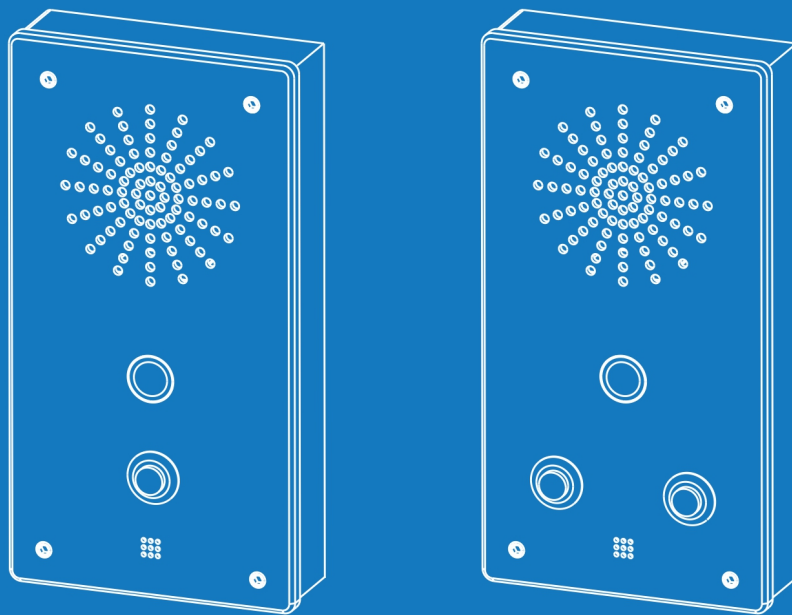


**SPON**

# IP VIDEO INTERCOM TERMINAL

## User Manual



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## Summary

### Safety Precaution

Please abide by the warning and the relevant safety tips.

Please take this manual in convenient place after you reading the guide for future reference.

#### Warning



The sign means there is potential safety hazard, when operate wrong may result in death or serious injury.



The sign is used to remind the user that attached is the important operation and maintenance data.

### Settings and Installation

(1) Avoid being wet with the water.

Don't make the machine or exposed to rain water or other liquid contamination of the environment, or lead to fire or get an electric shock.

(2) Don't use unspecified voltage.

Using the marked voltage on the machine.

Using more than the logo of voltage could lead to fire or shock.

(3) Don't scratch the power cord.

Don't scratch the power cord or cut it.

Simultaneously, keep the power line far way from heated objects, put heavy things on it will lead to fires or electric shock.

### Using machine

(1) In case of the anomalies

Please turn off the power supply immediately when finding the abnormal phenomena, please connect with the agency. if you continue to use, it will likely fires or shock.

- The smoke or odor of the machine.
- The inside of the machine is flooded by water or foreign bodies intrusion.
- Machine falling or machine shell damage.
- The power cord damage (wire core is exposed of broken, etc)
- Fault (e.g it can't network, no sound etc.)

(2) Don't open the machine internal or modify the machine.

Do not let foreign matters invade the machines internal.

Please don't put the metal or inflammable objects into the machine, otherwise it may cause fires or electric shock.

(3) Please do not touch it when thundering

To avoid electric shock, please do not touch the machine and the plug when lightning, etc.

(4) Please do not place containers with liquid or small metal objects on machine above.

If gets upset containers, and let the fluid inflow to the machine that will likely fires or cause shock.

(5) Do not open the machine internal or modify the machine.

The machine internal contains high voltage parts, once open the cover or modify the machine, it will likely fires or cause shock.

All the maintenance and other machine modification should be operated by professional personnel.

(6) Maintenance and the precautions for not using in a long time.

While maintenance, if the machine is not using for 10 days or more, please shut off power supply switch for safety. If do not comply with this provision, it will likely cause electric shock or fires.

## Product Introduction

IP video intercom terminal which is embedded with the IP Audio digital network audio technology of SPON independent intellectual property rights, the terminal is equipped with power input interface, camera, alarm input, alarm output etc ports. With intercom and broadcast etc functions.



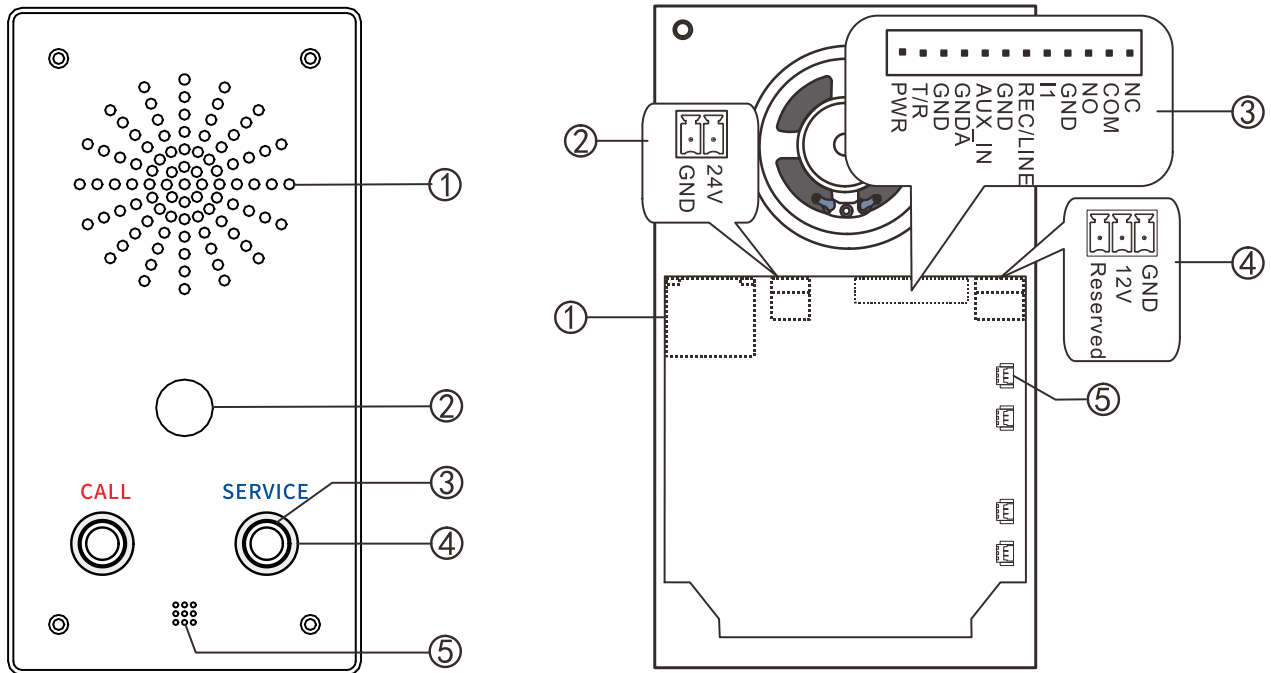
## Features

- High-end anti-corrosion brushed aluminum panel, sturdy and durable, beautiful and generous;
- Ultra-wide-angle camera, which can see the face and support video output with multiple resolutions;
- Built-in 3W speaker and microphone , hands-free call, receive broadcast, real-time monitor;
- Support ONVIF protocol, provide 3 standard ONVIF video and audio interfaces for 24/7 video and audio recording;
- Support offline intercom (initiate and receive) without server, the offline intercom target can be configured on the web page.
- Camera bandwidth dynamic, can automatically backlight compensation according to the scene or strong light suppression to ensure high definition.
- It can be connected with the three-color door light, and according to the alarm content to control the three-color door light, through the color of the three-color door light can quickly identify the alarm content.
- The terminal can be connected with an alarm control module to expand the alarm input and output interfaces.
- With 1 channel controlled power output (DC12V), can directly drive the alarm light.
- Support POE power supply;
- Support cross network segment and router, accessible to the system if the Ethernet is available.

## Hardware interface introduction

[\[Front\]](#)

[\[Back\]](#)



**【Front】**

- ①loudspeaker
- ②Camera: restore the local video.
- ③Status indicator ring: When the device is broadcasting or intercom, the indicator flashes quickly; when online is idle, the indicator light is always on; when offline, the indicator flashes slowly
- ④Call button (optional single button or two button): Press the left and right buttons to call the target terminal specified by the service software;
- ⑤Pickup microphone: pick up the local voice.

**【Back】**

- ①Network port: insert the network cable and connect to the server(support POE power supply)
- ②Power interface: DC24V/DC12V power input
- ③Comprehensive interface and function definition are shown in the figure below:IP

NC	}	Alarm output (NC: Normally closed, COM: COM, NO:Normally open)
COM		
NO		
GND	}	Alarm input 1 (GND: Ground,I1: Alarm input1)
I1		
REC/LINE	}	Record out/Line out interface (REC/LINE: Signal, GND:ground)
GND		
AUX_IN	}	Line in interface (AUX_IN: Signal, GNDA: Analog ground)
GNDA		
GND	}	Three-color door light interface (GND: Ground, T/R:Signal, PWR:Power)
T/R		
PWR		

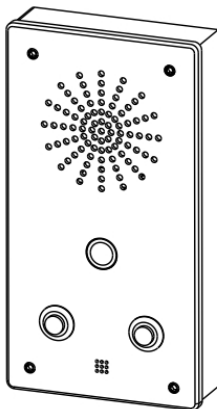
- ④Controlled power output interface: DC12V power output
- ⑤Alarm input interface 2: Reserved.

## Introduction

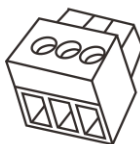
### Packing List

The IP video intercom terminal is including the following fittings, please check all the fittings before installation. Please contact your supplier if there is any missing.

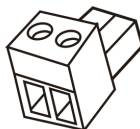
- (1) IP video intercom terminal 1PCS (one button/two buttons for optional)



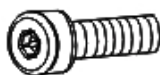
- (2) Wiring Terminal (3.5-3P) 1pcs



- (3) Wiring Terminal (3.5-2P) 1pcs



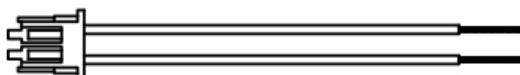
- (4) Allen screw (M3\*12) 4pcs



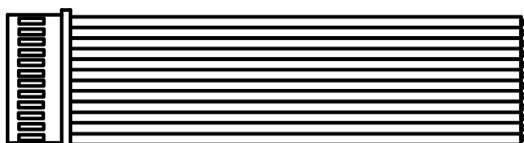
- (5) Allen screwdriver 1pcs



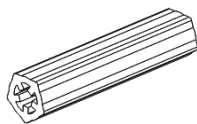
- (6) Red-Black line (X2-80) 1pcs



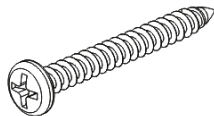
- (7) Red-White line (X12-100) 1pcs



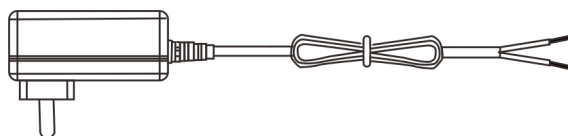
(8) Plastic swelling cover 4pcs



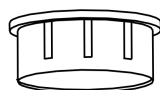
(9) Tapping screw (ST4\*25) 4pcs



(10) Power adaptor (DC24V/1A) 1pcs



(11) Plug (HP-16) 1pcs



(12) Plug (SMR7/8BK1) 1pcs



(13) Installation instructions 1pcs



(14) Certification 1pcs

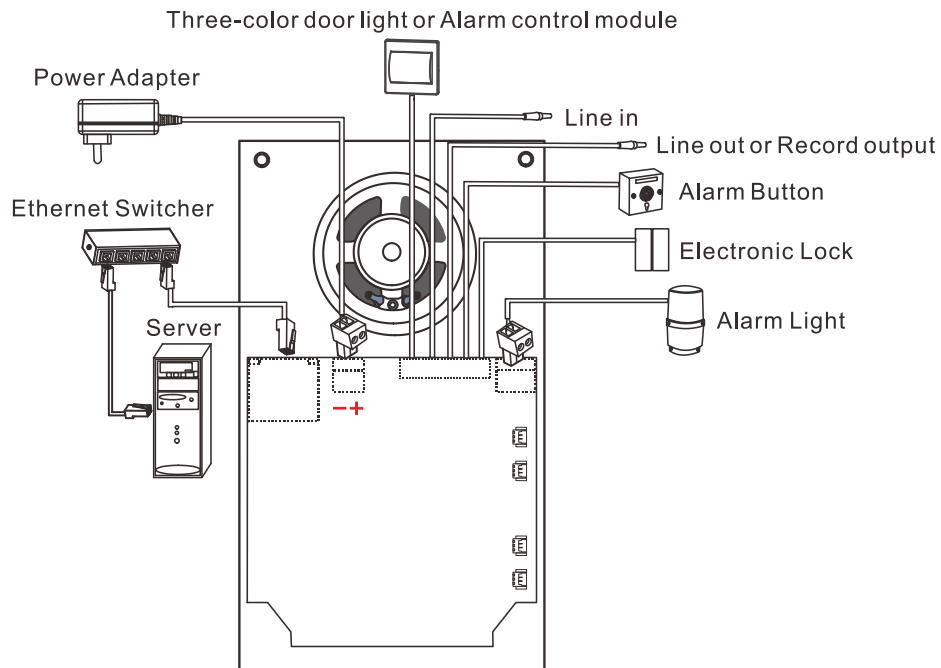


## Wiring

(1) Use one end of power adapter connect with the IP video intercom terminal power port and the other end connect with power socket.

(2) Use one end of Ethernet cables connect with the IP network video intercom terminal and the other end connect with the switcher.

(3) Contact the alarm lamp, three-color door light and alarm button to corresponding interface.



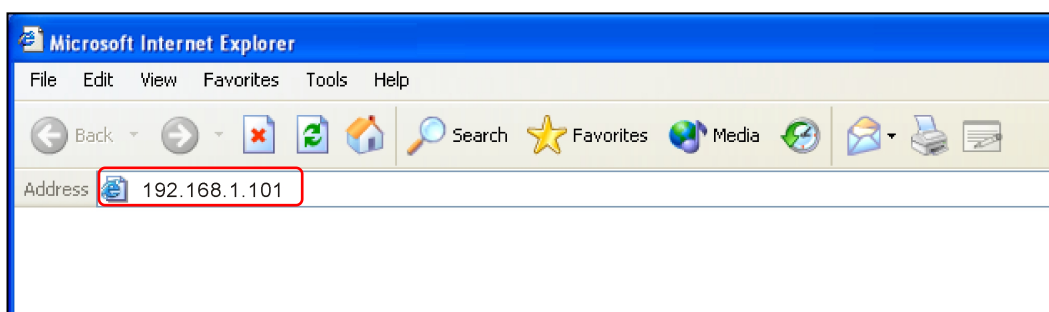
## Basic Network Settings

Contact the terminal and turn on the power, enter the web interface of the IP video intercom terminal, modify the terminal network parameter according to the live environment and "save". For specific operation steps, refer to the network parameter settings in the custom terminal parameters.

## User-Define Terminal Parameters

### Login web interface

(1) Please enter the IP video intercom terminal IP address to the browser address column (the factory default IP address is 192.168.1.101, when you press the button, the terminal will automatically broadcast the IP address without network), then enter.



(2) Enter the username and password in the web page login window (the default is admin).



(3) Click OK to enter the web page of the IP video intercom terminal.

## Network Parameters

To set the network parameters, please modify each parameter in the network parameters according to the site environment. After setting, click [Save], and the device will be restarted.

Parameters as following:

Terminal IP	IP address of the terminal, the factory default is 192.168.1.101
Subnet mask	The mask of the subnet where the terminal is located.
Default gateway	The gateway of the network where the terminal is located
Preferred DNS server	IP of the preferred domain name resolver on the network where the terminal is located

Alternate DNS server	IP of the alternate domain name resolver on the network where the terminal is located
----------------------	---

## SIP Parameters (SIP Protocol)

Set server platform parameters for terminal login. When the communication protocol between the terminal and the server is SIP protocol, directly set the server parameters in "SIP parameters". After setting, click [Save] to restart the device.

Note: If the server logged in by the terminal is NAS server, set the protocol as NAS version in "System Tools" - "Protocol Settings" on the Web page, and then set the service parameters.

Parameters as following:

SIP server	SIP server address where terminal located, please input correct SIP server IP address or domain name to avoid call failure. Please do not modify the port (the default is 5060) without any special situation.
Account/password	SIP account and password of terminal, it can't repeat with other terminals.
Network port	Set network port according to the situation
Audio port	Set audio port according to the situation

## Server Parameters (NAS protocol)

The default communication protocol between the terminal and the server is SIP protocol. If the server logged in by the terminal is NAS server, switch the protocol to NAS version in "System Tools" - "Protocol Settings" on the Web page. After switching and saving, restart the device and empty the browser cache, and the web version will become NAS protocol version. At this point, "service parameters" can be set. After setting, click [Save] to restart the device.

Parameters as following:

Terminal ID	The only identify device No., it can't repeat with other host. . The defaults is 1.
Local Port	The port No. of the terminal Note: please do not modify the port (the default is 2046) without any special situation.
Preferred server	Server address of terminal login, the defaults is 192.168.1.13
Alternate server	When the preferred server fails to connect, you can log in to the alternate server. After the preferred server is available, the terminal re-logs in to the preferred server.

## Video Parameters

Set the terminal video parameters, click [Save] after modification, and restart the device will take effect.

<div>System Information</div> <div>— Basic Settings —</div> <div>Net options</div> <div>SIP options</div> <div>Video options</div> <div>Audio options</div> <div>Talk options</div> <div>Alarm options</div> <div>— System Tools —</div> <div>Password Setting</div> <div>Language Setting</div> <div>Versions Setting</div> <div>Update firmware</div> <div>Firmware Keywords</div> <div>Factory reset</div> <div>Reboot</div> <div>System logs</div>	<div>Video options</div> <div> Main video resolution: 1080P-1920x1080 ▼  Main Fps: 20 ▼  Main Bitrate(kb): 1024 ▼  Main IFrame: 20 ▼  Second video resolution: 720P-1280x720 ▼  Second Bitrate(kb): 1024 ▼  Second IFrame: 20 ▼  OSD: Enable ▼  Terminal Information Configuration: Server Inf ▼  Local Terminal Information : Terminal : Terminal-1  Picture Complexity: BP ▼  video fec: Disable ▼  video jitter: Disable ▼  Vertical rotation: Disable ▼  Horizontal rotation: Disable ▼  90degree rotation: Disable ▼  WDR: Enable ▼  Move detect: Disable ▼  move check start time : 0 : 0 : 0  move check end time : 23 : 59 : 59  Detect class: High ▼ </div> <div>Save</div>
--	--

Parameters as following:

<b>Notes</b>	Video parameters are divided into two-channel coding, and the main code stream is used to set the quality parameters of video when NVR stream is fetched. The secondary code stream is used to set the quality parameters of video in intercom.
Video main resolution	The precision of the screen image ,1080P, 720, VGA for optional
FPS	Optional range (10~30).The higher the frame rate, the smoother video
Master code stream rate	The video code rate is the number of bits of data transmitted per unit of time

(kb)	<p>during data transmission, with an optional range (128kb~10240kb).</p> <p>At the same resolution, the larger the video code stream, the smaller the compression ratio, and the better the image quality. Also, the higher CPU consumption of the terminal may lead to video card, so the code flow needs to be adjusted according to the actual network situation</p>
Main I frame interval	<p>I frame is also called key frame. I frame is the basis of inter-frame compression. Optional range (1~29);</p> <p>The smaller the value, the more refined the quantization, the higher the image quality, and the longer the code stream generated.</p>
Main coding mode	<p>Dynamic code rate: in the process of image compression and coding, the encoder adjusts the code rate in real time according to the image condition.</p> <p>Static code rate: the encoder USES a fixed code rate value throughout the process of coding the image, no matter how the image changes.</p>
Character superimposition	<p>Enable character stack, send terminal name and time information on video, not displayed when disabled.</p> <p><b>Notes: OSD character at most support for 14 characters, among which Chinese characters at most 10, when editing the terminal name of the service software, please do not exceed the specified character number.</b></p>
Local terminal information	<p>When selecting "local configuration" on video terminal information, configure the terminal information on "local terminal information".</p>
Encoding complexity	<p>H.264 encoding type, BP(Baseline), MP (Main profile), HP(High profile) can be set.</p>
Video adaptation, Video stabilization	<p>When enabled, the video quality can be improved under the circumstance of poor network environment (such as network packet loss).</p> <p><b>Note: video adaptation and video stabilization can only be effective under SIP protocol. Once enabled, the user also need to synchronously "enable" automatic error correction and packet retransmission in the XC-9000 server software "basic setting" - "comprehensive setting" - "network adaptation".</b></p>
Vertical rotation Horizontal rotation 90 degrees rotation	<p>Horizontal rotation: video images will be displayed in horizontal mirror mode;</p> <p>Vertical rotation: video images will be displayed in vertical mirror mode;</p> <p>90 degrees rotation: video images will be rotated 90 degrees clockwise;</p> <p><b>Note: (1) The above three kinds of rotation modes are disabled by default, if there's no special requirement, no need to enable them.</b></p> <p><b>(2) The above three kinds of rotation modes can't be enabled simultaneously, only one mode can be enabled, pls set the rotation angle according to the installation direction of the terminal.</b></p> <p><b>(3) If enabling vertical rotation or 90 degrees rotation, then character stack will not be used.</b></p>
WDR	<p>Once enabling WDR, the terminal can provide automatically backlight compensation or strong light suppression according to the environment to ensure high definition video.</p>
Move detect	Reserved

## Audio Parameters

Set the audio parameters of the terminal, click [Save] after modification, and the reboot will take effect.

Audio options	
Recorder:	Enable
Talking Input Select:	Mic
Talking Output Select:	Speaker
Talking Input Volume:	10
Talking Output Volume:	8
Ring Volume:	8
Broadcast Output Select:	Speaker
Broadcast Volume :	8
Monitor Volume:	10
dialing voice close :	Enable
audio fec:	Disable
audio jitter:	Disable
keyword recognition:	Disable
<button>Save</button>	

Parameters meanings as following:

Recording	Set the terminal "line (or recording) output port" function. Set to "Enable", this interface is recording output, and set to "Disable" this interface is line output.
Input Select	The terminal during intercom default audio source input :microphone. Microphone: The audio source is the microphone input. Line input: collect audio from external devices as the intercom input source.
Intercom Output Selection	The terminal during intercom default audio source output:Speaker. Speaker:The voice output from speaker during intercom. Line Output:The voice output from line when intercom, no voice output from terminal speaker. <b>Note: If "Enable" is selected for the recording interface, the intercom output only supports speaker output, not line output.</b>
Intercom Input Volume	The total input volume within the conversation (0~15) .
Intercom Output Volume	The total output volume within the conversation (0~15) .
Ring Volume	The ring volume when receiving the call.
Broadcast Output Select	The terminal during broadcast default audio source output:Speaker. Speaker: The voice output from speaker during broadcast. Line Output:The voice output from line when broadcast, no voice output from terminal speaker. <b>Note: If "Enable" is selected for the recording interface, the intercom output only supports speaker output, not line output.</b>
Broadcast volume	The output volume during the terminal broadcasting (0~15) .
Monitor input select	The total input volume during the terminal monitored (0~15).
Intercom Tone	Enable: The terminal has a prompt tone (such as a call prompt tone, busy prompt tone, etc.) when the intercom is initiated;

	Disabled: There is no prompt tone when the terminal initiates an intercom.
Audio adaptive & Audio stabilization	When it is enable, can improve the audio quality in a poor network environment (such as network packet loss). Note: Audio adaptive and audio anti-shake are only valid under SIP protocol. Must also simultaneously "enable" automatic error correction and packet loss retransmission in "Network Adaptive" in "Basic Settings"- "Integrated Settings" of XC service software.
Keyword Recognition	Reserved

## Talk Parameters

Set the terminal intercom parameters, click [Save] after modification, and restart the device will take effect.

Parameters as following:

Auto answer	Set up the mode of terminal receiving talking, start for automatic answering; If forbidden, please pressing the button to turn on the talking
Allow to hang up	Set the mode of terminal hanging up the intercom. When disabled, you can't hang up the intercom. If enabled, you can hang up the intercom Set terminal hang up ways. Disabled, intercom can't be hung up; Enabled, terminal can hang up
Echo cancellation	It is enabled by default. When it is disabled, there will be an echo during the intercom process
Offline intercom	Enabled, the offline terminal can call the target set in the offline parameters Disabled, offline talk disable
Offline target	The target IP address of the target terminal corresponding to the left button of the terminal once enabled offline intercom. The setting format is the terminal ID@IP address+port number (e.g. 2@192.168.1.101:5060)
offline target 2	The target IP address of the target terminal corresponding to the right button of the terminal once enabled offline intercom (the setting format is the same as above). <b>Note: single button intercom terminal only needs to set "offline target".</b>
Play IP	Once enabled, when the terminal is not connected with network cable, press the left button or the right button to broadcast the device ID, IP address, subnet mask and other information.

## Alarm Parameters

Set the terminal alarm parameters, click [Save] after modification, and restart the device will take effect.

Parameters as following:

Emergency Alarm	<p>The alarm source is the "emergency alarm" port of the external alarm control module.</p> <p>When it is enabled . The three-color door light flashes red when the emergency alarm port is triggered to alarm. The three-color light turn off when the alarm is released.</p> <p>Pressing the "right button" of the terminal also can light up the three-color door light (flashing red),release alarm and turn off the three-color door light.</p> <p>Priority: Task priority level. The lower the priority number, the higher the level. If two alarms (or tasks) are triggered at the same time, the terminal responds to the higher-priority alarm and lights the corresponding three-color door light.</p>
Motion detection alarm	<p>The alarm source is the "Motion detection alarm" port of the external alarm control module.</p> <p>When it is enabled.The three-color door light flashes yellow when the terminal receives the motion detection alarm signal from the external camera. The three-color light turn off when the alarm is released.</p> <p>Priority is the same with emergency alarm</p>
Door sensor status	<p>When it is enable.The three-color light will be light when the terminal detects that the door sensor is turn on.</p> <p>When door sensor 1 is turned on, the three-color door light is always green;</p> <p>When door sensor 2 is turned on, the three-color door light is always blue;</p> <p>When the door sensor is closed, the three-color light turn off.</p> <p>When it is forbidden, do not detect door sensor status.</p>
Hubbub alarm	<p>When the hubbub alarm is enabled, the terminal will automatically alarm if the environment volume reaches a certain level and lasting a period time; when it's</p>



	forbidden, the terminal can not alarm; When the terminal makes hubbub alarm, the three-color light is on (flashing green); When hubbub alarm released, the three-color light is off;
Intercom Alarm	When the terminal is intercom, the three-color door light will be on synchronously (flashing green). When the call is over, the three-color door light will turn off.
Tamper alarm	When the tamper alarm is enabled, the terminal will automatically alarm if the device is disassembled during normal operation. If it is disabled, this function is not available.
Remote door opening control	Default is forbidden When it is enabled, when the other party presses the "Unlock" key during the conversation with the IP network visualization console, it will trigger the short-circuit output port of the machine to close. Disable it will not trigger.
Alarm Trigger 12V Output	When it is enable, press the call button (single button terminal) or the left button (dual button terminal) to trigger the 12V controlled power output of the device. Disable it will not trigger.
External Input	Reserved.
Panel Testing	When it is enable, the terminal will emit a beep when it is turned on. This function can detect the working status of the MIC and speaker.
Hubbub alarm volume	The environmental noise reach the alarm level
Hubbub alarm time	Environment lasting hubbub time, the unit is second.

**Remark:**

When the alarm with priority is triggered, the server will display the terminal name and alarm time in the pop-up window, as well as a voice reminder. The popover will exit automatically after the alarm is lifted.

There are two ways to remove the alarm: the server software can remove the alarm and press the "Alarm Removing Button" to remove the alarm. The server software can display the alarm removing information synchronously.

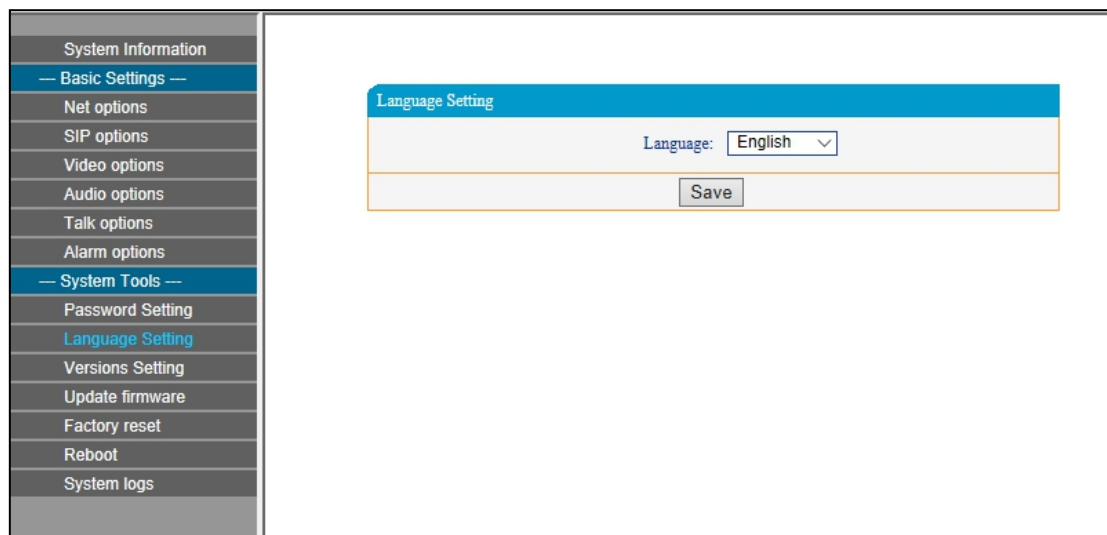
## Password Settings

You can revise the web page login-in account and password from the WEB management parameters.

## Language Settings

You can switch Web language between Chinese and English, save the revise and restart WEB to come into effective.



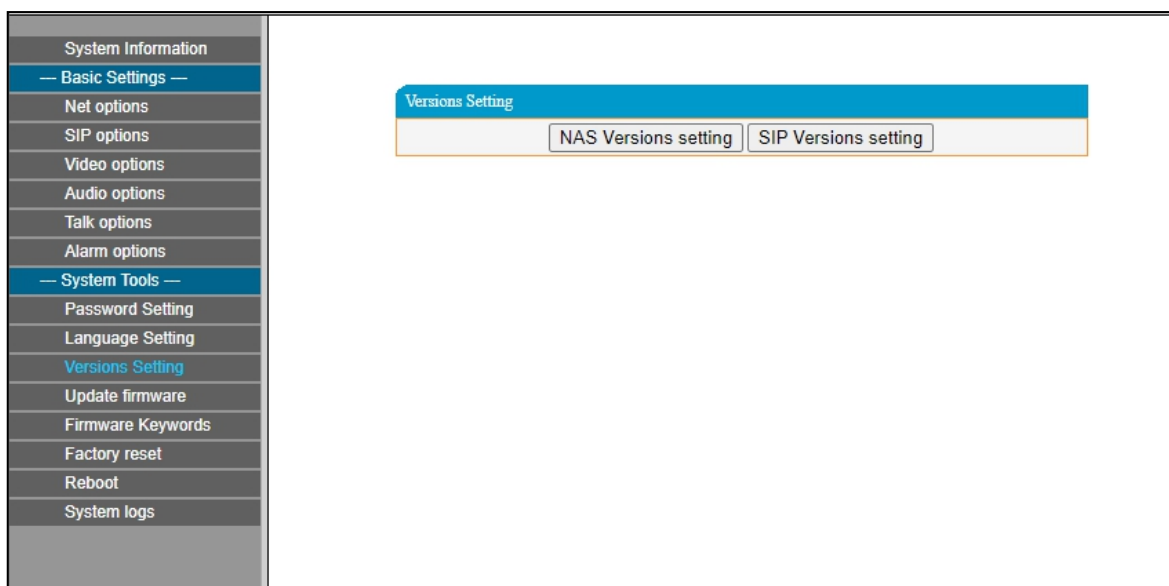


## Protocol Settings

Set the protocol for the normal communication between terminal and server, support intercom (NAS) and SIP protocol, the default is SIP.

Please select the corresponding protocol according to the server type that the terminal logs in, and then make relevant settings. After setting the protocol, save it and restart the device to take effect. At the same time, you need to clear the browser cache.

Note: Web pages of different protocols are slightly different. For details, please refer to the actual interface.

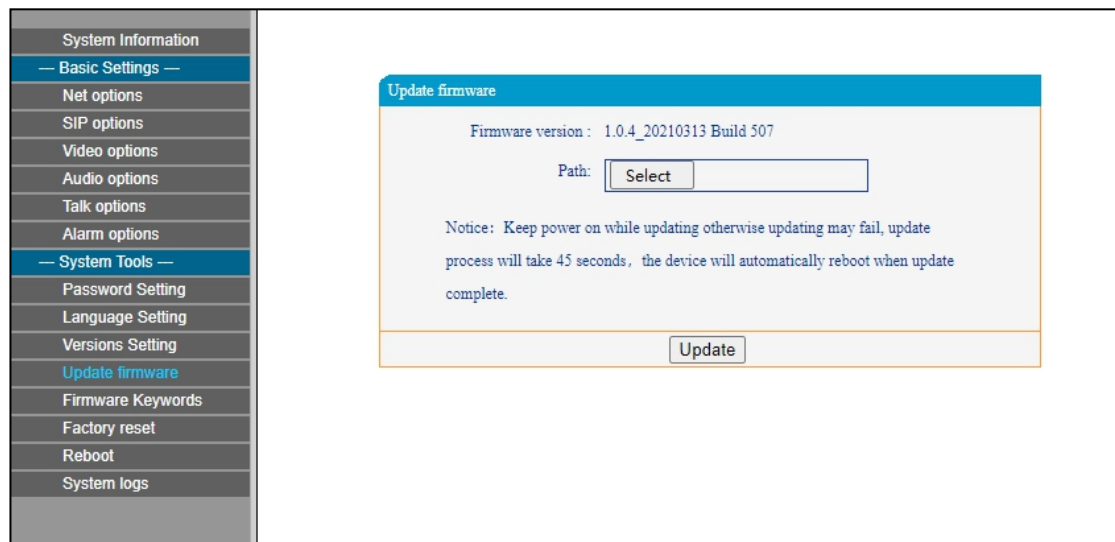


## Firmware Upgrade (Note: Otherwise special needs, please do not update the firmware)

In the firmware upgrade Web page, select the firmware upgrade file provided by the manufacturer, and click the "upgrade" button to start the upgrade.

### Remarks:

1. Do not cut off the power during the upgrade process, otherwise, the upgrade may fail and the equipment may malfunction. The upgrade process takes about 45s, after upgrade completed the device will automatically restart.
2. Do not upgrade the firmware unless you have special needs.

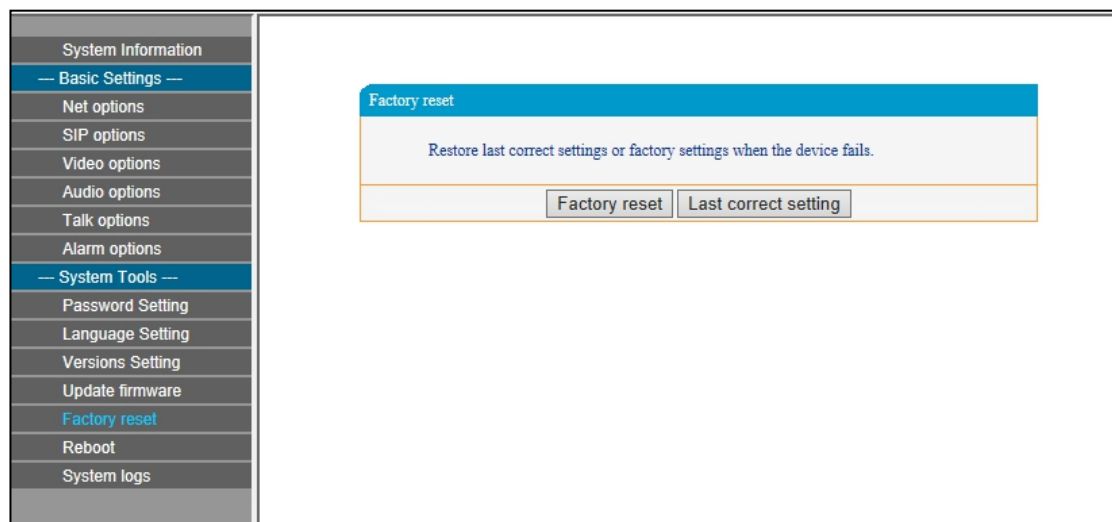


### Restore Factory Defaults

Restore to factory: all parameters were restored to factory settings.

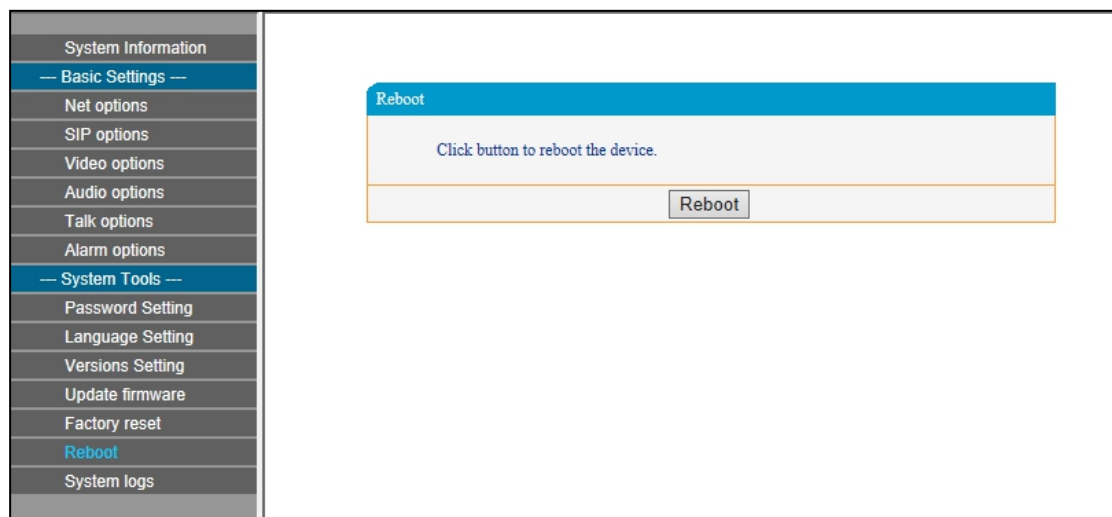
Last correct configuration: restore to the last parameter that login to the server.

Above settings will be effective after rebooting.



### Reboot Device

Part of modified parameters in the web page will be effective after rebooting.



## Other Functions

In addition to above function, IP video intercom terminal could coordinate with the server to accomplish the timing ringing, real-time broadcasting and the timing broadcasting all these functions, for the details please refer to the server software operation instruction.

## Basic functions

### Initiate Intercom

Press the button on the terminal panel to directly call other called terminals specified by the server software.

After the above operation is completed, if the called terminal is idle, the terminal will play a waiting tone to wait for the answering, and the called terminal will play a ringing tone; if the called terminal is busy or refuses to answer, the terminal will play a busy tone.

**Note: The default call is the terminal with ID number 001. Multiple call objects can be set in the server software, and when the called object is busy, automatically transferred to another object.**

### Receive Intercom

Manual answering or automatic answering can be set on the web page.

### Offline Intercom

For example, offline intercom is enabled in the Web page intercom parameter, and the target terminal of left and right key mapping is set correctly when offline.

When the device is offline, press the left or right button to call the specified target.

### Receive Broadcasting

Automatically answer without buttons.

## Troubleshooting

### Why the terminal is still "offline"?

1. Check the software server and the main controller is normal opened or not. It's required to close all firewall before open the software server (including system built-in firewall and other antivirus software firewall) .
2. Check the network connection is normal or not. After the terminal powered on, the network port green light is norm on, meantime the orange light will be short and fast flash, it means the network cable hard-connected normal. If the network port green light is not on, it means the network hard-connected problem, please check the terminal network cable and switcher whether they work normal, damaged and disconnect or not etc.
3. Check the terminal IP setting. Please check the terminal ID, sever IP, local IP, gateway IP ...etc parameters.

### When web show abnormal?

Please clear the caches or change the browser.

### How to change the web login account and password?

1. Click the password setting in webpage .
2. Input the old account and old pass word.
3. Input the new account and new pass word.
4. Input the new password again for confirmation
5. Click save.

The new account and new password will be effective after reboot.

### Terminal alarm cannot trigger 12V warning light

Check the web page "Alarm Parameters", the "Alarm Trigger 12V Output" must be configured as "enabled"

### Remote unlock by the center microphone does not take effect?

Check the web page "Alarm Parameters", the "Remote Unlock" must be configured as "enabled"

### Hubbub alarm cannot be triggered

Check the web page "Alarm Parameters", the "Hubbub Alarm" must be configured as "enabled"  
Check the Hubbub alarm volume setting if too high.

### Local Recording no sound

When offline, the local recording output configuration is controlled by the web page "Audio Parameters"- "Intercom Output Volume" setting. When the server is registered, the recording volume is controlled by the server.

Check whether the volume setting is 0.

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