VTH15 Series User's Manual

Table of Contents

Important Safeguards and Warnings

Please read the following safeguards and warnings carefully before using the product in order to avoid damages and losses.

Note:

- Do not expose the device to lampblack, steam or dust. Otherwise it may cause fire or electric shock.
- Do not install the device at position exposed to sunlight or in high temperature. Temperature rise in device may cause fire.
- Do not expose the device to humid environment. Otherwise it may cause fire.
- The device must be installed on solid and flat surface in order to guarantee safety under load and earthquake. Otherwise, it may cause device to fall off or turnover.
- Do not place the device on carpet or quilt.
- Do not block air vent of the device or ventilation around the device. Otherwise, temperature in device will rise and may cause fire.
- Do not place any object on the device.
- Do not disassemble the device without professional instruction.

Warning:

- Please use battery properly to avoid fire, explosion and other dangers.
- Please replace used battery with battery of the same type.
- Do not use power line other than the one specified. Please use it properly. Otherwise, it may cause fire or electric shock.

Special Announcement

- This manual is for reference only.
- All the designs and software here are subject to change without prior written notice.
- All trademarks and registered trademarks are the properties of their respective owners.
- If there is any uncertainty or controversy, please refer to the final explanation of us.
- Please visit our website for more information.

1. General Introduction

1.1　Model List

This manual is for the following product models; please carefully check your model and corresponding functions.

VTH Series	Model	Front Camera	Screen	SD Card
VTH15 series model A	VTH1510A	Not support	Resistive touch screen	Not support
	VTH1520A	Not support	Resistive touch screen	Support
	VTH1520AS-H	Not support	Resistive touch screen	Support
VTH15 series model B	VTH1550B	Not support	Capacitive touch screen	Not support
	VTH1560B(W)	Not support	Capacitive touch screen	Support
VTH15 series model CH	VTH1510CH	Not support	Resistive touch screen	Not support
	VTH1520CH	Support	Resistive touch screen	Support
	VTH1580CS	Not support	Capacitive touch screen	Support
VTH2X series model A	VTH2221A	Not support	Resistive touch screen	Not support

Chart 1-1

1.2 Front Panel

Figure 1-1 VTH15 Series Model A

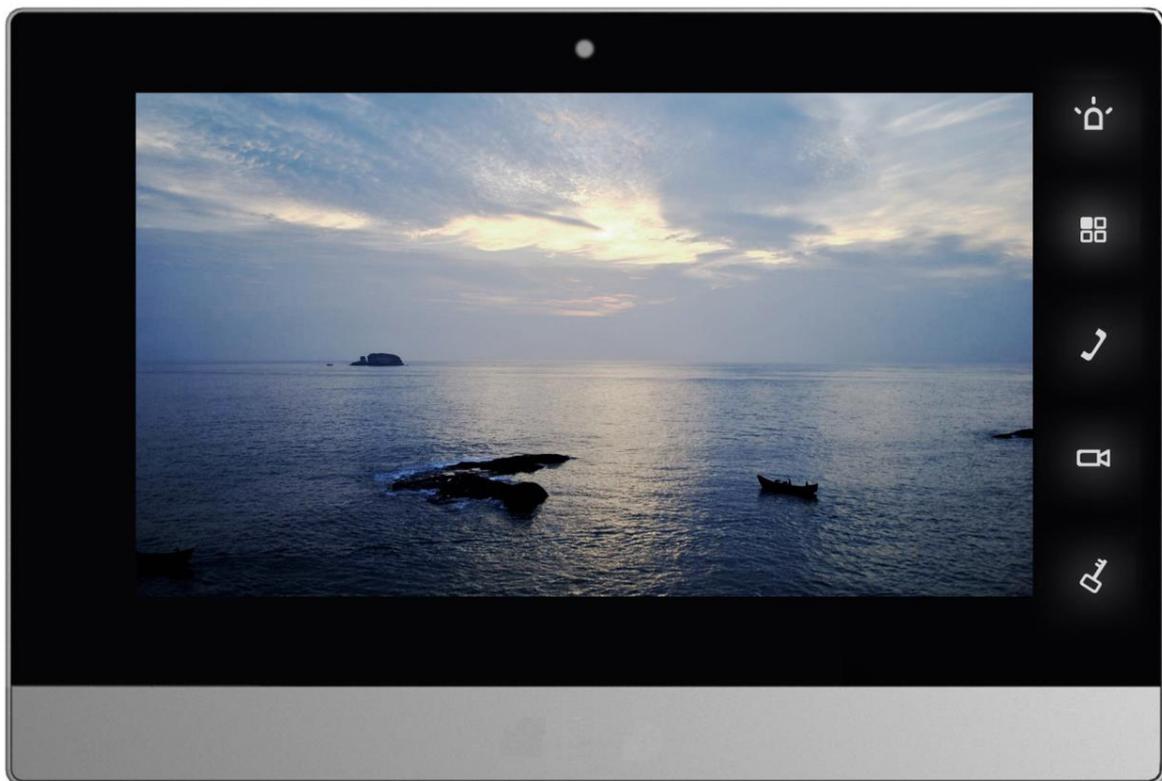Figure 1-2 VTH15 Series Model B

Figure 1-3 VTH15 Series Model CH

Note:

Only VTH1520CH-C model has front camera and other models do not have front camera.
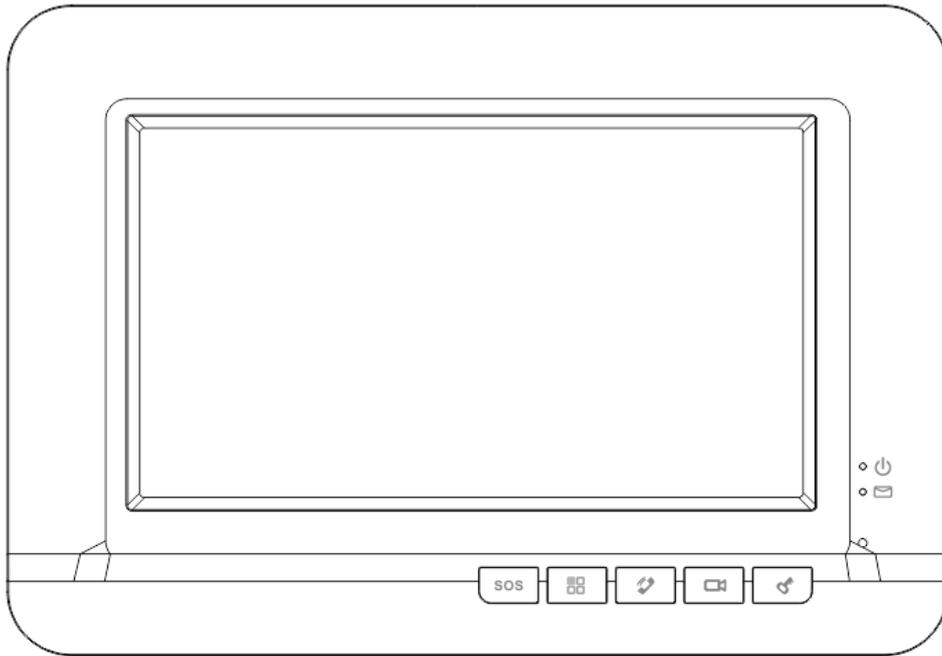
Figure 1-4 VTH2X Series Model A

1.2.1. Button

Different models of VTH may have slightly different button locations, but same silk-screens still correspond to the same function. See Figure 1-5 and Figure 1-6.
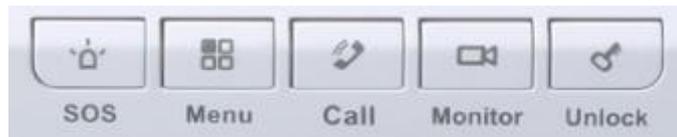

Figure 1-5

Figure 1-6

No.	Icon	Name	Note
1	SOS	SOS	Emergent call to center.
2		Arm/Menu	Click this button to return to main menu or arm.
3		Call	Under calling, status, click this button to answer call. During a call, click this button to hang up.
4		Monitor	Monitor VTO video.
5		Unlock	During incoming call, calling, monitoring status, click this button to unlock.

Chart 1-2

1.2.2. Indicator

Some 7 inch VTHs only have power and info indicator. Indicator of different models of VTH may vary.
Indicator of VTH 15 series model A and VTH2X model A are in Figure 1-7.

Figure 1-7

Indicator Name	Description
Power	Power cable is correctly connected, after device boot up, power indicator is green NO.
Info	When there is unread info, light is NO, after info is read, light is off.
Network	Communication with VTO is normal, light on; communication with VTH is abnormal, light off. Only VTH15 series model A has network indicator.
DND	When you enable DND function, DND indicator is green NO. Note ● Only VTH15 series model A has DND indicator. ● See Ch 3.2.1.5.

Chart 1-3

1.3   Rear Panel

Ports of VTH of different models may have different locations, but corresponding ports' functions stay the same.
The following are two examples.

1.3.1.   VTH15 Series Model CH
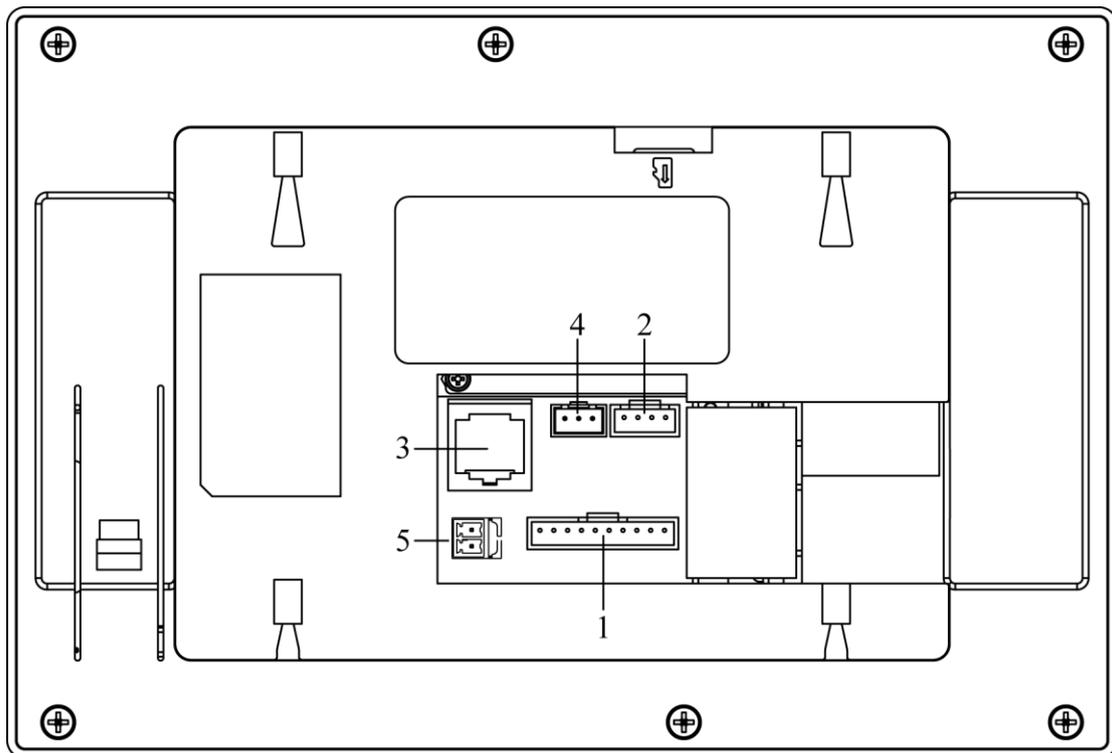
Figure 1-8

No.	Name	Description
1	Alarm Port	8-ch alarm, please refer to tag.
2	Debug Port	Extension port, for RS485 communication port.
3	Network Port	Plug in network cable.
4	Alarm Output	Note: Reserved port.
5	Power Port	Connect to 2-pin green 12V power supply.

Chart 1-4

1.3.2. VTH2221A
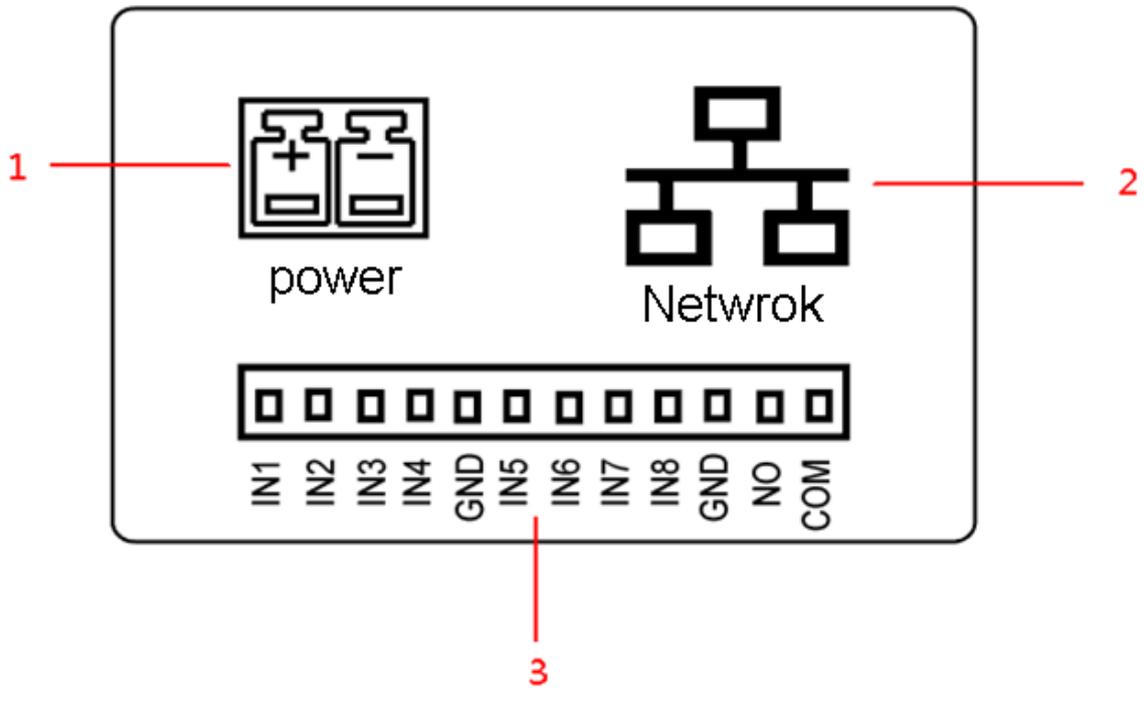
Figure 1-9

No	Name	Description
1	Power Port	Connect to 2-pin green 12V power supply.
2	Network Port	Plug in network cable.
3	12-pin Port	Alarm input 1 Alarm input 2 Alarm input 3 Alarm input 4 GND Alarm input 5 Alarm input 6 Alarm input 7 Alarm input 8 GND Alarm output NO（not included） Alarm output COM（not included）

Chart 1-5

2. Installation and Debugging

2.1   Install Device

The device has two installation methods: embedded box and direction installation.

Warning:

- **Avoid installation in poor environment, such as condensation, high temperature, oil stain, dust, corrosion or direct sunlight.**
- **After device is plugged to power, if you find any abnormal phenomenon, you shall immediately unplug network cable and cut power supply. You may re-plug in power after troubleshooting.**
- **Project installation and debugging must be done by professionals. Please do not open the device in case of failure, and please contact after sales service.**

2.1.1.   Embedded Box

Embedded box has 86 box and metal case.

2.1.1.1. 86 Box

Applicable to all devices.

Screw

Component Name	Figure	Quantity
M4×30 cross slot pan head screw		2

Chart 2-1

Steps

Note:

During installation, distance from the device center to the ground shall be 1400mm~16mm.

Step 1. Embed the 86 box into a wall at appropriate height (if there is embedded 86 box already, please skip this step).

Step 2. Fix installation bracket on 86 box with 2 screws (M4×30).

Step 3. Face VTH back toward installation bracket. Hang VTH back on the bracket from up to down.
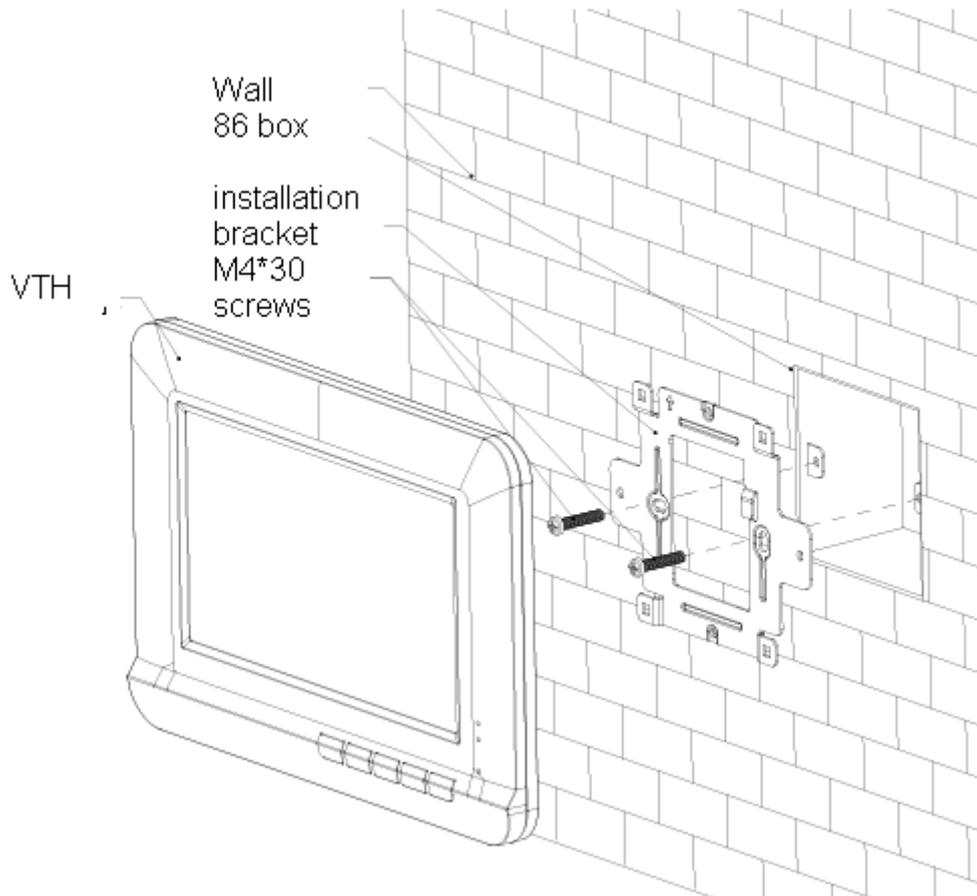Step 4. Check whether VTH is installed in place.

Figure 2-1

2.1.1.2. Metal Case

Applicable for model CH device only, including VTH1510CH and VTH1520CH.

Screw

Component Name	Figure	Quantity
M4×30 cross slot pan head screw		3

Chart 2-2

Steps

Note:

During installation, distance from the device center to the ground shall be 1400mm~16mm.

Step 1. Embed the metal case into a wall at appropriate height.
Step 2. Fix installation bracket on metal case with screws.
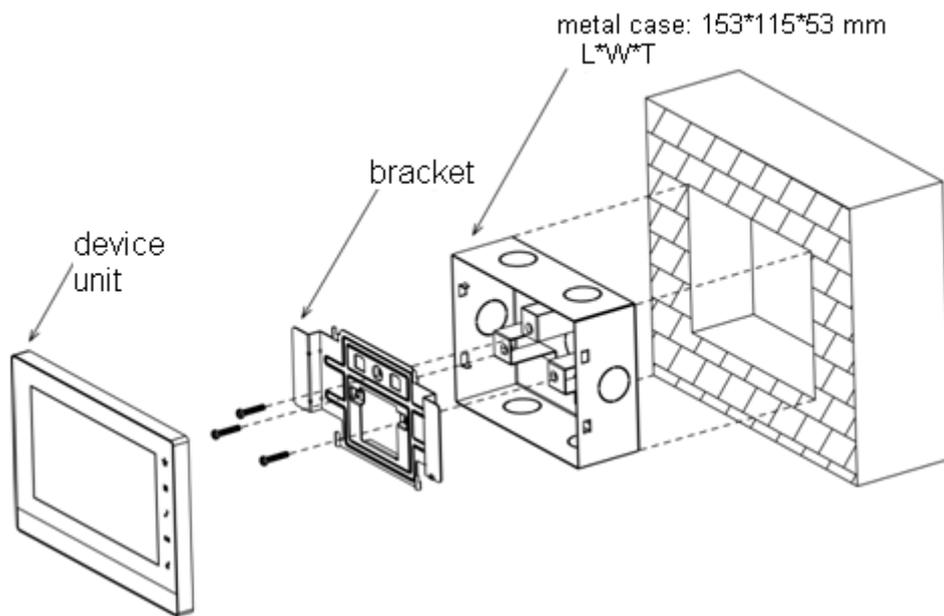Step 3. Fix the device unit on installation bracket with buckle.

Figure 2-2

2.1.2. Direct Installation

Direct installation is to pull all device cables from side without digging holes on wall as exit hole.

Step 1. Install bracket on tall, fix it with screw (M4*30).

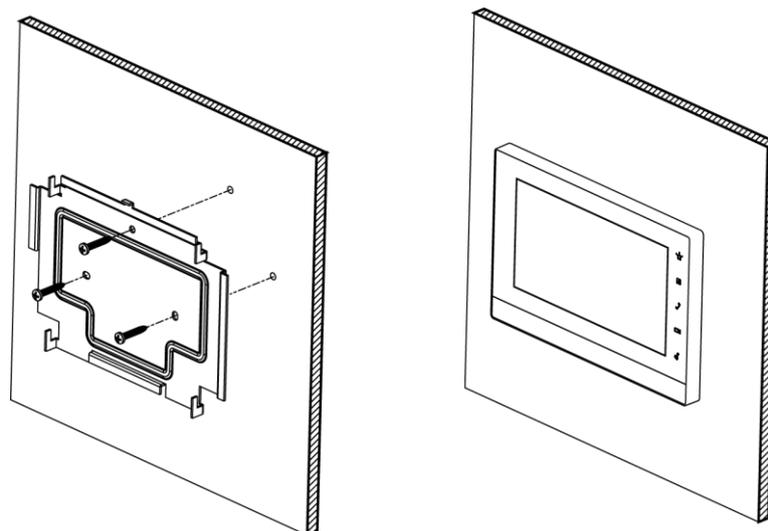Step 2. Fix the device unit on installation bracket, fix with buckle.

Figure 2-3

2.2   Cabling

See Ch 1.3 for detailed port.

2.3   Debug Device

After you have successfully set VTH and VTO, you start talk.

2.3.1.   Before Debugging

- Debugging personnel should be familiar with the relevant information, understand the device installation, wiring and use.
- Debugging personnel to detect whether there is a short circuit or open circuit, confirm line is normal, plug the device to power.
- After debugging complete, clean up the site (including joint processing, device fixing, etc.).

2.3.2.   Debugging Step

Note:

Project Settings interface is for engineer only. The entrance password is 888888.

Step 1.   Settings>Project Settings.

Step 2.   Enter project setting password (888888 by default).
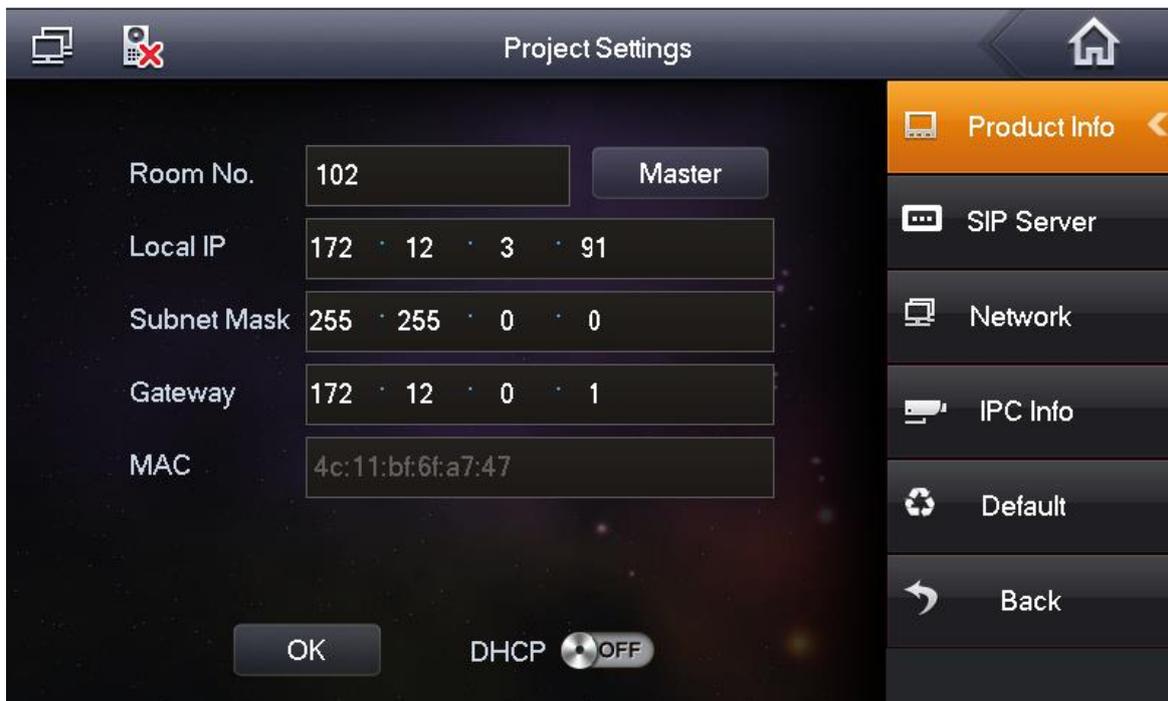
See Figure 2-4.

Figure 2-4

Step 3. Set VTH room no.

Warning:

VTH room no. must match VTH short no. set on VTO WEB page.

- If this VTH is set as master VTH, then select "Master".
    1. Fill in room no., local IP, subnet mask, gateway and etc.
    2. Click OK to save.
- If this VTH is set as extension, click "Master" to select extension.
    1. Fill in room no., master IP, subnet mask, gateway and etc.
       Note:
       Some of extension config will be synced with master VTH automatically, and cannot
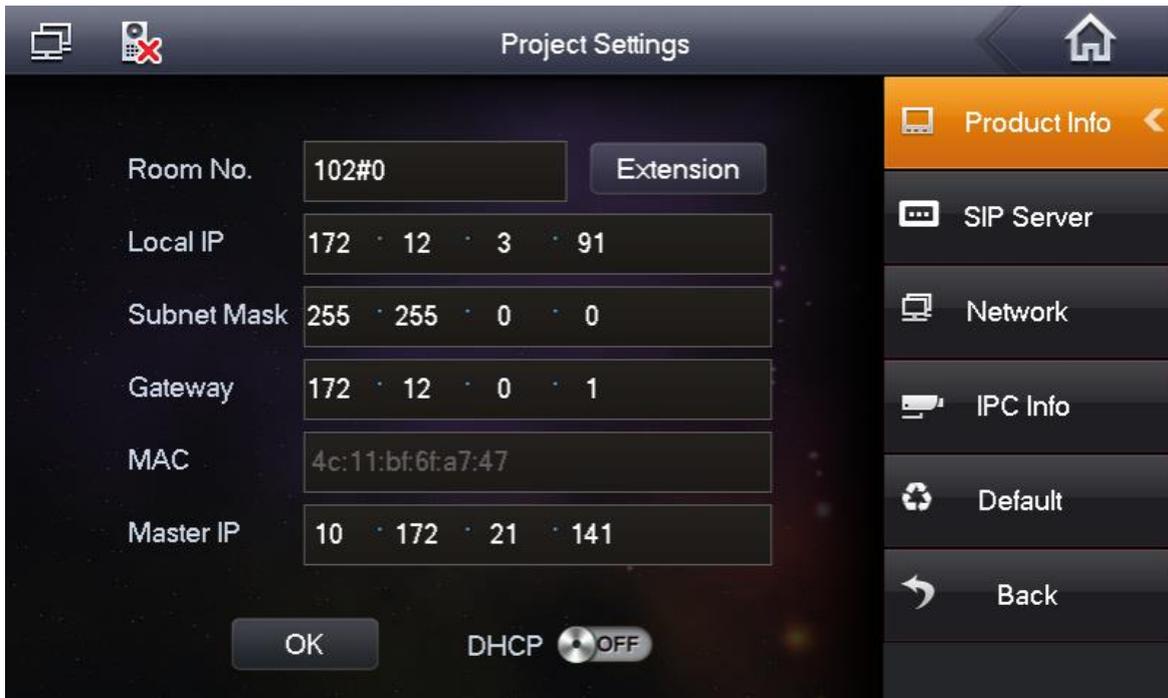   be changed. See Figure 2-5.

Figure 2-5

2. Click OK to save.

Note:

You also can enable DHCP, to auto get device IP, subnet mask and gateway.

Step 4. Set SIP server.

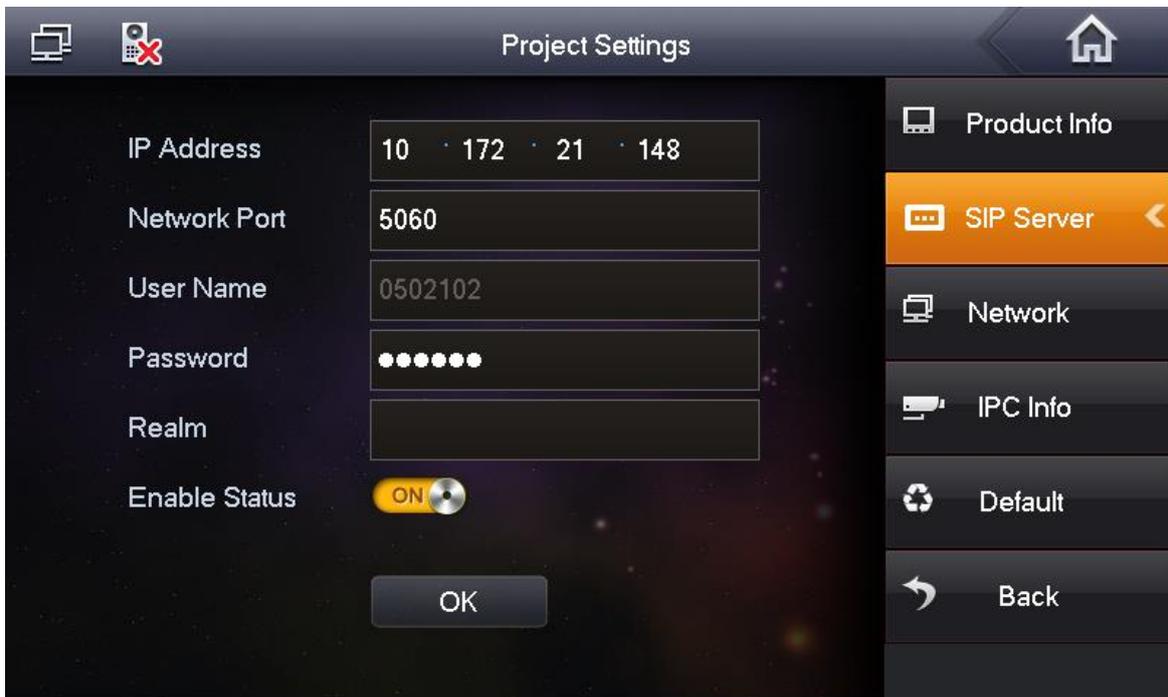Step 1. Click SIP Server. See Figure 2-6.

Figure 2-6

Step 2. See Chart 2-3 to set SIP server.

Parameter	Note
IP Address	SIP server IP address.
Network Port	SIP server port no., default is 5060.
Username	Login SIP server username and password, default
Password	username is the room no. of VTH.
Realm	SIP server domain registered, which can be blank.

Chart 2-3

Step 3. Set enable status to ON.

Step 4. Click OK to save.

Step 5. Add VTO info.

Step 6. Click Network. See Figure 2-7.

Step 7. Fill in VTO name, VTO IP address, set Enable Status to ON.
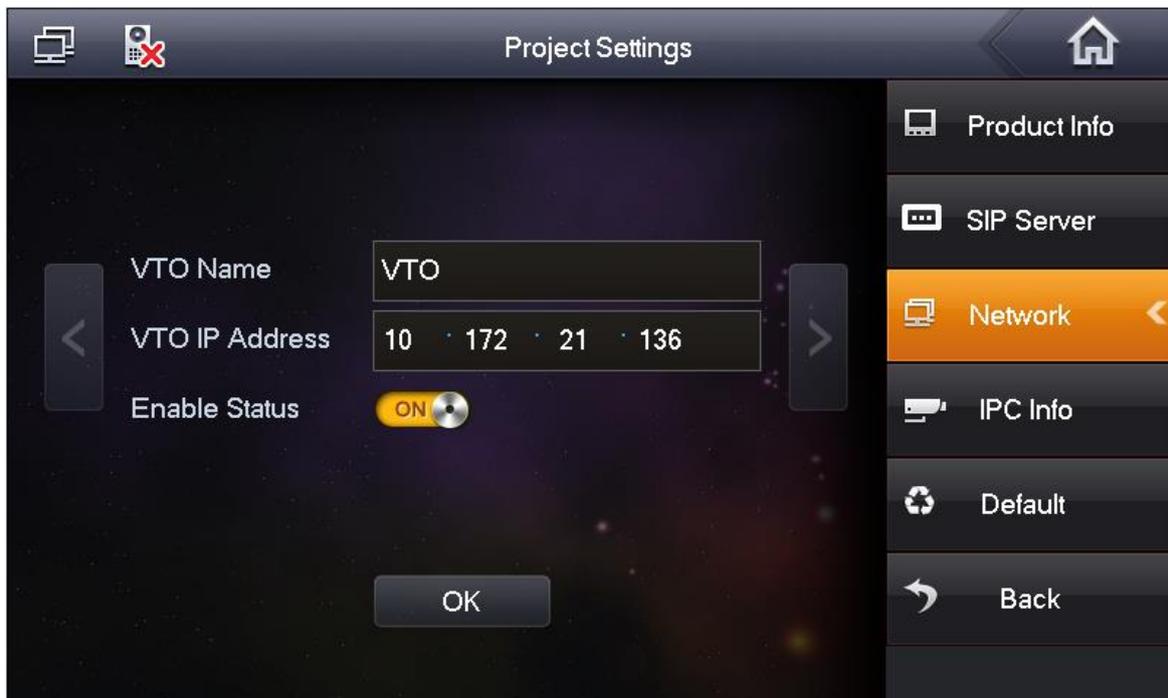

Figure 2-7

If you want to add sub VTO, you can press ▢ to page down. Fill in sub VTO name, sub VTO IP Address. Set Enable Status to ON. See Figure 2-8.
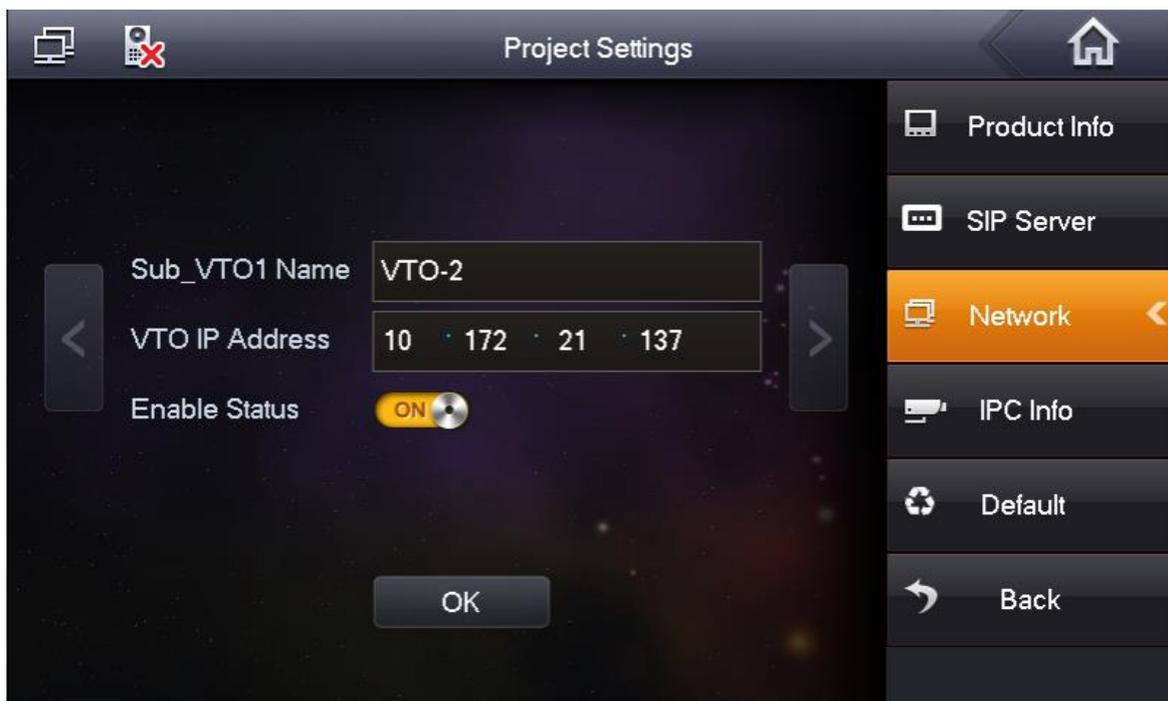
Figure 2-8

Step 8.　Click OK.

Step 5.　IPC Info to view IPC.

You can view IPC info gotten by VTH from SIP server, used to monitor IPC specified by VTH.

2.3.3.　Result Verification

Call VTH room no. from VTO. On VTH, a monitoring window pops up, see Figure 2-9.

On VTH, you can accept call, hang up, unlock and etc., see Chart 2-4.

Note:

VTH1520A\VTH1520AS-H\VTH1520CH\VTH1560B（W）models of VTH has built-in SD card supporting record, snapshot. If no SD card inserted, the button of record and snapshot will be grey.
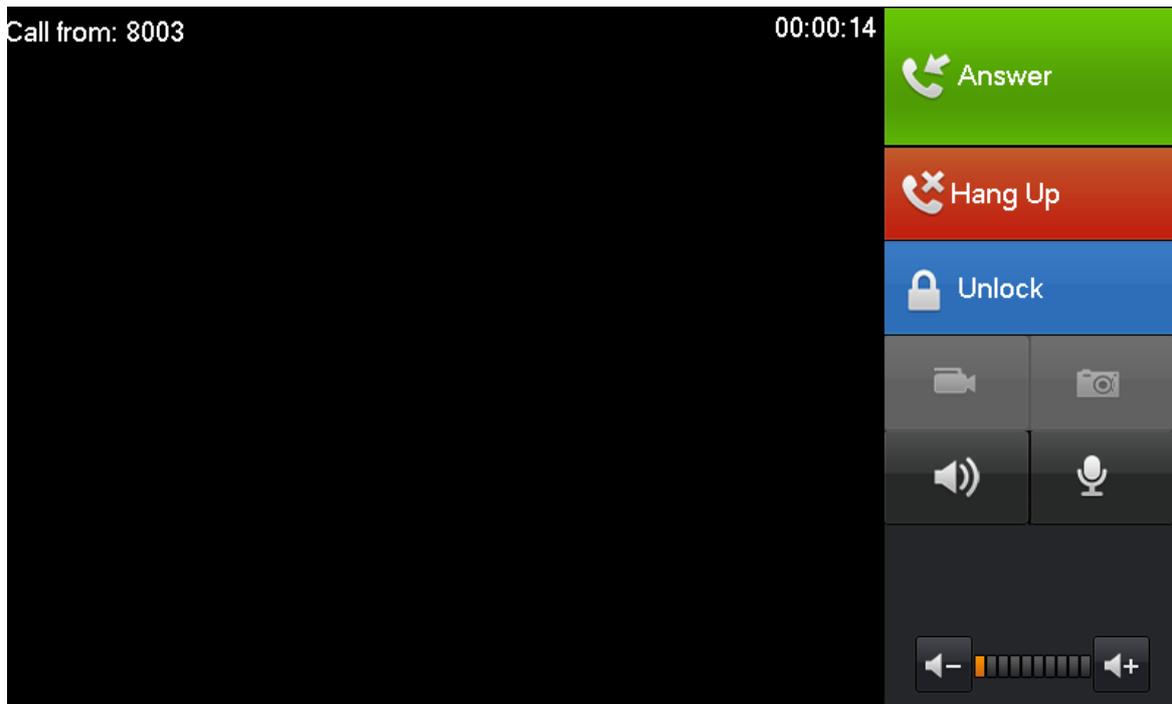
Figure 2-9

Icon	Name	Note
Answer	Accept	For incoming call, click Answer to answer.
Hang Up	Hang Up	For incoming call, click Hang Up to hang up.
Unlock	Unlock	When VTH is being called, click Unlock to unlock corresponding VTO. 。
🔊	Speaker	Used to enable or disable VTH audio output.
🎤	MIC	Used to enable or disable audio input.
📹	Record	Click to start record, click to end record.
📷	Snapshot	Click to snapshot 2 pictutres.
🔉− IIIIIIIII 🔊+	Volume	Adjust VTH volume.

Chart 2-4

3. Operation

3.1 Homepage

The product main interface has four menus: Video Talk, Security, Message, and Settings. See Figure 3-1.

Figure 3-1

Icon	Name	Note

1	Status	：Network connection icon, means network connection is normal.
		
		  ：It means device does not connect to any VTO.
		
		  ：SD card icon, means device has SD card inserted. Icon not shown, means device has not inserted SD card.
		
		  ：DND icon, means device enable DND (do not disturb) function.

		：Missed icon，means user has missed message.
2	Time Display	Show date, week and time.
3	Video Talk	View all call records in this face, including missed call and called call, support contact creation.
4	Alarm	Set zone type, status, delay time, zone switch and etc. of each zone.
5	Info Search	You can view, delete and clear Manager Center released info and alarm info, as well as guest info and record/snapshot.
6	Project Settings	Click this icon, to enter Project Settings.
7	Arm	Click this icon, to enter arm mode.

Chart 3-1

3.2 System Settings

You can go to System Settings>User Settings, set VTH password, ring, talk, DND, SD card and etc. You also may restore all user settings to default, see Figure 3-2.
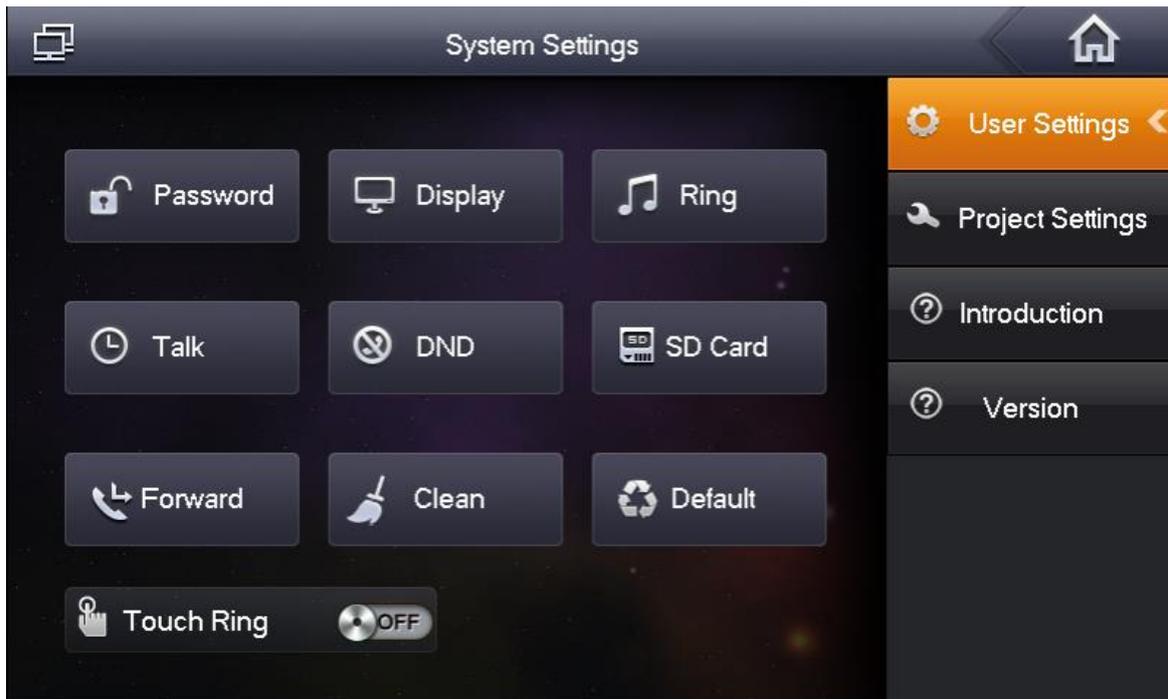

Figure 3-2

3.2.1.1. Password

You can go to System Settings>User Settings>Password, set user password, unlock password, arm/disarm password, anti-hijack password.

Step 1. System Settings>User Settings>Password. See Figure 3-3.

Figure 3-3

Step 2. Select password type, such as user password.

Step 3. Enter old password, new password and confirm password.

Note:

- Initial user password is 123456.
- Initial unlock password is null.
- Initial disarm/arm password is 123456.
- Initial anti-hijack password is 654321.

Step 4. Click OK.

3.2.1.2. Display

You can go to System Settings>User Settings>Display, click and to set screen breightness and screen saver, click OK.

3.2.1.3. Ring

You can go to System Settings>User Settings>Ring, select incoming ring and alarm ring, click and to set volume, click OK.

3.2.1.4. Talk

You can go to System Settings>User Settings>Talk, click ➕ and ➖ to set VTO ring time, VTH ring time, VTO talk time, VTH talk time, monitor time, record time and VTO message time, see Figure 3-4.

Figure 3-4

Note:
- **Max time for a VTO to call a VTH is 120 seconds; message time can be 0~90 seconds. When you set message time to 0, then message is not allowed.**
- **VTO calls VTH, when VTH ring time is 15 seconds, if VTO message time is 0 seconds, and VTO call VTH without being accepted in 15 seconds, the VTO auto hangs up. If VTO message time is not 0, then when VTO call VTH without being accepted in 15 seconds, it prompts whether you want to leave a message.**

3.2.1.5. DND

You can go to System Settings>User Settings>DND, set DND time to eliminate disturbance in (0~24) hours after setup.

Note:

DND is disabled by default.

3.2.1.6. SD Card

You can go to System Settings>User Settings>SD Card, view SD card free space and format SD card.
Note:
Please check if you have inserted SD card in the device.

3.2.1.7. Forward

You can go to System Settings>User Settings>Forward, enter number to forward to, see Figure 3-5.
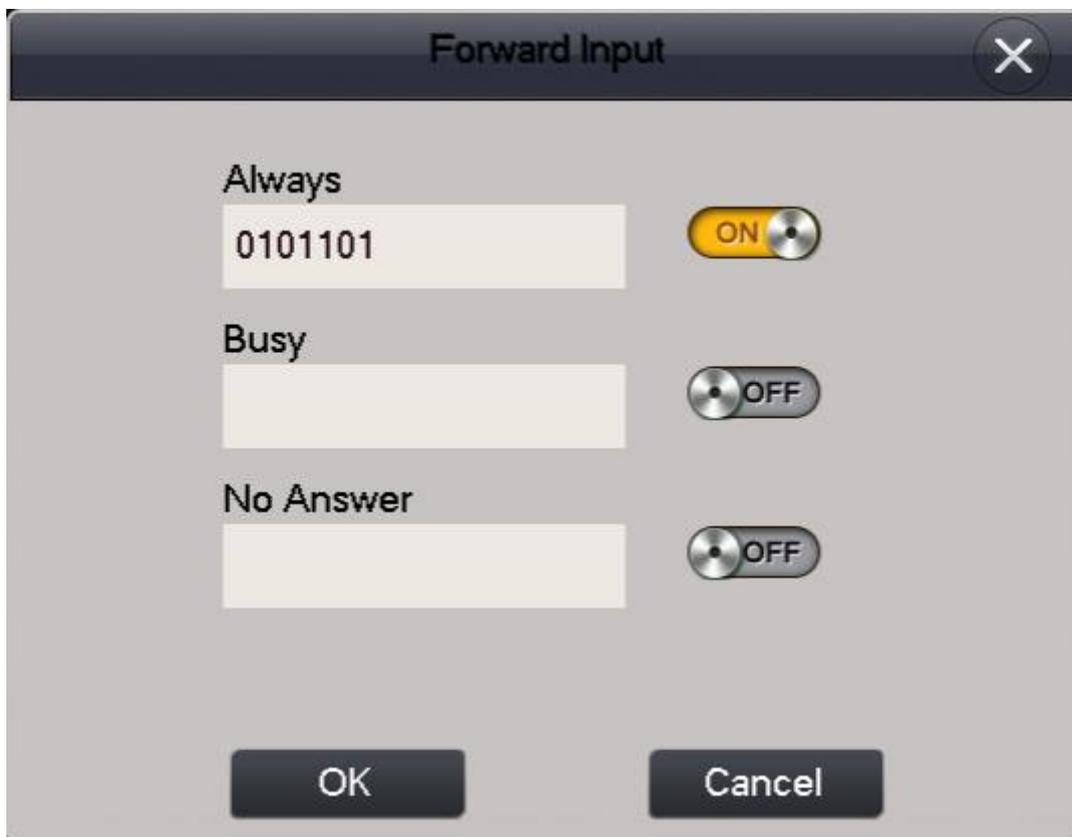

Figure 3-5

Note:
If you want to forward to room 101, unit 1, building 1, then enter 0101101.

Parameter	Note
Always	ON means to enable this function, after setup, all incoming calls will be forward to the set number.
Busy	ON means to enable this function, after setup, when a user is on a call and there is incoming call from a third party, this incoming call will be forwarded to set number. If not set "no answer", then if this incoming is hanged up, it stil

Parameter	Note
	will be forwarded.
No Answer	ON means to enable this function, after setup, when an incoming is not accepted, this call will be forwarded. When an incoming call is not accepted exceeding VTH ring time, it will be treated as no answer. Note: You can go to System Settings > User Settings > Talk interface to set VTH ring time.

Chart 3-2

3.2.1.8. Clean

You can go to System Settings>User Settings>Clean, click Clean and wait until screen is locked, you can clean the screen.

3.2.1.9. Default

Restore all settings in user settings interface to default.
Step 1. Select System Settings>User Settings>Default.
Step 2. In pop-up box enter password, click OK.
Device shows Default interface.
Note:
This verification password is the password of user. You can set in System Settings> User Settings>Password Settings. Default password is 123456.
Step 3. Click OK.

3.2.1.10. Touch Ring

Slide , ON means touch ring ON. OFF means no touch ring.

3.2.2. Project Settings

Click , and this function is for engineer only. Password to enter Project Settings is 888888.

3.2.3. Introduction

Go to System Settings>Introduction, view functions and FAQ of this product, see Figure 3-6.
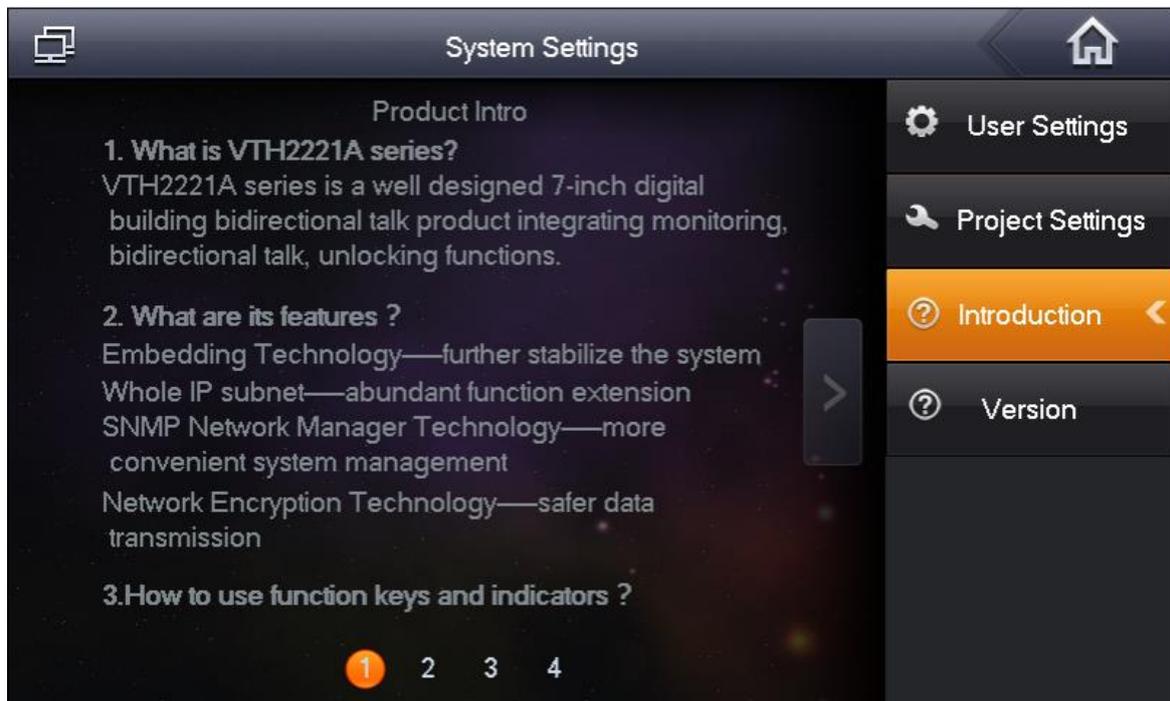

Figure 3-6

3.2.4. Version

Go to System Settings>Version, view or upgrade VTH device software version, see Figure 3-7.

Figure 3-7

3.3 Call

Note:
If both users on a call have camera, then they can have video talk.

3.3.1. Call User

3.3.1.1. Directly Call User

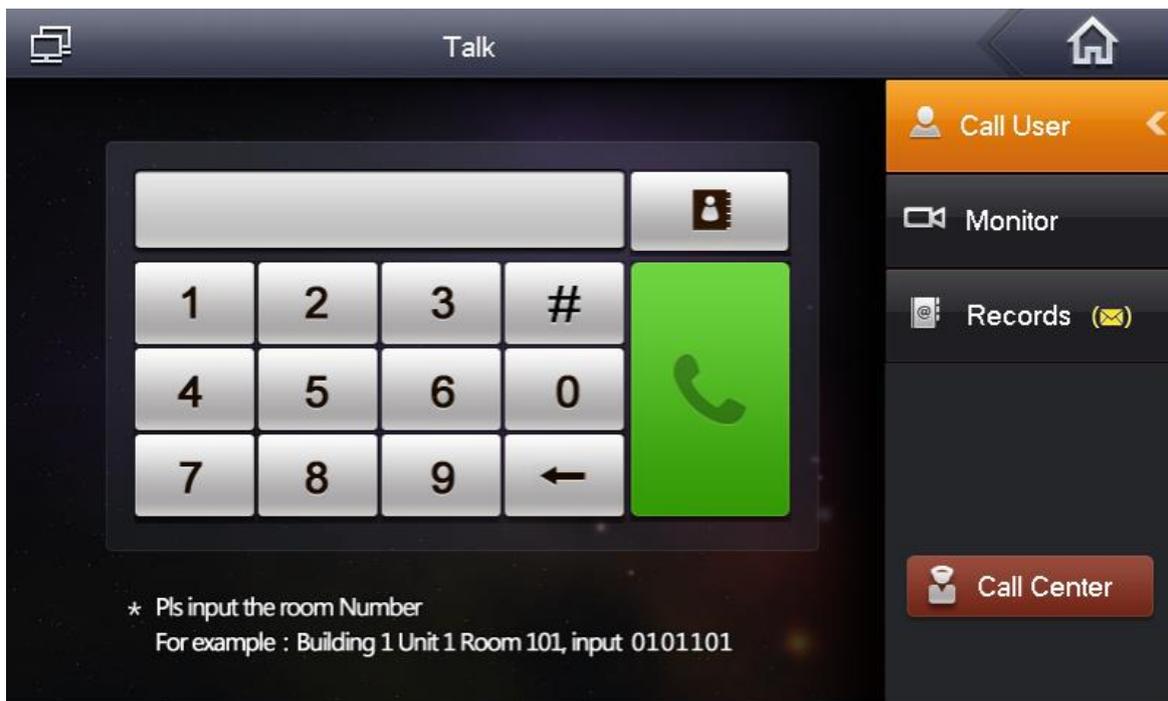Step 1. Select Video Talk>Call User, see Figure 3-8.

Figure 3-8

Step 2. Enter room no. of party you want to call, click [icon] icon to call. When the
party being called accept this call, the bidirectional video talk starts.
Note:
If you want to forward to room 101, unit 1, building 1, then enter 0101101.

3.3.1.2. Call User in Contact

Warning:

Before you call user, please add user in Contacts, see Ch 3.3.2.
Step 1. Select Video Talk> Call User. See Figure 3-8.

Step 2. Click [icon] to open Contacts.
Step 3. Select user to call, click Call.

3.3.2. Contacts

You can go to Video Talk>Call User, to add, call, delete, modify, and clear contacts.

- To add contact:
  - Select Video Talk>Call User.
  - Click . See Figure 3-9.

Figure 3-9

- Click Add.
- Enter contact first name, last name and room no. See Figure 3-10.

Figure 3-10

- Click Save.

- Call User

If you call contact, select contact you want to call, and click Call.

- Modify Contact Info

If you modify contact info, select contact you want to modify, and click Edit.

- Delete Contact

If you delete contact, select contact you want to delete, and click Delete.

- Delete All

If you want to clear all contacts, click Delete All. In pop-up box click OK.

3.3.3.   Records

You can go to Video Talk>Records to view, store, delete or clear call records of this VTH, and call back missed call, see Figure 3-11.
Note:
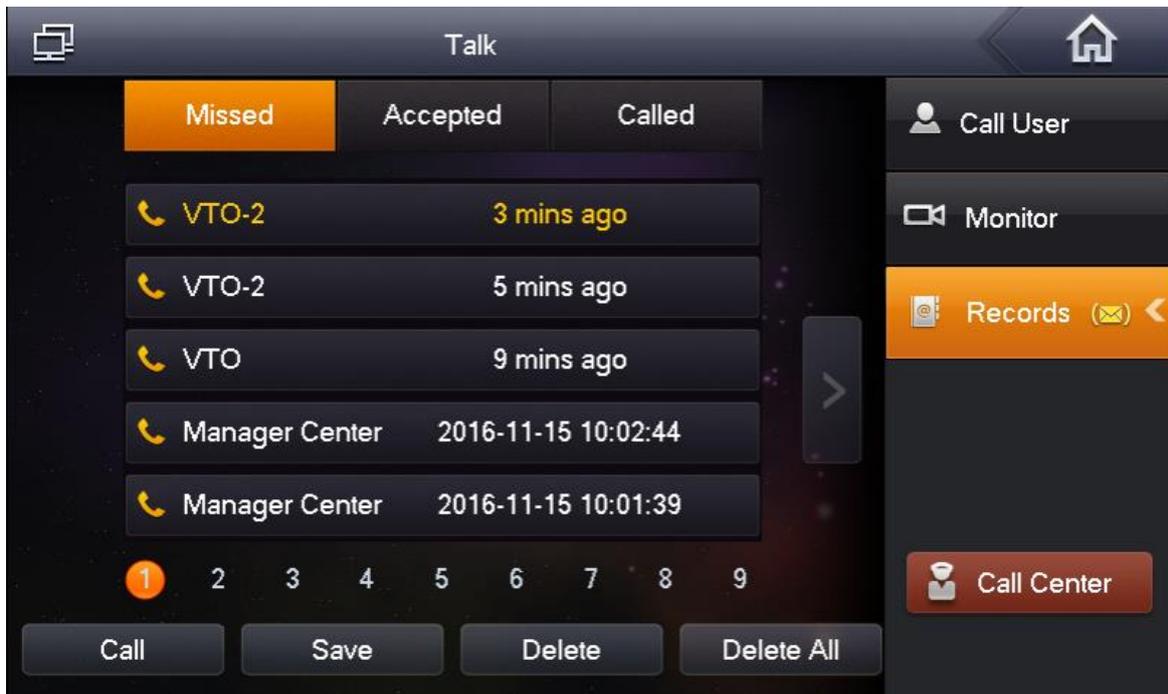Do not support call back and storage of records on VTO and Manager Center.

Figure 3-11

3.3.3.1. Call Back

If you need to call back (dial back) number, select number you want to dial, click Call.

3.3.3.2. Storage

If you want to save contact, select number you want to save, click Save. Enter first name, last name, room no. is auto entered, click Save. See Figure 3-12.
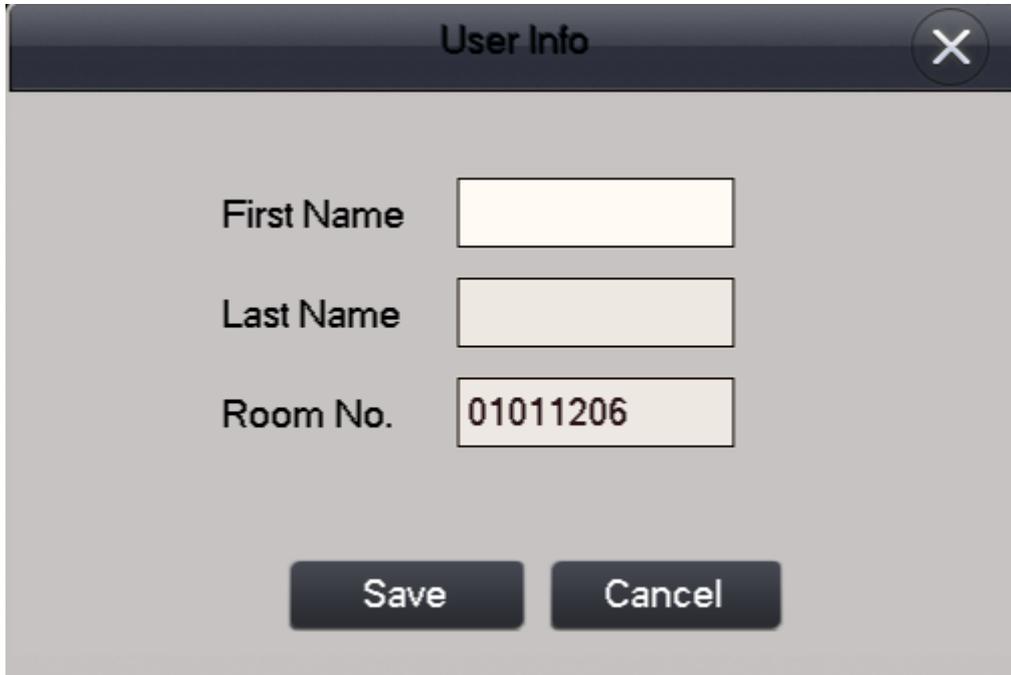

Figure 3-12

3.3.3.3. Delete, Delete All

Select call record you want to delete, click Delete to delete the call record.
You also can click Delete All to delete all call records. In pop-up box, click OK.

3.4 SOS Call

Under emergency conditions, click SOS button on device, or [Call Center] in the interface to call Manager Center. See Figure 3-13.
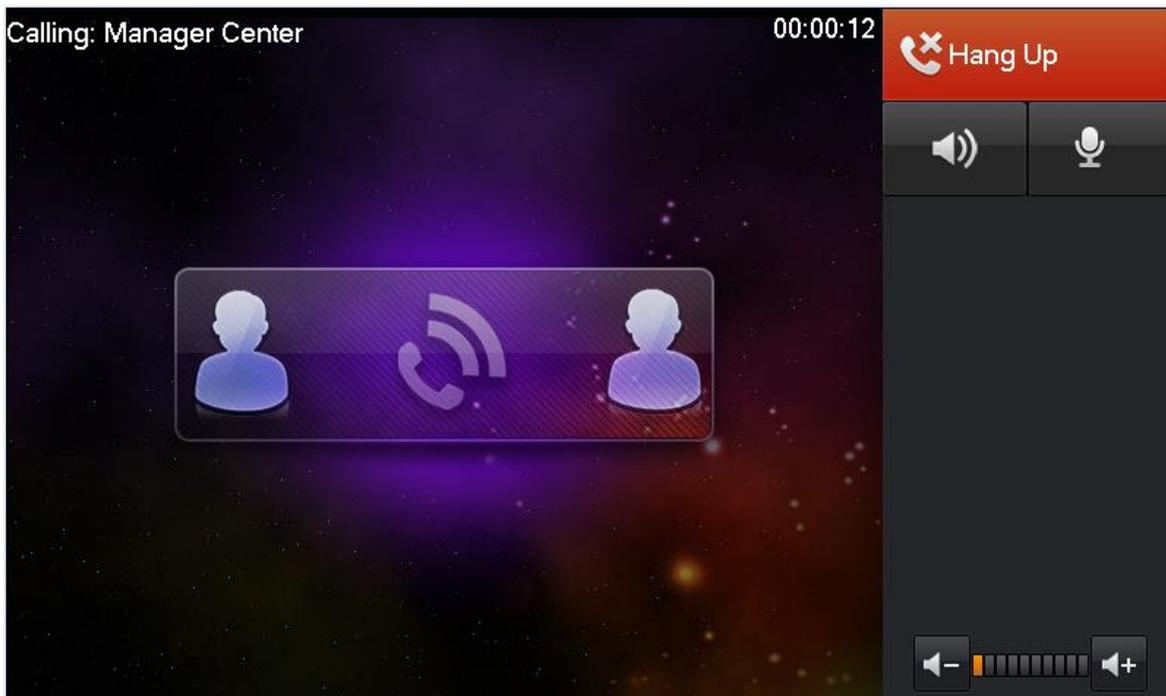
Figure 3-13

3.5 Monitor

VTH can monitor VTH, fence station or any other specified IPC. Under monitoring, click Call button on device front panel, to call VTO. When a call starts, VTO automatically accept call.

For example to monitor VTO:
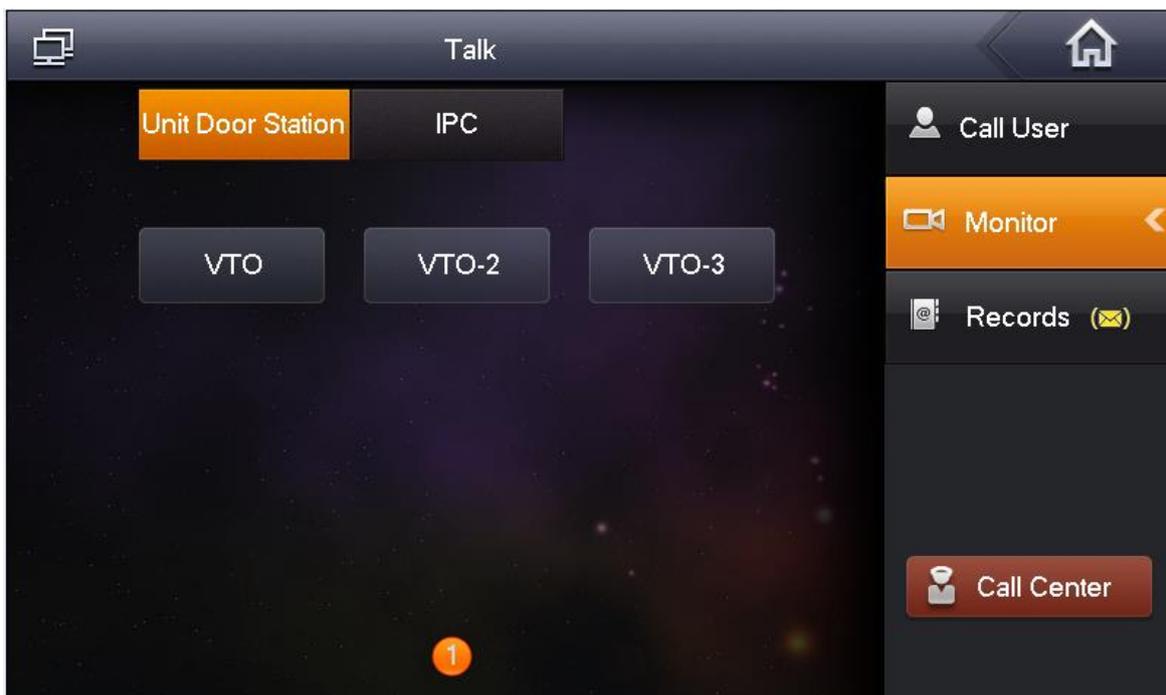Step 1. Select Video Talk>Monitor>Unit Door Station. See Figure 3-14.

Figure 3-14

Step 2. Select VTO to monitor, see Figure 3-15 and Chart 3-3.
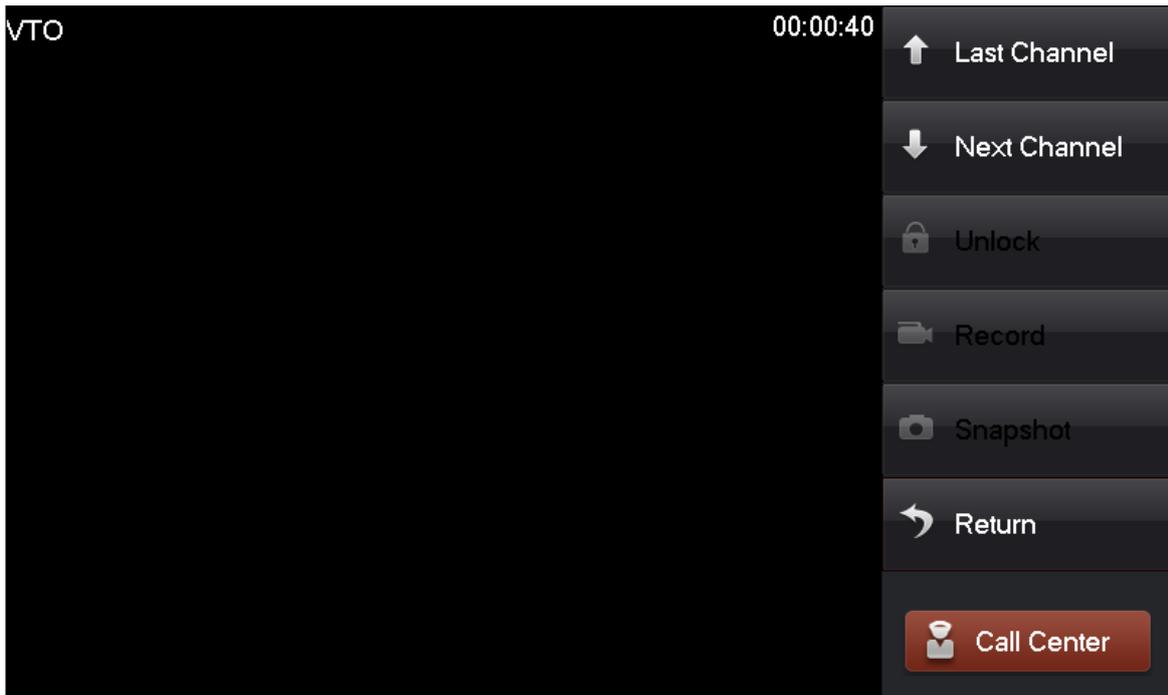
Figure 3-15

Icon	Note
⬆ ⬇	Switch to monitor previous channel or next channel of VTO.
🔒	Unlock button, may remotely unlock VTO lock.
📹	Record button, click 📹 start to record, and click 📹 to end record.
📷	Snapshot button, click 📷 to snapshot 2 pictures.
↩	Return button, may return to previous menu.
Call Center	Click Call Center to one-click call Manager Center.

Chart 3-3

3.6   Alarm

3.6.1.   Area Status

VTH supports 8-ch of area setup.
Note:
In disarm status, you can enter area setup.

You can go to Security>Area Status, set area type, status, delay of each channel.
 Step 1. Select Security>Area Status, see Figure 3-16.
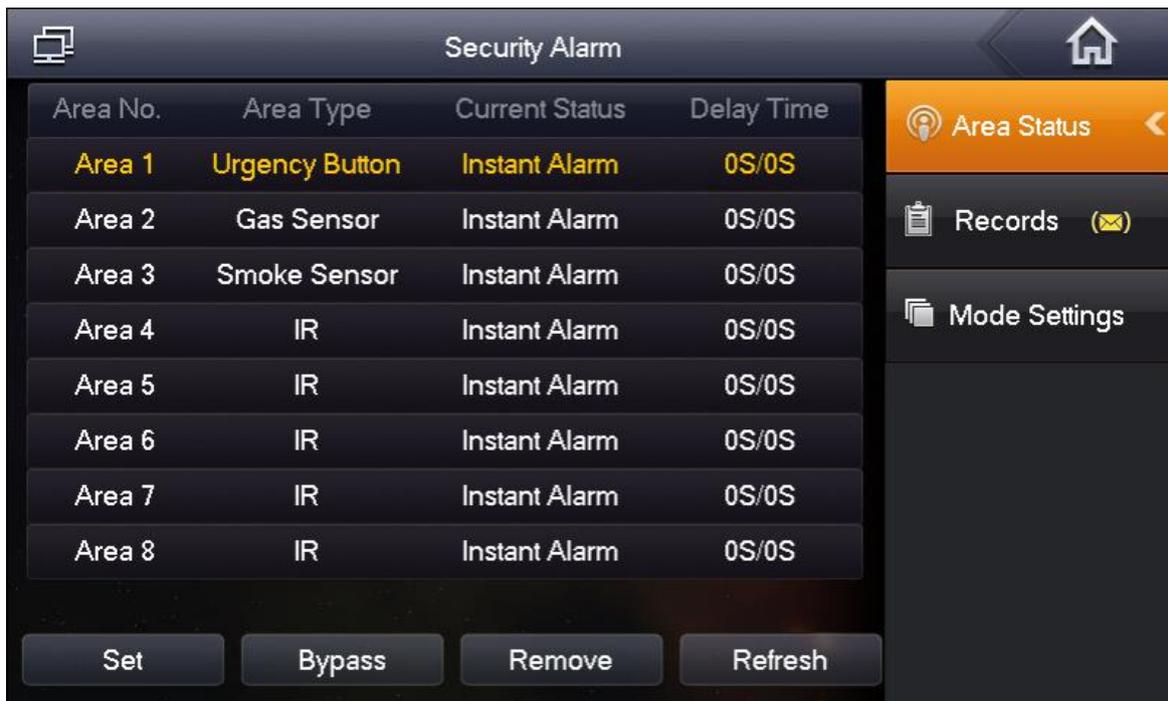
Figure 3-16

Parameter	Note
Set	Set zone, including "Area Type", "NO/NC", "Alarm", "Enter Delay" and "Exit Delay".
Bypass	Area is shielded in this arming. When a device disarms, area when return to status before bypass.
Remove	Area is shielded at arming/disarming
Refresh	Refresh area.

Chart 3-4

Step 2. Select area to set, click Setup.

Step 3. Enter arm password, which is 123456 by default.

Note:

You can change arm/disarm password in System Settings>User Settings>Password.

Step 4. Click OK. See Figure 3-17.

Figure 3-17

Step 5. According to Chart 3-5. Set "Area Type", "NO/NC", "Alarm", "Enter Delay" and "Exit Delay".

Parameter	Note	
Area No.	Set sensor area no., not changed by default.	
Area Type	According to each zone sensor type, select corresponding zone type, including IR, gas, smoke, SOS, door sensor, theft, perimeter and etc. Note: Area 1~area 3 cannot set area type by default.	
NO/NC	According to sensor type, select NO/NC type, which shall match type of sensor.	
Alarm	Alarm status includes instant alarm, delay alarm, bypass and remove. ● Instant alarm：this area enters arm status when prompt sound ends. ● Delay alarm：this area enters arm status when delay time ends. ● Bypass：this area is shielded in this arming, when device disarms, area restores to normal working status. ● Remove：this area is shielded in arming/disarming.	
Enter Delay	When alarm is triggered, if you disarm within delay time, then it will not trigger alarm. If not, after delay time ends, it alarms.	Note: This option is enabled only for delay alarm.

Chart 3-5

Step 6. Click OK.

3.6.2. Mode Settings

Go to Security>Mode Settings, set switch under each area, including Out, In, Sleep and Custom modes. See Figure 3-18.
Note:
You can set switch under each mode in disarm status only

Figure 3-18

3.6.3. Arm/Disarm

Arm: After being enabled, device enter arm status. When it detects an alarm, device creates alarm, and upload alarm info.
Disarm: After being enabled, device exit arm status.

3.6.3.1. Arm

Step 1. Click ![Arm] , see Figure 3-19.

Figure 3-19

Step 2. Select one mode.

Step 3. In pop-up box, enter password.

Device beeps, now it has successfully armed.

Note:

Initial arm password is 123456, you can change disarm password in System Settings>User Settings>Password.

3.6.3.2. Disarm

Step 1. Click Disarm icon at the lower right corner in homepage.

Step 2. In pop-up box, enter password.

If password is correct, then it will prompt that it successfully disarmed. If password is incorrect, then it will prompt an error, and ask you to retry.

Note:

Initial disarm password is 123456. You can change disarm password in System Settings>User Settings>Password.

Warning:

- **In emergency, if you are forces to disarm by someone, you can enter anti-hijack password. Now alarm system stops working, but device auto upload alarm info to Manager Center and platform.**
- **Anti-hijack password is 654321. You can change anti-hijack password in System Settings>User Settings>Password.**

3.6.4. Alarm Record

Go to Security>Records, you can view, delete or clear alarm time, area no., event and etc. See Figure 3-20. Meantime, alarm info will be sent to platform, when each channel has alarm, device will have a 15s alarm beeps with pop-up alarm interface. See Figure 3-20 and Figure 3-21.
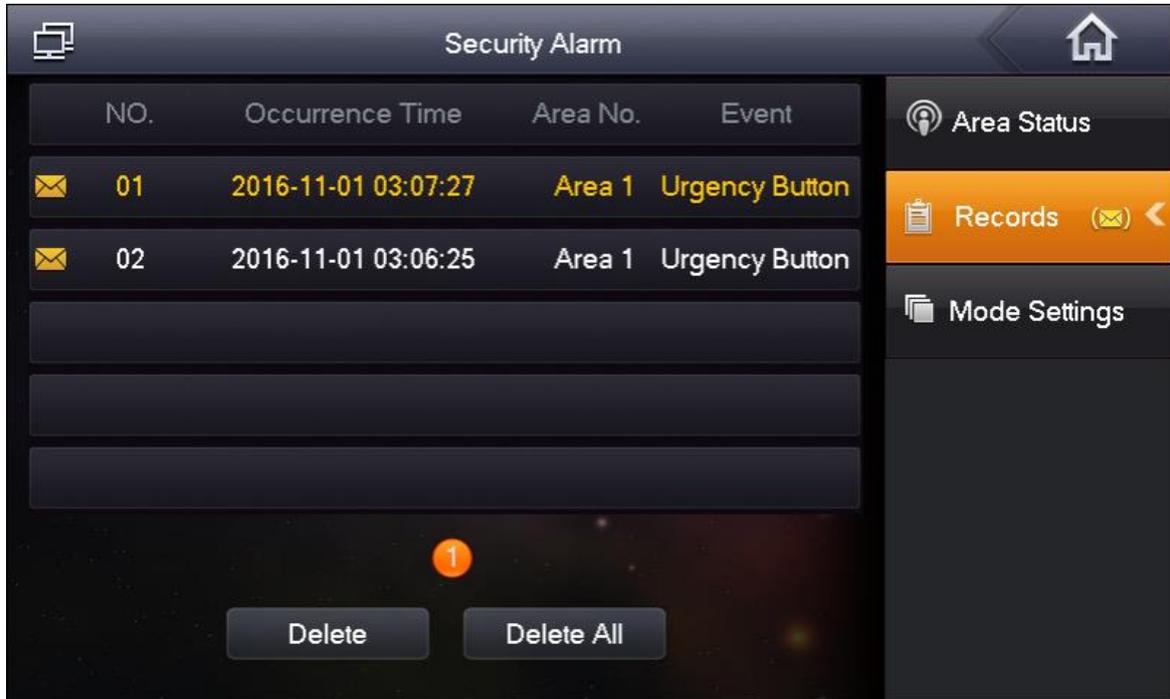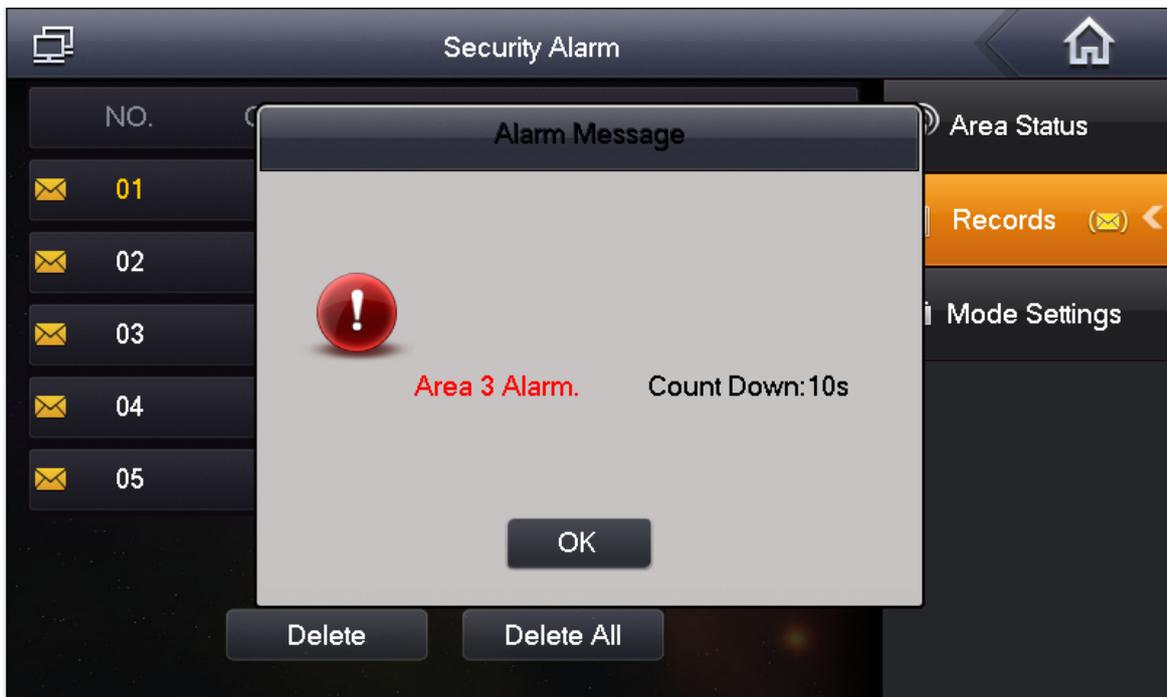

Figure 3-20

Figure 3-21

3.7   Smart Home

Note:
Functions supported by your project subject to actual product.

3.7.1.   Home Control

You can set scene mode of control over light, curtain, air-conditioner.

3.7.2.   Home Config

Password to enter home config : 002236.

3.8   Message

Go to Message>Publish Info, to view, delete and clear publish info, see Figure 3-22.
When VTH receives info sent by Manager Center, message light is On, the message will be
removed after reading.
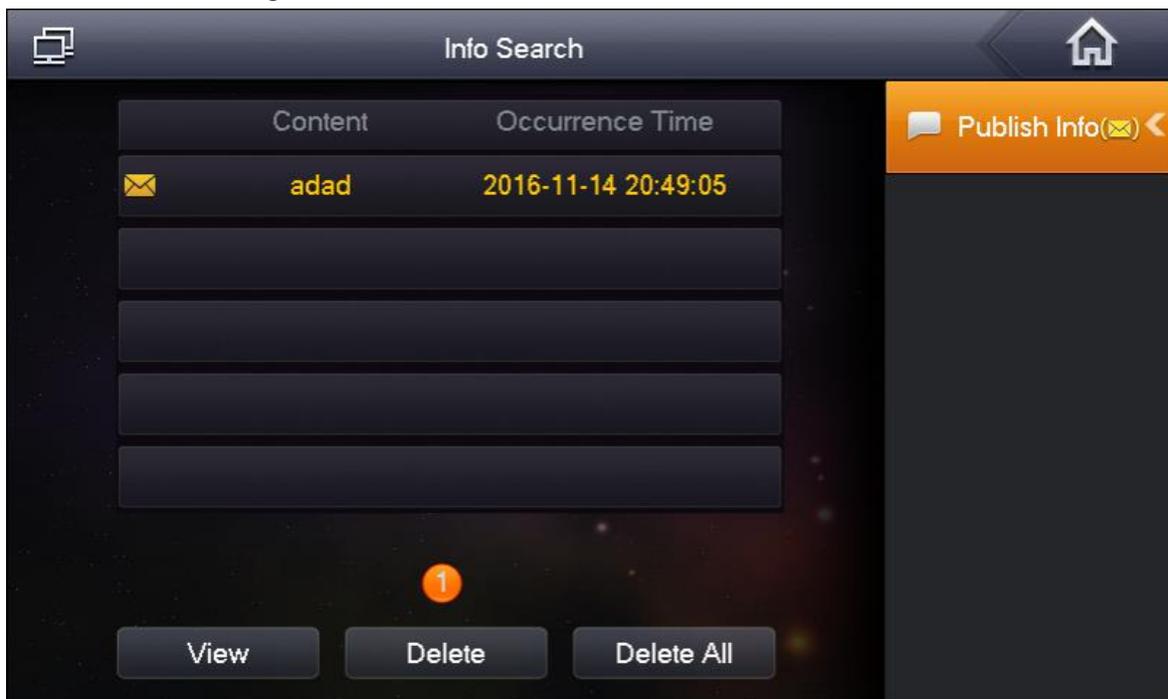

Figure 3-22

3.9　Unlock

When VTH is being called, monitored, in call status, click unlock button or unlock icon on VTH to remotely unlock door.

3.10　Default

Go to System Settings>Project Settings>Default, restore all settings in Project Settings page to default setup. **Be careful!**

Note:
After restoration, device will reboot.

4. Appendix 1 Technical Specification

VTH Model	VTH 15 Series Model A	VTH 15 Series Model B(W)	VTH 15 Series Model CH	VTH 2X Model A
System				
Main Processor	Built-in microcontroller			
Operating System	Built-in LINUX system			
Video				
Video Standard	H.264			
Video Resolution	800x480			
Front Camera	Only VTH1520CH supports front camera, 0.3 megapixels.			N/A
Audio				
Input	All-direction microphone			
Output	Built-in speaker			
Bidirectional Talk	Bidirectional audio talk			
Display				
Screen Dimension	7 inch TFT full real color			
Operating Mode				
Input	Mechanical button (SOS, arm/menu, call, monitor, unlock), touch screen technology			
Alarm				
Alarm Input	Support 8 channels alarm input			
Alarm Output	N/A			Reserved 1-ch local alarm output
Network				
Ethernet	10M/100Mbps self-adaptive			
Networking Protocol	TCP/IP			
Specifications				
Power	DC 10~15V or AV direct supply			
Power Consumption	Standby ≤1.5W ; Working ≤7W			
Working Environment	-10℃~+60℃			-10℃～+55℃
	10~90%RH			
Dimensions (L*W*H)	221mm*154mm*25mm	221mm*154mm*25mm	200mm*136mm*22 mm	200mm*153mm*22 .5mm
Weight	0.8 kg			

Note:

- **This manual 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.**

- **All trademarks and registered trademarks are the properties of their respective owners.**

- **If there is any uncertainty or controversy, please refer to the final explanation of us.**

- **Please visit our website or contact userr local service engineer for more information.**