

Master Station

Quick Start Guide






Foreword

General

This manual introduces the installation and basic operation of the master station (hereinafter referred to as "VTS").

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 Date
V1.0.0	First release.	March 2020

About the Manual

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

- If there is any uncertainty or controversy, please refer to our final explanation.

Important Safeguards and Warnings

This chapter introduces the contents covering proper handling of the VTS, hazard prevention, and prevention of property damage. Read these contents carefully before using the VTS, comply with them when using, and keep the manual well for future reference.

Operating Requirement

- Do not place and install the device in an area exposed to direct sunlight or near heat generating device.
- Do not install the device in a humid, dusty or fuliginous area.
- Keep its horizontal installation, or install it at stable places, and prevent it from falling.
- Do not drip or splash liquids onto the device; do not put on the device anything filled with liquids to prevent liquids from flowing into the device.
- Install the device at well-ventilated places; do not block its ventilation opening.
- Use the device only within rated input and output range.
- Do not dismantle the device arbitrarily.
- The device shall be used with screened network cables.

Power Requirement

- The product shall use electric wires (power wires) recommended by this area, which shall be used within its rated specification!
- Use power supply that meets SELV (safety extra low voltage) requirements, and supply power with rated voltage that conforms to Limited Power Source in IEC60950-1. For specific power supply requirements, refer to device labels.
- Appliance coupler is a disconnecting device. During normal use, keep an angle that facilitates operation.
- Do not cut off power supply during device upgrade. Power supply can be cut off only after the device has completed upgrade and has rebooted.



CAUTION

- Risk of explosion if the battery is replaced by an incorrect type.
- Do not throw or immerse into water, heat to more than 100 °C (212 °F), repair or disassemble, leave in an extremely low air pressure environment or extremely high-temperature environment, crush, puncture, cut or incinerate.
- Dispose of the battery as required by local ordinances or regulations.

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1 Structure

Put the VTS on a table place such as desk, and adjust the angle within 0°–45° through the bracket on the rear panel.

1.1 Front Panel

Figure 1-1 Front panel

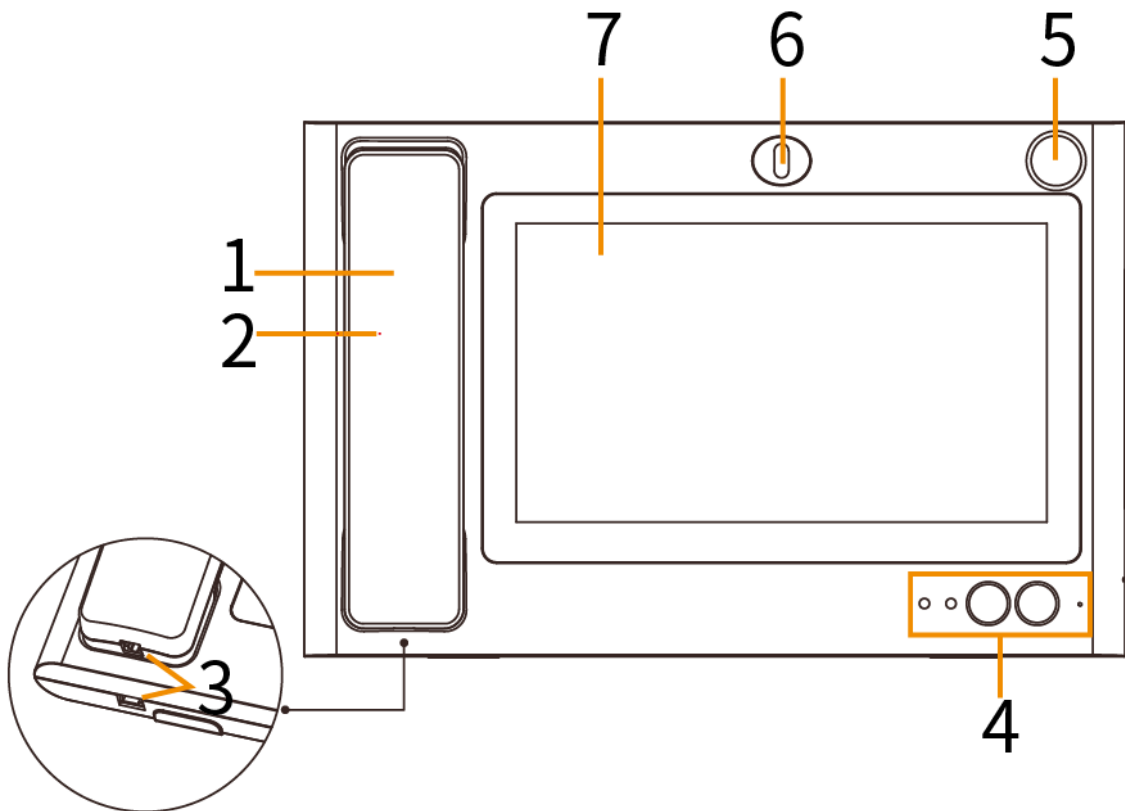



Table 1-1 Front panel description

No.	Parameter	Description
1	Handset	Pick up the handset, and the VTS enters handset mode.
2	Speaker	Outputs audio.
3	Telephone line port	Connected to the VTS and the receiver.
4	Indicator lights and buttons	From left to right: <ul style="list-style-type: none"> • Power indicator light On: Power on; Off: Power off. • Message indicator light On: There are missed calls; Off: There is no missed call or missed calls have been processed. • Unlock button (Optional) When the VTS is being called, monitoring or talking, press the button you can open some front

No.	Parameter	Description
		<p>devices which supports unlock function.</p> <ul style="list-style-type: none"> • Handfree button Answers calls, and switch between handfree mode and handset mode. • Built-in MIC Inputs audio.
5	Speaker port	<p>(Optional) Connects to a microphone.</p>  <p>This function is only available on the models with built-in camera.</p>
6	Camera	(Optional) You can adjust the camera angle manually.
7	Display and touch screen	LCD display and touch screen.

1.2 Rear Panel

Figure 1-2 Rear panel

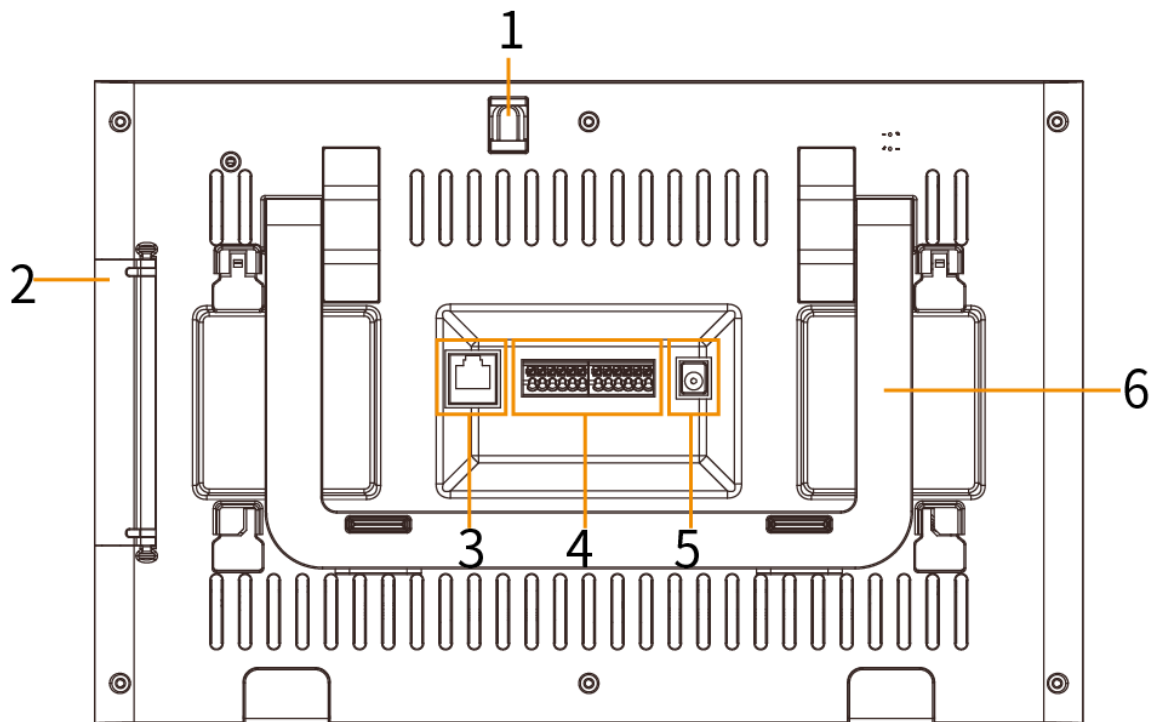


Table 1-2 Rear panel description

No.	Parameter	Description
1	Camera	You can adjust the camera angle manually.
2	Port	<p>Open the cover, ports from top to bottom:</p> <ul style="list-style-type: none"> • HDMI video transmission port, which is used for video transmission. • USB port.

No.	Parameter	Description
		<ul style="list-style-type: none"> ● USB port. ● SD slot.
3	Network port	Connects to RJ-45 cable.
4	12-Core port	<p>From left to right:</p> <ul style="list-style-type: none"> ● Power output port. ● Ground. ● Alarm input port 1. ● Alarm input port 2. ● Alarm input port 3. ● Alarm input port 4. ● Power input port. ● Ground port. ● RS-485A port. ● RS-485B port. ● Alarm Output No. ● Alarm Output COM.
5	Power	12V DC power input.
6	Bracket	Adjust the angle within 0°–45° through the bracket on the rear panel.

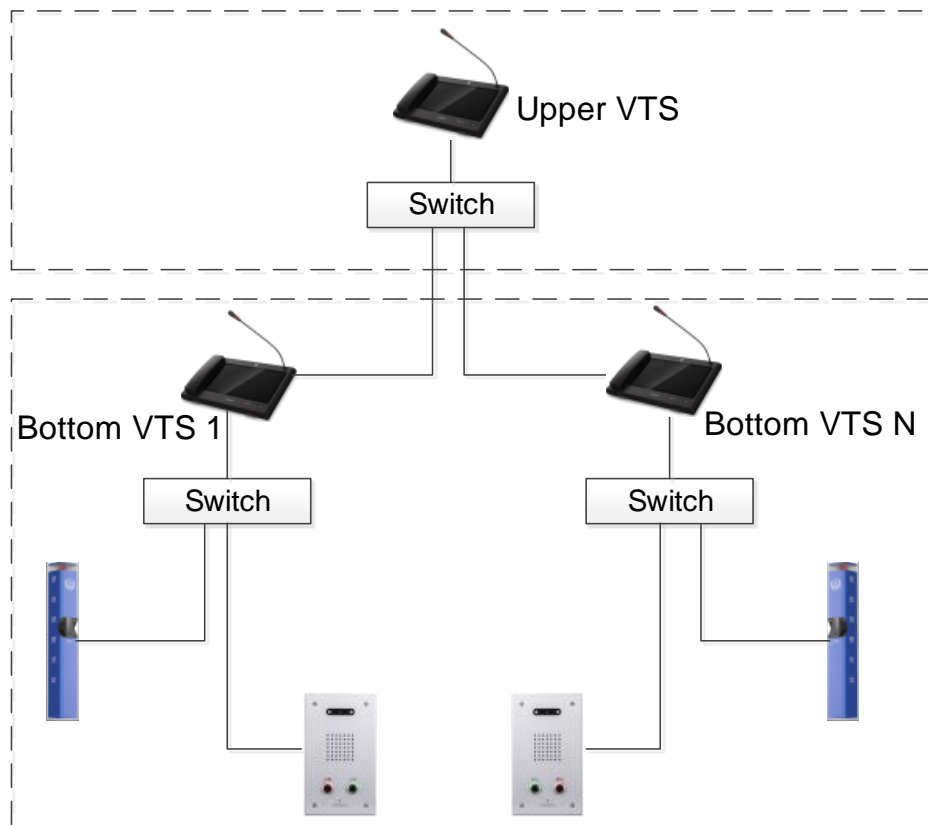
2 Cable Connection

2.1 Important Note

- Use the standard power adapter. Do not supply power with the adapter of other models.
- Before connecting cables, read "1 Structure" to learn the device structure.
- Before connecting the power source, make sure that all the cables are connected correctly. After power on, the power indicator light is on.

2.2 Network Diagram

Figure 2-1 Network diagram



3 Web Operations

3.1 Device Initialization



For first time login, or after default setting, you need to initialize the VTS; otherwise the VTS cannot be used normally.

Step 1 Enter the IP address of the VTS (192.168.1.108 by default) in the address bar.

Figure 3-1 Password setting

Device

1 Setting 2 Protect 3 Complete

Username admin

New Password

Weak Middle Strong

Confirm Password

Use a password that has 8 to 32 characters, it can be a combination of letters, numbers and symbols (please do not use special symbols like \, \, ;, :, \, &)

Next

Step 2 Follow the screen instruction, enter the new password, confirm the password, and then click **Next**.

Figure 3-2 Password protection

Device

1 Setting 2 Protect 3 Complete

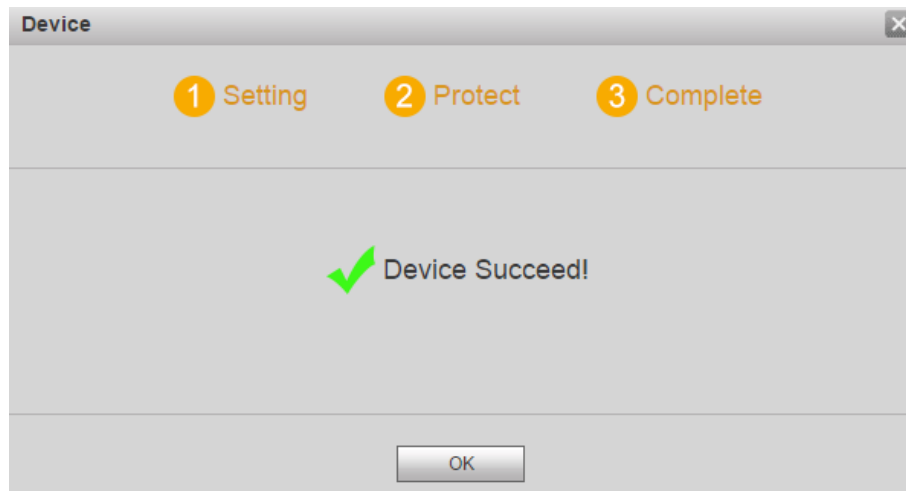
Email

(To reset password, please input properly or update in time)

Next

Step 3 Select the **Email** check box, and then enter your email address. Click **Next**.

Figure 3-3 Completed



Step 4 Click **OK**. The login interface is displayed.

3.2 Login

Step 1 Enter the IP address of the VTS in the address bar.



Make sure that the PC IP address is in the same network segment with that of the VTS.

Figure 3-4 Login



Step 2 Enter the username and password

Step 3 Click **Login**.

3.3 Password Reset

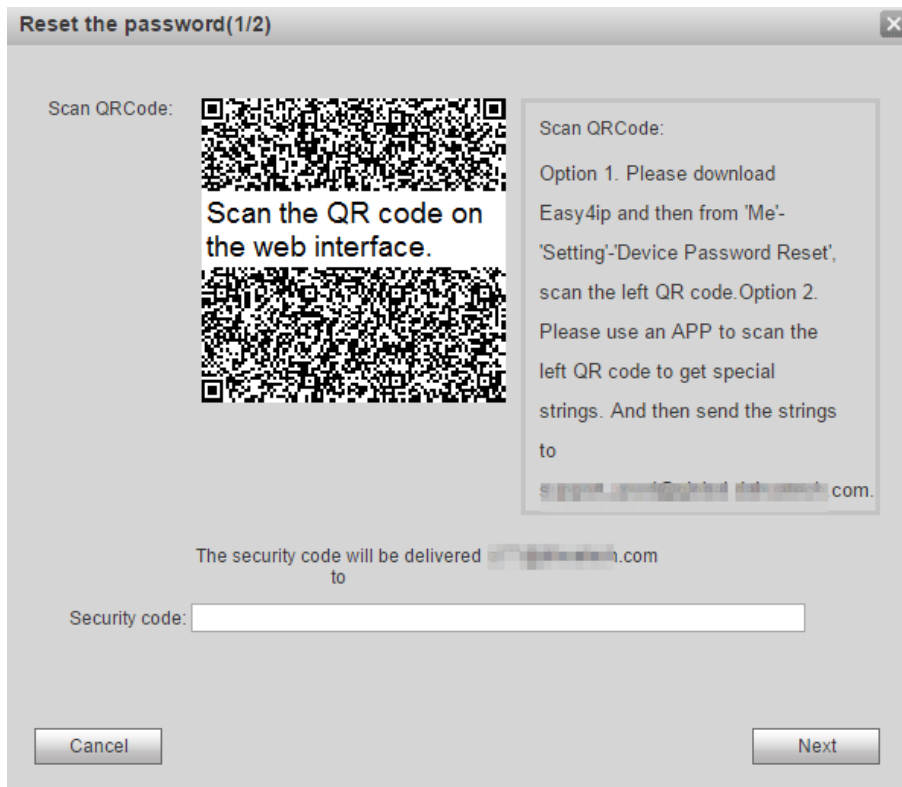
If you forgot the password, you can reset the password through this function.

Step 1 Click **Forgot password ?** on the login interface.



If you use IE browser, the system might prompt **Stop running the script**, click **No** and continue to run the script.

Figure 3-5 Reset password (1/2)



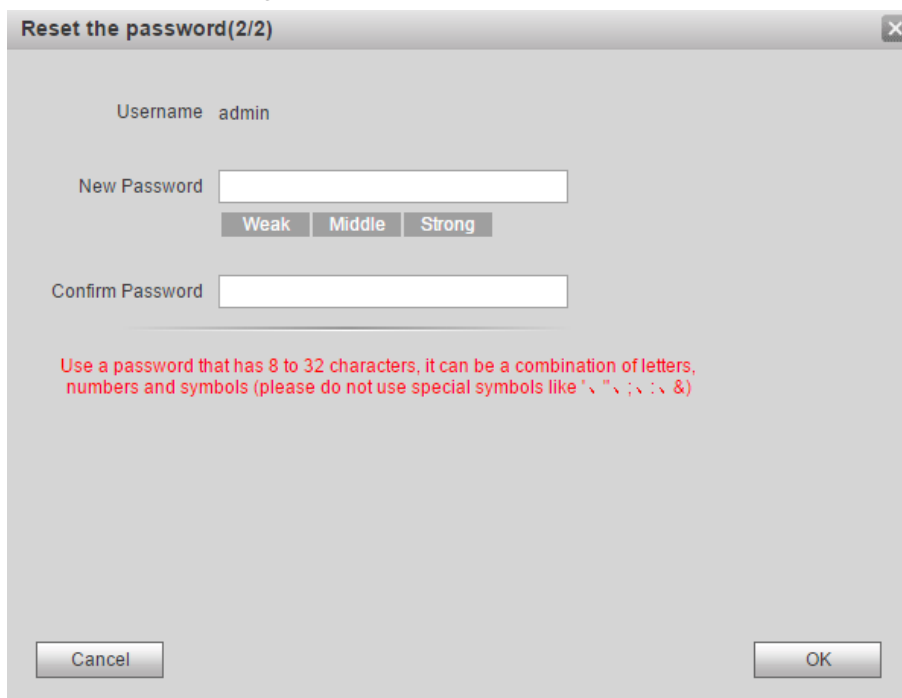
Step 2 Scan the QR code, and you will get a string.

Step 3 Send the string to the email address displayed on the QR code interface.
A security code will be sent to your email.

Step 4 Enter the security code that you have received.

Step 5 Click **Next**.

Figure 3-6 Reset the password (2/2)



Step 6 Enter the new password and confirm it.

The password must consist of 8 to 32 non-blank characters and contain at least two types of characters among upper case, lower case, number, and special character

(excluding ' " ; : &). **Password** and **Confirm Password** shall be the same. Enter a strong password according to the password strength indication.

Step 7 Click **OK** and password reset is completed.

3.4 Local Setup


Set device role, device number and IP address, and more.



Step 1 Select **System Setup > Local Setup**, and then click the **Local Setup** Tab.

Figure 3-7 Local setup

Step 2 Configure parameters.

Table 3-1 Local settings

Parameter	Description
Device Role	<p>Includes 3 role types, and the default one is Bottom VTS.</p> <ul style="list-style-type: none"> Bottom VTS: When used without platform, VTS can be used as bottom VTS, which has management permission. Upper VTS: When used without platform, VTS can be used as upper VTS, which has the permission to add the VTS of lower level, but does not have the permission to manage the organization structure. Platform client: When used with platform, VTS can be used as platform client, which does not have the permission to manage device.
Device Name	Customize the name for the device.
Device No.	<p>Customize the number for the device. Do not modify it arbitrarily.</p> <p> If you modify the number of the VTS of lower level, you need to add the device to the upper VTS again.</p>
IP Address	Enter the IP address, subnet mask, and gateway.

Parameter	Description
Subnet Mask	
Default Gateway	If you modify the IP address of the VTS of lower level, you need to add the device to the upper VTS again.
MAC Address	The MAC address of the VTS.
DNS Address	The DNS address of the VTS. It is 8.8. 8.8 by default.
Reboot Date	Set the time at which the VTS auto reboots. The time is 2:00, Tuesday by default.
Version Info	The current version.
SSH	Enable or disable the SSH debug function.  If you have enabled the SSH function the Advanced Config on the device, the function is enabled on the web interface.

Step 3 Click **OK**.

- Click **Default** to restore all the configuration of this tab to the default value.
- Click **Refresh** to display the current system configuration.



- The parameter with * must be configured.
- When the device role is modified, the system will go to the login interface, and you need to log in again.
- When IP Address is modified, the system will go to the login interface, and you need to log in again.

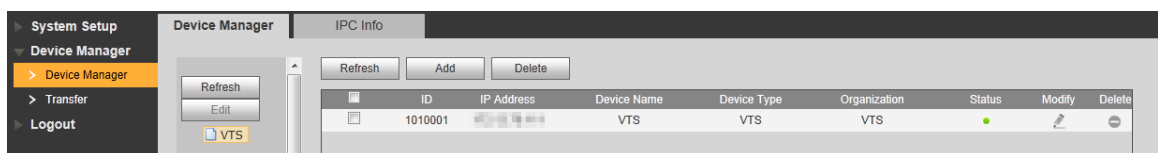
3.5 Device Management

3.5.1 Device Manager

- When the device role is bottom VTS, it can add the VTT and the VTA
- When the device role is upper VTS, it can add the bottom VTS.

Select **Device Manager > Device Manager**, and click **Device Manager**.

Figure 3-8 Device manager



3.5.1.1 Adding Device

- Bottom VTS
Click VTS node on left side of the interface, and then click **Add**. See Figure 3-9. Enter the device information of added VTT and VTA, and then click **OK**.



- The **Device Name** is "group name + device name", and it will be displayed in the device tree on the left side of the interface.
- Make sure that the device model is correct; otherwise the device adding will fail.

Figure 3-9 Add device

Username admin *

Password *

Upper Organization VTS *

ID 1010002 *

IP *


Port 3666 *

Device Name - * (Fill in group name first and then fill in device name)

Device Type VTT *

Device Model VTT *

OK Cancel

- Upper VTS
Click **Edit**. See Figure 3-10. Hover over the device name, and the adding and deleting icons will be displayed. Click , see Figure 3-11. Enter the IP address, username and password, and then click **OK**.



After adding the device, click Refresh to display the VTT or VTA information on the interface.

Figure 3-10 Adding VTS

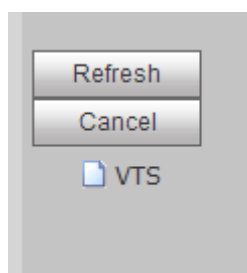


Figure 3-11 Add node

The 'Add Node' dialog box features a title bar with a close button. Below the title bar, there are four input fields: 'Upper Organization' (containing 'VTS'), 'IP', 'Username', and 'Password'. Each field is followed by a red asterisk. At the bottom of the dialog are two buttons: 'OK' and 'Cancel'.

3.5.1.2 Modifying Device

You can only modify VTT or VTA information.



Click  next to the VTT or VTA information, see Figure 3-12. You can modify username, password, IP address, port, device name, device type and device model.

Figure 3-12 Add device (VTT or VTA)


The 'Add Device' dialog box has a title bar with a close button. It contains the following fields: 'Username' (admin), 'Password', 'Upper Organization' (VTS), 'ID' (1010004), 'IP', 'Port' (3666), 'Device Name' (two empty fields separated by a hyphen), 'Device Type' (VTT), and 'Device Model' (VTT). Each field has a red asterisk. Below the 'Device Name' fields, there is a red note: "(Fill in group name first and then fill in device name)". At the bottom are 'OK' and 'Cancel' buttons.

3.5.1.3 Deleting Device

- Delete VTS
Click **Edit**, hover over the device name, and the adding and deleting icons will be displayed. Click  to delete it.



Root node cannot be deleted.

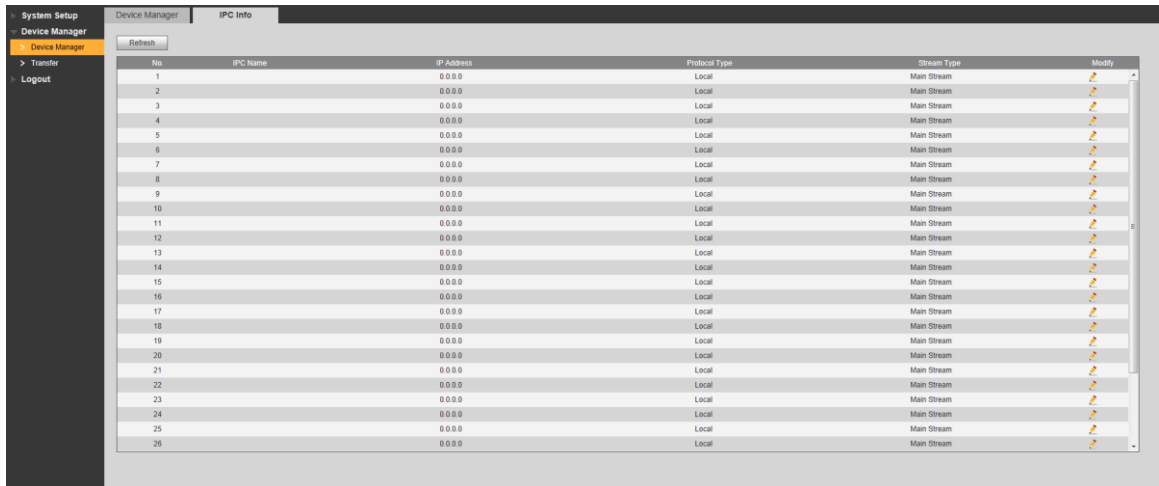
- Delete device (VTT or VTA)
Click  in the device information bar to delete a device.

3.5.2 IPC Information

Add IPC to do monitoring, and you can add 32 cameras at most.

Step 1 Select **Device Manager > Device Manager**, and click the **IPC Info** tab.

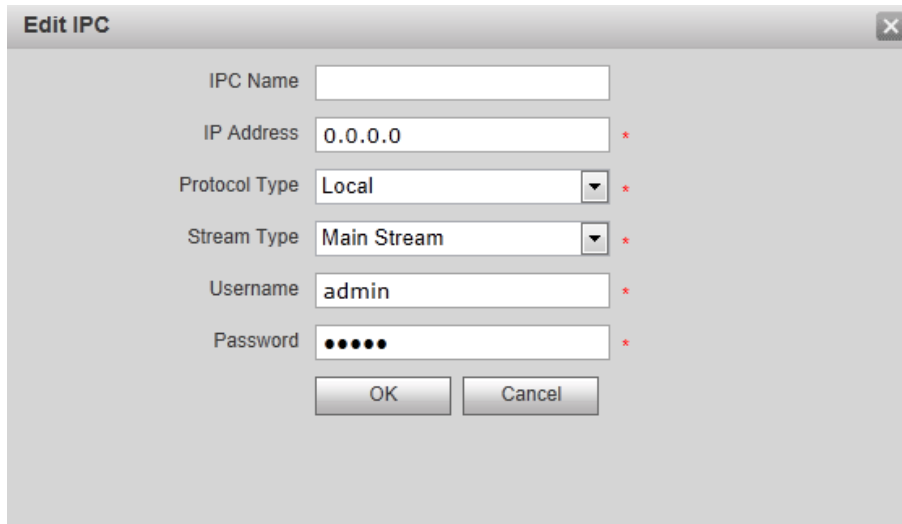
Figure 3-13 IPC information



No.	IPC Name	IP Address	Protocol Type	Stream Type	Modify
1		0.0.0.0	Local	Main Stream	
2		0.0.0.0	Local	Main Stream	
3		0.0.0.0	Local	Main Stream	
4		0.0.0.0	Local	Main Stream	
5		0.0.0.0	Local	Main Stream	
6		0.0.0.0	Local	Main Stream	
7		0.0.0.0	Local	Main Stream	
8		0.0.0.0	Local	Main Stream	
9		0.0.0.0	Local	Main Stream	
10		0.0.0.0	Local	Main Stream	
11		0.0.0.0	Local	Main Stream	
12		0.0.0.0	Local	Main Stream	
13		0.0.0.0	Local	Main Stream	
14		0.0.0.0	Local	Main Stream	
15		0.0.0.0	Local	Main Stream	
16		0.0.0.0	Local	Main Stream	
17		0.0.0.0	Local	Main Stream	
18		0.0.0.0	Local	Main Stream	
19		0.0.0.0	Local	Main Stream	
20		0.0.0.0	Local	Main Stream	
21		0.0.0.0	Local	Main Stream	
22		0.0.0.0	Local	Main Stream	
23		0.0.0.0	Local	Main Stream	
24		0.0.0.0	Local	Main Stream	
25		0.0.0.0	Local	Main Stream	
26		0.0.0.0	Local	Main Stream	

Step 2 Click  to edit IPC.

Figure 3-14 Edit IP



Edit IPC ✕

IPC Name

IP Address *

Protocol Type *

Stream Type *

Username *

Password *

Step 3 Configure the parameters.

Table 3-2 IPC parameter description

Parameter	Description
IPC Name	Enter the IPC name.
IP Address	Enter the IP address of the IPC.
Protocol	Includes Local and ONVIF .
Stream Type	Includes Main Stream and Sub Stream

Parameter	Description
Username	Enter the user name and password of the IPC that you need.
Password	

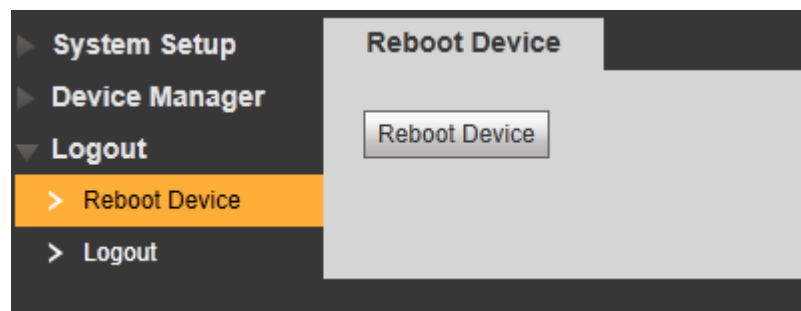
Step 4 Click **OK**.

3.6 Logout

3.6.1 Reboot

Step 1 Select **Logout > Reboot Device**.

Figure 3-15 Reboot device

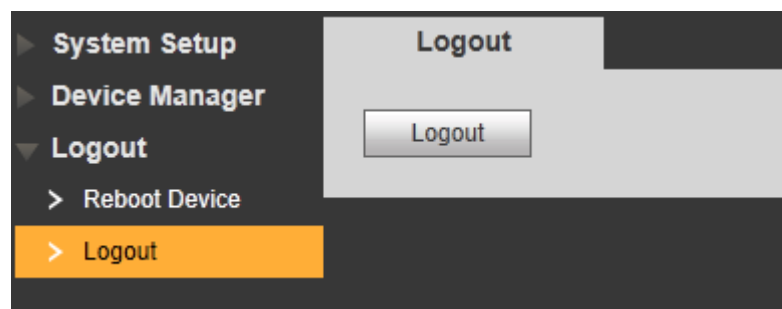


Step 2 Click **Reboot Device** to restart the device.

3.6.2 Logout

Step 1 Select **Logout > Logout**.

Figure 3-16 Logout



Step 2 Click **Logout**.
The login interface is displayed.

4 VTS Operations



Before operating the VTS, make sure that the cable connection is correct. For details, see "2.1 Important Note."

4.1 Standby Interface

After powering on, the standby interface is displayed. See Figure 4-1. Tap anywhere to go to the homepage. See Figure 4-2.

Figure 4-1 Standby interface

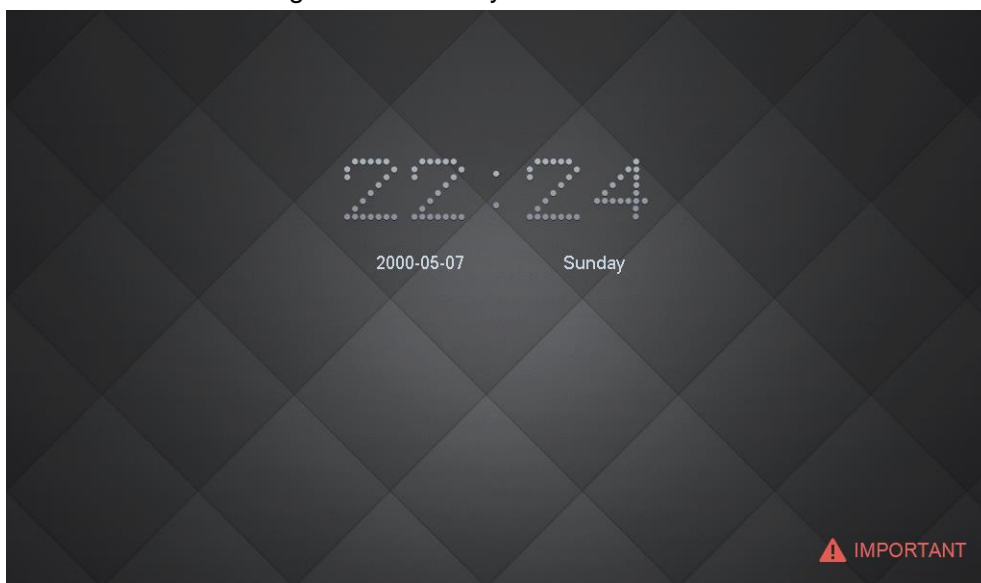
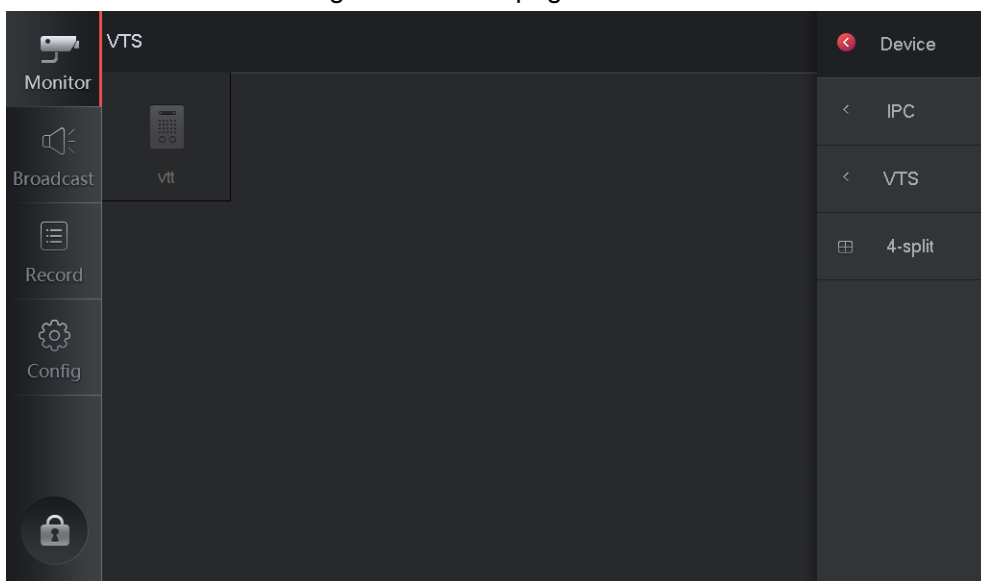



Figure 4-2 Homepage





Tap , and the system enter the screen saver mode, tap anywhere to cancel the screen saver mode.

4.2 Monitor

The VTS can monitor the terminals including VTT, VTA, and IPC, and talk with the VTS in the network.



Before monitoring, add the corresponding terminals and IPC. For the detailed operation of adding terminals, see "3.5.1.1 Adding"; for the detailed operation of adding IPC, see "3.5.2 IPC Information."

4.2.1 Device

You can do operations on the added devices (VTT and VTA) such as monitor, switch, call, record, and snapshot.

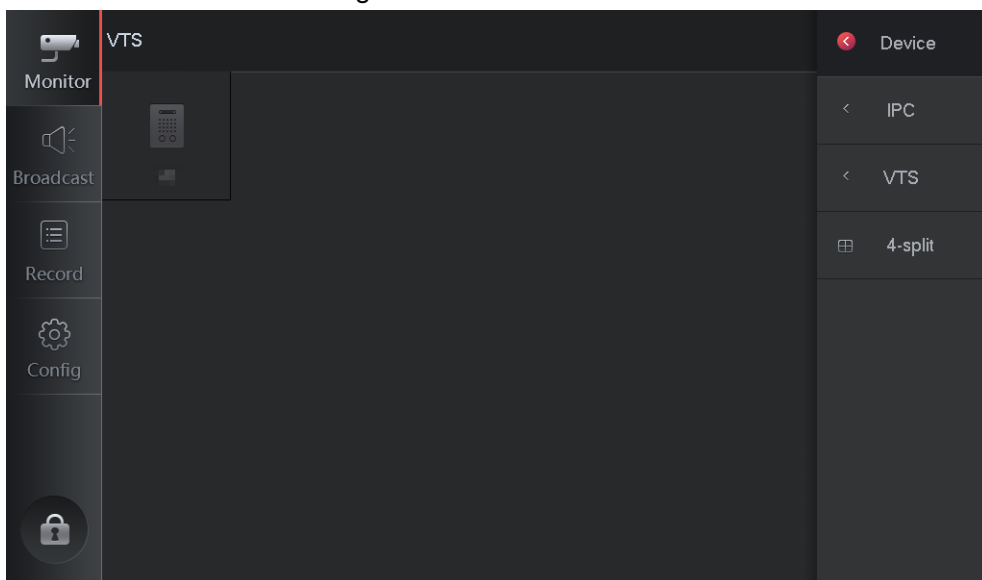
This section takes VTA as an example.

Step 1 Select **Monitor > Device**.



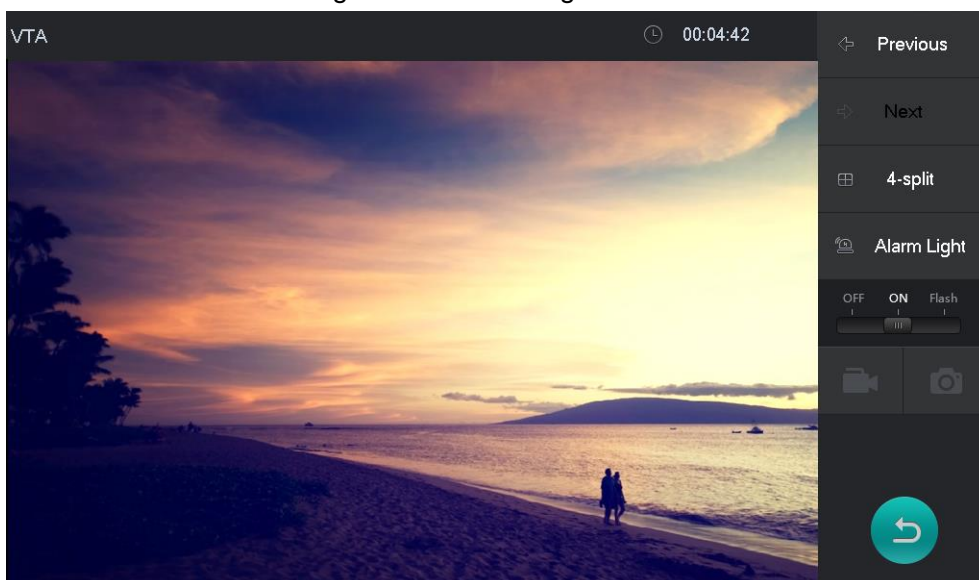
When the icon is highlighted, you can monitor the device.

Figure 4-3 Device



Step 2 Tap the VTA icon.

Figure 4-4 Monitoring



Step 3 Do the operation as the description of Table 4-1.

Table 4-1 Monitor description















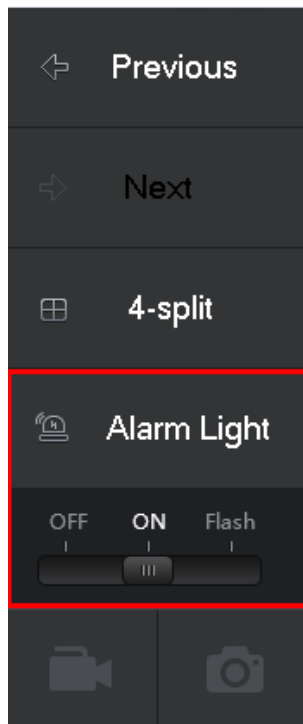
Icon/Parameter	Description
Previous	When the VTS connects to several devices, tap Previous or Next to switch the monitoring image.
Next	
Split	Tap Split , and the 4-split interface is displayed. For details, see "4.2.4 4-split."
Alarm light	The function is available on VTA. 1. Tap Alarm Light , and the interface shown in Figure 4-5 is displayed. 2. Tap the OFF , ON or Flash button to make the alarm light of VTS in the corresponding status.
	Tap  , you can hear the sound from the device which is calling, and the icon changes to  ; tap  again to stop the audio monitoring.
	Tap  , you can talk with the device which is calling, and the icon changes to  ; tap  to stop the call.
	Tap  to start recording video, and the icon changes to  ; tap  again to stop the recording.
	
	 <ul style="list-style-type: none"> When there is no SD card in the VTS, the icon is gray. The snapshot and recorded videos are stored in the SD card.

Figure 4-5 Alarm light operation

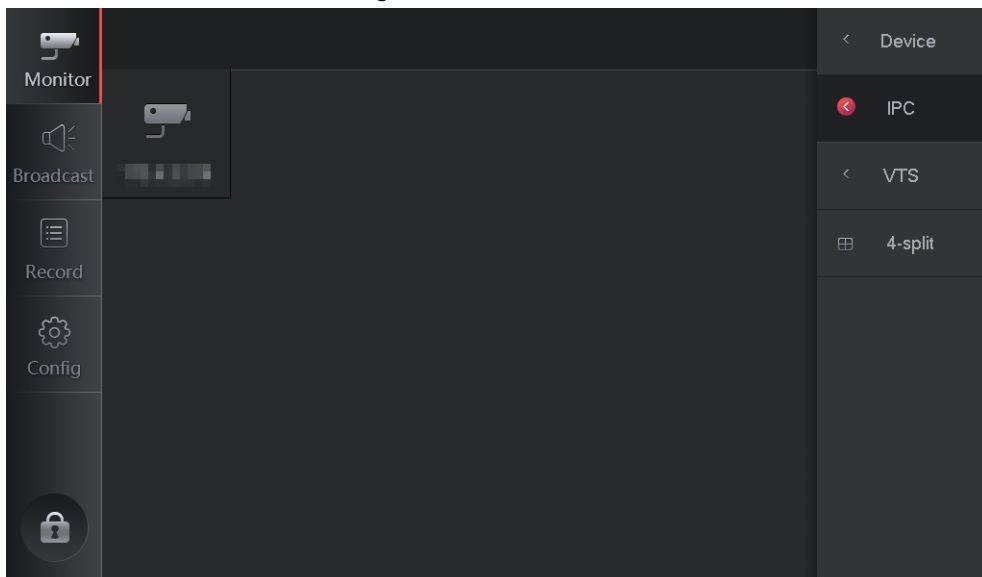


4.2.2 IPC

You can do operations on the added IPC such as monitor, switch, call, record, and snapshot.

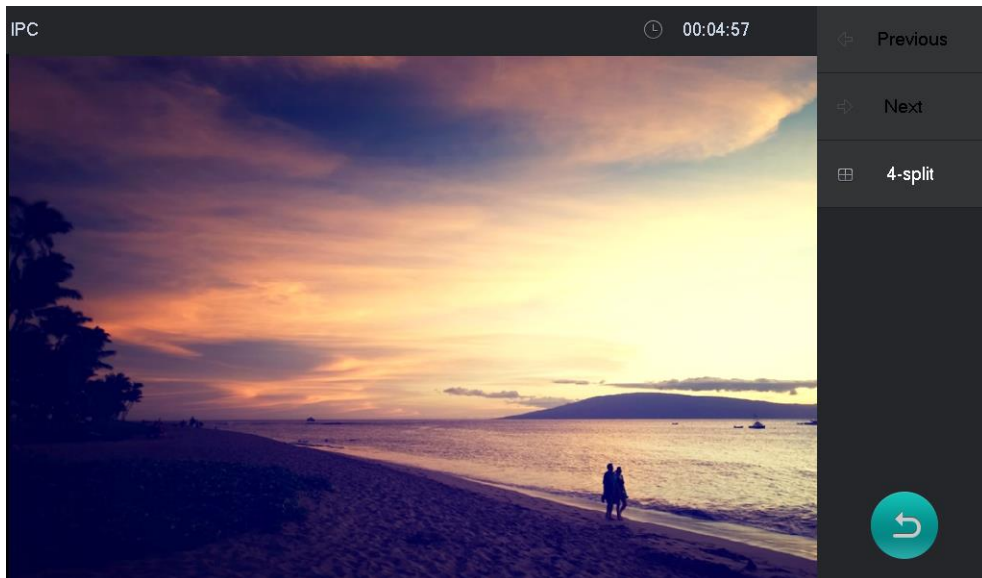
Step 1 Select **Monitor > IPC**.

Figure 4-6 IPC



Step 2 Tap the IPC icon.

Figure 4-7 Monitoring



Step 3 Do the operation as the description of Table 4-1.

4.2.3 VTS

You can call and control the online VTS that has been added.

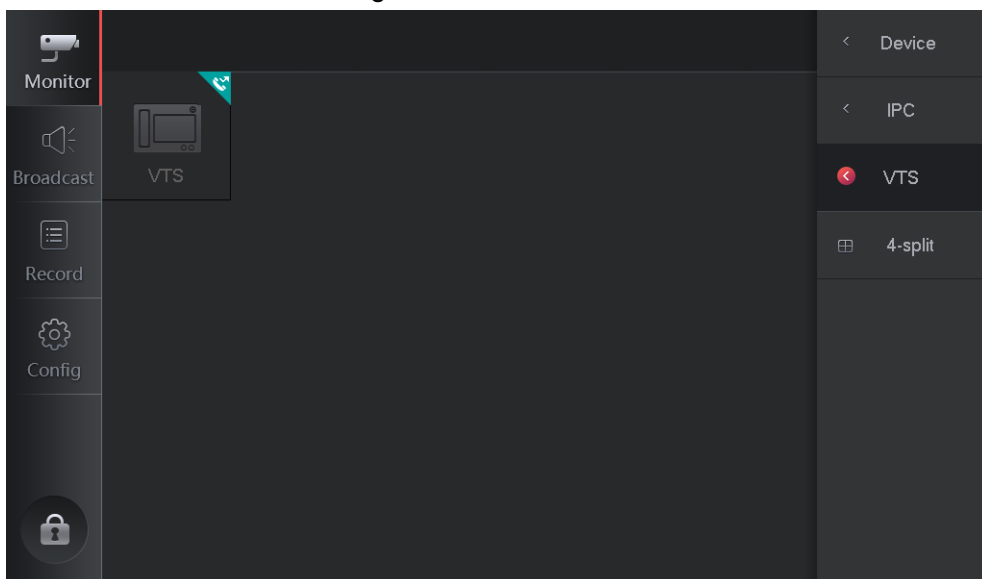
4.2.3.1 Call

Step 1 Select **Monitor > VTS**.



The highlighted icon means the VTS is online, and you can call the VTS.

Figure 4-8 VTS



Step 2 Tap the highlighted icon to call the VTS.

When the other device answers the call, the calling interface is displayed. See Figure 4-10. For details, see Table 4-2.



The camera is not on in Figure 4-10; when the camera is on, there will be monitoring image on the interface.

Figure 4-9 Calling

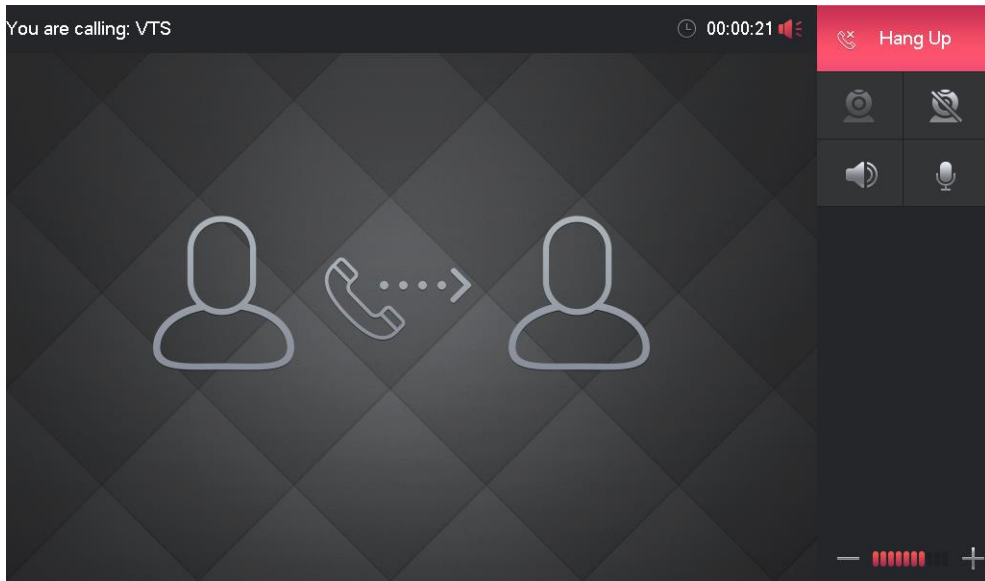


Figure 4-10 Talking

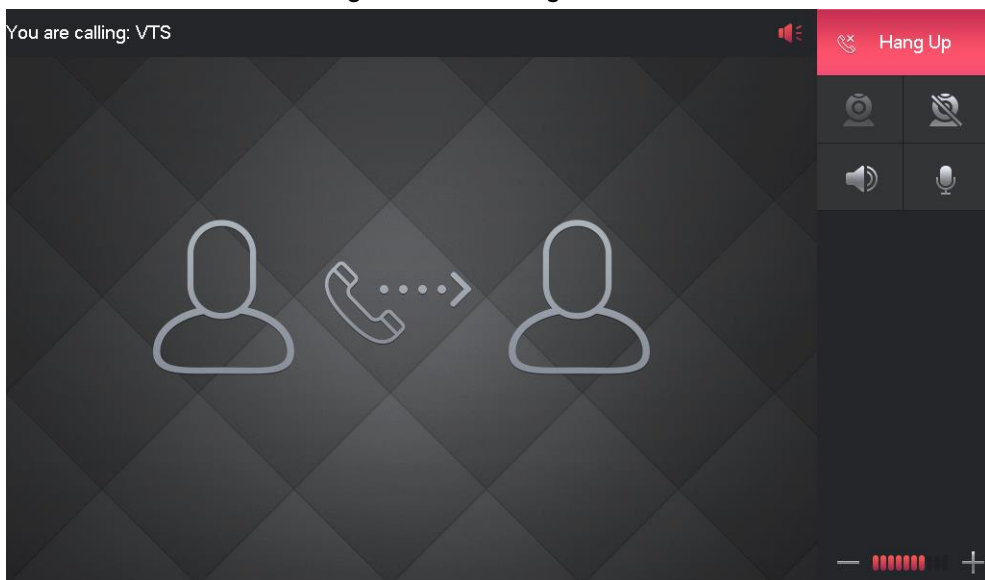














Table 4-2 Icon description

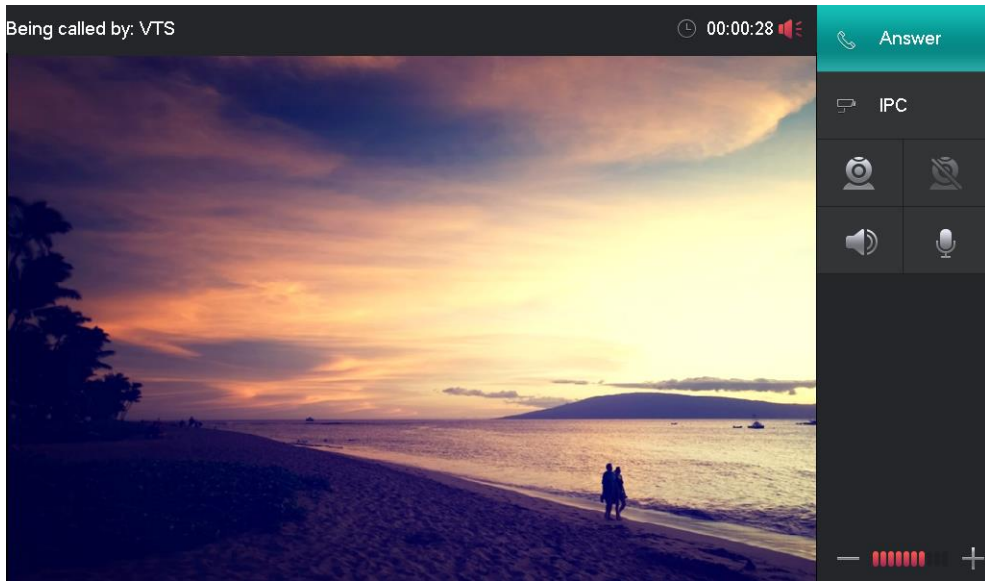
Icon	Meaning
	Tap  to allow the other device monitoring the local video.
	Tap  to forbid the other device monitoring the local video.
	Tap  , and the VTS will not play the audio of the other device.
	Tap  , and the other device cannot receive the audio of the VTS.
	Adjust the talking volume.

Icon	Meaning
	<p>  indicates that the VTS is in handsfree mode; when you use handset, the icon changes to . </p>

4.2.3.2 Answer

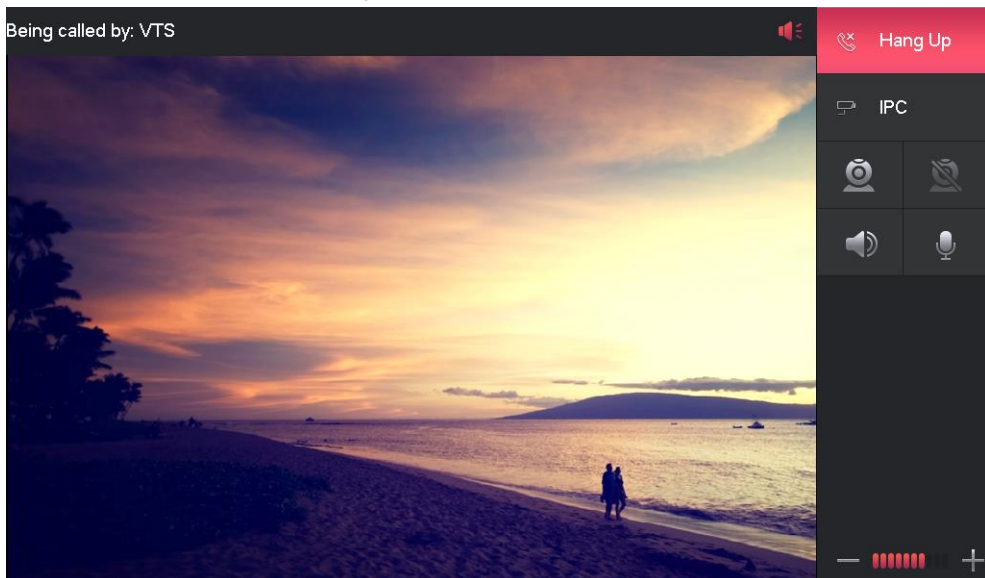
When VTS calls, the answering interface is displayed.

Figure 4-11 Calling status



Step 1 Tap **Answer** or the handsfree button on the device to answer the call. See Figure 4-12. For details, see Table 4-2.

Figure 4-12 Busy




Step 2 (Optional) Tap **IPC** to enter the device list. See Figure 4-13. Select an IPC to do monitoring. Tap  to go to the calling interface.

Figure 4-13 IPC monitoring



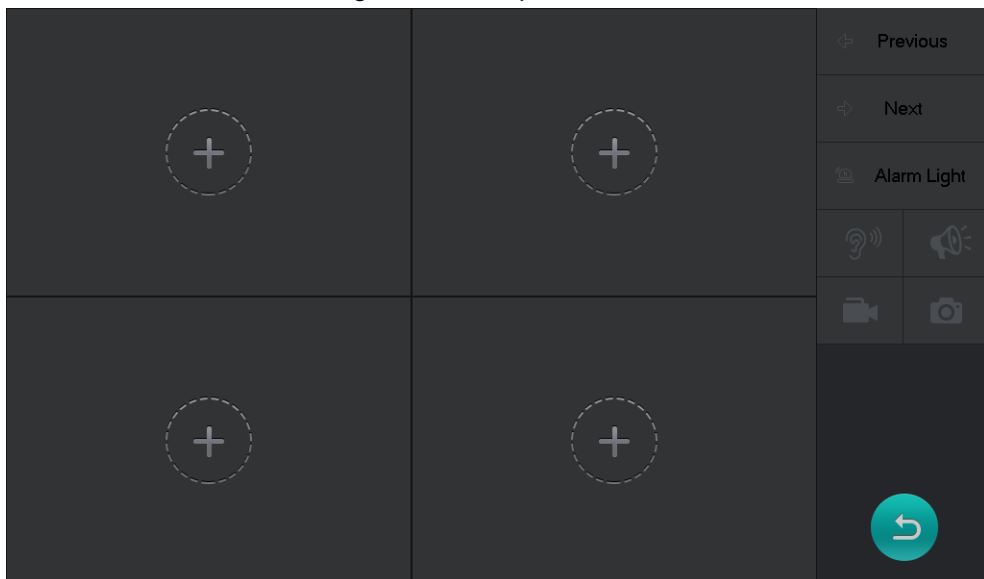
Step 3 Tap **End** to end the call.

4.2.4 4-split

You can monitor max. 4 terminals and IPCs at the same time, and do operations on them.

Step 1 Select **Monitor > 4-split**.

Figure 4-14 4-split




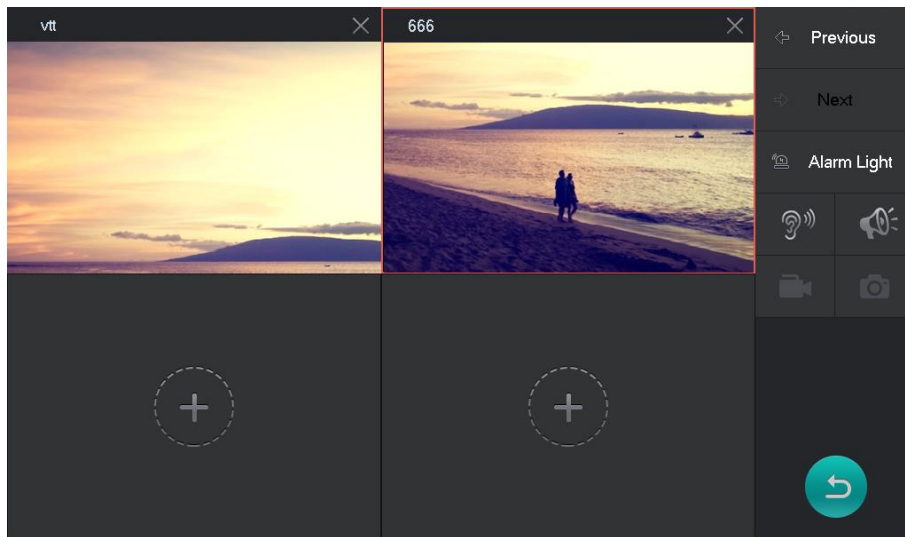
Step 2 Tap , and select the terminal or IPC as needed.

Figure 4-15 4-Split monitoring



Step 3 Tap the window of a certain device to control the device. For details, see Table 4-1.

Appendix 1 Cybersecurity Recommendations

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

Mandatory actions to be taken for basic equipment network security:

1. Use Strong Passwords

Please refer to the following suggestions to set passwords:

- The length should not be less than 8 characters;
- Include at least two types of characters; character types include upper and lower case letters, numbers and symbols;
- Do not contain the account name or the account name in reverse order;
- Do not use continuous characters, such as 123, abc, etc.;
- Do not use overlapped characters, such as 111, aaa, etc.;

2. Update Firmware and Client Software in Time

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

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

1. Physical Protection

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

2. Change Passwords Regularly

We suggest that you change passwords regularly to reduce the risk of being guessed or cracked.

3. Set and Update Passwords Reset Information Timely

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

4. Enable Account Lock

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

5. Change Default HTTP and Other Service Ports

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

6. Enable HTTPS

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

7. Enable Whitelist

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

8. MAC Address Binding

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

9. Assign Accounts and Privileges Reasonably

According to business and management requirements, reasonably add users and assign a minimum set of permissions to them.

10. Disable Unnecessary Services and Choose Secure Modes

If not needed, it is recommended to turn off some services such as SNMP, SMTP, UPnP, etc., to reduce risks.

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

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

11. Audio and Video Encrypted Transmission

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

Reminder: encrypted transmission will cause some loss in transmission efficiency.

12. Secure Auditing

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

13. Network Log

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

14. Construct a Safe Network Environment

In order to better ensure the safety of equipment and reduce potential cyber risks, we recommend:

- Disable the port mapping function of the router to avoid direct access to the intranet devices from external network.
- The network should be partitioned and isolated according to the actual network needs. If there are no communication requirements between two sub networks, it is

suggested to use VLAN, network GAP and other technologies to partition the network, so as to achieve the network isolation effect.

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