



# Smart All-In-One LED Display

## User's Manual






# Foreword

## General

This manual introduces the functions and operations of the smart all-in-one LED display (hereinafter referred to as "the Device"). Read carefully before using the Device, and keep the manual safe for future reference.

## Safety Instructions

The following signal words might appear in the manual.

Signal Words	Meaning
 <b>WARNING</b>	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
 <b>CAUTION</b>	Indicates a potential risk which, if not avoided, could result in property damage, data loss, reductions in performance, or unpredictable result.
 <b>NOTE</b>	Provides additional information as a supplement to the text.

## Revision History

Version	Revision Content	Release Time
V1.0.1	Updated the information of appearance and sturcture.	February 2024
V1.0.0	First release.	September 2023

## Privacy Protection Notice

As the device user or data controller, you might collect the personal data of others such as their face, fingerprints, and license plate number. You need to be in compliance with your local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures which include but are not limited: Providing clear and visible identification to inform people of the existence of the surveillance area and provide required contact information.

## About the Manual

- The manual is for reference only. Slight differences might be found between the manual and the product.
- We are not liable for losses incurred due to operating the product in ways that are not in compliance with the manual.
- The manual will be updated according to the latest laws and regulations of related jurisdictions. For detailed information, see the paper user's manual, use our CD-ROM, scan the QR code or visit our official website. The manual is for reference only. Slight differences might be found between the electronic version and the paper version.

- All designs and software are subject to change without prior written notice. Product updates might result in some differences appearing between the actual product and the manual. Please contact customer service for the latest program and supplementary documentation.
- There might be errors in the print or deviations in the description of the functions, operations and technical data. If there is any doubt or dispute, we reserve the right of 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 company names in the manual are properties of their respective owners.
- Please visit our website, contact the supplier or customer service if any problems occur while using the device.
- If there is any uncertainty or controversy, we reserve the right of final explanation.

# Important Safeguards and Warnings

This section introduces content covering the proper handling of the device, hazard prevention, and prevention of property damage. Read carefully before using the device, and comply with the guidelines when using it.

## Storage Requirements



- Stably put the device onto a support platform that is strong enough to prevent the device from falling.
- Do not place the device in a place exposed to sunlight or near heat sources.
- Store the device under allowed humidity (10%–60% (RH)) and temperature (–20 °C to +60 °C, or –4 °F to +140 °F) conditions.

## Installation Requirements



- Securely attach the device to a structure in the building or a mobile stand before you begin to use it.
- 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.
- Select a suitable wall mount with a yellow label and let it be installed by professionals.
- Do not install the device in a place exposed to sunlight or near heat sources.
- Keep the device away from dampness, dust, and soot.
- Install the device on a stable surface to prevent it from falling.
- Install the device in a well-ventilated place, and do not block its ventilation.
- The power supply must conform to the requirements of ES1 in IEC 62368-1 standard and be no higher than PS2. Please note that the power supply requirements are subject to the device label.
- The rated power is 1,600 W (100–180 VAC) or 2,400 W (180–240 VAC).
- The appliance coupler is a disconnection device. Keep it at a convenient angle when using it.
- Make sure to install a circuit breaker or similar devices in the external power circuit.
- Place the device in a location that children cannot easily access.
- Follow the instructions to safely and correctly install the device.

## Operation Requirements



- The contact rating of the device is about 13 mA. Before you connect the device to its power supply, make sure the power supply is connected to an earthed power socket.
- Be cautious when using the device to avoid injuring people, especially children.
  - ◇ Follow the recommendations of the manufacturer to select whether to install the device in a cabinet, bracket or to use other mounting methods.
  - ◇ Do not allow people to climb the device and protect the power supply.



- ◇ Protect the line cord and wires from being walked on or squeezed, and organize them so people cannot trip on them.
- ◇ Do not place the device in an unstable environment.
- High voltage inside the device. Do not disassemble the device without a qualified professional present to avoid the risk of being exposed to danger.
- Improper use of the battery might result in a fire or explosion.
- Replace unwanted batteries with new batteries of the same type and model.
- Use the standard power adapter. We will assume no responsibility for any problems caused by the use of a nonstandard power adapter.
- Use the power cords that are recommended for the region and conform to the rated power specifications.
- Make sure all cables are connected correctly before plugging the device into the power. Do not overload the power socket or pull the power cord. Otherwise, it might cause fire or electric shock.

 **WARNING**

- Avoid using the device in an area with a lot of radio interference.
- There is high pressure in the device. To avoid the risk of electric shock, non-professionals should not open the back cover.
- Improper use of the battery might result in a fire or explosion.
- Make sure to use the same model when replacing the battery.
- Use the standard power adapter. We will assume no responsibility for any problems caused by the use of a nonstandard power adapter.
- Use the power cord that is recommended for the region and conforms to the rated power specifications.
- Do not overload the power socket or unplug the power cord while the adapter is powered on to avoid electric shock and fires breaking out.



- Operate the device within the rated range of power input and output.
- Do not disassemble the device.
- Use the device under allowed humidity (10%–90% (RH)) and temperature (–10 °C to +40 °C, or +14 °F to +104 °F) conditions.
- The appliance coupler is a disconnection device. Keep it at a convenient angle when using it.
- The device has sharp edges. Please be careful when you are next to it.

## Maintenance Requirements

 **DANGER**

- Make sure to use the same model when replacing the battery to avoid fire or explosion. Dispose the battery strictly according to the instructions on it.
- Power off the device before maintenance to make sure that the device is disconnected from the power supply.



- The front cover at the lower beam of the device is used for quick maintenance. When the bottom row of light panels is removed, you must overcome the magnetic pull of the front cover. There is a safety cable connected to the front cover of the device that protects the front cover.
- Cut off the power before cleaning the device. To clean the device, do not use liquid detergents or spray detergents.

- Use the clean and soft cloth or use the special lens wiping cloth when cleaning the surface of display screen. Do not use the wet cloth to clean the display screen. Otherwise, it may do harm to the screen.

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# 1 Overview

## 1.1 Introduction

The smart all-in-one LED display is an integrated multimedia device, which integrates large screen, electronic whiteboard, application, and central control system. It can be widely used in enterprise, government and finance.

The Device supports the following functions and features:

- Ultra-light and ultra-thin design: the thickness of the screen is less than 19 mm, and the thickness of the wall-mount installation is less than 39 mm.
- With the design of privacy protection, the device adopts a built-in flip camera, which automatically pans up during use, and pans down when it stops working.
- 8 MP wide-angle camera: Diagonal: 99°, horizontal: 87°, vertical: 49°.
- With built-in fingerprint identification module, supports fingerprint for locking and unlocking screen.
- Wi-Fi 6, which is faster than Wi-Fi 5. You can select 2.4G or 5G bands.
- Screen sharing, group settings, multiple screens and moderator control.
- Reverse controlling of the screen through PAD and phone.
- Scan the QR code to share the file.
- Meeting sign-in through person recognition.
- Non-contact gestures to swipe screens or take snapshots.
- Electronic whiteboard.

## 1.2 Packing List

Check whether there is any obvious damage on the packing box. Unpack the box and check whether the components are complete according to the packing list.

Table 1-1 Packing list

Name	Quantity	Name	Quantity
LED column	5	Transverse beam	1
Front cover	1	Beam connector	1
Camera	1	Power cable	1
LED modules (box)	13	Remote control	1
Projector	1	Type-C cable (on the camera)	1
HDMI cable (on the camera)	1	Hub accessory package	1
LED accessory package	1	Wall mount screw (preinstalled)	16
OPS sheet metal bracket	1	Quick start guide	1
Cabinet screw	40	M5 × 12 screw	12

## 1.3 Structure

### 1.3.1 Appearance and Structure

Figure 1-1 Appearance

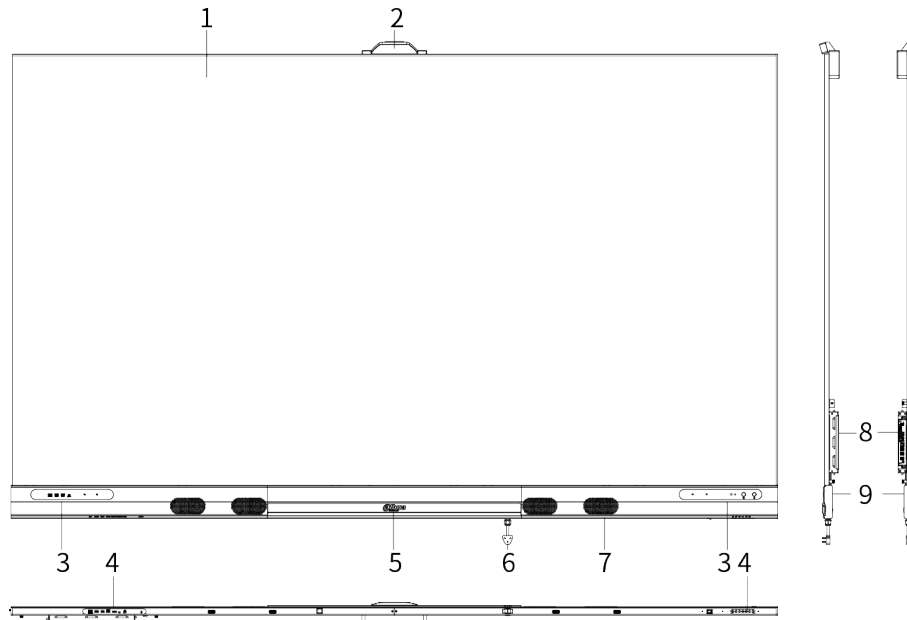




Table 1-2 Description of appearance

No.	Description
1	LED screen.
2	Camera.
3	Front panel.
4	Bottom panel.
5	Indicator light. The light is red when the Device is on standby and blue when the Device is in normal use.  You can set the display mode of the indicator light as needed.
6	Power input port. Inputs 100–240 VAC power.
7	Speaker. Plays multi-media sound.
8	OPS module. Switches between Android and Windows system.  OPS module does not come with delivery. Please purchase it as needed.
9	Transverse beam, which contains the main control modules.

## Front Panel

Figure 1-2 Front panel (1)

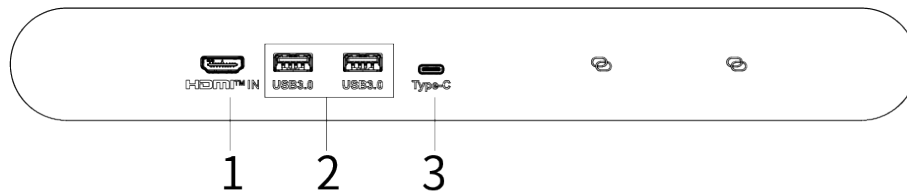


Figure 1-3 Front panel (2)

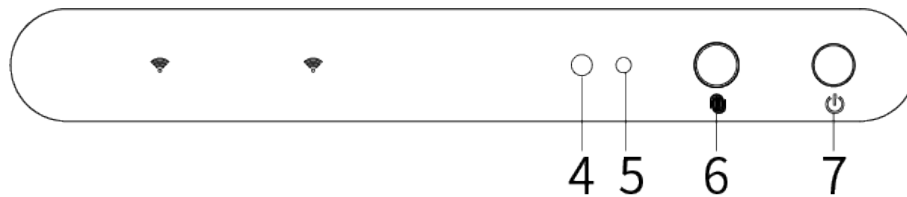




Table 1-3 Front panel description

No.	Description
1	HDMI IN. HD audio and video signal input port. Connects to the computer, set-top box, and other video devices with HDMI output ports.
2	USB 3.0. Connects to USB devices such as mobile hard disk, USB flash drive, USB keyboard, and USB mouse. They are accessible both from the built-in Android system and the optional OPS computer module.  USB 3.0 Type A, supports 5 V 1 A (MAX).
3	Type-C. Connect a laptop or other devices to the Device through the Type-C port for screen sharing and other operations.  Type-C supports 5 V 3 A, 9 V 3 A, 15 V 3 A and 20 V 3 A (MAX).
4	IR sensor. Receives signals from the remote control.
5	Light sensor. The Device recognizes the ambient brightness through the light sensor and automatically adjusts the backlight brightness according to the ambient brightness.
6	Fingerprint reader. After adding your fingerprint, you can unlock the Device through fingerprint recognition.
7	Power button. Turn on or turn off the screen.

## Bottom panel

Figure 1-4 Bottom panel (1)

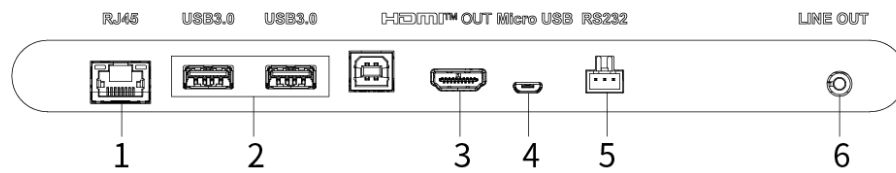


Figure 1-5 Bottom panel (2)

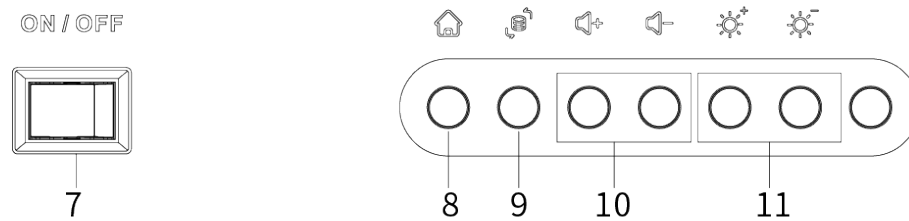

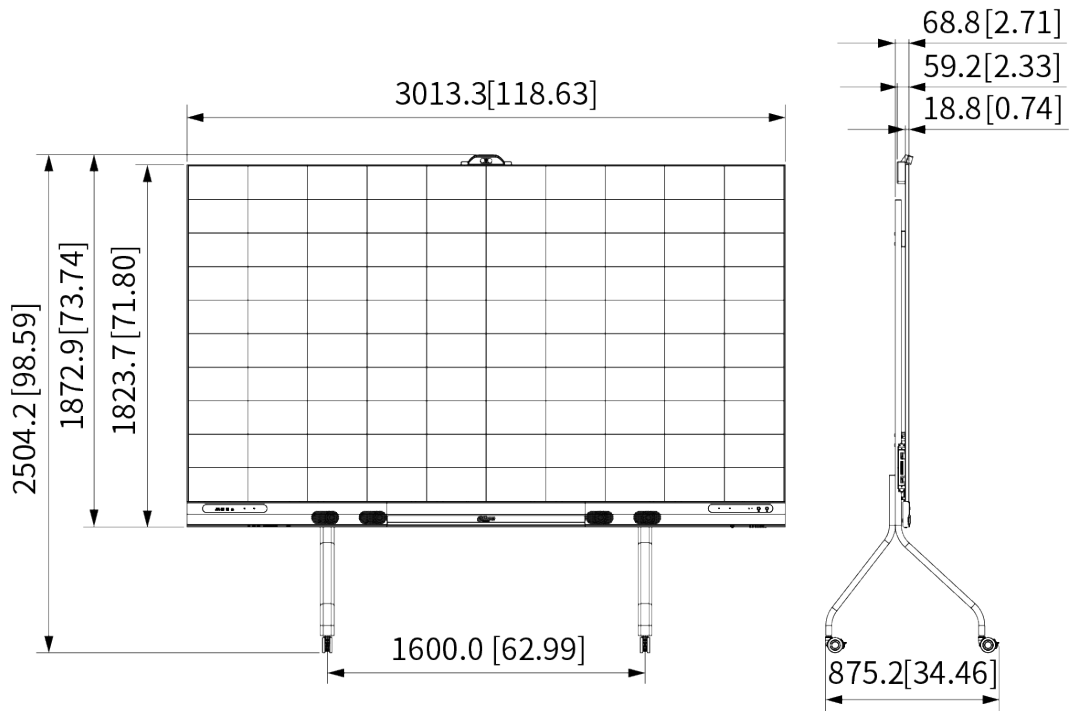


Table 1-4 Bottom panel description

No.	Description
1	Network port. Connects to network cable to access network.
2	USB 3.0 port. Connects to USB devices such as mobile hard disk, USB flash drive, USB keyboard, and USB mouse. They are accessible both from the built-in Android system and the optional OPS computer module.  USB 3.0 Type A, supports 5 V 1 A (MAX).
3	HDMI OUT. HD audio and video signal output port. Transmits uncompressed HD video and multi-channel audio data.
4	Micro USB. Used for debugging Android system.
5	RS-232 port. Transmits data between devices. You can connect to central control devices with RS-232 port.
6	LINE OUT. An audio output port that connects to the earphone or speaker.
7	Power switch. Turn on or turn off the power supply of the Device.
8	Go back to the home screen.
9	Select signal sources.
10	Adjust the column.
11	Adjust the brightness of the screen.

### 1.3.2 Dimensions

Figure 1-6 Dimensions (mm[inch])





## 2 Initial Settings

### 2.1 Turning on the Device

#### Prerequisites

- Before starting the device, check whether the input voltage is correct against the power supply requirements.
- To ensure the stable work of the device and the external devices connected to the device and to prolong the service life, we recommend you refer to the national related standard to use the power source that provides stable voltage with less interference from ripples.

#### Procedure

- Step 1 Connect the power cord.
- Step 2 Press the "I" end of the rocker switch next to the power cord.
- Step 3 Press the power button on the right panel to turn on the screen.  
After startup, the system displays the home screen by default.

### 2.2 Turning off Screen

When the screen is on, press the power button once to turn off the screen.

After the screen has been off for 3 seconds, you can wake up the device in either of the following ways:

- Press the power button again.
- Press the power button on remote control.

## 2.3 Home Screen

Figure 2-1 Home screen

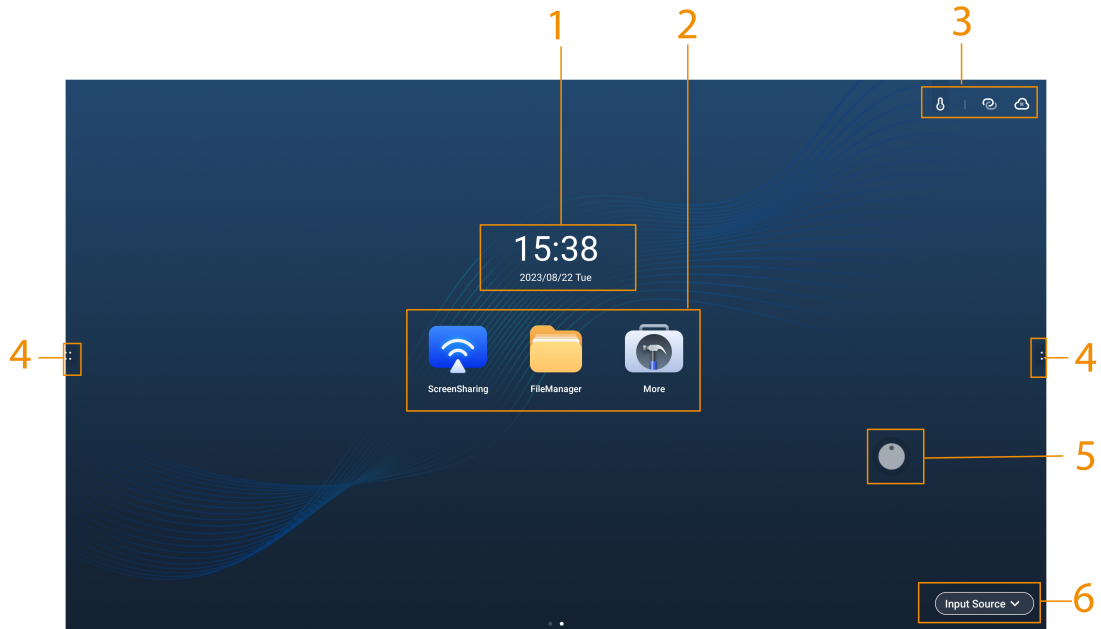



Table 2-1 Home screen description

No.	Description
1	Displays date, time and the day of the week.
2	Assistive touch. Tap the icon to quickly use functions as screen sharing and file manager.
3	Device status bar. Displays different status information. Tap each icon to view details.
4	Tap  to bring up the navigation bar.
5	Function area. Tap a function icon to go to the corresponding operation screen.
6	Input source. Supports Windows, HDMI, and Type C.

## 3 Basic Operations

### 3.1 Quick Operations

You can use the navigation bar or assistive touch to quickly use basic functions.

#### 3.1.1 Bringing up the Navigation Bar







Tap  on the left and right sides of the home screen to bring up the navigation bar.

Figure 3-1 Navigation bar



Table 3-1 Description of navigation bar

Icon	Description
	Display or hide the navigation bar.
	Go back to the previous screen.
	Go back to the home screen.
	Tap the icon to display common tools such as annotation, screen sharing, and camera.
	Displays the apps that are running in the background. You can close the background apps one by one or in batches.

#### 3.1.2 Bringing up the Assistive Touch


Tap  on the home screen to bring up the compass menu.

Figure 3-2 Assistive touch

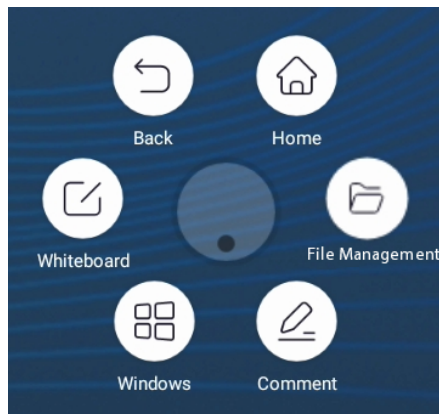


Table 3-2 Description of assistive touch

Icon	Description
	Go back to the home screen.
	Go back to the previous screen.
	Go to the electronic whiteboard screen.
	After you insert the computer module, tap the icon to switch to the Windows system.
	Turn on the annotation mode. <ul style="list-style-type: none"> <li>● Tap <b>Fountain Pen</b> to select the type of pen and the size of the brush.</li> <li>● Tap <b>Eraser</b> to clear content.                             <ul style="list-style-type: none"> <li>◇ Tap  to clear unwanted content.</li> <li>◇ Tap  , circle unwanted content, and then erase the selected content.</li> <li>◇ Tap  to clear all content on the screen.</li> </ul> </li> <li>● Tap <b>Save</b>, and then select the path to save your annotations.</li> <li>● Tap <b>Exit</b> to exit the annotation screen.</li> </ul>
	Manage files.

### 3.1.3 Common Tools

#### Procedure

- Step 1 Tap on the left and right sides of the home screen to bring up the navigation bar.
- Step 2 Tap to display the common tools.

Figure 3-3 Common tools

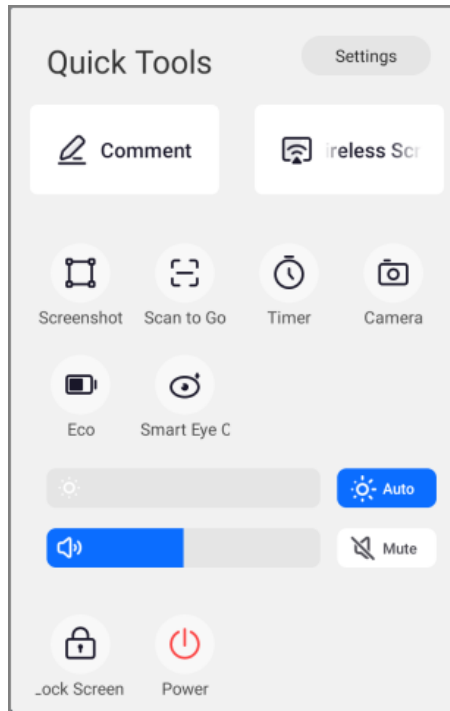








Table 3-3 Description of common tools

Function	Description
Settings	Go to the <b>Settings</b> screen.
Comment	Turn on the annotation mode. For details, see Table 3-2 .
Wireless Screen Sharing	Tap the icon to use the wireless screen sharing function. You can transfer content to the device through the computer or phone.
Screenshot	<p>Tap the icon, and then the middle area is selected by default. You can drag the four corners of the square to customize the area size.</p> <ul style="list-style-type: none"> <li>• Tap , and then you can import the screenshot to the device with one tap.</li> <li>• Tap  to capture the full screen.</li> <li>• Tap  to cancel the screenshot.</li> <li>• Tap , and then the screenshot named year - month - day - hour - minute - second.jpg will be saved to the screenshot folder.</li> </ul>

Function	Description
Scan to Go	<p>Tap the icon, and then select the files that you want to share. You can select different types of files but cannot select folders. The size of a single file must not exceed 200 MB. Tap <b>OK</b> to compress 2 or more files into a zip file for transmission. After a QR code is generated, you can scan the QR code to download the file, or tap <b>Continue to Select</b> under the QR code to return to the file selection screen to select more files.</p> <p>Supports QR code. After you connect to the hotspot, use the camera app or browser on your phone to scan the code. If encryption is enabled, you need to enter the verification password after scanning the code, and the download screen will be displayed after the verification is successful.</p>  <ul style="list-style-type: none"> <li>• File sharing poses a risk of data leakage. Keep the QR code safe.</li> <li>• When the selected files have the same name, the QR code cannot be generated.</li> </ul>
Timer	<p>Tap the icon, and then the timer setting screen is displayed. You can start and pause the timer, set full-screen display of information on the timer, and reset the timer (reset is only available when the timer is paused, and it will reset to the initial state 00:00:00).</p>
Camera	<p>Tap the icon to take a picture.</p> <ul style="list-style-type: none"> <li>• The built-in camera supports the configuration of mirroring, white balance, WDR, exposure, and more.</li> <li>• Supports countdown settings, including: off, 3 s (default), 5 s, and 10 s.</li> <li>• Tap <b>Import device</b>, and then you can import the screenshot to the device with one tap.</li> <li>• Tap  to save the picture to the local default folder. The picture is named year-month-day-hour-minute-second.png by default.</li> <li>• Supports scanning to go.</li> </ul>
Eco	<p>With this function enabled, the backlight is set to a lower value. The backlight brightness can be adjusted manually or automatically.</p>
Smart Eye Care	<p>Enable or disable the eye care function.</p> <p>With this function enabled, the device will reduce the intensity of its blue light and change the screen to eye care mode.</p>
Brightness	<p>Drag the slider to adjust the backlight brightness. You can tap <b>AUTO</b> to enable the auto adjustment function. The device can automatically adjust the brightness according to the environment.</p>
Volume	<p>Drag the slider to adjust the volume. Tap <b>MUTE</b> to enable mute.</p>
Lock Screen	<p>Tap the icon to lock the screen. Swipe the button in the middle of the screen to unlock the screen.</p>
Power	<p>Tap the icon to shut down, restart the device, or exit Windows.</p>

## 3.2 Electronic Whiteboard

Tap **More > Whiteboard** on the home screen to open the whiteboard software. You can write or draw pictures on the screen.

Figure 3-4 Electronic whiteboard

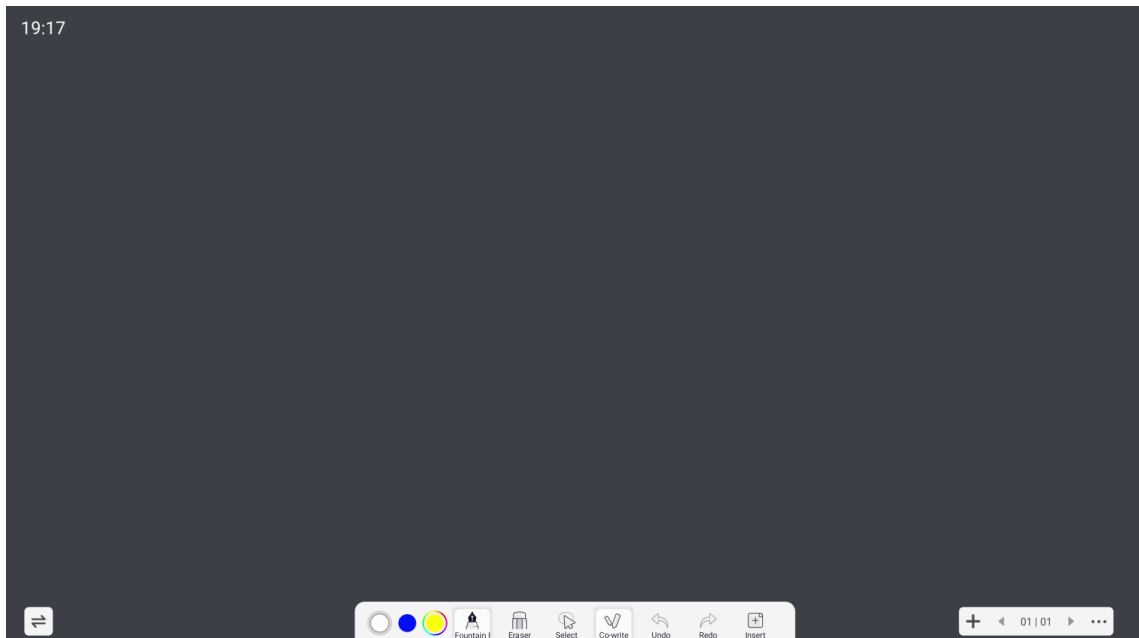


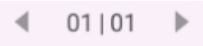








Table 3-4 Description of whiteboard icons

Icon	Description
	Adjust the location of the whiteboard tool bar.
	Select or customize the color of the pen.
Fountain Pen	<p>Select the type of pen and the size of the brush.</p> <ul style="list-style-type: none"> <li>• Oily pen: By default, the color of the brush is white with 0 transparency.</li> <li>• Mark pen: By default, the color of the brush is yellow with 40% transparency.</li> <li>• Fountain pen: By default, the color of the brush is white with 0 transparency.</li> <li>• Smart text: The handwritten content is recognized and transformed to the standard font with the color and thickness the same as the oily pen.                             <div style="border: 1px solid #ccc; background-color: #f0f0f0; padding: 5px; margin-top: 5px;">                                 Smart text is only available for simplified Chinese, traditional Chinese, and English. When you write in other languages, the content cannot be recognized and transformed.                             </div> </li> <li>• Smart graphics: The hand-drawn graphics are recognized and transformed to standard graphics with the color and thickness the same as the oily pen. The system can recognize lines, arrows, circles, quadrilaterals, pentagrams, and more.</li> <li>• Laser pen: The written content appears with a trail and disappears in 1 second. The color can be green, red, and pink.</li> </ul>

Icon	Description
Eraser	<p>Erase content.</p> <ul style="list-style-type: none"> <li>• Tap <b>Eraser</b> to clear unwanted content.</li> <li>• Tap <b>Circle Eraser</b>, circle unwanted content, and then erase the selected content.</li> <li>• Tap <b>Slide clear</b> to clear all content on the screen.</li> </ul>  <p>You cannot erase graphics or tables directly.</p>
Select	Select content on the screen to zoom in, zoom out, move or rotate.
Co-write	<p>Switch between zoom mode and co-write mode.</p> <ul style="list-style-type: none"> <li>• Zoom mode: Only supports one-point writing. You can zoom in and zoom out the canvas.</li> <li>• Co-write mode: Supports 10 pens writing simultaneously. You cannot zoom in or zoom out the canvas.</li> </ul>
Undo	Undo the previous action.
Redo	Redo the action that has been undone.
Insert	<p>Tap the icon to insert images, graphics or tables.</p> <ul style="list-style-type: none"> <li>• Image: You can insert images in the bmp, png, jpg, jpeg or gif format. Up to 10 images in total can be inserted.</li> <li>• Graphics: Select a type of graphic that you want to insert.</li> <li>• Table: The default table layout is 3 × 3. The table supports up to 12 columns and 12 rows.</li> </ul>
	Add a whiteboard page. You can add up to 50 pages.
	Tap  to preview the saved file list. Tap the file to edit. When you have created several files, tap  or  to switch to the previous file and the next file. You can browse the thumbnail of the switch page.



Icon	Description
	<p>Tap the icon, and then you can perform the following operations.</p> <ul style="list-style-type: none"> <li>● <b>New</b> : Create a new whiteboard file. Remember to save your content before creating a new file, or else you will lose all your changes.</li> <li>● <b>Open</b> : Open the saved writing file. Only the whiteboard file format can be opened. After you tap <b>Open</b>, the system will jump to the whiteboard file column on file management screen.</li> <li>● <b>Change Background</b> : You can use a local background template or custom template.                                              The custom template only supports images in bmp, png, jpg and jpeg formats. The image size is limited to 5 MB. The recommended image ratio is 16:9.                 </li> <li>● <b>Save</b> : Save the file. The default name of the file is year-month-day-hour-minute-second. You can customize the file name. The file format can be wbh (source file format), pdf, and png. The source file format is used by default.</li> <li>● <b>Save As</b> : Save as a new file. The default file name is year-month-day-hour-minute-second. The file format can be wbh (source file format), pdf, and png. The source file format is used by default.</li> <li>● <b>Scan to Go</b> : Download the written whiteboard file.</li> <li>● <b>Exit</b> : Exit the whiteboard app.                                              Remember to save your modifications before exiting, or you will lose all your changes.                 </li> </ul>

### 3.3 File Management

Manage local files and files on the USB drive.

Tap **File Manager** on the home screen to view the device files, images, documents and more.

Figure 3-5 File management

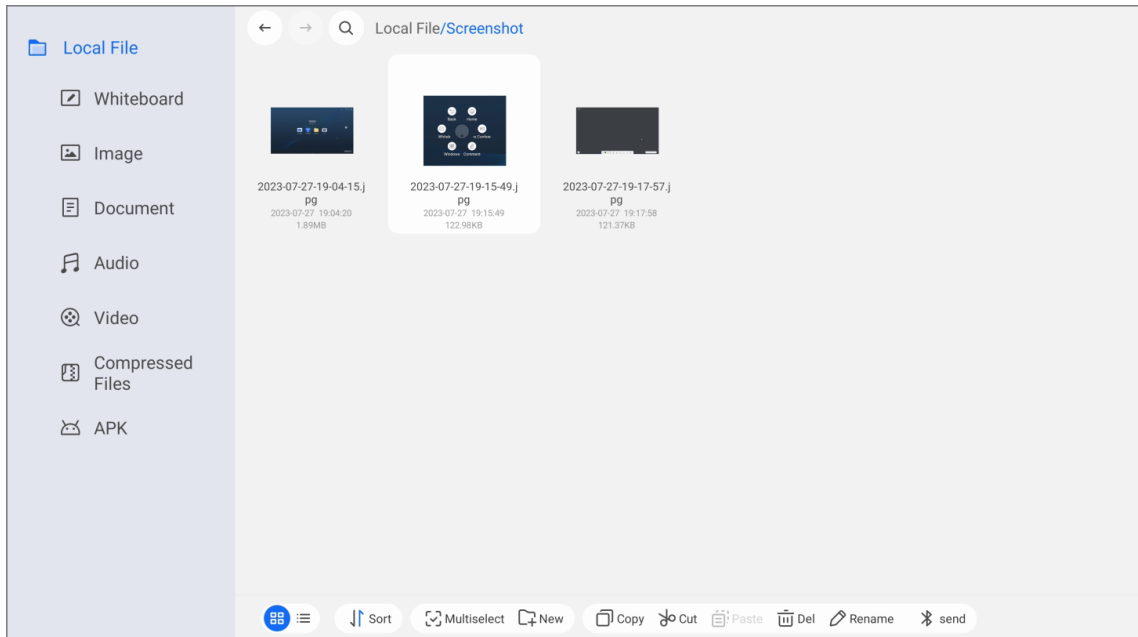


Table 3-5 File management icons

Icon	Description
	View local files on the previous or next screen.
	Enter file names to search for.
	Display files in thumbnail or list format.
Sort	Sort files in the ascending or descending order by name, size and time.
Multiselect	You can select multiple files or all the files.
New	Create a new folder.
Copy	Select a file or folder, tap <b>Copy</b> or <b>Cut</b> , and then tap <b>Paste</b> to paste the file or folder.
Cut	
Paste	
Delete	Delete files or folders.
Rename	Rename the files and folders. You cannot change the suffix of the file name.
Send	Send the selected information through Bluetooth.

## 3.4 Screen Sharing

You can remotely control the device on the phone, computer, or tablet, and project the content to the device screen.

### 3.4.1 Sharing Screen through App

After sharing the screen between the LED display and your phone or other devices such as tablets, you can project content from the phone or other devices to the screen and control the screen on your phone or other devices.

#### Prerequisites

The device and your computer are on the same LAN network and the hotspot of the device has been enabled.

#### Procedure

**Step 1** Tap **Screen Sharing** on the Android home screen of the device.

**Step 2** Use your phone or tablet to scan the QR code on the lower-left corner of the screen, and then download and install the EShare app that corresponds to the operating system on your phone or other devices. For example, EShare for Android.





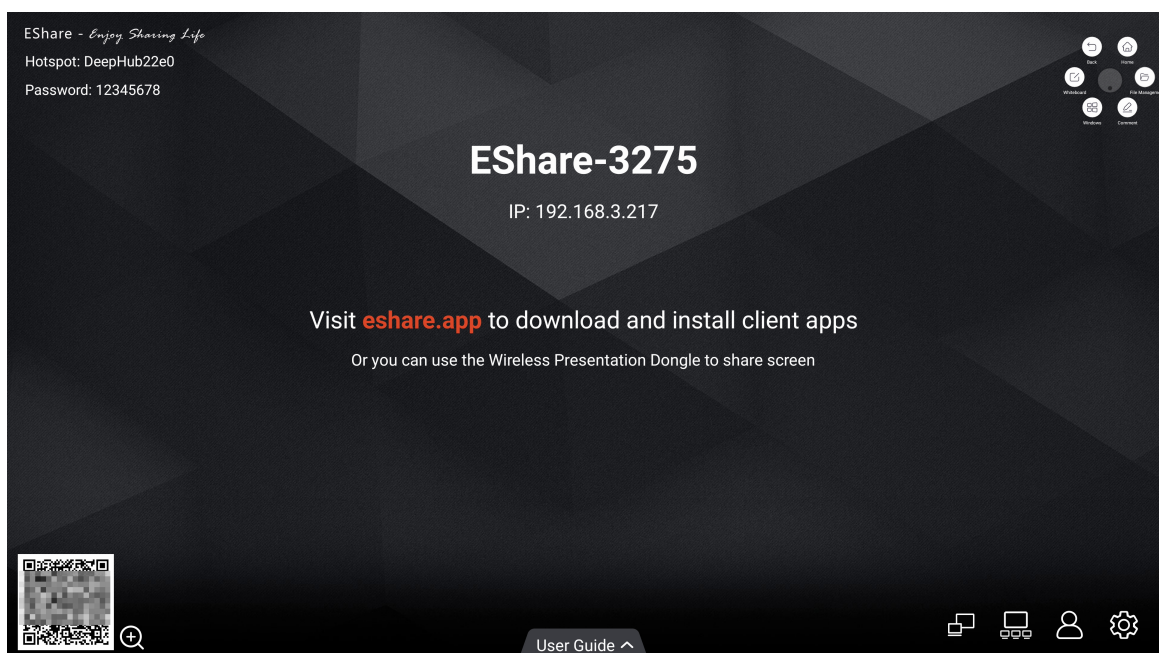
- You can also download the app by visiting <http://IP address:port> on your phone.
- The IP address might vary depending on the network the device is connected to.
- Tap  to zoom out the QR code.
- Tap  to enable WebCast so that you can use a browser to share the screen without the help of the EShare app.



Figure 3-6 Screen sharing





**Step 3** Open the EShare app, and then select the name of the device to connect the device and EShare.

After connection is successful, you can control the device on your phone or other devices and project content to the device screen.

Table 3-6 EShare icon description

Icon	Description
	Enable WebCast so that you can use a browser to share the screen without the help of the EShare app.
	Group settings. <ul style="list-style-type: none"> <li>● Duplicate displays.                             <ul style="list-style-type: none"> <li>◇ <b>Enable</b> : Duplicate your screen to all other devices in the display group.</li> <li>◇ <b>Only valid in client screen sharing</b> : Only when you share the screen of your phone or other devices using the client, the screen is mirrored to other devices in the group.</li> <li>◇ <b>Disable</b> : Stop duplicating your screen to the devices in the group.</li> </ul> </li> <li>● Invitation for joining display group.                             <ul style="list-style-type: none"> <li>◇ <b>Auto-accept</b> : Other devices can duplicate their screen to your screen without any permissions.</li> <li>◇ <b>Notify me</b> : The system will prompt you when you receive an invitation for joining a display group.</li> <li>◇ <b>Disable</b> : Refuse to join any display groups.</li> </ul> </li> </ul>

Icon	Description
	<p>Moderator control center.</p> <ul style="list-style-type: none"> <li>● Share screen or files.                             <ul style="list-style-type: none"> <li>◇ <b>All allowed</b> : You can project the screen or send files from your phone or other devices to the LED display without further authorization.</li> <li>◇ <b>Need authorization</b> : The system will ask for authorization when you project the screen or send files from your phone or other devices to the LED display.</li> <li>◇ <b>Disable</b> : You are not allowed to project the screen or send files from your phone or other devices to the LED display.</li> </ul> </li> <li>● View, control and wireless annotation.                             <ul style="list-style-type: none"> <li>◇ <b>Allowed</b> : You can view and control the LED display screen and make annotations from your phone or other devices.</li> <li>◇ <b>View only</b> : You can view the LED display screen from your phone or other devices but cannot control the LED display or make annotations.</li> <li>◇ <b>Need authorization</b> : The system will ask for authorization to view and control the LED display screen and make annotations from your phone or other devices.</li> <li>◇ <b>Disable</b> : You cannot view and control the LED display screen and make annotations from your phone or other devices.</li> </ul> </li> <li>● Floating moderator button.                             <ul style="list-style-type: none"> <li>◇ <b>Always display</b> : The floating moderator button appears on any screen. You can tap the button to go to the moderator control center.</li> <li>◇ <b>Only on Home screen</b> : The floating moderator button appears only on the home screen.</li> <li>◇ <b>Disable</b> : Hide the floating moderator button.</li> <li>◇ <b>Auto</b> : The floating moderator appears when the LED display is connected to the phone or other devices. You can view the number of connected devices.</li> </ul> </li> </ul>
	<p>Display settings.</p> <ul style="list-style-type: none"> <li>● <b>Device Name</b> : You can customize the device name.</li> <li>● <b>Connection Mode</b> : Select a connection mode.                             <ul style="list-style-type: none"> <li>◇ Device name: When you open EShare, the app will automatically display large display devices on the same network. Select the device name of the LED display to connect the LED display and EShare.</li> <li>◇ PIN code (4 digits): You need to enter the 4-digit PIN code to connect the LED display and EShare.</li> <li>◇ PIN code (6 characters): You need to enter the 6-character PIN code to connect the LED display and EShare.</li> </ul> </li> <li>● <b>Multiple Screens</b> : Select <b>Disable</b>, <b>2 Screens</b>, <b>4 Screens</b>, <b>6 Screens</b>, or <b>9 Screens</b>.</li> <li>● <b>Show Device Name on Screen</b> : Show the name of the devices connected with the LED display.</li> <li>● <b>Auto Fullscreen</b> : The screen of the connected device covers the full screen of the LED display even though the screen aspect ratios of the LED display and the connected device are different.</li> <li>● <b>AirPlay Visible</b> : Allow iOS and macOS devices on the same network with the LED display to share screen without installing the EShare app.</li> </ul>

Icon	Description
User's Manual	View the basic guide of screen sharing.

## 3.4.2 Sharing Screen through Wireless Presentation Dongle

After sharing the screen between the computer and the LED display, you can project content from the computer to the screen of the LED display and control the LED display on your computer.

### Prerequisites

- The LED display and your computer are on the same LAN network and the hotspot of the LED display has been enabled.
- Get a compatible wireless presentation dongle. It does not come with the LED display. Purchase it as needed.

### Procedure

Step 1 Pair the wireless presentation dongle with the LED display.

1. Tap **Screen Sharing** on the Android home screen of the LED display.
2. Insert the wireless presentation dongle to the LED display.

The wireless presentation dongle starts pairing with the LED display.

3. Wait until the system prompts successful pairing.
4. Tap **OK**.

Step 2 Project content from your computer to the LED display.

1. Connect the wireless presentation dongle to your computer.



For the first-time use, you might need to install the driver of the wireless presentation dongle. The installation might take a while. If installation failed, download the driver manually and then try again.

2. Press the button on the wireless presentation dongle to project content from your computer to the LED display.

## 3.5 Person Management

Register person information for meeting sign-in.

### Prerequisites

- Make sure that you have enabled **Target Recognition**.
- Make sure that you have configured the digital password or unlock pattern.

### Procedure

Step 1 Select **More > Person Management** on the home screen of the Android system.

Step 2 Enter the password.

Step 3 Tap **Add Person**.

Step 4 Make sure that the person is located in the recognition frame. When the system will recognize the person and then automatically take a snapshot.



If 2 or more persons appear in the recognition frame, you need to register the person information again.

**Step 5** Enter the name and number of the person, and then tap **Save**.

Figure 3-7 Person management



### Related Operations

- Sort by: Sort the persons by name in the alphabetic order or by number in the ascending order.
- Multi-select: Select one or more persons and then delete them in batches.
- Add person: Add more persons. You can register up to 20,000 persons.
- Modify: Tap a person record, and then you can modify the information on the person, such as editing the name and adding corresponding photos.

## 3.6 Person Sign-in

### Prerequisites

- Make sure that the camera works well.
- Make sure that you have enabled **Target Recognition**.
- Make sure that you have registered the persons that attend the meeting.

### Procedure

**Step 1** Select **More > Sign in** on the home screen of the Android system.

**Step 2** Tap **Sign in**. The device recognizes persons whose information has been added to its database and registers their attendance.

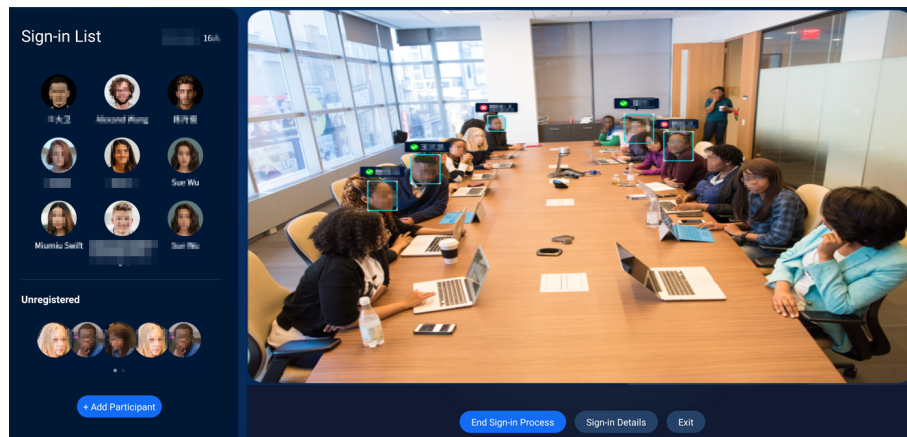
**Step 3** When the device detects a person whose information is not found in the database, the person appears on the **Unregistered** list. Tap **Add Participant** to add the person to the temporary person database.



The temporary person database will be deleted automatically after you end the sign-in process.

**Step 4** Tap **End Sign-in Process**. The system generates a sign-in list that supports scan to go.

Figure 3-8 Sign-in




## 3.7 Non-contact Control

You can use non-contact gestures to swipe screens or take snapshots.

### Prerequisites

- Make sure that you have enabled **Non-contact Control**.
- The camera that comes with the device works well.

### Procedure




Step 1 Keep waving hands for 3 to 5 seconds.  appears on the screen for 1 s, meaning the device enters non-contact control mode.

In non-contact control mode, the camera keeps track of your gestures. If no gesture is detected within 10 minutes, the device automatically exits non-contact control mode. You need to turn on the mode again.



- We recommend you perform gestures 1 m to 3 m away from the screen.
- Make sure to look directly at the camera with nobody standing between you and the device or closely behind you.
- If your face leaves the view range of the camera or is blocked, the camera cannot find the target and the device automatically exits non-contact control mode.

Step 2 Use your gestures to control the screen.

- Turn the screen left: Make a fist with one hand with the thumb pointing to the left (a gesture like ) , place the hand in front of your right shoulder, and then slowly move your hand to the left for 1 to 2 seconds.
- Turn the screen right: Make a fist with one hand with the thumb pointing to the right (a gesture like ) , place the hand in front of your left shoulder, and then slowly move your hand to the right for 1 to 2 seconds.
- Take a screenshot: Make a V-sign (a gesture like ) , place the hand in front of you at the head height, and then slowly move your hand downward for 1 to 2 seconds.



The device takes a full screenshot by default. After the screenshot, you can view the storage path on the upper-right corner of the page.

### 3.8 Welcome Page

#### Prerequisites

Import the media such as images and audio files used to create the welcome page.

#### Procedure

- Step 1 Select **More** > **Welcome Page** on the home screen of the Android system.
- Step 2 Tap **Setting** on the lower-right corner to configure the welcome page.

Figure 3-9 Configure the welcome page

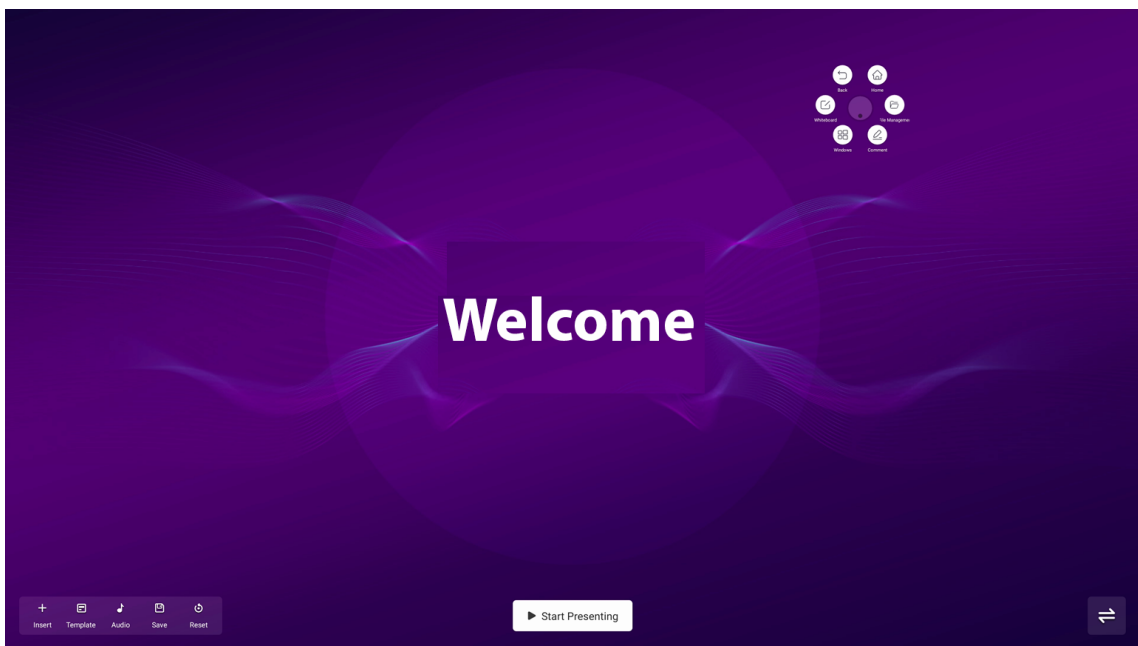


Table 3-7 Icon description

Icon	Description
	Change the position of the toolbar.
Insert	Insert a background image or other images and text.
Template	You can use local background template or custom template.
Audio	Insert audio.
Save	Save your configurations.
Restart	Restore the welcome page to the default template.
Start Presenting	Show the presentation effect of the welcome page.

- Step 3 Tap **Save**. You can swipe left on the home screen to view the welcome page.

## 3.9 System Settings

Configure network settings, general and advanced settings, and other system settings.

### 3.9.1 Configuring Network Connection

On the home screen, tap **More** > **Settings** to configure the network settings.



You can enable wireless network or wired network. Wireless network and wired network cannot be enabled at the same time. The device itself can also act as a hotspot to share network connection with other devices.

Figure 3-10 Network

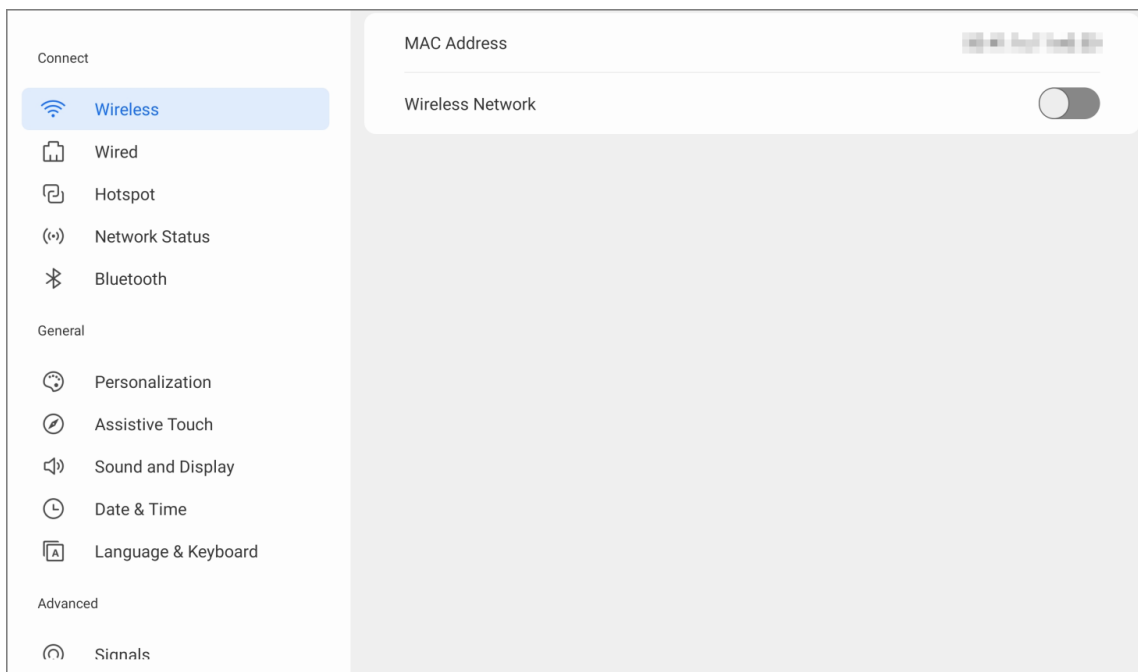



Table 3-8 Network parameters

Parameter	Description
Wireless	<p>Enable <b>Wireless Network</b>, and then the device can connect to an available Wi-Fi network in the area. To add a wireless network, tap <b>Add Network</b>, enter the SSID network name and password, and then configure advanced settings as needed.</p> <p></p> <p>We recommend you select a secure authentication method to connect to a wireless network.</p>

Parameter	Description
Wired	Configure wired network connection parameters. <ul style="list-style-type: none"> <li>● <b>DHCP</b> : When there is a DHCP server on the network, you can enable <b>Wired</b>, and then the device gets a dynamic IP address automatically.</li> <li>● <b>Static</b> : Set IP address, subnet mask, default gateway and DNS manually for the device.</li> </ul>
Hotspot	Enable <b>Hotspot</b> , configure the network SSID and then enter the password. You can view hotspot name, hotspot password, encryption method, frequency band and other information.
Network Status	Displays information such as the current network connection mode, IP address, default gateway, subnet mask, and DNS.
Bluetooth	Enable <b>Bluetooth</b> , and then the device displays the Bluetooth name, paired devices and other devices.

### 3.9.2 Configuring General Settings

On the home screen, tap **More** > **Settings** to configure the general settings.

Figure 3-11 General settings

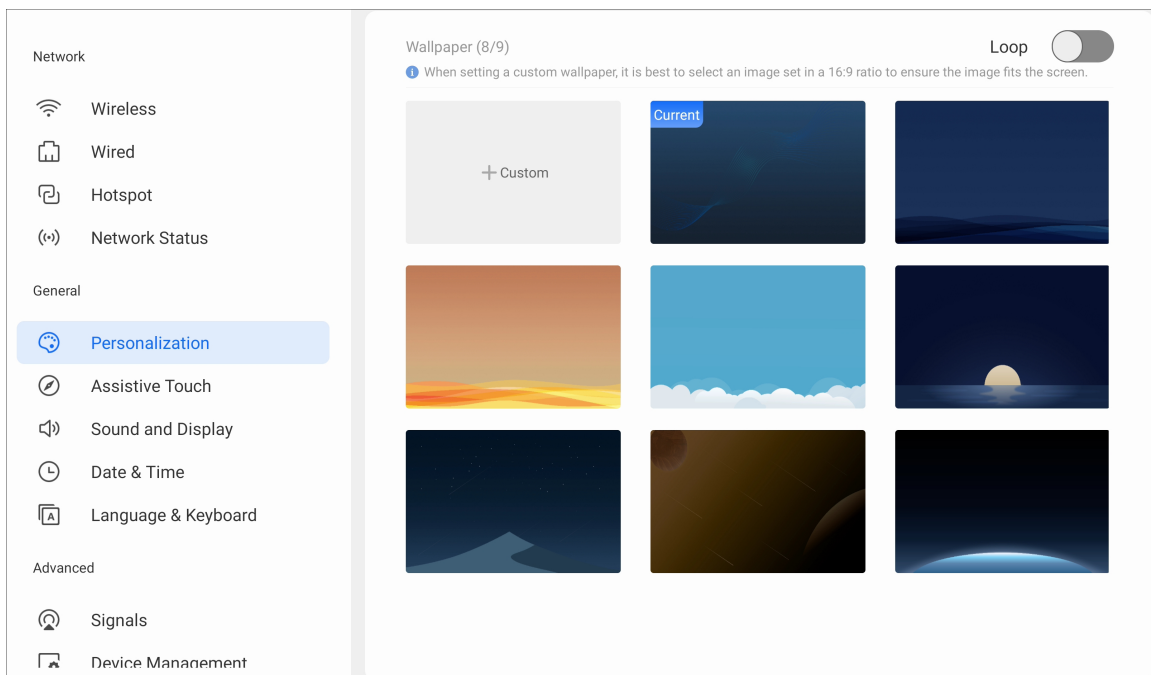


Table 3-9 General settings description

Parameter	Description
Personalization	Set the background image, and you can enable Loop to play the selected background images in turn and customize the boot screen. <ul style="list-style-type: none"> <li>● The system provides 8 wallpapers by default.</li> <li>● You can also customize and upload wallpapers. The recommended image ratio is 16:9.</li> </ul>

Parameter	Description
Assistive Touch	Enable for disable the assistive touch. Select or customize when the assistive touch is automatically hidden away, and the manner in which it is hidden (small circle or disappear).
Sound and Display	<ul style="list-style-type: none"> <li>Adjust the level of volume. If the volume is 0, a mute sign will be displayed at the lower-left corner of the screen.</li> <li>Sound effect: You can select <b>Standard</b> , <b>Music</b> , <b>Meeting</b> and <b>Theater</b>.</li> <li>System sound prompt: You can use the default audio or external audio. You can add up to 10 external audio files with each file smaller than 500 KB.</li> <li>Brightness can be adjusted manually in the range of 1–100 or automatically according to the ambient brightness.</li> <li>Indicators: You can select <b>Breathing Light</b> , <b>Marquee Light</b> , or <b>Always</b> depending on how you want the indicator light to indicate the running or update status. The indicator light is solid blue by default.</li> </ul>
Date & Time	<p>Set the date and time automatically or manually. You can configure the format of the time, date and time zone.</p> <p>With <b>Auto Sync Time</b> enabled, the system time is synchronized with the server time. When it is disabled, you need to manually set the date and time.</p>
Language & Keyboard	Select the system language and the input method.

### 3.9.3 Configuring Advanced Parameters

On the home screen, tap **More** > **Settings** to configure the advanced parameters.

Figure 3-12 Advanced parameters

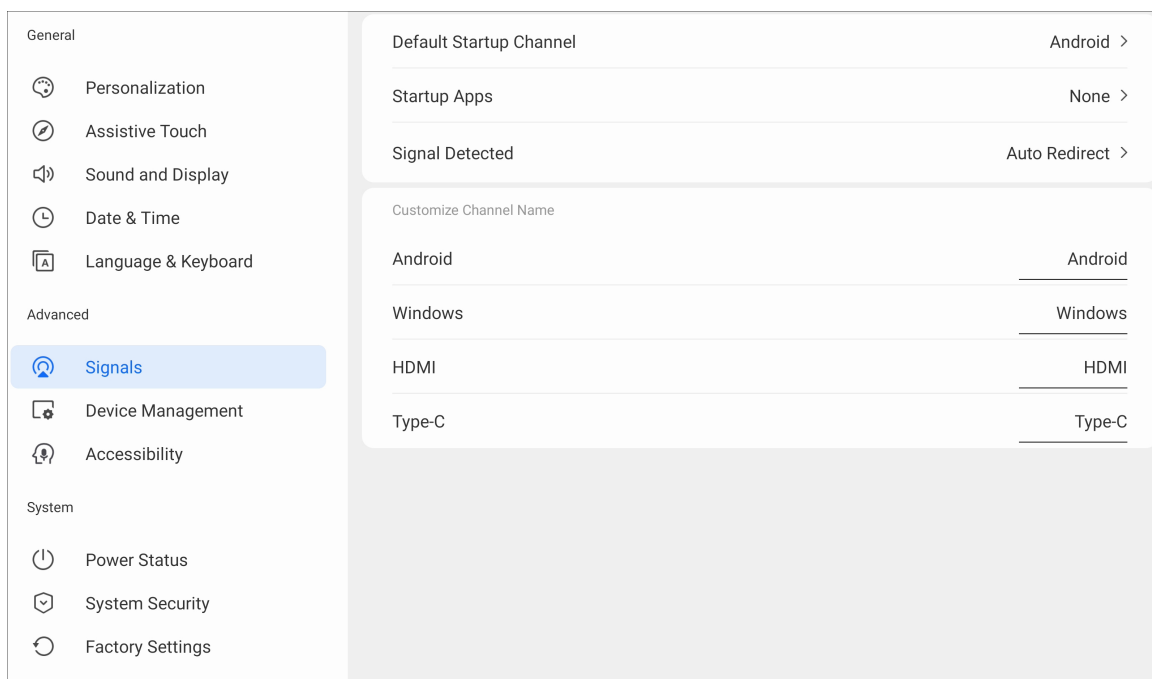



Table 3-10 Description of advanced parameters

Parameter	Description
Signals	<ul style="list-style-type: none"> <li>● Default Startup Channel: Select the channel to be enabled at startup.</li> <li>● Default Apps: Select an application that is on the device to be opened every time the system starts.</li> <li>● Signal Detected:               <ul style="list-style-type: none"> <li>◇ <b>Auto Redirect</b> : Connect to the signal source and automatically redirect to the corresponding channel.</li> <li>◇ <b>Pop-up Window</b> : When a signal source is connected, a pop-up window appears asking whether to jump to the connected source channel.</li> </ul> </li> <li>● <b>Customize Channel Name</b> : Customize the channel name. After the name is modified, the corresponding channel name of the whole system will be modified synchronously.</li> </ul>
Device Management	<ul style="list-style-type: none"> <li>● View information on the camera, microphone, and speaker. You can import firmware package to update the camera or recalibrate the postition of the camera.</li> <li>● <b>HDMI OUT</b> : The function is available after the device is connected to a monitor through the HDMI OUT port. After you enable <b>HDMI OUT</b>, the device outputs signals at the maximum resolution of the monitor by default. You can select different resolutions depending on the capacity of the monitor.</li> <li>● <b>RS-232 Control</b> : With <b>RS-232 Control</b> enabled, you can connect the device to the RS-232 transparent debugging serial port for data transmission between devices.</li> </ul>
Accessibility	<ul style="list-style-type: none"> <li>● <b>Non-contact Control</b> : Use gestures to turn screens and take screenshots.</li> <li>● <b>Target Recognition</b> : Recognizes target.</li> </ul> <p><b>Person Unlock</b> : Applies to screen lock and touch lock. After you enable the function, a registered person can unlock the device and an unregistered person can wake up the screen.</p>  <p>Non-contact control and target recognition cannot be enabled at the same time.</p>

### 3.9.4 Configuring System Parameters

On the home screen, tap **More** > **Settings** to configure the system parameters.

Figure 3-13 System parameters

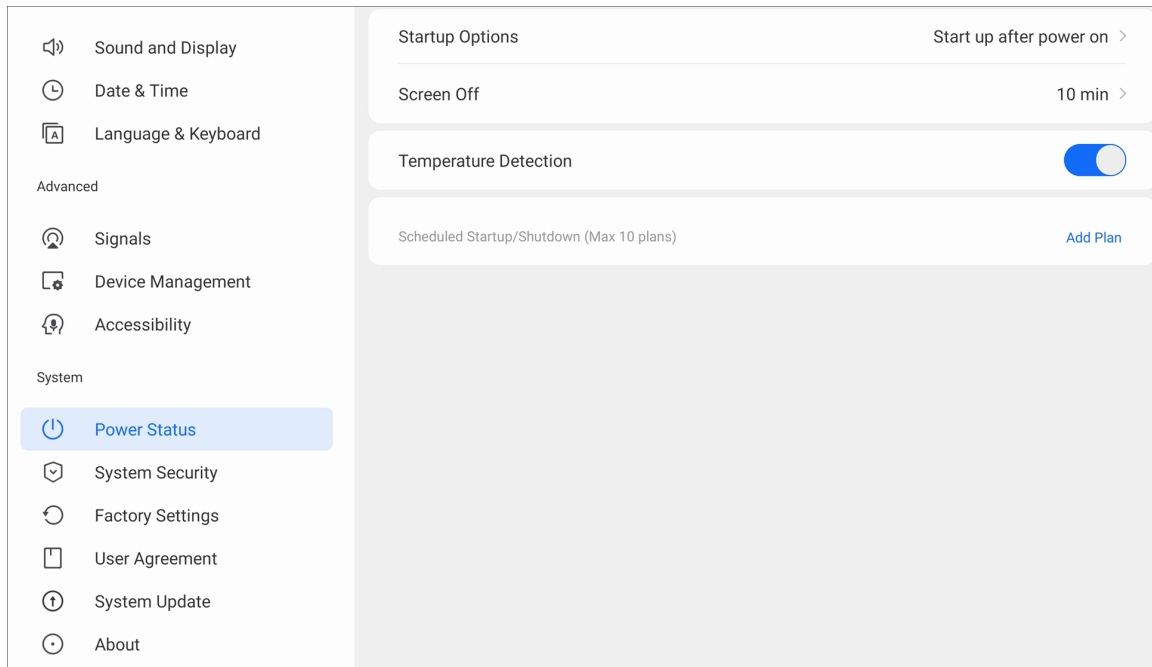




Table 3-11 System parameter description

Parameter	Description
Power Status	<p>Set the startup and shutdown functions of the device.</p> <ul style="list-style-type: none"> <li>● <b>Startup Options</b> : Select standby after power on or startup after power on (default).</li> <li>● <b>Screen Off</b> : Offers always on and no operation after 1 min, 5 min and 10 min. It also has custom configuration from 1 to 60 min.</li> <li>● <b>Temperature Detection</b> : After you enable the function,  appears on the upper-right corner of the home screen. When the temperature of CPU is higher than 80 °C, the icon becomes orange. When the CPU temperature is higher than 90 °C, the icon becomes red.</li> <li>● <b>Scheduled Startup/Shutdown (Max. 10 plans)</b> : Tap <b>Add Plan</b> to set when to automatically power on and off the system. Tap  to delete the plan.</li> </ul>

Parameter	Description
System Security	<ul style="list-style-type: none"> <li>● <b>Pin</b> : After enabling <b>Pin</b>, you can unlock the device with digital password.</li> <li>● <b>Unlock Pattern</b> : After enabling <b>Unlock Pattern</b>, you can unlock the device by drawing a pattern.</li> <li>● <b>Fingerprint</b> : After enabling <b>Fingerprint</b>, you can unlock the device with your registered fingerprint.</li> <li>● <b>Lock Screen</b> : Tap <b>Lock screen</b>, and then select a screen lock option, including no operation after 1 min, 5 min and 10 min, and custom configuration.</li> <li>● <b>USB Permission</b> : With USB permissions disabled, the system does not detect the access of USB devices.</li> </ul>
Factory Settings	Tap <b>FACTORY SETTINGS</b> , and all your operation records and saved content will be deleted. The device will also be restored to its factory settings.
User Agreement	View the privacy policy, software license agreement, and open source agreement.
System Update	View the current system version. When the device is connected to a network, tap <b>CHECK FOR UPDATES</b> to check whether there is a new version available.
About	View MAC address, device serial number, device name (can be edited), running memory, storage space, resolution, system version, Android version, and security baseline version.

## 4 Shutdown

After the device is turned on, press and hold the power button for 5 s, and then the system will prompt you whether to shut down the device. Tap **OK** to shut down the device.



## 5 System Update

You can update the system online or through USB.



Please be advised that downgrading to a lower version will make the device vulnerable to security attacks.

### 5.1 Online Update

After the device is registered to the cloud management platform, the platform can send the update package to the device.

#### Prerequisites

- Make sure that the device is connected to the network.
- Make sure that you have enabled OTA platform.

#### Procedure

- Step 1 On the home screen, select **More** > **Settings** > **System Upgrade**.
- Step 2 Tap **CHECK FOR UPDATES**.
- Step 3 When the system detects that a newer version available, tap **Download** to download the update package.
- Step 4 After the package is downloaded, you can select to install the package immediately. After it updates, the device restarts automatically.

### 5.2 Update through USB

You can upload update.zip file into a USB flash drive and then use the update file to update the system.

#### Prerequisites

Get the update package from the technical support.

#### Procedure

- Step 1 Save the file to the root directory of the USB flash drive.
- Step 2 With the device turned on, plug the USB flash drive into the USB port of the device.



Update the system with a USB flash drive in the FAT 32 format. Otherwise, update might fail.

- Step 3 When the system prompts whether to update immediately, tap **Upgrade**. The update begins. After it updates, the device restarts automatically.

## 6 FAQ

### 1. **Missing or abnormal colors.**

If the device is connected to a computer, check whether the HDMI cable is intact and correctly connected.

### 2. **The image is not displayed in full screen or part of the image is outside the screen.**

- Check whether the resolution is 16:9.
- If the device is connected to an external computer, unplug the HDMI cable, and then plug it back in.

### 3. **The device displays images but has no sound.**

- Adjust the volume.
- If the device is connected to a computer, check whether the audio cable is correctly connected.

### 4. **The device cannot be powered on.**

- Make sure that the device is connected to power supply, the power switch is on, and then check whether the indicator on the front panel is on.
- If the indicator is off, and the ports such as the RJ-45 network port and USB port have no power, it might be a problem with the power supply of the device. Check whether the fuse at the input of the power cable is blown.
  - ◇ If the fuse is blown, replace the fuse.
  - ◇ If the fuse is normal, it might be the power board or motherboard exception. You need to remove the back cover to replace the power board or motherboard.

### 5. **Wireless screen sharing cannot be connected / or the connection is unstable.**

Check whether the hotspot of the device is enabled. After it is enabled, search for the hotspot to see whether it can be found.

- If the hotspot search and connection are normal, but wireless screen sharing has an unstable connection, update the software to the latest version.
- If the hotspot cannot be enabled, the hotspot module might be abnormal and needs to be replaced.

### 6. **Wi-Fi connection failed.**

Check whether the Wi-Fi is enabled, search the hotspot and connects to it. If the connection is failed, replace the motherboard.

If the hotspot is connected, check whether the configuration is normal.

### 7. **USB External Device Function Exception.**

The exceptions contain unavailable functions and abnormality in external device.

- The external device function is not available in the Android system:

Make sure that external devices are powered on and running normally, and the external devices (such as USB CODEC, USB CAM, or USB Speaker) is selected in the external device management as the corresponding functional input or output source.

- The external device function is not available in the OPS Windows system or under other signal sources:

Make sure that external devices are powered on and running normally, and external devices such as USB CODEC, USB CAM, or USB Speaker are disabled. Then select the external devices as the corresponding functional input or output source.

- USB external device function exception: Delayed movement in wireless mouse:

Do not insert an external device into the USB 3.0 port that is next to the port of the 2.4GHz wireless mouse.

# Appendix 1 Security Commitment and Recommendation

Dahua Vision Technology Co., Ltd. (hereinafter referred to as "Dahua") attaches great importance to cybersecurity and privacy protection, and continues to invest special funds to comprehensively improve the security awareness and capabilities of Dahua employees and provide adequate security for products. Dahua has established a professional security team to provide full life cycle security empowerment and control for product design, development, testing, production, delivery and maintenance. While adhering to the principle of minimizing data collection, minimizing services, prohibiting backdoor implantation, and removing unnecessary and insecure services (such as Telnet), Dahua products continue to introduce innovative security technologies, and strive to improve the product security assurance capabilities, providing global users with security alarm and 24/7 security incident response services to better protect users' security rights and interests. At the same time, Dahua encourages users, partners, suppliers, government agencies, industry organizations and independent researchers to report any potential risks or vulnerabilities discovered on Dahua devices to Dahua PSIRT, for specific reporting methods, please refer to the cyber security section of Dahua official website.

Product security requires not only the continuous attention and efforts of manufacturers in R&D, production, and delivery, but also the active participation of users that can help improve the environment and methods of product usage, so as to better ensure the security of products after they are put into use. For this reason, we recommend that users safely use the device, including but not limited to:

## Account Management

### 1. Use complex 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: 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 repeating characters, such as 111, aaa, etc.

### 2. Change passwords periodically

It is recommended to periodically change the device password to reduce the risk of being guessed or cracked.

### 3. Allocate accounts and permissions appropriately

Appropriately add users based on service and management requirements and assign minimum permission sets to users.

### 4. Enable account lockout function

The account lockout function is enabled by default. You are advised to keep it enabled to protect account security. After multiple failed password attempts, the corresponding account and source IP address will be locked.

### 5. Set and update password reset information in a timely manner

Dahua device supports password reset function. To reduce the risk of this function being used by threat actors, if there is any change in the information, please modify it in time. When setting security questions, it is recommended not to use easily guessed answers.

## Service Configuration

### 1. Enable HTTPS

It is recommended that you enable HTTPS to access Web services through secure channels.

### 2. Encrypted transmission of audio and video

If your audio and video data contents are very important or sensitive, we recommend you to use encrypted transmission function in order to reduce the risk of your audio and video data being eavesdropped during transmission.

### 3. Turn off non-essential services and use safe mode

If not needed, it is recommended to turn off some services such as SSH, SNMP, SMTP, UPnP, AP hotspot etc., to reduce the attack surfaces.

If necessary, it is highly recommended to choose safe modes, including but not limited to the following services:

- SNMP: Choose SNMP v3, and set up strong encryption and authentication passwords.
- SMTP: Choose TLS to access mailbox server.
- FTP: Choose SFTP, and set up complex passwords.
- AP hotspot: Choose WPA2-PSK encryption mode, and set up complex passwords.

### 4. Change HTTP and other default service ports

It is recommended that you change the default port of HTTP and other services to any port between 1024 and 65535 to reduce the risk of being guessed by threat actors.

## Network Configuration

### 1. Enable Allow list

It is recommended that you turn on the allow list function, and only allow IP in the allow list to access the device. Therefore, please be sure to add your computer IP address and supporting device IP address to the allow list.

### 2. MAC address binding

It is recommended that you bind the IP address of the gateway to the MAC address on the device to reduce the risk of ARP spoofing.

### 3. Build a secure network environment

In order to better ensure the security of devices and reduce potential cyber risks, the following are recommended:

- Disable the port mapping function of the router to avoid direct access to the intranet devices from external network;
- According to the actual network needs, partition the network: if there is no communication demand between the two subnets, it is recommended to use VLAN, gateway and other methods to partition the network to achieve network isolation;
- Establish 802.1x access authentication system to reduce the risk of illegal terminal access to the private network.

## Security Auditing

### 1. Check online users

It is recommended to check online users regularly to identify illegal users.

### 2. Check device log

By viewing logs, you can learn about the IP addresses that attempt to log in to the device and key operations of the logged users.

3. **Configure network log**

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

## Software Security

1. **Update firmware in time**

According to the industry standard operating specifications, the firmware of devices needs to be updated to the latest version in time in order to ensure that the device has the latest functions and security. If the device is connected to the public network, it is recommended to enable the online upgrade automatic detection function, so as to obtain the firmware update information released by the manufacturer in a timely manner.

2. **5.2 Update client software in time**

We recommend you to download and use the latest client software.

## Physical Protection

It is recommended that you carry out physical protection for devices (especially storage devices), such as placing the device in a dedicated machine room and cabinet, and having access control and key management in place to prevent unauthorized personnel from damaging hardware and other peripheral equipment (e.g. USB flash disk, serial port).

ENABLING A SMARTER SOCIETY AND BETTER LIVING

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