internet carrier or used by other device in the same LAN.
- Use another network or Internet carrier in case of network problem.

4. Over max user connections

The prompt means that current device has reached max user limitation. If you want to add this device to your App, please reduce users connected to this device.

5. Out of resource. The system is currently busy.

Please restart the device or reduce users connected to the device.

6. Alarm notification cannot be received

- If the device does not support alarm notification push, then your mobile phone cannot receive alarm notification.
- Make sure that the device connects to network correctly and live view is available.
- Make sure that the device or channel has subscribed alarm notification.
- If all of the above operations are proper, make sure that device port mapping is correct. Otherwise, you can change http port for mapping.

7. Alarm message cannot be subscribed

- The device does not support alarm notification subscription.
- Make sure that the device connects to network correctly and live view is available.
- Change device http port, and then map again to prevent port conflict or occupation, otherwise improper device might be connected, which do not support alarm notification subscription.

8. The device can be connected to App in a Wi-Fi network not in a cellular network The device can be connected to App through Wi-Fi but not cellular data

When the device can be used in a Wi-Fi network, its configuration is correct. If you need to play with cellular data, you need to:

- Add a fixed Internet IP to your device.
- Connect the device to a router with an Internet IP, and map http port.
- Connect the device to an Internet network. If the device supports P2P and can be registered through P2P, you can add the device through P2P.

9. Failed to play back videos and snapshots

- Enable recording/snapshot plan for the device.
- If the problem still exists, check if device storage component is loose, or disk is damaged.

10. Live view lagged

- Change main stream to sub stream.
- Network bandwidth is insufficient. We recommend you to use a better network.
- Mobile phone decoding capacity is limited. You can play live video in one window, or adjust definition from HD to SD or auto.


11. Wi-Fi configuration failed

- Make sure that the mobile phone has connected to Wi-Fi network and check Wi-Fi password during network configuration.
- Do not use dual band router with 5G frequency.
- During network configuration, keep your mobile phone close to the device (max distance 30 cm).
- If you have configured the network for the device, you need to reset the device, and then configure other network.
- If the problem still exists, please reset the device.


12. Device initialization failed

- Make sure that the device has connected to the network.
- Make sure that the mobile phone and the device are in the same LAN with either Wi-Fi connection or wired connection.
- If the problem still exists, please reset the device.








13. How to view multiple channels simultaneously

Make sure the function is support by the App. Tap  on live view interface, select channels you want to view, and then tap **Start Live View**.

14. How to control PTZ directions and PTZ zoom

Select a video, and then tap  to control PTZ. You can use icons or gestures to control PTZ. Swipe on the screen to control the PTZ direction. Pinch or stretch out with two fingers to zoom in or zoom out.


15. How to make a blurred video clear

- Select a video, and then tap  to switch the stream from SD and HD.
- On **Live** interface, tap , select **Remote Configuration > Image Adjustment**, select the device channel, and then tap  to switch video quality. Tap  to switch to real-time mode. Tap  to switch to fluent mode. Tap  to switch to auto mode.
- You can also customize coding parameters to adapt to your network environment. On **Live** interface, tap , select **Remote Configuration > Camera Setting > Video Stream**. If your mobile phone performance and network environment are both good, select main stream, and then customize resolution, frame rate, and bitrate.

16. How to close a playing video

Tap and hold the video, drag it to the trash bin appeared on the top of the interface, and then release.

17. How to close video during playback

- Tap and hold the video, drag it to the trash bin appeared on the top of the interface, and then release.
- You can also tap  (a cross in the center) to close all the played videos.



18. Videos cannot be viewed

Step 1 Make sure that the information such as IP address and port (37777 by default) is correct when you add the device.

Step 2 Deal with the problem according to the on-screen instructions when you failed to log in.

Step 3 If the problem still exists, check whether the device is online.

19. Where are Remote Configuration, HDD, and Alarm Output

- On the **Home** interface, tap , and then tap **Device Details**.
- You can also tap the device or channel, and then tap  on the interface to go to device management interface.

20. What are the differences between the following device adding methods

- **P2P type**: P2P function is supported by the device. You can add the device by scanning or manually enter QR code.
- **IP/Domain**: Generally, devices can be added by entering their IP. You can also add devices if you have domain address from the third party.

21. How to share snapshots with my friend

You can share recorded videos or snapshots in **File**.

22. Why storage device is needed for local devices if you want to view videos after alarm message is pushed

Videos cannot be stored on Android system. They are acquired from the added device.

23. Where to get the App

Search DMSS in Google Play.

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.

