Digital Villa VTO (VTO6 Series)

Installation Guide

V2.0.2

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.

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1 System Networking

This chapter mainly introduces usage of digital VTO, please read the following content and install the device according to your actual condition.

1.1 One-to-One Scene

Visitor press Call button to call residence (as VTH) or Center.
The following makes VTO6110BW as example. See Figure 1- 1.

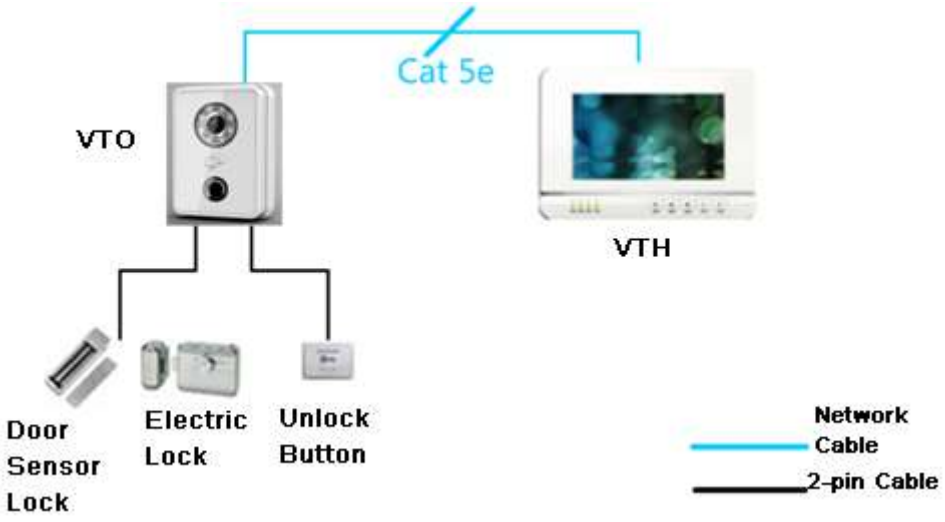


Figure 1- 1

1.2 One-Multiple Scenes

In general, user installs VTO at entrance of building, and installs VTH in resident's room. Visitor can call any resident via the VTO, and the resident being called can unlock to allow the visitor entering the building. Then, the visitor call the resident to unlock room door again via second-confirm VTO.

1.3 Group Call Scene

About group call, please refer to Ch 4.3. See Figure 1- 2.

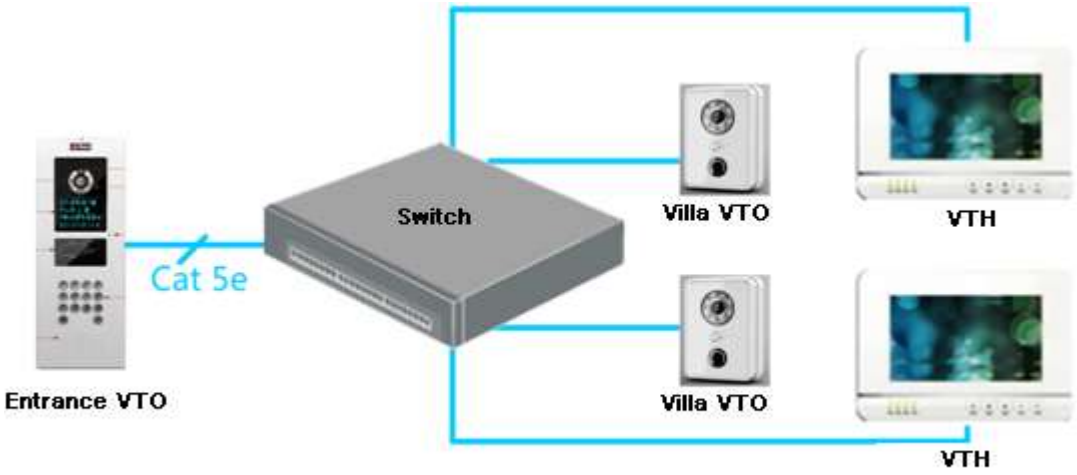


Figure 1- 2

2 Install VTO

2.1 Model List

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

Product Model	Enclosure Material	Color	IC Card Unlock	Button	Lock Control Module
VTO6000A	Metal	Metal Gray	Not support	Mechanical	External
VTO6110B	Fireproof ABS	Black	Support	Touch	External
VTO6110BW	Fireproof ABS	White	Support	Touch	External
VTO6210B	Fireproof ABS	Black	Support	Touch	Built-in
VTO6100C	Fireproof ABS	White	Support	Mechanical	Built-in
VTO6000C	Fireproof ABS	White	Not support	Mechanical	Built-in
VTO6000CM	Metal	Metal Gray	Not support	Mechanical	Built-in

2.2 Screw

Before you install the VTO, please check screws in accessories bag and install according to this manual.

Component Name	VTO6000A	Purpose
ST3×10 Cross recessed countersunk head tapping screws—galvanizing black	1	Fix unit and embedded box

Component Name	Figure	VTO6000C, VTO6000CM VTO6100C	VTO6110B, VTO6110BW
M3×8 Cross recessed countersunk head tail machine screws --- galvanizing black		1	1

M4×30 Cross recessed countersunk head tail machine screws		2	2
ST3×18 Cross recessed countersunk head tail tapping screws --- galvanizing white		2	4
White expansion tube ¢6×30mm		2	4

2.3 VTO6000A

2.3.1 Dimension

Before you install the device, please make sure you know the dimension of device and select appropriate installation method. See Figure 2- 1.

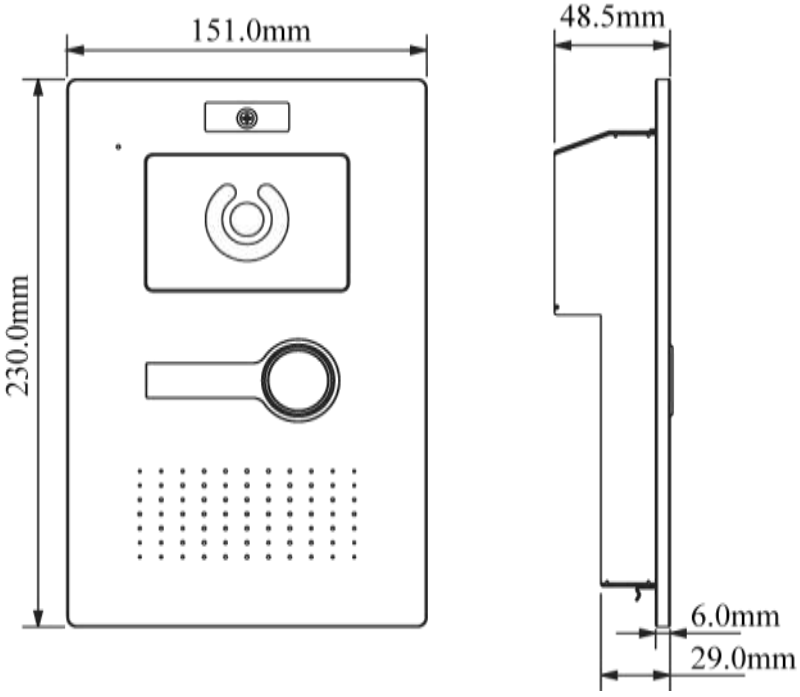


Figure 2- 1

2.3.2 Installation Step

Step 1. Install metal bracket into the groove on wall.

Step 2. Fasten ③ onto the metal bracket along device chassis and bracket chassis (④ in Figure 2- 2).

Step 3. Lock screw a (ST3×10 Cross recessed countersunk head tapping screws), and fix device unit onto the metal bracket.

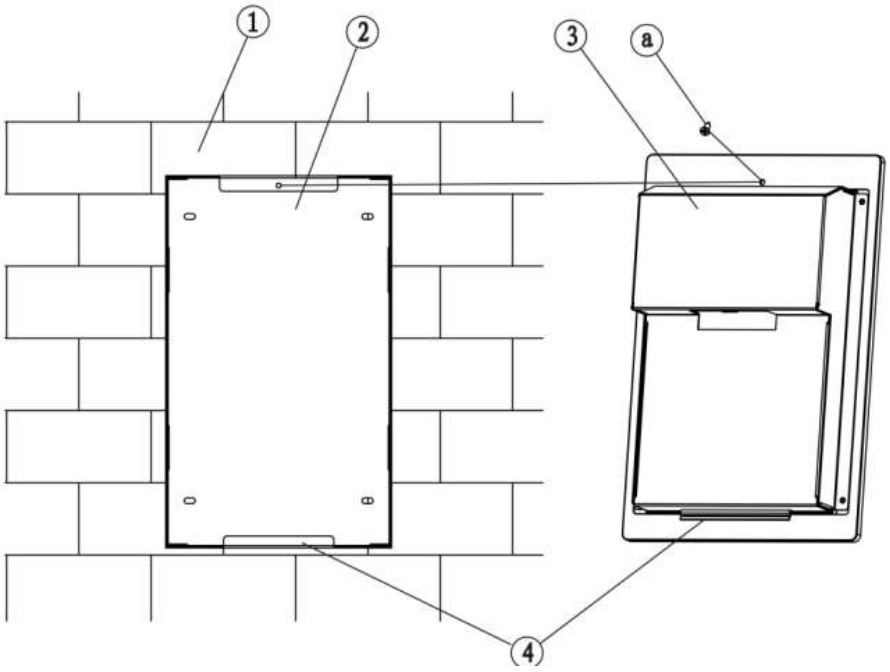


Figure 2- 2

2.3.3 Wiring

See Figure 2- 3.

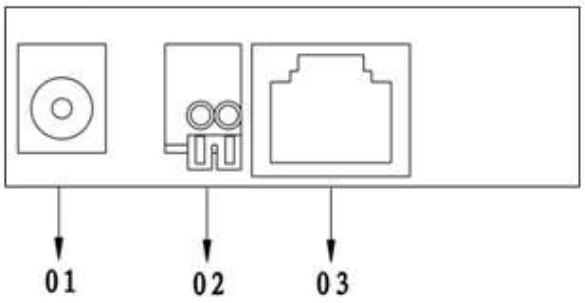


Figure 2- 3

No.	Port Name	Note
01	Power	Input DC 12V
02	Lock Port	Connect access control extension module
03	Network Port 1	Plug in RJ45 cable

2.4 VTO6110B/VTO6210B/VTO6110BW

2.4.1 Dimension

Before you install the device, please make sure you know the dimension of device and

select appropriate installation method. See Figure 2- 4.

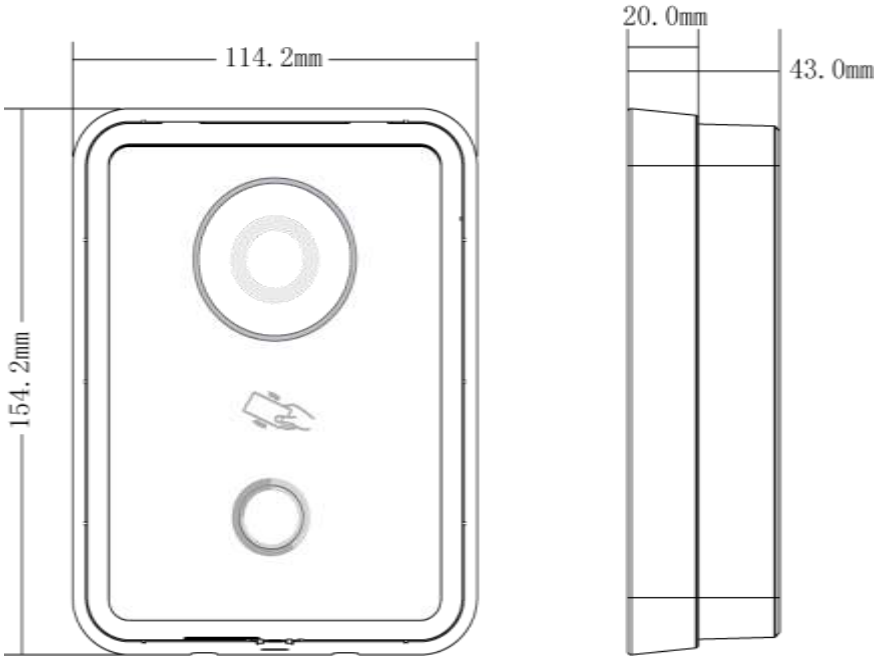


Figure 2- 4 VTO6110B/VTO6210B/VTO6110BW

2.4.2 Installation Step

Here makes VTO6210B as an example. Installation of VTO6110B and VTO6110BW may refer to VTO6210B.

Step 1. Fix installation bracket on wall.

a) Use M4 screw in accessories, to fix bracket onto 86 box (b in Figure 2- 5).

b) After 86 box is locked, fix ST3.0 screw in accessories onto wall. (c in Figure 2- 5)

Step 2. Fix device unit ① onto installation bracket, fasten top edge and lightly push bottom edge.

Step 3. Use M3 screw to fix device and bracket.

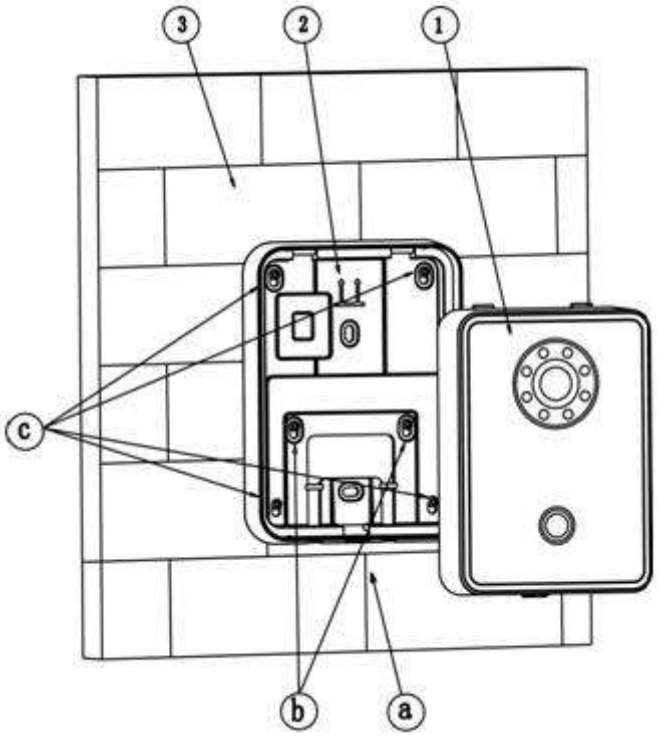


Figure 2- 5

2.4.3 Wiring

This chapter introduces wiring between VTO embedded box and por.t

See Figure 2- 6.

- VTO6110B, VTO6110BW

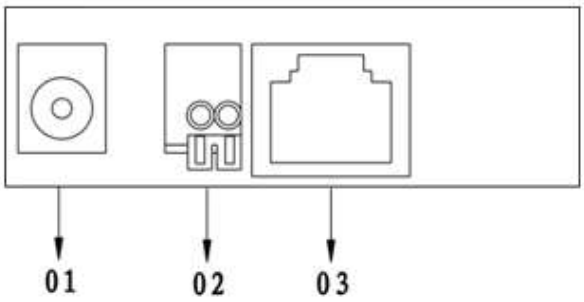


Figure 2- 6

No.	Port Name	Note
01	Power	Input DC 12V
02	Lock Port	Connect access control extension module
03	Network Port 1	Plug in RJ45 cable

- VTO6210B

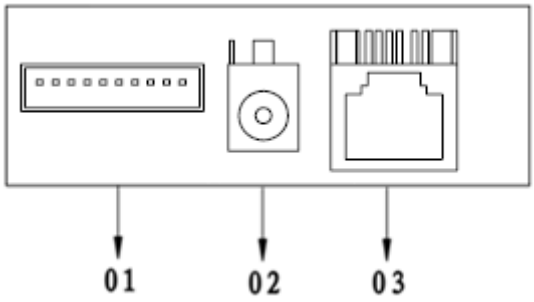


Figure 2- 7

No.	Port Name	Note
01	10-Pin Port	Connect to door lock, door sensor and unlock button. It provides preserved 485 port for other devices.
02	Power	Input DC 12V
03	Network Port 1	Plug in RJ45 cable

2.5 VTO6000C/VTO6000CM/VTO6100C

2.5.1 Dimension

Before you install the device, please make sure you know the dimension of device and select appropriate installation method. See Figure 2- 8.

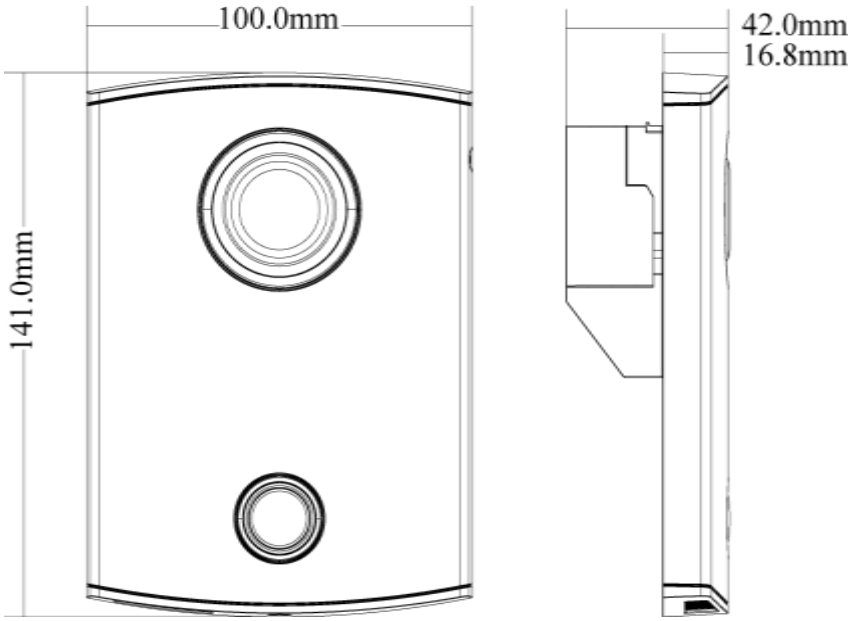


Figure 2- 8

2.5.2 Installation Step

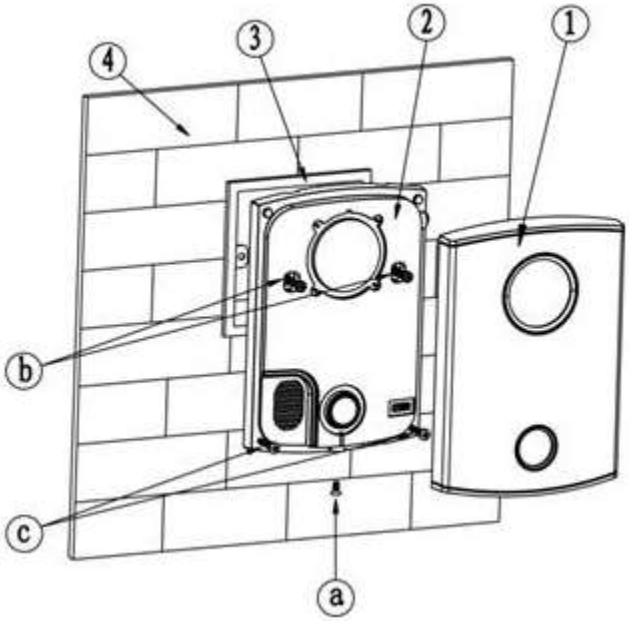


Figure 2- 9

Step 1. Remove M3 screw at the bottom of VTO, take down decoration cvoer ①.

Step 2. Fix the VTO onto wall, use M4 screw in accessories to fix the bracket onto 86 box (③ in Figure 2- 9).

Step 3. b is designed to fasten the product. After 86 box is locked, Fix ST3.0 screw on to wall (c in Figure 2- 9).

Step 4. Place decoration cover ① on to device unit ②, fix with MS screw.

Note:

Do not install VTO6100C on iron gate, otherwise the signal may be masked.

2.5.3 Wiring

This chapter taks VTO6100C as example since VTO6000C, VTO6000CM and VTO6100C's rear ports are the same. See Figure 2- 10.

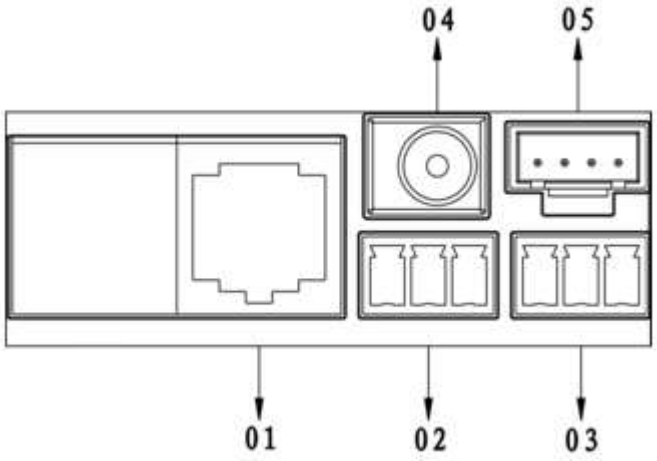


Figure 2- 10

No.	Port Name	Note

1	Network Port	Plug in RJ45
2	3-pin Green Port 1	Insert lock
3	3-pin Green Port 2	Insert door sensor and unlock button
4	Power Port	DC 12V
5	Debug Port	For installer use

2.6 Electric Control Lock and Electromagnetic Lock

This chapter introduces VTO connection to electronic control loch and electromagnetic lock.

2.6.1 Electric Control Lock

- Here makes VTO6100C as an example. For VTO6000C, VTO6000CM and VTO6100C you can refer to this chapter.

  When VTO connects to electric control lock, it means that the positive end of electronic control lock connects to NO of VTO (03.3-pin green 1) while its negative end connects to COM of VTO (03.3-pin green 3).

  When VTO connects to unlock button, one end of unlock button connects to ALM2 of VTO (04.3-pin green 2) while the end connects to CND of VTO (04.3-pin green 3). See Figure 2- 11.

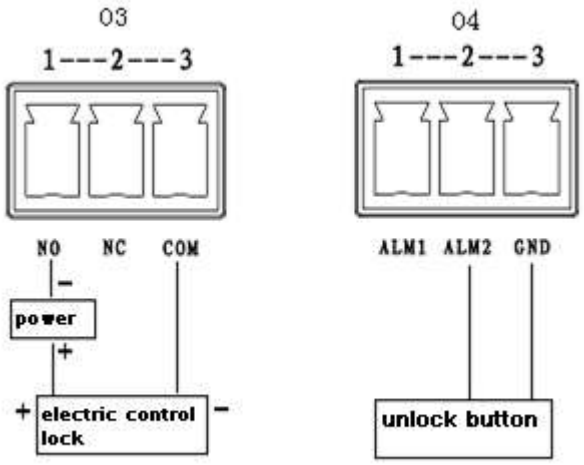


Figure 2- 11

- Here makes VTO6210B as an example.

  When VTO connects to electric control lock, it means that the positive end of electronic control lock connects to NO of VTO (RS485 port 2) while its negative end connects to COM of VTO (RS485 port 1).

  When VTO connects to unlock button, one end of unlock button connects to ALM1 of

VTO (RS485 port 5) while the end connects to GND of VTO (RS485 port 4). See Figure 2- 12.

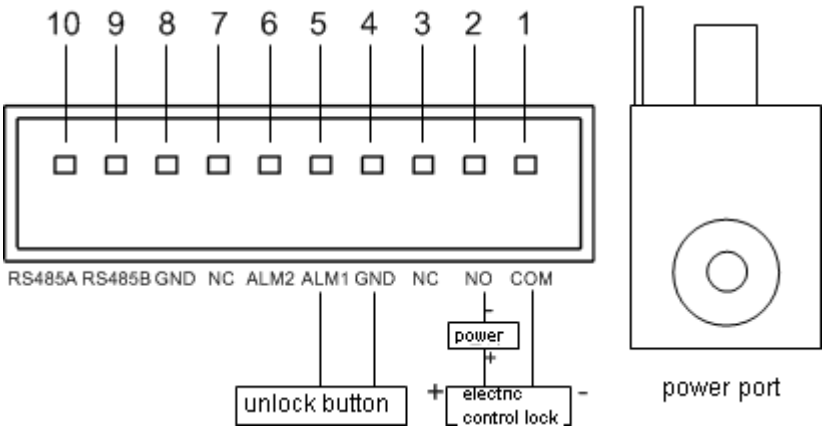


Figure 2- 12

2.6.2 Electromagnetic Lock

- Here makes VTO6100C as an example. For VTO6000C, VTO6000CM and VTO6100C you can refer to this chapter.

  When VTO connects to electromagnetic lock, it means that the positive end of electromagnetic lock connects to NC of VTO (03.3-pin green 2) while its negative end connects to COM of VTO (03.3-pin green 3).

  When VTO connects to door sensor in electromagnetic lock, one end of door sensor connects to ALM1 of VTO (04.3-pin green 1) while the end connects to GND of VTO (04.3-pin green 3). See Figure 2- 13.

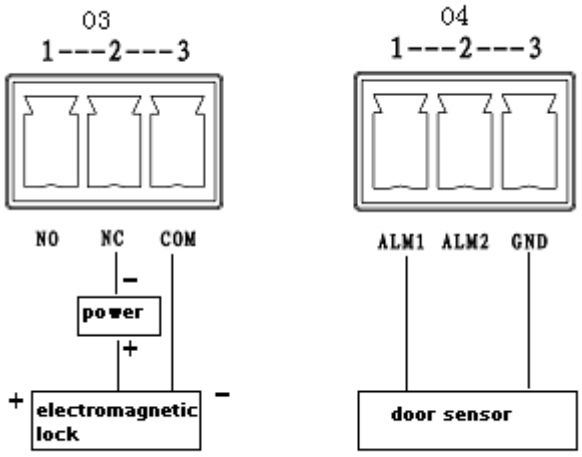


Figure 2- 13

- Here makes VTO6210B as an example.

  When VTO connects to electromagnetic lock, it means that the positive end of

electromagnetic lock connects to NC of VTO (RS485 port 3) while its negative end connects to COM of VTO (RS485 port 1).

When VTO connects to door sensor in electromagnetic lock, one end of door sensor connects to ALM2 of VTO (RS485 port 6) while the end connects to GND of VTO (RS485 port 4). See Figure 2- 14.

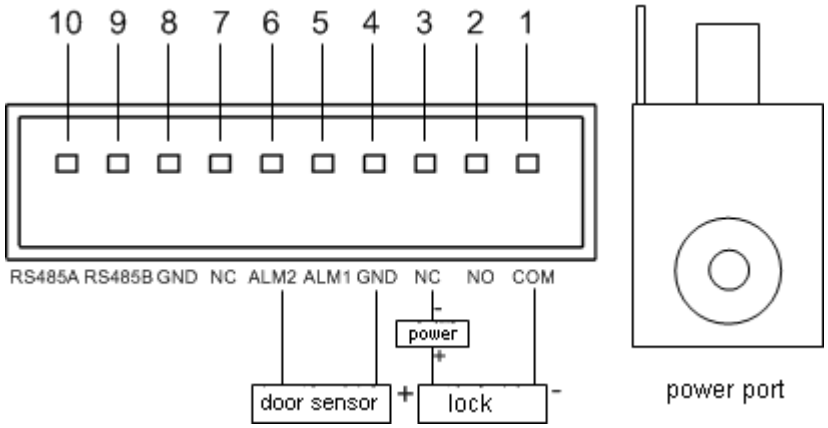


Figure 2- 14

3 Installation Debugging

Warning:

- **Before debugging, the staff shall be familiar with device's installation, wiring and usage.**
- **Beore debugging, check wiring for short or open circuit.**
- **When staff find each circuit is normal, plug the device to power.**
- **After debugging, clear the site.**

3.1 Requirement for Power

After installation is complete, first make sure devce power, current, wiring are right, then plug device to power.

3.2 On and Off

After plugging device to power, you can turn on the device.

- VTO6110B/VTO6110BW/VTO6210B
  After power is pluggin in, indicators in button area light up and about 60s later they turn off. Now systen enters normal working status.
- VTO6000C, VTO6000CM and VTO6100C
  After power is pluggin in, indicators in button area turn blue and about 60s later they turn off. Now systen enters normal working status and the indicators remains blue.

3.3 Debug Network

First check if network is connected. In Internet Explorer's address field, input IP address of the VTO. If you can successfully login its WEB interface as in Figure 3- 1, it means the network works properly.

Note:

Default IP address of VTO is 10.22.5.189 or 192.168.1.110. Default username and password is admin/admin. After first login, please change your password.


IP VDP Door Station
Web Server V1.0
Username:
Password:
Login
Cancel

Figure 3- 1

4 Operation

4.1 WEB Setup

If you first use VTO, you may need to operate according to the following steps:

- **Login WEB**

First, make sure your PC and the VTO are well connected, and follow steps below to login WEB interface.

Step 1. In Internet Explorer, input IP address of the VTO, and press Enter. System shows Figure 4- 1.

Step 2. Input Username and Password.

Step 3. Click on Login.

Note:

Default IP address of VTO is 10.22.5.189 or 192.168.1.110. Default username and password is admin/admin. After first login, please change your password.

Figure 4- 1

- **Setup**

Step 1. In WEB interface, select System Config>Local Config, set video format as WVGA as in Figure 4- 2.

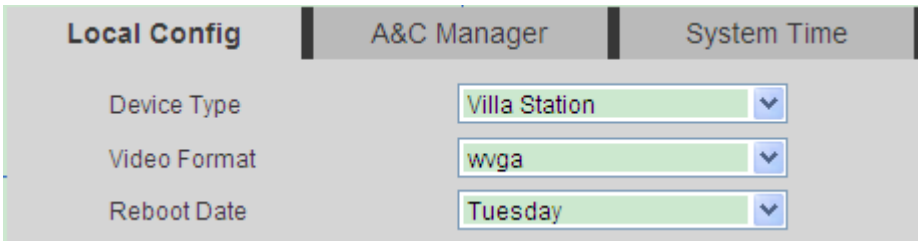


Figure 4- 2

Step 2. In System Time tab, click on Sync PC to make VTO time the same with PC.

Step 3. Select System Config>Network Config, set VTO IP, Subnet Mask and Default Gateway. See Figure 4- 3.

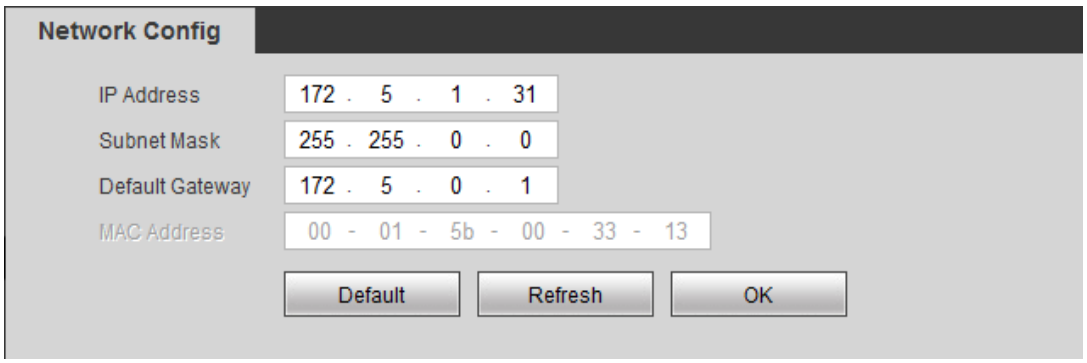


Figure 4- 3

Step 4. (Optional) If VTO connects to VTMS platform, System Config>LAN Config, set Area No. Section No. Building No. And etc. These parameters must match settings on VTO as in Figure 4- 4. Please refer to Appendix 2 and 3. See Figure 4- 5.

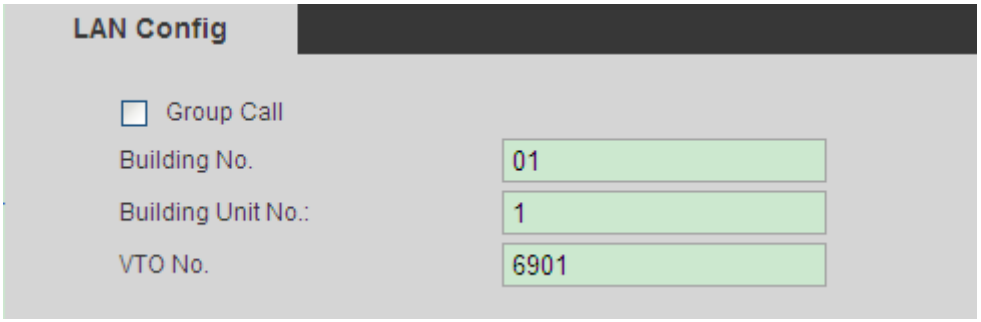


Figure 4- 4

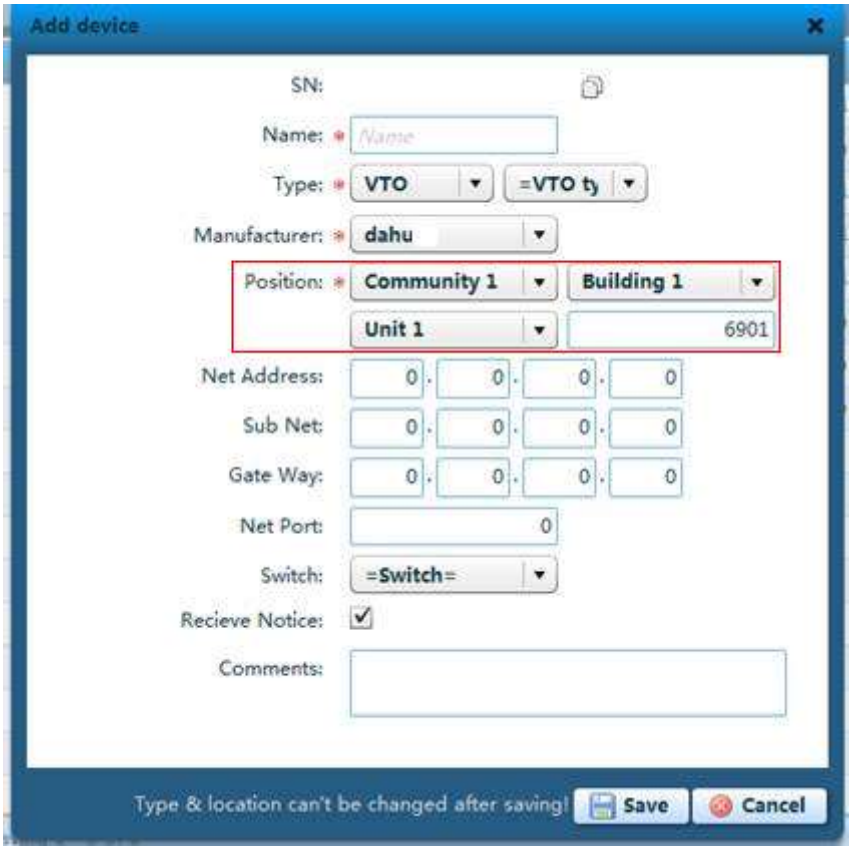


Figure 4- 5

4.2 Issue Card

- **Issue Card on WEB**

In WEB interface, click on Issue Card, and when you hear a “DI” sound, it means you have successfully issued card. Then, you can swipe this card to unlock. (VTO6000A/VTO6110B/VTO6110BW require access control module)

- **Issue Card by VTMS**

Please refer to VTMS user’s manual.

4.3 Group Call

When guiest press Call button on VTO, multiple VTHs will ring. Resident can accept call, hand up or unlock on any of these VTHs.

Note:

VTH includes main VTH and extension. In a system, there is no more than 1 main VTH and 5 extensions. See Figure 4- 6.

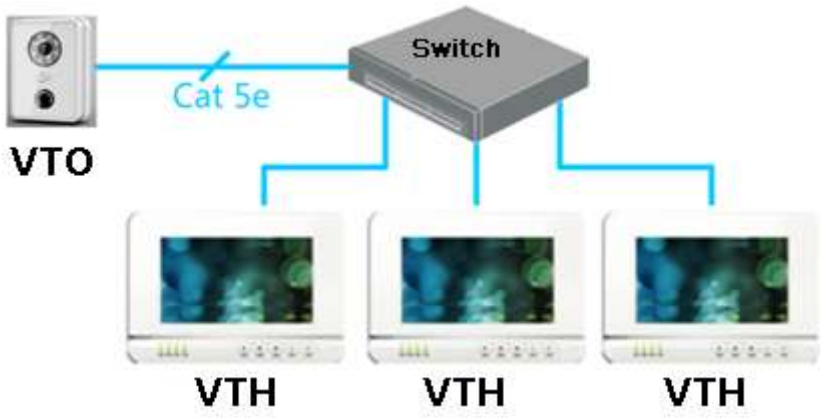


Figure 4- 6

- **Set VTO**

Step 1. Select System Config>Indoor Station Manager, system shows Indoor Station interface.

Step 2. Click on Add, input VTH Short No., IP Address (optional) to add a VTH. See Figure 4- 7.

Note:

In Indoor Station interface, you only need to add main VTH, and you do not need to add extension.

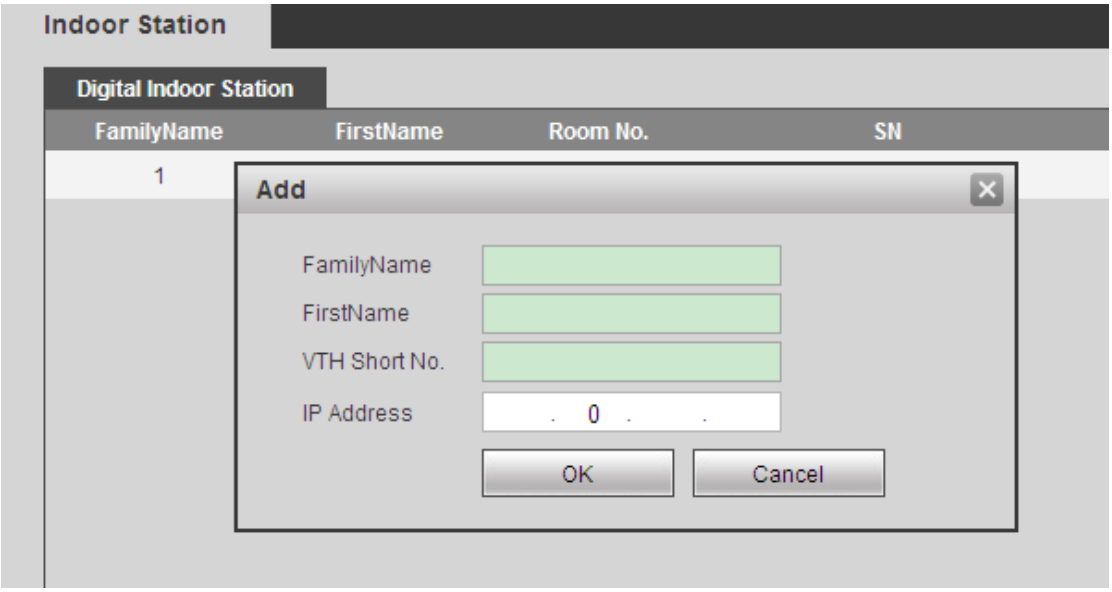


Figure 4- 7

Step 3. In LAN Config interface, check Group Call, and click on OK. See Figure 4- 8.

Step 4. After config is complete, enter Logout interface to reboot VTO.

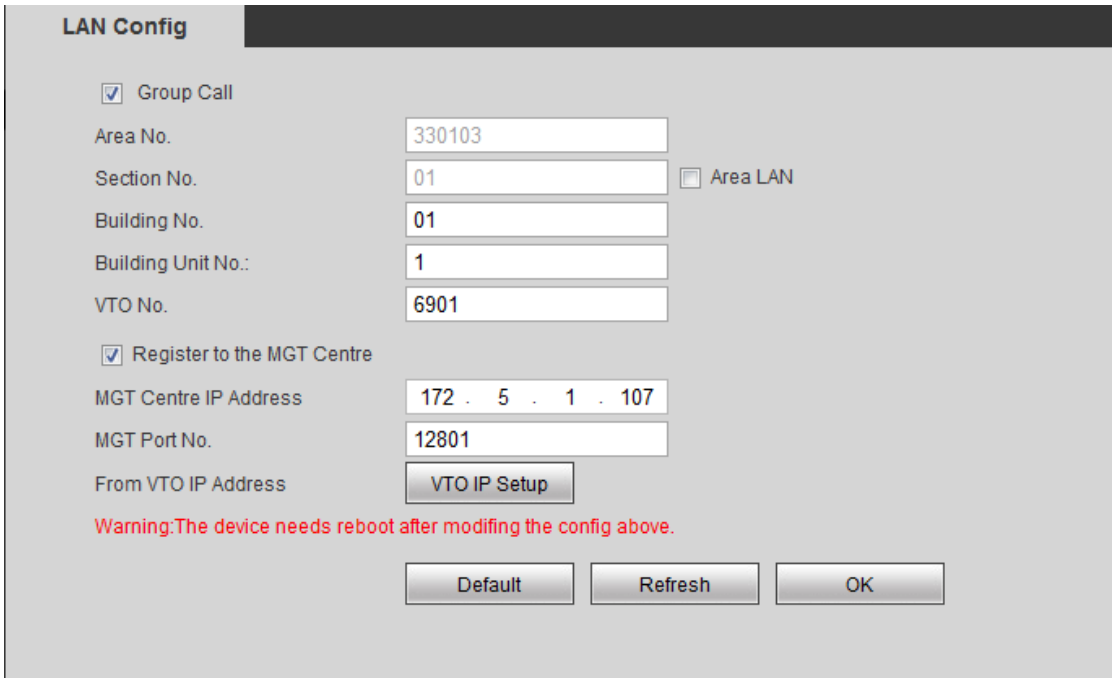


Figure 4- 8

- **Set Main VTH**

Step 1. On VTH screen, press System Settings>Project Settings, input password (default is 002236) to enter Project Settings interface.

Step 2. Press Product Info, input Room No., Local IP and etc as in Figure 4- 9.

Note:

Room No. Must match setting in VTH Short No. in Figure 4- 7.

Figure 4- 9

Step 3. Press Network, input VTO IP Address. See Figure 4- 10.

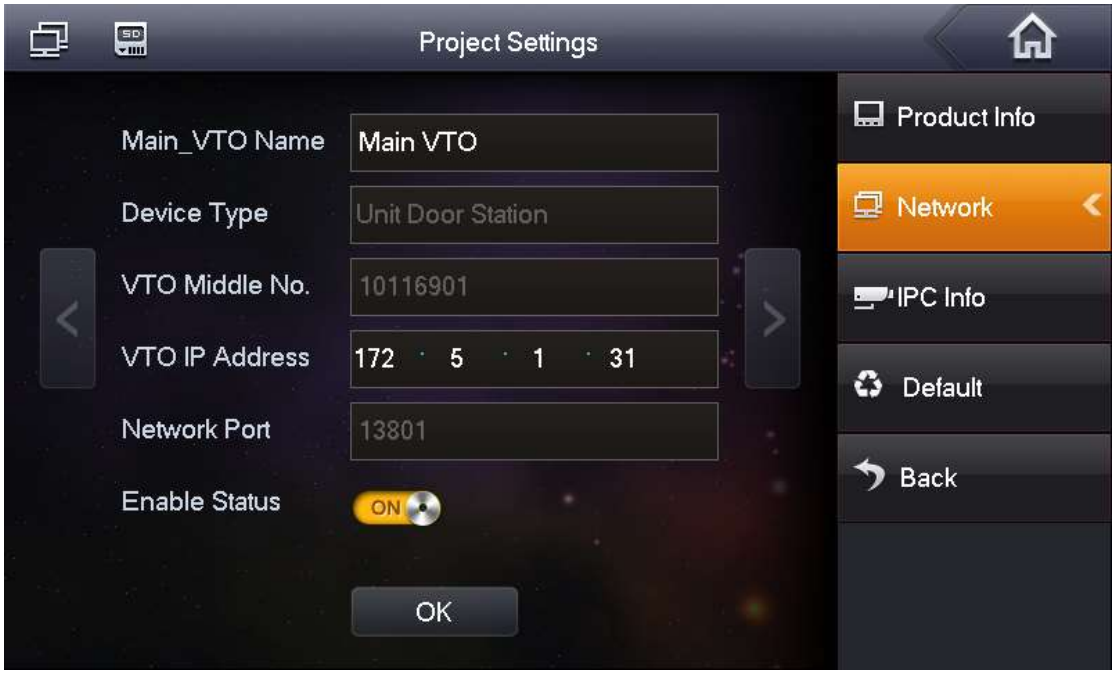


Figure 4- 10

- **Set Extension**

Step 1. On VTH screen, press System Settings>Project Settings, input password (default is 002236) to enter Project Settings interface.

Step 2. Press Product Info. Press Master, Master icon becomes Extention icon.

Step 3. Set Room No. (i.e. 102-1), input IP Address, Subnet Mask and Gateway.

Step 4. In Master IP, input IP of the main VTH. After competion, extension will automatically sync with main VTH info configured by user. See Figure 4- 11.

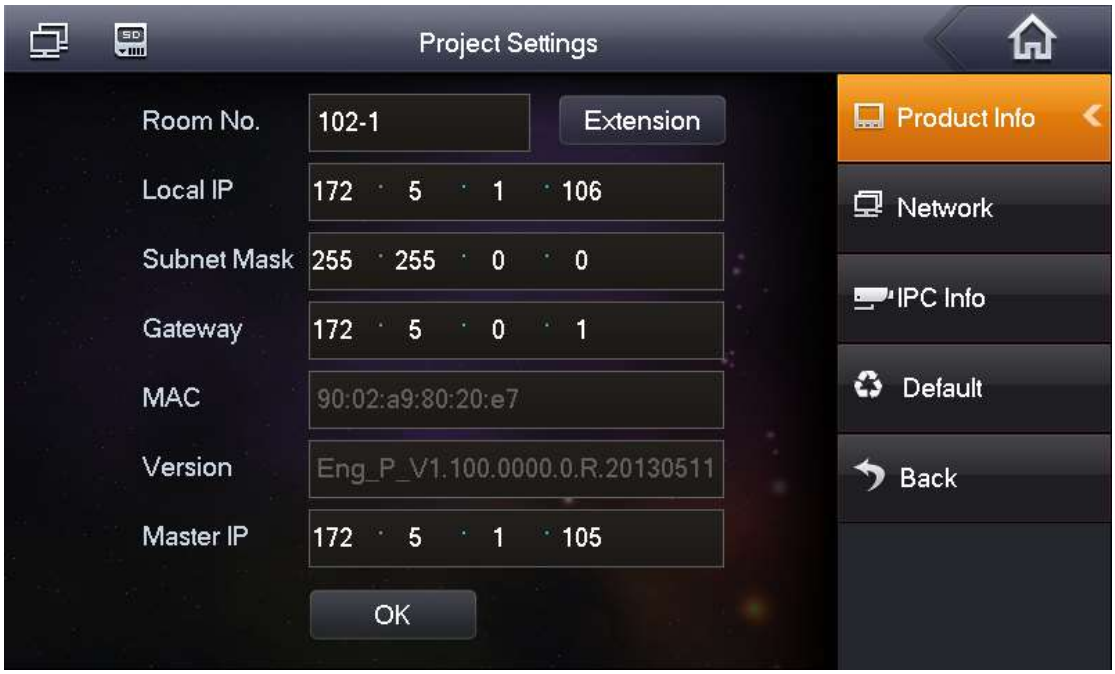


Figure 4- 11

5 FAQ

FAQ	Solution
Device cannot boot up.	● Check if VTO is plugged to power. Its normal power range is 10V~15V. ● If VTH is powered by 2-pin green plug, check if the power supply is normal. Power voltage is normally 10V~15V. ● If VTH is powered by switch, check if switch is on and cable is loose. Switch voltage is normally 22V~26V.
VTO cannot call VTH.	Check if VTH has not been registered on VTO.
Sound is too low.	Based on actual condition, adjust VTO and VTH volume.
VTH does not have video or video frame is poor.	● In VTO WEB interface, switch video format to WVGA. ● Avoid expose VTO to place of poor light or direct sunlight.
I cannot unlock.	● Make sure VTO supports unlock by swiping card. ● Check if VTO access control module is loose. ● Check electric control lock is normal. (wiring is wrong, no voltage output or low voltage)
Door Sensor Alarm	Please check if door is stuck.
I cannot issue card. (For model with this function only)	● VTO must support card issuing function ● The card must be IC card.

Appendix 1

Appendix 1.1 Cable Specification

The wiring length between VTO and VTH is L_N, so reasonable specification of wiring is:

Cable Specification	$0<L_N\leq 50m$	$50<L_N\leq 100m$
UTP Cat5e/Cat6: 10 ohm/100m	Optional	Optional
UTP Cat5e/Cat6: 18.8 ohm/100m	Optional	Not optional

Note:

Please do not let L_N be over 100m.

Appendix 1.2 Power Extension Line Specification

The wiring length between VTO and adaptor is L_C, so reasonable specification of extnsion line is:

Extension Line Specification	$0<L_C\leq 30m$	$30<L_C\leq 100m$
20AWG	Optional	Not optional
18AWG	Optional	Optional
17AWG	Optional	Optional

Note:

Before plugging extension line to power, make sure its positive and negative end are correctly wired.

Appendix 1.3 Embedded Box

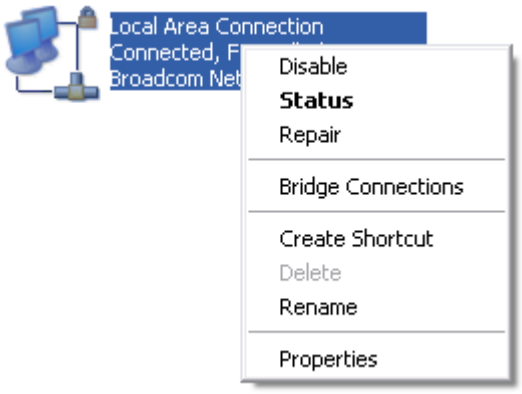
VTO Model	Embedded Box
VTO6000C, VTO6100C, VTO6000CM	86 box
VTO6110B, VTO6210B, VTO6110BW	86 box, 120 box

Appendix 2 VTMS

- **Check Installation Environment**

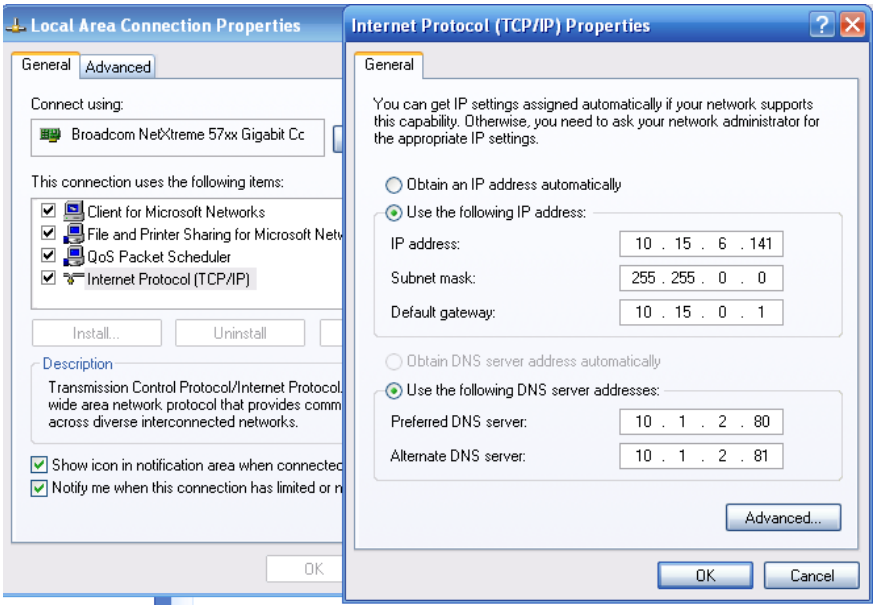
This manual makes Window XP as example to introduce how to modify IP of PC inorder to connect VTMS and monitoirng system.

Step 1. Select Start>Control Panel>Network Connection>Local Area Connection, right click on Local Area Connection icem, select Properties, see Appendix 2- 1.



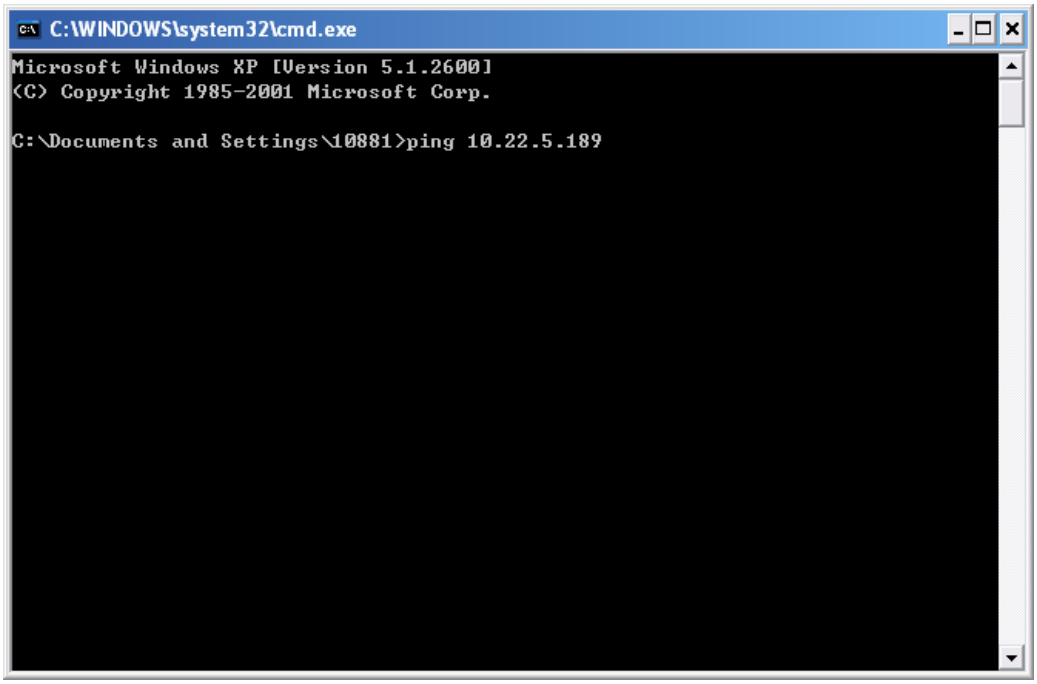
Appendix 2- 1

Step 2. View and modify IP address, make it in the same segment with VTO. See Appendix 2- 2.



Appendix 2- 2

Step 3. After complete modification, select Start>Run, input “cmd”, click on OK. Enter command interface, input “ping” + IP of the VTO. If it obtains communication data, then VTO and the PC are connected. See Appendix 2- 3.



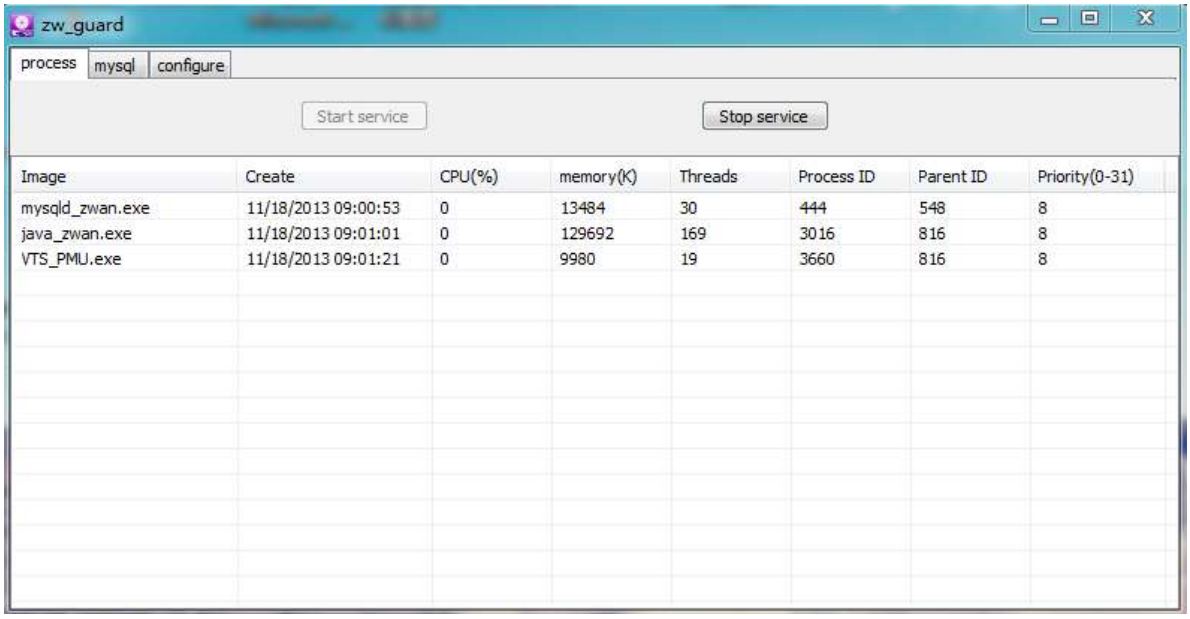
Appendix 2- 3

- **Enable VTMS**

The following mainly introduces how to config VTMS for you to login VTO and use VTMS.

Step 1. Install VTMS on PC.

Step 2. Double click on zw_guard. . , click on Start service, and VTMS will boot up.



Appendix 2- 4

Appendix 3 VTMS Client

This following mainly introducts how to config VTMS Client.

Appendix 3.1 Config Network Address

Step 1. Install VTMS Client on PC.

Step 2. Double click on 

, in pop-up box input username, password, IP address, port and etc. Click on Login. See Appendix 3- 1.

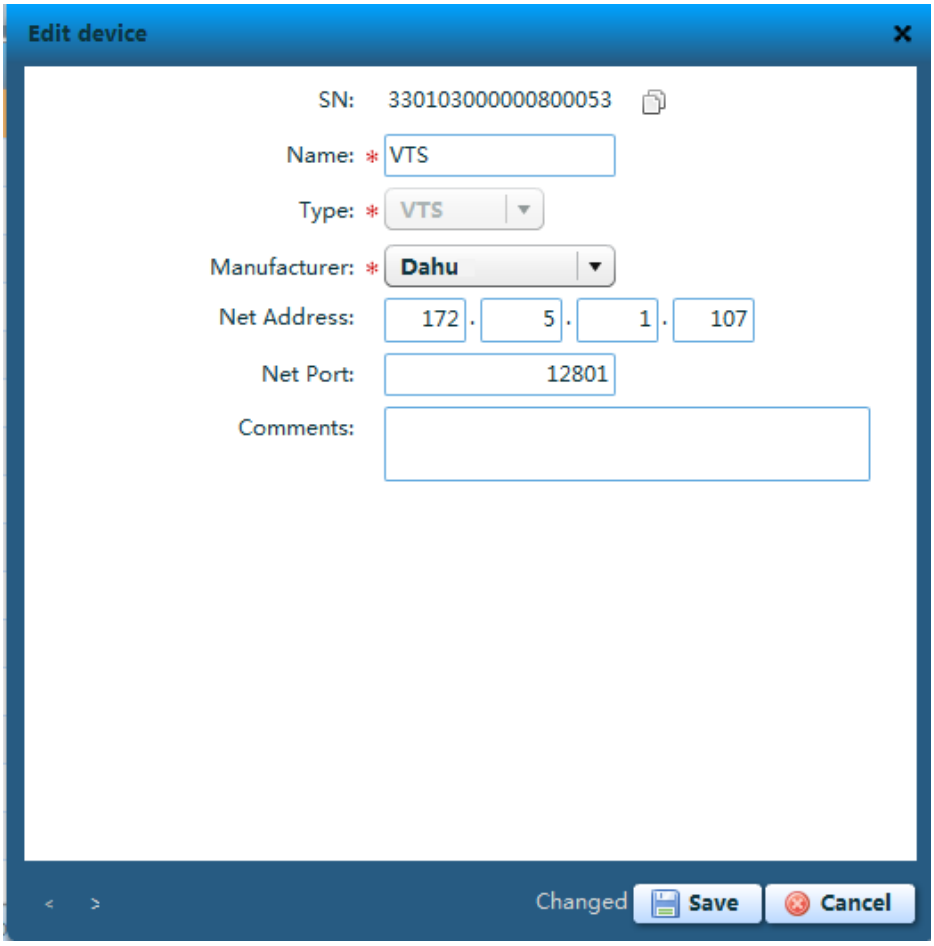
Note: Default username and password is admin and 123, respectively. After first successful login, please change password.

Appendix 3- 1

Step 3. In main interface, click on Device MGR. See Appendix 3- 2.

Appendix 3- 2

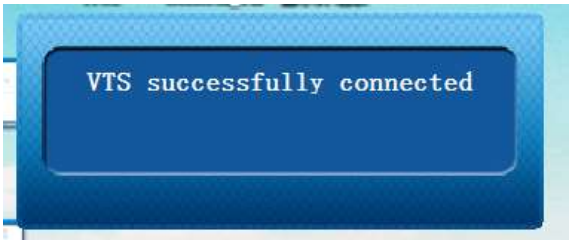
Step 4. Double click on VTS parameter collumn, sustem pops up Edit device box, input PC's IP address. See Appendix 3- 3.



Appendix 3- 3

Step 5. Click on Save. Input project password (default project password is 123).

Step 6. Re-login VTMS, you can see VTMS is successfully configured as in Appendix 3- 4.



Appendix 3- 4

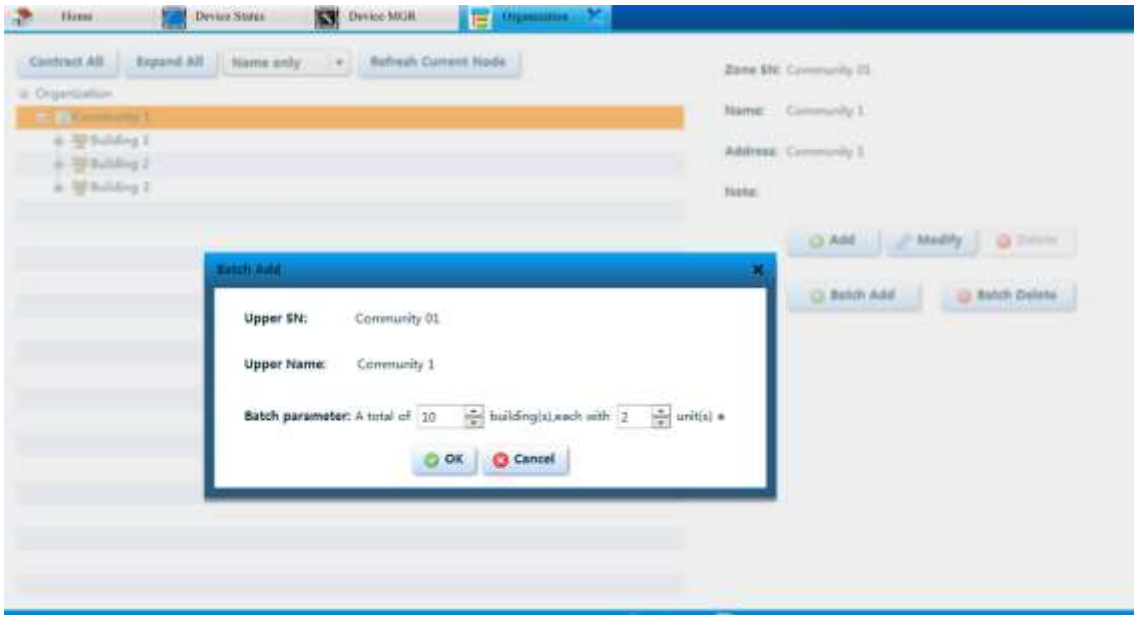
Appendix 3.2 Create Organization

First you must build up environmrnt and set VTMS server, please refer to Appendix 2.

This chapter takes example of a residence with 10 buildings and 2 units.

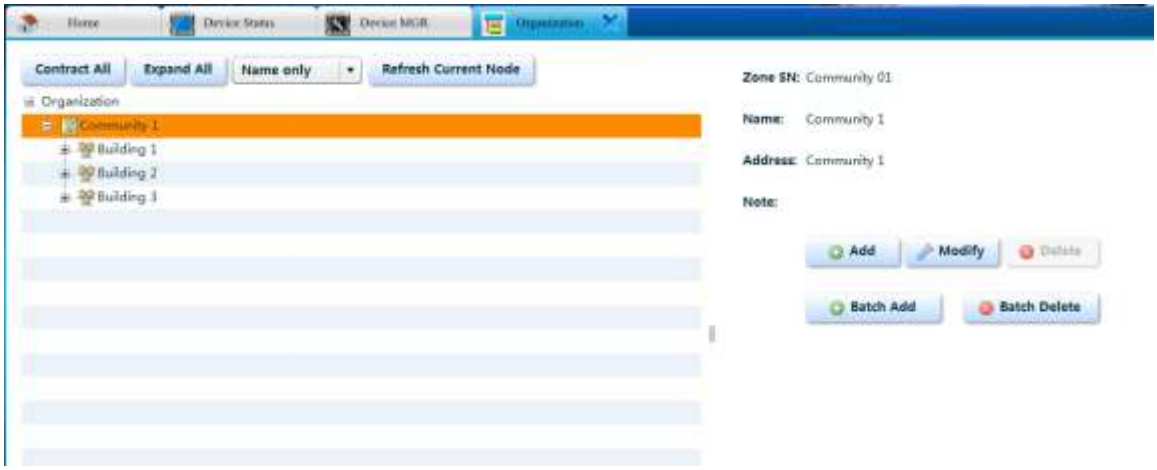
- **Create Residence Organization**

Step 1. In VTMS main interface, select Organization, click on Batch Add. System pops up Batch Add box, see Appendix 3- 5.



Appendix 3- 5

Step 2. Click on OK to save. The created organization is as in Appendix 3- 6.

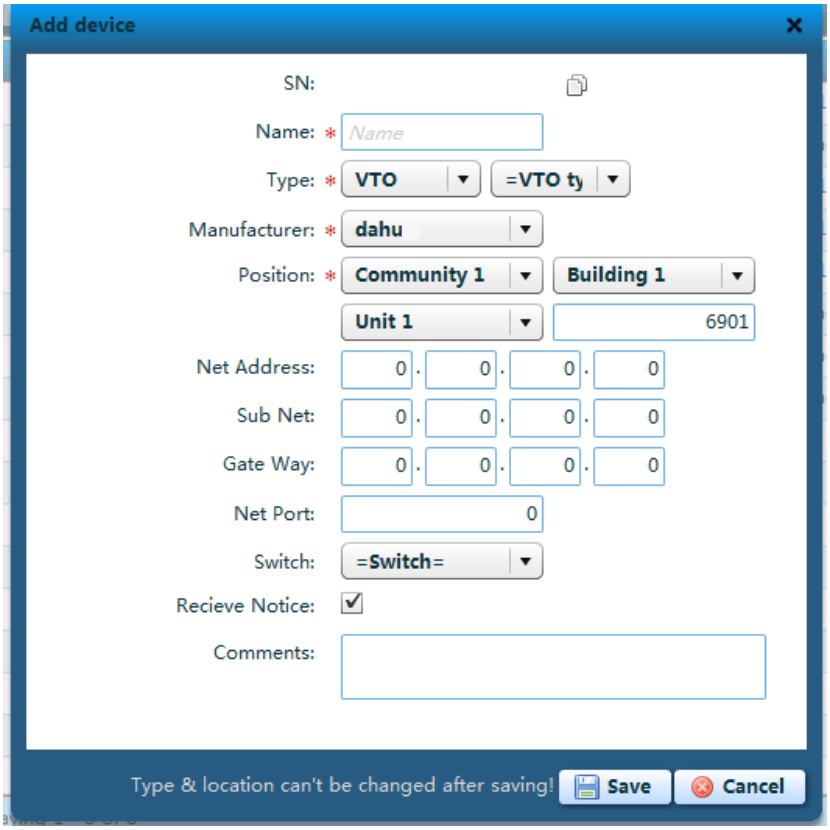


Appendix 3- 6

- **Add VTO**

Step 1. In VTMS main interface, select Device MGR, click on Add, system pops up Batch Add box.

Step 2. Fill in info according to your actual condition, and click on Save. See Appendix 3-7.

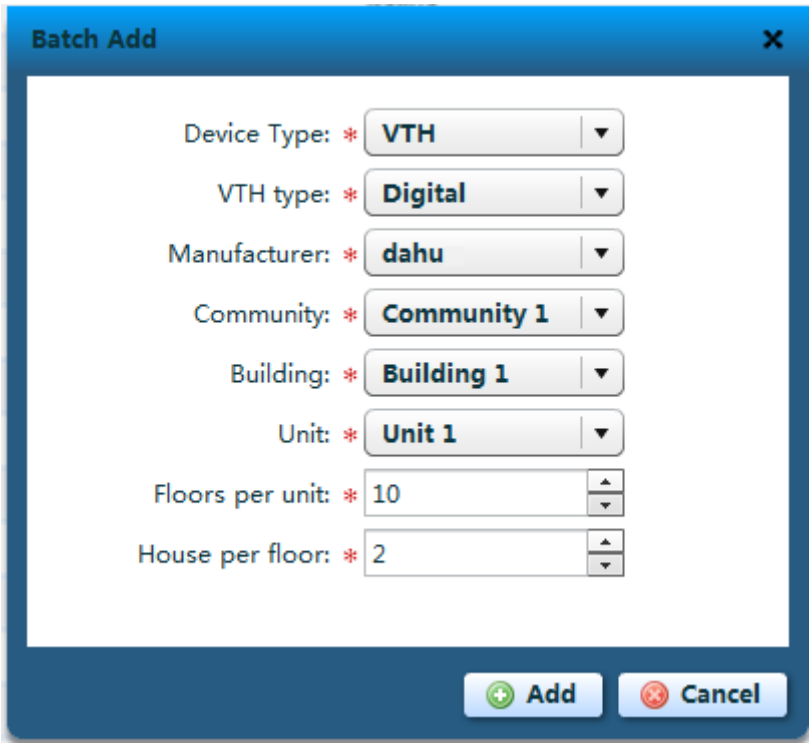


Appendix 3- 7

- **Add VTH**

Step 1. In VTMS main interface, select Device MGR, click on Batch Add, system pops up Batch Add box.

Step 2. Fill in info according to your actual condition, and click on Save. See Appendix 3-8.


Batch Add
Device Type: * VTH
VTH type: * Digital
Manufacturer: * dahu
Community: * Community 1
Building: * Building 1
Unit: * Unit 1
Floors per unit: * 10
House per floor: * 2
Add
Cancel

Appendix 3- 8