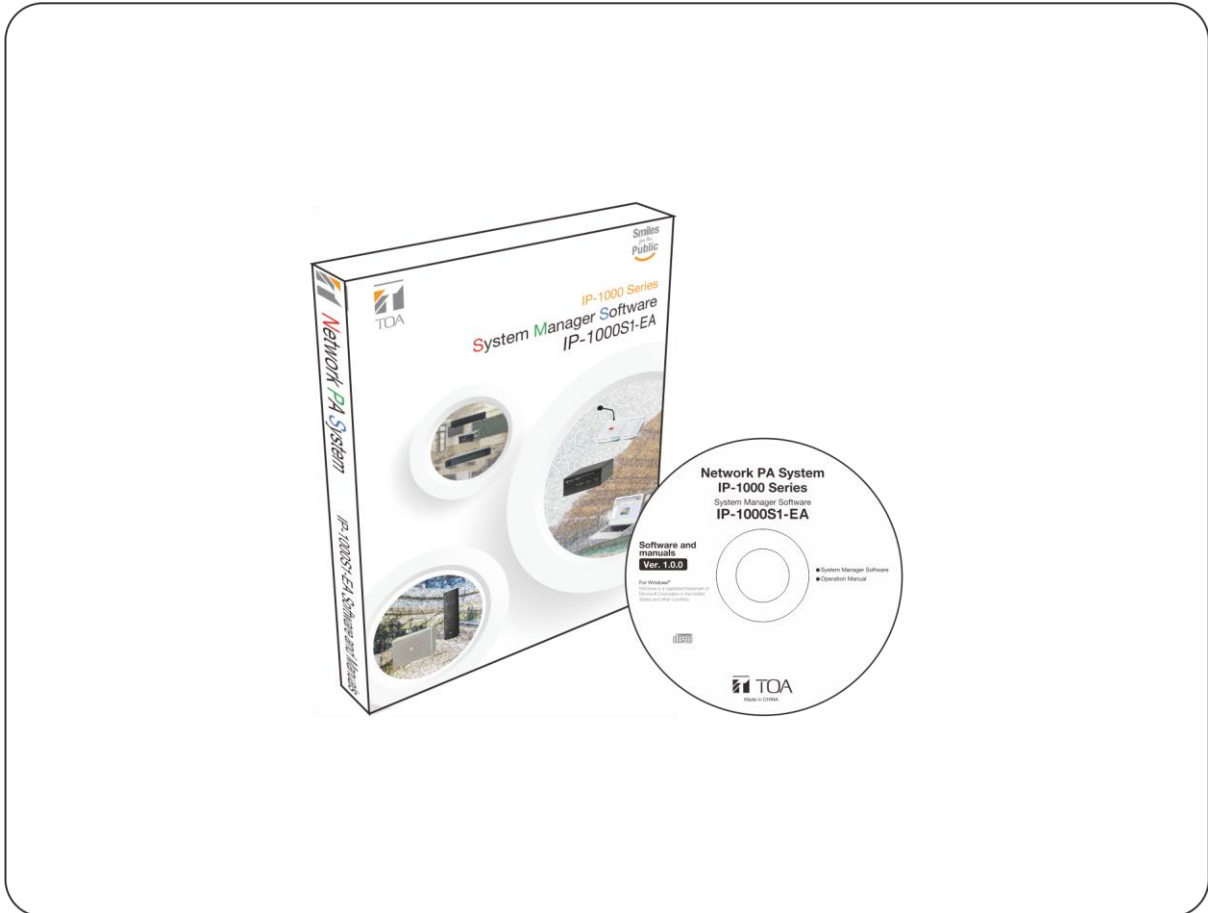




## User's Manual

IP PA/Intercom software package

IP-1000S1-EA



Thank you very much for purchasing TOA product.

Please read the instructions in this manual carefully to ensure long-term, trouble-free operation of the machine.

**TOA Corporation**

# 1. SUMMARY

IP PA and Intercom System Software adopts advanced IPAudio™ technology, which is a pure digital transmission system by transmitting the signal in data packet on the LAN and WAN. The system solves the limitation of the transmission distance, susceptible to interference and such problems in traditional intercom and PA systems. The construction of the system is clear that just connecting the terminal to the computer can make up the strong digital communication system. It ingrates the computer network, intercommunication and public address without separate wiring to each interface.

## 1.1 Features

- **Function:** it covers the intercom and PA system functions such as audio streaming on-demand service, budget management, terminal management, and authorization management, and so on.
- **Transmission:** audio transmission distance can infinitely extend and it can be operated over LAN and internet. The system supports the significant application in a large scale, such as the centralized control room from the main campus to sub-campus, from the headquarter to the branch office, to realize the fast and reliable information communication. The program takes up only 0.1Mbps of bandwidth per channel.
- **Tone quality:** Terminal output level close to CD quality ( 44.1K, 16.bit). It is more suitable for music enjoyment and listening training, such as Colleague Entrance Examination, CET4 and CET6 listening part. All the listening material can be clearly played and the candidates will not be puzzled by the vague sounds.
- The tone quality is clear and smooth, not disturbed by external electromagnetic waves. The minimum bandwidth is only 34kbps. The calling delay in LAN is less than 30 millisecond.
- The transmission distance can be infinitely extended. With the network, it can realize the intercom and multiparty call and build information and communication system in wider scale.
- It adopts digital audio processing technology and the audio width is 7KKz. The system has the function of echo cancellation and noise reduction, and realizes full-duplex conversation, multiparty calling and zone-broadcast.
- Confidential communication, special audio coding format, encryption processing, prevent eavesdropping;
- It is simple to adjust the communication scale, and it can complete the system expansion with increasing the terminal

## 1.2 Function List

Function	Description
● <b>System overview</b>	Quickly understand the number of terminals, sessions, tasks, media, servers, terminals online, system resource usage, and various types of tasks in the system, so that the system operation is clear.
● <b>Terminal management</b>	Manage all terminals in the system, and set the intercom, broadcast,monitor properties of terminals. For example, you can configure the terminal name, bind external cameras, intercom call transfer, multi-party call, intercom permission, broadcast permission, broadcast receiving mode,monitor permission, intercom/broadcast input/output volume, and task priority.
● <b>Zone management</b>	Zoning can be planned according to the actual situation of the project. Zoning is mainly used for selection during broadcast.
● <b>User management</b>	Add/delete user account ,set the role ,the rights of each role can be customized,including function right and operation terminal right.

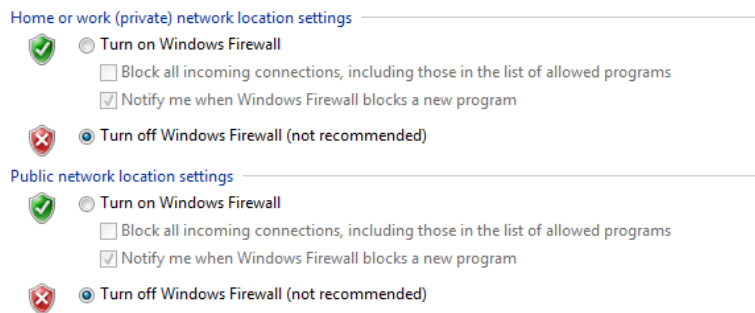
<ul style="list-style-type: none"> <li>● <b>Dial management</b></li> </ul>	<p>Support to add ring group ,when a terminal call to the specified ringing group number , all terminals in the group will ringing according to the ringing mode.</p> <p>Support to add a shortcut number to call a specified terminal .</p>
<ul style="list-style-type: none"> <li>● <b>Broadcast settings</b></li> </ul>	<p>Support to set broadcast related parameters . For example ,multicast address、real-time task limitduration 、 task processing mode、 data processing mode.</p>
<ul style="list-style-type: none"> <li>● <b>Conference management</b></li> </ul>	<p>Support to add audio/video conference , the conference title 、 host、 participant、 conference reminder、 video conference rotation ,use the run button of the conference template to control related terminals to run a conference in one click.</p> <p>Support to check、 control、 manage ongoing conference in the software.</p>
<ul style="list-style-type: none"> <li>● <b>Terminal status</b></li> </ul>	<p>Support to view the terminal propeties and status information ,and sort&amp;filter terminal by zone、 online status、 search.</p> <p>Terminal status support list view、 grid view.</p>
<ul style="list-style-type: none"> <li>● <b>Schedule task</b></li> </ul>	<p>Support to add schedule tasks ,set triggers to trigger an operation on a terminal or server to automatically execute a task without human intervention.</p> <p>Trigger include <b>【Timing trigger】</b> and <b>【Event trigger】</b> (alarm/button/card/login/intercom/monitor/broadcast).</p> <p>After trigger , the operation include <b>【Broadcast】</b> (file broadcast/server sound card broadcast/terminal broadcast/voice synthesis) 、 specified terminal <b>【Intercom】</b>、 <b>【Monitor】</b>、 <b>【Delay】</b>、 <b>【Command】</b> (Volume adjust/alarm/remote broadcast control/custom instructions),user can customize schedule task according to the work environment.</p> <p>The schedule task support offline broadcast settings , the audio file can be pushed to termianl and save in advance ,the terminal play the media file according to the preset playing policy.</p>
<ul style="list-style-type: none"> <li>● <b>Real-time task</b></li> </ul>	<p>Support real-time broadcast .Real-time broadcast(file broadcast/terminal broadcast/voice composite broadcast) can be sent to the specified terminal.</p>
<ul style="list-style-type: none"> <li>● <b>Media</b></li> </ul>	<p>User can upload the audio files to media library , as audio source to be used in timing ring、 broadcast、 real-time task. The files in the media library support to download、 online listen、 delete.</p>
<ul style="list-style-type: none"> <li>● <b>Record</b></li> </ul>	<p>Recording files in WAV format generated by intercom, broadcast, monitor, and conference content between terminals are saved on the server. Recording files can be queried, listened , and downloaded .</p>
<ul style="list-style-type: none"> <li>● <b>Report</b></li> </ul>	<p>Record the real-time status、 history records、 Statistical analysis, to know the system status timely and accurately .</p> <p>In the real-time status report, the ongoing intercom、 broadcast、 monitor、 alarm、 conference、 and alarm login events can be processed. For example, you can perform forced call release, monitor, forcible insertion, and transfer of ongoing intercom events.</p>
<ul style="list-style-type: none"> <li>● <b>Multi-server</b></li> </ul>	<p>Support to set multi-server 、 SIP trunk to interact with other server for large-scale terminal expansion.</p>
<ul style="list-style-type: none"> <li>● <b>Device upgrade</b></li> </ul>	<p>Support terminal automatic upgrade .After the terminal firmware program is uploaded to the server, the terminal automatically obtains the firmware update program from the server to upgrade the firmware. (Only supported by some terminals)</p>
<ul style="list-style-type: none"> <li>● <b>Language</b></li> </ul>	<p>Supports the language configuration of the server. Simplified Chinese, traditional</p>

<b>configuration</b>	Chinese, English, Russian, Spanish, Portuguese and French can be configured.
● <b>Extension function</b>	Support to view the authorized status(scenrio view、map view、SIP access、APP access) of the extension module.
● <b>Version information</b>	Support to viwe the version information、authorize information and restart server.
● <b>Device maintenance</b>	Support to control device to task self-check and statistic result. (Only supported by some terminals)

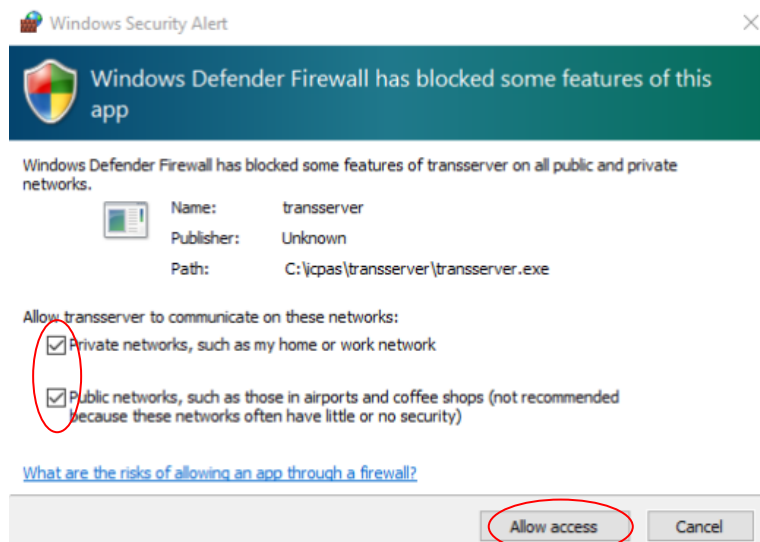
**Note: The above functions need to cooperate with corresponding type of device.**

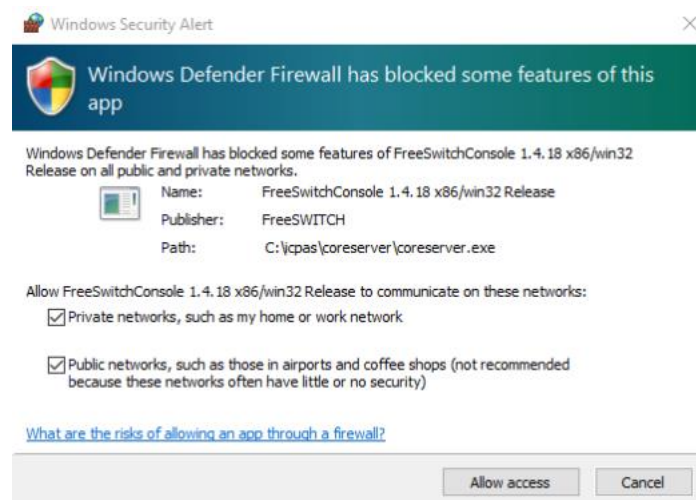
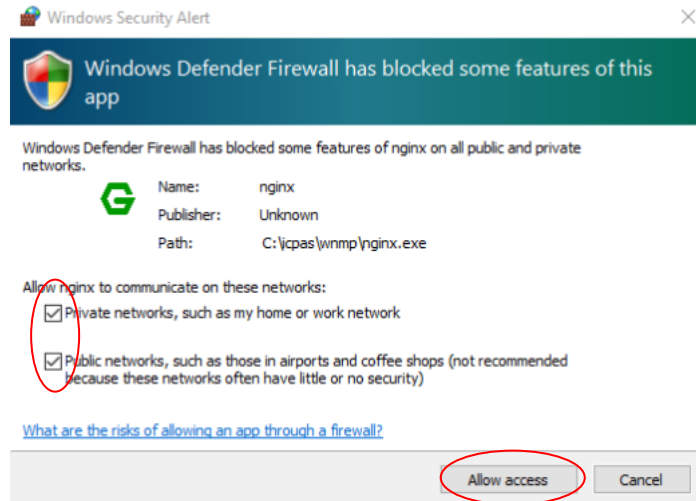
## 2. SOFTWARE INSTALLATION

**⚠ Warning: Some firewall software may effect the running of IP PA and intercom system software, therefore please close all the firewall software(including WindowsXP built-in firewall) before installing the software.**



Note: when the software is running for the first time after the installation, choose "private network" and "public network" in the security alert pop-up in Windows, and then click "allow access" to allow related programs of service software to pass through the firewall, as shown in the picture below.[Note: different system server settings may not same, take Win10 as an example for this settings]





## 2.1 Operate Environment

- ◆ CPU: above Intel I3 series processor
- ◆ Hard disk: 500G hard disk or above
- ◆ Sound card: the computer request for it and it must with stereo mixing function.
- ◆ Memory: 4G or above
- ◆ Network card: 100M/1000M self-adaption

## 2.2 Installation Steps

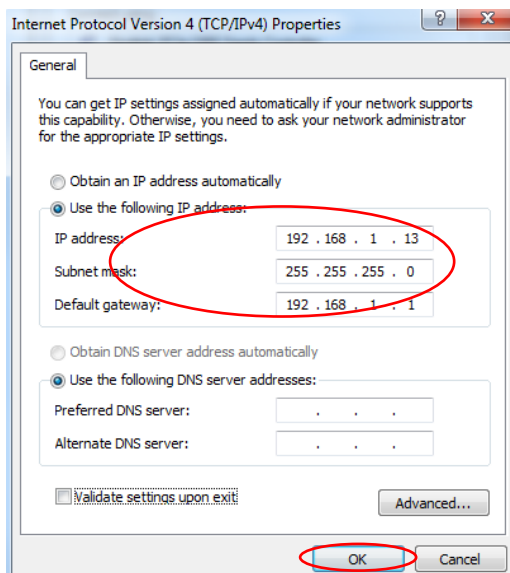
This software supports Windows 7 (including) above operating system( recommend Windows 10), and not supports Window XP operating system.

### Install Sever Software

Step	Operation	Diagram
1	Confirm the computer has 100/1000M network card and the drive program is correctly installed.	

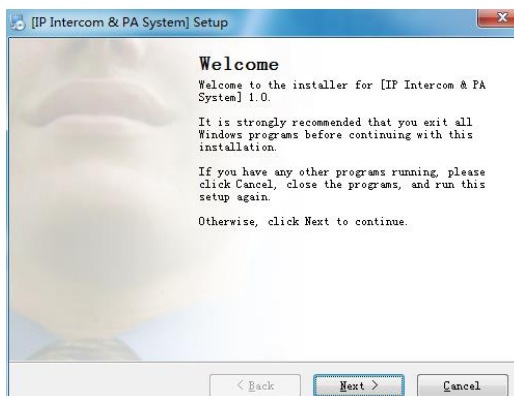
- 
- 2 In the TCP/IP settings of network can be set to automatically get the IP address.

**Note:** if the network didn't set DHCP service, please consult the network manager to get the available fixed IP.



- 
- 3 Put the system installation disk, in disk:/Setup/Catalogue, double click software program to pop up welcome interface, then click the NEXT.

Choose the installation path, click the NEXT till the installation is finished and the icon shows on the desktop.



- 
- 4 Right click the shortcut icon, and choose "attribute"- "compatibility", click the "run as administrator".
-

## 2.3 Software Operation

Double click “ICPAS controller” icon to enter server control interface.



**Open the server:** please check that the server IP address in “Local IP” rectangle is correct after opening the controller ( when there are several network cards, please bind one of them for IP intercom and PA system use), and then check whether all servers are started or not (note: defaults is “Auto Start”)

**Restart the server:** click “Stop All” first, and then click “Start All”

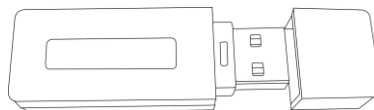
**Note:** 1) when server starts normally, the status bar displays ✓. If displays ✗, please click “Stop All” to stop all servers, and then click “Config” to check whether the server port is occupied or not.

2) Set IP access restriction: click **【Config】- 【IP access restriction】**, select “restriction” and add IP address, the restriction will be effective after preservation. IP address added access restriction allows access to the server, the factory default is unlimited ( all IP allow access to server).

## 2.4 Software Registration

User can get authorization to use the official version server software through serial number or dongle.

**Dongle:** directly insert dongle to the USB (drive-free), and then reboot the server software.



**License:** through the WEB to access the server IP address, the system will automatically pop up the registration information. Send the machine code to the manufacturer to get the license for the usage of the official server software.

**Note:** the server must be registered before normal operation.

### 3. SERVER SOFTWARE OPERATION DESCRIPTION

#### 3.1 Software Login

(1) In the web browser address bar, type https://server IP (for example: https://192.168.1.13), enter the user name and password in the pop-up login window.

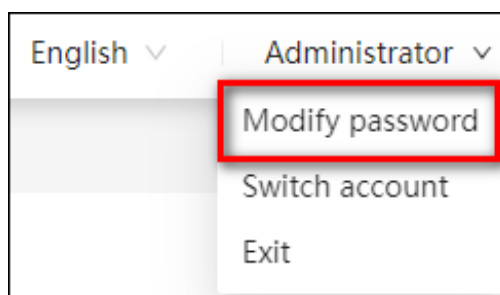
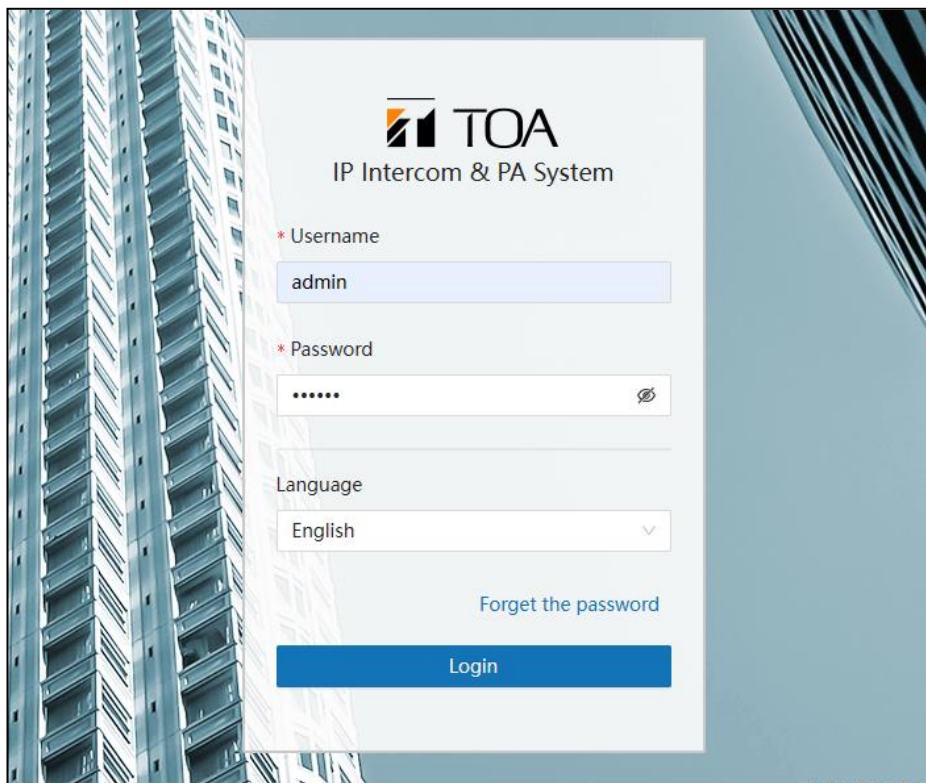
#### 3.2 Admin Login

When login for the first time , the default username and password are both admin , after press [Login] button, system will automatically display the option to change the password , in this case , the new password must be set .The password must contain at least three types of characters: uppercase letters, lowercase letters, digits, and special characters. The password must contain at least eight characters. Please modify the password periodically.

**The way to modify the password:**

After login successfully , click the “**Administrator**”in the upper right corner and choose “change password” to change password.

(2) After modify the password, enter the username and new password , click[login]to access to the software webpage.



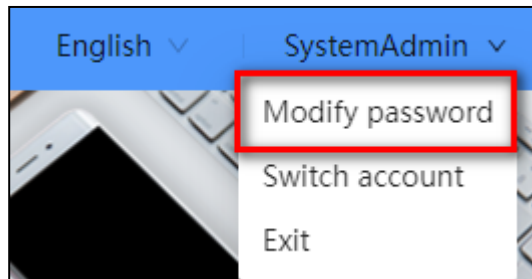
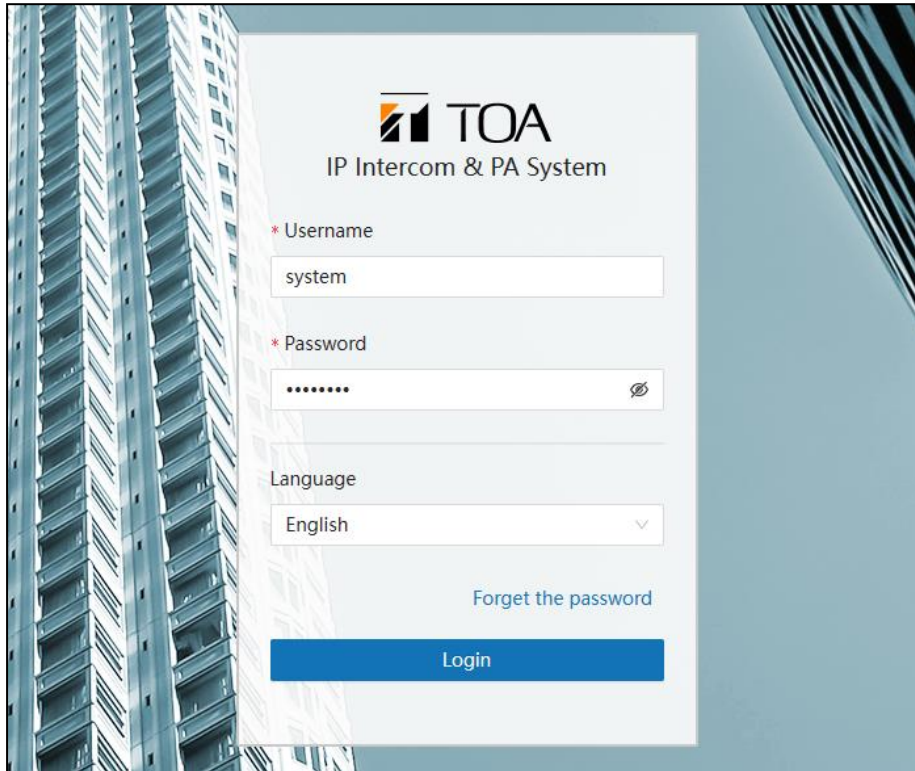


### 3.3 System Administrator login (for debugger login)

When login for the first time , default username is system, default password is Admin123 .

**The way to modify the password:**

After login successfully , click the “SystemAdmin” in the upper right corner and choose “change password” to change password.

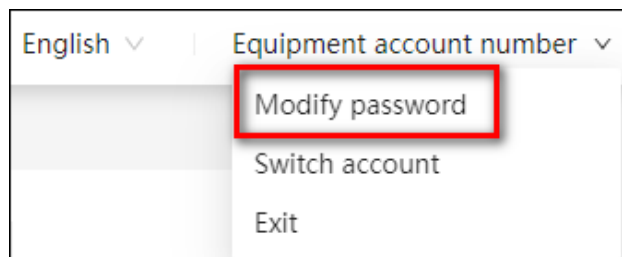
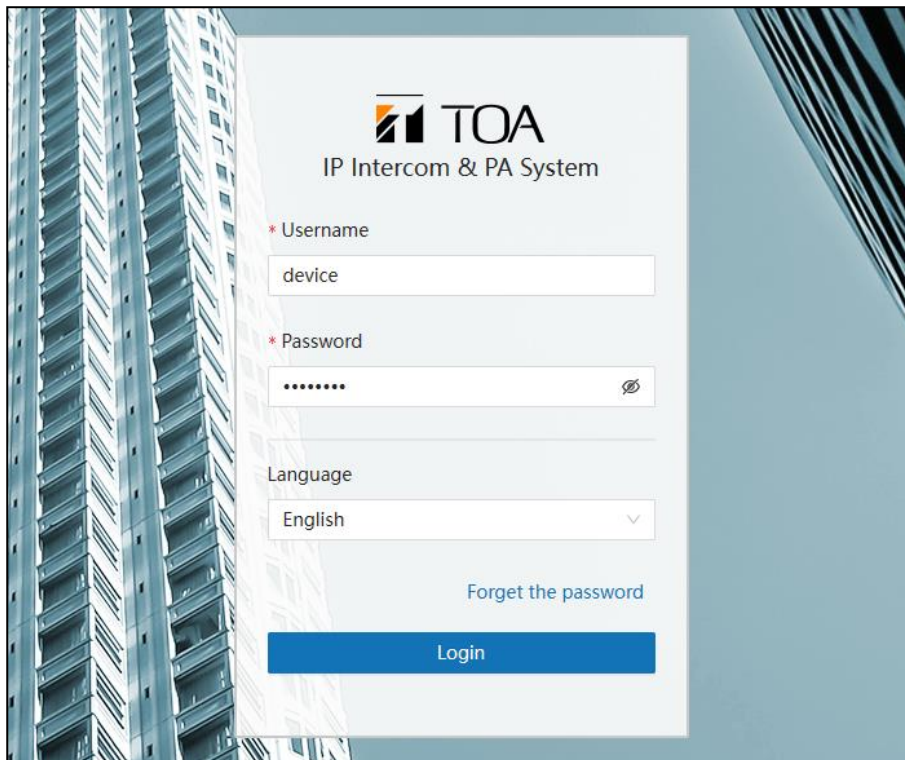


### 3.4 Device User Login

This user name must be correctly entered on the device for the device to obtain server information. When login for the first time , the default username is device , the default password is Admin123 , after press [Login] button, system will automatically display the option to change the password , in this case , the new password must be set .The password must contain at least three types of characters: uppercase letters, lowercase letters, digits, and special characters. The password must contain at least eight characters. Please modify the password periodically.

#### The way to modify the password:

After login successfully , click the “**Equipment account number**”in the upper right corner and choose “change password” to change password.



**Note:** If webpage login abnormal ,the browser version maybe too early ,replace the browser or upgrade the browser.

# 4. Administrator Interface

## 4.1 Overview

After successfully login server ,the overview interface can view the following contents:

(1)View terminal number、 session number、 task nmuber、 media number、 server number.

Terminal number: Display the number of all terminals in the system. Click to enter **【terminal List】** .

Session number: Display the number of terminals in the task (such as intercom, broadcast, monitoring, etc.), click to enter the [Report] - [real-time status] module.

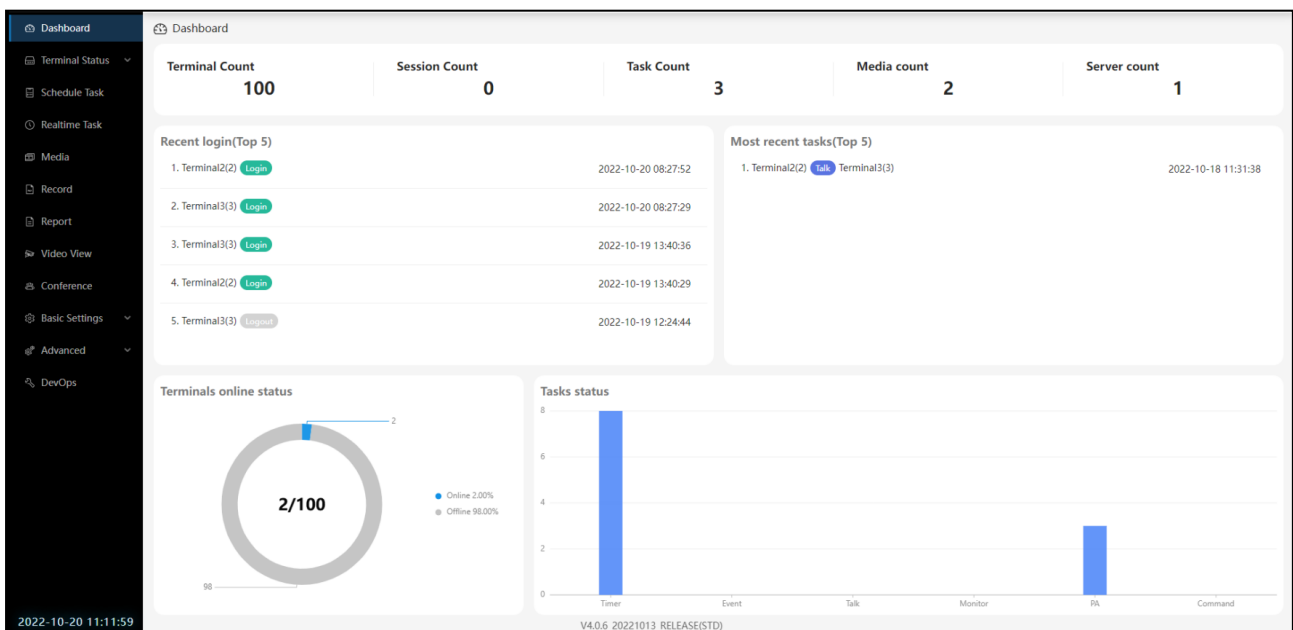
Task nmuber: Display the total number of scheduled tasks in the system. Click to enter the **【Scheduled Task】** module.

Media number: Display the total number of audio files in the system, click to enter the **【Media Library】** module.

Server number: Display the total number of associated servers in the system, click to enter the **【Server Interconnection】** module.

(2)In"Recent login" to view the top five terminals ; In "Recent task" to view the top five task terminal;

(3) View the number of online terminal、 offline terminal、 terminal in task in the fan chart ; View the task number of timing、 event、 intercom according to the task type in the bar chart.



## 4.2 Terminal Status

The “Status” shows terminal view mode, which supports table view, grid view.

**Note: The zone information and terminal information of each view must be set in 【Basic Settings】 - 【Zone Management】 and 【Terminal Management】 in advance.**

### Table View

The interface displays in table view and it can show the zone list, terminal login status ( online, offline), ID,name,IP address,and task status ( such as intercom, broadcast ,idle etc.)

Zone	State	ID	Type	Name	Local IP	Task	Audio Processing	Handle
1_Zone1	Offline	1	-	Terminal1	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
2_Zone2	Idle	2	XC	Terminal2	192.168.4.14:5060	Idle	Tuning parameter	Talk Monitor PA
3_Zone3	Idle	3	NAS	Terminal3	192.168.4.25:2046	Idle	Tuning parameter	Talk Monitor PA
Undefined zone	Offline	4	-	Terminal4	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
	Offline	5	-	Terminal5	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
	Offline	6	-	Terminal6	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
	Offline	7	-	Terminal7	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
	Offline	8	-	Terminal8	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
	Offline	9	-	Terminal9	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
	Offline	10	-	Terminal10	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
	Offline	11	-	Terminal11	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
	Offline	12	-	Terminal12	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
	Offline	13	-	Terminal13	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA

### Table view interface:

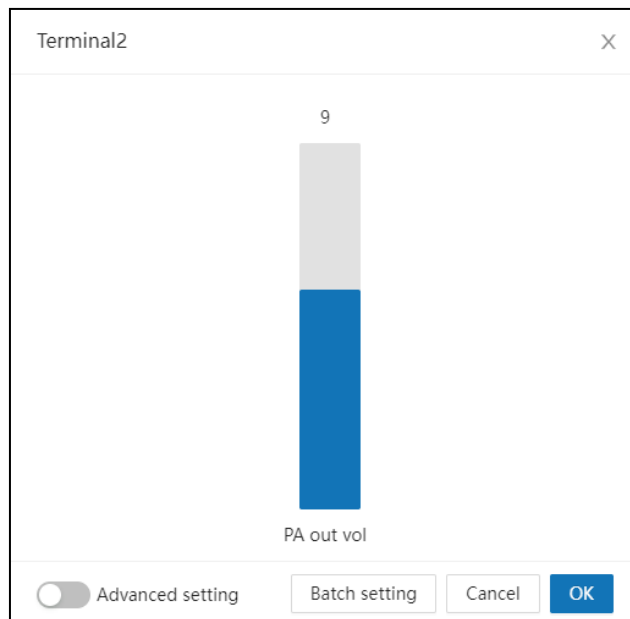
The interface displays in table view and it can show the zone list, terminal login status ( online, offline), and task status ( such as intercom, broadcast ,idle etc.)

Zone	State	ID	Type	Name	Local IP	Task	Audio Processing	Handle
1_Zone1	Offline	1	-	Terminal1	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
2_Zone2	Idle	2	XC	Terminal2	192.168.4.14:5060	Idle	Tuning parameter	Talk Monitor PA
3_Zone3	Idle	3	NAS	Terminal3	192.168.4.25:2046	Idle	Tuning parameter	Talk Monitor PA
Undefined zone	Offline	4	-	Terminal4	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
	Offline	5	-	Terminal5	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
	Offline	6	-	Terminal6	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
	Offline	7	-	Terminal7	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
	Offline	8	-	Terminal8	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
	Offline	9	-	Terminal9	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
	Offline	10	-	Terminal10	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
	Offline	11	-	Terminal11	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
	Offline	12	-	Terminal12	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA
	Offline	13	-	Terminal13	0.0.0.0	Idle	Tuning parameter	Talk Monitor PA

## Terminal Volume Settings

- 1 Broadcast output volume can be set as double click the terminal or volume, click the volume bar to increase or decrease the volume. Press "OK" to run the next task at this volume, the task can be performed in this time only if click "Cancel" and the next time will not.

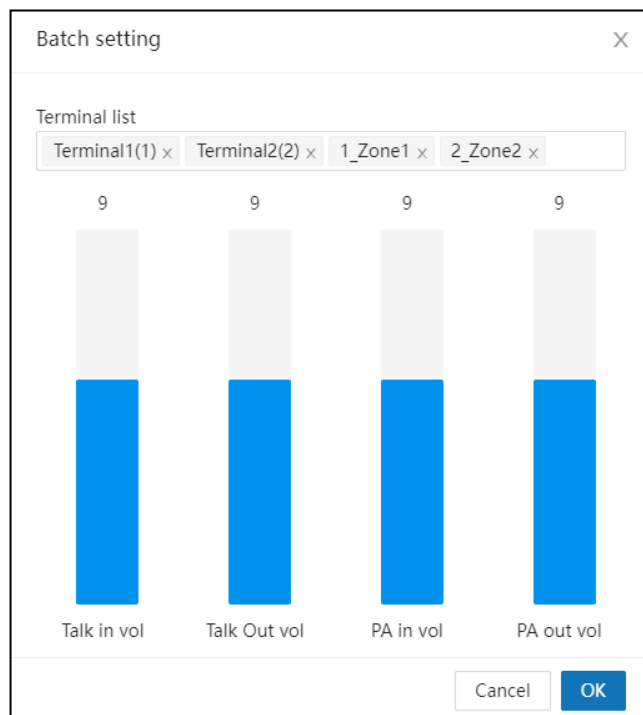
Note: turn on the "Advanced Setting" to set the intercom input and output volume, and the broadcast input and output volume.



## 2 Batch Setting

Click "Batch Setting", and choose the target terminal in the list, click the volume bar to increase or decrease the volume.

**Note: the volume of all terminals will be same after saving the batch setting.**



### 3 Audio Processing

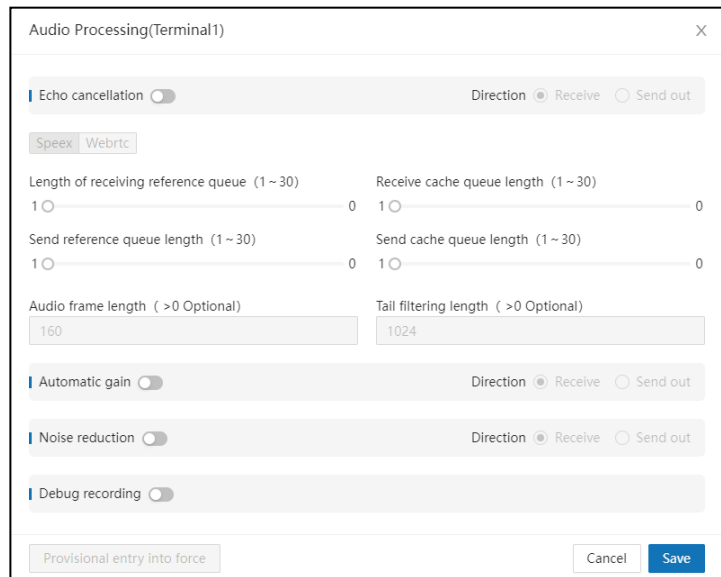
Click on “Audio Processing” to process the audio in the receiving and sending directions of the terminal.

**Echo cancellation:** Set whether to enable the echo cancellation function and adjust related parameters. After the echo cancellation function is enabled, the echo during intercom can be suppressed.

**Automatic gain:** Set whether to enable the automatic gain function. After this function is enabled, the input and output volume of the terminal can be multiplied according to the surrounding environment.

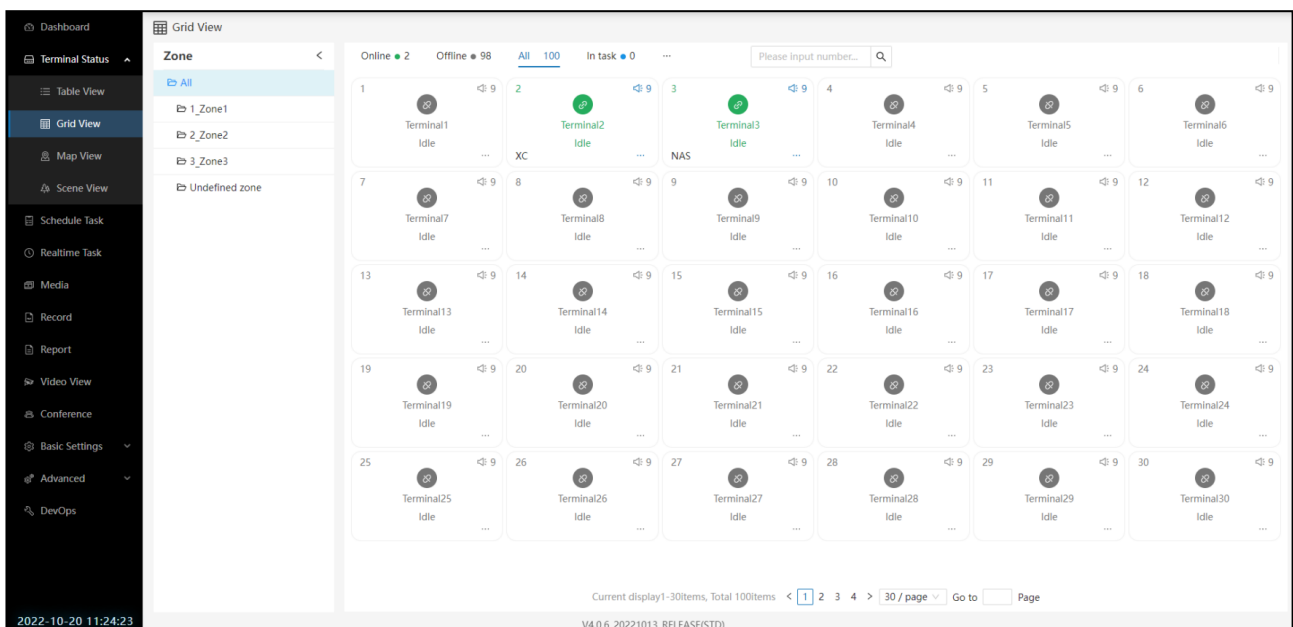
**Noise reduction:** Set whether to enable noise reduction function.

**Debug recording:** it is a recording tool used to debug audio processing effect , it is disabled by default.



### Grid View

The interface displays in grid and the grid view can show the zone list, terminal login status ( online, offline) and task status ( such as intercom、 broadcast 、 monitor、 conference、 Idle etc.)



- Terminal volume adjustment

Double click one terminal or click  icon to set broadcast and intercom volume, for details, see “Volume Settings” in table view.

### Map View

The terminal location and status can be displayed in the map form. Users can make a marker on the map to


clearly get the login address information. In map view, the target terminal can initiate intercom, broadcast, monitor and view the videos as well.

### Add terminal map marks

Step	Description
1	Select the terminal needed to be added on map in terminal list, and then right click the map to add the it to the corresponding position.
2	Right click on the appointed position on the map to add terminals.

You can also click Download Template on the interface to download the terminal import template. After editing the terminal information, click Import to import the terminal.

Note: 1) Move marked terminal position: right click appointed position on map directly after selecting the terminal in the terminal list.

2)Delete marked terminal position: click the terminal and the delete button  on the pop-up information bar.

### Initiate intercom, broadcast and video

In the Map view, Marked terminals can be quickly view in the terminal list. Click terminal icon on the map to check terminal login status (online, offline), and task status (intercom, broadcast, and Idle).

Click the terminal on the map, and then click the corresponding button to initiate intercom, broadcast or monitor to this terminal.

**Note: who initiate the intercom, broadcast and monitor will binding the center microphone in 【Basic Settings】 - 【User management】 , as the right picture shows.**

### Video

Click the terminal on the map, then click the video to check the terminal camera video in real-time

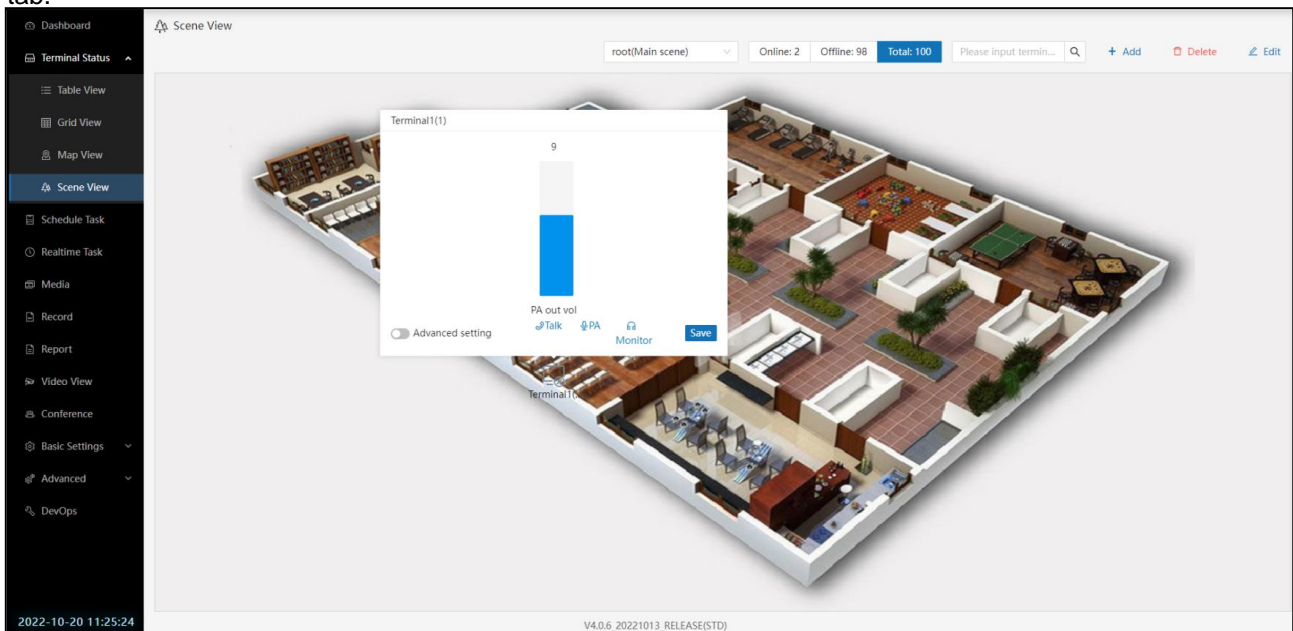
**Note: This function requires video to be bound in the “Terminal” tab. see [Basic Settings] - [Terminal] as below for details.**

### Scene View

In the Scene View, it can display the terminal login location. Users can customize scene image, and add terminal mark or picture on the image.

It can also add the scene mark on the scene map. Click the scene mark to switch the scene. ( click the left upper selection button to select different scene)

Click the terminal mark on the scene map to check the terminal login status (online, offline), task status (intercom, broadcast), at the same time, it can initiate intercom, broadcast, monitoring and so on functions (intercom, broadcast, monitoring initiator is the central microphone which is bound in [Basic Settings] -[User] tab.

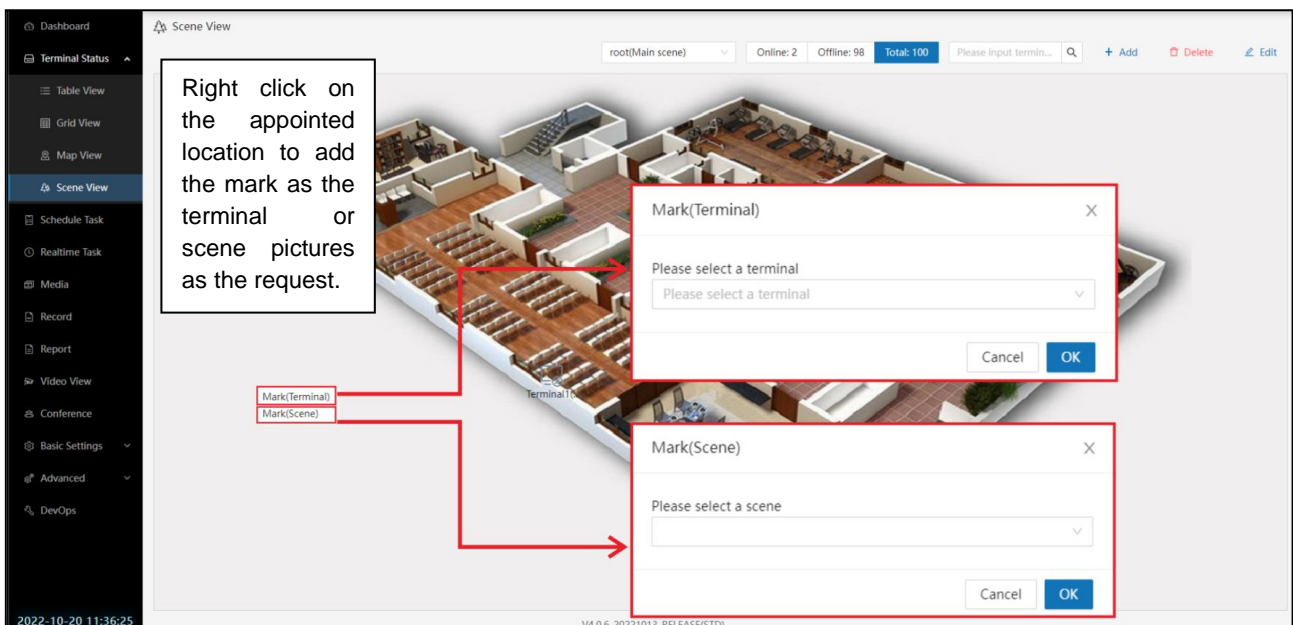


### Self-defined scene mode

#### Step

#### Description

- 1 Click “+” button to add scene pictures. It can add more scene pictures as the request.
- 2 Right click on the appointed location to add the mark as the terminal or scene picture as the request.

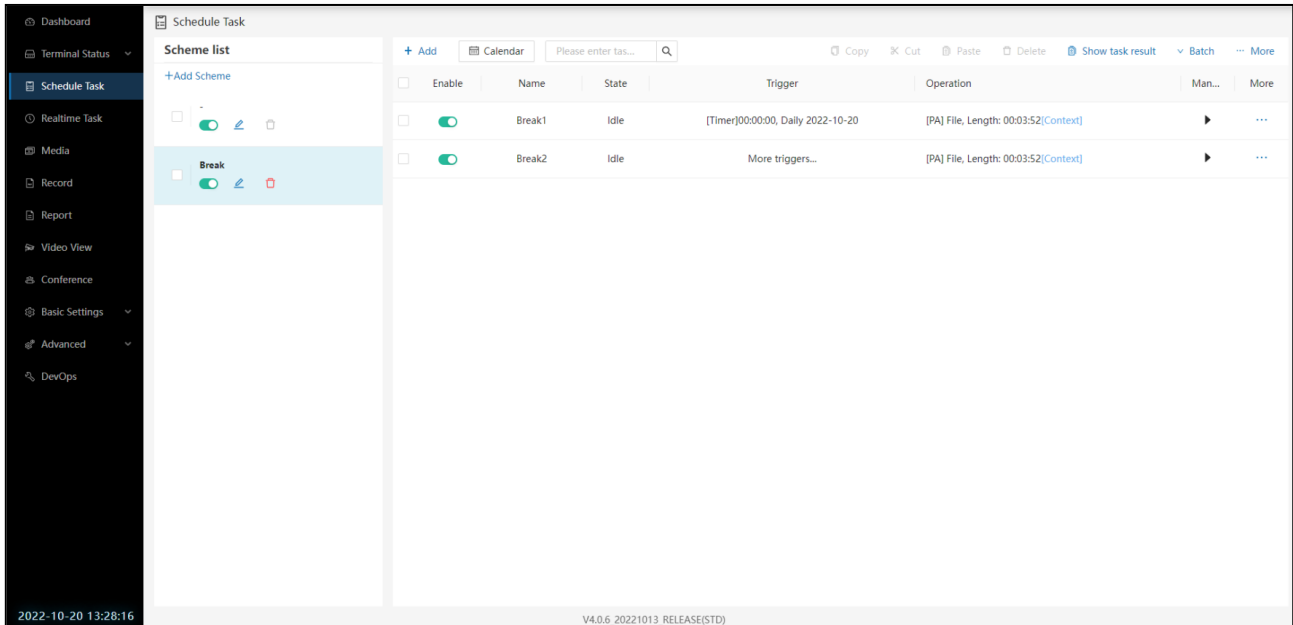


## 4.3 Schedule Task

Users can set such tasks as the broadcast, alarm, intercom, timing programs in the [Schedule task]. When the server receives the triggering signal from terminals, it will automatically execute operations without the



manual intervention. For example: add one timing ring, when select “timing” in 【 Add-Trigger】 , it will set up the execution time. In the [ Add -Operation] to set as broadcast. When it comes to the scheduled time, the system will broadcast the task. Please see the following detailed operation:

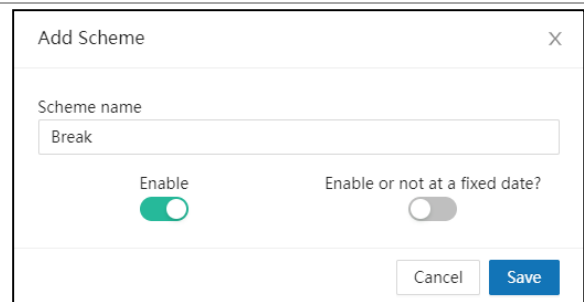


## Add Scheme

### Add scheme

Click [+Add Scheme](#) to add the scheme. On the pop-up task window to set the scheme name.

Note: Only uppercase and lowercase characters and digits can be entered in the scheme name.



## Add Task

### Professional edition:

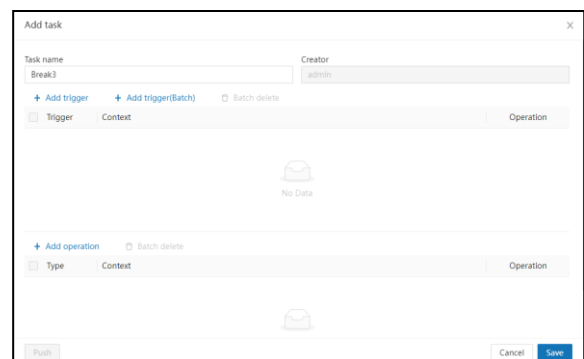
### Add Task

Click to add the task icon [+ Add](#) , on the pop-up task window to set the task name , triggers and operation. It can add various operation at the same time for one task. For the task with the same time and level, it can set the play order.

Task adding steps are as follows:

1. To set a name for a task ;
2. Add trigger (see "Add Triggers" as follow for details).
3. Add operation (see "Add Operation" as follow for details);

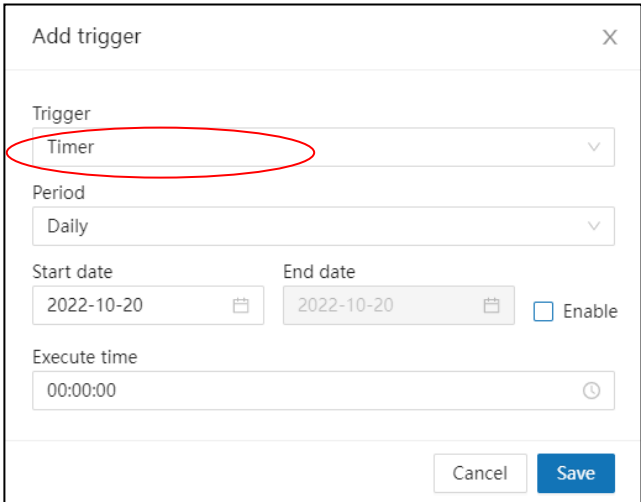
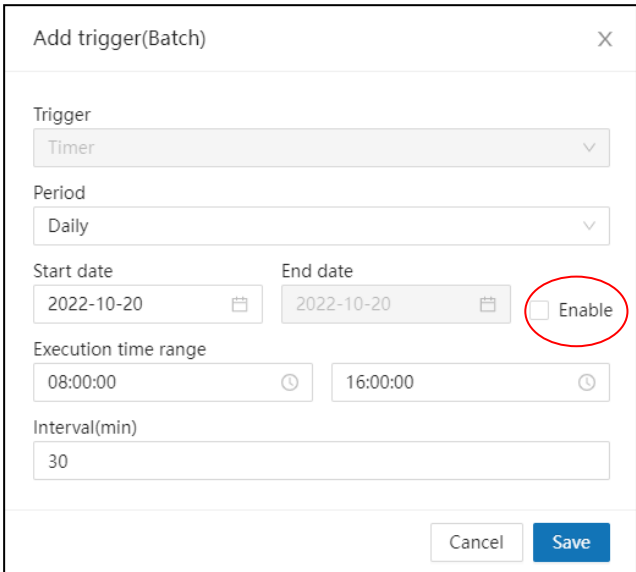
**Push task: When a task is finished, click “Push task” to send this task to device. The push task can be executed when the device is offline. (Only some**



terminals support)

It will be effective after saving settings.

## Add trigger

No.	Functions	Diagram
1	<p><b>Add trigger: Timer</b></p> <p>Timing task is to execute task at the appointed time.</p> <p>After setting the execute time, schedule, start and end date and save. It will automatically run at the appointed time.</p> <p><b>Note: the start date must be within the start date range in the scheme.</b></p>	
	<p><b>Batch addition (trigger)</b></p> <p>Timing task can work with batch addition.</p> <p>Task cycle can work with daily/weekly/time;</p> <p>Set the task start time, execution time range and interval time. The task will be executed as setting time after saved.</p> <p>Note: choose enabled to set the end of task date</p>	

## 2 Add trigger: Event

### Event type

[Alarm]: The alarm trigger port is set up and the event terminal is checked. When the terminal alarm input is triggered, the specified event set in the "operation" is triggered, such as playing the specified note, triggering the dialogue, and so on, and the specific event is described in the "add operation" below.

"Is it mandatory to stop? : Under the condition of specified playing time, when checked, the alarm input is disconnected, that is, the task stops; If this parameter is not selected, the task will be completed as long as it is triggered, regardless of whether the input is closed or not.

[button]: Set the terminal button number and check the event terminal. When the terminal presses the specified button, it triggers the specified event set in the operation.

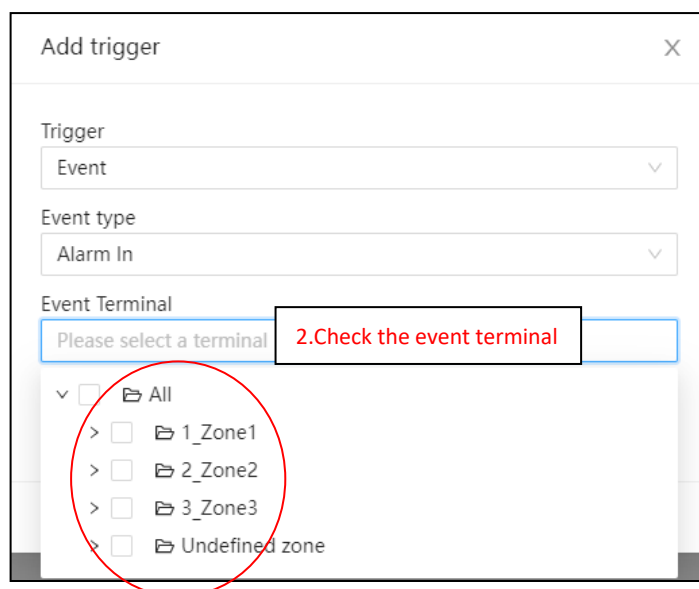
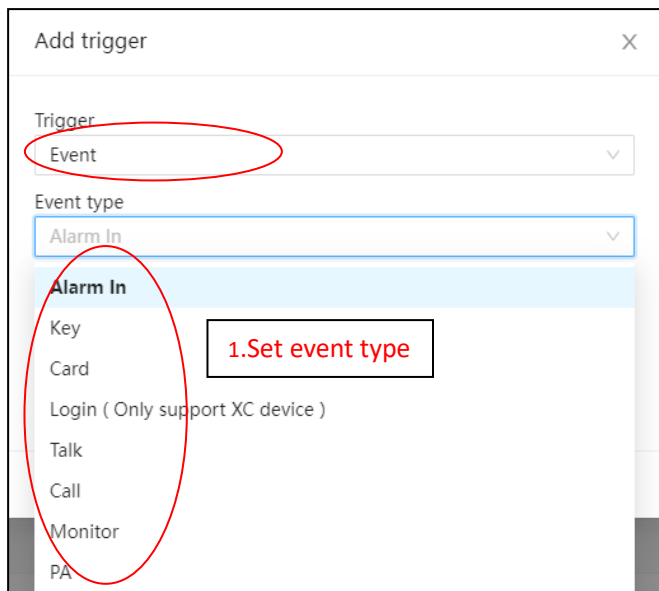
[Card]: Check the event terminal and trigger the specified event in the operation when the terminal is swiping.

[Login]: Check the event terminal and trigger the specified event in the operation when the terminal lands on the server.

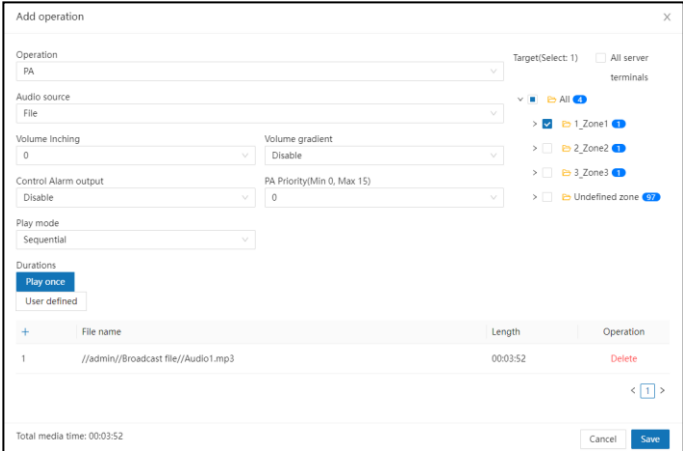
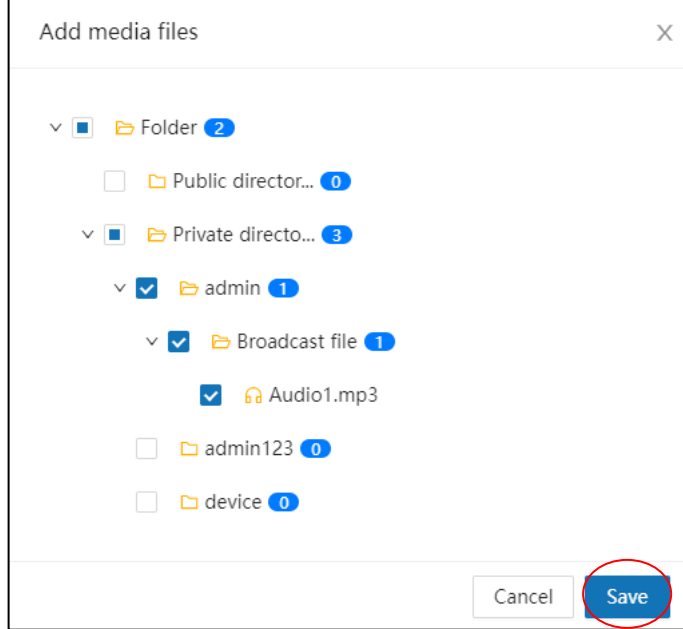
[Talk]: Check the event terminal, when the terminal works, it will trigger the specified event set in the operation.

[Monitor]: Check the event terminal, when the terminal is monitored, it will trigger the specified event set in the operation.

[PA]: Check the event terminal, when the terminal initiates or receives the broadcast, it triggers the specified event set in the operation.



## Add operation

No.	Functions	Diagram
1	<p><b>Add operation: PA</b></p> <p>When the operation is set to broadcast, the task is to the o time, or the terminal specified event is triggered (the specified event is the type of event set in the trigger), and the specified audio is played.</p> <p>1.1 audio source type: [file]</p> <p>①Media file adding: click + button to choose audio file which is need to be added in the file list.(The audio files in the list from the media library. Please add audio files in the media library ahead of time.)</p> <p>(Note: a task can be added many audio files, but the the file format must be same. Eg, you can choose mp3 or WAV format, but you can not choose mp3 and WAV format.)</p> <p>②Select the target terminal in the target area.</p> <p>③Volume gradient: set whether to enable volume gradient function.</p> <p>④Synchronous control strong cut: when the timing task runs, a short-circuit signal is generated at the same time, which is used to control the strong cut signal output of the terminal in the target area.</p> <p>⑤Broadcast level: when multiple tasks meet the date of execution on that day, the highest level is executed first and at the same level, the terminal receives the task first by default, which can be modified in broadcast Settings.</p> <p>⑥Play mode: can be set to play in sequence or random play (valid when the duration is not 0)</p> <p>⑦The time of duration: audio broadcast time settings, default as broadcast only once. Support customized broadcast time settings. If the broadcast time is less than the file time, the broadcast will be</p>	 

automatically interrupted at the appointed time. If the time is longer, it will in loop broadcast.

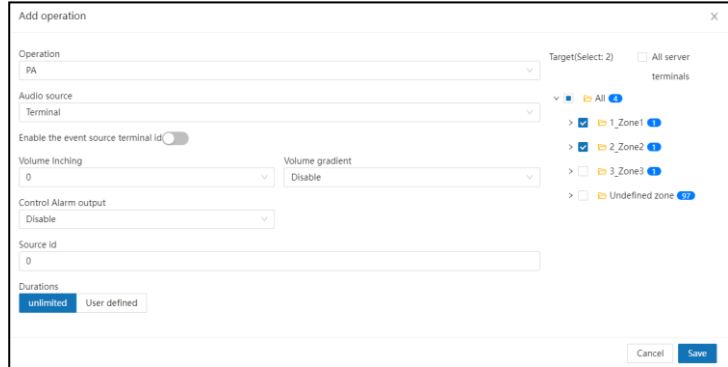
### Add operation: PA

1.2 audio source type: [terminal]

When the audio source type is terminal, when the trigger is triggered, the broadcast microphone will be broadcast to the target area. For example, set the sound source terminal number 2, and at the specified time, terminal 2 will broadcast the target area.

#### Enable event source number: the event terminal will be broadcast from the event terminal

Duration: The default duration is unlimited. Supports user-defined duration, automatically interrupts broadcast when the specified duration is reached.



### Add operation: PA

1.3 Audio resource type:【 Server Sound Card】

Collect audio resource of computer server sound card to broadcast.

#### Add operation:PA

1.4 audio source type:[speech synthesis]

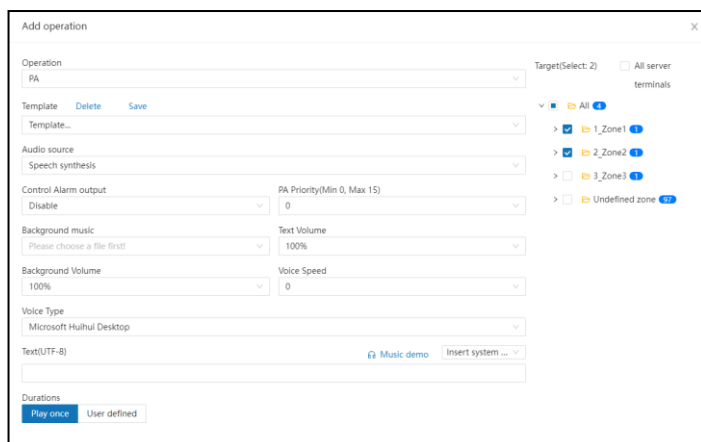
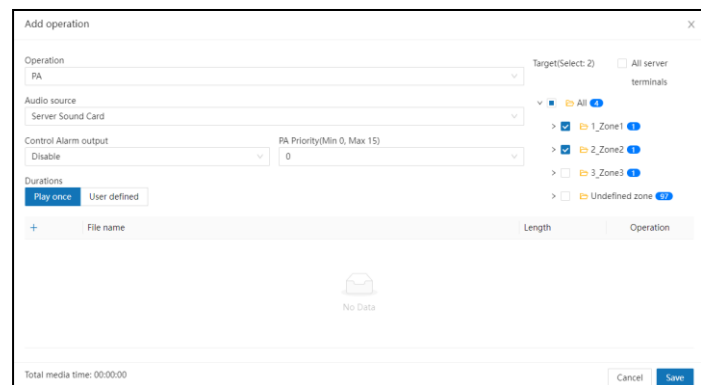
Broadcast by converting text to audio.

#### General speech synthesis broadcast:

Enter the text to be played in the "speech synthesis" text box, select the target terminal and press "save".

#### Event triggers speech synthesis broadcast and automatically call the event terminal name:

Add a trigger and set the trigger type to "Event", the event type can be customized, then select the event terminal.



Add operation, operation type choose "PA"- "speech synthesis", click "Insert system parameters", speech synthesis text box will automatically insert {terminalname}, input text content before and after {terminalname}. After save take effect, the terminal name and text content of the event will be automatically broadcast when the specified event is triggered.

For example, set the trigger type to "Event"- "Login", and set the event terminal to Terminal 5. Then click "Add operation"- "Speech synthesis", and then click "Insert system parameters", enter "need support" after {terminalName}, when terminal 5 logs in to the server, the voice will be played to the specified area: terminal 5 needs support.

## 2 Add operation: Talk

When operation is set as talk, and set start panel ID and end panel ID, set to automatically initiate monitor at the specified time ( or triggered pointed event)

Note; terminal with panel, please input panel ID.

Duration: set talk time, in seconds. Talk can not be hung up during the set time range. If have not time requirements, it can be set to 0 according to the real situation.

Enable source event ID: check event terminal from added trigger and initiate talk to target terminal.



The screenshot shows the 'Add operation' dialog box with the following fields and options:

- Operation: Talk (selected in a dropdown menu)
- Enable the event source terminal id:
- Start terminal ID: [text input field]
- Start panel ID: 0
- Receive terminal ID: [text input field]
- Receive panel ID: 0
- Durations: unlimited (selected), User defined
- Buttons: Cancel, Save

## 3 Add operation: monitor

When operation is set as monitor, and set start panel ID and end panel ID, set to automatically initiate monitor at the specified time ( or triggered pointed event)

Enable source event ID: check the event terminal and monitor the target terminal.

Note : only the terminal with monitor function has the right to initiate monitor.



The screenshot shows the 'Add operation' dialog box with the following fields and options:

- Operation: Monitor (selected in a dropdown menu)
- Enable the event source terminal id:
- Start terminal ID: [text input field]
- Start panel ID: 0
- Receive terminal ID: [text input field]
- Receive panel ID: 0
- Durations: unlimited (selected), User defined
- Buttons: Cancel, Save

#### 4 Add operation: Delay

The server waits for the specified period to perform the next operation.



#### 5 Add operation: Command

##### 5.1 Command type: volume

Terminal volume settings when the event is triggered.

##### 5.2 Command type: Alarm output

Alarm output number and type (closed/open) to corresponding device trigger settings, and the alarm output port closed/open durationtime.

##### 5.3 Command type: Remote play

You can set the file number in the remote broadcast control folder and select the target terminal. It will play the file when the task is run manually or automatically.

##### 5.4 Command type: Publish info

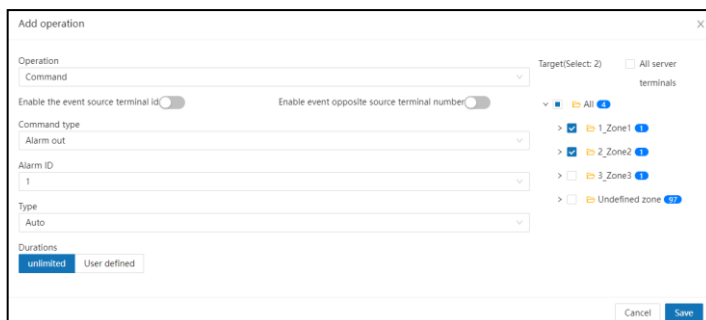
It sets the LED screen display content (only part of the terminal support).



① Publish common text: Select the target terminal and enter the display text in Send Content. When the task is run manually or automatically, the LED screen will display the text content of the Settings.

② Countdown to the National College Entrance Examination: To enable the countdown to the National College Entrance Examination, you must add Trigger first. Set Trigger to Timing, cycle type to Daily, select start date and end date (National College Entrance Examination date), and execution time to 00:00.

Trigger setting is completed, and then in the "Add operation" - "information release" setting, pressing the Countdown button, it will automatically generate the "left \*\* days from the college entrance



examination" content, save after running the task, LED screen will show the college entrance examination countdown: "left \*\* days from the college entrance examination", at the same time, the system will automatically update the countdown days every day.

③Examination room release: When setting information release, click "Examination room release", select the test room, save and run the task. The content displayed on the terminal LED screen in the examination room is the examination room name set by the server. Note: The name of the examination room and the examination room terminal can be temporarily added or added in the service software [Broadcast Setting] - [Examination room Setting].

Enable event source terminal number: the command terminal is the target one which is chosen by trigger.







After adding tasks, task state will be displayed in the scheme list, as the below picture shows:

Enable	Name	State	Trigger	Operation	Man...	More
<input type="checkbox"/>	Break1	Idle	[Timer]00:00:00, Daily 2022-10-20	[PA] File, Length: 00:03:52[Context]	▶	⋮
<input type="checkbox"/>	Break2	Idle	More triggers...	[PA] File, Length: 00:03:52[Context]	▶	⋮

### Enable or disable task/ modify or delete task/ start or stop task:

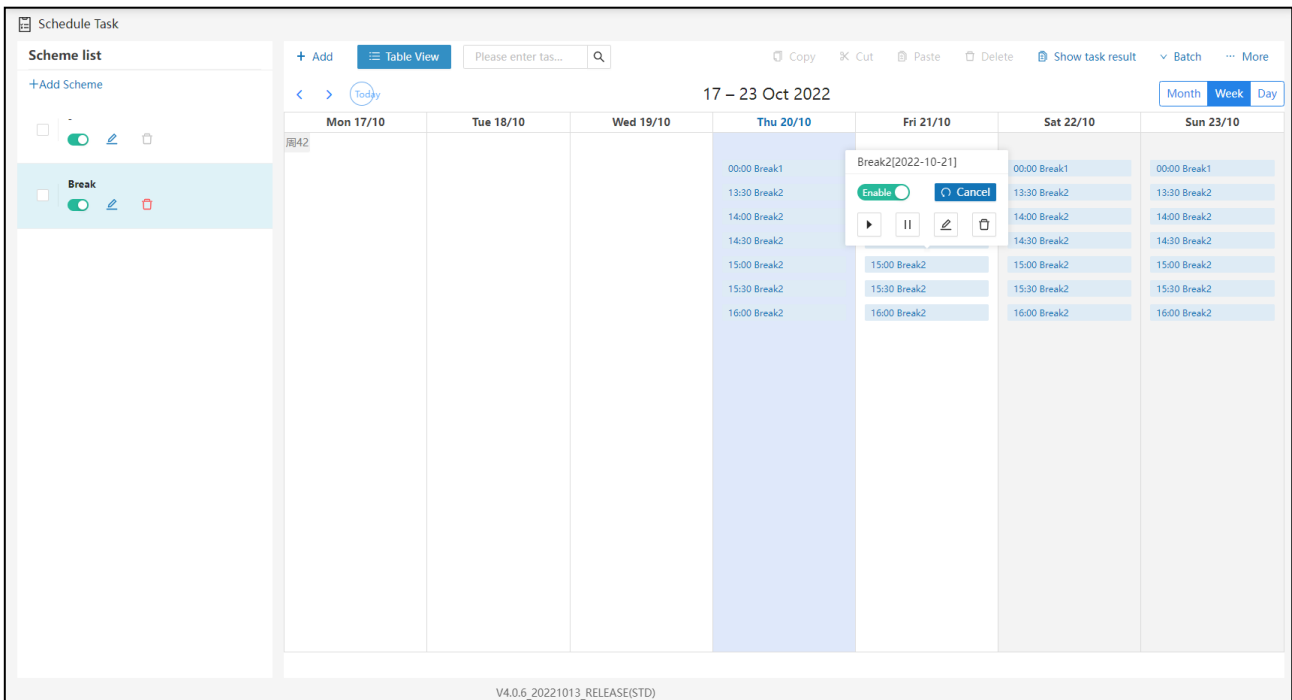
- enable or disable task: Check task and click button in the toolbar to enable or disable task;
- Modify task: Double-click the task directly or click the "More" button at the far right of the task list, and select the "Modify" option to modify the task. (Double-click the to modify the task)
- Delete task: Select the task, click the "More" button at the far right of the task list, and select the "Delete" option to delete the task;
- Manually start/stop the task: Select the task, click the "Start" button to manually start the task, click the "Stop" button to manually stop the running task; Or check the specified task, click button to manually run or stop the task.
- Copy/Cut/Paste: Check the task, click the "Copy" or "Cut" button, select another







	program, and click the "Paste" button to paste the task to other programs.
● Daily task	Click the button  and select "Daily task" to view the scheduled task of the day;
● Batch	Check the task and click the "Batch" button to batch modify the task cycle type、add terminal、delete terminal、sound source modification.Supports query of temporary batch records.
● Sort by time	Click  button, choose "Sort by time" to sort by task execute time.
● Sort by name	Click  button, choose "Sort by name" to sort by task name.
● Export	Click  button, choose "Export" to export the scheduled task.
● Import	Click  button, choose "Import" to import scheduled tasks.
● TemplateDownload	Click  button, choose "TemplateDownload" to download the template for importing scheduled tasks.

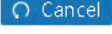
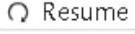
### Table view/calendar view

On the main interface of schedule task , default display is table view. Click the "Calendar View" button on the planned task interface to switch in calendar view, which supports displaying monthly, weekly and daily task.




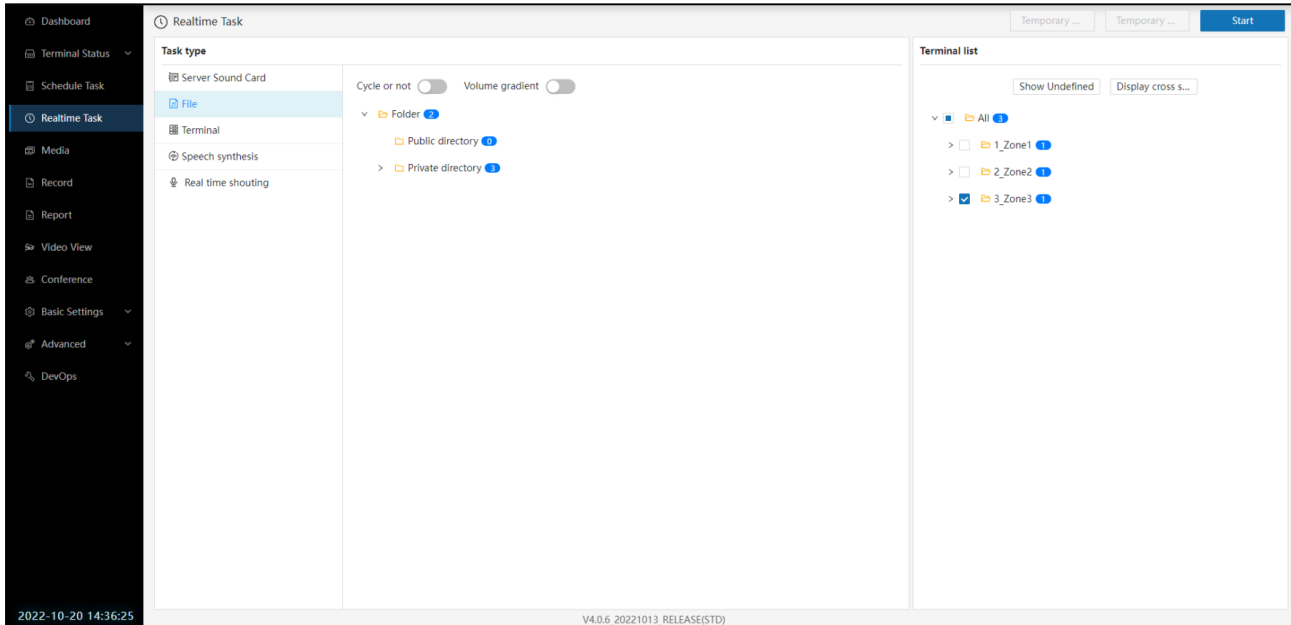
Click a task, press 、 button can be opened or closed the task;

Press     button can manually run、stop、modify、delete task .

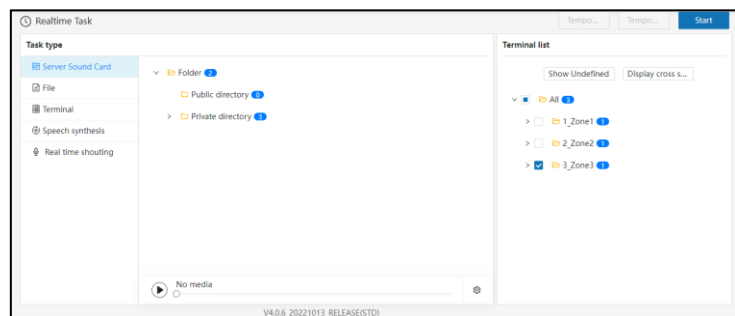
Click a task, press 、 button can delete or resume the current task temporarily .

## 4.4 Real-time Task

Real-time task supports file, terminal and speech synthesis broadcast. Select broadcast type and check target terminals, and then click  to initiate real-time broadcast.

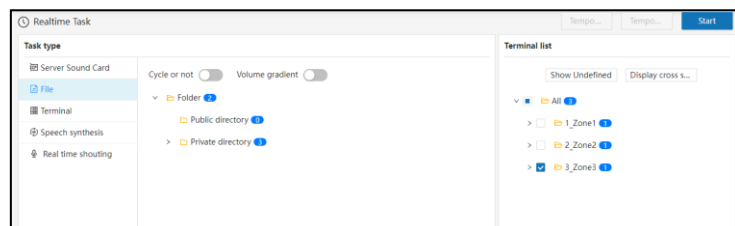


① **Server sound card:** collect computer sound card on the server to broadcast to target terminal.



② **File broadcast:** use audio file of media library to broadcast to the target terminal.

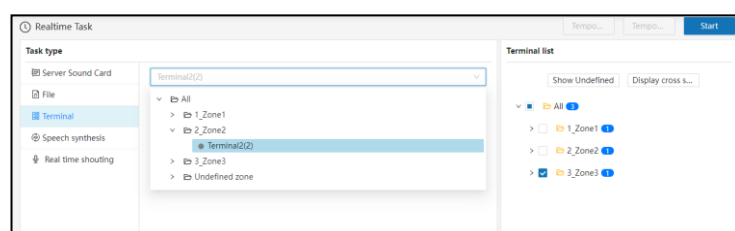
Operation method: Select "File" for broadcast type, and then left-click to select audio files in the file list (please add audio files in the "Media Library" module in advance), then select the target terminal, and press the "Start Broadcast" button to broadcast.



**Note:**left click to select the audio, double click can online audition.

③ **Terminal broadcast:**Set terminal ID of initiating broadcast , the terminal will initiate broadcast to target terminals.

Operation Method: Set Broadcast type to "Terminal", set the ID of the terminal that initiates broadcast, select the target terminal, and press the **【Start Broadcast】** button. The terminal can initiate broadcast to the



target terminal.

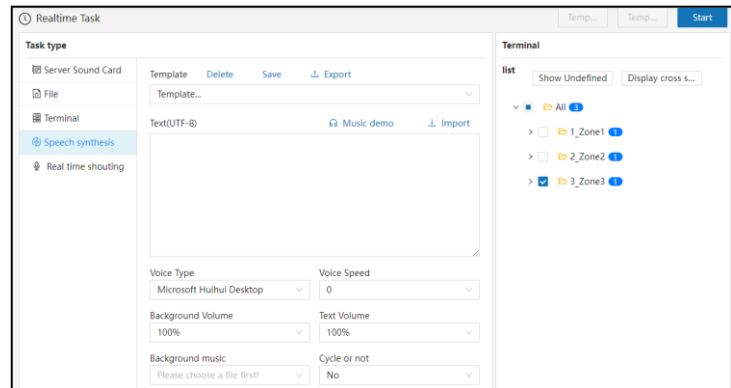
④ **Speech synthesis:** Broadcast to the target areas by text convert to audio.

Operation method: Input the broadcast content in the "Speech Synthesis" text area, and set the voice type, speed, background music, volume and other information. Then select the target terminal and press the **【Start Broadcast】** button to broadcast. Voice Speed: Set the speed of the speech during speech playback. When set in 0, it means playing at normal speech speed.

Background music: set the background music of voice broadcasting. The background music is an audio file uploaded to the media library.

Text template settings: input the words in the speech synthesis, and then click "Save" to input the template title in the pop-up dialog box, it will be effective after saving. Choose the corresponding template to make broadcasting in the next time. Choose the corresponding template ,press"delete" button to delete.

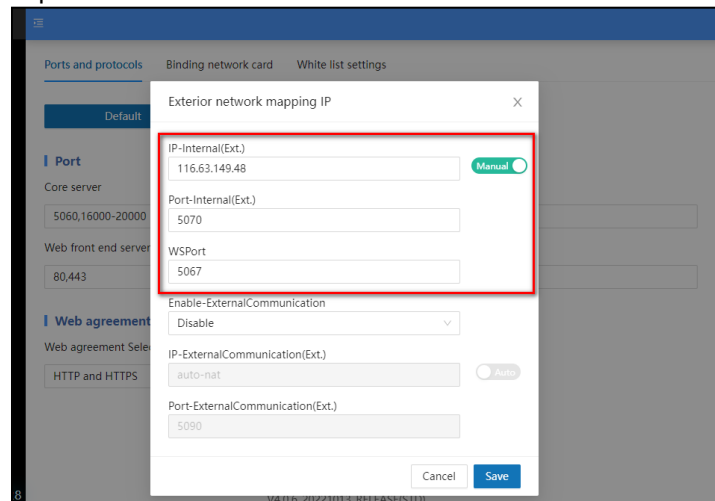
Export audio:Export text audio files to a specified path.



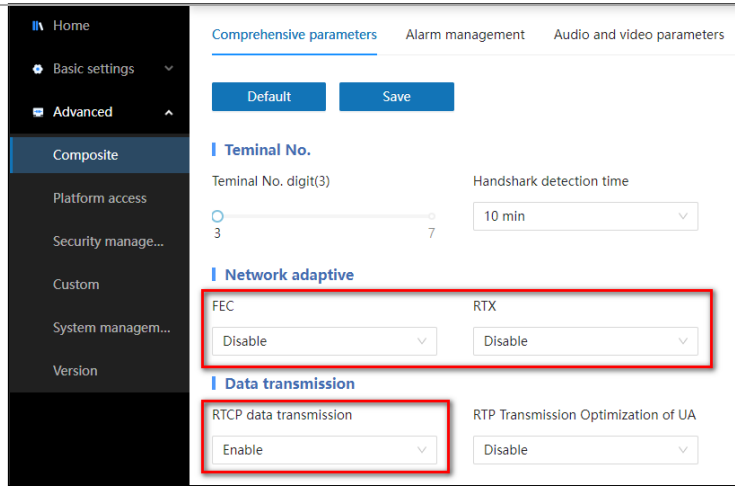
When you use Real time shouting function, you need to configure it.

1. When you access the server from the internet, you need to configure internet mapping on the web. The configuration depends on the actual environment.

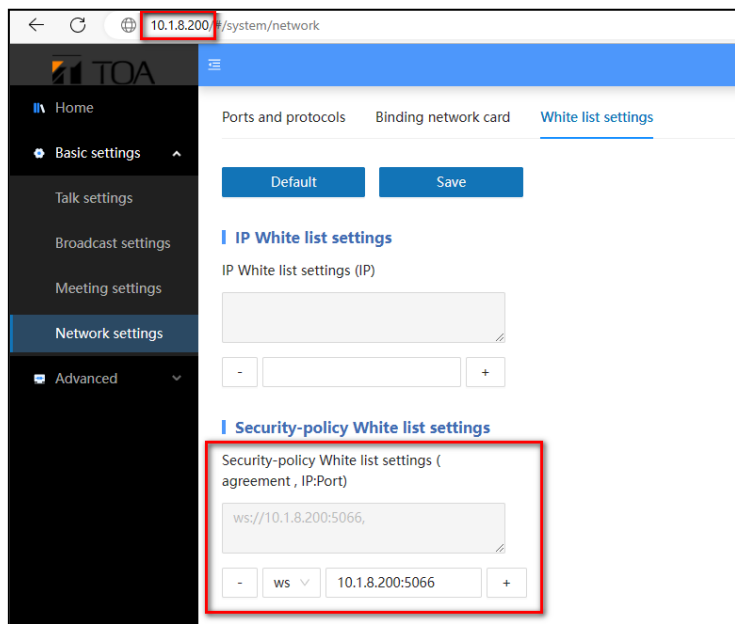
⑤ **Real time shouting:** Set Whether to enable real time shouting function.



2. Disable the Network adaptive(FEC, RTX), and enable the RTCP data transmission function.



3. Nginx configuration: To send sip signaling through the web, we need to use the websocket. The configuration of the web page is as follows:



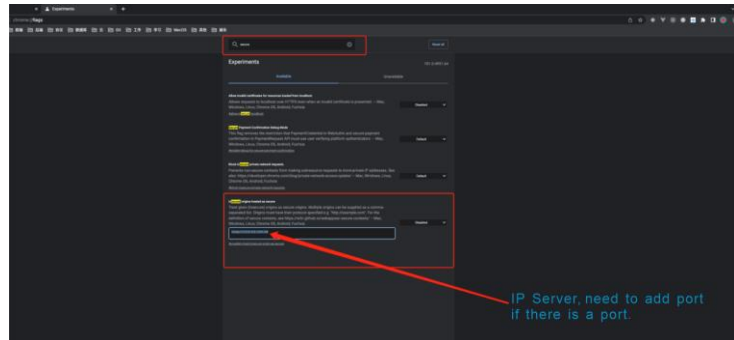
**Note:**

1. If external network mapping is performed, then use the mapped ip address. If not, then use the ip address that the XC9000 server bound.

2. For ws port mapping, 5067 is used (the same figure as above); If there is no mapping, fill in 5066. (5066 is the default boot port for ws)

4. Special note: Please ensure that the browser has the microphone permission. In Google Browser, enter:

chrome://flags in the url, and restart the browser after the modification is complete.



5. Restart the server and browser after the preceding configurations are modified.

## 4.5 Media

Users can upload audio recourse to media as the audio recourse of timing bellling, broadcast and real-time tasks. Audio recourse of media support download, online audition and delete.

### Add audio files

1. Click the [Add Folder](#) button to build new files catalog.

**Note: The file directory name can contain only uppercase and lowercase characters and digits.**

2. Select pointed catalog, click [Upload file](#) button to upload audio files need to be added to the media library, file format supports MP3 and WAV. **(It is ok for adding different bit rate audio files, the system background will be automatically converted to qualified bit rate files)**


File type	File name	File size	Operation
mp3	Audio1.mp3	8.96M	Download Music demo Delete

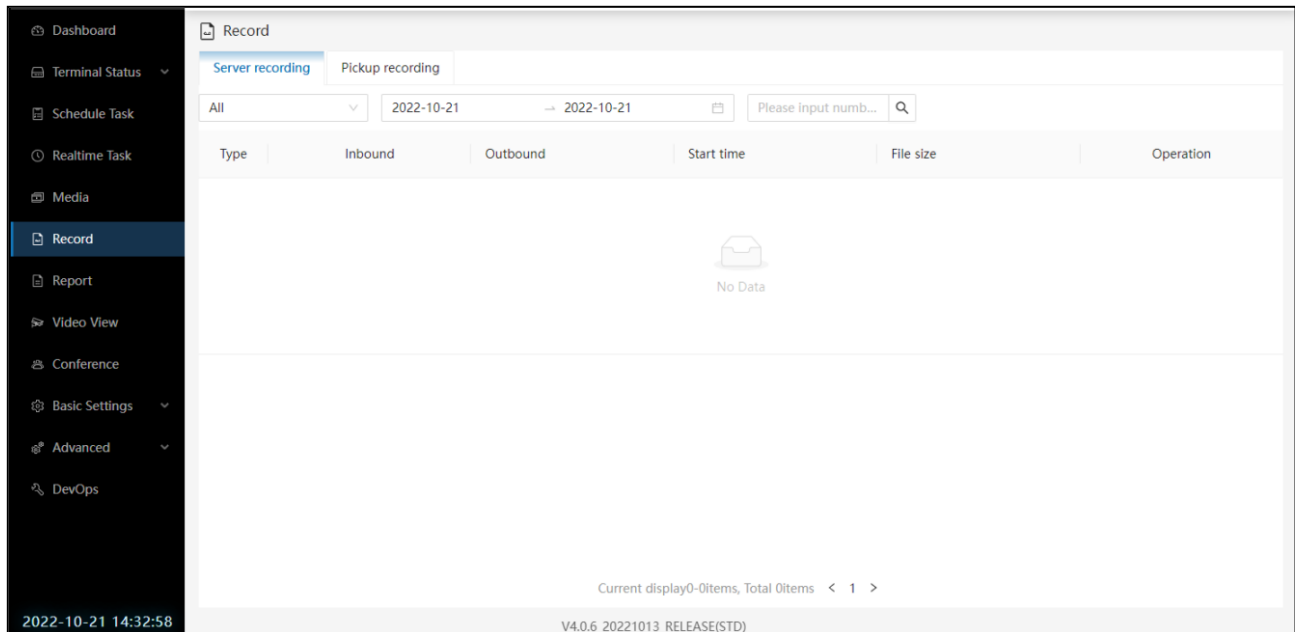
## 4.6 Record

### Server recording:

This server can save record files on the server in form of WAV format of intercom, broadcast, and monitor between terminals for downloading and reviewing later. **(Note: Please use “system” account to login , enable the recording function in the “Basic settings”-”Composite settings”-”Audio and video configuration”in advanced)**

### Inquiry/ download/ audition recording files:

Recording files can inquiry by category, time and terminal number. Select the file type and start time, press the search button  to inquiry the recording file (If you need to follow the terminal inquiry, please input the terminal number), after inquired the recording file, click the [Download] or [Music demo] button on the right to download or listen to the recording file online. **Note: if "Video Record" function is enabled in "Talk" of terminal management, you can check and download the video files.**



The screenshot displays the 'Record' section of a web application. On the left is a dark sidebar with navigation items: Dashboard, Terminal Status, Schedule Task, Realtime Task, Media, Record (highlighted), Report, Video View, Conference, Basic Settings, Advanced, and DevOps. The main content area is titled 'Record' and has two tabs: 'Server recording' (active) and 'Pickup recording'. Below the tabs are search filters: a dropdown menu set to 'All', a date range from '2022-10-21' to '2022-10-21', and a search input field with the placeholder 'Please input numb...'. A table with columns 'Type', 'Inbound', 'Outbound', 'Start time', 'File size', and 'Operation' is shown below the filters. The table is currently empty, displaying a 'No Data' message with a folder icon. At the bottom of the page, there is a status bar with the text 'Current display 0-0 items, Total 0 items < 1 >' and a footer with 'V4.0.6 20221013 RELEASE(STD)'. The system time '2022-10-21 14:32:58' is visible in the bottom left corner.

## Pickup recording:

The server can generate audio and video files of the alarm information of the pickup and save them in the server for downloading and playback when needed in the future. (Note: Please log in as the system user and enable the recording function in Advanced Settings - Comprehensive Settings - Audio and Video Parameters - Recording and Recording Configuration)

The screenshot shows the 'Record' interface with a sidebar on the left containing navigation items like Dashboard, Terminal Status, Schedule Task, Realtime Task, Media, Record, Report, Video View, Conference, Basic Settings, Advanced, and DevOps. The main area is titled 'Record' and has tabs for 'Server recording' and 'Pickup recording'. Below the tabs, there are date filters for '2022-10-21' and a search box. A table with columns 'Operation mode', 'ID', 'Local IP', 'Alarm type', 'Panel number', 'Alarm', 'Alarm time', and 'Operation' is shown, but it contains no data, indicated by a 'No Data' message and a folder icon. At the bottom, it says 'Current display 0-0 items, Total 0 items' and 'V4.0.6\_20221013\_RELEASE(STD)'.

## 4.7 Report

Record real-time status, history and statistical analysis of the equipment.

Set the rights to view reports for different users in [Basic Settings] -- [User Management] -- [Role Management] , for detail operation steps please refer to the introduction of [Role Management] .

[Real-time status] Records ongoing intercom, broadcast, monitor, alarm, conference, alarm login events. In real-time status, the records disappear after intercom, broadcast, monjtor, and conference tasks stop. Users can view detailed records in the [Historical Record] module (export to Excel format). View statistical reports in the **【statistical Analysis】** module.

The screenshot shows the 'Report' interface with a sidebar on the left containing navigation items like Dashboard, Terminal Status, Schedule Task, Realtime Task, Media, Record, Report, Video View, Conference, Basic Settings, Advanced, and DevOps. The main area is titled 'Report' and has tabs for 'State', 'History', and 'Analyze'. Below the tabs, there are date filters for 'All' and a search box. A table with columns 'Type', 'Time', 'Source', 'Target', 'State', and 'Operation' is shown. The table contains several rows of data, including 'Talk (Inbound)', 'Talk (Outbound)', and 'Register' events. At the bottom, it says 'Current display 1-10 items, Total 10 items' and 'V4.0.6\_20221013\_RELEASE(STD)'.

Type	Time	Source	Target	State	Operation
Talk (Inbound)	2022-10-21 14:36:28	Terminal2(2)	Terminal3(3)	Answered	Hangup Eavesdrop Insert Transfer caller
Talk (Outbound)	2022-10-21 14:36:28	Terminal2(2)	Terminal3(3)	Answered	Hangup Eavesdrop Insert Transfer caller
Register	2022-10-21 14:36:17	Terminal2(2)	-	Login	Delete
Register	2022-10-21 13:37:06	Terminal2(2)	-	Logout	Delete
Register	2022-10-21 13:35:18	Terminal3(3)	-	Login	Delete
Register	2022-10-21 13:07:32	Terminal2(2)	-	Login	Delete
Register	2022-10-21 12:26:13	Terminal2(2)	-	Logout	Delete
Register	2022-10-21 11:25:41	Terminal2(2)	-	Login	Delete
Register	2022-10-21 09:53:01	Terminal2(2)	-	Logout	Delete
Register	2022-10-21 09:08:41	Terminal2(2)	-	Login	Delete

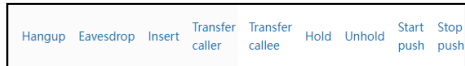
**Real-time status event processing:** You can delete related events, call forcible release , and monitor. (Note: Different operations can be performed for different attribute tasks. For details, see actual situations.)

### Real-time status event processing

**Hangup:** Press "Hangup" button to forcibly stop an ongoing intercom task.

**Eavesdrop:** Select "Eavesdrop" and input the ID of the terminal in the dialog box that is displayed. The terminal can eavesdrop to a specified call.

**Insert:** Select "Insert", input the ID of terminal in the dialog box that is displayed, the terminal can forcibly inserted into an intercom.



**Transfer caller:** Transfer the caller to other terminal.

**Transfer callee:** Transfer the callee to other terminal.

**Hold/Unhold:** Press **【Hold】** , the call will be hold, press **【Unhold】** , the call will be recovered.

**Start push/Stop push:** When interconnecting with a streaming media server, you can push streams to the streaming media server (reserved function).


## 4.8 Video View

**Video view is additional module, which will be available after authorization. Please choose the module and input the license code in "Advanced" - "Extension" (please contact the manufacturer for license). Click the download button to download video control, and restart the browser after installation.**

### Video preview


Double click the terminal bound video in the terminal list to preview the camera real time video (bind video please refer to "basic setting"- "terminal management")


### View switch

Click the  button to switch different views respectively ( 4 grids video, 6 grids video, 7grids video, etc), and you can directly drag the terminal bound video to the designated screen for browsing.

### Video tour

Set video tour to realize automatically display multi-channel video. Operation as below:

1) Right click under the tour list, select "Add" button to add group. Check terminals need to tour in the list, and then click  to add, it will be effective after clicking save.

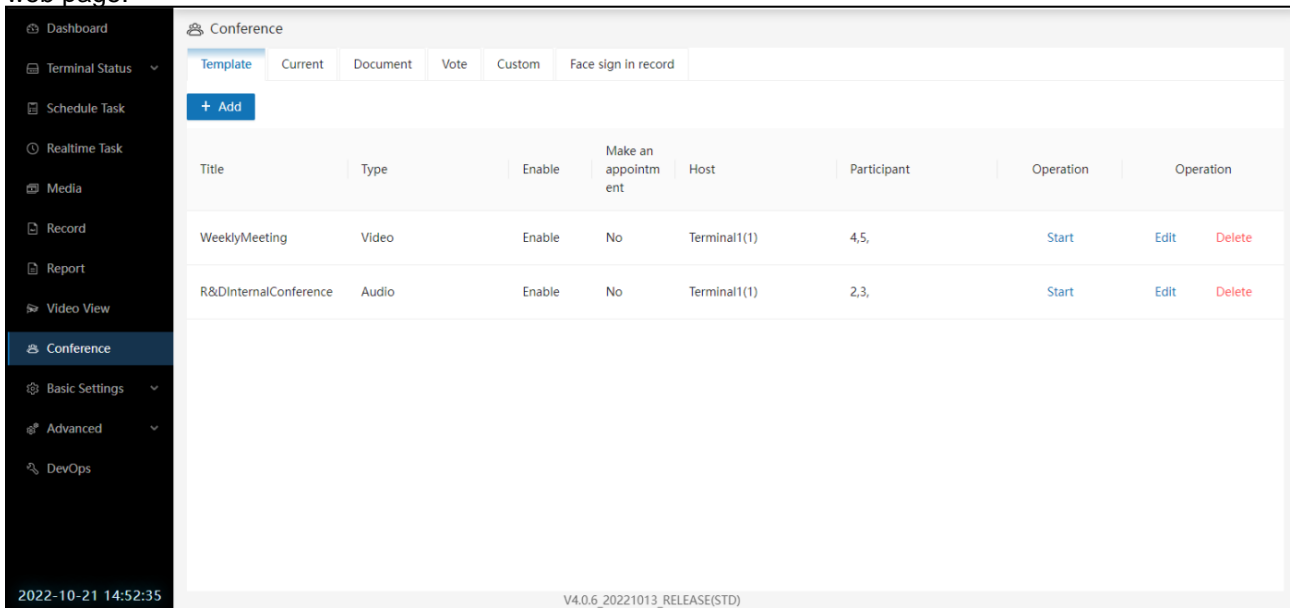
2) Right click  icon in the lower right corner of computer , and then select "Config" to set tour time.

3) After setting, the video will automatically tour display according to the set time after dragging added groups to the video preview in the tour list.



## 4.9 Conference

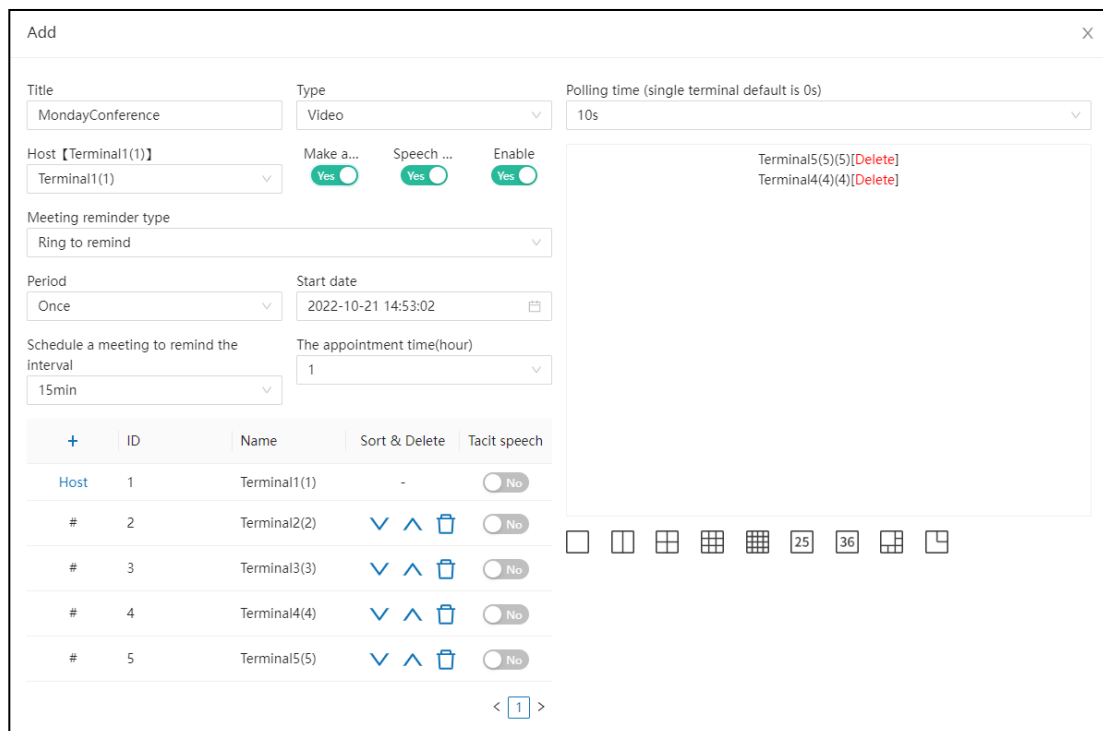
Support to adding video/audio conference and it can directly control and manage parties of conference on web page.



### (1) Conference template settings

The conference can be viewed, added, modified, run on the interface of conference template. The conference which is set in the conference template can be showed simultaneously on the conference display of the IP network visualized control host, click and run by manually.

Press[add] button to add a new conference template, for detail operation as following:




(1) Conference name Customize the conference name;

(2) Conference type Support audio and video conference;

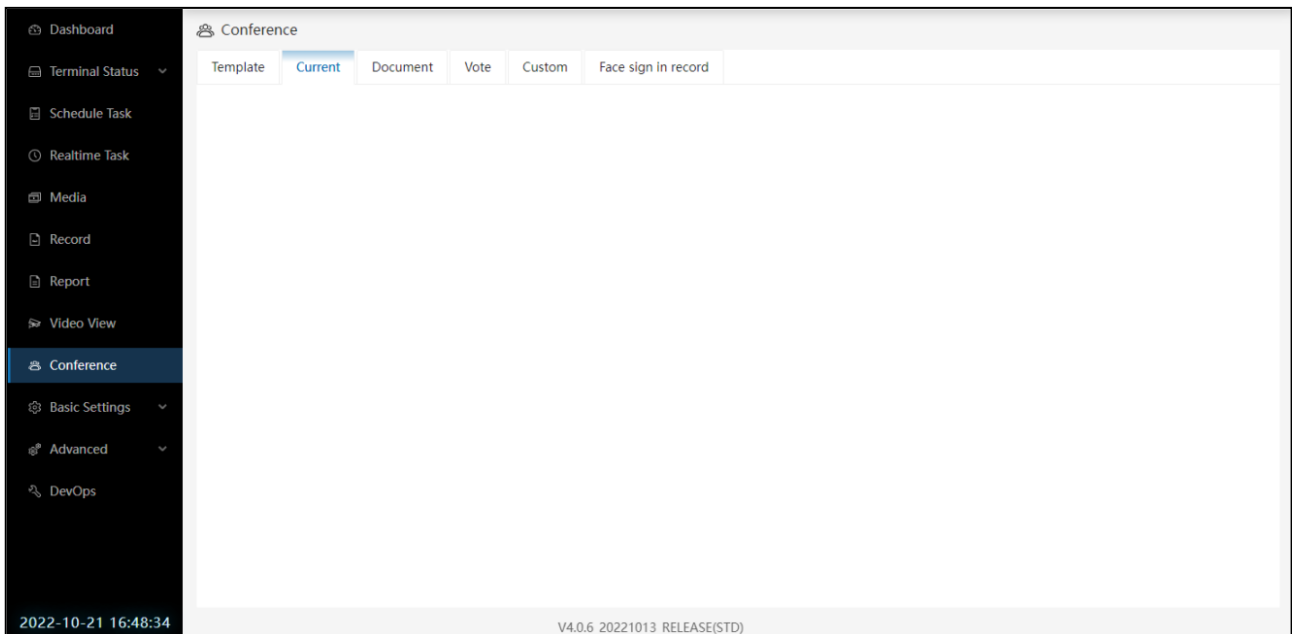
(3) Conference host Set the conference host, only one terminal can be choosed as the host.

(4) Set whether to 1) Appointment: After enabled, the conference participants will receive

enable [Appointment]、 [Speech follow]function	<p>conference reminder notification within the specified time.</p> <p>Reminder type:Support message reminder and ringing reminder.</p> <p>Start time: Remind the start time of the conference.</p> <p>Schedule a conference reminder time: Choose reminders 15 or 30 minutes before the meeting starts.</p> <p>The appointment time: Appointment duration of a conference (The specific duration is based on the actual conference duration, which is used as a reminder).</p> <p>2)Speech follow: After enabled , the terminal need to be set into the conference template , when the participant speech , the video will be displayed at the top of the corresponding area.</p>
(5) Add participant	Set the conference participants ,support to choose multiple conference participants .
(6) Conference melting screen 、 video rotation settings(audio conference no support)	<p>If the video conference is set, according to , different melting screen types can be set, support 1、 2、 4、 9、 16 etc. grid melting screen. That is, during the conference, the screen can display 1, 2, 4, 9, 16 grid video.Each grid support to add one or more terminal, but the terminal checked by each grids can not be repeated.In the list of participants, select the corresponding terminal and drag it into the video display box.</p> <p>When one grid to add more terminals ,the video will rotating play, the rotation time support to customize, the default is 10s.</p>

**Current Conference**

The current conference template display the current ongoing conference, choose the corresponding conference ,click “Enter” button to enter into the management interface of the conference, support add、 all mute、 all invite.

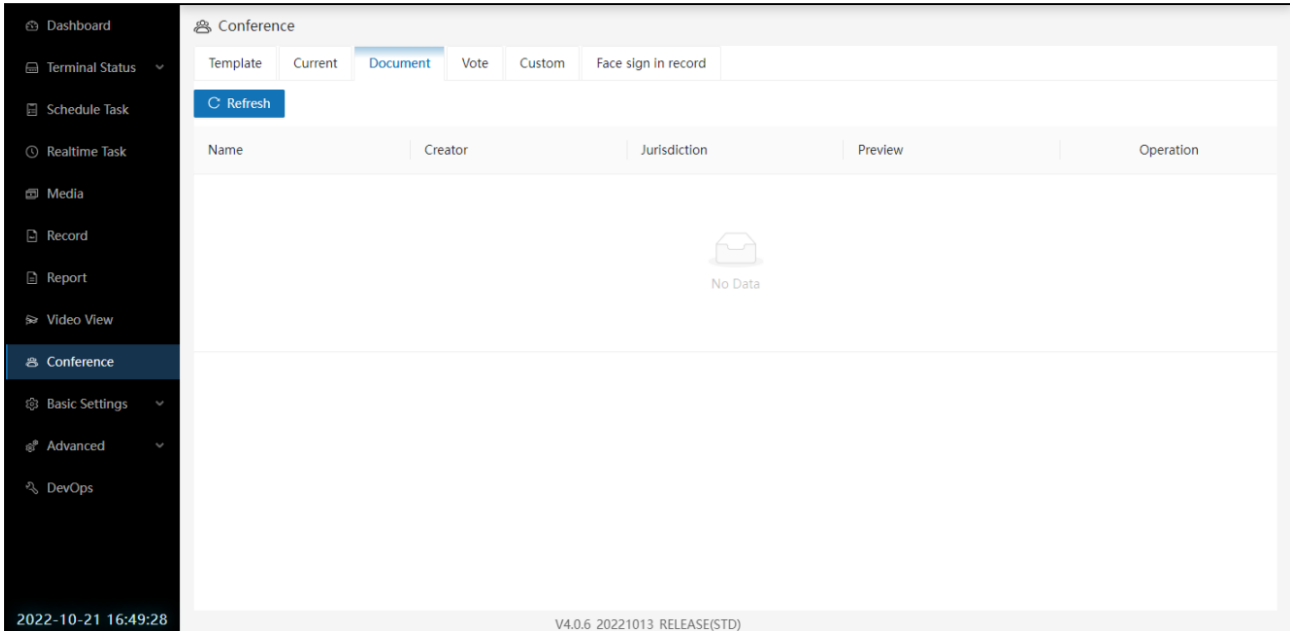


## Document

On the document management page, you can upload files (Word, PDF, Excel and PPT formats are supported) required by the meeting to the service software. During a terminal meeting, you can use the uploaded files for preview or screen display.

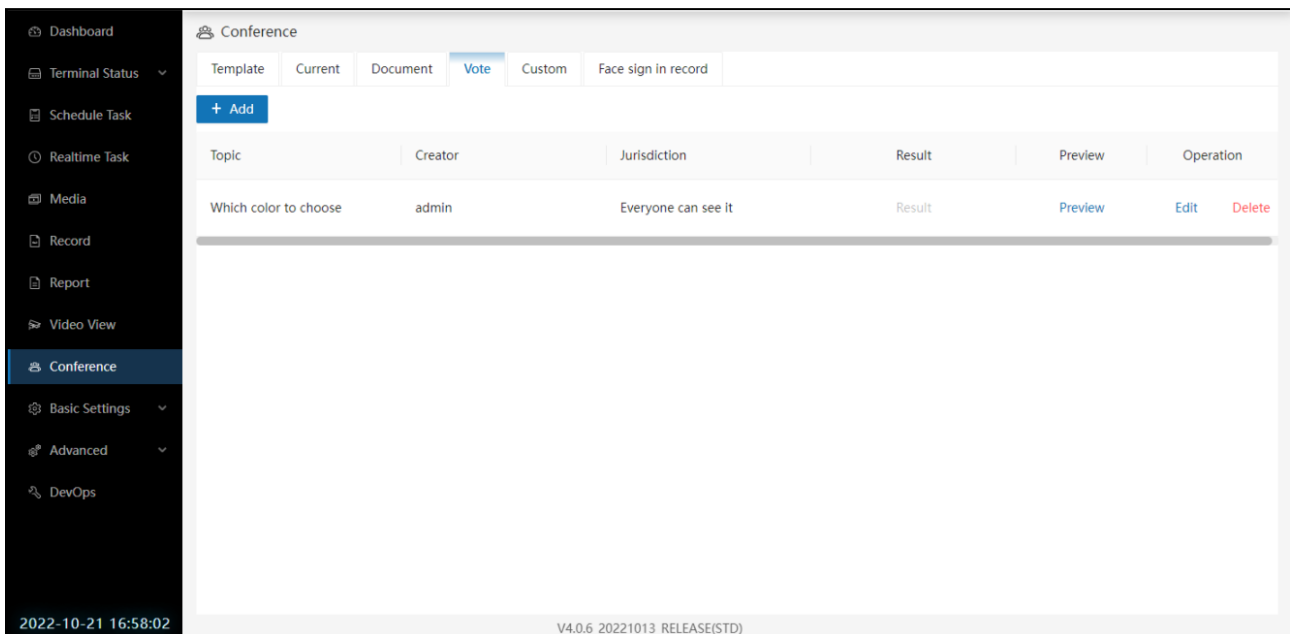
The UploadDataTool tool is required to upload files. **(If you need to upload files, please contact our technical support to obtain the upload tool.)**

Click the refresh button, and the file list will display the uploaded document. Click the Preview button to preview online, and click the Delete button to delete the document.



## Vote

Add a vote in Vote Management. The IP network visual console can initiate a vote during a meeting.



Vote setting procedure:

Number	Function	Diagram
1	<b>Add a vote</b> Select Vote Management and press the [Add] button to add a	

vote. In the dialog box that is displayed, perform the following Settings:

(1)**Topic:** the title of the vote.

(2)**Voting content:** Each line represents a voting question, and the format should be (question: Answer 1, Answer 2, Answer 3.....), Separate single options with commas, and separate multiple options with semicolons. (Note: Punctuation marks in voting content should be entered in English)

Note: After saving, you can click the preview button to preview whether the voting setting is qualified.

Add ✕

Topic

Jurisdiction

Data

Tip: single line describe single question, format:  
(QT:Answer1,Answer2,Answer3)  
Single: Which animal you like:Cat,Dog,Pig  
Multi: Which animal you like:Cat;Dog;Pig

2 After a vote is created, the created vote is displayed on the Vote management page.

During a terminal meeting, the moderator can press the Initiate Vote button to initiate a vote set by the server. Participants in the meeting will receive the vote initiated by the moderator. After the vote is complete, the voting result is displayed on the moderator's voting screen. In the meantime, you can view the voting results in the service software.

Topic	Creator	Jurisdiction	Result	Preview	Operation
Which color to choose	admin	Everyone can see it	Result	Preview	Edit Delete

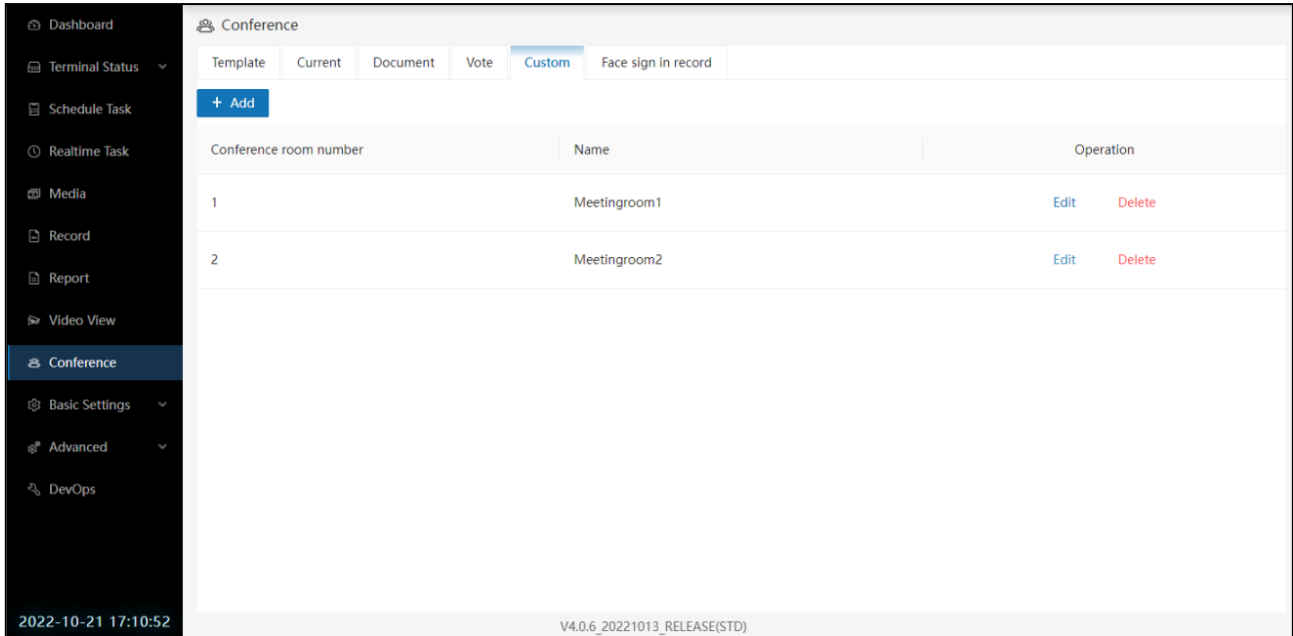
3 Preview of voting results: Click the preview button to preview the voting results after the voting.

## Custom

A customized meeting room is a virtual meeting room. Users can dial the customized meeting room number to join a meeting without using the service software or the moderator. Note: You must enable the customized meeting room in Meeting Management module.

Add a conference room: Press the Add button to set the conference room number and name (Note: The conference room number cannot be the same as the terminal ID number). Click Save after setting.

Meeting: Any terminal can directly call the number of the added meeting room to enter the meeting room.



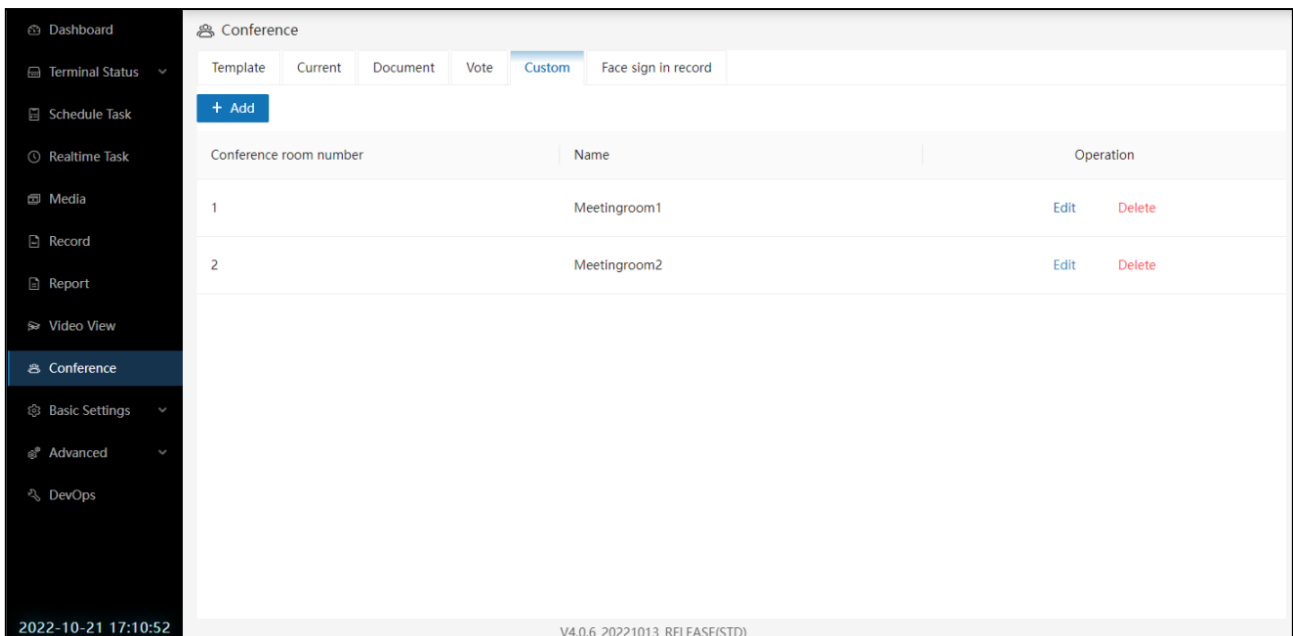
The screenshot shows a web application interface for managing conference rooms. On the left is a dark sidebar with navigation options: Dashboard, Terminal Status, Schedule Task, Realtime Task, Media, Record, Report, Video View, Conference (highlighted), Basic Settings, Advanced, and DevOps. The main content area is titled 'Conference' and has tabs for Template, Current, Document, Vote, Custom (selected), and Face sign in record. Below the tabs is a '+ Add' button. A table lists two custom meeting rooms:

Conference room number	Name	Operation
1	Meetingroom1	<a href="#">Edit</a> <a href="#">Delete</a>
2	Meetingroom2	<a href="#">Edit</a> <a href="#">Delete</a>

The footer of the interface shows the date and time '2022-10-21 17:10:52' and the version 'V4.0.6\_20221013\_RELEASE(STD)'.

## Face sign in record

Record the check-in record of the face of signing in to the meeting.



This screenshot is identical to the one above, showing the 'Conference' management interface. The 'Face sign in record' tab is selected, but the table content remains the same, displaying two custom meeting rooms with their respective edit and delete options.

## 4.10 Basic Settings

### Terminal Management

Terminal settings can be operated at the time of installing software, you can add terminal/ modify terminal/delete terminal in the terminal management interface. For detail operation see the following.

St...	ID	Type	Name	Talk	PA	Monitor	Confere...	Volume	Priority	Operation
●	1	-	Terminal1	All   2,3   2,3	All   Unicast   Unicast	All	All	09   09   09   09	Conference > PA > Talk > Mon...	Edit Delete
●	2	XC	Terminal2	All   1   1	All   Unicast   Unicast	All	All	09   09   09   09	Conference > PA > Talk > Mon...	Edit Delete
●	3	NAS	Terminal3	All   1   1	All   Unicast   Unicast	All	All	09   09   09   09	Conference > PA > Talk > Mon...	Edit Delete
●	4	-	Terminal4	All   -   -	All   Unicast   Unicast	All	All	09   09   09   09	Conference > PA > Talk > Mon...	Edit Delete
●	5	-	Terminal5	All   -   -	All   Unicast   Unicast	All	All	09   09   09   09	Conference > PA > Talk > Mon...	Edit Delete
●	6	-	Terminal6	All   -   -	All   Unicast   Unicast	All	All	09   09   09   09	Conference > PA > Talk > Mon...	Edit Delete
●	7	-	Terminal7	All   -   -	All   Unicast   Unicast	All	All	09   09   09   09	Conference > PA > Talk > Mon...	Edit Delete
●	8	-	Terminal8	All   -   -	All   Unicast   Unicast	All	All	09   09   09   09	Conference > PA > Talk > Mon...	Edit Delete
●	9	-	Terminal9	All   -   -	All   Unicast   Unicast	All	All	09   09   09   09	Conference > PA > Talk > Mon...	Edit Delete
●	10	-	Terminal10	All   -   -	All   Unicast   Unicast	All	All	09   09   09   09	Conference > PA > Talk > Mon...	Edit Delete
●	11	-	Terminal11	All   -   -	All   Unicast   Unicast	All	All	09   09   09   09	Conference > PA > Talk > Mon...	Edit Delete
●	12	-	Terminal12	All   -   -	All   Unicast   Unicast	All	All	09   09   09   09	Conference > PA > Talk > Mon...	Edit Delete

### Edit Terminal

Enter into **【Basic settings】—【Terminal management】**—click “Add” to add terminals ( or double click the terminal and modify terminal attribute), set basic attribute/ talk attribute/ monitor attribute/ PA attribute/ volume/ task priority of terminals.

No.	Description	Diagram
-----	-------------	---------

1	“Basic” attribute	
---	-------------------	--

① Set terminal ID and name.

**Note: terminal ID is unique, can not repeat with other host numbers. It is suggested to use a positive integer starting from 1 as the terminal No.**

② Terminal password: The default is 1234, after the password is changed, you need to change the device password to ensure normal login.

③ PIN code: if XC-APP access function is enabled in “Advance”-“Extension”, the PIN code of the APP device can be filled in.

④ Binding video: The real-time preview function of the server video and the event-linked automatic video pop-up function must be bound to the video, and the video of the terminal's own camera or the environment camera gun can be bound. The operation

Add terminal ✕

Basic | Talk | Monitor | PA | Conference | Volume | Priority | Subdivision | Ext. | Audio Processing

ID:

Name:

Password:

PIN(use for APP):

Binding video:

Bind NVR:

mode is as follows:

Video address format is rtsp://  
username: password@IP address:  
port;  
(eg.rtsp://admin:123@192.168.1.1  
01:554)

Bind more than one video address,  
please divided by \$ (eg.  
rtsp://admin:123@192.168.1.101:5  
54\$rtsp://admin:123@192.168.1.1  
02:555)

⑤ **Binding NVR:** NVR address  
Format: NVR Type: User name:  
Password :IP address: Port:  
Channel number. (for example: dh:  
admin:  
admin123:192.168.1.101:3777:1)

## 2 “Talk” Attribute

Call target: set terminal call map,  
at most point 5 (when the target is  
busy or power off, call will  
automatically transfer to the next  
target); if you need fixed call to the  
terminal, please point all 5 targets  
to this terminal.

Extension call target: double click  
terminal button, target terminals  
can be set in the “ExCall Target”  
(left button corresponds to call  
target, right button corresponds to  
extend call target), the principle is  
consistent with the call target.

Manage target: set managed  
terminal, the machine will no  
longer receive server task within  
the specified period of time, and  
the related functions such as  
intercom will be performed by  
managed terminal.

Transfer time: when target is busy  
or power off, call will automatically  
transfer to the next target time,  
time range can be set to 0-120s.

💡 Note: if you need set more than  
one target terminal ID, please  
divided by English comma “,”;

Outbound(pitch shift): After  
enabled ,the voice received by the  
other side is processed after pitch  
shift.

Multiparty calls: set whether to  
enable multiparty calling.

Talk range: set talk permissions of

Add terminal

Basic Talk Monitor PA Conference Volume Priority Subdivision Ext. Audio Processing

Talk range

All x 1\_Zone1 x 2\_Zone2 x 3\_Zone3 x Undefined zone x + 100 ...

Call Target

+	Time	Target	Operation

No Data

ExCall Target

+	Time	Target	Operation

No Data

Managed the target

+	Time	Target	Operation

No Data

Transfer time: 20 Outbound(Pitch shift): Disable

Multiparty: Disable Video record: Disable

Cancel Save

terminals, it is suggested to check all.

Enable video recording: only applicable to the terminal binding with a camera. Recording files will be generated during talking, which can be previewed or downloaded in the interface of "Recording". (The terminal with camera have video, the terminal without camera have no video).

### 3 "Monitor" attribute

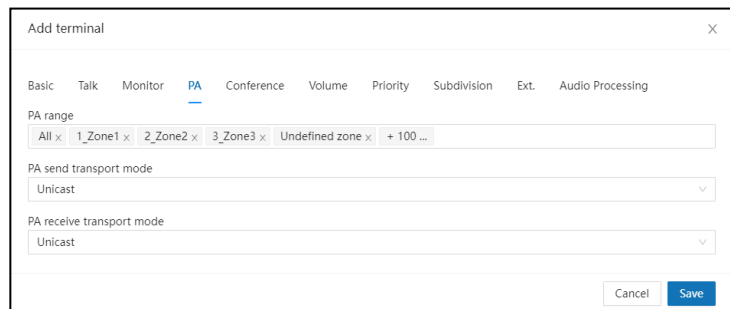
Monitor terminal and monitor permissions can be set in the monitor attribute, check authorized terminals in the "Monitor range".



### 4 "PA" attribute

Broadcast permissions of terminals and the transmission mode of receiving and sending broadcast can be set on the PA attribute.

The system send audio resource to terminal by default.



## Compare unicast and multicast

Name	Explanation	Advantages	Disadvantages
<b>Unicast</b>	The one to one communication mode between the server and terminal, switcher in the network only transmit data and not copy. If 10 terminals require the same data, the server need to transmit data one by one 10 times.	Server aims at every different customer's requirements to send different data, it is easy to realize personalized service.	Server aims at every terminal to send data flow, server flow = terminal quantity x terminal flow; The server load is heavy in the flow media application of big quantity terminals and terminals with large flow.
<b>Multicast</b>	The one to one communication mode between server and terminal, it means that hosts joined the same group can accept	Client sides needed the same data flow join the same group to share one data flow, which is save the load of the server.	At present, although devices are support multicast transmission, but limit the use of multicast (specially in WAN)



all data in this group. Switcher only transmit and copy the required data to demander.

## 5 Conference

Meeting authorized terminals can be set on the meeting attribute.

## 6 Volume


Click volume bar to increase/decrease and to set the input/output of intercom/broadcast of the terminal.

## 7 Task priority

Set task priority and terminal levels.

When terminals carry out more than one tasks, higher-priority task is able to cut off the lower-priority task. When the task type is same, it is decided by the terminal level.

Task priority ordering: click   to rank.

Terminal priority settings: click or pull the  on the terminal lever line.

Index	Task type	Sort
1	Recieve conference level	^ v
2	Recieve PA level	^ v
3	Recieve talk level	^ v
4	Recieve monitor level	^ v

## 8 Subdivision

When the subdivision is set for broadcast console to initiate broadcast on the terminal of the tape zone/panel, different zones/panels can be selected for broadcast, which is convenient and flexible.

Type: select a

---

subdivision or panel based on the terminal type.

Number: set the number of zones of the terminal, select 4 zones, 8 zones and 16 zones according to the actual situation;

Name: customize each zone name.

---

## 9 Audio Processing

It can process the audio in the receiving and sending directions of the terminal.

Echo cancellation: Set whether to enable the echo cancellation function and adjust related parameters. After the echo cancellation function is enabled, the echo during intercom can be suppressed.

Automatic gain: Set whether to enable the automatic gain function. After this function is enabled, the input and output volume of the terminal can be multiplied according to the surrounding environment.

Noise reduction: Set whether to enable noise reduction function.

Debug recording: it is a recording tool used to debug audio processing effect, it is disabled by default.

---

The screenshot shows the 'Add terminal' dialog box with the 'Audio Processing' tab selected. The settings are as follows:

- Echo cancellation:** Enabled (toggle on). Direction: Receive (radio button selected).
- Length of receiving reference queue (1-30):** 1 (slider).
- Receive cache queue length (1-30):** 1 (slider).
- Send reference queue length (1-30):** 1 (slider).
- Send cache queue length (1-30):** 1 (slider).
- Audio frame length (>0 Optional):** 160 (input field).
- Tail filtering length (>0 Optional):** 1024 (input field).
- Automatic gain:** Enabled (toggle on). Direction: Receive (radio button selected).
- Noise reduction:** Enabled (toggle on). Direction: Receive (radio button selected).
- Debug recording:** Enabled (toggle on).

Buttons: Cancel, Save.

# Batch Management

No	Functions	Diagram
1	<p><b>Batch add</b></p> <p>Click <span style="border: 1px solid black; padding: 2px;">Batch ▾</span> “Batch” button, and select “Batch add”, input the start and end ID need to be added in the pop-up dialog box, and then click “Add”</p> <p>IP intercom and PA system software at most support 1000 PCS terminals, suggest to add 1-1000 terminal No.</p>	

2	<p><b>Batch modify</b></p> <p>Click <span style="border: 1px solid black; padding: 2px;">Batch ▾</span> “Batch” button, and select “batch modify”, and then check the terminals and terminal attributes need to be modified on the “Terminal list”</p> <p>After batch modification, press the “save current page” button to save the current page parameters, click “save all” button to change parameters of all terminals to become consistent. (For example, if the "Intercom" parameters are modified in batches, press the "Save current page" button to synchronize the "Intercom" parameters of the selected terminal, but the unmodified parameters such as monitoring, broadcasting, and conference remain unchanged. If you click the "Save All" button, the parameters of monitoring, broadcasting, and conference become consistent.)</p>	
---	---	--

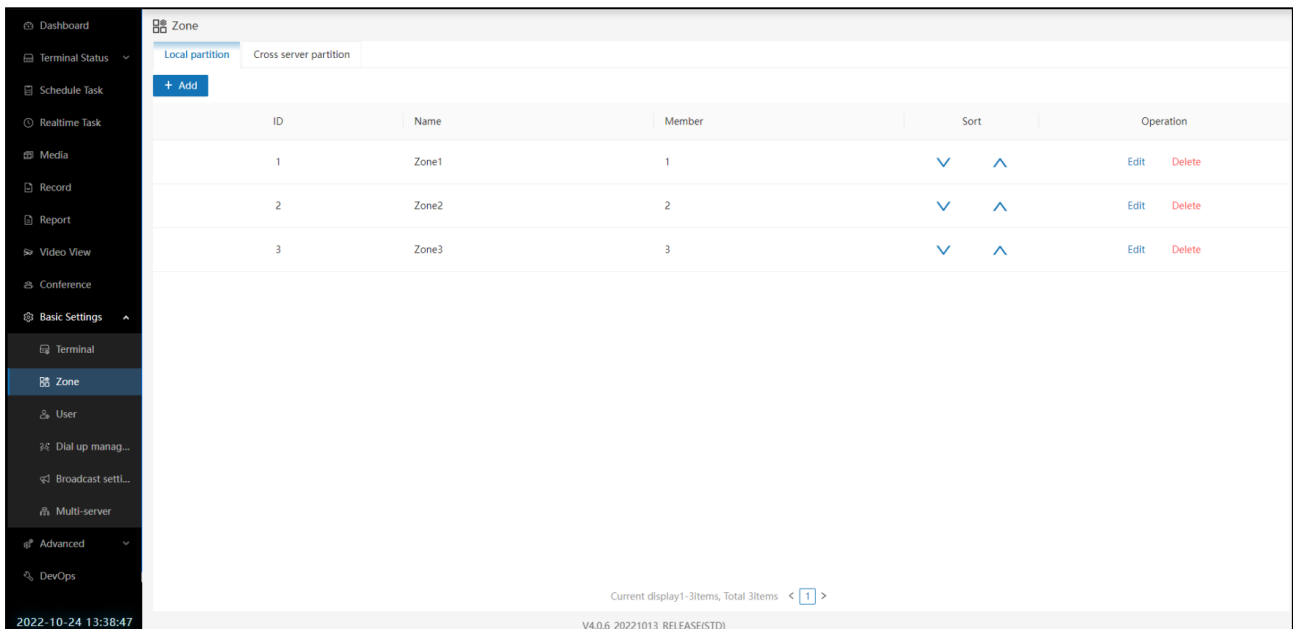
3	<p><b>Batch delete</b></p> <p>Click <span style="border: 1px solid black; padding: 2px;">Batch ▾</span> “Batch” button, and select “Batch delete” and input the start and end ID need to be deleted in the pop-up dialog box, and then click delete.</p>	
---	--	--

## More

No	Functions	Description
1	<b>Sync Host</b>	Click <a href="#">More</a> "More" button and select "Sync Host", you can refresh the current list of terminals.
2	<b>Template Download</b>	Click <a href="#">More</a> "More" button and select "Template Download", you can download the terminal import template.
3	<b>Import</b>	Click <a href="#">More</a> "More" button and select "Import", you can import terminals.
4	<b>Export</b>	Click <a href="#">More</a> "More" button and select "Export", you can export terminals.

## Zone management

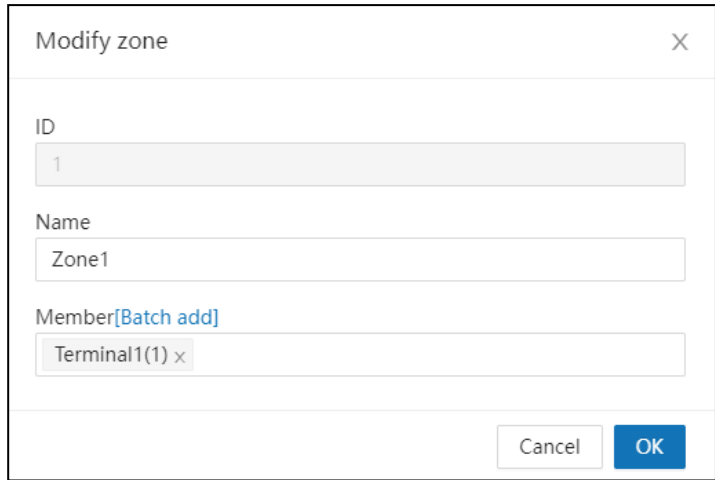
On the "Zone" management interface, zones can be divided by the project real situation, zones are mainly used for broadcasting zone selection.



## Add/ Modify zone

No.	Functions	Diagram
1	<p><b>Add zone</b></p> <p>Click "add" <a href="#">+ Add</a> button, input zone name in the zone management interface, at the same time check the terminals needed to be added to the zone and click "Save".</p> <p> Note: one terminal can be added to more than one zones.</p>	

- 2 Modify zone**  
Double click the zone or click [Modify] button to Modify its name, member.



Modify zone

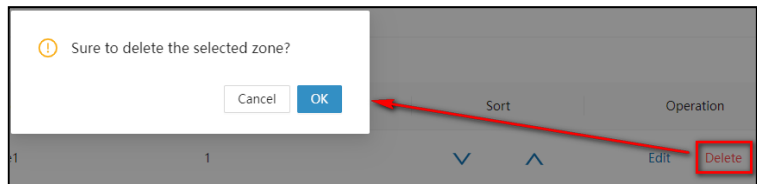
ID  
1

Name  
Zone1

Member[Batch add]  
Terminal1(1) x

Cancel OK

- 3 Delete zone**  
Click “delete” button to modify and delete zone.

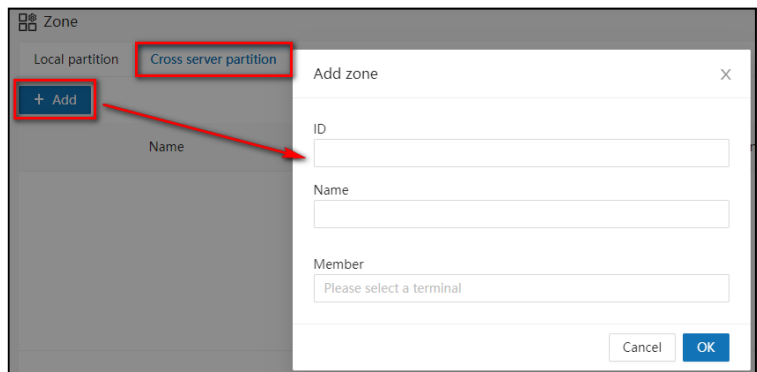


**4 Cross-server zone settings**

Please add other servers' information in “Basic Settings”-“Multi-server”.

Click “Cross-server Zone” and click + to add zones, the zone name and member list can be set. The cross-server zone member display mode is server number+ terminal ID number.

The zone modification and delete operation same as above mentioned.



## User management

### User management

User management can assign login accounts and use permissions to the different operators using the server.

State	Username	Display	Role	Operation
<span style="color: green;">●</span>	admin	Administrator	Administrator	Edit Delete Log out
<span style="color: gray;">●</span>	device	Equipment account number	Administrator	Edit Delete Log out
<span style="color: gray;">●</span>	admin123	admin123	user	Edit Delete Log out

Current display 1-3 items, Total 3 items < 1 >

V4.0.6 20221013 RELEASE(STD)

### Add user/ Modify user/ delete user

NO.	Functions	Diagram
1	<p><b>Add user</b></p> <p>Click the user addition button <b>+</b> and set the user name, password (<b>The password set at least 8 characters, must contain at least three types of combinations: uppercase letters, lowercase letters, special characters, and digits</b>) and role name in the popup dialog box.</p> <p><b>Note:</b> terminal authorization range default as all terminals and servers. If some terminal and server authority request, you can turn off "Apply to all terminals" and "Apply to all servers" buttons (open state: <input checked="" type="checkbox"/>, close state: <input type="checkbox"/>), and then choose the authorized terminals and servers in the member and server list.</p> <p>Account lockout: After the account is locked, the user cannot log in and a message is displayed indicating that the account is locked.</p> <p>Message alert: After enabled, the device goes online/alarms will be prompted in the lower</p>	

---

right corner of the page (you can choose the display time). When the device goes online or alarms are triggered, you can check whether the window pops up in the lower right corner.

Binding terminal: binding center microphone number settings, which is used for map control and video linkage.

Equipment account number: When the device need to get the informations of the server, need to input the account on the device to get the informations of the server . Usually , it is used for central microphone.

Department: User's department

Binding SIP gateway: binding SIP gateway and the number settings (Note: SIP gateway can be added in "Multi-Server" - "SIP Trunk").

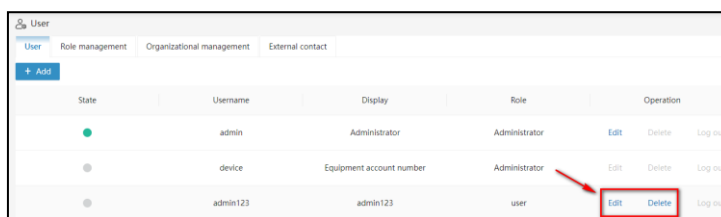
---

## 2 Edit/Delete user

Edit user: Click [edit] button or double click a user to edit the user name 、 password 、 rights,etc.

**Note: If the user forget the password, the administrator can modify the password through "Edit user".**

Delete user: Click [delete] button to delete the user.



State	Username	Display	Role	Operation
<span style="color: green;">●</span>	admin	Administrator	Administrator	<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Log out</a>
<span style="color: gray;">●</span>	device	Equipment account number	Administrator	<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Log out</a>
<span style="color: gray;">●</span>	admin123	admin123	user	<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Log out</a>





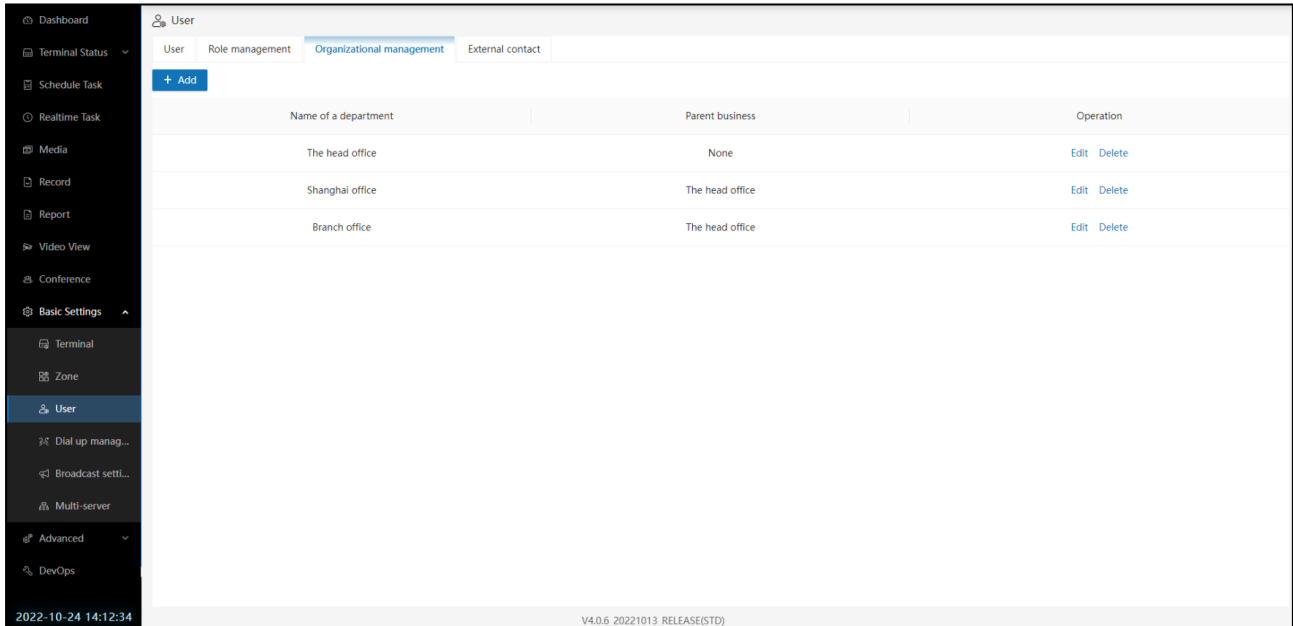
## 2 Modify/Delete role

Click the button **...** before the role to modify or delete its display name, password, permissions, and other relative information.



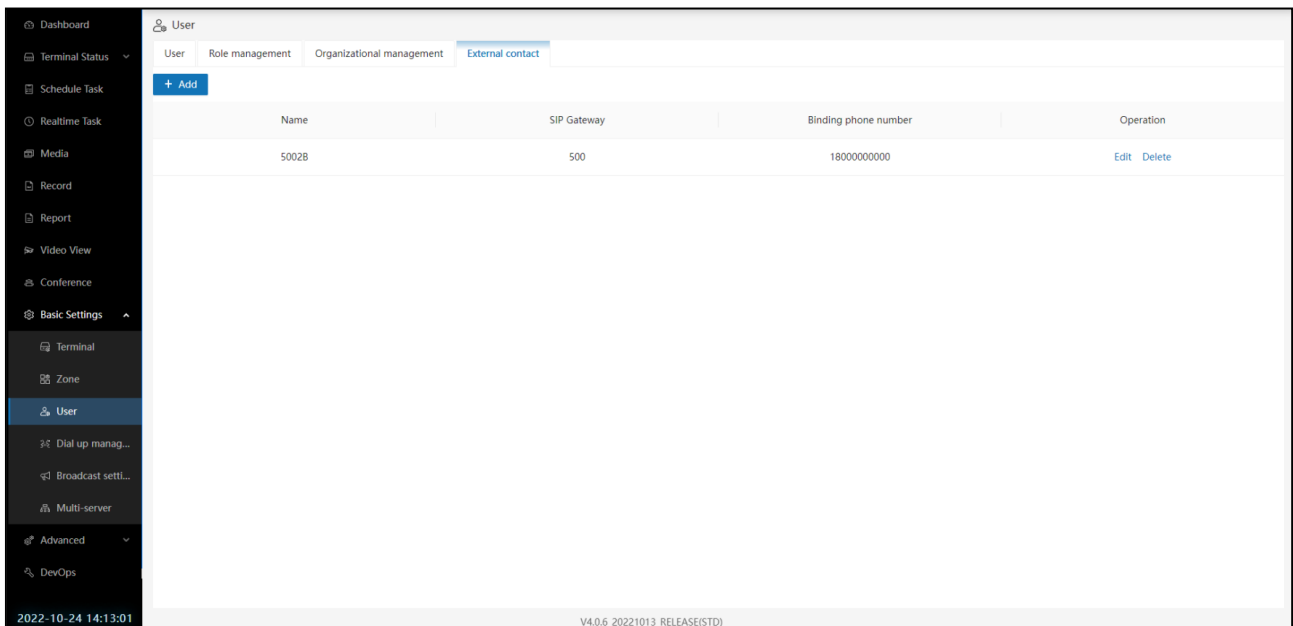
## Organization management

Set the department organization structure, press the [Add] button to add a directory.



## External contact

External contacts are used for a specific device. Add a SIP gateway and bind a mobile phone number to an external contact so that one-touch calls can be made to the specified personnel on the device.

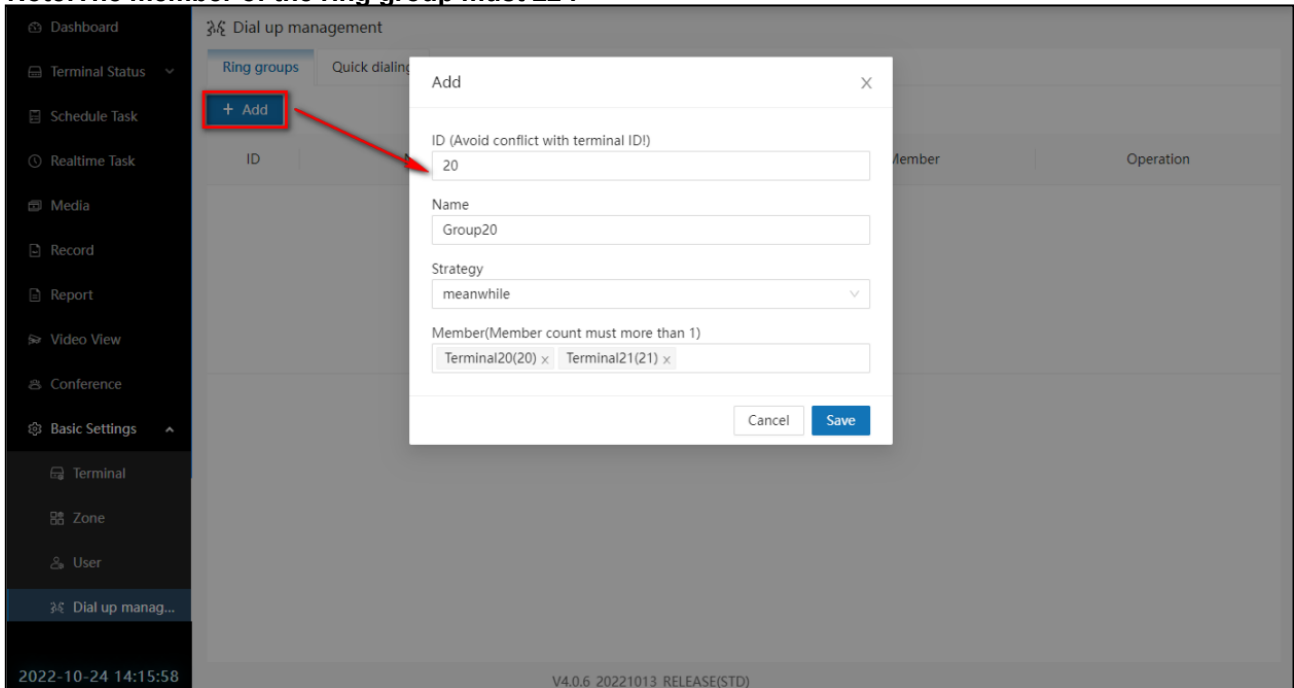


## Dial up management

### Ring groups

The function interface can be set in group call mode, click to add ringing group, set a grouping number (Note: the grouping number is ID number format, and can not be duplicated with other terminal ID), and set the group name and strategy(eg, ringing mode, can be set to simultaneous ringing or order ringing, order ringing are sorted according to the order in which the member list has selected), member list. When a terminal calls a group number that has been set, all terminals under this group number will ringing according to the set ringing mode. Once the terminal answered, other terminals will stop ringing.

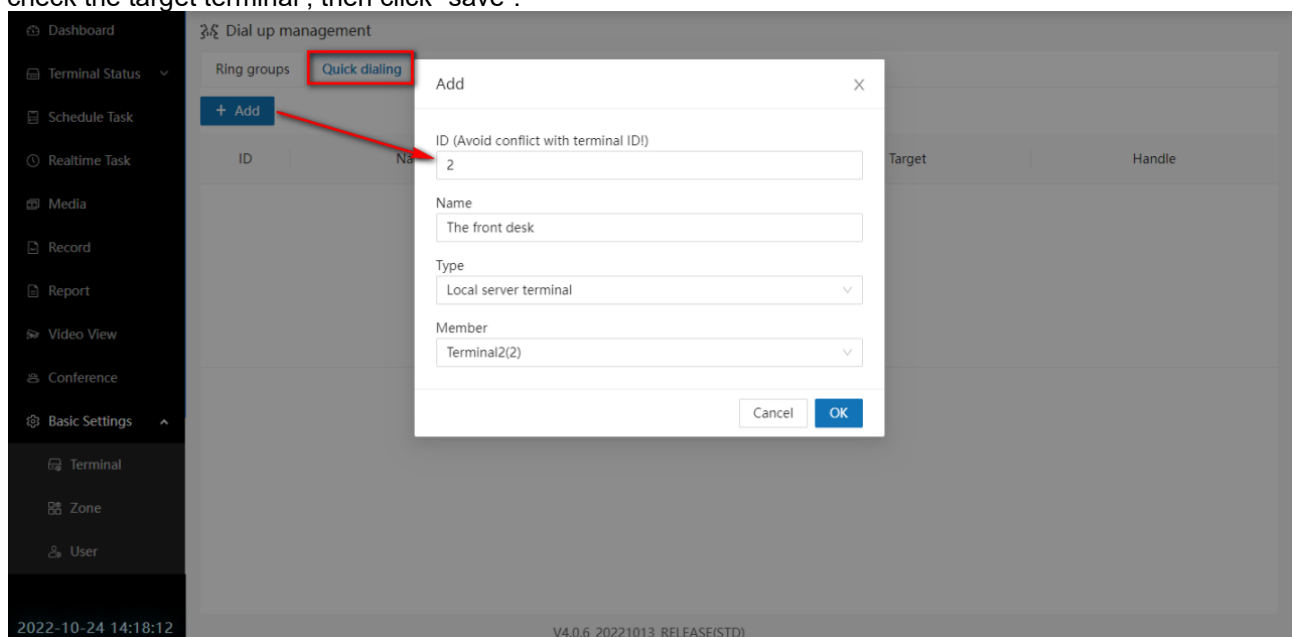
**Note:**The member of the ring group must  $\geq 2$ .



### Quick dial

User can set the quick dial number for the terminal, to make a quick call to the specified terminal by dial the quick dial number.

**Quick dial setting:** Click "+ add" button, set the ID number in the dialog box that is displayed (Note: ID number cannot be the same as another terminal ID), name, type (Local server terminal: call the terminal within the server; Across server terminal: call the terminal across the server; Sip trunk: call to the external telephone), check the target terminal, then click "save".

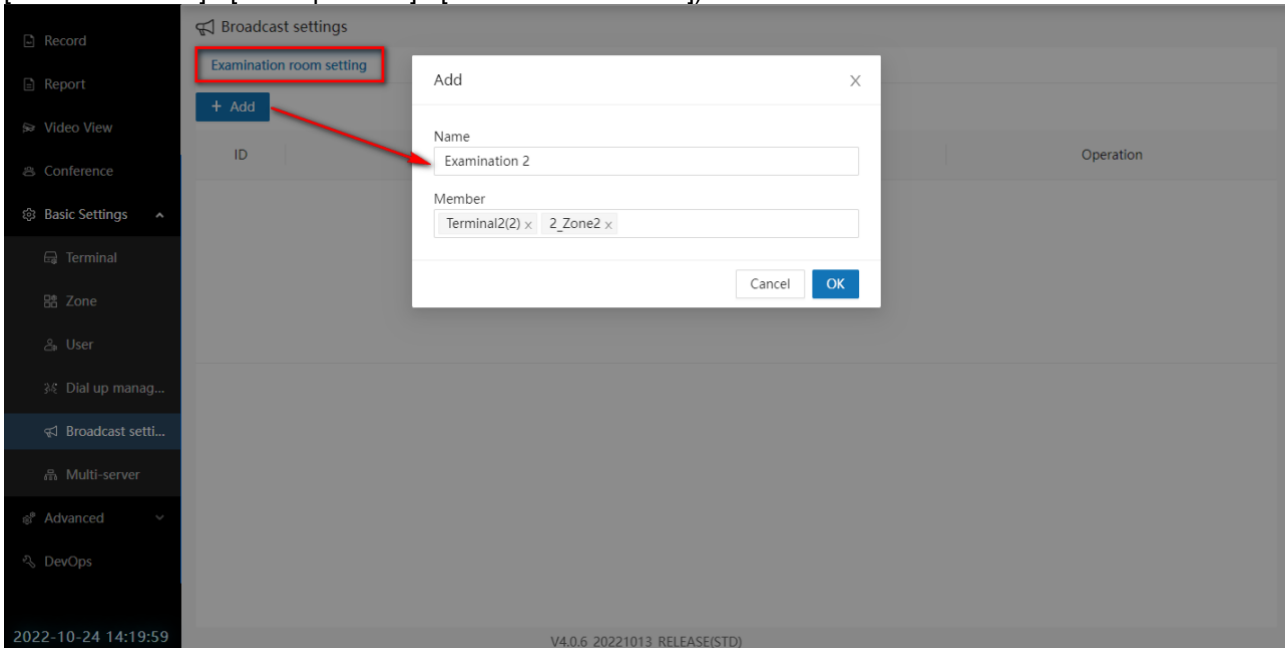


## Broadcast Setting

### Examination room setting

The examination room setting is suitable for terminals with LED screens that display the name of the test room set in the test room setup.

On the examination room setting screen, press the [Add] button to add the test room. After the test room is added, when adding Scheduled task - information release, if you select the examination room release, you can select the added examination room in "Examination Room Setting". After the task runs, The LED screen of the terminal under this examination room will display the name of the examination room (for details, see [Scheduled Task] - [Add Operation] - [Information Release]).



The screenshot shows the 'Broadcast settings' interface. A red box highlights the 'Examination room setting' option in the left sidebar. A red arrow points from this box to the '+ Add' button. The 'Add' dialog box is open, showing the following fields:

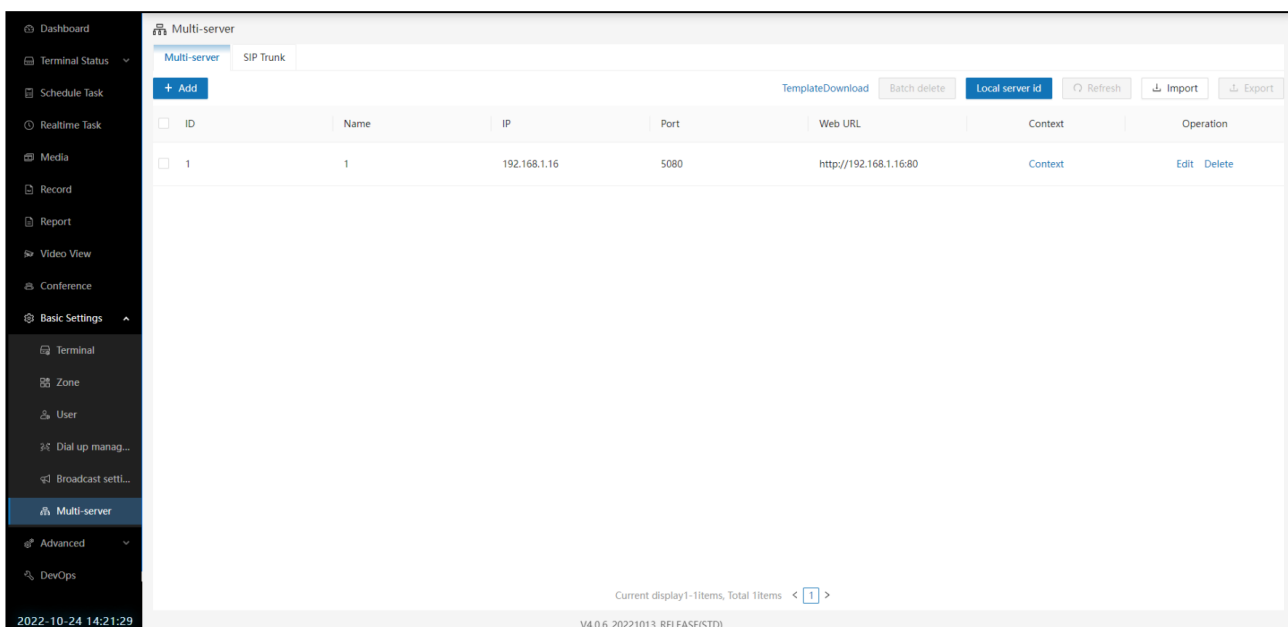
- Name: Examination 2
- Member: Terminal2(2) x 2\_Zone2 x

Buttons for 'Cancel' and 'OK' are visible at the bottom of the dialog. The background shows a table with columns for ID and Operation.

## Multi-server

Add different type of server on the multi-server to realize across server communication.

**Note: External communication must be enabled for external communication. (Log in to the system account, under "Basic Settings" - "Network Settings" - "Exterior network mapping IP", you can enable external communication.)**




The screenshot shows the 'Multi-server' interface. The table displays the following data:

ID	Name	IP	Port	Web URL	Context	Operation
1	1	192.168.1.16	5080	http://192.168.1.16:80	Context	Edit Delete

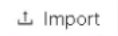
Buttons for '+ Add', 'TemplateDownload', 'Batch delete', 'Local server id', 'Refresh', 'Import', and 'Export' are visible at the top of the table. The footer shows 'Current display 1-1 items, Total 1 items' and 'V4.0.6\_20221013\_RELEASE(STD)'.

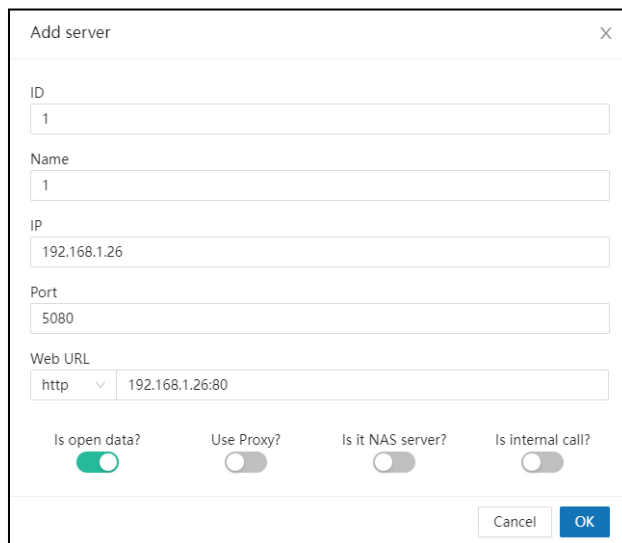
## 1 Add server

The server interconnection should add both the server information and the server information of the interconnection, click “add”  to add server and to set ID, name, IP, Port (default is 5080).

Proxy enabled: The terminal under the local server whether to obtain the information about the configured server from the local server .Enabled to obtain from the local server , otherwise directly obtain from the peer server.

Internal call enabled: After enabled , the terminals under the local server can call the other terminal under this server by using internal call mode ; Otherwise by using external call mode.

Import: Click  button , choose the server information table saved on the local server , the format of the table header must be as shown in the diagram on the right .



A	B	C	D	E
serverid	servername	serverip	serverport	serverurl

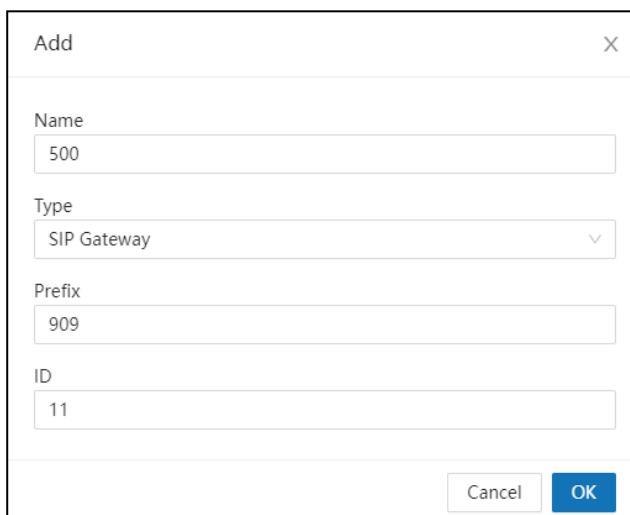
## 2 Add SIP Trunk

If the system needs to make an external call, it should be configured accordingly.

Dial prefix: the prefix used to dial an outside phone;

Terminal number: ID number of the telephone gateway;

Type: select to access the SIP gateway (IP VOIP interface)、 SIP wireless gateway or SIP server (PBX)



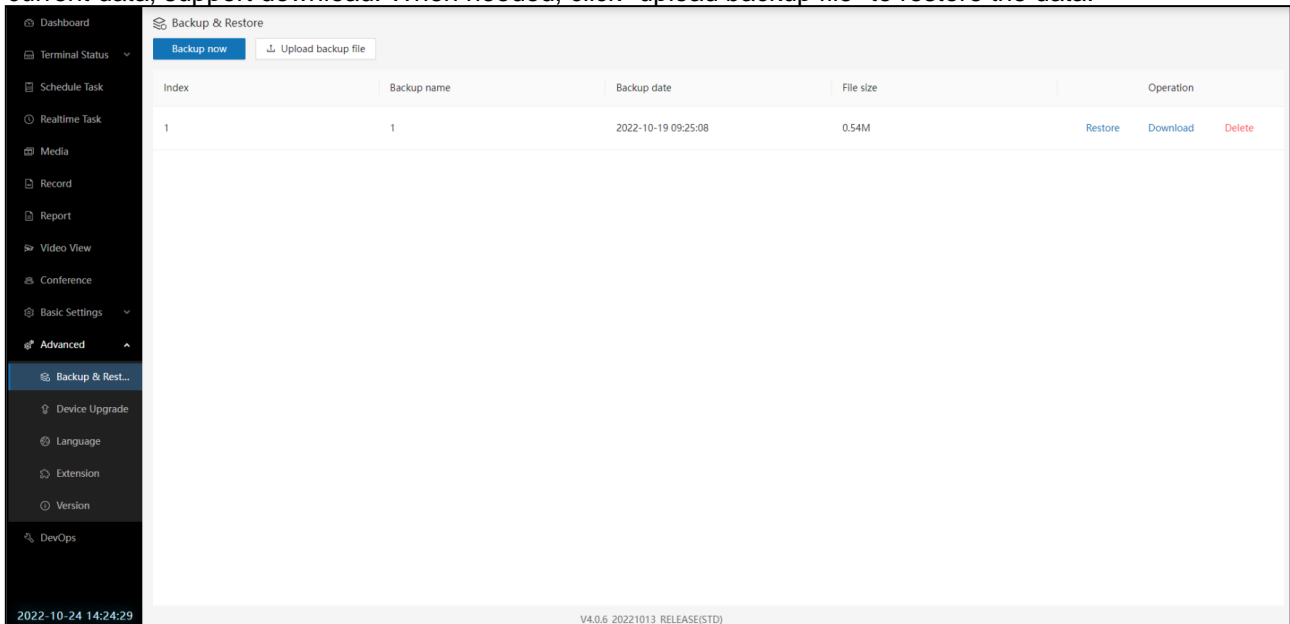
## 4.11 Advanced

### Backup/Restore

Back up all terminal/zone/tasks/user's information. When the data is destroyed, the data can be restored by

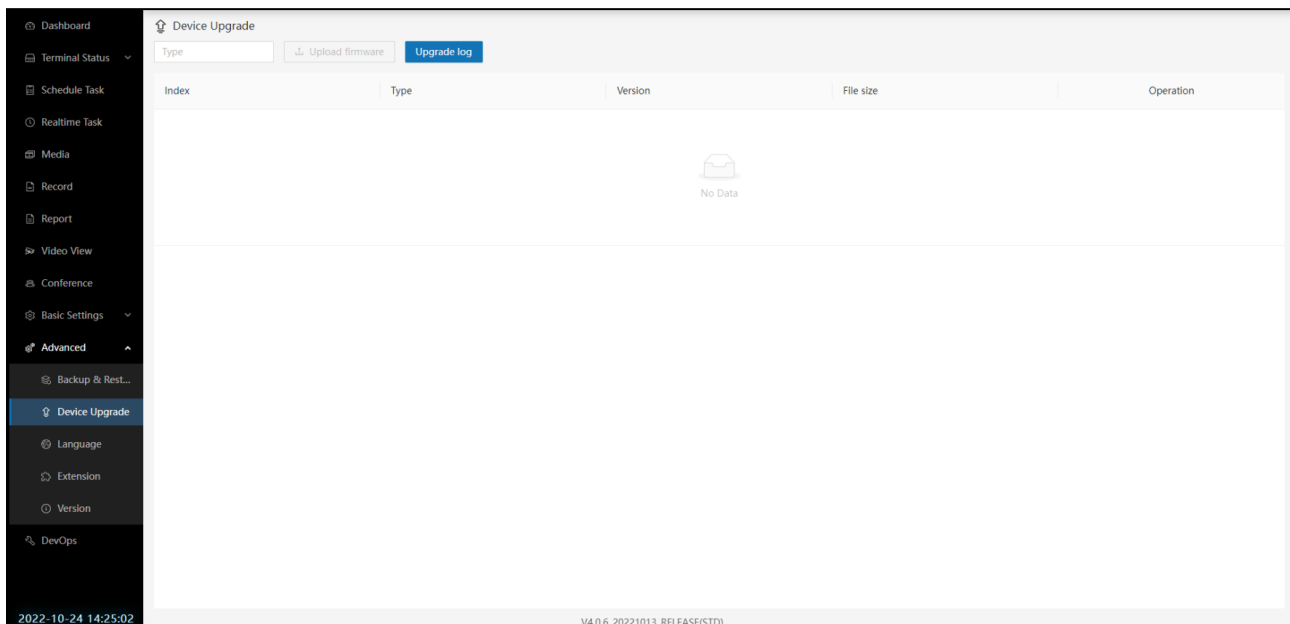
the backup (for example, when the coverage is installed, the system parameter data will be modified, the user's data can be backed up before the coverage is installed, and the data will be covered after the installation is installed).

Click "Backup now" to backup data and save the file on the server automatically. Click "Restore" to restore the current data, support download. When needed, click "upload backup file" to restore the data.



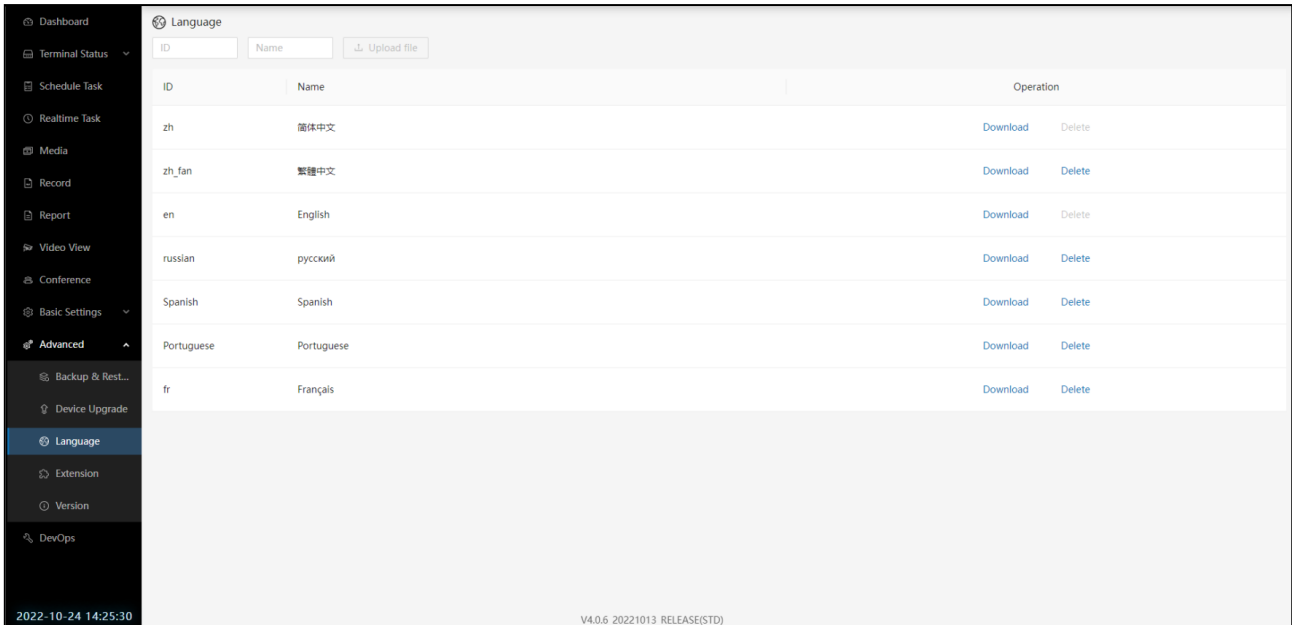
## Device upgrade

Input the terminal type, Click "Upload firmware" button to upload the upgrade file to server, and the terminal will automatically obtain the update program from the server for firmware upgrading. (Note: only parts of terminals are ok)




## Language

Available for system language configuration, default language is Chinese, English, Russian, Spanish, Portuguese, French.



## Extention

In the extended function, broadcast console, identity recognition and intelligent analysis can be opened by pressing the button  directly without license.

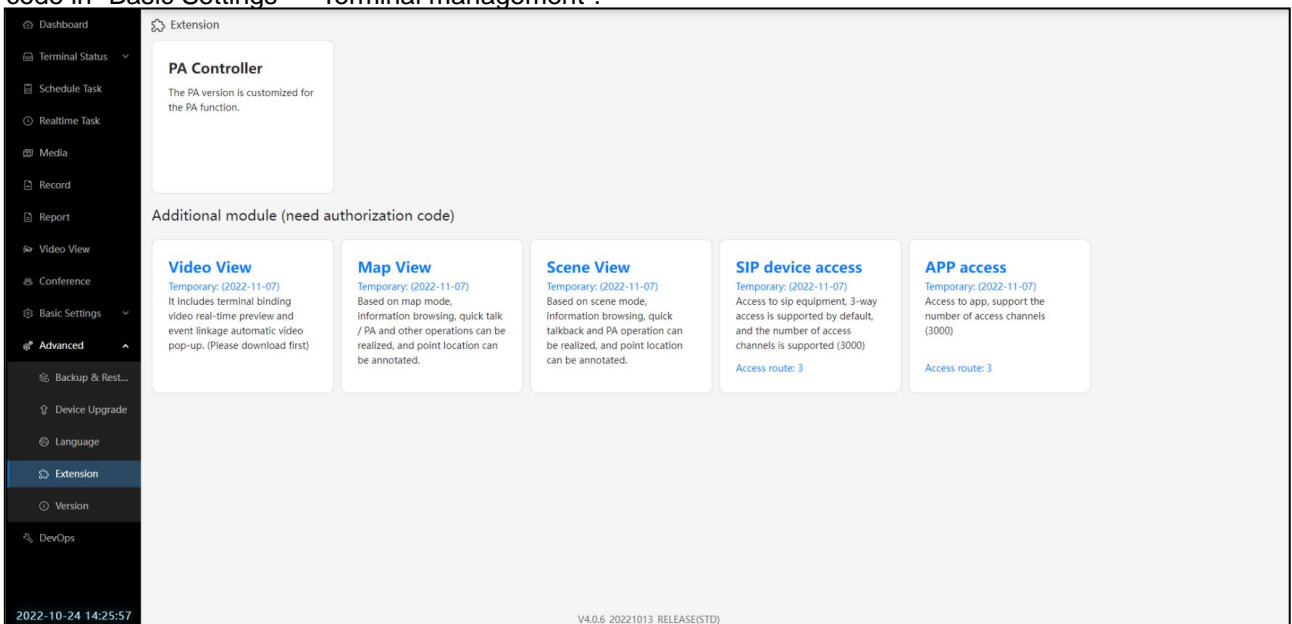
Video, map view/scene view, SIP device access and XC-APP access belong to additional modules, which can be used after authorized. Check the required module, click "Get application code", send the application code to the manufacturer, and then obtain authorization according to the license provided by the manufacturer.

**Video view:** including binding video real-time preview and event linkage automatic video popover. , Click the "download" button on the right to download and install video contro after authorization!(see "Video preview" for details)

**Map view/scene view:** map/scene mode to browsing information, positioning and mark on map/scene view, it can work with intercom, broadcast and other operations (see "Terminal status" - "Map view"/" Scene view "for details)

**SIP device connection:** defaul as 3-way SIP device access, 3000 channel can be accessed after authorisation.

**APP Access:** XC-APP default as access in. And it will be ok can be after authorization. Please input PIN code in "Basic Settings" - "Terminal management".



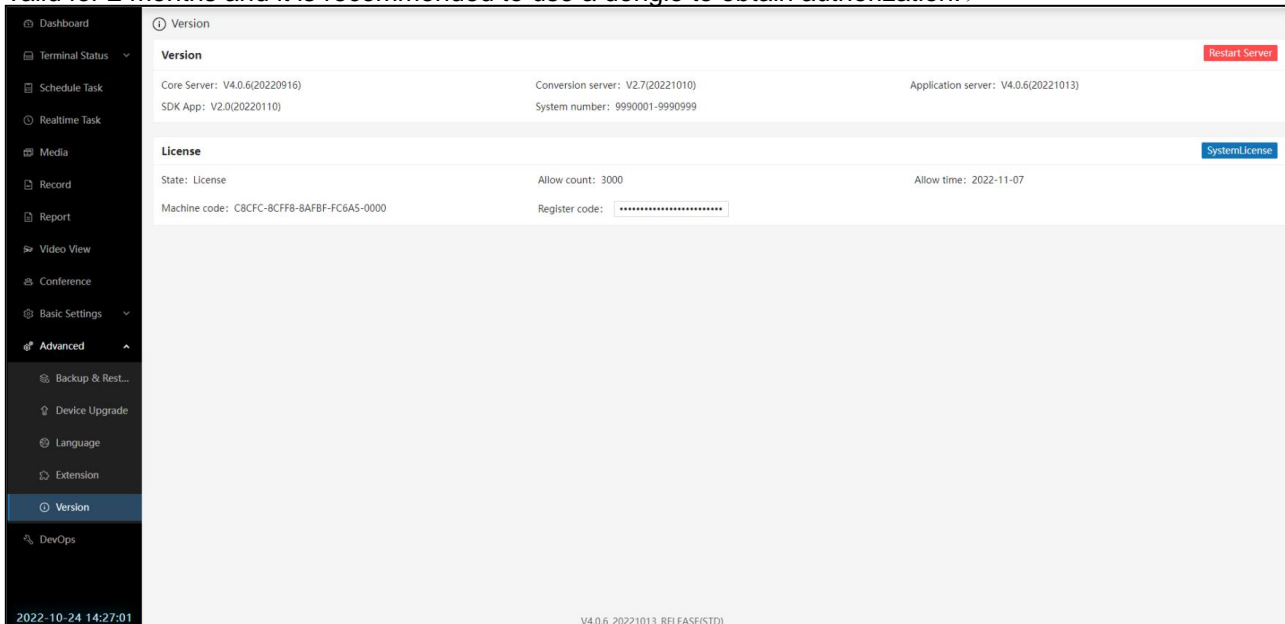
## Version

### Version information

Display server version, core server version etc, click "Restart Server" to restart server;

## License

Please offer the machine code to acquire the license of official server from supplier. (The registration code is valid for 2 months and it is recommended to use a dongle to obtain authorization.)

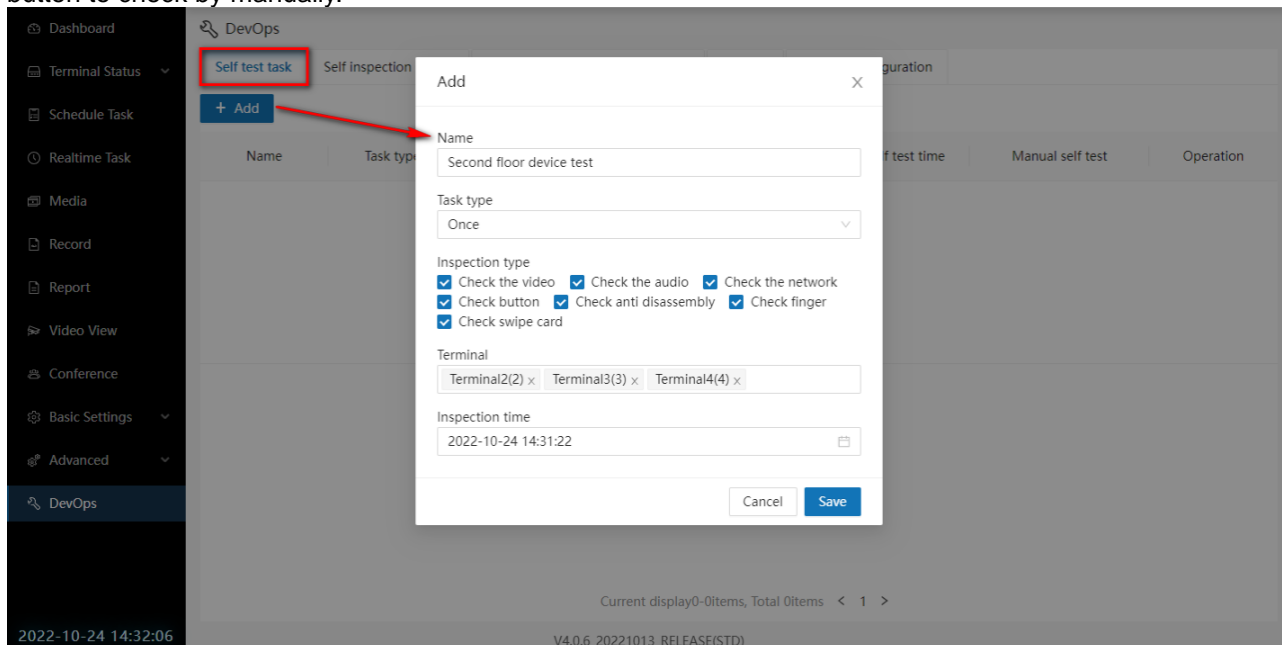


## 4.12 DevOps

### Device Self-inspection (Only some terminals support)

**Add self-inspection task:** Press “+ Add” button to add a new self-inspection task , the task name、task type、inspection type、inspection terminal、inspection time can be set on the displayed dialog . After save to take effect , the terminal will perform the specified item inspection at the specified time .The device inspection type support video inspection、audio inspection、network inspection、button inspection .etc .

**Manual self-inspection :** Choose the corresponding self-inspection task , prss the “Manual self-inspection” button to check by manually.

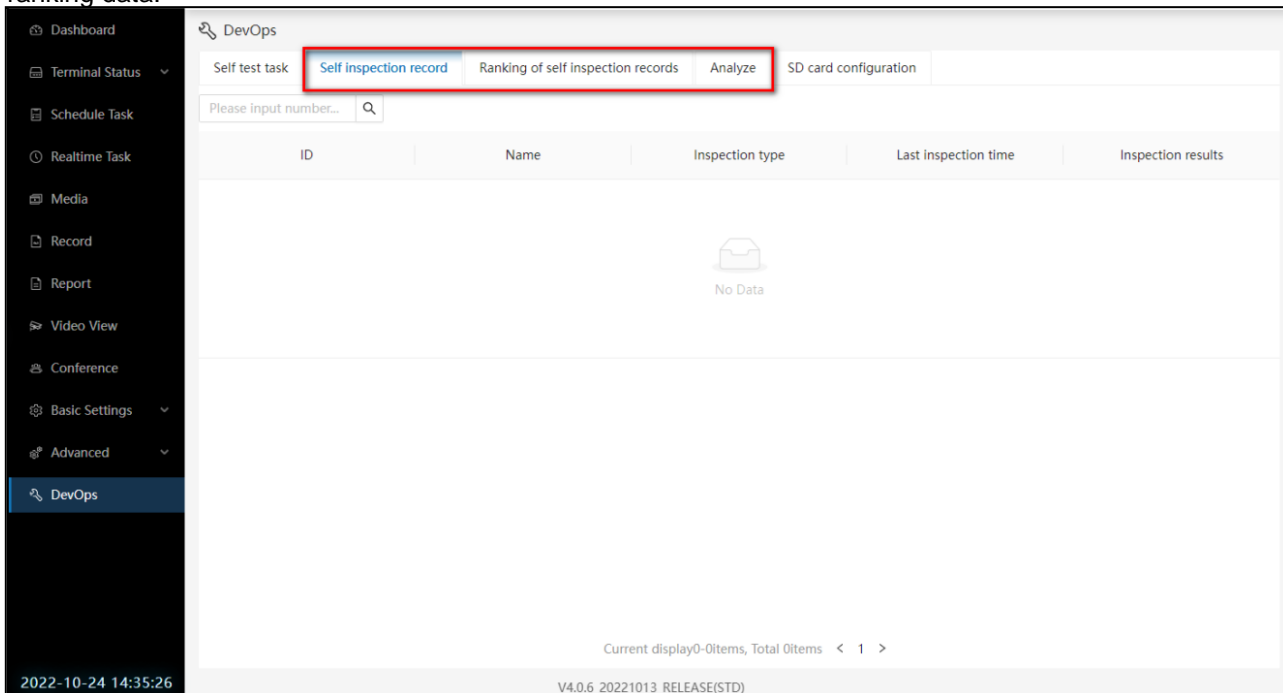


Self-inspection records、Ranking of self-inspection records、Analyze

**Self-inspection records:** Click Self-check Record to query device Self-inspection records, including terminal number, name, task name, check type, check time, and check result.

**Ranking of self-inspection records :** Click self-inspection record ranking to query the number of self-inspection failures and the last inspection time.

**Analyze:** Use diagram to show the device self-inspection failure data 、 failure type times、 self-inspection ranking data.

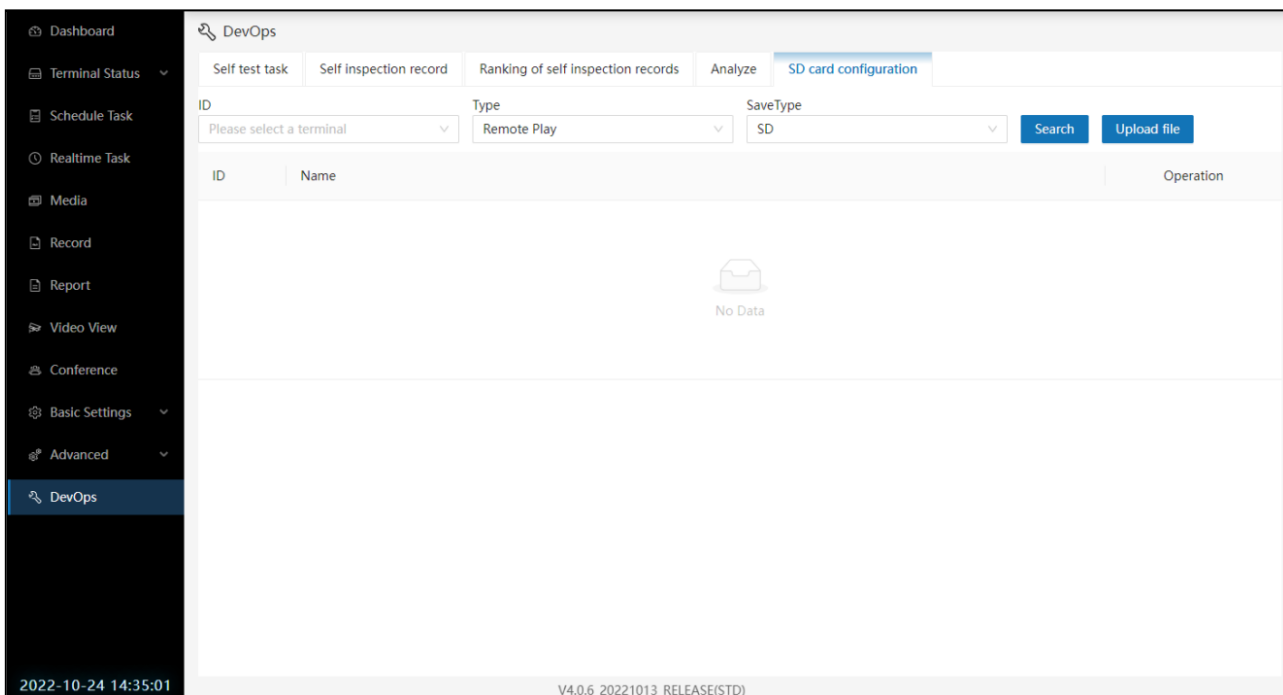


### SD card configuration

This command is used to upload or download audio files from the corresponding path on the device.

(1) File upload: First, select the corresponding terminal, and then select the type of file to be uploaded: remote broadcast control or short-circuit input 1, short-circuit input 2; Finally, press the "Upload File" button. The media library file list will pop up. Select the corresponding audio file and click "Save" to upload the file to the specified path on the device.

(2) File download: After selecting the corresponding terminal, file type, and file saving type, press the [query] button. The queried file can be displayed in the file list, and the corresponding file in the list can be downloaded.



## 5. System Administrator Interface

The way to login system administrator interface to see "software login"-system administrator login"(For



debugger login)

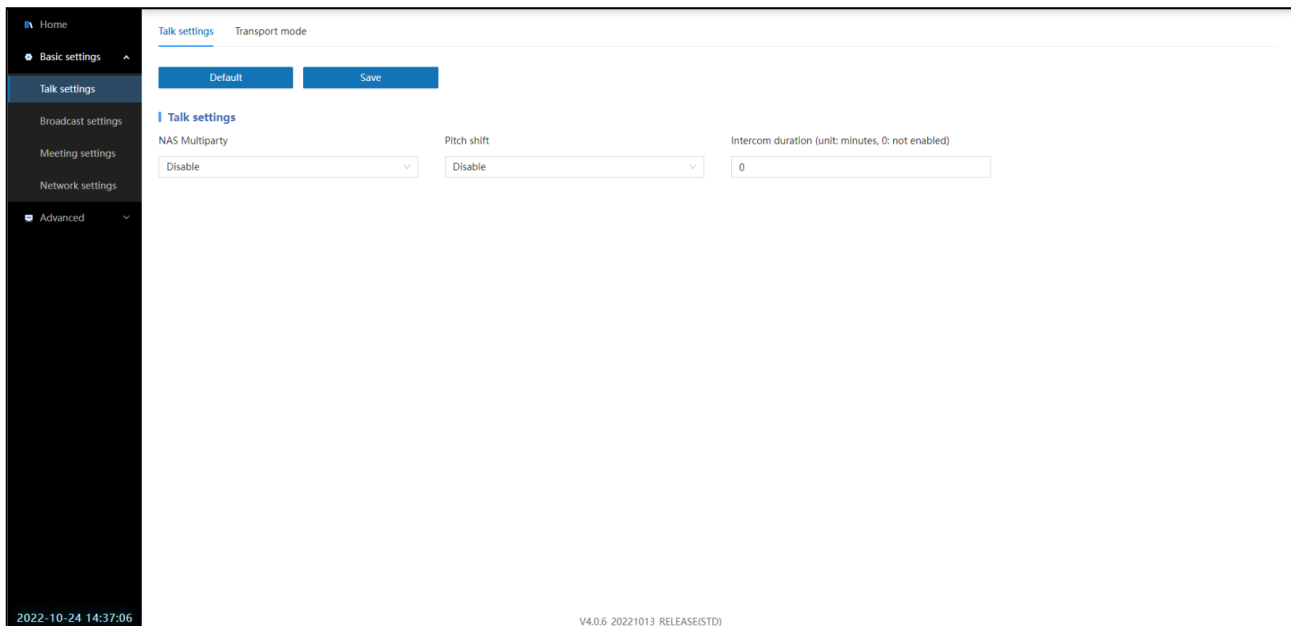
## 5.1 Basic Settings

### Talk Settings

**NAS Multiparty:** Set whether to enable the multi-party call function. To enable the multi-party call function for NAS devices, you need to enable the multi-party call function for the corresponding terminal in the terminal Settings (in the intercom property Settings of [Basic Settings]-[Terminal Management], select Enable for multi-party call). (Note: Multi-party call function is only supported by some terminals.

**Pitch shift:** Default is disable . After enabled , the voice will be changed by pitch shift during communication. This function is supported under server transfer mode. The “Pitch shift” function of the corresponding terminal need to be enabled on the terminal settings.(In talk parameters of [Basic settings]-[Terminal management], “enable” the talk pitch shift) .

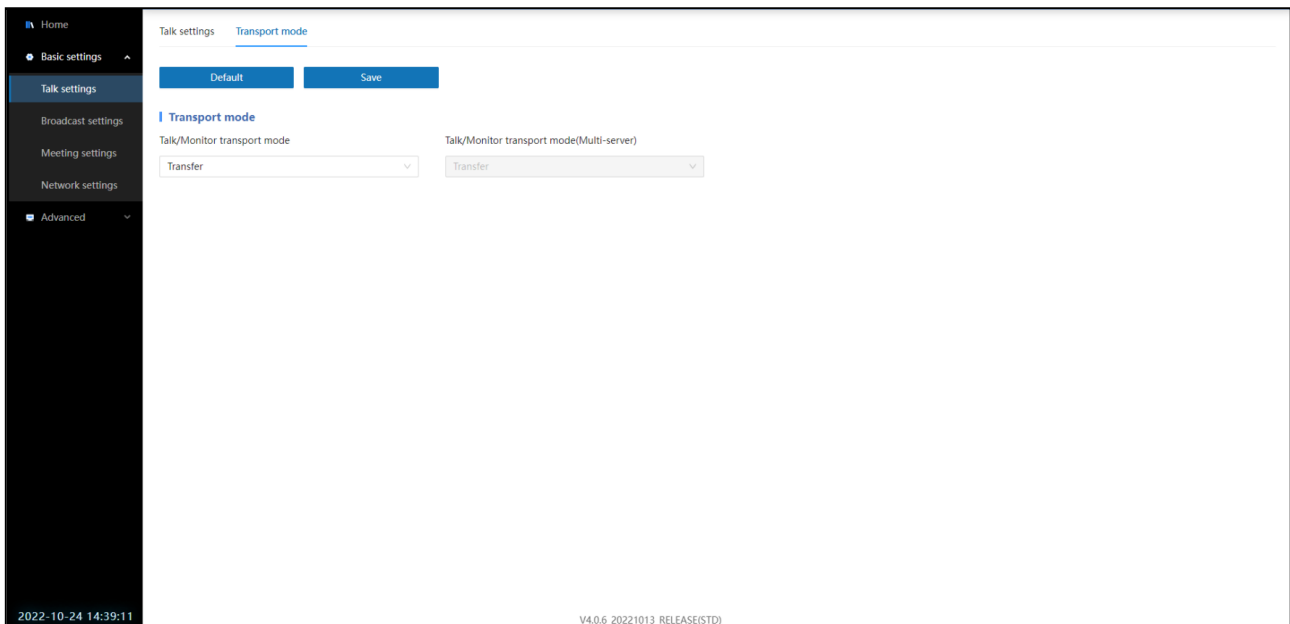
**Intercom duration:** Set intercom duration. 0 indicates that intercom duration setting is disabled.



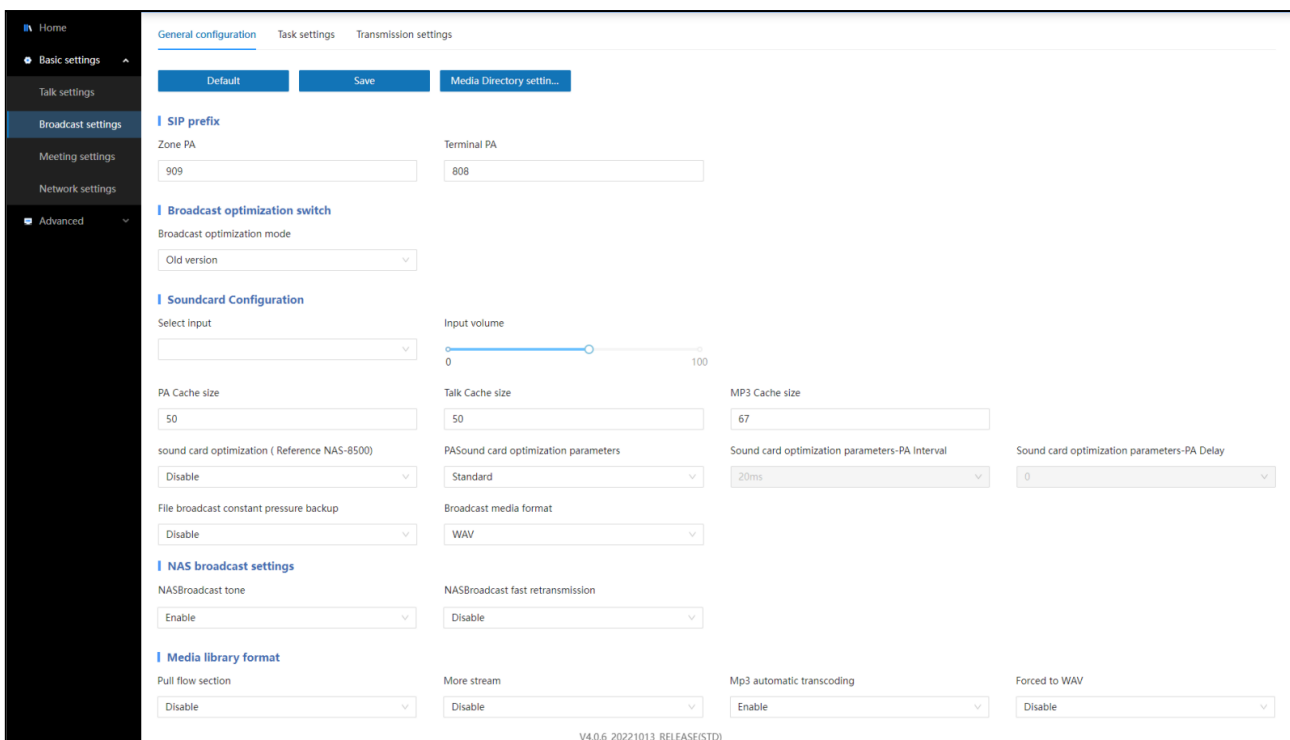
**Talk/Monitor transport mode:** The default is “Transfer” , can be set to “Direct” .

**Transfer:** Talk/Monitor data can be transferred by server , for example terminal 1 transfer to server then transfer to terminal 2.

**Direct:** Talk/Monitor data can be transferred not by server , for example terminal 1 direct to terminal 2 , not go through terminal 2 .



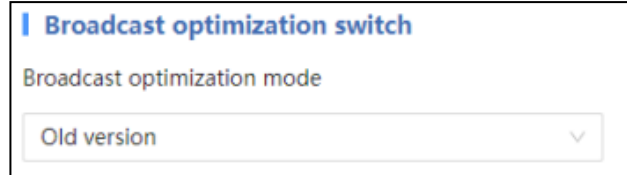
## PA settings General Settings



NO.	Functions	Diagram
1	<p><b>SIP prefix</b></p> <p>Standard SIP devices access to this system, the prefix numbers are needed to use broadcast function.</p>	

## 2 Broadcast optimization switch

Broadcast optimization mode: You can select old version mode or new version mode



The screenshot shows a settings panel titled "Broadcast optimization switch". Below the title is a label "Broadcast optimization mode" and a dropdown menu currently set to "Old version".

## 3 Soundcard Configuration

When configuring the broadcast, the server sound card input mode (generally adopts stereo mixing), and the volume adjustment.

PA、Talk、MP3 Cache size: Sound card Cache Settings when it is collecting audio.

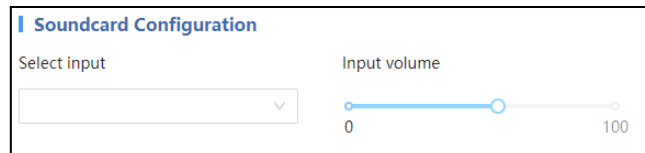
sound card optimization: sound card audio collection mode optimized (disabled by default).

PASound card optimization parameters: Select a sound card audio collection mode. Optional: Standard mode, speed mode, Custom mode.

Sound card optimization parameters-PA interval、delay: When the PASound card optimization parameters is set to Custom Mode, you can customize the audio collection interval and delay.

File broadcast constant pressure backup: Set whether to enable the scheduled task file broadcast constant pressure backup function.

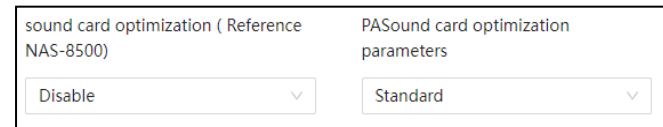
Broadcast media format: The audio encoding format that the server sound card sends when it picks up audio. The audio encoding format supports WAV 22K(default) and MP3 44K.



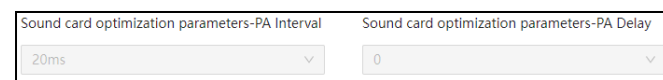
The screenshot shows the "Soundcard Configuration" panel. It includes a "Select input" dropdown menu and an "Input volume" slider ranging from 0 to 100.



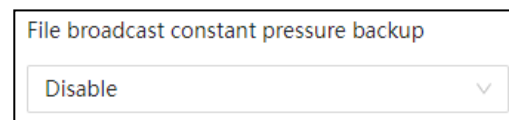
The screenshot shows three input fields for cache sizes: "PA Cache size" (50), "Talk Cache size" (50), and "MP3 Cache size" (67).



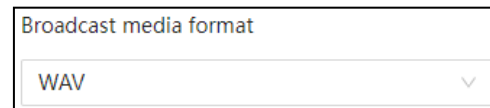
The screenshot shows two dropdown menus: "sound card optimization (Reference NAS-8500)" set to "Disable" and "PASound card optimization parameters" set to "Standard".



The screenshot shows two dropdown menus: "Sound card optimization parameters-PA Interval" set to "20ms" and "Sound card optimization parameters-PA Delay" set to "0".



The screenshot shows a dropdown menu for "File broadcast constant pressure backup" set to "Disable".

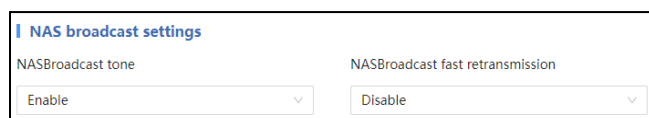


The screenshot shows a dropdown menu for "Broadcast media format" set to "WAV".

## 4 NAS broadcast settings

NASBroadcast tone: When this function is enabled, the device plays a broadcast announcement when it initiates or receives a broadcast. This function applies only to NAS devices.

NASBroadcast fast retransmission: If the device does not enter the broadcast state when the broadcast starts, the server quickly reinitiates the broadcast.



The screenshot shows the "NAS broadcast settings" panel. It includes two dropdown menus: "NASBroadcast tone" set to "Enable" and "NASBroadcast fast retransmission" set to "Disable".

## 5 Media library format

Multi-streaming : After enabled , when audio file uploading , ffmpeg will convert to different streaming file to the application server for broadcasting use.

Pull flow section : Reserved .

MP3 automatic transcoding: After enabled, the different bit rate MP3 files uploaded to the media library can be converted to qualified bit rate

Forced to WAV: After enabled ,the different format audio file can be forced converted to WAV format.

## 6 Media Directory settings

You can modify the directory for storing media library files.

**Note: This operation will cause the media library files in the original directory to be lost. Exercise caution when performing this operation.**

## Task Settings

NO.

Functions

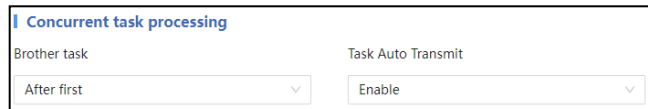
Diagram

---

## 1 Task processing mode

**Brother task:** Conflicts occur when a terminal receives multiple tasks of the same level ,accept the “First-in”task or “After first”task.

**Task auto transmit:** After enabled , support the task auto transmit (For example , When a task is initiated, the device does not receive the task initiation command due to the network condition or other reasons. After the network is recovered, the device can receive the task again), this function only suit for NAS device.



**Concurrent task processing**

Brother task: After first

Task Auto Transmit: Enable

---

## 2 Task concurrency

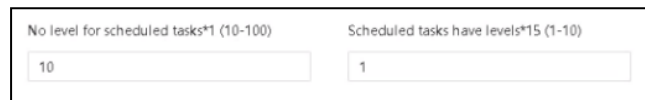
**Schedule task:** The schedule task include none level task and level task , the none level task support max 10 tasks concurrently run , 10-100 tasks can be set. The level task can concurrently run 1 channel for each level task(\*15 refer to task level 1-15) , 1-10 tasks can be set.

**Real-time task:** The real-time task default support max 40 tasks concurrently run , 10-100 tasks can be set .

**Nmuber of wireless gateway ports:** When the wilreless gateway device in the system , the number consistent with the number of wireless gateway ports need to be add here.

**WebSip Real time shouting \*1 (1-30):** Set the number of WebSip Real time shouting.

**Note:** The number of concurrent tasks cannot be lower than the default value.



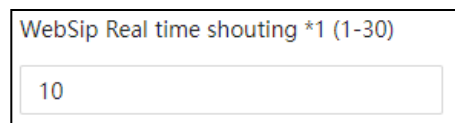
No level for scheduled tasks\*1 (10-100): 10

Scheduled tasks have levels\*15 (1-10): 1



Realtime Task\*1 (10-100): 40

Number of wireless gateway network ports\*1 (0-64): 0

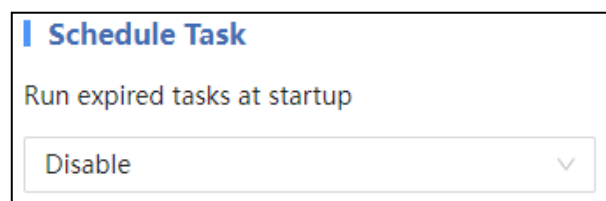


WebSip Real time shouting \*1 (1-30): 10

---

## 3 Schedule task

Run expired task at startup : Default is disable.



**Schedule Task**

Run expired tasks at startup: Disable

---

## 4 Real-time task

**Time limits:** "Real-time task" time control as minute, and when it is disabled, it will play according to the actual time of the audio.

**PA Priority:** set priority for real-time task broadcasting, from lowest 0 to highest 15.



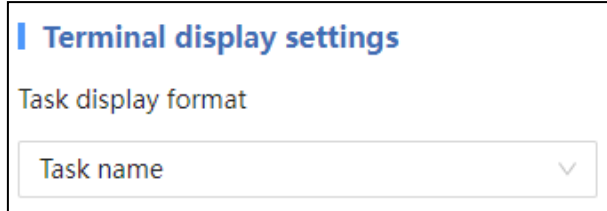
**Realtime Task**

Time limit (minute): Disable

PA Priority (Min 0, Max 15): 10

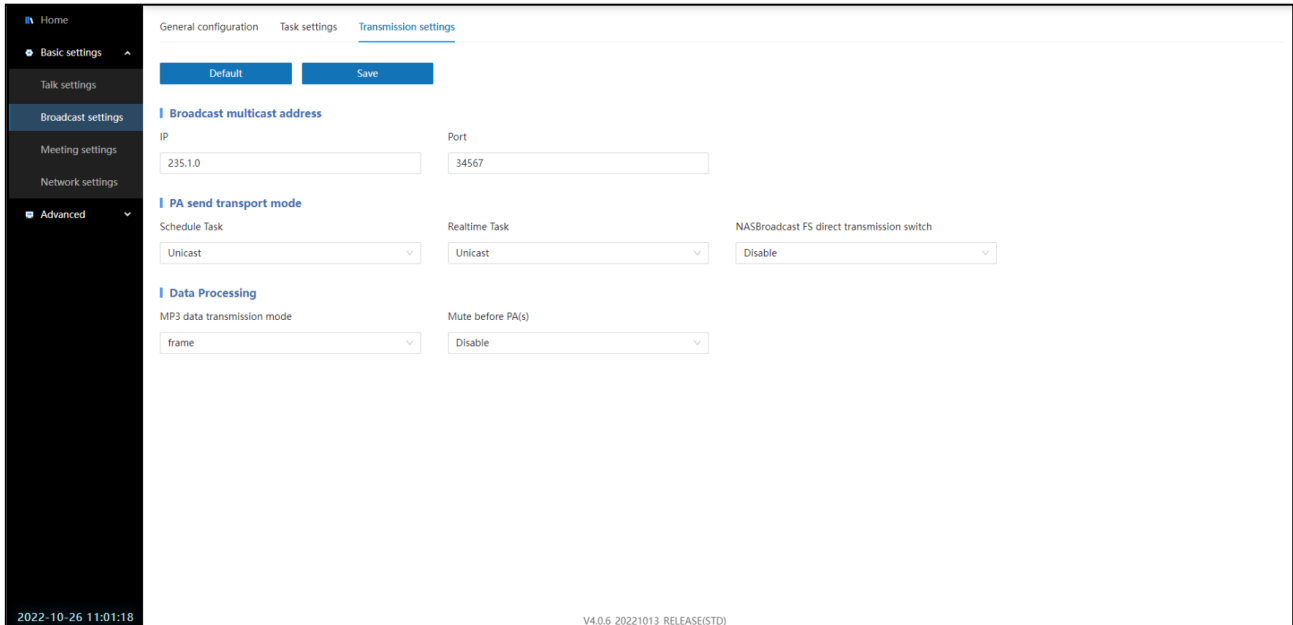
## 5 Terminal display settings

When set the broadcast , the display format of the task queue is according to the task name display or file name display.

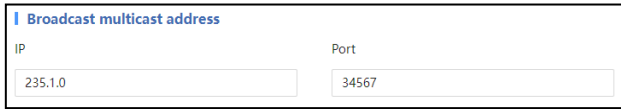

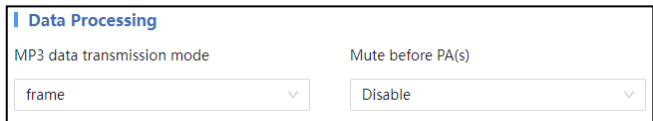


The screenshot shows a settings window titled "Terminal display settings". It contains a dropdown menu labeled "Task display format" with "Task name" selected and a downward arrow on the right.

## Transmission Settings

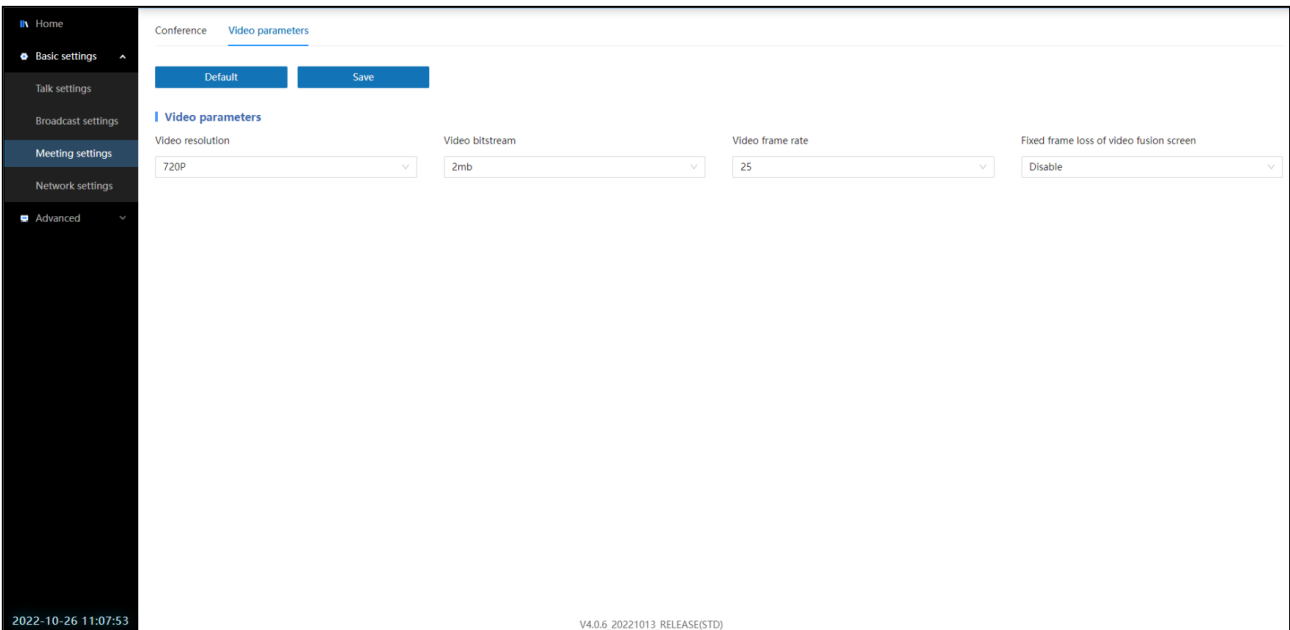
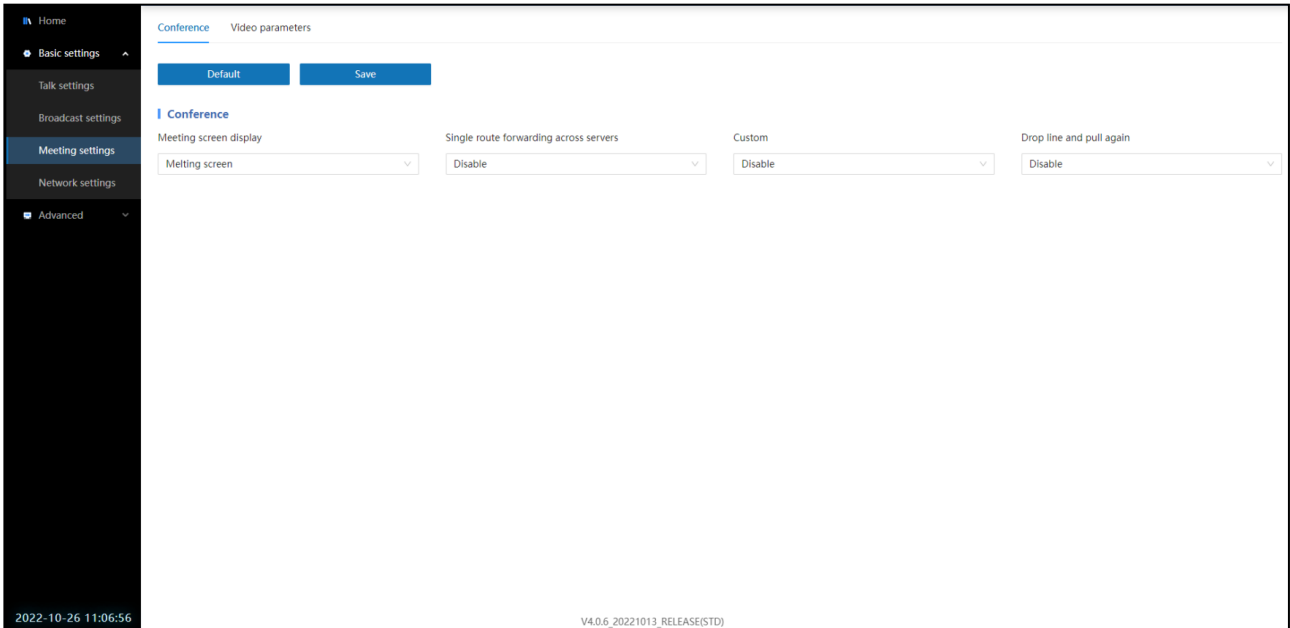


The screenshot shows the "Transmission settings" page in a web interface. It includes a sidebar with navigation options like "Basic settings", "Broadcast settings", and "Advanced". The main content area has tabs for "General configuration", "Task settings", and "Transmission settings". There are "Default" and "Save" buttons. The settings are organized into sections: "Broadcast multicast address" with IP (235.1.0) and Port (34567) fields; "PA send transport mode" with "Schedule Task" (Unicast), "Realtime Task" (Unicast), and "NASBroadcast FS direct transmission switch" (Disable) dropdowns; and "Data Processing" with "MP3 data transmission mode" (frame) and "Mute before PA(s)" (Disable) dropdowns. A footer shows the date "2022-10-26 11:01:18" and version "V4.0.6 20221013 RELEASE(STD)".

No.	Functions	Diagram
1	<b>Broadcast multicast address</b> Set the multicast address and port .	 <p>The diagram shows the "Broadcast multicast address" section with two input fields: "IP" containing "235.1.0" and "Port" containing "34567".</p>
2	<b>PA send trnsport mode</b>  Schedule task: Set the schedule task transmission mode is unicast or multicast.  Real-time task: Set the real-time task transmission mode is unicast or multicast.  NASBroadcast FS direct transmission switch: Set whether to enable broadcast delay optimization.	 <p>The diagram shows the "PA send transport mode" section with three dropdown menus: "Schedule Task" (Unicast), "Realtime Task" (Unicast), and "NASBroadcast FS direct transmission switch" (Disable).</p>
3	<b>Data processing</b>  MP3 data transmission mode : Frame or fixed length  Mute duration before PA: Before initiating file broadcast, the mute packet can be sent for a specified period to avoid packet loss in a poor network environment. The mute packet duration can be set to 1-5 seconds. Default is disabled.	 <p>The diagram shows the "Data Processing" section with two dropdown menus: "MP3 data transmission mode" (frame) and "Mute before PA(s)" (Disable).</p>

# Meeting Settings

Set the conference display mode、 video parameters .ect , set the parameters according to the operation environment .



## Network Settings

### Ports and protocols

#### Port

The ports of the core server and application server can be set (Note: Do not change the port except in special cases) .

#### Web agreement Select

Select a protocol for logging in to the WEB UI of the server. You can select HTTP, HTTPS, or HTTP and HTTPS.

The login method varies according to the selected protocol.

HTTP and HTTPS: The login mode supports HTTP or HTTPS.

HTTP only: Only Supports HTTP login.

HTTPS only: Only Supports HTTPS login.

The login method is as follows:

Enter http://server IP address: port in the address box of the web browser.

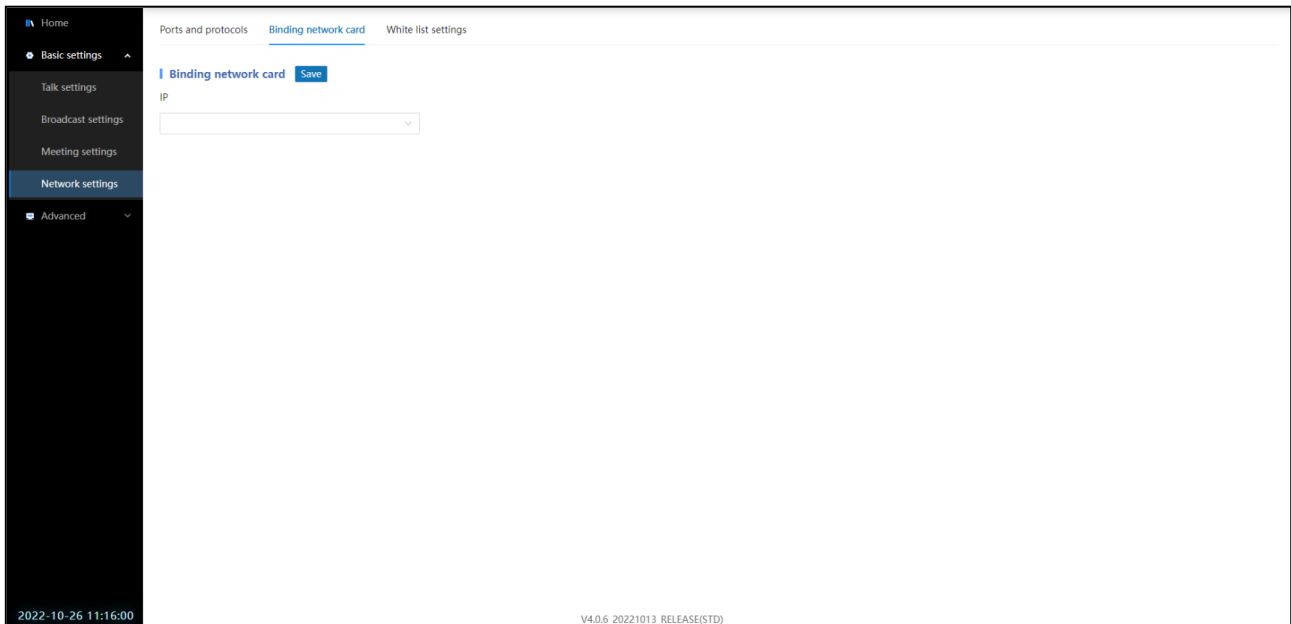
Enter https://server IP address: port in the address box of your web browser.

The screenshot displays the 'Ports and protocols' configuration page. At the top, there are tabs for 'Default', 'Save', and 'Exterior network map...'. The 'Port' section contains four input fields: 'Core server' (5060,16000-20000), 'Application server' (8888), 'Application server(WebSocket)Port' (9999), and 'Conversion server' (2048,1978). Below this, the 'Web agreement Select' dropdown is set to 'HTTP and HTTPS'. The interface includes a left sidebar with navigation options like 'Basic settings', 'Talk settings', 'Broadcast settings', 'Meeting settings', 'Network settings', and 'Advanced'. The bottom of the page shows the date '2022-10-26 11:13:20' and the version 'V4.0.6 20221013 RELEASE(STD)'.

### Binding network card



When there have multiple network card , binding one of these network card use for IP network audio system software.



## White List Settings

Press **+** button to add IP address (Delete: Input the IP ,press **-** button to delete) . After the save takes effect, only the IP addresses added to the whitelist are allowed to access the server(The default value is unlimited, that is, all IP addresses can access the server).

## Security-policy White list settings

A content security policy, the whitelist of allowing access to third resources.

## Access-Control-Allow-Origin Config

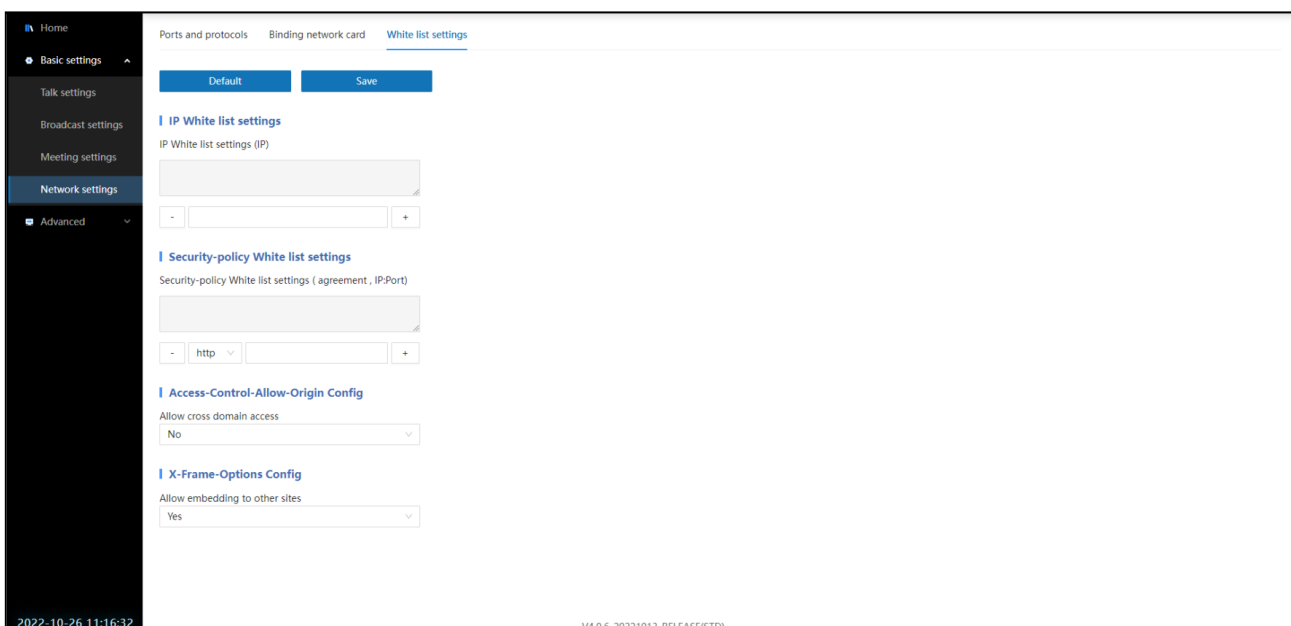
One security configuration, cross-domain configuration.

Yes: allows scripts with all domain names to access the resource.

No: Cross-domain access is not allowed (default value).

## X-Frame-Options Config

Set whether to allow embedding to other sites.



## 5.2 Advanced

### Composite

#### Composite Parameters

##### Terminal No.

Set the terminal number digit and handshark detection time .

**Note: The terminal number digit support max 7 digits.**

##### Network adaptive

According to the actual network environment to set the parameters.

##### Data transmission

RTCP data transmission:Enable RTCP data sending for audio and video. The server disables RTCP by default. need to enable RTCP function (but disable FEC/RTX function) during WebSIP intercom.

RTP Transmission Optimization of UA:After this function is enabled, only file broadcast uses the timer to send data, and other modes directly forward data to reduce the delay.

The screenshot shows a web interface for configuring 'Composite Parameters'. The left sidebar contains navigation options: Home, Basic settings, Advanced, Composite (selected), Platform access, Security manage..., Custom, System managem..., and Version. The main content area has tabs for 'Comprehensive parameters', 'Alarm management', and 'Audio and video parameters'. Below the tabs are 'Default' and 'Save' buttons. The configuration is divided into three sections: 'Terminal No.' with 'Terminal No. digit(3)' (range 0-7) and 'Handshark detection time' (10 min); 'Network adaptive' with 'FEC' and 'RTX' (both set to 'Disable'); and 'Data transmission' with 'RTCP data transmission' and 'RTP Transmission Optimization of UA' (both set to 'Disable'). The footer shows the date '2022-10-26 11:18:28' and version 'V4.0.6 20221013 RELEASE(STD)'.

## Alarm management

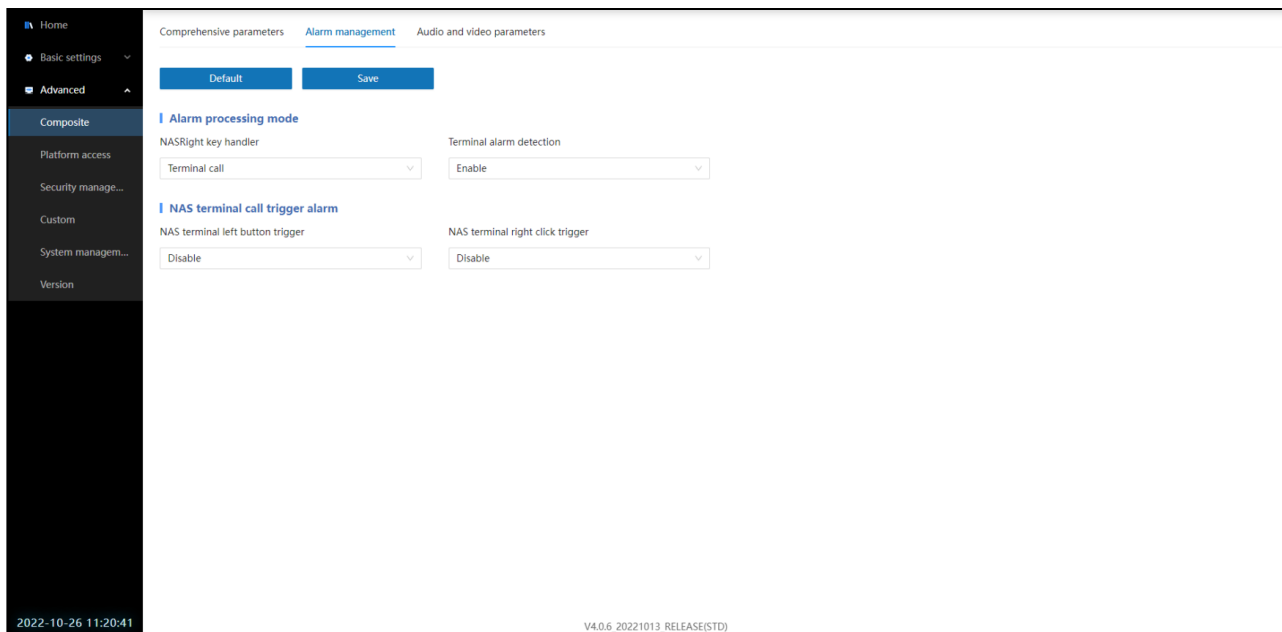
### Alarm processing mode

NASRight key handler: Set the function of right-clicking the NAS panel with two buttons, that is, pressing the right button can make a call or alarm.

Terminal alarm detection: After this function is enabled, the server receives the alarm information uploaded by the terminal. If it is disabled, it will not receive.

### NAS terminal call trigger alarm

Set whether to trigger the corresponding alarm input when the NAS terminal presses the left or right button to initiate a call.



## Audio and Video parameters

### Video parameters

Set the video encoding mode 、 encoding preset .

### NAS terminal video advanced parameters

NAS terminal automatically binds environment RTSP video:After this function is enabled, you can bind external videos in terminal management. If this function is disabled, the binding is invalid.

Send video during NAS terminal Conference: After this function is enabled, the NAS terminal can send external videos bound to the terminal

### Recording and video configuration

Configure whether to enable recording function and recording save path.

After enabled, the server can generate WAV format recording files for intercom, broadcast, listening and other contents between terminals and save them in the server.

User can independently set whether the recording function of Intercom 、 Conference 、 Broadcast enabled.

### RTPKey frames such as video packet loss

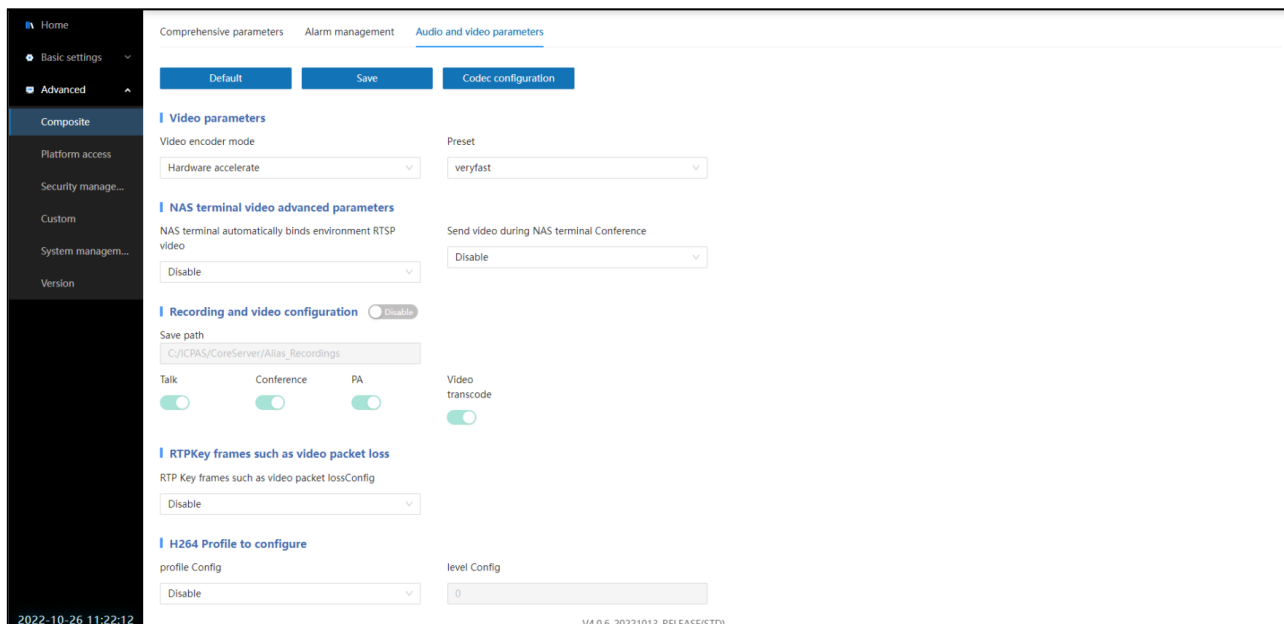
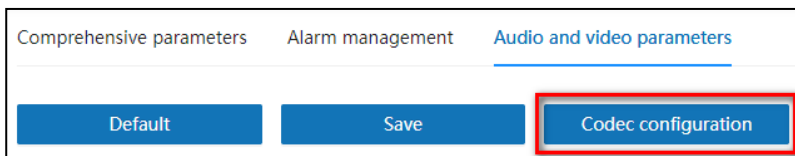
Set whether to enable RTPKey frames such as video packet loss function.

### H264 Profile to configure

Set video quality and other related parameters.

### Codec Configuration

Default PCMU、 PCMA、 H264、 L16 , add according to the actual requirement .



## Platform access

### Business Server

#### NAS binding server

Enable and set the IP address, port number, and audio data type of the NAS server. Save the Settings and restart the server for the Settings to take effect. This server obtains all terminal logins of the NAS server. .

#### AI Record Server

Enable this function and set the IP address and port (for example, 192.168.1.33:85) of the record server, the record server obtains recording and video data from the local server.

#### Media Stream ServerDisab

Reserved.

#### Audio and video push configuration

Audio/Video push switch: Set whether to enable audio/video push function. After this function is enabled, the audio and video of the intercom can be pushed to the third-party platform.

Audio/Video push client IP, port: The IP address and port of the third-party platform.

The screenshot displays the 'Business Server' configuration page. The left sidebar contains navigation options: Home, Basic settings, Advanced, Composite, Platform access (selected), Security manage..., Custom, System managem..., and Version. The main content area is titled 'Business Server' and includes tabs for 'HTTP access' and 'Compatible mode'. A 'Save' button is at the top. The 'NAS binding server' section is currently disabled and shows a table with columns for IP, Port, Audio format, and Operation, but it is empty with a 'No Data' message. Below this is the 'AI Record Server' section, which is also disabled. It features a 'URL' field with the example '192.168.1.13:85' and a 'Sync' button. The 'Media Stream Server' section is disabled and has a 'URL' field with the example 'rtmp://192.168.1.13/live'. The 'Audio and video push configuration' section includes an 'Audio push switch' dropdown set to 'Disable', 'Audio push client IP' and 'Audio push client port' input fields, and a 'Video push switch' dropdown set to 'Disable'. Below these are 'Video push client IP; port' and 'Video push client port' input fields, with '5051' entered in the latter. The footer shows the timestamp '2022-10-26 11:25:53' and the version 'V4.0.6 20221013 RELEASE(STD)'.

## HTTP access

The third-party access platform uses the Http interface access mode.

The screenshot shows a management console interface. On the left is a dark sidebar with a menu containing: Home, Basic settings, Advanced, Composite, Platform access (highlighted), Security manage..., Custom, System managem..., and Version. The main content area has a breadcrumb trail: Business Server > HTTP access > Compatible mode. Below the breadcrumb is a blue '+ Add' button. A table header is visible with columns: HTTP Uri, State, and Operation. The table body is empty, displaying a 'No Data' message with a folder icon. At the bottom of the main area, there is a pagination control: 'Current display 0-0 items, Total 0 items < 1 >'. The footer of the page shows the date '2022-10-26 11:31:22' on the left and the version 'V4.0.6\_20221013\_RELEASE(STD)' on the right.

## Compatible mode

The third-party access platform uses the original Internal communication access mode.

The screenshot shows a management console interface. On the left is a dark sidebar with a menu containing: Home, Basic settings, Advanced, Composite, Platform access (highlighted), Security manage..., Custom, System managem..., and Version. The main content area has a breadcrumb trail: Business Server > HTTP access > Compatible mode. Below the breadcrumb are two buttons: '+ Add' and 'Config'. A table header is visible with columns: IP, Port, and Operation. The table body is empty, displaying a 'No Data' message with a folder icon. At the bottom of the main area, there is a pagination control: 'Current display 0-0 items, Total 0 items < 1 >'. The footer of the page shows the date '2022-10-26 11:31:43' on the left and the version 'V4.0.6\_20221013\_RELEASE(STD)' on the right.

## Security Management

### Session management

#### Token authentication on

##### Token detection、Token timeout:

After TOKEN detection is enabled, the server authenticates the identity of the requester. If TOKEN detection times out, the requester needs to log in to the server again.

**(Note: You are advised to enable TOKEN detection. Disabling TOKEN detection may cause risks.)**

##### HTTP connection detection、HTTP response detection:

Whether to enable the HTTP connection and response detection function. If there is no HTTP connection、 or response, the requester needs to log in to the server again.

The screenshot displays the 'session management' configuration page in a web console. The left sidebar contains navigation options: Home, Basic settings, Advanced, Composite, Platform access, Security manage... (highlighted), Custom, System managem..., and Version. The main content area has tabs for 'session management', 'safeguard', 'Password settings', and 'Key management'. Below the tabs are 'Default' and 'Save' buttons. The 'Token authentication on' section is active, showing four settings: 'Token detection' (set to 'Disable'), 'Token timeout' (set to '24 Smallhour'), 'HTTP connection detection' (set to 'Disable'), and 'HTTP response detection' (set to 'Disable'). The footer shows the date '2022-10-26 11:32:07' and the version 'V4.0.6 20221013 RELEASE(STD)'.

## Safeguard

### Password management

#### Password validity:

After TOKEN authentication is enabled, the server will force you to change the login password when it reaches the password validity period.

#### Can the account and password be the same:

Set whether the account and password can be the same.

#### Password strength verification:

If No is selected, you can set any type of password.

If Yes is selected, the password must contain at least three combinations of uppercase letters, lowercase letters, digits, and special characters and must be at least eight characters in length.

The screenshot shows the 'safeguard' configuration page for 'Password management'. The page has a dark sidebar on the left with navigation options: Home, Basic settings, Advanced, Composite, Platform access, Security manage..., Custom, System managem..., and Version. The main content area has tabs for 'session management', 'safeguard', 'Password settings', and 'Key management'. Below the tabs are 'Default' and 'Save' buttons. A blue header indicates 'Password management [takes effect after token authentication is enabled]'. Three settings are shown: 'Password validity' set to '90Day', 'Can the account and password be the same' set to 'No', and 'Password strength verification' set to 'No'. The footer shows the date '2022-10-26 11:32:29' and version 'V4.0.6 20221013 RELEASE(STD)'.

Setting	Value
Password validity	90Day
Can the account and password be the same	No
Password strength verification	No



## Password Settings

### Project password

If the project password function is authorized in the dongle, you can change the password here. (Maximum 8 digits, maximum number of modifications 10 times)

**Note: This password is required when adding or deleting a terminal. Enable authorization in the dongle.**

### System password

#### Password:

Change the passwords of all terminals on the server . After the passwords take effect, the default passwords of all terminals are the same. The terminal whose password has been changed still uses the new password.

#### ESLPassword:

Password for information exchange between the terminal and the server (do not change it at will).

The screenshot shows the 'Password settings' page in a web application. The left sidebar contains navigation options: Home, Basic settings, Advanced, Composite, Platform access, Security manage..., Custom, System managem..., and Version. The main content area has tabs for 'session management', 'safeguard', 'Password settings', and 'Key management'. Under 'Password settings', there are two sections: 'Project password' and 'System password'. The 'Project password' section has an 'Edit' button and three input fields: 'Original', 'New password', and 'Confirm'. The 'System password' section has two input fields: 'Password' and 'ESLPassword'. At the top of the main content area, there are 'Default' and 'Save' buttons. The footer shows the date '2022-10-26 11:36:21' and the version 'V4.0.6 20221013 RELEASE(STD)'.

## Key Management

### Key Management

Click to upload the nignx certification .

### Sip Secret Key

Set the SIP secret key , the length of the key should be 32 characters .

The screenshot shows the 'Key management' page in a web application. The left sidebar is the same as in the previous screenshot. The main content area has tabs for 'session management', 'safeguard', 'Password settings', and 'Key management'. Under 'Key management', there is a section for 'Key management' with a button 'Upload nginx certificate'. Below that is a section for 'SIPSecret key' with an 'Edit' button and a single input field for the 'SIPSecret key'. The footer shows the date '2022-10-26 11:36:43' and the version 'V4.0.6 20221013 RELEASE(STD)'.

## Custom

### Personalization

#### Title Config

Customize software title , for example: XX school , the title will appear on the upper software after save .**Click the title to display the interface function keys**

#### Home page setting

Set the page displayed on the home page when login to the service software. For example, if the home page is set to List View, the list View screen is displayed after a user enters the account and password to login to the service software.

#### Layout setting

After enabled , the terminal which has call panel to login server can display the detail panel information.

#### View mode

The partitioned display mode can be set .



## Third party docking

### SSO

Set the login mode and HTTP path of the server.

### RJ single sign on

IP address and key of the third-party system (used for interconnecting with the third-party system).

### Smart street lamp platform single sign on

The IP address, port, client ID, key, and redirection address of the connected Smart street light platform (used for connecting to the Smart Street light platform).

### Third party platform jump (general)

The name, address of Third-party platform(used when connecting to a third-party platform).

### SDK filtering (HTTP access mode and compatibility mode)

The SDK only sends messages for the relevant terminal and its enabled configuration.

#### Terminal number

Enter the terminal number that the SDK needs to send messages to.

#### Talk、PA、 Alarm filter

Enable, the intercom/broadcast/alarm message of the set terminal can be sent out through the SDK;

After disabled, the intercom/broadcast/alarm messages of the set terminal will not be sent out through the SDK.

The screenshot shows a web interface for configuring 'Third party docking'. The page is titled 'Personalization' and 'Third party docking'. A 'Save' button is at the top left. The configuration is organized into several sections:

- SSO**: Includes a 'Type' dropdown menu (set to 'SSO\_STD') and an 'HTTP Url' text input field.
- RJ single sign on**: Includes 'Third party system IP address' and 'Third party key' text input fields.
- Smart street lamp platform single sign on**: Includes 'IP', 'Port', 'client ID', and 'secret key' text input fields, and a 'Redirect address' text input field.
- Third party platform jump (general)**: Includes 'Third party platform name', 'Third party platform address', and 'Third party platform login' (a dropdown menu set to 'nothing') text input fields.
- SDK filtering (HTTP access mode and compatibility mode)**: Includes a 'Terminal number (for example: - 1-2-3 -, all:\*)' text input field, and 'Talk filter', 'PA filter', and 'Alarm filter' dropdown menus, all currently set to 'Disable'.

The interface includes a dark sidebar on the left with navigation options: Home, Basic settings, Advanced, Composite, Platform access, Security manage..., Custom (highlighted), System managem..., and Version. The bottom left corner shows the date and time '2022-10-26 11:45:59', and the bottom center shows the version 'V4.0.6\_20221013\_RELEASE(STD)'.

## System Management

### Advanced Management

#### Time switch machine

You can set the server timing switch, For example, the server can be automatically shut down at night and automatically turned on in the morning.

#### Auto Power Off

Turn on the timed shutdown switch on the right side to set the shutdown time of the computer

#### Auto Power on

Click [configuration] to open the help document and set the automatic startup time as prompted

#### Serial SMS

Supports the SMS module.

#### Log Level

Set the server log level , that is ,the detail situation of the log recording.

#### Shelf Life

Set the shelf life of terminal operation log、recording、TTS audio file , the log and recording support to save permanently.

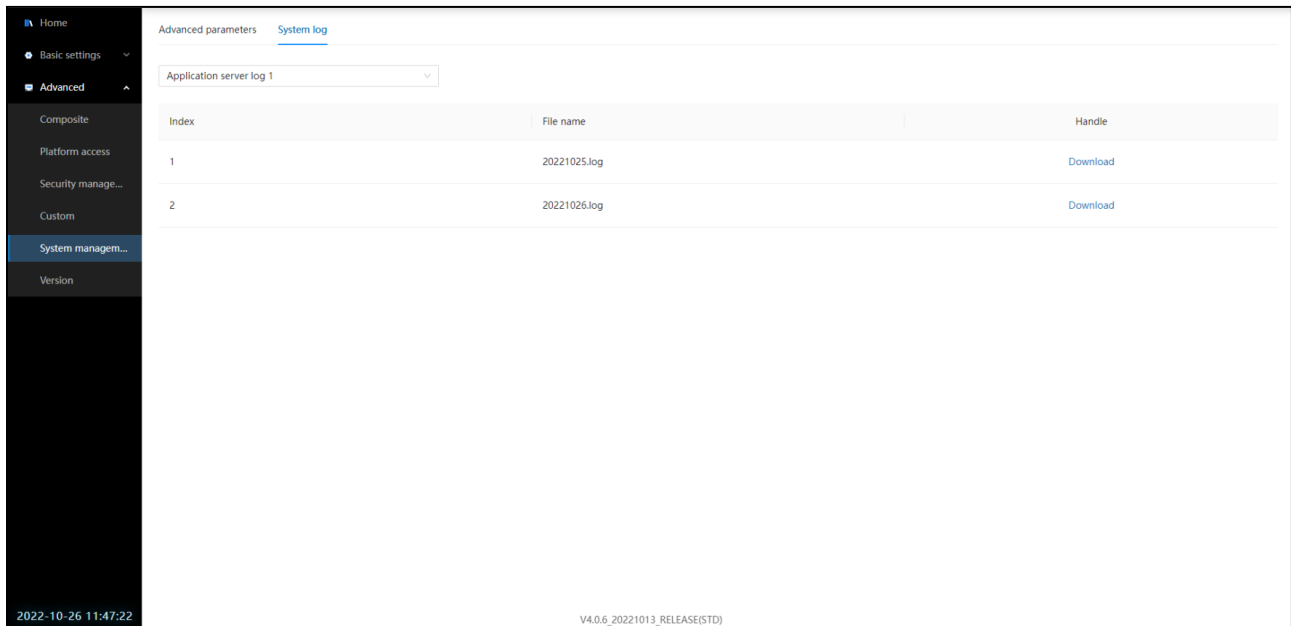
#### Server Data refresh interval

You can set the server data refresh interval.

The screenshot displays the 'System management' configuration page. The left sidebar contains navigation options: Home, Basic settings, Advanced, Composite, Platform access, Security manage..., Custom, System managem..., and Version. The main content area is titled 'Advanced parameters' and 'System log'. It features a 'Default' button and a 'Save' button. The 'Time switch machine' section includes an 'Auto Power Off' toggle and a 'Configuration' link. The 'Serial SMS' section has fields for 'Serial port number', 'Send content' (set to 'Terminal call'), and 'Receive the number(split with )'. The 'log level' section includes 'Convert server log level' (set to 'operate'), 'Core server log level' (set to 'operate'), 'Application server log level' (set to 'operate'), and 'Application server log size (taken from 5 - 100M)' (set to '10'). The 'Shelf life (days)' section includes 'Log' (set to '30'), 'Record' (set to '5'), and 'TTS voice file' (set to '30'). The 'Server Data refresh interval' section includes a field for 'Server Data refresh interval ( Company min)' set to '3'. The footer shows the date '2022-10-26 11:46:44' and the version 'V4.0.6\_20221013\_RELEASE(STD)'.

## System Log

Support to view the operation log of Application Server 、 Core Server、 Web Server .



The screenshot shows the 'System log' page in a web application. The left sidebar contains navigation options: Home, Basic settings, Advanced, Composite, Platform access, Security manage..., Custom, System managem..., and Version. The main content area has tabs for 'Advanced parameters' and 'System log'. A dropdown menu is set to 'Application server log 1'. Below this is a table with the following data:

Index	File name	Handle
1	20221025.log	<a href="#">Download</a>
2	20221026.log	<a href="#">Download</a>

At the bottom left, the timestamp is '2022-10-26 11:47:22'. At the bottom center, the version is 'V4.0.6.20221013.RELEASE(STD)'.

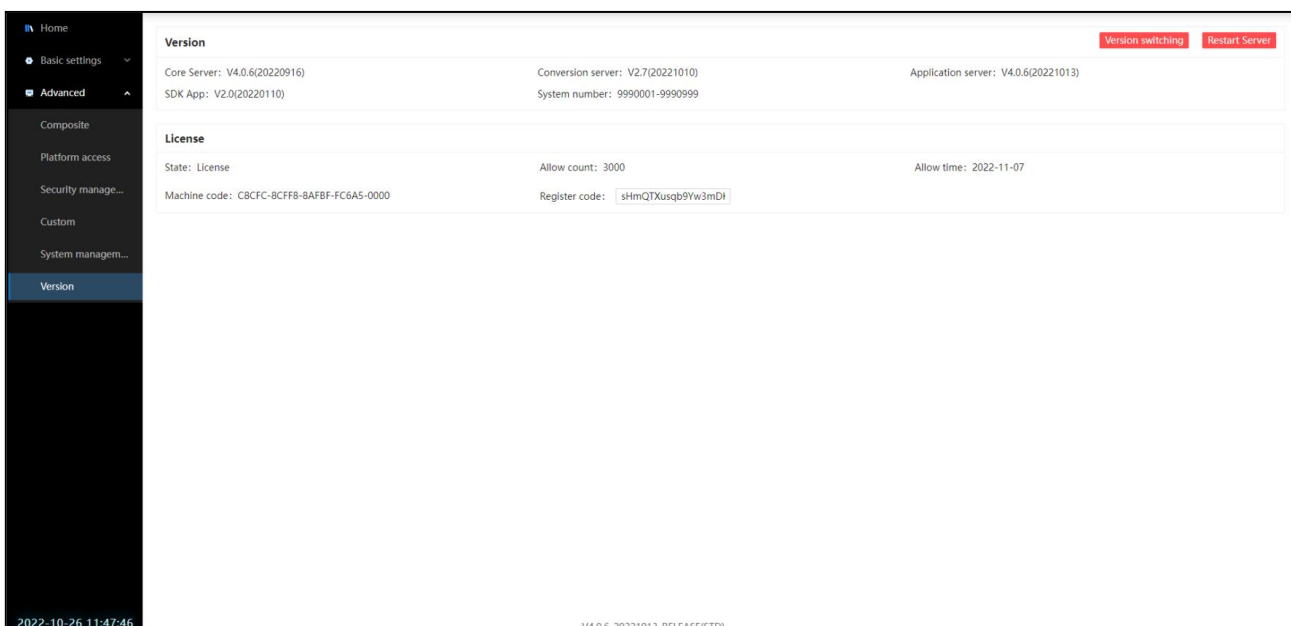
## Version

### Version Information

Display the version of the system software 、 Core server informations , press “Restart server” to restart the software, the software version can be switched , the available server versions are broadcast version, intercom version, and universal version ,users can switch to different server versions according to the industry in which they work. The direct function modules of different server versions are slightly different.

### License

Please send the machine code to the manufacturer and then ask for the registration code to obtain the use of the official server software. (Registration code valid for 2 months, it is recommended to use a dongle to obtain authorization)



The screenshot shows the 'Version' and 'License' pages in a web application. The left sidebar is the same as in the previous screenshot. The main content area has a 'Version' section with the following information:

Version		
Core Server: V4.0.6(20220916)	Conversion server: V2.7(20221010)	Application server: V4.0.6(20221013)
SDK App: V2.0(20220110)	System number: 9990001-9990999	

Buttons for 'Version switching' and 'Restart Server' are visible in the top right of the Version section.

The 'License' section contains the following information:

License		
State: License	Allow count: 3000	Allow time: 2022-11-07
Machine code: C8CFC-8CFF8-8AFB8-FC6A5-0000	Register code: sHmQTXusqb9Yw3mDI	

At the bottom left, the timestamp is '2022-10-26 11:47:46'. At the bottom center, the version is 'V4.0.6.20221013.RELEASE(STD)'.

## 6. FAQ

---

Fault phenomenon	Fault reasons & exclude
Why all terminals can't login?	<ol style="list-style-type: none"><li data-bbox="588 293 1390 439">1. The firewall will prevent the server software access to the network by default, and it result in the server can't work normally. Therefore it's required to turn off the firewall or add the server software program is out of firewall prevent list.</li><li data-bbox="588 465 1390 495">2. The server IP address and the terminal set [server IP] is different.</li><li data-bbox="588 521 863 551">3. The server is closed.</li><li data-bbox="588 577 1390 651">4. Check whether the SIP key configured on the device is consistent with that configured on the server</li></ol>
Why some terminals can't login?	<ol style="list-style-type: none"><li data-bbox="588 696 1390 770">1. Under the cross-network, the terminal haven't set the gateway properly.</li><li data-bbox="588 797 1390 943">2. Network does not work, we suggest using ping command test. The objective testing method is using the terminal connected cable insert to a computer (and set the terminal IP address), then Ping command to test connectivity on the server.</li><li data-bbox="588 969 1123 999">3. Please use administrator to run the server.</li></ol>

---

