

**Digital VTO (VTO15 Series)**  
**User's Manual**

**V1.1.0**

# 1 Table of Contents

1	Table of Contents .....	2
1	Product Overview .....	1
1.1	VTO1520C .....	1
2	Function.....	3
2.1	Basic Function .....	3
2.2	Call .....	4
2.2.1	Call User .....	4
2.2.2	Call Center.....	5
2.2.3	Group Call.....	6
2.3	Contacts.....	6
2.4	Unlock.....	7
2.5	Issue Card.....	7
2.6	Default .....	7
2.7	Import/Export .....	7
3	WEB Setup.....	1
3.1	Login.....	1
3.2	System Settings .....	2
3.2.1	Local Config.....	2
3.2.2	Connection Config .....	4
3.2.3	VTH Management.....	4
3.2.4	Network Cetup .....	4
3.2.5	FTP Setup.....	5
3.2.6	Video Setup .....	5
3.2.7	Change Password.....	6
3.2.8	User Management .....	6
3.2.9	IPC.....	6
3.3	Info Search.....	6

3.3.1	VTO Call Record.....	6
3.3.2	Alarm Record.....	7
3.3.3	Card Record .....	7
3.4	Status Statistics .....	7
3.4.1	VTH Status .....	7
3.5	Exit.....	8
	Appendix 1 Technical Specifications .....	1
	Appendix 2 Local Config .....	2
	Appendix 3 Toxic or Hazardous Materials or Elements .....	1

## 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 Product Overview

## 1.1 VTO1520C

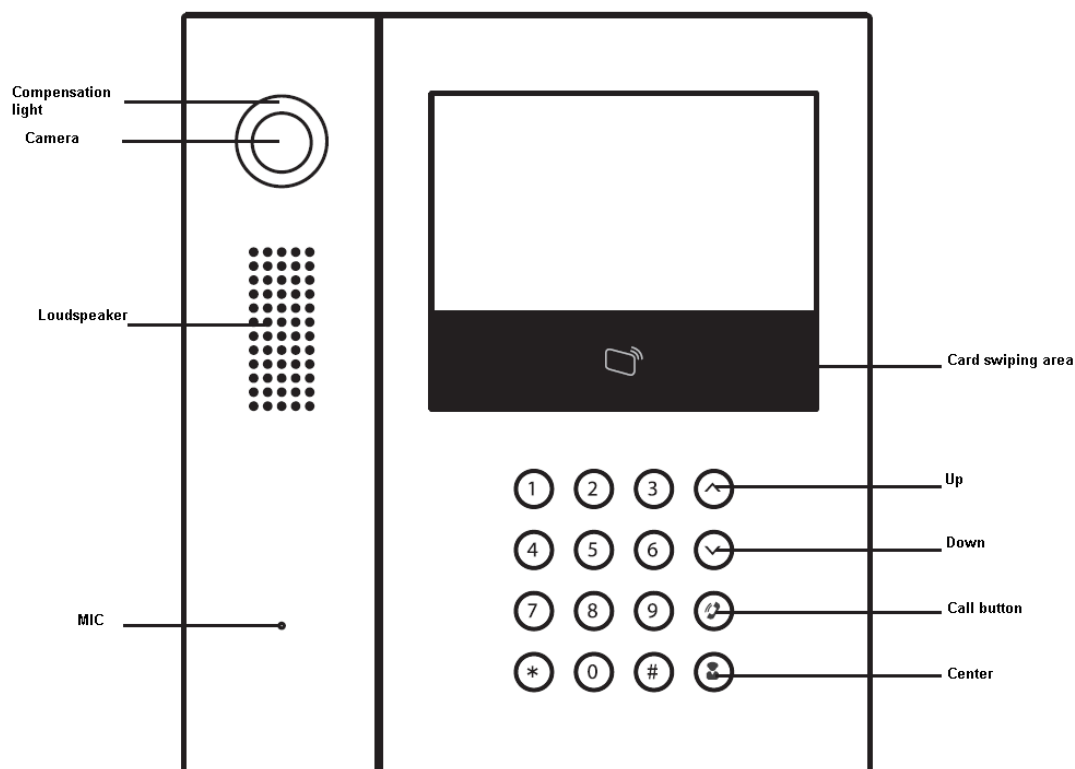


Figure 1- 1 VTO1520C Front Panel

Component Name	Note
Card swiping area	Swipe card to unlock.
Up	By pressing Up button, user can enter project setting interface, please refer to Appendix 2.
Down	Under VTO standby status, press Down button to enter contacts.
Call button	Input room no., press Call button to call.
Center	Press Center button to management center.
Buttons	Number key 0~9: input 0~9. *: press * to go back. #: press # to confirm.

Compensation light	Under insufficient light, and if VTO is monitored, calling or in call status, VTO automatically turns on compensation light.
Camera	Monitor video in door area.
Speaker	Sound output.
MIC	Sound input.

Chart 1- 1

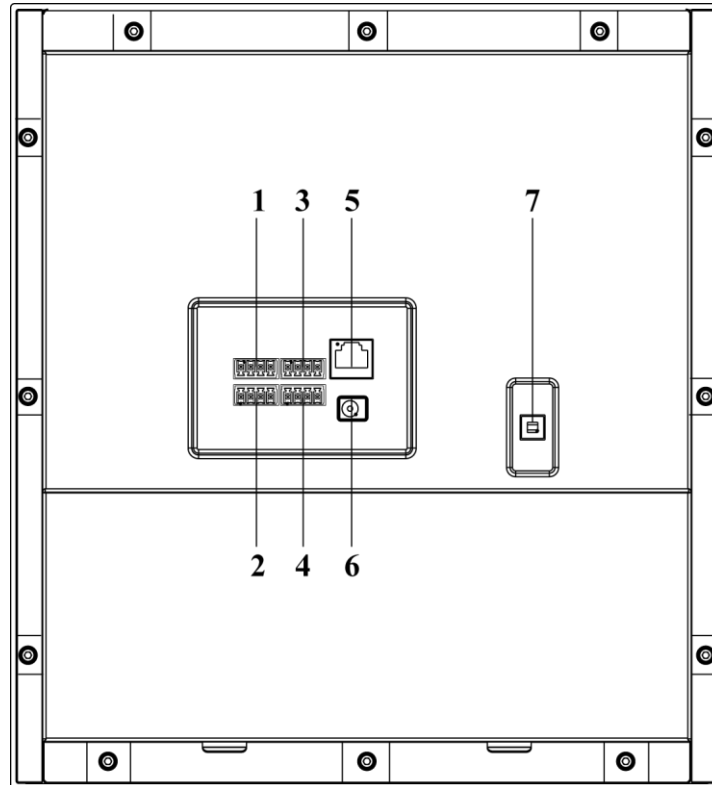


Figure 1- 2 VTO1520C Rear Panel

No.	Port Name	Note
1	RS485 port	Connect to RS485 device.
2	Door sensor port	Connect to unlock button(DOOR_IN)and door sensorsignal(DOOR_OUT).
3	Alarm input/output port	1-ch alarm input, 1-ch alarm output
4	Lock port	Control NO/NC lock (enable/disable)
5	Network port	Plug in network cable(RJ45 crystal head).
6	Power port	Connect to 12V DC.
7	Vandal proof	When the VTO is forced to leave wall, it will alarm and send alarm info to management center.

Note:

About rear panel and wiring information, please refer to VTO15 Series Installation Guide.

## 2 Function

Before using this product, please refer to VTO15 Series Installation Guide for setup environment, installation and configuration.

### 2.1 Basic Function

#### Monitor

Management center and VTH can both monitor VTO to remotely view video of VTO.

#### Upload Message

In VTO local config interface, check upload message to enable message uploading function.

If guest calls VTH but no one picks up the call, guest can press number key 1 to select to leave a message. Message will be automatically saved to ICMS management center and user can view it on VTH.

#### Snapshot

In VTO local config interface, check auto snapshot and this function sends snapshot to ICMS management center or SD card.

- Guest calls user, and VTO will automatically snapshot three pictures.
- User swipes call to unlock, and VTO automatically snapshot two pictures.

#### Book Lift

When VTO local config interface has checked enable list control, user can book lift.

#### Vandal Proof

There is a channel of vandal proof switch in VTO (VTO rear panel has vandal proof button). When VTO is forced to leave wall, it will alarm and send alarm to center.

#### Forced

When user is threatened, input room no.+forced password, VTO unlocks and sends alarm to ICMS management center.

#### Compensation Light

VTO under dark environment or at night, it enables auto light sensing technology and compensates light.

#### SD Card

The product carries SD card to store multi-media files and snapshots.

## 2.2 Call

VTO standby interface is shown in Figure 2- 1.



Figure 2- 1

### 2.2.1 Call User

Input user's room no. on VTO, press Call button. VTH in user's room will ring.

#### Operate VTO

Step 1. Under VTO standby interface, as in Figure 2- 1, input four digits of room no., see Figure 2- 2.If user input wrong room no, user can press Up button to delete.

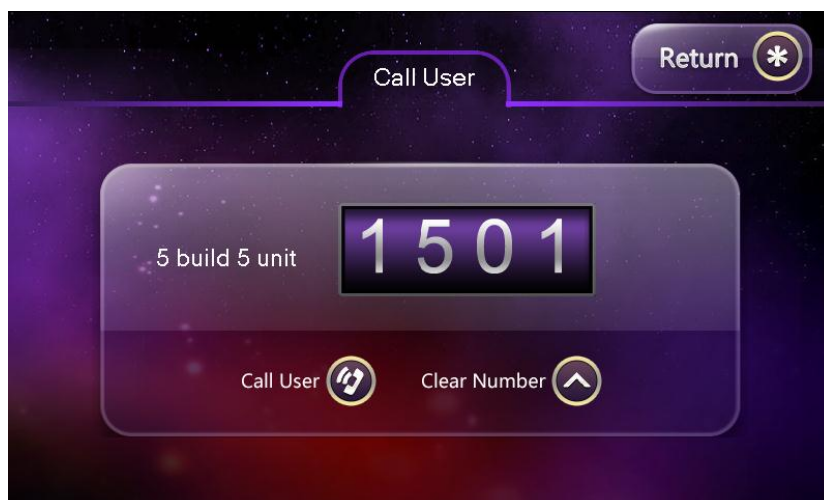


Figure 2- 2



Step 2. Press Call button to call corresponding room.

Step 3. If no one picks up the call, and when countdown ends, user can press number key 1 to select to leave a message. Press Call button to call or press center button to call management center, see Figure 2- 3.

Note:

Set countdown time on the VTH called by this VTO.

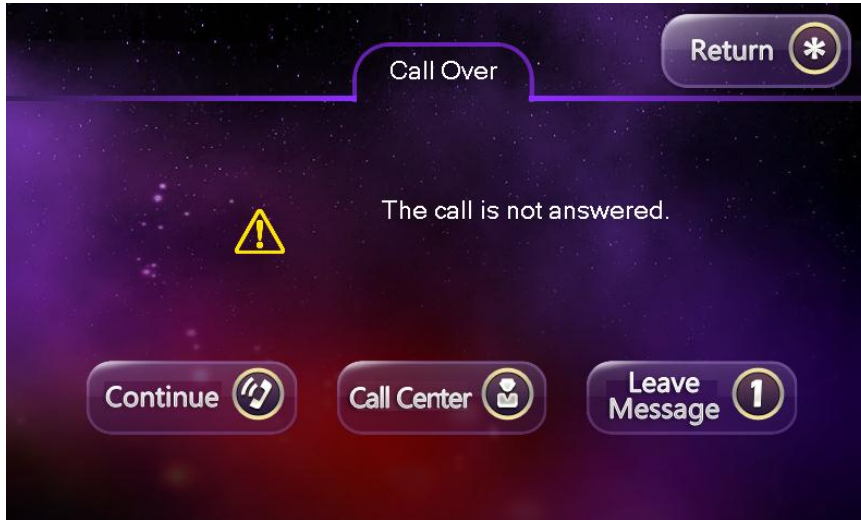


Figure 2- 3

Step 4. After countdown ends, VTO will automatically hand up and return to standby status.

### Operate VTH

VTH rings, user can operate:

- On VTH, view monitoring video of VTO.
- On VTH, press Unlock button to open door.
- On VTH, press Answer button to answer call. User may perform visual talk.

Note:

For VTH information, please refer to corresponding user's manual.

### 2.2.2 Call Center

Management center is the central management platform if intelligent community, known as ICMS management center.

Press Center button on VTO front panel to call ICMS management center.

Note:

For how to call management center, please refer to VTO15 Series Installation Guide.

### 2.2.3 Group Call

When guest input user's room no. on VTO, press Call button, multiple VTH rings at the same time. User can pick up call, hang up and unlock on any one of these VTHs.

Note:

For group call function, please refer to VTO15 Series Installation Guide.

## 2.3 Contacts

### View Contacts(PhoneBook)

Under VTO standby status, see Figure 2- 1. Press Down button to enter Contacts(Phonebook), see Figure 2- 4.

Contacts has 8 pages in total with 9 numbers per page. User can press Up and Down buttons to flip pages.



Figure 2- 4

### Edit Contacts

VTO's contacts shall match contacts in System Settings>VTH Management. User can edit, delete and add contacts on WEB, please refer to Ch 3.2.3.

## 2.4 Unlock

### Center Unlock

When center is called, monitoring, in call status, it can remotely unlock door of VTO.

### VTH Unlock

When VTH is called, monitoring, in call status, it can remotely unlock door of VTO.

### IC Card Unlock

In VTO card swiping area, use authorized IC card to unlock.

## 2.5 Issue Card

Place IC card on VTO card swiping area, user can authorize IC card to unlock door.

VTO supports ICMS card issuing and WEB card issuing. Please refer to VTO15 Series Installation Guide.

VTO supports card issuing via master card and password, please refer to Appendix 2.

## 2.6 Default

### Restore Card No.

If user want to restore default setting of card, user can restore card no. via this function.

### Restore VTH

If user want to restore VTH information, user can restore VTH via this function.

### Note:

**Every half hour, VTO automatically saves card no. and VTH info in its system. Therefore, if user intends to restore card no. or VTH information, please do so before next information update since after information update every half hour, user will not be able to restore original information.**

## 2.7 Import/Export

### Batch Configure VTO

Select a VTO and configure all parameters. Select System Settings>Local Config>Configure Setup. Export config file (Config.backup), and import this file into other VTOs as to batch configure VTOs.

**Backup Config File**

Select a VTO and configure all parameters. Export config file and save it. When system crashes or miss-operates, user can quickly import config file, eliminating extra work of re-configuration.

## 3 WEB Setup

This chapter mainly introduces digital VTO WEB interface's parameters and how to set them.

### 3.1 Login

First, please make sure PC and VTO are connected, and refer to the following steps to login WEB.

Step 1. In Internet Explorer, input IP address of VTO, and press Enter. System goes to VTO WEB login interface as in Figure 3- 1.



Figure 3- 1

Step 2. Input username and password.

Step 3. Click on Login.

Note:

VTO default IP address is 10.22.5.189 or 192.168.1.110. Default username and password are both admin. Please change user password after first time login.

## 3.2 System Settings

### 3.2.1 Local Config

#### 3.2.1.1 Local Config

In local config interface, user can view device type, device model, software version and etc.

See Figure 3- 2.

The screenshot shows the 'Local Config' interface with a sidebar on the left containing navigation options like 'System Config', 'LAN Config', 'Indoor Station Manager', 'Network Config', 'Video Set', 'Change Password', 'User Manage', 'IPC Information', 'Info Search', 'Status Statistics', and 'Logout'. The main area is divided into several sections: 'System Config' (Unit Layer Amount: 30, System Type: Tcp/IP, Room Amount in One Layer: 8, Device Type: Fence Station), 'Device Param' (Video Format: WVGA, Frame Rate: 25, Version Info: 2014-05-06 V1.000.0.0, Reboot Date: Tuesday, Key/AutoLightSet: 18:00:00 to 08:00:00), 'A&C Manager' (Password Unlock Type: Uniform Password, Door Sensor Check Time: 30, Project Password, Issue Card Password, Menace Password, Lift Control Protocol: Dahua Protocol), 'Upload Set' (Upload Message, Upload Talk Record, Auto Snapshot: Save in SD Card), and 'Issue Card' (Issue Card button). At the bottom are 'OK', 'Refresh', and 'Default Config' buttons.

Figure 3- 2

Parameter	Note
Unit floor, rooms on one floor	Fill in floor number and rooms on the floor. Check create room no. to batch add room no. User can view these room no. in VTH management interface.
System type	Digital system.
Device type	Select fence station or unit VTO.
Video format	Set camera collection video format, including: WVGA, resolution is 800×480.
Reboot date	Device will reboot on this date.
Frame speed	Set NTSC as 30 frames; set PAL as 25 frames.
Button indicator setup	During this period, button indicator remains on.
Version	Display device software version no.
Password unlock, old password, new password, confirm.	Change unified password(default : 123456)and personal password(default: 123456). Please refer to Ch 2.4.
Unlock response	After unlocked, interval for device to response for next unlock (unit

interval	is second).
Unlock interval	Door remains unlocked interval (unit is second).
Door sensor time	Check door sensor check before lock, set door sensor detection function. If door remains unlocked after this time, it will alarm (unit is second).
Project password	Password needed to enter Appendix 2 interface. Default: 888888.
Issuing password	Default: 123456. Please refer to Ch 2.5.
Forced password	Set forced password (default is 654321).
Protocol	Device protocol.
Auto Snapshot	Check enable to automatically upload snapshot to FTP server.
Unlock info upload	User can view card swiping record in info search>card record on WEB.
Upload message	Check enable to upload message to ICMS management center. User can view the message on VTH.
Call history upload	User can view call history in info search>call record on WEB.
Auto Snapshot	Select "save on SD card" or "upload to FTP".
Issue card	Issue card via WEB.
Default	Reset all parameters in Local Config interface.

Chart 3- 1

### 3.2.1.2 Config Setup

Parameter	Note
Backup	After checking card no. info, VTH info, click on backup to manually backup card no. and VTH info.
Restore backup	After checking card no., VTH info, click on restore backup to restore card no. and VTH info.
Export config	Export config file(Config.backup).
Import config	Import config file.
Restore all config	
Reset	Reset all device parameter to default. Note: Please backup before pressing reset button.

Chart 3- 2

### 3.2.1.3 System Time

User can set system date and time format, and input system date and time. User also can sync time with PC. Or, user can check NTP setup, and set NTP info to sync with NTP server time.

### 3.2.2 Connection Config

About how to configure group call, how to register VTO to center, and how to call management center, please refer to VTO15 Series Installation Guide.

Note:

Sub VTO-IP address is used mainly for analog system to add sub VTO, which is not available for this version.

### 3.2.3 VTH Management

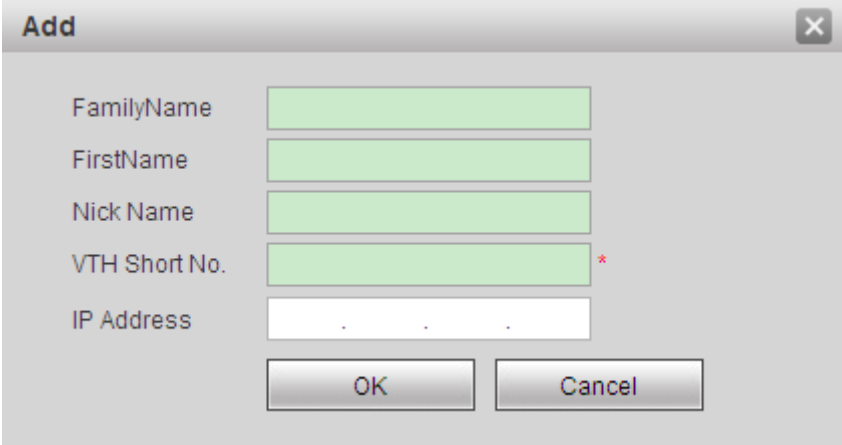
In VTH management, user can add, view and delete digital VTH.

In VTH management interface, click on add, system pops up Figure 3- 3. Fill in VTH information, including user's name, nickname, VTH no. and IP address.

VTH no. is the room no. where it locates.

Note:

VTH no. has four digits with first two digits ranging from 01 to 99 and last two digits ranging from 01 to 16. VTH short no. must match setup of room no. in local config of VTH.



The image shows a software dialog box titled "Add". It contains the following fields and controls:

- FamilyName: A text input field with a light green background.
- FirstName: A text input field with a light green background.
- Nick Name: A text input field with a light green background.
- VTH Short No.: A text input field with a light green background, followed by a red asterisk (\*).
- IP Address: A text input field with a white background and a dotted cursor.
- OK: A button at the bottom left.
- Cancel: A button at the bottom right.

Figure 3- 3

### 3.2.4 Network Cetup

Set VTO IP address, subnet mask and default gateway. Click on OK to save setup. WEB



interface will reboot and go to the new IP page.

### 3.2.5 FTP Setup

Set FTP server IP address, subnet mask, default gateway and etc.

FTP server is used to store snapshot taken at card swiping at VTO. User can login FTP to get these pictures.

### 3.2.6 Video Setup

When there is “w\_no\_plugins” shown in video window, please click on it and install control unit following instruction. See Figure 3- 4.

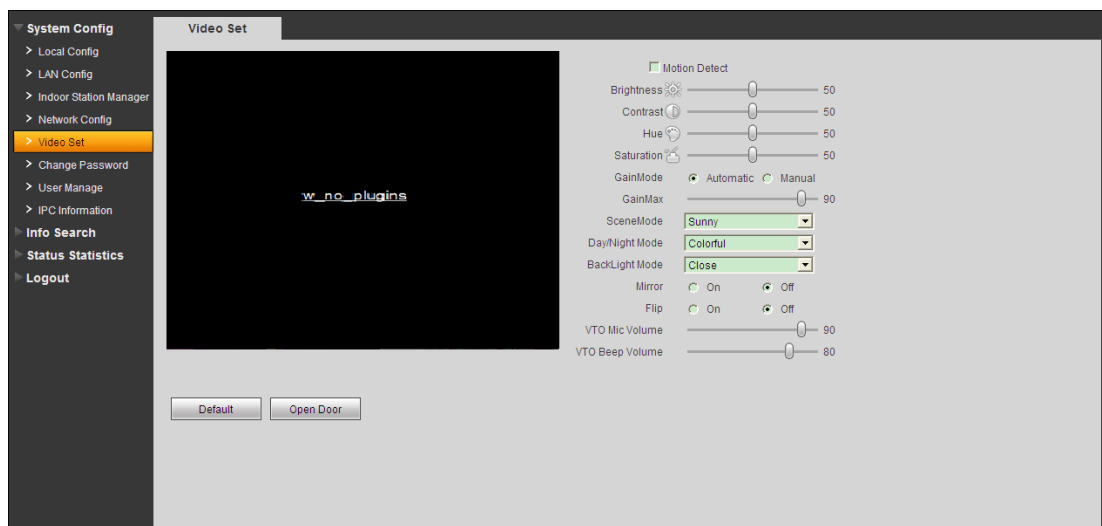


Figure 3- 4

Parameter	Note
Motion Detection	Detect body coming close to the VTO, it will automatically turn on light behind buttons.
Brightness, contrast, HUE, saturation	Adjust video effect.
Gain mode	Auto mode: system automatically adjusts according to gain mode setup. Manual mode: manually adjust.
Scene mode	Include: off, auto, day, night.
Day/Night mode	Include: color, auto and b/w.
Compensation mode	Include: off, light compensation, WDR, HLC.
Mirror	Flip video horizontally.
Flip	Flip video vertically.
VTO MIC volume, speaker volume	Adjust VTO MIC volume, speaker volume.
Default	Reset all parameters in video setup interface to

	default.
Unlock	Click on unlock to remotely unlock door.

Chart 3- 3

### 3.2.7 Change Password

User can change WEB login password in Change Password interface. (Default username and password are both **admin**.)

### 3.2.8 User Management

User can add user. Currently system supports two types of user: admin and user.

Admin: high system right, can view, edit and delete right to configure.

User: only can view system config right.

### 3.2.9 IPC

After user have configured IPC on VTH, user can view video of IPC on VTH.

## 3.3 Info Search

### 3.3.1 VTO Call Record

User can search call record of VTO in call record interface with up to 1124 records can be stored.

- Call type

Outgoing: call someone else.

- End status

Missed: no one answer.

Received: someone answer.

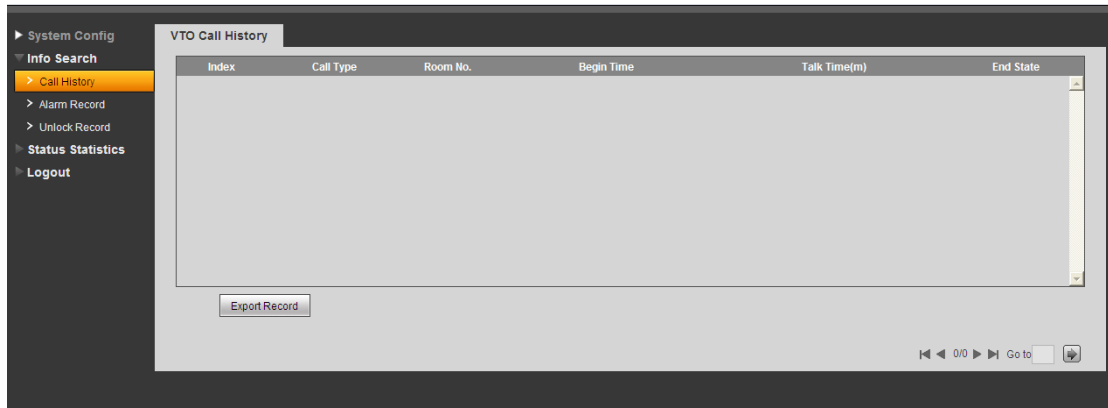


Figure 3- 5

### 3.3.2 Alarm Record

In alarm record, it records all alarm information received from VTH, including: room no., alarm type, channel no., start time and etc.

### 3.3.3 Card Record

In card swiping record interface, it records all card swiping records, including: room no., IC card no., swiping result and time.

## 3.4 Status Statistics

### 3.4.1 VTH Status

User can view VTH connection status in VTH status interface.

- Status

Offline: VTO and VTH are disconnected, and cannot call, monitor and etc.

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

- Monitoring status

Unmon: VTH is not monitoring.

Onmon: VTH is monitoring.

VTH	Status	MON	IP:Port	Reg Time	Off Time
9901	Offline	Unmon	0.0.0.0	0	0

Figure 3- 6

### 3.5 Exit

In exit system interface, user can reboot device or exit system.  
Click on exit, user goes to login interface.

## Appendix 1 Technical Specifications

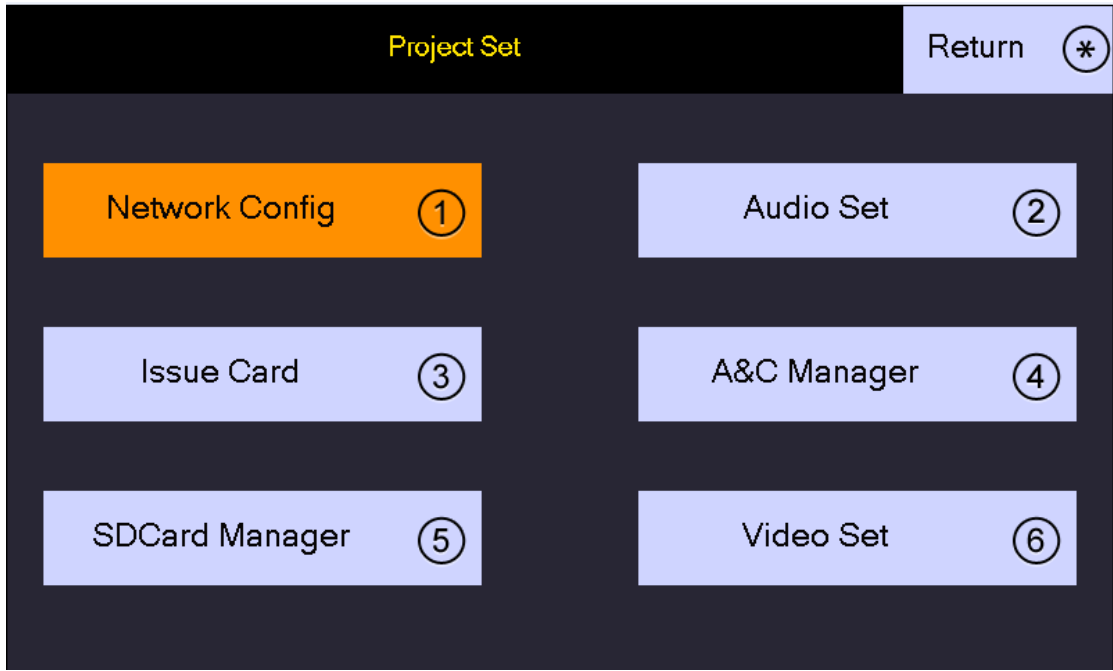
Model		VTO1520C
System	Main processor	Embedded micro controller
	OS	Embedded Linux OS
Video	Video compression standard	H.264
	Input/Sensor	1.30 megapixel CMOS HD camera
	Night vision	Support
	Backlight	Support
	Auto light compensation	Support
Audio	Input	Omnidirectional MIC
	Output	Built-in MIC
	Talk	Support bidirectional talk
Display	Screen dimension	7 inch TFT screen
	Resolution	800×480
Operation mode	Input	Mechanical button
	Swipe card	Built-in IC card sensor
Alarm	Vandal proof	Support
Access control	NO output	Support
	NC output	Support
	Unlock button	Support
	Door status detection	Support
Network	Ethernet	10M/100Mbps self-adaptive
	Network protocol	TCP/IP
General	Power	DC 10V~15V
	Consumption	Standby ≤3W ; working ≤20W
	Working temperature	-40℃~+60℃
	Humidity	10%~90%RH
	Dimension(L×W×H)	303.4mm×275.2mm×38.6mm
	Weight	3.5kg
	Waterproof level	IP53

## Appendix 2 Local Config

All operations of local config are performed via front panel of VTO. Under VTO standby status, long press Up button about 10s, and input project password (default is 888888) to enter project settings interface.

Select via 1~7 number keys. Press # to confirm and press \* to cancel or go back.

Parameter	Note
Network setup	User can modify VTO IP address, subnet mask (msk), gateway (gate), and view MAC address. Press # button to save setup.
Audio setup	In audio setup interface, press number key 4 to lower volume and press number key 6 to increase volume. Press # button to save and exit.
Issue card	<ul style="list-style-type: none"> <li>● Issue via master card: in master card interface, swipe master card, fill in IC card room no., and swipe IC card, you will be informed that you successfully issued IC card. Press # button to exit.</li> <li>● Issue via password: in password issuing interface, input issuing password (default is 002236.), press # button to enter. Fill in IC card room no. and swipe IC card. You will be informed that you successfully issued IC card. Press # button to exit.</li> </ul>
Access control management	Please refer to Chart 3- 1.
SD card management	Press Up and down buttons to flip page. Press number keys 1~9 to open corresponding folder.
Video management	<p>Brightness: adjust screen brightness.</p> <p>Screen saver: set time such as 30s so when device has been idle for 30s, it enters screen saver.</p> <p>Screen saver duration: Duration screen saves lasts.</p>



Appendix 1- 2

## Appendix 3 Toxic or Hazardous Materials or Elements

Component Name	Toxic or Hazardous Materials or Elements					
	Pb	Hg	Cd	Cr VI	PBB	PBDE
Circuit Board Component	○	○	○	○	○	○
Device Case	○	○	○	○	○	○
Wire and Cable	○	○	○	○	○	○
Packing Components	○	○	○	○	○	○
Accessories	○	○	○	○	○	○

O: Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T11363-2006 standard.

X: Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts is above the relevant threshold of the SJ/T11363-2006 standard. During the environmental-friendly use period (EFUP) period, the toxic or hazardous substance or elements contained in products will not leak or mutate so that the use of these (substances or elements) will not result in any severe environmental pollution, any bodily injury or damage to any assets. The consumer is not authorized to process such kind of substances or elements, please return to the corresponding local authorities to process according to user local government statutes.

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