10-inch Touch Screen VTO User’s Manual

V1.0.1

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.

Privacy Protection Notice

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

About the Manual

- The Manual is for reference only. If there is inconsistency between the Manual and the actual product, the actual product shall prevail.
- We are not liable for any loss caused by the operations that do not comply with the Manual.
- The Manual would be updated according to the latest laws and regulations of related regions. For detailed information, see the paper User's Manual,

CD-ROM, QR code or our official website. If there is inconsistency between paper User's 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 Guide (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.

1 Product Overview

1.1 Introduction to Product

10-inch touch screen VTO can connect to VTH, VTS and etc., providing bidirectional video intercom for visitor and resident, plus password unlock card unlock fingerprint unlock, QR code unlock and face recognition (expansible).

1.2 Features

- 10-inch IPS screen
- Night vision
- Aluminium alloy plate
- HD touch screen
- Unlock via password, IC card, and remotely unlock
- 2.0 MP camera, auto BLC, adjustable up/down, wide viewing angle
- IP54
- Proximity sensor at card area/button area/screen.
- Heating inside, allow work environment down to -40℃
- Unlock via fingerprint
- Expand face recognition.

2 Structure

2.1 Front Panel

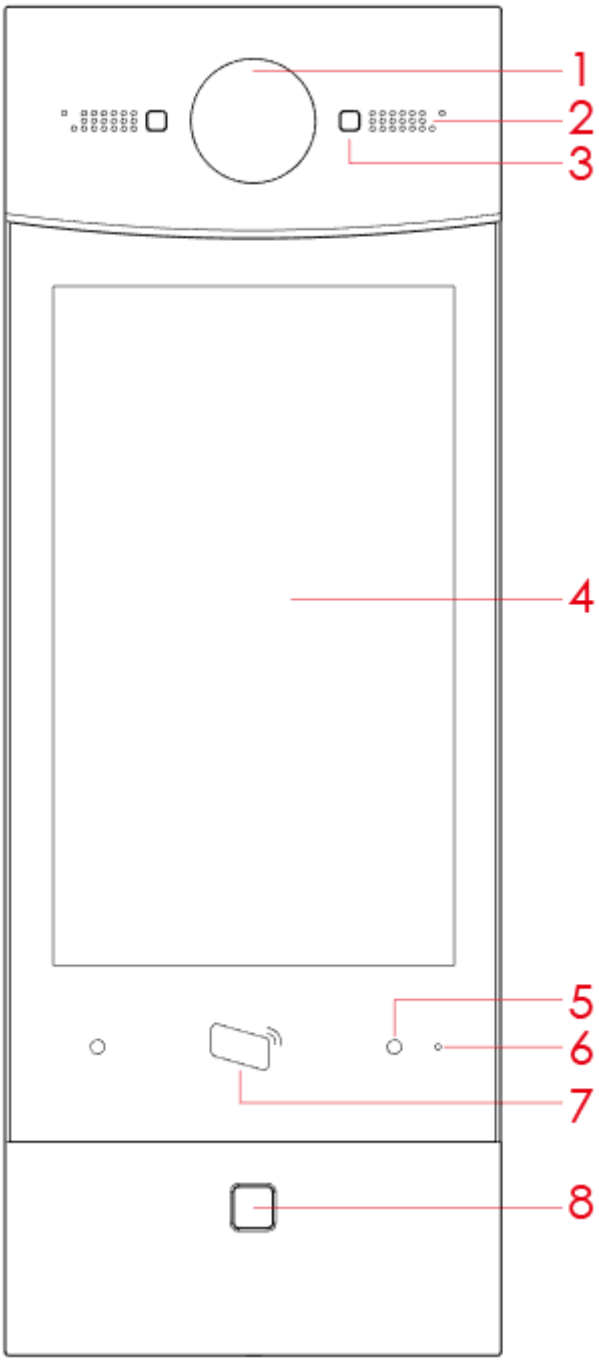

Figure 2-1 Front Panel

No.	Component Name	Description

No.	Component Name	Description
1	Camera	Monitor VTO video.
2	Speaker	Sound output.
3	Backlight	Backlight of camera.
4	Screen	10 inch IPS HD screen
5	Proximity Sensor	When body or object approaches, the sensor light is ON.
6	MIC	Sound input.
7	Card Area	Authorize IC card unlock right （issue card）, card unlock
8	Fingerprint Module	Recorded fingerprint can unlock door.

Chart 2-1

2.2 Rear Panel

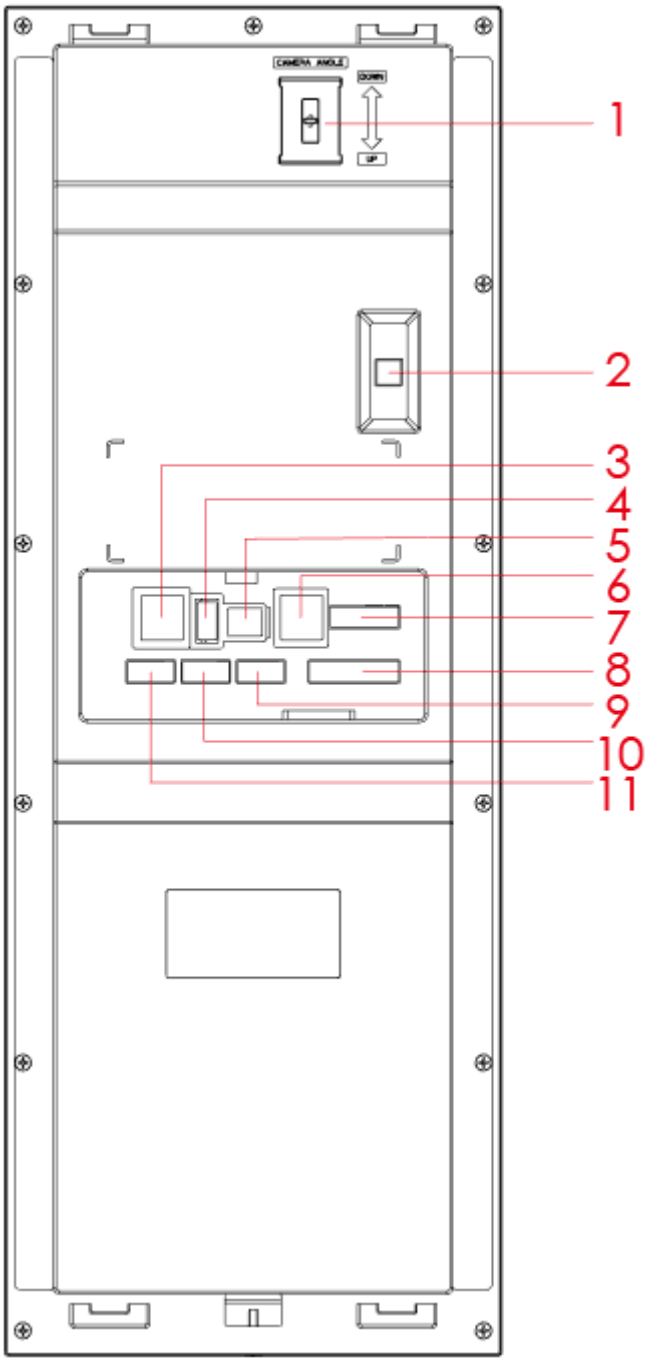

Figure 2-2

No.	Component Name	Description
1	Camera Adjust	Adjust camera.
2	Vandal-proof	When VTO is forced to leave wall, it will alarm and send alarm to MGT center.
3	Network	Standard RJ45 Ethernet cable.

No.	Component Name	Description
4	USB	Device debugging.
5	Power Input	DC 12V power input
6	Analog Signal	Analog signal connect to distributor
7	Lock	Connect to unlock button and door sensor, control NO/NC lock ON/OFF, see device rear label for details.
8	Wiegand Port	Connect to wiegand device, see device rear label for details.
9	Alarm Out	Include 2-ch alarm output and 2-ch alarm input, see device rear label for details.
10	Alarm In	
11	RS485	Connect to RS485 device, see device rear label for details.

Chart 2-2

3 Networking

Figure 3-1

4 Installation and Debug

4.1 Device Wiring

Please see device rear panel.

4.2 Installation

Warning:

- Avoid installation in poor environment, such as condensation, high temperature, oil stain, dust, corrosion or direct sunlight.
- 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.

4.2.1 Screw

Component Name	Diagram	Quantity
M4×30 cross pan head machine screw		2

Chart 4-1

4.2.2 Installation Step

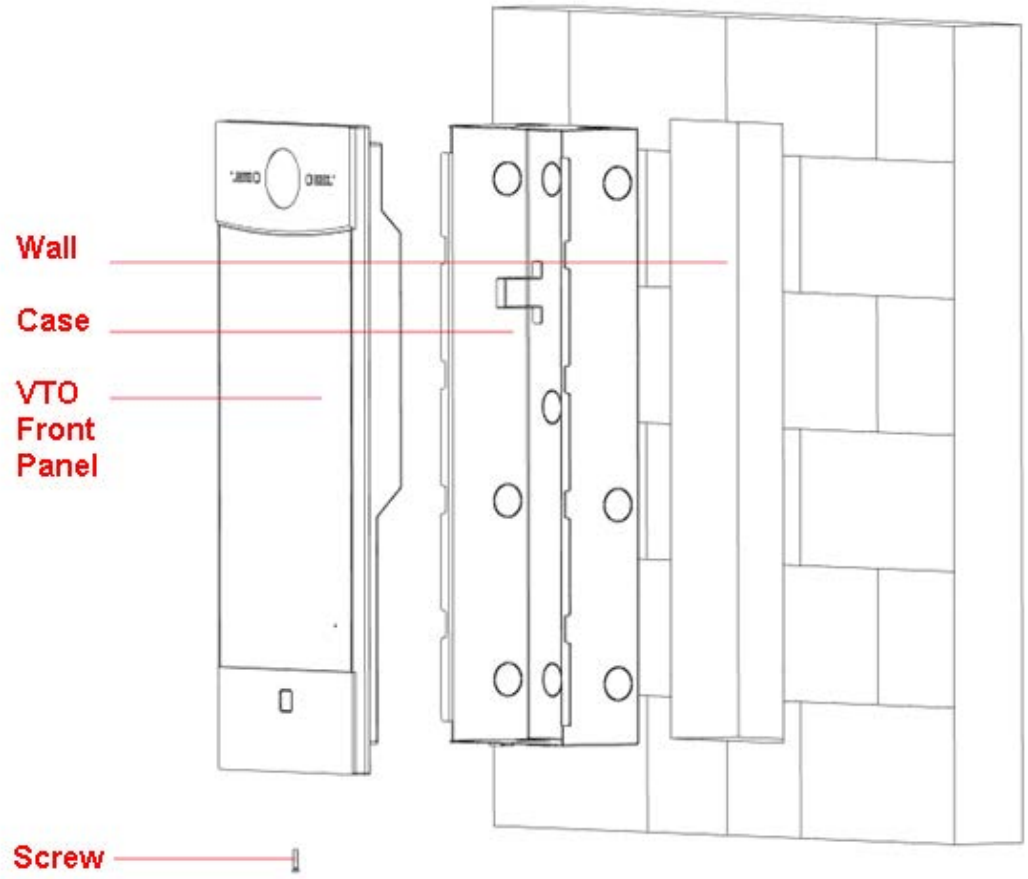

Figure 4-1

Step:

Step 1. On appropriate surface, embed case into wall with cement.

Note:

During installation, the recommended distance from device center to ground is 1.4m~1.6m.

Step 2. Fix VTO front panel on the case with screws.

4.3 Device Debug

4.3.1 Before Debugging

Debugging personnel shall be familiar with related materials, know device installation, wiring and usage.

Debugging personnel check whether circuit has short circuit or open circuit or not. Make sure circuit is normal, plug device to power.

After debugging end, clear up site (handle plugs, fix device and etc.)

VTO default IP address is 192.168.1.110. Before you use the VTO, please modify IP address to be planned IP address, so that VTO and VTH are in the same segment.

Step to debug:

Step 1. Plug device to power.

Step 2. In PC Internet Explorer, enter default device IP address (192.168.1.119).

Step 3. Enter username and password.

Note:

Default username and password are both admin. After first time login, please change password ASAP, see Ch 5.2.6.3.

Step 4. Click Login.

Step 5. Modify device IP address to be planned IP address, see Ch 5.2.4.1. After modification is done, WEB page restarts, go to the new IP address page.

4.3.2 Debug Device (VT System)

For example, connect to 10-inch VTH.

Step 1. Plug device to power.

Step 2. In homepage, long click Settings for 6 seconds. Device pops up Password Verification box.

Step 3. Enter project setup password which is 888888 by default.

Step 4. Click Net Set to connect VTH.

- Wireless:

  If the VTH supports WI-FI, you can select wireless connection.

  1. Select Wireless, open WLAN, view available WI-FI. See Figure 4-2.

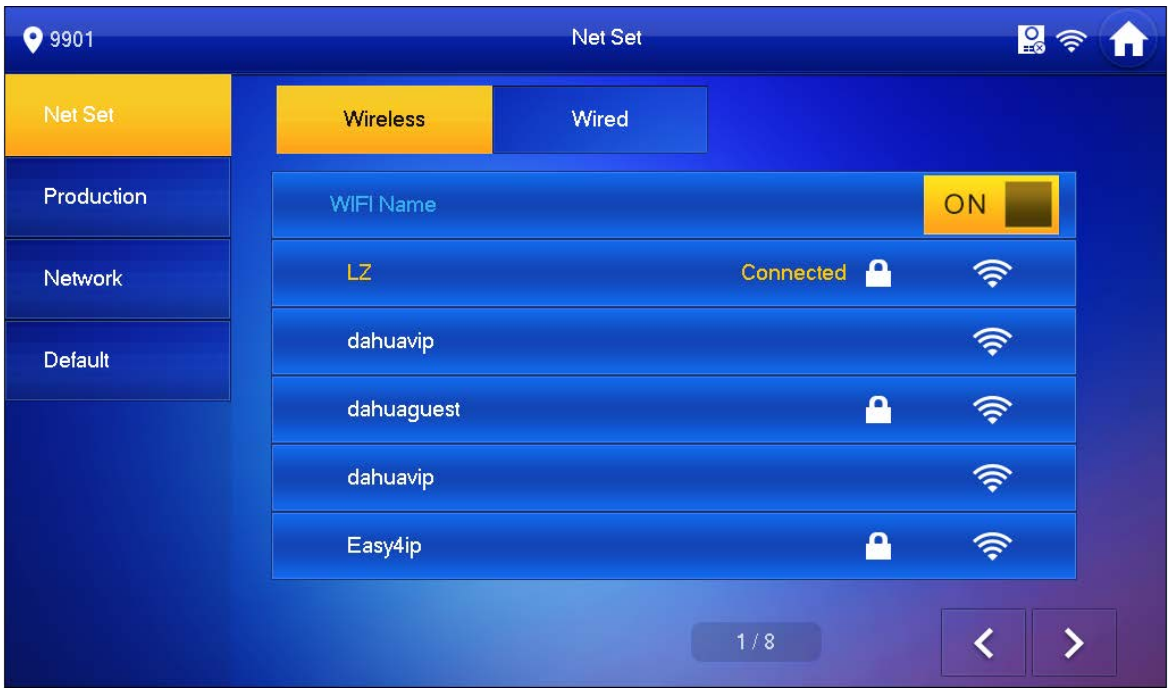

Figure 4-2

2. Select WI-FI you want to connect, and in pop-up WLAN connection window, enter WI-FI password.
3. Click OK.

Now device interface shows at the upper-right corner which means wireless connection is successful.

- Wired:
  1. Select Wired. See Figure 4-3.

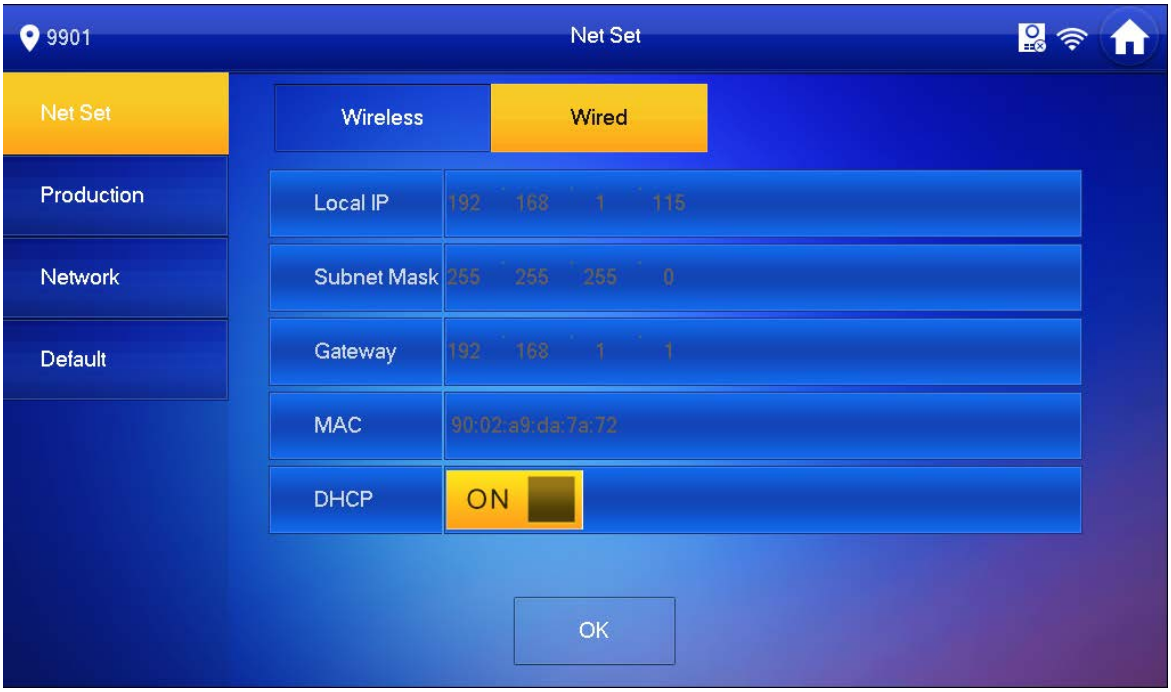

Figure 4-3

2. Enter VTH Local IP, Subnet Mask and Gateway.
3. Click OK.

Now device interface shows  at the upper right corner which means wired connection is successful.

Note:

You also can enable DHCP to auto gain VTH IP, subnet mask and gateway and click OK to complete wired connection.

Step 5. Click Production to config VTH room no.

Warning:

VTH room no. must match VTH short no. on WEB of corresponding VTO.

- If you want to set this VTH to be master VTH, then you shall select Master. Fill in room no., click OK to save, see Figure 4-4.

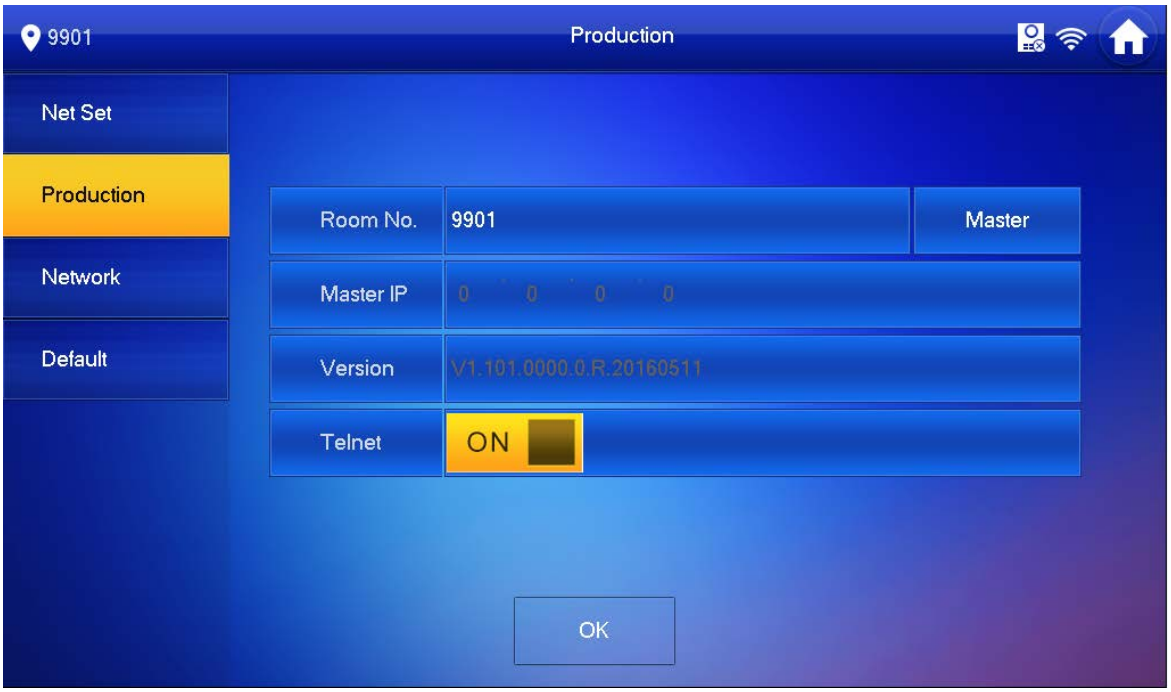

Figure 4-4

- If you want to set this VTH to be extension VTH, then you shall select Extension.
  1. Fill in user cinfig info for extension to auto sync with master, such as room no. and master IP. See Figure 4-5.

  Note:

  Some extension config will auto sync with master VTH info, and cannot be modified.

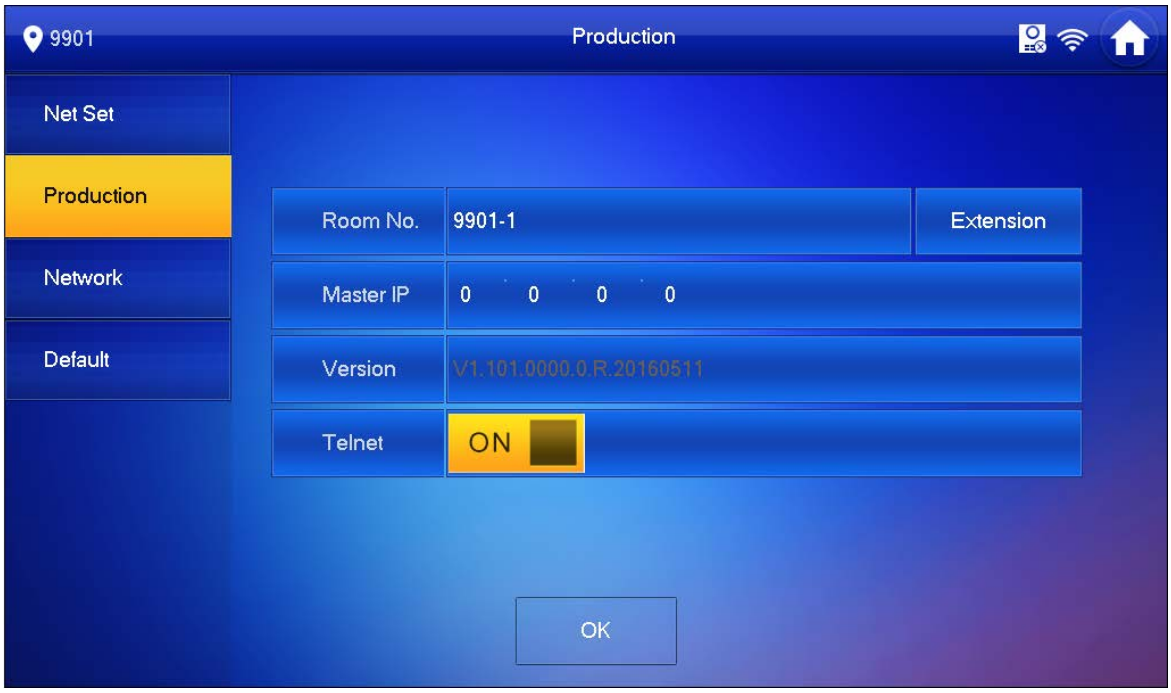

Figure 4-5

2. Click OK to save config.
   System pops up prompt interface which means config is successful.
   Note:
   Telnet server is ON, debugging personnel can view VTH config via telnet+IP.

Step 6. Click Network to config VTO info.

Warning:

Before config, please make sure VTO is plugged to power and is in the same segment with VTH.

1. Fill in VTO name, master VTO IP address, set enable status to 

, see Figure 4-6.

Figure 4-6

2. Fill in VTO name, and extension VTO IP address, select device type, set enable status to 

.

   The device supports n19 units of extensions, and you can click  to page down to add more extensions.

4.3.3 Successfully Debug

On VTO dial VTO room no. to call VTH. VTH pops up monitoring video and operation buttons, see Figure 4-7. You can accept call, hang up, snapshot, record, unlock and etc. on VTH.

Figure 4-7

Icon	Icon Name	Note
	Unlock 1	VTO config electric control lock, click  , unlock.
	Unlock 2	If this VTO has 485 expansion interface, it can expand electric control lock or door sensor lock, after successfully matching with VTH, click  , unlock.
	MIC	Click  , turn off MIC volume.
	IP Camera	Click  , select IPC video of monitoring favorites.
	Snapshot	Click  , to snapshot. Note: When SD card is not installed, this button is grey.
	Record	Click  , record; call ends, click  end recording. Records are stored to SD card of this VTH,

Icon	Icon Name	Note
		if full, it overwrites from the earliest record. Note: When SD card is not installed, this button is grey.
	Volume	Adjust call volume.
	Accept Call	-
	Hang up	-

Chart 4-2

5 WEB Config

This chapter introduces WEB config of 10-inch touch screen VTO.

5.1 WEB Login and Logout

5.1.1 Login

Step 1. In Internet Explorer of PC enter planned IP address of VTO. See Figure 5-1.

Figure 5-1

Note:

- Please confirm IP of PC and IP of VTO are in the same segment.
- VTO default IP address is 192.168.1.110. See Ch 5.2.4.1. to change IP.

Step 2. Enter username and password.

Note:

Default username and password are both admin. Please change password ASAP after first time login, see Ch 5.2.6.3.

Step 3. Enter Login.

5.1.2 Logout

Step 1. Select Logout>Logout>Logout. See Figure 5-2.

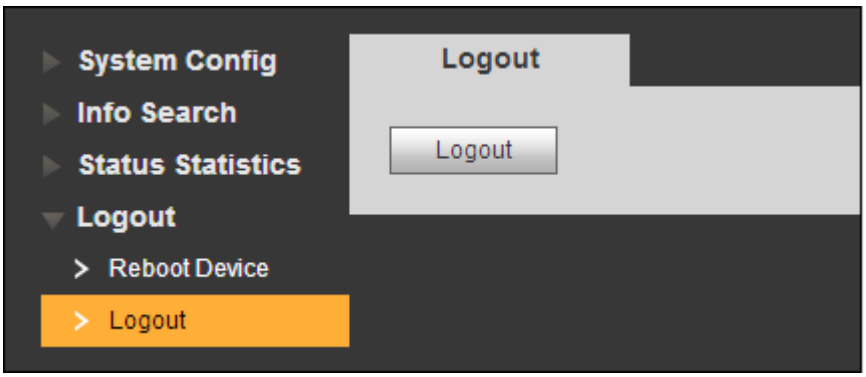

Figure 5-2

Step 2. Click Logout.

System exits WEB page. You can go to Logout>Reboot Device>Reboot Device, to reboot the device.

5.2 System Config

5.2.1 Local Config

You can go to Local Config interface, set local, access control, talk, system time and config.

5.2.1.1 Local Config

In page, select System Config>Local Config>Local Config. Set parameter, and click on OK. See Figure 5-3.

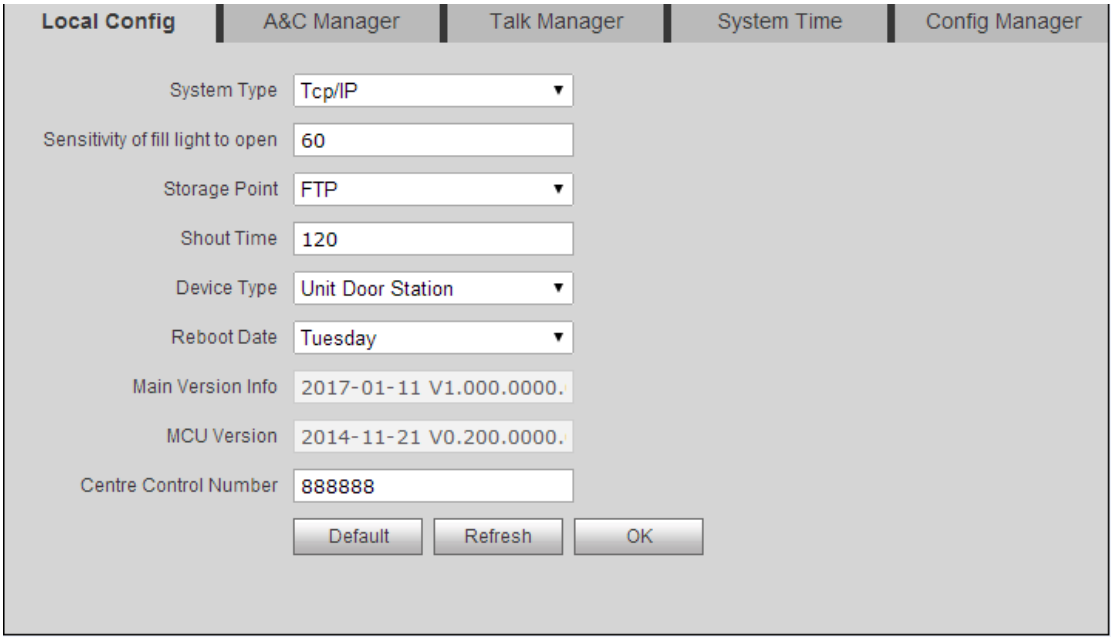

Figure 5-3

Parameter	Note
System Type	Unit VTO scene includes digital system networking and analog system networking. You can select corresponding system type.
Sensitivity of fill light to open	During video talk, if environment is dark, auto enables light. Range is 0~255, default is 60.
Storage Point	Record, snapshot and other info can be stored in FTP server or SD card. Note: ● Please refer to Ch 5.2.4.2. ● When you select SD card, please make sure you have inserted SD card.
Shout Time	Set VTH or MGT center call time with VTO.
Device Type	Display device type. Now it is unit VTO.
Reboot Date	In set date, device will reboot. Default is 2 AM every Tuesday.
Main Version Info	View software version.
MCU Version	Show MCU version, for troubleshooting.
Centre Control Number	Default is 888888.
Default	Click Default to restore all parameters in this page to default.
Refresh	Click Refresh to refresh this page.
OK	Click OK to confirm page content.

5.2.1.2 A&C Manager

Go to System Config>Local Config>A&C Manager, you can set unlock responding interval, unlock period and etc.
See Figure 5-4.

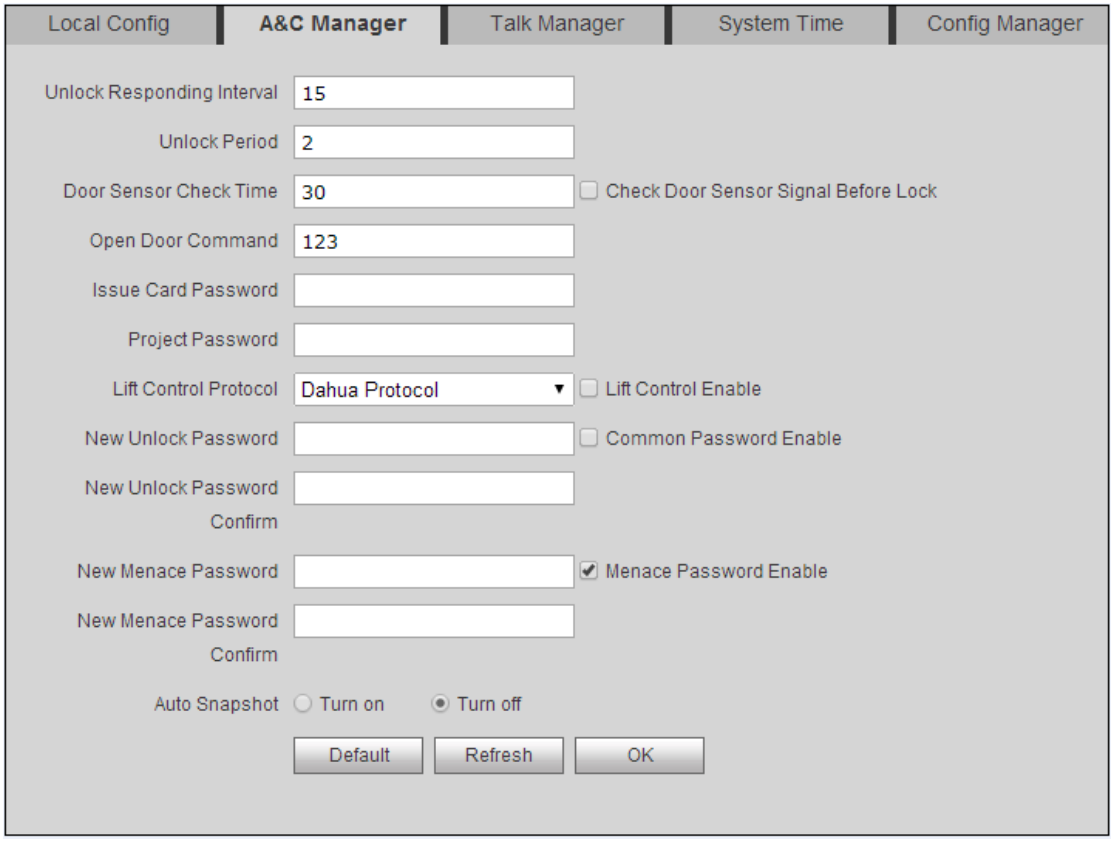

Figure 5-4

Parameter	Note
Unlock Responding Interval	After being unlocked, interval before device responds to next unlock. Unit is second.
Unlock Period	After respond and unlock, time the door remained unlocked. Unit is second.
Door Sensor Check Time	Only when using door sensor lock, check “Check Door Sensor Signal Before Lock”, valid only when “door sensor check time” is set. When door open time exceeds set door sensor check time, and alarm occurs, you can view uploaded alarm in Info Search>Alarm Info>Alarm Info.
Check Door Sensor Signal Before Lock	
Open Door Command	Command from third party VDP.
Issue Card Password	Issue card password which may be changed.
Project Password	Enter project setup interface with this password, it is 888888 by default, may be changed.
Lift Control Protocol	Include local protocol and etc. Protocol can set floor reach by user.
Lift Control Enable	Check and enable lift control.
New Unlock	Check “Common Password Enable” to enable a consistent

Password	password, so each user can unlock with this new password.
New Unlock Password Confirm	
Common Password Enable”	
New Menace Password	Check “Menace Password Enable” to enable unlock function. In emergency, if you enter menace password, the device will report menace info to the MGT center.
New Menace Password Confirm	
Menace Password Enable	
Auto Snapshot	Once enabled, it will auto snapshot if you unlock via card, password. It also uploads snapshot to FTP.
Default	Restore all device parameters in the tab to default setting.
Refresh	Click Refresh to refresh the page.

5.2.1.3 Talk Manager

In System Config>Local Config>Talk Manager interface, you can set auto snapshot, publish overlay and etc. See Figure 5-5.

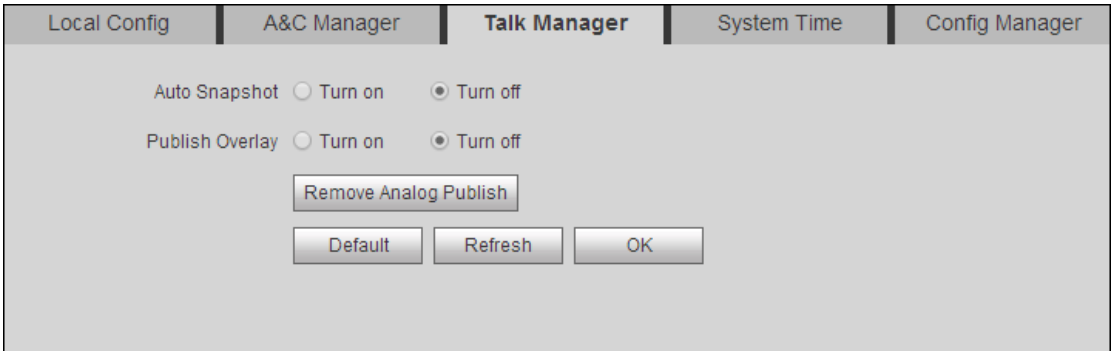

Figure 5-5

Parameter	Note
Auto Snapshot	Select “Turn on”, so when a user calls, it will snapshot once and upload to FTP.
Publish Overlaying	Select “Turn on”, publish info auto overlays to System Config >Video Set > Video Set preview, and roll.
Remove Analog Publish	Click “Remove Publish Info”, delete all info in System Config> Publish Info > History.
Default	Click “Default”, to restore all parameters in this page to default.
Refresh	Click “Refresh”, to refresh this page.

5.2.1.4 System Time

In page, select System Config>Local Config>System Time.
Set date format, time format, system time, NTP server address, time zone and port. See Figure 5-6.

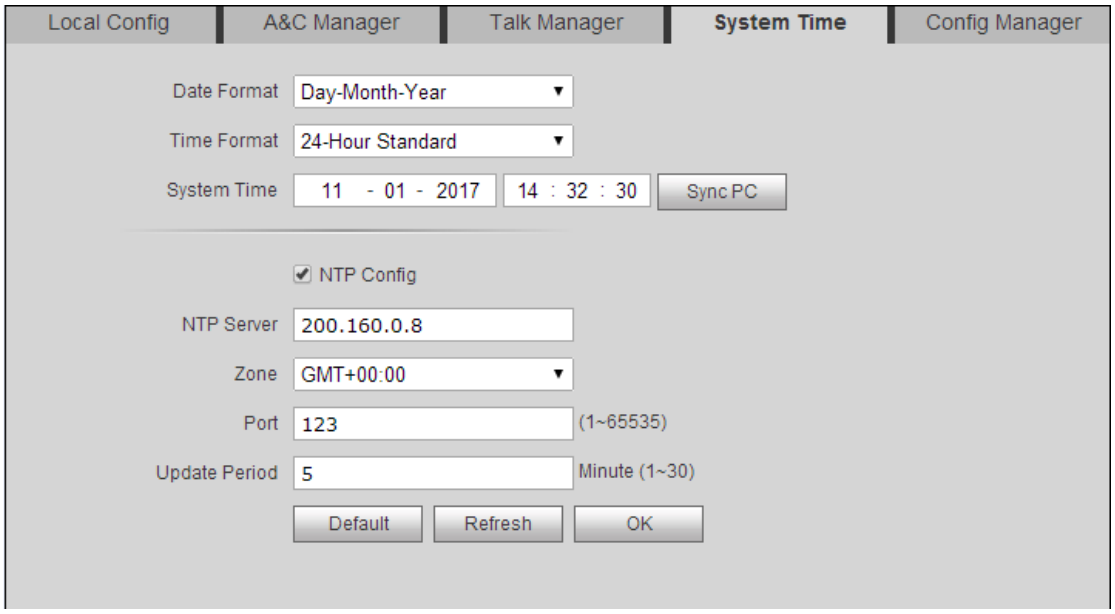

Figure 5-6

Parameter	Note
Date Format	Set date format of display.
Time Format	Set time format of display as 12-hour and 24-hour.
System Time	Set system display time.
Sync PC	Click “Sync PC”, to sync system time with PC time.
NTP Config	Check “NTP Config”, to enable NTP server net sync time. You also can enter IP, zone, port and upgrade period of PC where NTP server is installed to set net time sync.
NTP Server	
Zone	
Port	
Upgrade Period	
Default	Click “Default”, to restore all parameters in this page to default.
Refresh	Click “Refresh”, to refresh this page.

5.2.1.5 Config Manager

In page, select System Config>Local Config>Config Manager. Here you can set export config, import config and default. See Figure 5-7.

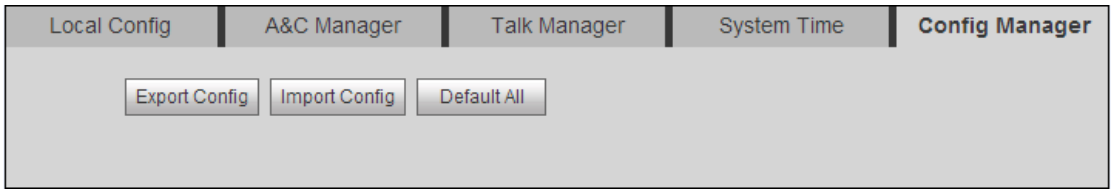

Figure 5-7

Paraemter	Note
Export Config	Import or export system config file, when more than one device need to set the same parameter, a user can backup config file. ● Export config file（Config.backup）. ● Import config file.
Import Config	
Default All	Device all parameters will be restored to default.

5.2.2 LAN Config

In page, select System Config>LAN Config, you can set VTO No., support group call and server type. See Figure 5-8.

After you have set config, go to Logout>Reboot>Reboot, click Reboot Device to make config effective.

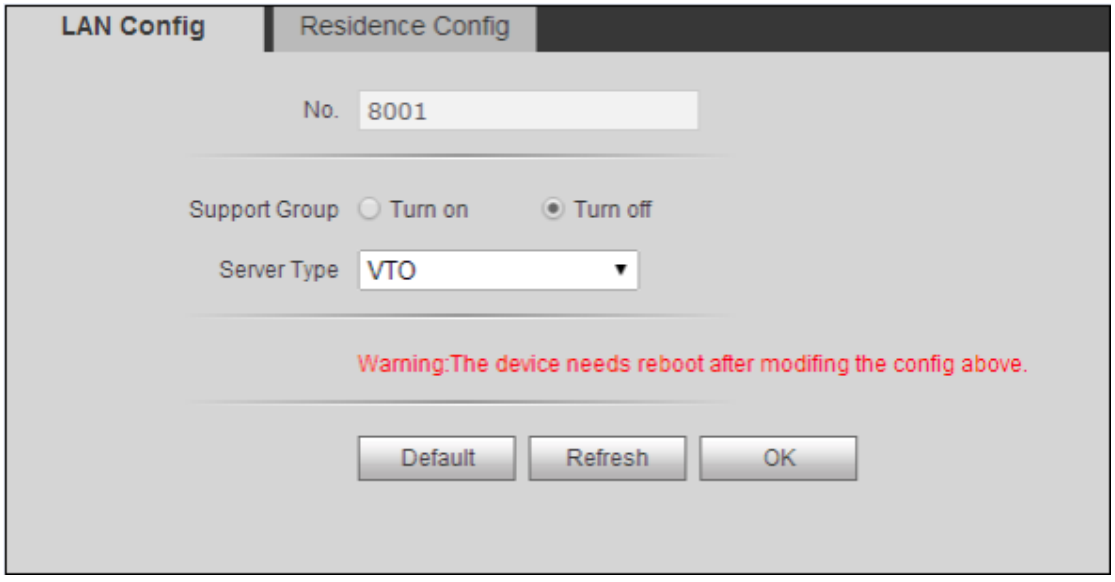

Figure 5-8

Parameter	Note
No.	Unit VTO no. Note: If the device is SIP server, a user can edit this no. SIP server setup refers to Ch 5.2.4.3.
Support Group	Select Turn on, to enable group call.

Parameter	Note
Server Type	Select server type of device. If this device is SIP server, select VTO for server type.
Default	Click “Default”, to restore all parameters in this page to default.
Refresh	Click “Refresh”, to refresh this page.

5.2.3 Device Manager

Note:
Visible if this device is used as SIP server.
Support to add, modify and delete VTO and VTH. One VTO supports more than one VTH.

5.2.3.1 Outdoor Station Manager

Note:
If the device is used as SIP server, then added VTO will be a sub VTO of this VTO.
Step 1. Select System Config>Device Manager>Outdoor Station Manager.
System shows Outdoor Station Manager interface.
Step 2. Click Add. System shows Add interface.
Step 3. Fill in VTO no., format is “80XX” and VTO IP address (optional).
See Figure 5-9.

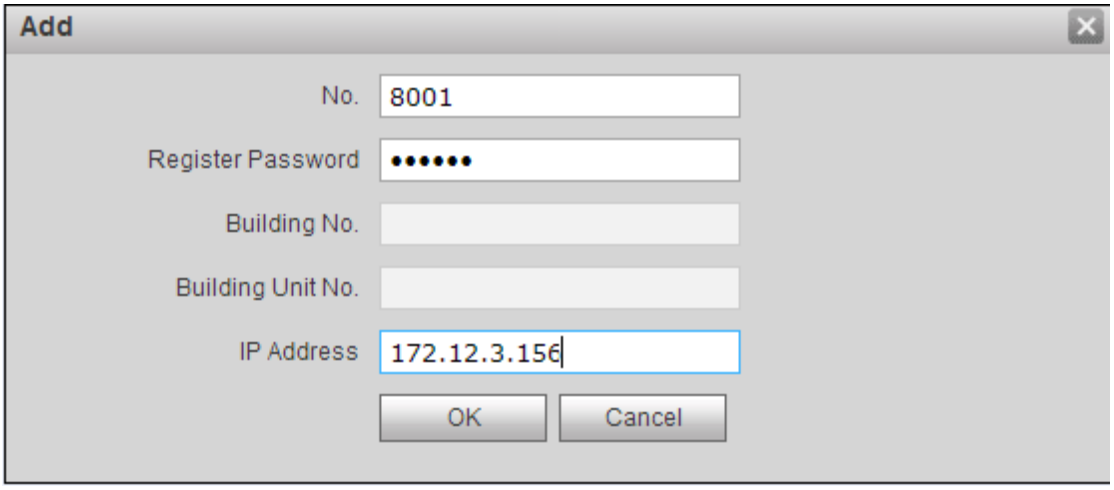

Figure 5-9

Step 4. Click OK, to complete.
See Figure 5-10.

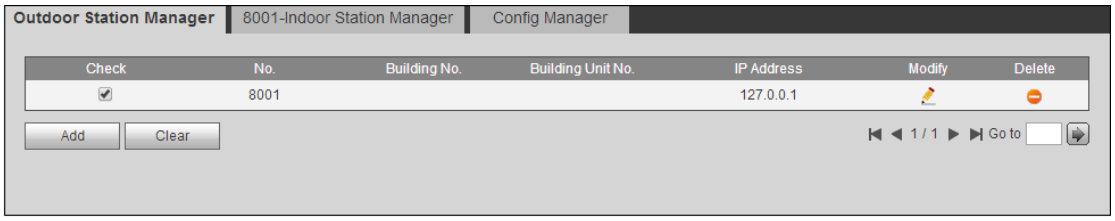

Figure 5-10

Click  to modify VTO parameter info. Click  to delete added VTO.

Note:

For VTO in use, you cannot modify it or delete it.

5.2.3.2 Indoor Station Manager

Warning:

After you have added a single VTH, we do not recommend you to batch add VTH, since this operation will overwrite original VTH. Please add VTH one by one after batch operation.

You can add VTH via either method below:

- Add one VTH

Step 1. Select System Config>Device Manager>Outdoor Station Manager. System shows Outdoor Station Manager interface.

Step 2. Check VTO you want to add VTH, such as 8001.

Step 3. Select “8001-indoor station manager” tab.

Step 4. Click Add. System shows Figure 5-11.

Figure 5-11

Step 5. Configure parameters, see chart below.

Parameter	Note
Family Name	Set VTH username.
First Name	
VTH Short No.	As VTH room no. Note: ● VTH short no. is composed of 1-5 digits of number. ● If your VTH room no. need group call function, please make sure you have enabled group call in System Config>LAN Config>LAN Config, and add “-0” behind VTH short no., add “-1”, “-2” and so forth behind extension short no. Otherwise, VTH will only calls main VTH when dial the room no.
Register Password	SIP system signal command interacting, use default is OK.
Register Type	

Step 6. Click OK, to complete VTH, see Figure 5-12.

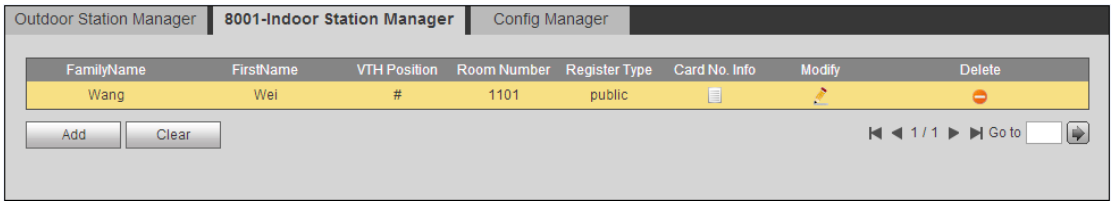

Figure 5-12

- Batch add VTH

Batch add multiple VTHs, up to 1024.For example, add 5 floors and each floor has 4 VTH.

Step 1. Select System Config>LAN Config>Residence Config. System shows Residence Config interface.

Step 2. Configure parameter, see Figure 5-13.

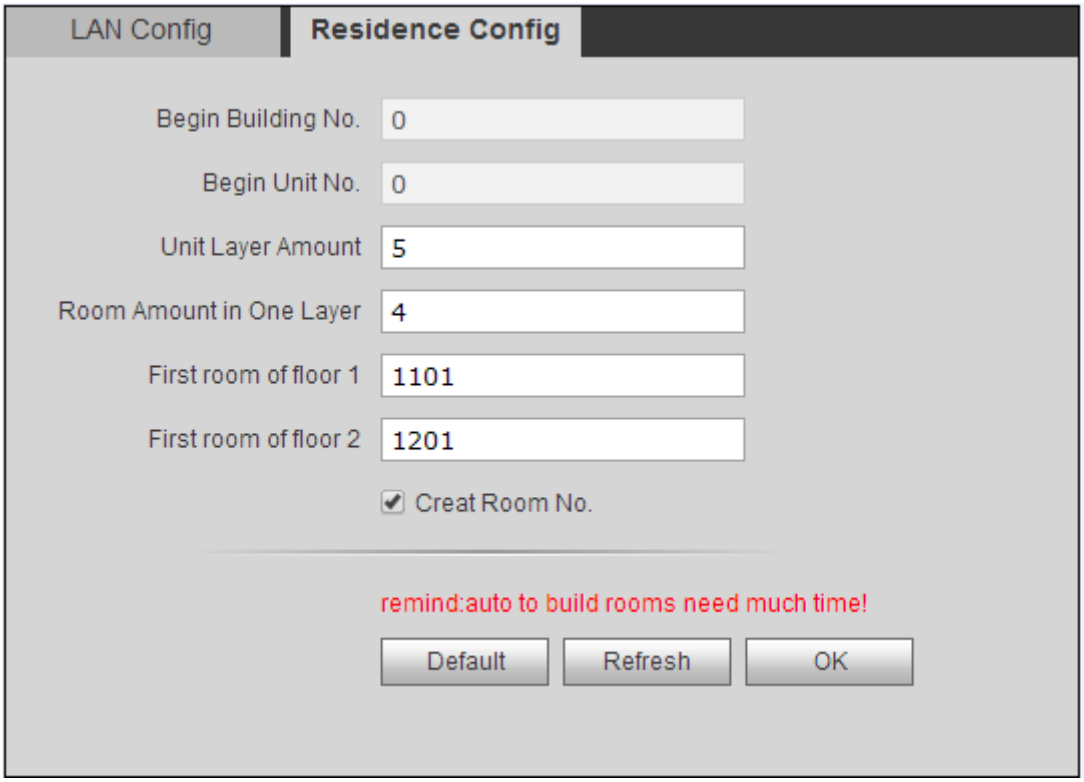

Figure 5-13

Step 3. Check Create Room No., to enable batch add VTH.

Step 4. Click OK.

See Figure 5-14.

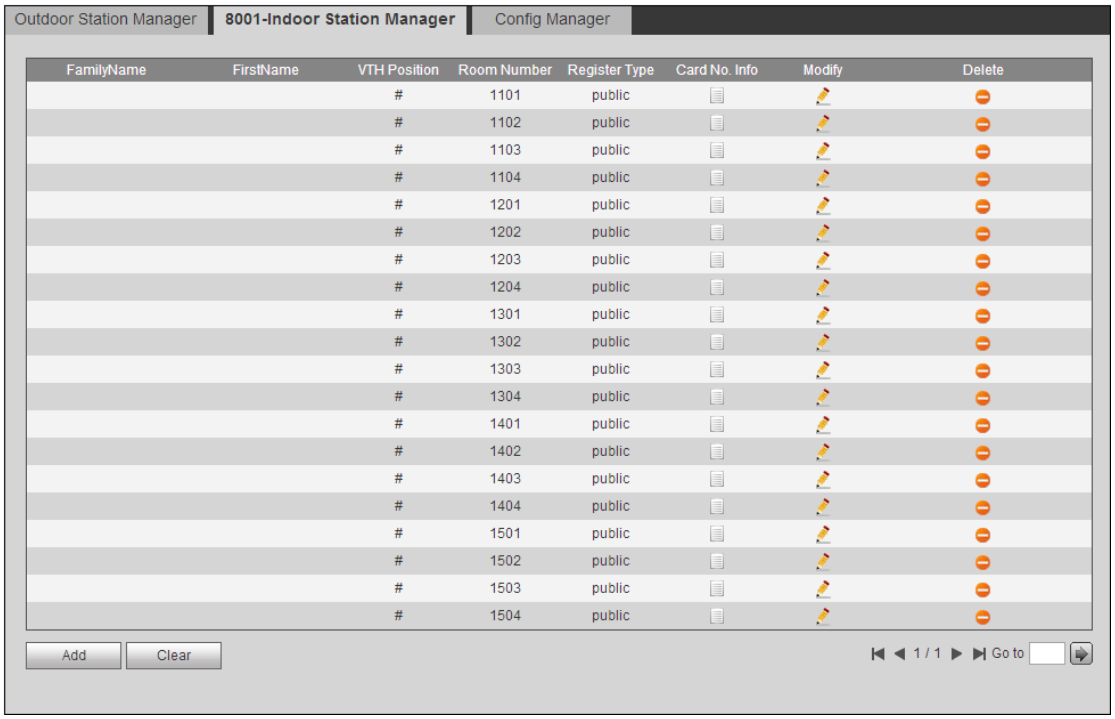

Figure 5-14

Step 5. Click to modify VTH username, password, registration and its password. Click to delete VTH.

Tips:
If your VTH room no. need group call function, please make sure you have enabled group call in System Config>LAN Config>LAN Config, and add “-0” behind VTH short no., add “-1”, “-2” and so forth behind extension short no. Please refer to Ch 5.2.3.2.

5.2.3.3 Card Manager

Warning:
Please add VTH first and then issue card. Please refer to Ch 6.1.3..

In Figure 5-14, click , to view all issued cards under this VTH, see Figure 5-15 and chart below.

Figure 5-15

Parameter	Note
Card ID	Show IC card’s card ID, username and VTH room. No.
Card Number	
Username	
Main Card	Check “main card”, set this IC card as main card. Note: Main card can issue card.
Report Loss	When IC card is lost, click to report loss. After reporting loss, the IC card cannot unlock door.
Modify	Click , to modify this IC card username.
Delete	Click , to delete this IC card.

5.2.3.4 Config Manager

You can import or export system config file, when more than one device need to set same parameter, you can use backup config file.

Step 1. Select System Config>Device Manager>Config Manager.

See Figure 5-16.

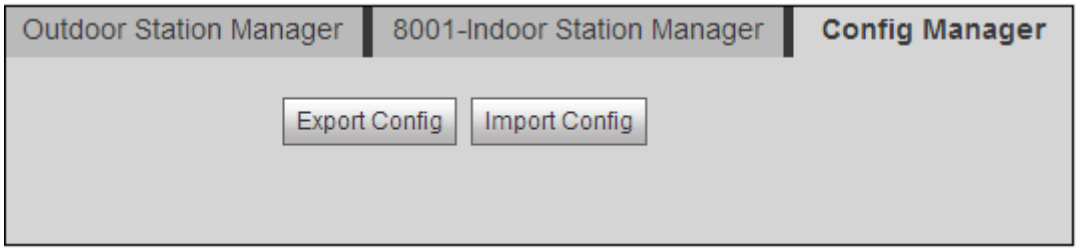

Figure 5-16

Step 2. Config import/export.

- Config export.

  1. Click “Export Config”. System shows Export box, see Figure 5-17.

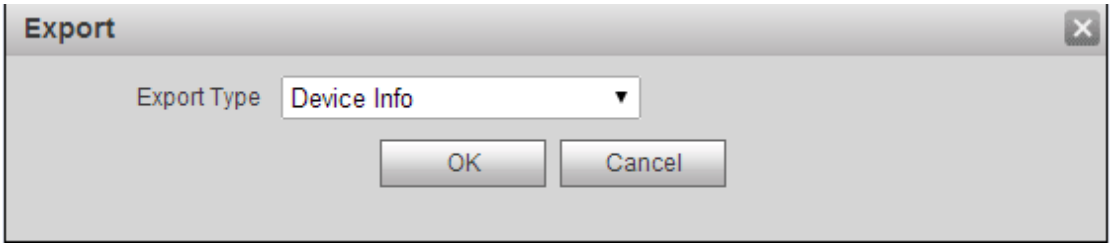

Figure 5-17

  2. Select export type you need to export (device info/card info/password info).
  3. Click OK.
  4. Click Save.

  System prompts “operation is successful.”, export is complete.

- Config import

  1. Click “Import Config”. System shows Import box.
  2. Select config file （.log）you need to import, click Open.

  System prompts “operation is successful.”, import is complete.

5.2.4 Network Config

5.2.4.1 TCP/IP

Go to System Config>Network Config>TCP/IP interface, you can set VTO IP address, subnet back, default gateway, see Figure 5-18.

Please refer to chart below. After config is complete, WEB interface and VTO will both

reboot. After a while, WEB interface directly goes to new IP address.
You also can modify VTO IP in Project Setup>IP Setup local interface.

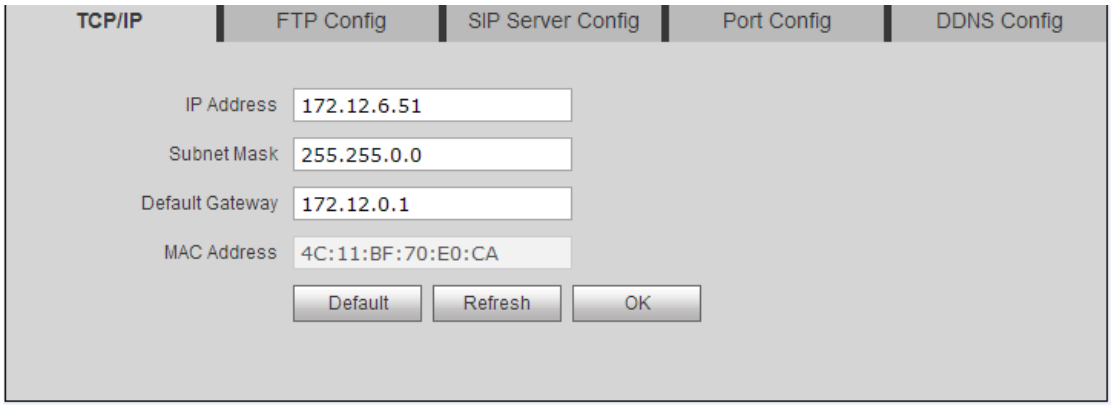

Figure 5-18

Parameter	Note
IP Address	Enter number as IP address.
Subnet Mask	According to actual condition, subnet mask prefix is number, enter 1～255，part of subnet prefix is a special network link, which in general include a layer structure.
Default Gateway	According to actual condition, it must be in the same segment with IP address.
MAC Address	Show device MAC address.
Default	Click “Default”, to restore all parameters in this page to default.
Refresh	Click “Refresh”, to refresh this page.

5.2.4.2 FTP Config

Back up record and picture to set FTP server for storage and view.
Note:
FTP is enabled by default.
Step 1. Select System Config>Network Config>FTP Config. See Figure 5-19.

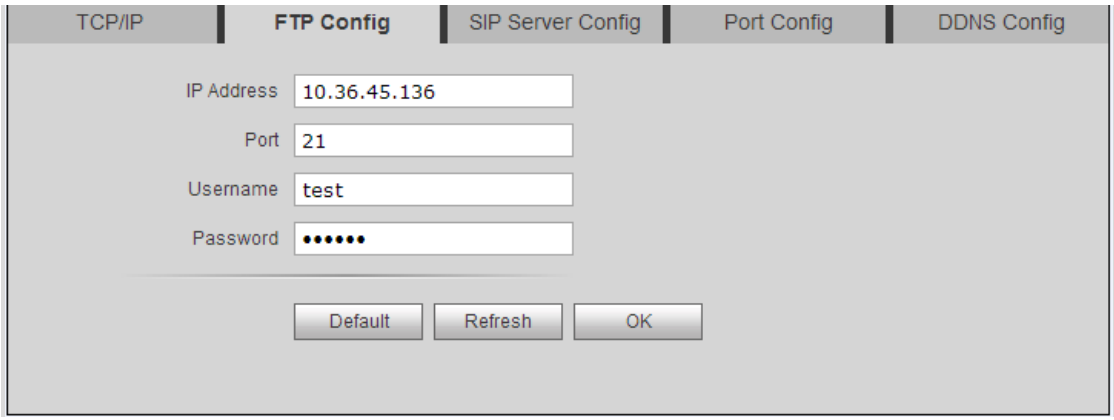

Figure 5-19

Step 2. Configure interface parameter, see chart below.

Parameter	Note
IP Address	Host IP address where FTP is installed.
Port No.	Default is 21.
Username	Username and password to access FTP server.
Password	

Step 3. Click OK, to complete FTP setup.

5.2.4.3 SIP Server

- When unit VTO is as SIP server, one SIP server can manage 200 units of device. Set the device to be SIP server, operation as follows:

Step 1. Select System Config>Network Config>SIP Server. See Figure 5-20.

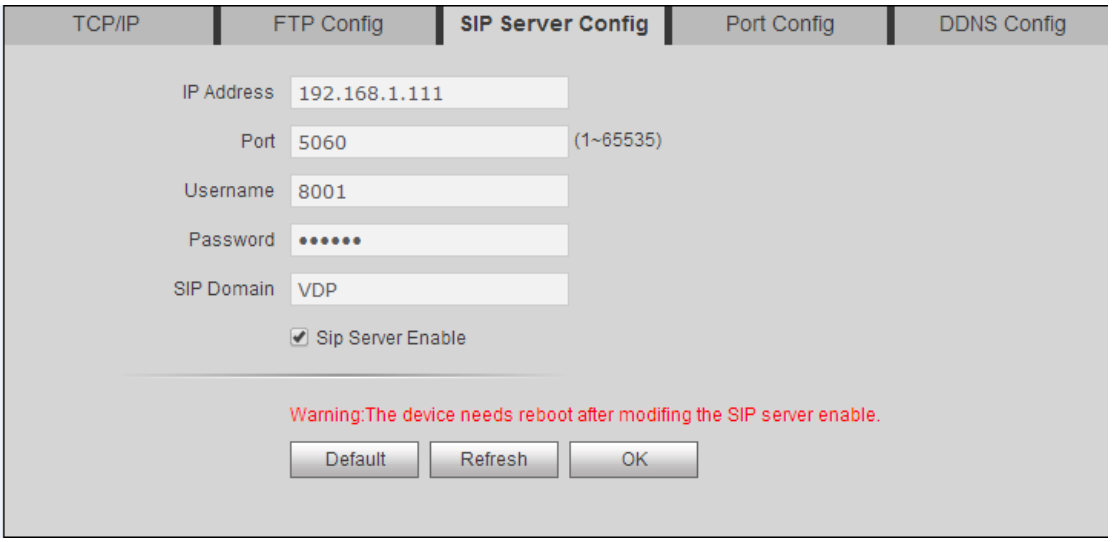

Figure 5-20

Step 2. Check “SIP Server Enable”, to enable the device as SIP server.

After complete, unit VTO will reboot.

- When unit VTO is not as SIP server, you can select other SIP server, and setup as follows:

Step 1. Select System Config>Network Config>SIP Server Config.

System shows SIP Server Config interface.

Parameter	Note
IP Address	SIP server IP address.
Port	When SIP server IP is filled as VTO IP address, default network port is 5060； when SIP server IP is filled as H500 platform IP address, default network port is 5080.

Parameter	Note
Username	SIP server login username and password.
Password	Default username is VTO no., and default password is 888888.
SIP Domain	SIP server domain, can be null.

Step 2. Enter parameter.

Step 3. Click OK.

5.2.4.4 Port Config

Step 1. Select System Config>Network Config>Port Config. See Figure 5-21.

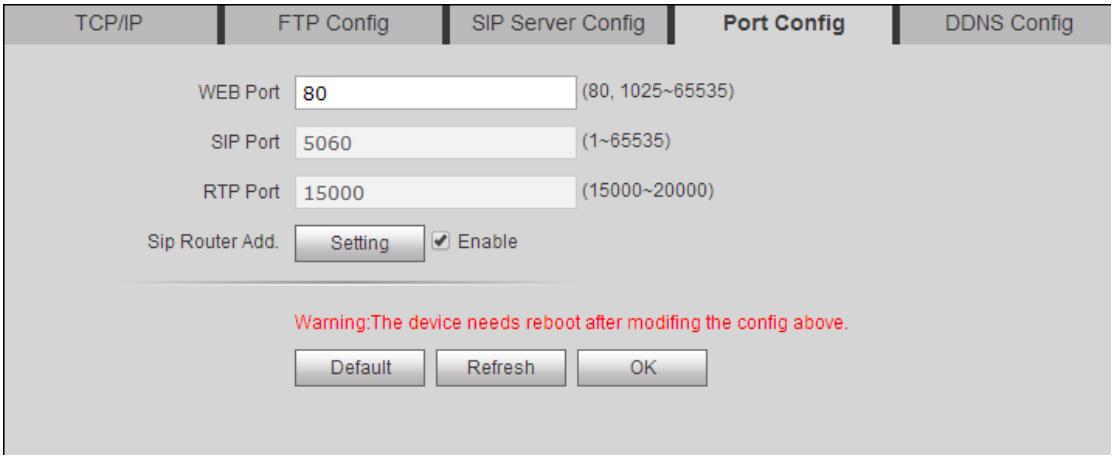

Figure 5-21

Step 2. Configure parameter, see chart below.

Parameter	Note
WEB Port	Set port to login unit VTO WEB interface, default is 80; you also can go to VTO host "project setting > WEB port" to view WEB port no. If the port is occupied, you can use 1025~65535 range, in browser enter "*http://VTO IP: WEB port no."to visit VTO W*EB interface.
SIP Port	SIP server port, default is 5060.
RTP Port	Video pull stream port, default is 15000.
SIP Router Add	Check "Enable" to enable router function.
Setting	Click "router setup", in pop-up box enter H700 platform IP address, port no. is 5080.

Step 3. Click OK.

5.2.4.5 DDNS Config

DDNS（Dynamic Domain Name Server）, is dynamic upgrade of domain name and IP address of DNS server when device IP address is changing frequently. This can guarantee user access to device via domain name.

Warning:

- Before config, please make sure the device support DNS type, and login corresponding DDNS username, password and etc.
- User register on DDNE website and login, thus can view all connected device info under this user.

Step 1. Select System Config>Network Config>DDNS. See Figure 5-22.

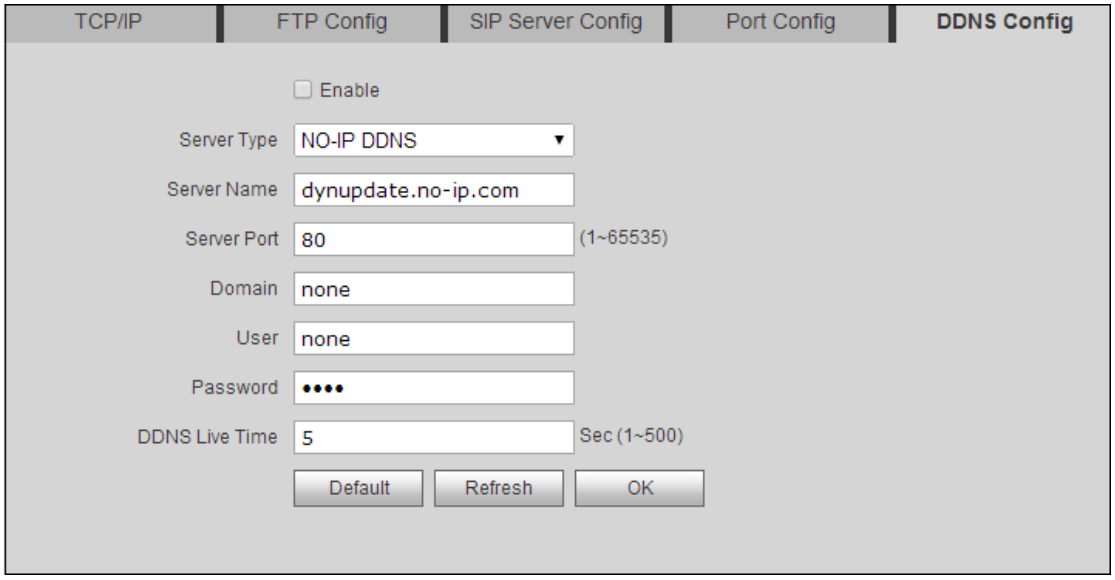

Figure 5-22

Step 2. Check Enable to enable DDNS server function.

Step 3. Config parameter, refer to chart below.

Parameter	Note
Server Type	DDNS server provider name and address, corresponding relation as follows. Dyndns DDNS address：members.dyndns.org NO-IP DDNS address is：dynupgrade.no-ip.com As select “server type” to be NO-IP DDNS, server name is dynupgrade.no-ip.com.
Server Name	
Server Port	DDNS server port.
Domain	User registered domain on DDNS server provider website.
User	Enter username and password received from DDNS server provider. User shall register on DDNS server provider website (username and password included).
Password	

Parameter	Note
DDNS Live Time	DDNS server live time.

Step 4. Click OK, to complete DDNS server setup.
In PC web browser enter domain name, and press Enter. If it shows device WEB page, the operation is successful. If not, config failed.

5.2.5 Video Set

5.2.5.1 Video Set

In page, select System Config>Video Set>Video Set.
You can set camera brightness, contrast, HUS and etc. See Figure 5-23.

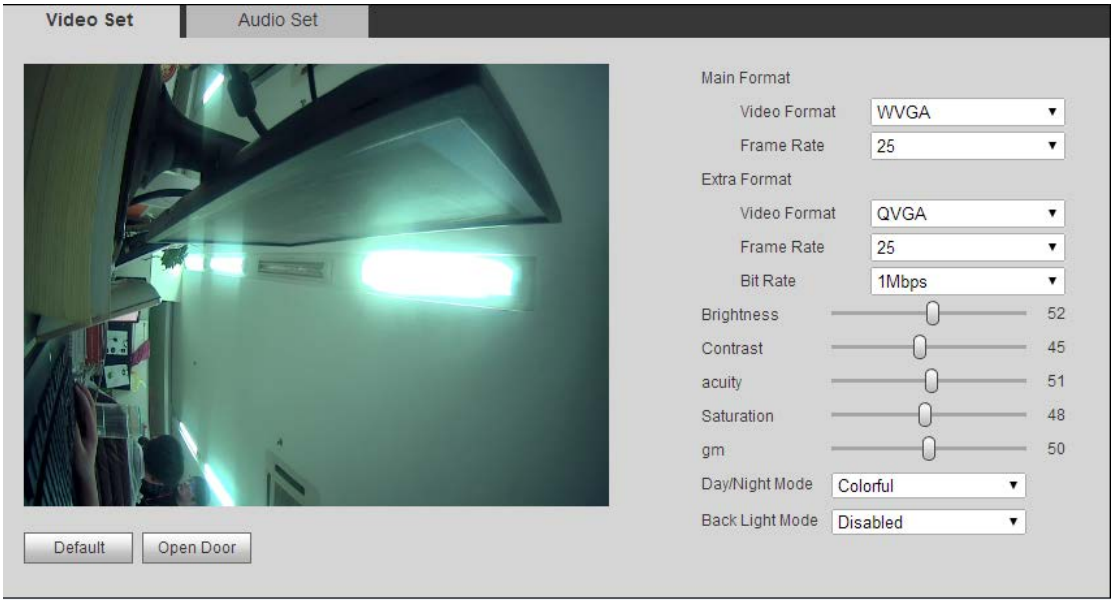

Figure 5-23

Note:
If you cannot see video, please install plug in first.

Parameter		Note
Main Format	Video Format	Adjust video resolution, as 720P, WVGA and D1. ● 720P: resolution is 1280*720. ● WVGA：resolution is 800×480. ● D1：resolution is 720×576.
	Frame Rate	Adjust video transmission speed, as 30 and 25 fps.
Extra Format	Video Format	Adjust video resolution, as WVGA and D1, QVGA: ● WVGA：resolution is 800×480.

Parameter		Note
		● D1：resolution is 720×576. ● QVGA:：resolution is 320×240.
	Frame Rate	Adjust video transmission speed, as 30 and 25 fps.
	Bit Rate	According to actual device input network, select bit rate, as 256Kbps，512Kbps，1Mbps，2Mbps and 3Mbps.
Brightness		Adjust video brightness
Contrast		Adjust video contrast
HUE		Adjust video HUE
Saturation		Adjust video saturation
Gain Mode		Auto mode: system automatically adjusts.
Scene Mode		Includes: disabled, automatic, sunny and night.
Day/Night Mode		Includes: colorful, automatic, black white.
Back Light Mode		Four modes available：
Mirror		Horizontally flip video.
Flip		Vertically flip video.
Default		Restore all parameter in video set tab to default.

5.2.5.2 Audio Set

Go to System Config>Video Set>Audio Set interface, you can set MIC volume and beep volume. See Figure 5-24.

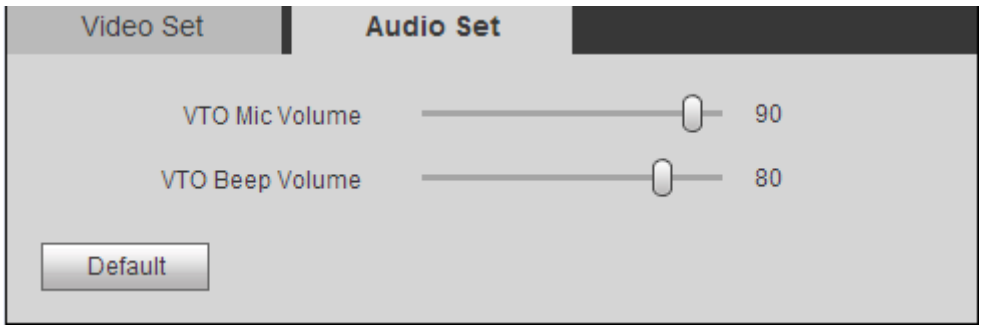

Figure 5-24

Click Default to restore all parameters in Audio Set interface to default.

5.2.6 User Manage

5.2.6.1 Add User

Step 1. In page, select System Config>User Manager.
Step 2. Click on Add User.
Step 3. In pop-up box fill in user info. See Figure 5-25.

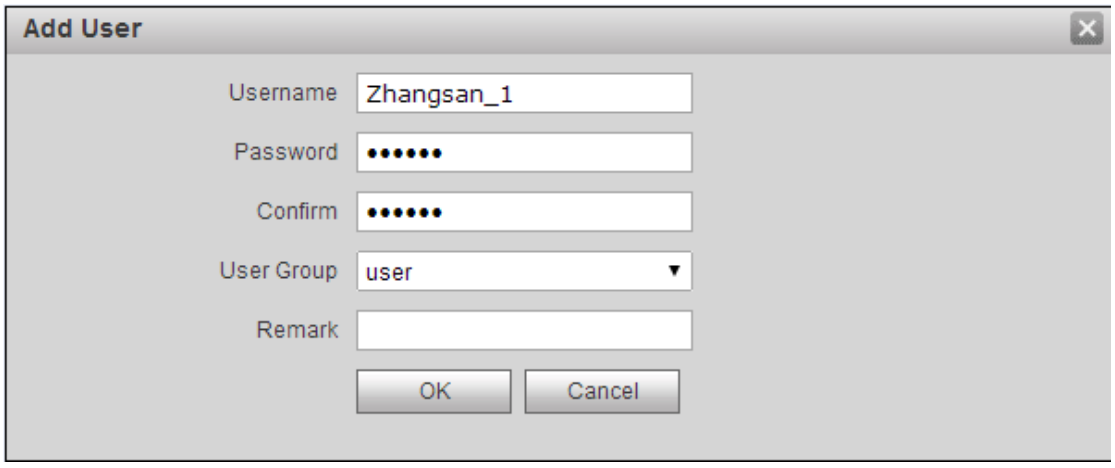

Figure 5-25

Note:

Currently the system supports two user types: admin and user.

- Admin has higher rights with full operation rights.
- User can only view system configuration, unlock, export record, send publish info and modify user password.

Step 4. Click OK, complete WEB interface adding of user, see Figure 5-26.

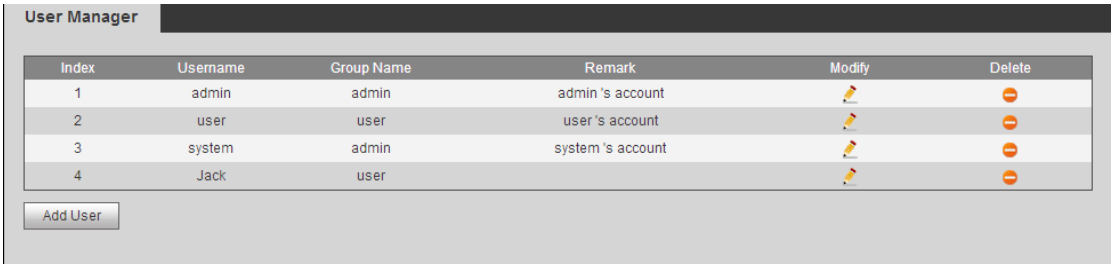

Figure 5-26

5.2.6.2 Delete User

In User Manage interface, click on to delete user.

5.2.6.3 Modify User

Step 1. Select user you want to modify, click .

Step 2. Check “Change Password”, see Figure 5-27.

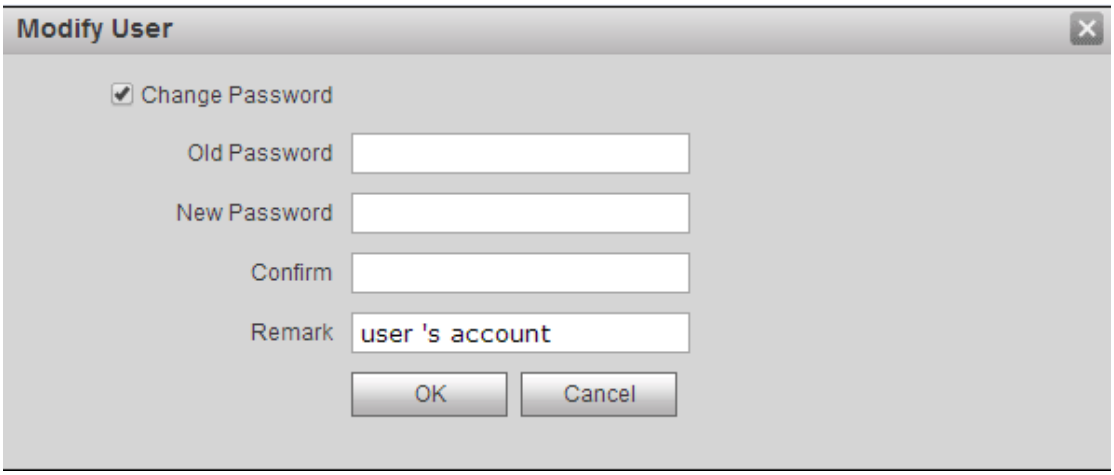

Figure 5-27

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

Step 4. Click OK.

5.2.7 IPC Information

Note:

Visible when this device is as SIP server.

You can add up to 20 IPCs, and added cameras will be auto synced with VTH.

To add IPC:

Step 1. Select System Config>IPC Information>IPC Information.

Step 2. Click , system pops up a bo. See Figure 5-28.

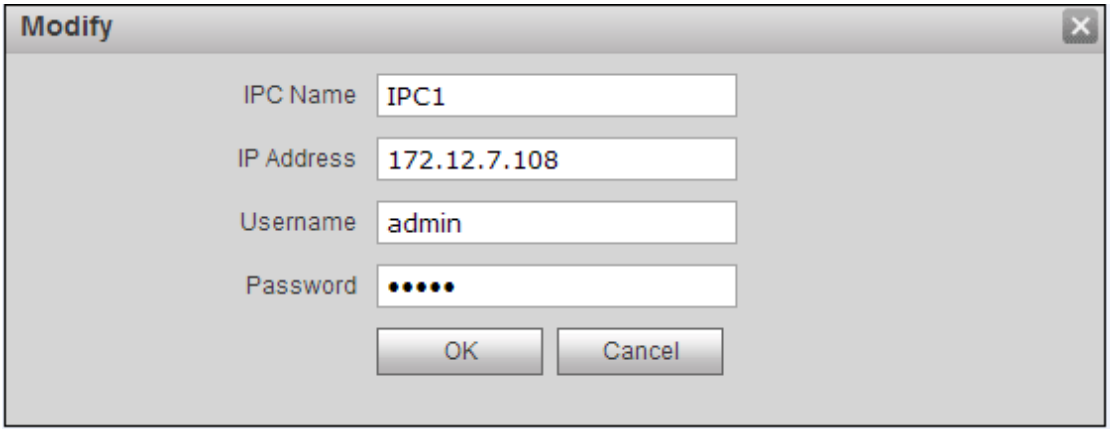

Figure 5-28

Step 3. Fill in IPC information, see chart below.

Parameter	Note
IPC Name	IPC name.
IP	IPC IP.

Parameter	Note
Address	
Username	Login IPC WEB interface username and password.
Password	

Step 4. Click OK.

5.2.8 Publish Information

In Publish Information page, you can send publish information and view historical information.

Note:

Visible when the device is as SIP server.

5.2.8.1 Send Info

In page, select System Config>Publish Information>Send Info. You can set validity published info, select device to send info or check “all devices” and etc. Click Send, see Figure 5-29.

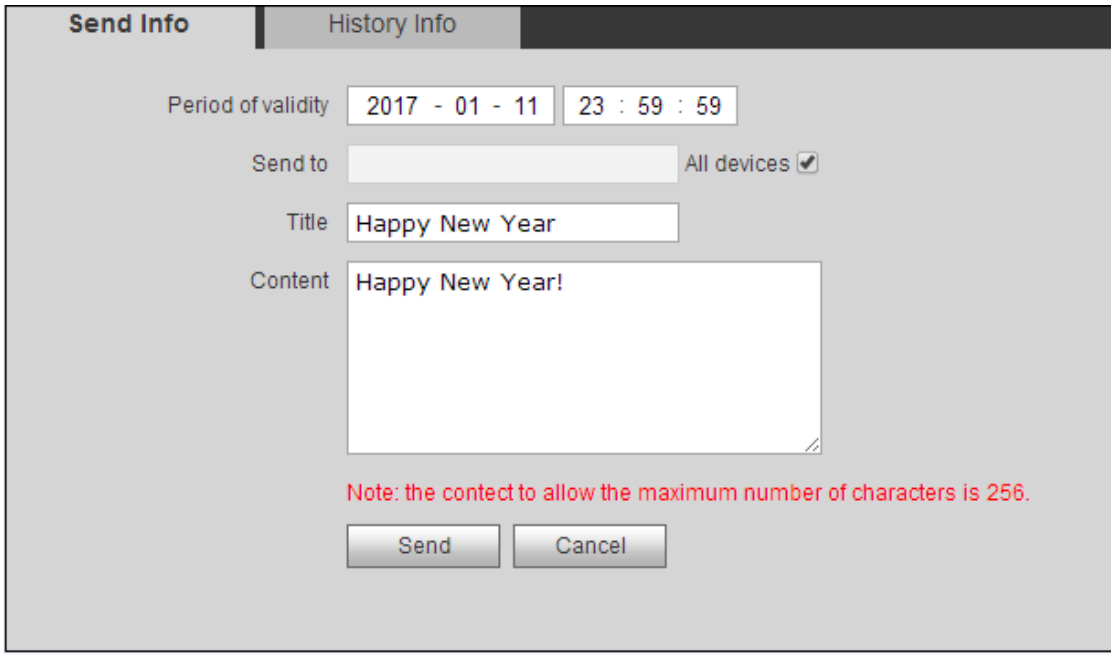

Figure 5-29

5.2.8.2 History Info

In page, select System Config>Publish Information>History Info.

You can view historical information, click on to delete ifnormation. See Figure 5-30.

You also can go to System Config>Local Config>Talk Manager interface, to delete publish info.

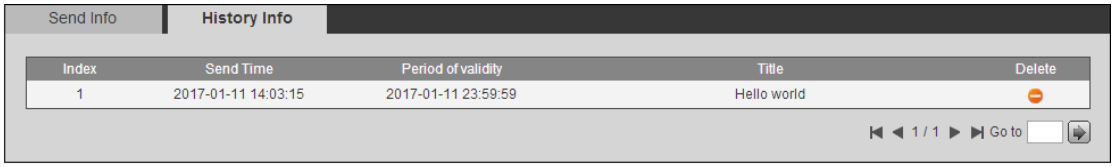

Figure 5-30

5.2.9 UPnP Setup

Note:
Visible when the device is set as SIP server.

Warning:

- **Login router, set router WAN port IP address connection to WAN.**
- **Router enables UPnP function.**
- **Connect device to router LAN port, to private network.**

Via UPnP protocol create mapping relationship between private network and outer network. Outer network user can visit device in LAN via outer IP address.

Step 1. Select System Config>UPnP Setup>General.

Step 2. Check “UPnP Enable” to enable UPnP function.

Step 3. Click Add. See Figure 5-31.

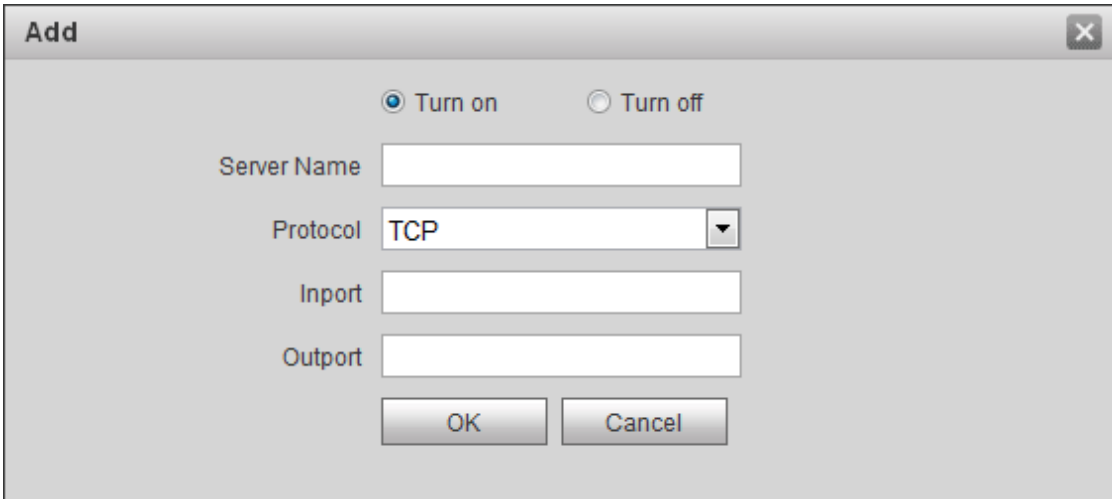

Figure 5-31

Step 4. Enable UPnP function, select enable, see chart below.

Parameter	Note
Server Name	Server name.
Protocol Type	Select protocol type, TCP or UDP.

Parameter	Note
Inport	Port to mapping.
Outport	Port mapped on router.

Note:

- When you set router mapping outer port, try use port within 1024~5000, to avoid using well-known port 1~255 and system port 256~1023.
- When there are multiple devices in the same LAN, please plan for port mapping, to eliminate multiple device mapping to one external port.
- For port mapping in progress, please make sure mapping port is not occupied or limited.
- TCP/UDP internal and external ports must be identical, cannot be modified.

Step 5. Click OK, to complete UPnP setup.

In browser, enter *"http://WAN IP：WAN port no."*to visit corresponding router port no. of private device.

5.2.10 Fingerprint Info

You can record up to 3000 fingerprints.

Go to System Config>Fingerprint Manager>Fingerprint Info, you can delete, add, import and export fingerprint info.

5.2.10.1 Add Fingerprint

After you add fingerprint, you can unlock via fingerprint.

- Add single fingerprint

Step 1. Select System Config>Fingerprint Manager>Fingerprint Info.

Step 2. Click Register, see Figure 5-32.

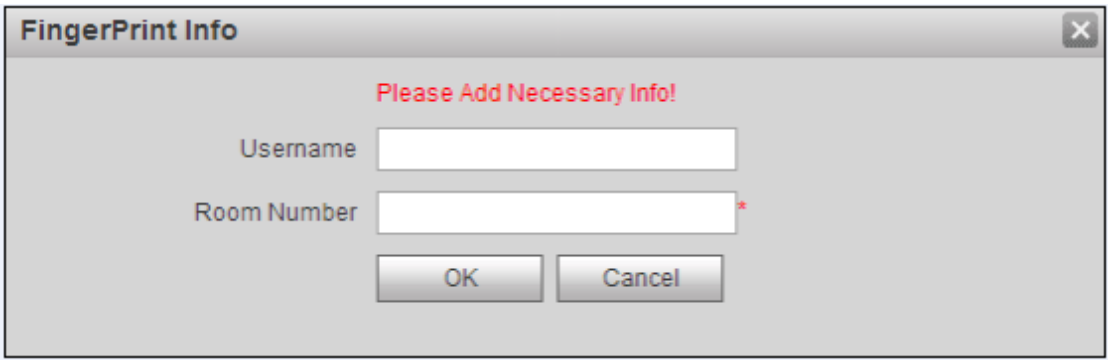

Figure 5-32

Note:

Room no. in fingerprint manager shall be identical with room no. set in System Config>Device Manager>Indoor Station Manager.

Step 3. Enter username and room no. of the fingerprint, click OK.

Step 4. Follow audio instructions to enter fingerprint for three times on VTO. If verification fails, please enter fingerprint again. See Figure 5-33.

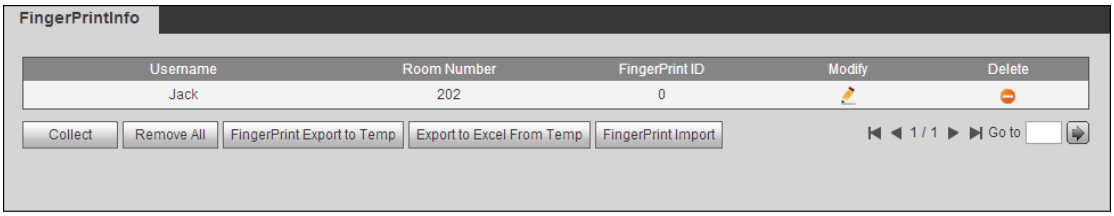

Figure 5-33

- Batch add fingerprint

Step 1. Select System Config>Fingerprint Manager>Fingerprint Info.

Step 2. Click Fingerprint Import.

Step 3. Select fingerprint info (.csv) file, click Open. System will prompt when operation is successful.

5.2.10.2 Delete Fingerprint

Go to System Config>Fingerprint Manager>Fingerprint Info interface, you can click to delete added fingerprint info. You can click Remove All to delete all added fingerprints.

5.2.10.3 Modify Fingerprint

Go to System Config>Fingerprint Manager>Fingerprint Info interface, you can click to modify fingerprint info.

5.2.10.4 Export Fingerprint Info

Step 1. Select System Config>Fingerprint Manager>Fingerprint Info.

Step 2. Click Fingerprint Export to Temp, to export into Browser cache.

Step 3. Click OK. ‘

Step 4. Click Export to Excel From Temp.

Step 5. Select path, save fingerprint info.

5.3 Info Search

You can view call record, alarm record and unlock record.

5.3.1 Call Record

Store up to 1024 records.
Select Info Search>Call History>Call History. You can search VTO call records, including call type, room no., start time, call time and end status. See Figure 5-34.

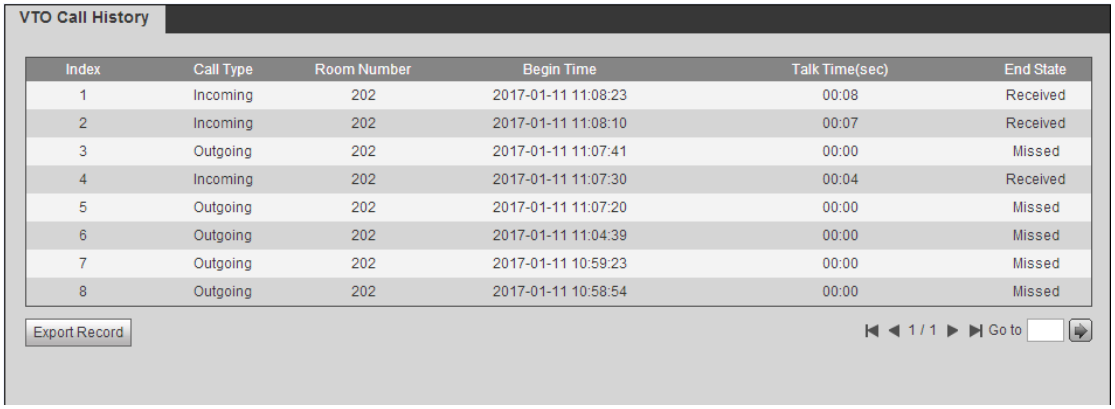

Figure 5-34

Click Export Record to export call record of VTO.

5.3.2 Alarm Record

Store up to 1024 records, including door sensor alarm, vandal-proof alarm and etc.
Select Info Search>Alarm Record>Alarm Record interface, you can search unit VTO alarm, including room no., alarm status and etc, see Figure 5-35.

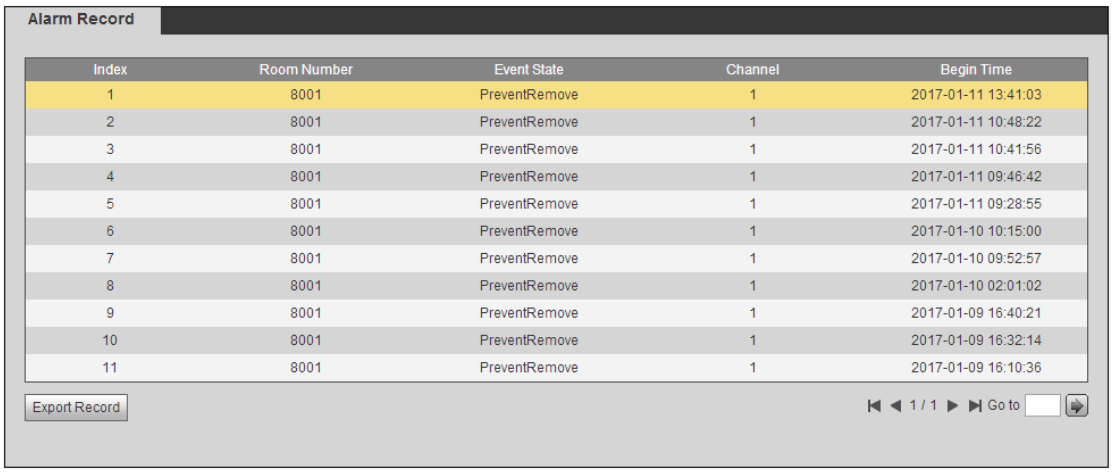

Figure 5-35

Click Export to export VTO alarm record.

5.3.3 Unlock Record

Unlock record stores up to 1000 records, including remote unlock, card unlock and button unlock.

In Info Search>Unlock Record>VTO Unlock Record interface, you can search unit VTO unlock status, including unlock type, unlock time and etc. See Figure 5-36.

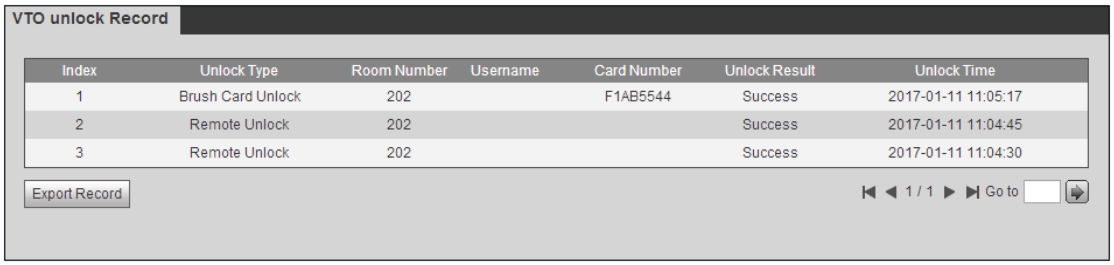

Figure 5-36

Click Export Record to export VTO unlock record.

5.4 Status Statistics

In Status Statistics>VTH Status>VTH Status interface, you can view VTH connection status, IP port and etc. See Figure 5-37.

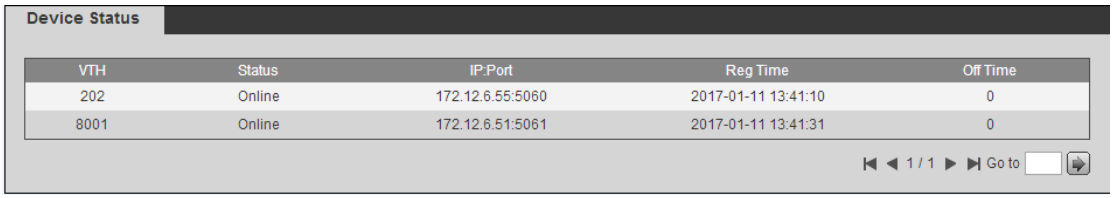

Figure 5-37

Step 1. Status

Offline: VTO and VTH are not connected, you cannot call, monitor, talk or etc.

Online: VTO and VTH are connected, you can call, monitor, talk and etc.

6 Functional Operation

VTO supports unlock via fingerprint, password, card, QR code, and to call MGT center and VTH. It also supports video intercom with MGT center and VTH.

6.1 Project Setting

In Project Setting interface, for engineer config only. Password to enter is 888888.
Note:
Project setting password can be changed on WEB, see Ch 5.2.1.2.

6.1.1 IP Config

In Project Setting>IP Config interface, you can set VTO IP address, subnet mask and gateway, see Figure 6-1.

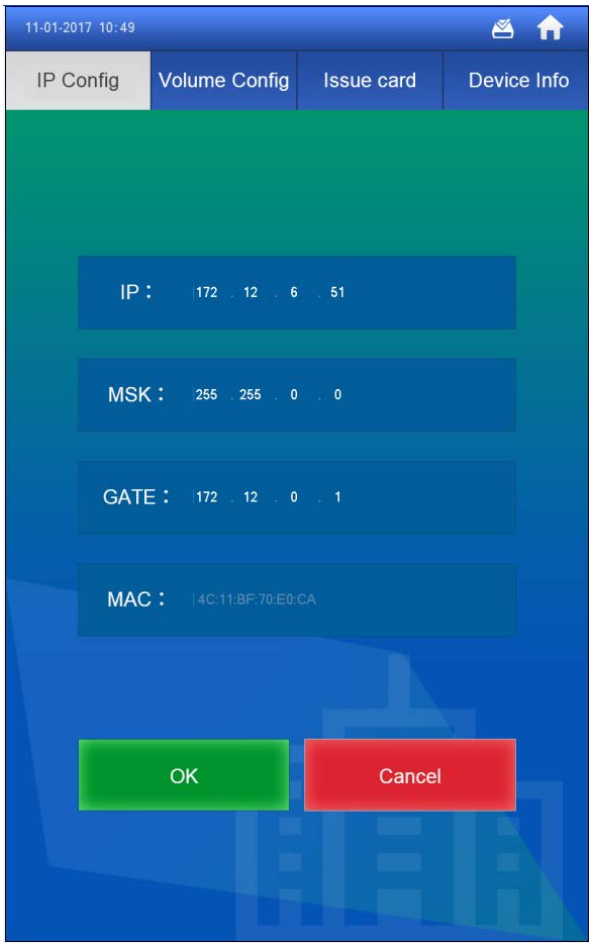

Figure 6-1

6.1.2 Volume Config

In Project Setting>Volume Config interface, you can control volume of entire VTH, incluing touch screen tone, VTH ring, alarm tone and etc. There are recommended values, see Figure 6-2.

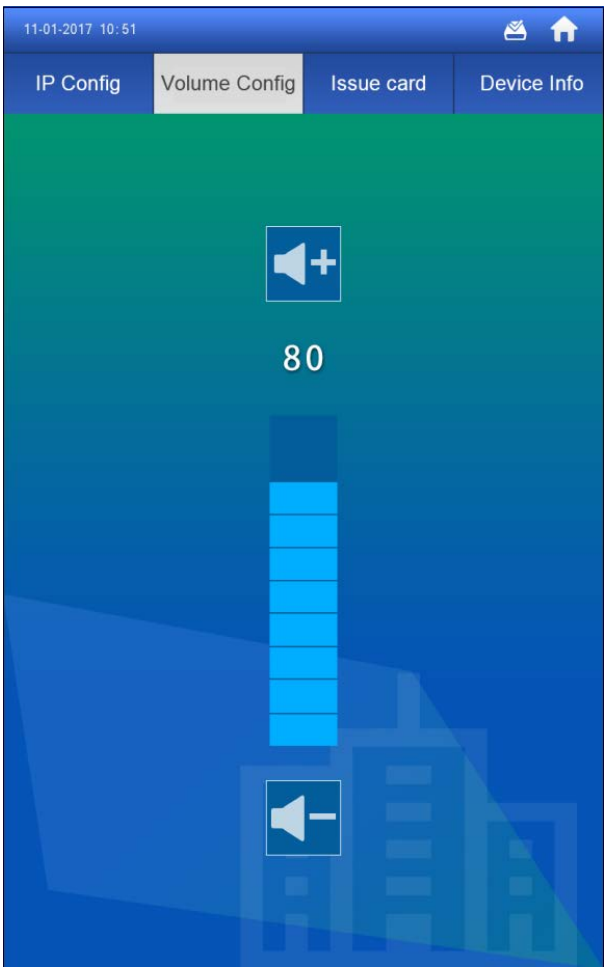

Figure 6-2

6.1.3 Issue Card

Step 1. Select Project Setting>Issue Card, see Figure 6-3.

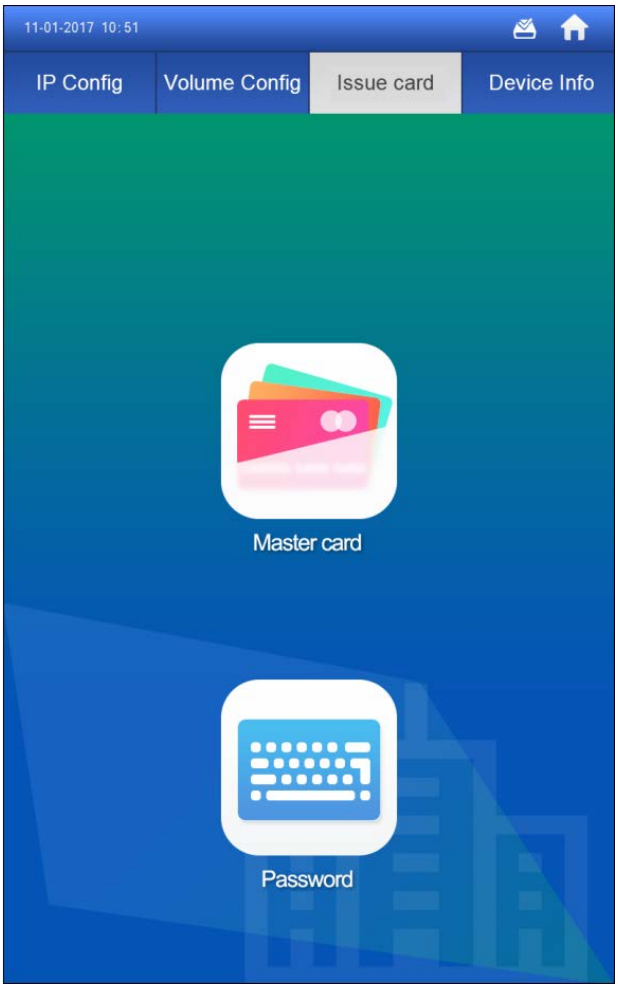

Figure 6-3

Step 2. Select method to issue card.

- Master card.
  1. Select master card.
     Note:
     Set authorized card to be master card, referring to Ch 5.2.3.3.
  2. At device card area, swipe master card.
     Note:
     Room no. entered shall be identical with room no. set in VTO WEB System Config>Device Manager>Indoor Station Manager.
  3. Enter room no., press OK.
  4. Swipe card at card area. Please swipe card to be authorized.
     After authorization is successful, it will prompt, and you can go to System Config>Device Manager>Indoor Station Manager, click to view.

- Password
  1. Select Password.
  2. Enter card issuing password, click OK.
     Note:

Room no. entered shall be identical with room no. set in VTO WEB System Config>Device Manager>Indoor Station Manager.

3. Enter room no., press OK.
5. Swipe card at card area. Please swipe card to be authorized.
   After authorization is successful, it will prompt, and you can go to System Config>Device Manager>Indoor Station Manager, click to view.

6.1.4 Info

In Project Setting>Device Info interface, you can view WEB port and MCU version, see Figure 6-4.

Figure 6-4

6.2 Unlock

6.2.1 Unlock via Fingerprint

At fingerprint area of VTO, enter recorded fingerprint to unlock.
See Ch 5.2.10.1.

6.2.2 Unlock via Password

On VTO enter “#+unlock password+, to unlock.
See Ch 5.2.1.2.

6.2.3 Unlock via Card

Note:
Visible only when VTO is set as SIP server.
At card area on VTO, swipe authorized card to unlock.
See Ch 6.1.3.

6.2.4 Unlock via QR Code

QR code issued by the platform, and can be scanned by camera on VTO to unlock, see Figure 6-5.

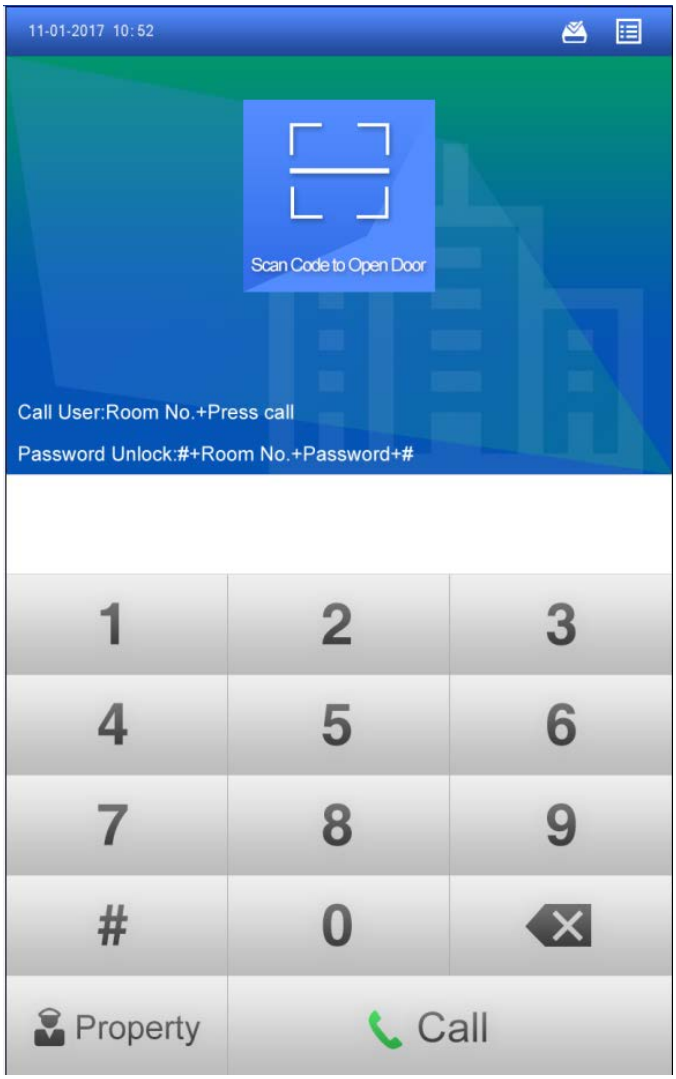

Figure 6-5

6.2.5 Unlock via VTH

When VTH is being called, monitored or on a call, it all can remotely unlock VTO. After it hangs up or countdown ends, it can return to standby interface.

6.3 Call Function

6.3.1 Call MGT Center

Press Property on VTO screen to call MGT center, see Figure 6-6.

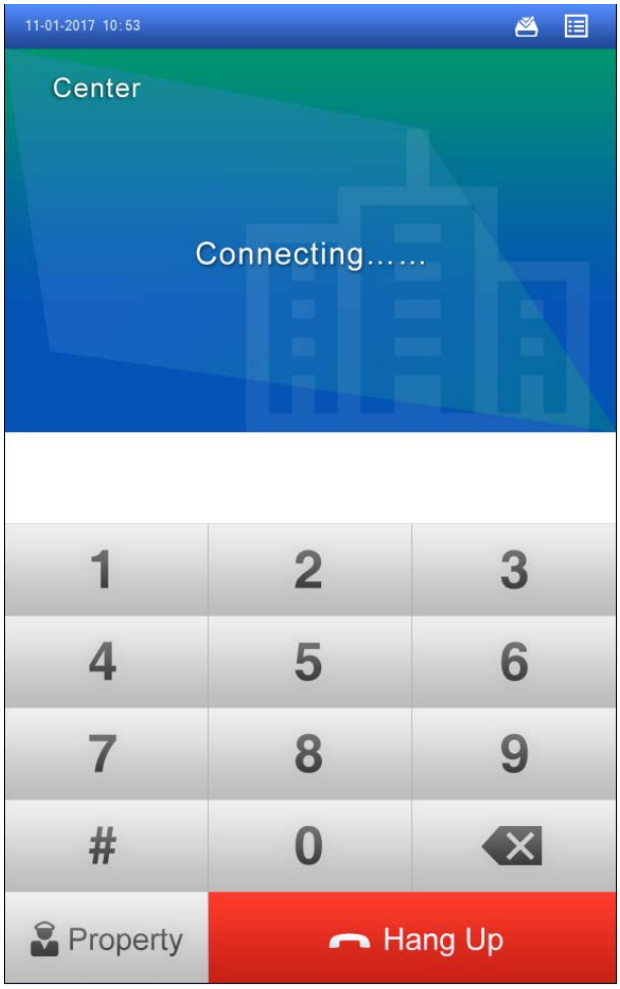

Figure 6-6

Note:
MGT center no. can be modified on VTO WEB, see Ch 5.2.1.1. Default is 888888.

6.3.2 Call VTH

On VTO enter “room no.+call Call ” to call corresponding VTH, see Figure 6-7.

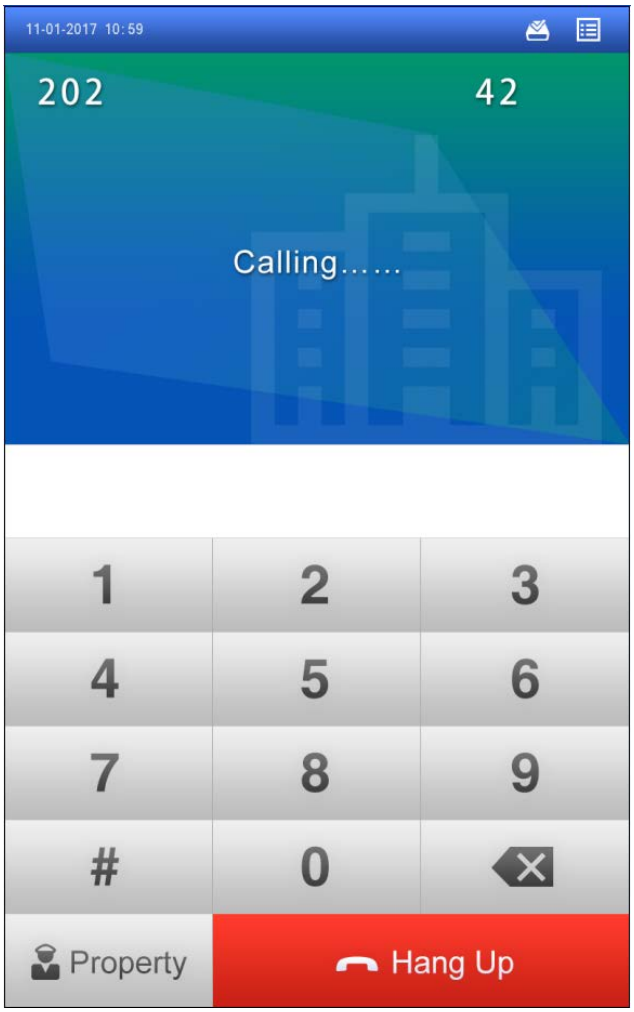

Figure 6-7

6.4 Default

See Ch 5.2.1.5.

Appendix 1 Technical Specifications

Model	DH-VTO9221D	DH-VTO9231D
System		
Main Process	Embedded micro controller	Embedded micro controller HI3521
OS	Embedded Linux os	Embedded Linux os
Video		
Video Compression Standard	H.264	H.264
Input	2.0 MP HD camera	2.0 MP HD camera
Night Vision	Support	Support
BLC	Support	Support
Auto Fill Light	Support	Support
Audio		
Input	Omnidirectional Mic	Omnidirectional Mic
Output	Built-in speaker	Built-in speaker
Talk	Support bidirectional talk	Support bidirectional talk
Display		
Screen Dimension	10 inch TFT screen	10 inch TFT screen
Resolution	1280×800	1280×800
Operation Mode		
Input	Capacitive touch screen	Capacitive touch screen
Card	Built-in IC card sensor	Built-in IC card sensor
Fingerprint	Not support	3000 fingerprints
Proximity		
Body Proximity	Support	Support
Alarm		
Vandal-proof	Support	Support
Access Control		
NO Output	Support	Support
NC Output	Support	Support
Unlock Button	Support	Support
Door Status Check	Support	Support
Network		
Support	10M/100Mbps self-adaptive	10M/100Mbps self-adaptive
Support	TCP/IP	TCP/IP
General		
Power	DC 10V－15V	DC 10V－15V
Consumption	Standby≤8W;	tandby≤8W; working≤18W

Model	DH-VTO9221D	DH-VTO9231D
	working≤18W	
Working Environment	-40℃～+60℃	-40℃～+60℃
	10%RH～95%RH	10%RH～95%RH
Protection	IP54	IP54
Dimensions	475mm×174mm×58mm	475mm×174mm×58mm

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.**
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