



Dahua Video Conferencing Endpoint Quick Start Guide

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ZHEJIANG DAHUA VISION TECHNOLOGY CO., LTD.

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Cybersecurity Recommendations

Mandatory actions to be taken towards cybersecurity

1. Change Passwords and Use Strong Passwords:

The number one reason systems get “hacked” is due to having weak or default passwords. It is recommended to change default passwords immediately and choose a strong password whenever possible. A strong password should be made up of at least 8 characters and a combination of special characters, numbers, and upper and lower case letters.

2. Update Firmware

As is standard procedure in the tech-industry, we recommend keeping NVR, DVR, and IP camera firmware up-to-date to ensure the system is current with the latest security patches and fixes.

“Nice to have” recommendations to improve your network security

1. Change Passwords Regularly

Regularly change the credentials to your devices to help ensure that only authorized users are able to access the system.

2. Change Default HTTP and TCP Ports:

- Change default HTTP and TCP ports for systems. These are the two ports used to communicate and to view video feeds remotely.
- These ports can be changed to any set of numbers between 1025-65535. Avoiding the default ports reduces the risk of outsiders being able to guess which ports you are using.

3. Enable HTTPS/SSL:

Set up an SSL Certificate to enable HTTPS. This will encrypt all communication between your devices and recorder.

4. Enable IP Filter:

Enabling your IP filter will prevent everyone, except those with specified IP addresses, from accessing the system.

5. Change ONVIF Password:

On older IP Camera firmware, the ONVIF password does not change when you change the system’s credentials. You will need to either update the camera’s firmware to the latest revision or manually change the ONVIF password.

6. Forward Only Ports You Need:

- Only forward the HTTP and TCP ports that you need to use. Do not forward a huge range of numbers to the device. Do not DMZ the device's IP address.

● You do not need to forward any ports for individual cameras if they are all connected to a recorder on site; just the NVR is needed.

7. Disable Auto-Login on SmartPSS:

Those using SmartPSS to view their system and on a computer that is used by multiple people should disable auto-login. This adds a layer of security to prevent users without the appropriate credentials from accessing the system.

8. Use a Different Username and Password for SmartPSS:

In the event that your social media, bank, email, etc. account is compromised, you would not want someone collecting those passwords and trying them out on your video surveillance system. Using a different username and password for your security system will make it more difficult for someone to guess their way into your system.

9. Limit Features of Guest Accounts:

If your system is set up for multiple users, ensure that each user only has rights to features and functions they need to use to perform their job.

10. UPnP:

● UPnP will automatically try to forward ports in your router or modem. Normally this would be a good thing. However, if your system automatically forwards the ports and you leave the credentials defaulted, you may end up with unwanted visitors.

● If you manually forwarded the HTTP and TCP ports in your router/modem, this feature should be turned off regardless. Disabling UPnP is recommended when the function is not used in real applications.

11. SNMP:

Disable SNMP if you are not using it. If you are using SNMP, you should do so only temporarily, for tracing and testing purposes only.

12. Multicast:

Multicast is used to share video streams between two recorders. Currently there are no known issues involving Multicast, but if you are not using this feature, deactivation can enhance your network security.

13. Check the Log:

If you suspect that someone has gained unauthorized access to your system, you can check the system log. The system log will show you which IP addresses were used to login to your system and what was accessed.

14. Physically Lock Down the Device:

Ideally, you want to prevent any unauthorized physical access to your system. The best way to achieve this is to install the recorder in a lockbox, locking server rack, or in a room that is behind a lock and key.

15. Connect IP Cameras to the PoE Ports on the Back of an NVR:

Cameras connected to the PoE ports on the back of an NVR are isolated from the outside world and cannot be accessed directly.

16. Isolate NVR and IP Camera Network

The network your NVR and IP camera resides on should not be the same network as your public computer network. This will prevent any visitors or unwanted guests from getting access to the same network the security system needs in order to function properly.

Welcome

Thank you for purchasing our video conferencing endpoint!

This quick start guide is designed to be a reference tool for your system.

Please read the following safeguard and warnings carefully before you use this series product!

Please keep this user's manual well for future reference!

Important Safeguards and Warnings

1 . Attention

- Please modify the user's default password after the device operates in case of being stolen.
- Please do not keep or install the device in a place with direct sunlight or near heat-producing equipment.
- Please do not install the device in a place which is wet, dusty or with soot.
- Please ensure horizontal installation for the device or it is installed in a stable place, and pay attention not to make the product fall.
- Please do not allow liquid dripping or splashing onto the device and make sure no object filled with liquid is placed on the device, which is to avoid the liquid flowing into the device.
- Please install the device in a place with sound ventilation, and do not block the ventilation opening of the device.
- Please use the device only within the rated input output range.
- Please do not dismantle the device unprofessionally.

2 . Warning

- All installation and operation here should use your locally recommended wire module (power cable), and make sure it is applied within the fixed standard.
- The power shall conform to the requirement in the SELV (Safety Extra Low Voltage) and the rated voltage power supply of Limited power source according to the IEC60950-1. The exact power supply requirement is subject to the device label.
- Please make disconnecting device conveniently operable if using power plug or appliance coupler as disconnecting device.

3. Statement

- Please refer to the actual product for more details; the manual is just for reference.
- The manual will be regularly upgraded according to the product update; the upgraded content will be added in the manual without prior announcement.
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4. FCC Statement

This equipment has been tested and found to comply with the limits for Part 15 of the FCC rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

RF Exposure Warning

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

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1 Product Overview

1.1 Brief Introduction

TS20A0 is a type of integrated video conferencing endpoint with small size which is presented by Dahua; it integrates HD digital camera, stereo microphone and speaker. The operation is so convenient that it only needs to connect the device to power and network to realize video communication; the device can be operated and controlled via remote control, keyboard, mouse and etc., which is quite suitable for video conferencing in the enterprise, government and crossed region; besides, it is fit for home users as well.

1.2 Features

Apart from being portable and convenient installation, the device also owns the following features:

- Supports mouse and keyboard operation, quick configuration.
- Built-in Wi-Fi module, support wireless network connection.
- Supports data sharing.
- Integrates built-in MIC and speaker.

1.3 Product Structure

1.3.1 Structure Figure of Video Conferencing Endpoint

Please refer to Figure 1-1 and Figure 1-2 for the structure of both front panel and rear panel respectively.

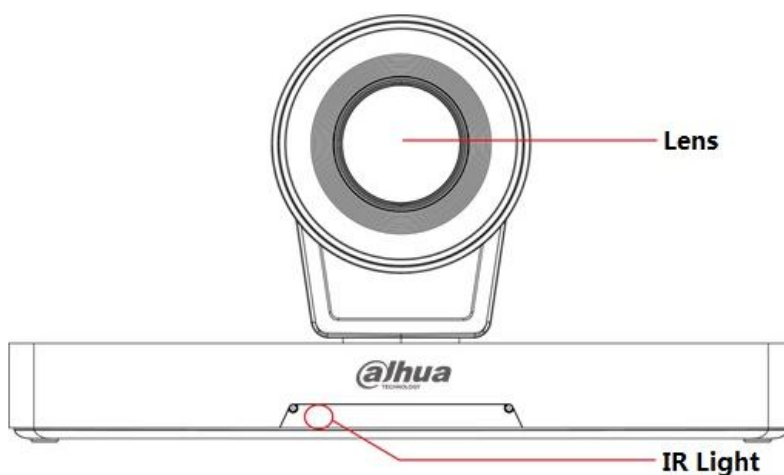


Figure 1-1

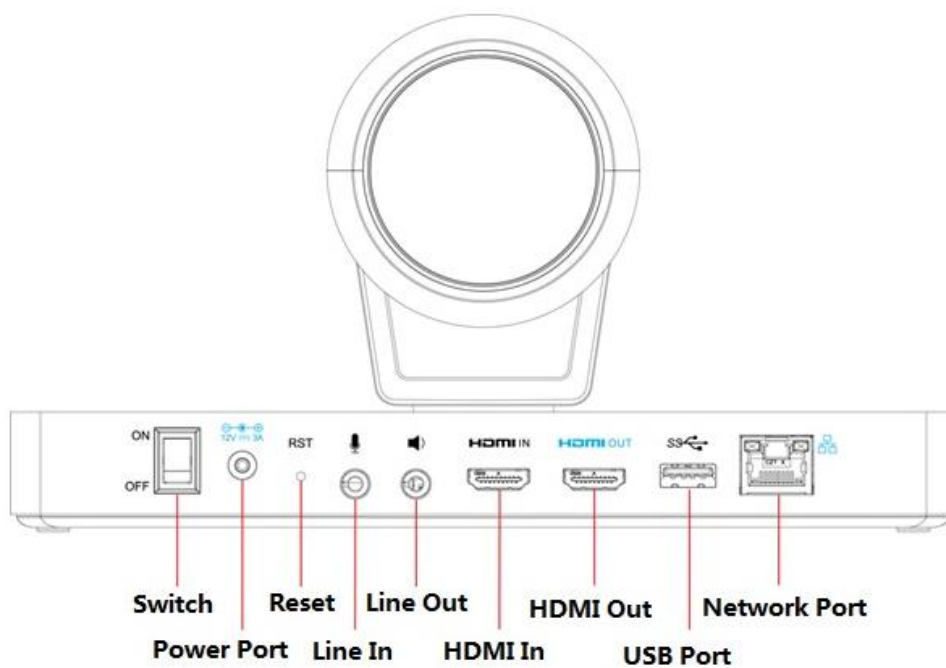


Figure 1-2

1.3.2 Remote Control

1.3.2.1 Structure Figure of Remote Control

Please refer to Figure 1-3 and Table 1-1 for the structure and button description of the remote control.

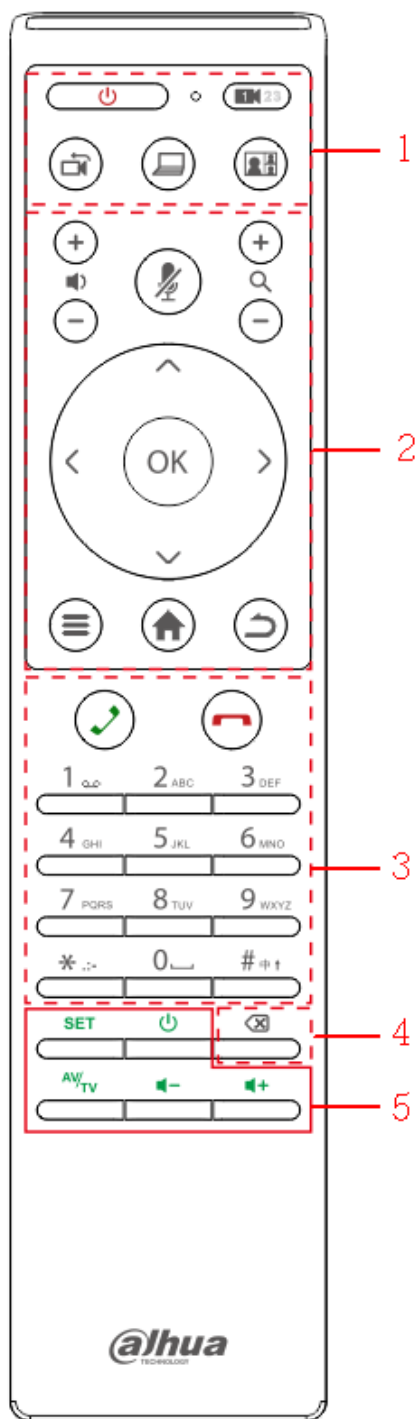


Figure 1-3

SN	Name	Description
1		Used to turn on/off the device.
		Indicator light.
		Option button for camera.
		Remotecamera button.

SN	Name	Description
		One button to send demo after the device is correctly connected to laptop.
		Switch button for local screen layout.
2	 	Volume adjustment button for voice output.
		Mic mute.
	 	Zoom in or out, which can be checked via local preview interface.
		UDLR direction button.
		OK button.
3		Call or have a meeting.
		Hang up meeting.
	Number button	Press number button continuously and it can switch to English, character.
4		Backspace/Delete
5		Setting button.
		TV power button.
		HDMI signal source switch button.
		TV volume button.



Table 1-1

1.3.2.2 Button Matching of Remote Control


The TV power button , signal source switch button and TV volume adjustment button can work normally after they are matched.

Take TV power button matching for example, the operation steps are as follows:

Step 1

Press  button till the blue indicator light is on and then release the  button.

Step 2

Press  button, the blue indicator light flashes.

Step 3


Long press the *Power Button* of TV remote control, get close to the IR signal source of device remote control for matching.

Note

Please make sure the IR signal source of two remote controls is within the same horizontal plane, and the distance shall be kept between 1cm and 3cm.

- If matching succeeds, then the blue indicator light will flash three times and will be always on.
- If matching fails, then the blue indicator light will flash once and will be normally on.

Step 4

Press  button, the blue light is off. Save matching code value and exit matching mode.

Note

It will exit matching mode automatically if there is no any signal input within 10s and blue indicator light is off when the device remote control IR is in the status of receiving signal.

2 Product Networking

The networking of video conferencing endpoint is shown in Figure 2-1.

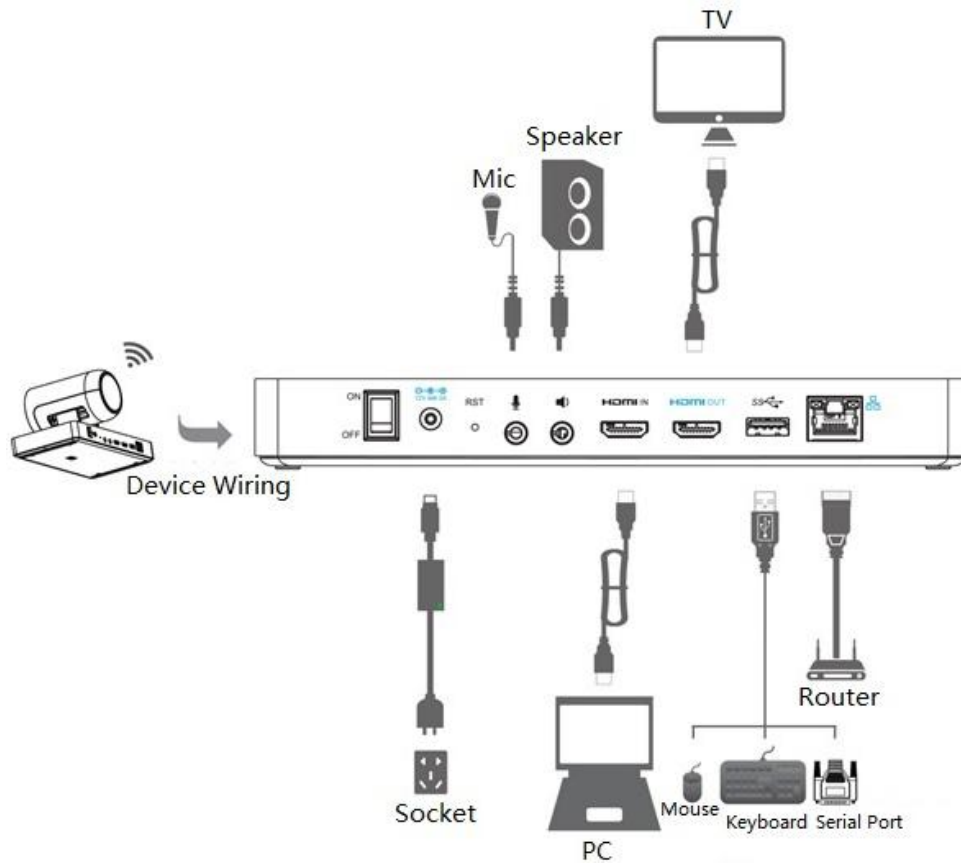


Figure 2-1

3 Product Installation

3.1 Packing List

Please check the stuff according to Table 3-1 before installation.

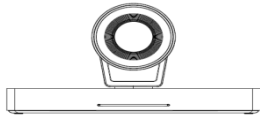
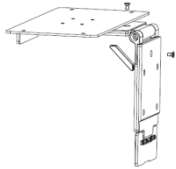



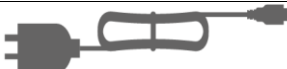



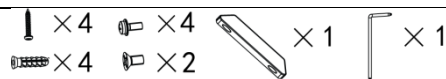

SN	Name	Diagram	Quantity	Description
1	Endpoint TS20A0		1	-
2	L-shaped bracket		1	Used for wall mount and hang mount of video endpoint device.
3	Remote control		1	Refer to the real object for more details.
4	Battery		2	Used to provide power for remote control.
5	Power adapter		1	Used to connect to power.
6	Power connection cable		1	Used to connect device to power.
7	Network cable		1	Used to connect to network
8	HDMI cable		2	Used to connect to monitor
9	USB to serial port cable		1	It is to realize the switch from USB to serial port
10	Screw		1	It is used for hang-mount and wall-mount, fix the device bracket.
11	Quick start guide		1	It is to guide users to install quickly, connect and use video endpoint device.

Table 3-1

3.2 Video Conferencing Endpoint Installation

Video conferencing endpoint supports two types of installation mode: hang-mount and wall-mount.

3.2.1 Hang Mount

The installation steps of hang-mounted installation are shown in Figure 3-1.

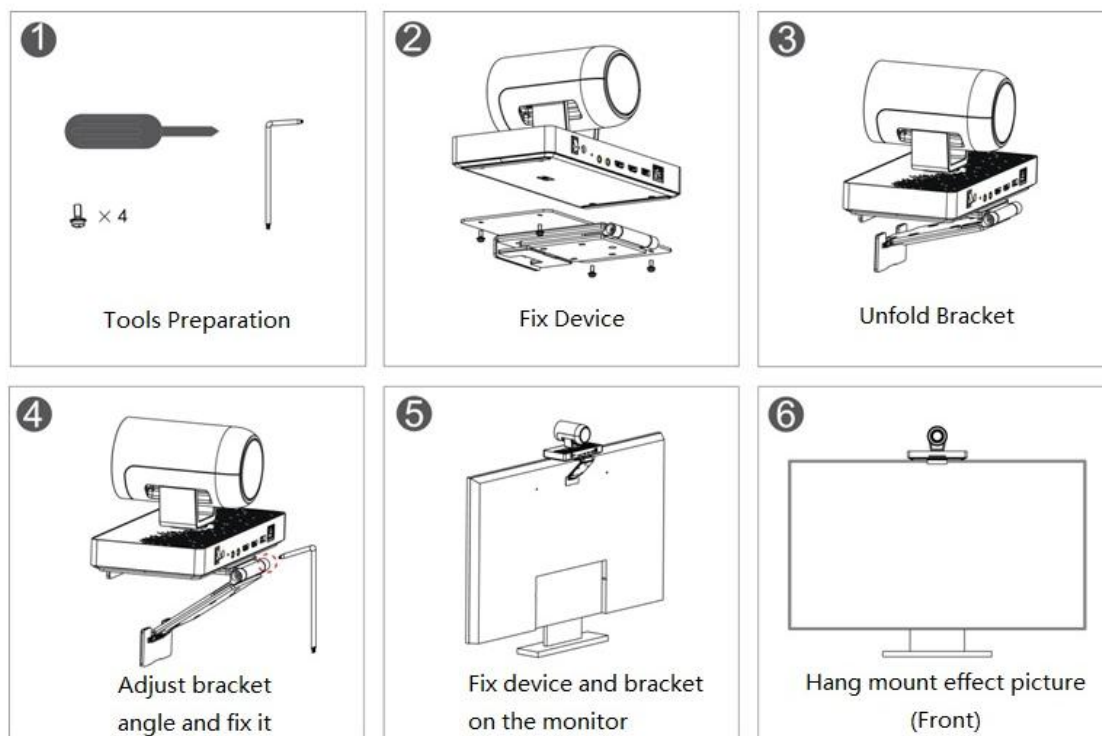


Figure 3-1

3.2.2 Wall Mount

The installation steps of wall-mounted installation are shown in Figure 3-2.

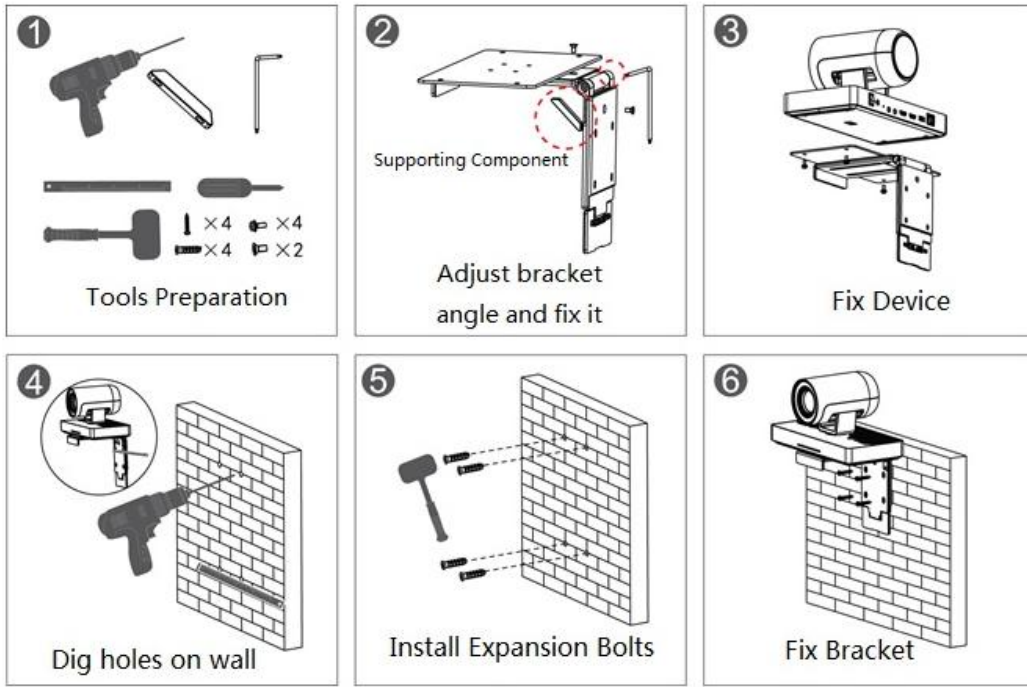


Figure 3-2

4 Initial Configuration

4.1 Starting Up

Caution

- Make sure the input voltage is in accordance with device power, and turn on the power after the device is correctly connected to power cable.
- In order to protect the device, please connect the device to power adapter and then connect to power.
- In order to guarantee stable operation of both device and external device (such as camera), prolong hardware service life, it is recommended to provide stable power input with less ripple disturbance according to the international standard. It is advised to use UPS power.
- Video endpoint device supports three types of control operation which are remote control, keyboard and mouse, the manual takes remote control operation as an example.

The steps of starting up are shown as follows

Step 1

Connect the device to monitor.

Step 2

Connect to power and enable the monitor.


Note

Please turn on the power switch on the rear panel of the device if it is the first time to enable the device.

Step 3

Switch the monitor to HDMI channel after the device is enabled, at this moment it will display the main interface of the system.

Note

You can press the  button on the remote control to start the device when the power on the device rear panel is enabled.

4.2 Power Off



- It is to power off via remote control.

Press the  button on the remote control to turn off the device.

- Turn off the device by pressing the power button on the device rear panel.

4.3 Remote Control Button Instruction

The following button operation instruction is the common operation command of remote control.

- Press  to select parameters.
- Press  to make it confirmed.
- Press “Number Button” to input parameter info.

Note

You can press **Enter** button when it needs to input number, letter or symbol if you use a keyboard, then the virtual keyboard is shown in Figure 4-1. You can input number, letter or symbol via keyboard. Press **Esc** button to exit the virtual keyboard.

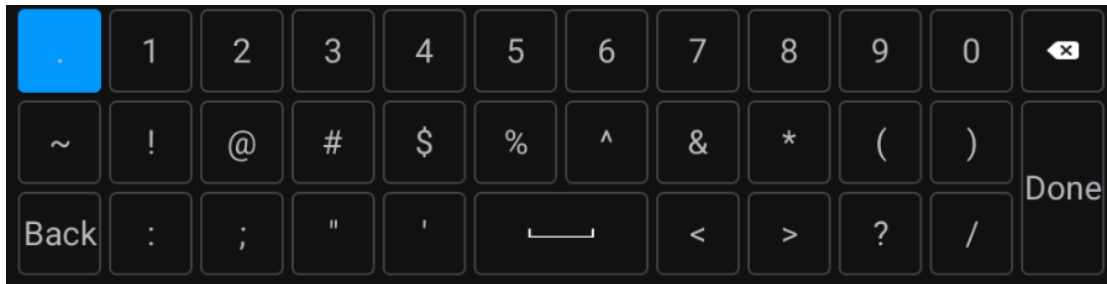


Figure 4-1

4.4 Main Interface Introduction

After switching monitor HDMI output channel, the system will display the interface which is shown in Figure 4-2.



Figure 4-2

4.5 Network Config

The device can be connected to network via wired or Wi-Fi, here it is to take wired connection as an example.

Note

Please make sure the network cable is correctly connected.

Step 1

Select "Setting > Network > Wired", press  button and the system will display the interface of "Wired", which is shown in Figure 4-3.

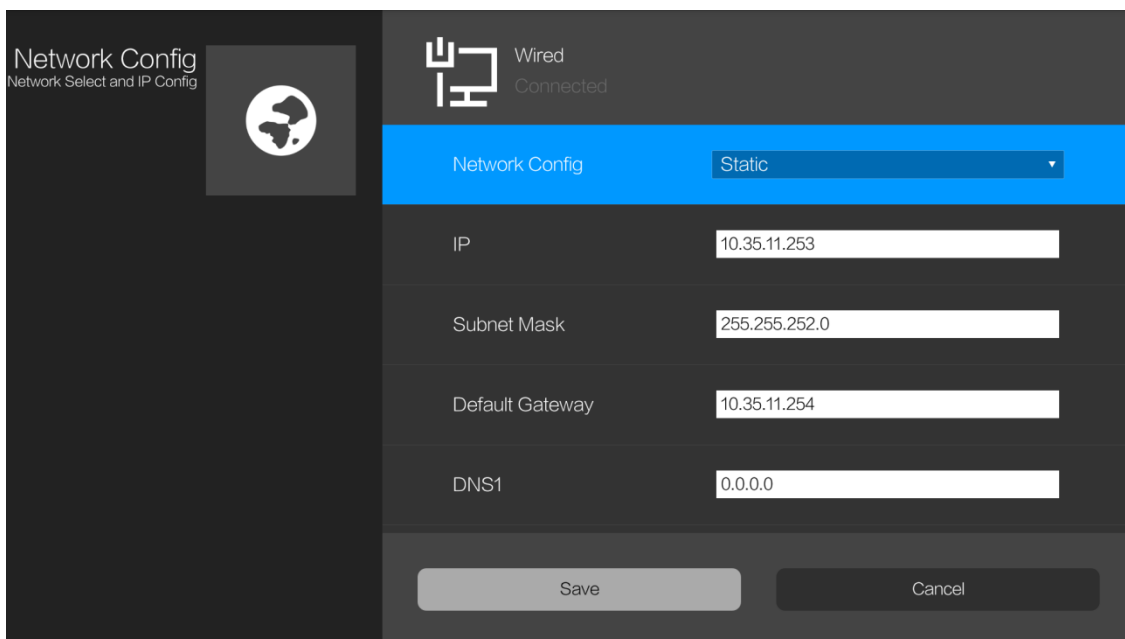


Figure 4-3

Step 2

Configure the parameters on the interface; please refer to Table 4-1 for more details.

Parameter	Note
Network Config	<ul style="list-style-type: none"> Static It needs to set IP address/subnet mask/default gateway/DNS1 manually. Note DNS1/DNS2 doesn't have to be configured. DHCP Search IP address automatically, at this moment IP/subnet mask/default gateway/DNS1 cannot be set.

Table 4-1

Step 3

Select "Save" and press  button to complete network setting.

4.6 Meeting Config

Note

- Please add device into the video conferencing management system (MCU).
- The following "Video Conferencing Management System" is called MCU for short.

4.6.1 Add Device

MCU server is used to create and control meeting. It needs to add devices in the video conferencing management system before configuring external MCU server, then it can create new meeting and select contacts in the contact list.

Step 1

Log in video conferencing management system.

Step 2

Select “Device Management > All” and the system will display the interface of “All Devices”, which is shown in Figure 4-4.

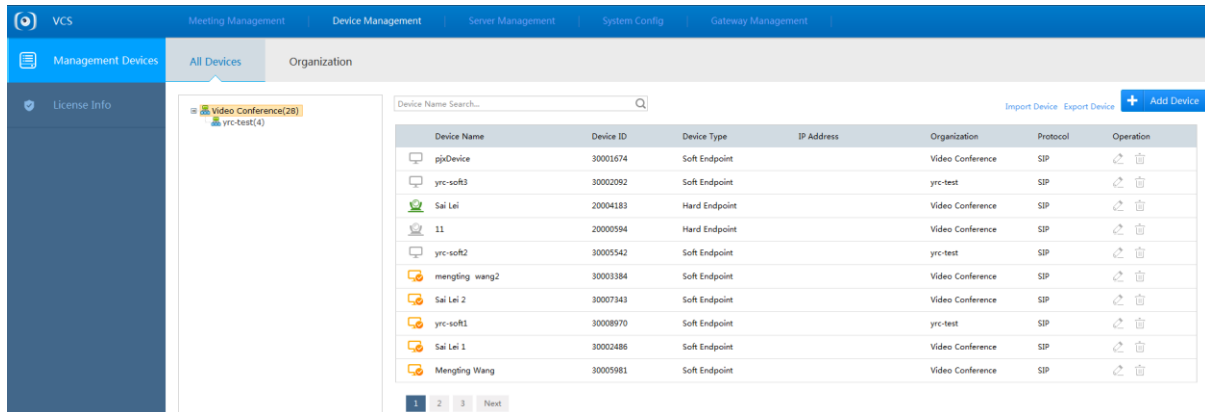



Figure 4-4

Step 3

Click  and the system will display the interface of “Add Device”, which is shown in Figure 4-5.

Add Device
✕

Device Type : *

Organization Name : *

Device Name : *

Device ID : 20005480

Password :

Number of Camera :

IP Address : . .

Phone :

E-mail :

Continue to add device :

OK

Figure 4-5

Step 4


It is to configure parameters. Please refer to Table 4-2 for more details.

Parameter	Note
Device Type	Categorized as hardware endpoint, software endpoint, RTSP endpoint, Dahua device, H323 and STD SIP. Here it selects

Parameter	Note
	“Hardware Endpoint”.
Organization Name	It is to select organization name according to the actual needs.
Device Name	Custom name.
Device ID	The device ID is automatically generated. <ul style="list-style-type: none"> ● Hardware endpoints: the device ID for system registration. ● Software endpoints: user name to log into PC or mobile conferencing endpoints.
Password	Applied to login passwords for hardware endpoints, software endpoints, PC and mobile conferencing endpoint. <p>Note If the authentication password has not yet been set, the system automatically assigns the default password: 123456.</p>
Number of Cameras	Input the number of cameras, default 1 is integrated endpoint.
IP address	It is the device IP address. Enter the device IP address. By default, endpoints under this IP address can create and join conferences.
Phone	The phone number of the person responsible for this device.
Email	The email address of the person responsible for this device.
Continue to add devices	Checked: continue to add devices. Unchecked: do not continue adding devices.

Table 4-2

Step 5

Click  to complete adding devices, the system will display the interface of “All Devices”, which is shown in Figure 4-6.

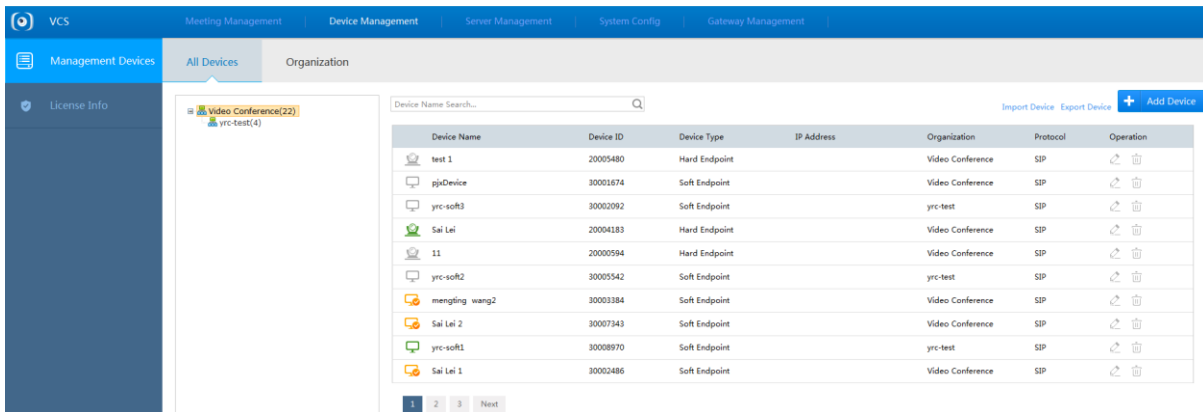


Figure 4-6

Note

- Select the device, and then click  to modify the device information.
- Select the device, and then click  to delete the device.

4.6.2 Service Config

Note

- Please select “Hardware Endpoint” in the “MCU” device adding before configuring SIP.
- The SIP config parameter of local device has to be in accordance with the actual setting of MCU, otherwise SIP config will fail.

Step 1

Select “Setting > Service”, the system will display the interface which is show in Figure 4-7.

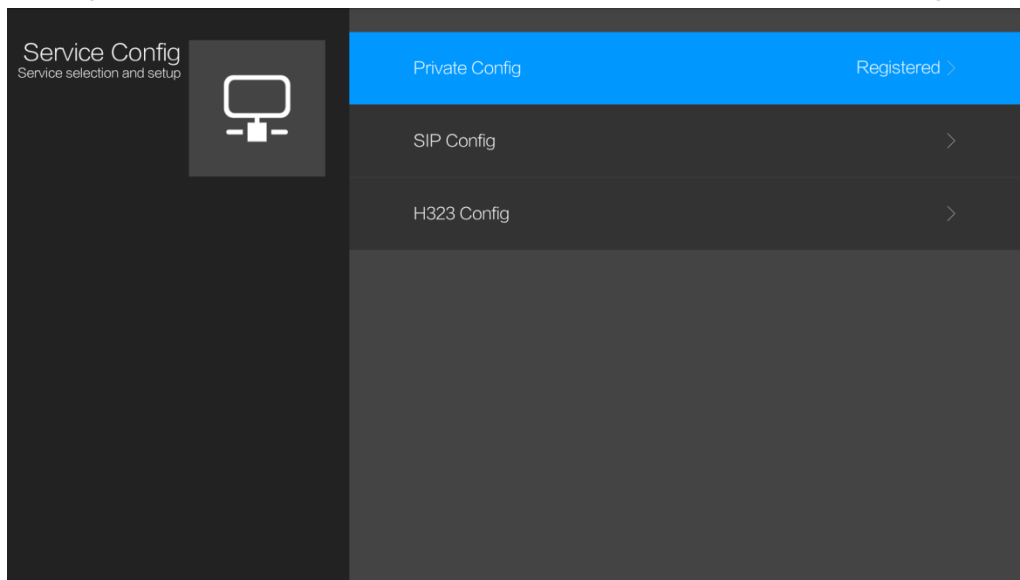



Figure 4-7

Step 2

Select “Private Config” and press  button. The system will display the interface which is shown in Figure 4-8.

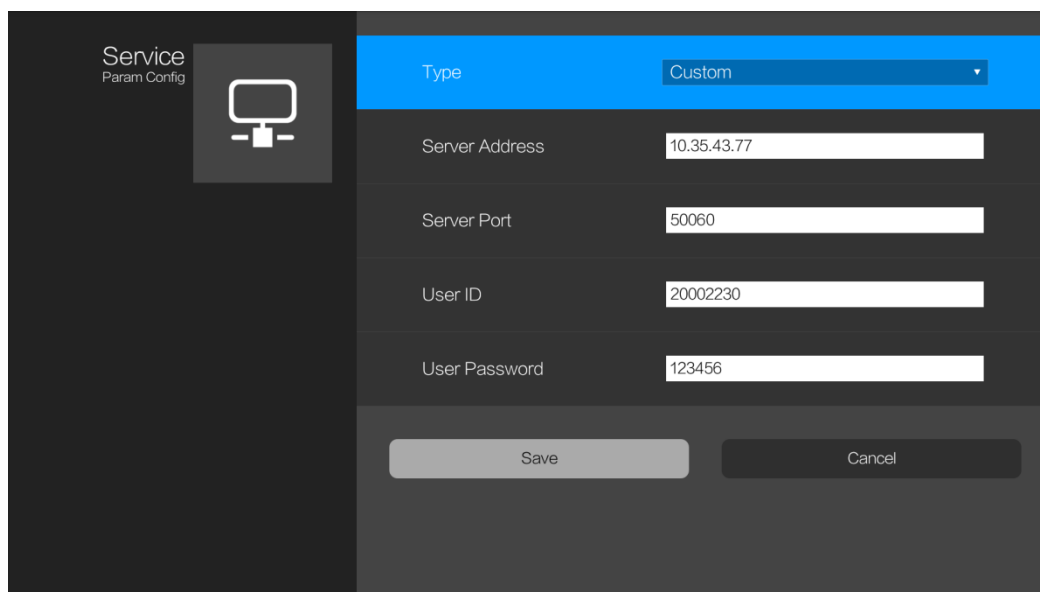


Figure 4-8


Step 3

It is to set parameters, please refer to Table 4-3 for more details.

Parameter	Note
Type	Custom: Use matched MCU to support. Cloud: Connect to Dahua cloud.
Server Address	Input MCU server IP address.
Server Port	Input MCU server port.
User ID	Input the device ID which is assigned by MCU server. It is the device ID when it is to add devices in the video conferencing management system.
User Password	Input user password.

Table 4-3

Step 4

Select "Save" and press  button.

5 Meeting

5.1 Hold Meeting

You can create immediate meeting and reserved meeting.

- Immediate meeting: It is to set meeting theme, duration, add members and etc., the meeting is enabled immediately.
- Reserved meeting: You can customize meeting time, and create meeting.

5.1.1 Create Meeting

Note

- The meeting duration shall be at least 30 minutes.
- The earliest time for reserved meeting is one minute after the current time.

Take “Create Immediate Meeting” as an example, the exact operation steps are shown as follows:

Step 1

Select “Meeting> New” and the system will display the interface of “New Meeting”, which is shown in Figure 5-1.

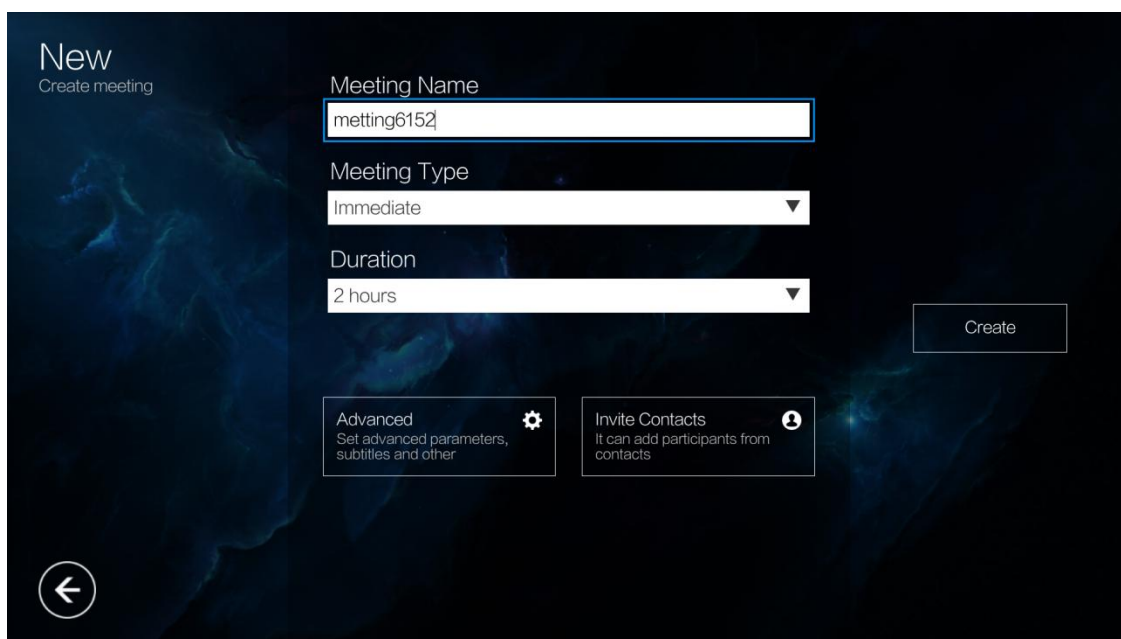



Figure 5-1

Step 2

Input “Meeting Name”, and select “Meeting Type” as “Immediate”, select “Duration” and configure “Meeting Password” according to requirements.

Step 3

Invite contacts

1. Select “Invite Contacts” and press  button. The system will display the interface of “Invite Contacts”, which is shown in Figure 5-2.

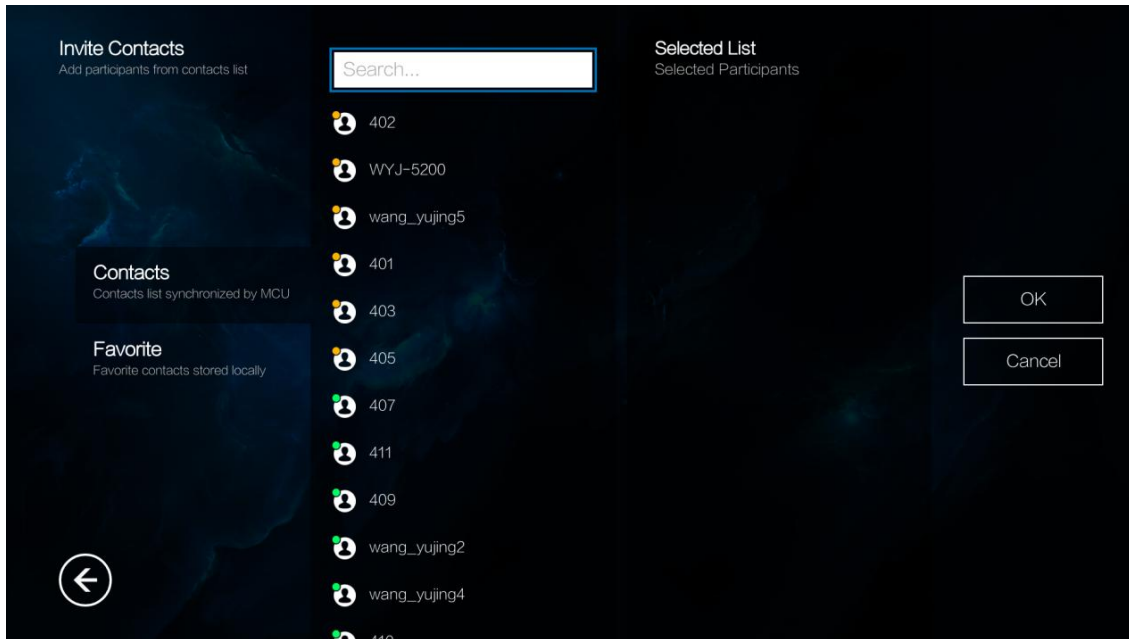





Figure 5-2

2. Select member, press  button to select the needed meeting members.
3. Select "OK", press  button and save config.
The system returns to "New" interface, and it will display the name of the first contact and the number of invited members in the button of "Invite Contacts".

Step 4

Select "Create" and press  button.
The system will enter meeting directly.

Note

Select "Advanced" to set meeting stream parameters and meeting parameters.

5.1.2 Join Meeting

Some meeting is in process, and you failed to join in time, then you can join directly via entering "Meeting ID".

Note

For non-member, it only supports to join the meeting which has not been locked.

Step 1

Select "Meeting> Join" and the system will display the interface of "Join", which is shown in Figure 5-3.

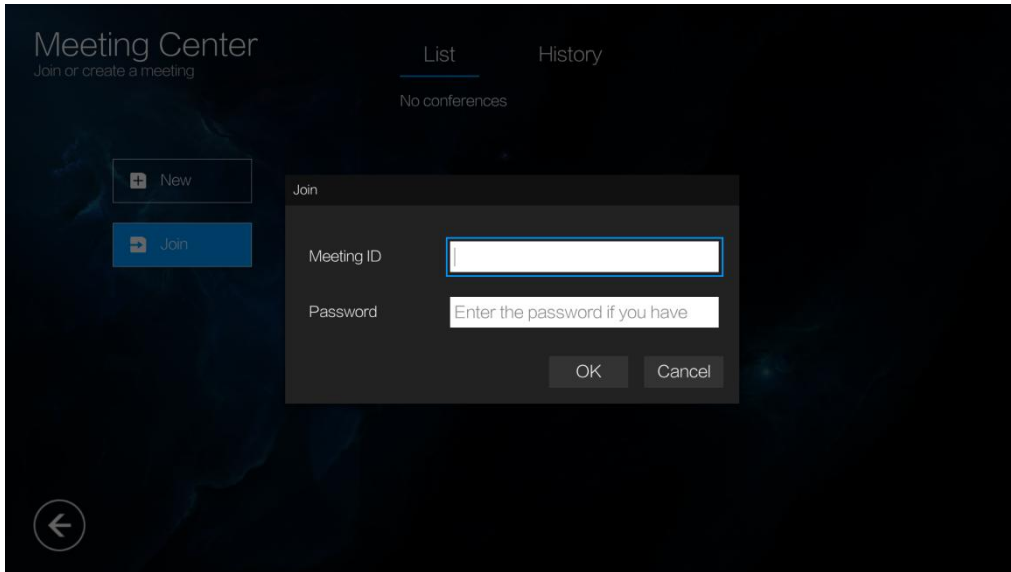


Figure 5-3

Step 2

Enter "Meeting ID" and "Password".

Step 3

Click "OK" to enter meeting display interface.

5.2 Meeting Control

Meeting control consists of "Chairman Meeting Site" and "Non-chairman Meeting Site".

5.2.1 Chairman Meeting Site

When the local meeting site becomes the chairman, press



button and the meeting main menu is displayed, which is shown in Figure 5-4.



Figure 5-4

Please refer to Table 5-1 for the functions of chairman meeting site.




Parameter	Note
Meeting Control	It is to control individual member or all members.
Rollcall	Chairman can designate some meeting site to speak.
Add Meeting	Chairman can add meeting member.
Send Demo	Press  button on the remote control to send/close demo. Note It is to connect computer to video conferencing endpoint via VGA cable.
Release Chairman	It is to exit chairman meeting control.
Hang up	Leave/end meeting temporarily. Note  You can press  to make quick operation.

Table 5-1

5.2.2 Non-chairman Meeting Site



When the local meeting site is general member, press  button and the meeting main menu is displayed, which is shown in Figure 5-5.



Figure 5-5

Please refer to Table 5-2 for the functions of general member.

Parameter	Note
Apply	It can apply for speech to the chairman.
Send Demo	Press  button on the remote control to send/close demo. Note It is to connect computer to video conferencing endpoint via VGA cable.
Apply	Chairman meeting site owns bigger meeting control authority than non-chairman meeting site.



Parameter	Note
Hang up	<p>Leave/end meeting temporarily.</p> <p>Note</p> <p>You can press  to make quick operation.</p>

Table 5-2

6 Voice

You can make detection over microphone and speaker, the operation steps are shown as follows:

Step 1

Select “Voice” and press  button. The system will display the interface which is shown in Figure 6-1.

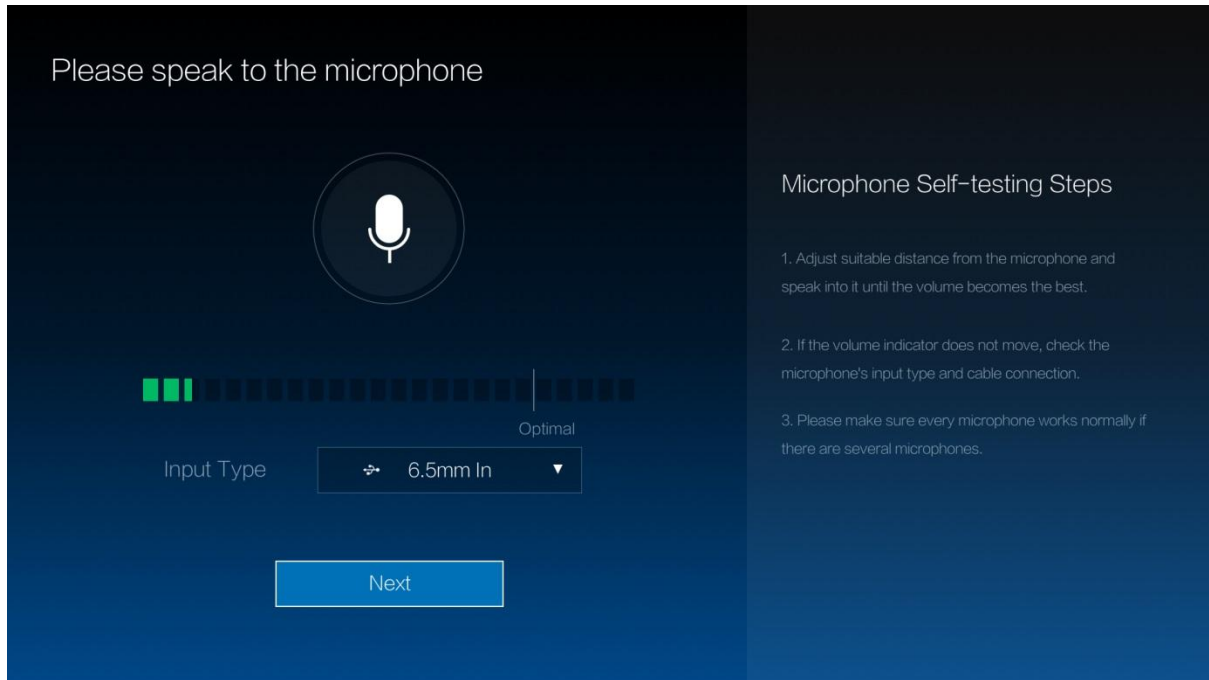



Figure 6-1

Step 2

Speak to the microphone according to the prompt on the interface.

- The progress bar means volume, then it will reach the top red area when the volume is too big.
- Please try the following solutions if you cannot see the progress bar.
 - ✧ Check if the microphone volume beats.
 - ✧ Please check if the port is correctly plugged into microphone port if it is connected to external microphone.

Step 3

Select “Next” and press  button. The system will display the interface which is shown in Figure 6-2.

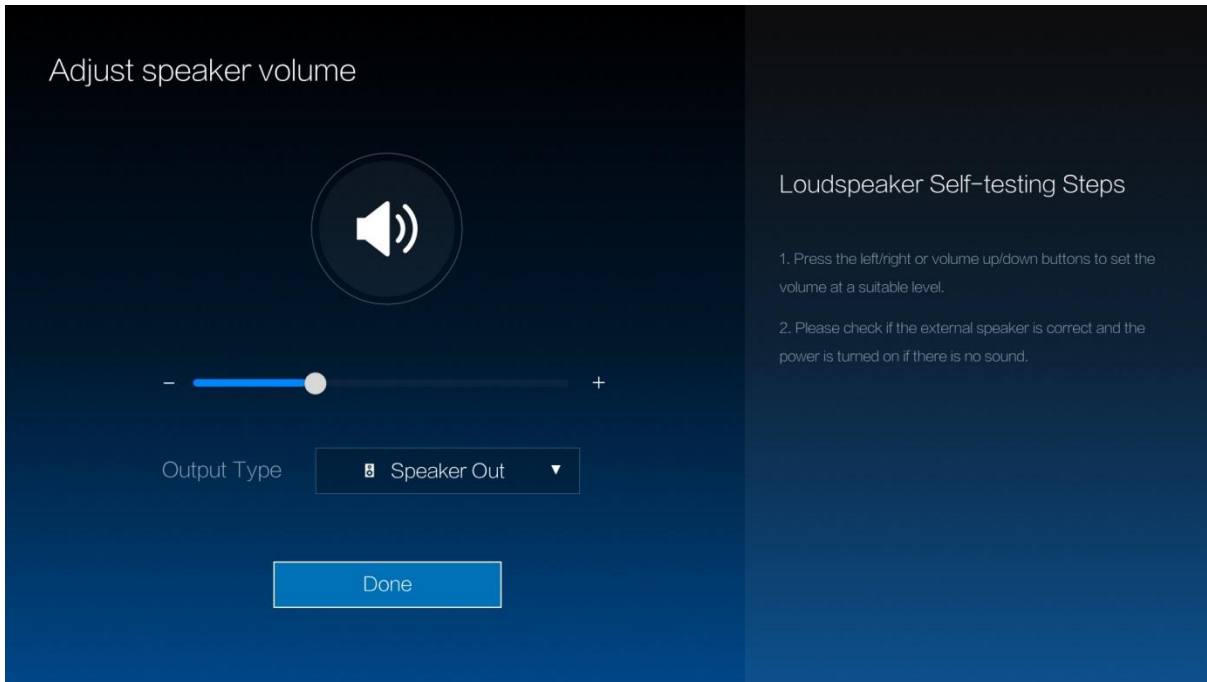



Figure 6-2

Step 4

Select output type and adjust corresponding volume.

- Please check if the TV stereo can play normally if there is no voice output when using TV stereo.
- Please check if the external speaker is correctly plugged into the port or if the external speaker can be turned on if there is no voice output when using external speaker.
- Please check if the volume is set as minimum or the built-in speaker is malfunctioned if there is no voice output when using built-in speaker.

Step 5

Select “Done” and press  button. The system will return to main interface and test is completed.

7 Appendix I Technical Parameters

Parameter	Note
Endpoint Dimension	218mm×106mm×118mm
Package size	360mm×250mm×250mm (reference size, ±5mm)
Device net weight	2.5kg
Device gross weight	4kg
Working voltage	DC12V
Working frequency	50Hz~60Hz
Max power consumption	30W
Temperature	0℃~+45℃ (working status) -40℃~+70℃ (non-working status)
RH	10%~80% (working status) 0%~95% (non-working status)
Ambient noise	<46dBA SPL

Table 7-1

Note

- This quick start guide is for reference only. Slight difference may be found in user interface.
- All the designs and software here are subject to change without prior written notice.
- If there is any uncertainty or controversy, please refer to the final explanation of us.
- Please visit our website or contact your local service engineer for more information.



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