

Tonmind IP Speaker User Manual



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1. Overview

SIP-Sxxx series is IP based paging speaker. They have different shape, materials and design which can be easy installed in indoor and outdoor environment. Tonmind IP speakers are well compatible with SIP & ONVIF protocol that can be used in VoIP and security field. Up to 10 RTP multicast address enable to arrange different paging solutions. Alarm in and HTTP URL are able to combine with alarm system. Pre-recorded message and schedule broadcasting to meet various paging demands. The 48K OPUS Audio Codec enables excellent sound quality to make announcement, play background music, security alarm in school, factory and hospital, etc.



2. Web Configuration

Web configuration includes complete function setting . When the device and your computer are connected to a same network, please open a browser and type in <http://192.168.5.200>, then log in with defaulted username and password as below.

Username: admin

Password: tm1234

2.1 Status

We can check out firmware version, free space and two SIP accounts status of IP speaker, also can locate the current network information here, like MAC, IP address and gateway etc.

Status	
Device Time	2024-01-04 14:04:06
Device ID	50346849B085981C
Firmware Ver	CS20-V3.3.19
Free Space	3732KB
SIP1 Status	REG SUCCESS
SIP2 Status	REG SUCCESS

Network	
MAC Address	A2:C0:A4:29:E7:5D
IP Address	192.168.5.199
Subnet Mask	255.255.255.0
Gateway	192.168.5.1
Primary DNS	218.85.152.99
Secondary DNS	218.85.157.99

2.2 Basic

2.2.1 Date/ Time

There are two update modes for time: NTP/ local time, choose one and set the time zones, NTP sever and interval can choose default setting, then save the configuration.

Date/Time

Device Time 2024-01-04 14:07:20

Update Mode

TimeZone

NTP Server

NTP Interval Minutes

Date/Time

Device Time 2024-01-04 14:07:20

Update Mode

LocalTime 2024-01-04 14:11:24

2.2.2 Network

When you choose DHCP and save it, IP address will be created automatically by a DHCP server, then you need to login again with the new IP address on browser: 192.168.5.XXX.

Status IP address: it is a default IP and will not be changed as follows.

Network

DHCP

Static IP Address

IP Address	<input type="text" value="192.168.5.200"/>
Subnet Mask	<input type="text" value="255.255.255.0"/>
Gateway	<input type="text" value="192.168.5.1"/>
Primary DNS	<input type="text" value="192.168.5.1"/>
Secondary DNS	<input type="text" value="218.85.152.99"/>

2.2.3 Network advanced

Pick one of network as your requested.

Network Advanced

Http/Https *Take effect after restart!

Http&Https

Http&Https

Http

Https

2.3 ONVIF

Select Enable ONVIF, then the device be searched by ONVIF VMS.

Default user name: admin, password:tm1234.

Then open The VMS/NVR to search and connect with Tonmind IP speaker.

2.4 SIP Account

Each speaker has two SIP accounts, put SIP extension and SIP sever information into the blanks and save the configuration, then you can check if it registers successfully or not on status.

Parameter	Description
Outbound Proxy	Choose disable or enable the proxy as needed.
Expire Time	Set the expire time of registered account information.
Ringing Tone	5 system ringtones and 10 users upload media files.
Auto Answer	Answer immediately and answer delay when a calling incomes.
Incoming Notify	Put an URL from the third party, when a incoming call ringing, URL take effect.
Answer Notify	Put an URL the third party, when a incoming call answered, URL takes effect.
SIP Advanced	UDP/TCP/TLS, three SIP protocol optional.

SIP Set

Account	<input type="text" value="Account 1"/>	REG SUCCESS
User Name	<input type="text" value="6001"/>	
Auth ID	<input type="text" value="6001"/>	
Password	<input type="password" value="...."/>	
Display Name	<input type="text" value="6001"/>	
Server Host	<input type="text" value="192.168.5.201"/>	
Server Port	<input type="text" value="5060"/>	
Outbound Proxy	<input type="text" value="Disable"/>	
Expire Time	<input type="text" value="180"/>	Seconds
Ringing Tone	<input type="text" value="bell1"/>	
Auto Answer	<input type="text" value="Answer Immediatly"/>	
Incoming Notify	<input checked="" type="checkbox"/>	
Http URL	<input type="text" value="http://192.168.5.201:9391/action?zone=3000&operation=st"/>	
Answer Notify	<input checked="" type="checkbox"/>	
Http URL	<input type="text" value="http://192.168.5.201:9391/action?zone=3000&operation=st"/>	

SIP Advanced

SIP Protocol	<input type="text" value="UDP"/> <ul style="list-style-type: none"> <li style="background-color: #007bff; color: white; padding: 2px;">UDP <li style="padding: 2px;">TCP <li style="padding: 2px;">TLS 	<input type="button" value="Save"/>
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2.5 Audio

On the audio part, we can choose four audio codecs to be compatible with major audio sources. and adjust the volume and sound quality of speaker and MIC.

Jitter buffer: to make the audio more stable.

Amp auto off: It's set defaulted as ON, then there will be less noise when the speaker under broadcasting.

HPF: High Pass Filter

NR: Noice reduction.

AEC: Automatic echo cancellation.

AGC: Automatic Gain Control.

Codec

Codec Setting

<input checked="" type="checkbox"/>	OPUS
<input checked="" type="checkbox"/>	G.722
<input checked="" type="checkbox"/>	G.711U
<input checked="" type="checkbox"/>	G.711A

Speaker

Volume (0-100)

Amp Auto OFF ▼

Jitter Buffer (60 - 2000) ms

HPF

NR

MIC

Gain ▼

Volume (0-100)

AEC

AGC

AGC Gain Level ▼


HPF

NR


NR Level ▼


2.6 Media File

There are five system ringtones, and you can upload 10 user files as customers' demands: music, announcement, bells, etc, support MP3 and WAV. Files. the limitation of user file is 3732KB.











 this button is for uploading files for PC.

 this button is to preview the files you upload.

















 click this button, the speaker will play the files.

 it's a delete button.

System File

#	Name	
1	bell1	 
2	bell2	 
3	bell3	 
4	bell4	 
5	bell5	 

User File (3732KB free)

#	Name	File					
1	userfile1	userfile0.mp3	<input type="button" value="选择文件"/> 未送				
2	userfile2	userfile1.wav	<input type="button" value="选择文件"/> 未送				
3	userfile3		<input type="button" value="选择文件"/> 未送				
4	userfile4		<input type="button" value="选择文件"/> 未送				
5	userfile5		<input type="button" value="选择文件"/> 未送				
6	userfile6		<input type="button" value="选择文件"/> 未送				
7	userfile7		<input type="button" value="选择文件"/> 未送				
8	userfile8		<input type="button" value="选择文件"/> 未送				
9	userfile9		<input type="button" value="选择文件"/> 未送				
10	userfile10		<input type="button" value="选择文件"/> 未送				

2.7 Alarm

2.7.1 Alarm In

File Enable: choose one play file and the cycle mode, save configuration. Trigger the alarm which connect to the alarm in port on the IP speaker, then the speaker will play the file.

SIP Enable: choose one of the sip account, and put the SIP extension you wanna call, eg. 6006. Trigger the alarm which connect to the alarm in port on the IP speaker, then 6006 will received the alarm call.

Alarm In

File Enable

Play File bell1

Cycle Mode Once only

Sip Enable

Sip Account Account 1

Sip Number 6006

Save

2.7.2 Http URL

User can control the alarm by HTTP URL. (also we can rewrite a new url as the examples)

- (1) Enable the selection;
- (2) Open any browser you have in computer;
- (3) Put the URL as the following examples, enter, then this url takes effort.

Http URL

Play File Enable

Example1: `http://192.168.5.199/api/play?action=start&file=bell1`

Example2: `http://192.168.5.199/api/play?action=start&file=userfile1&mode=once&volume=10`

Example3: `http://192.168.5.199/api/play?action=start&file=userfile1&mode=multiple&count=10&volume=20`

Example4: `http://192.168.5.199/api/play?action=start&file=userfile1&mode=duration&count=10&volume=30`

Example5: `http://192.168.5.199/api/play?action=stop`

2.8 Schedule

This function is widely use in school, factory and office projects. Making a regular bell, announcement and alarm.

Enable the schedule, wou can name the schedule, choose start and end time, cycle days, etc. At last don't forget to save the configuration to make it work.

Schedule Add/Edit

Schedule Enable

Schedule Name

Start Date

End Date

Allowed Days Mon Tue Wed Thu Fri Sat Sun

Action Time

Action Type

Play File

Cycle Mode

Times (1-1000)

Save **Cancel**

2.9 RTP Multicast

There are 10 RTP addresses can be received for each device, please note that: port numbers do not use continuous numbers when setting the same RTP addresses. Use discontinuous numbers. eg:

239.255.1.2:8000, 239.255.0.1:8001, 239.255.0.1:8002 (×)

239.255.0.1:8000, 239.255.0.1:8002, 239.255.0.1:8004 (√)

- Multicast address range: 224.0.0.0-239.255.255.
- Ports range: 1024-65536
- Use IP Tool, Audio manager and PA System software to play RTP multicast.

Priority	IP Address (e.g. 239.255.0.1:5004)
1	<input type="text" value="e.g. 239.255.0.1:8000"/>
2	<input type="text" value="e.g. 239.255.0.1:8002"/>
3	<input type="text" value="e.g. 239.255.0.1:8004"/>
4	<input type="text" value="e.g. 239.255.0.1:8006"/>
5	<input type="text" value="e.g. 239.255.0.1:8008"/>
6	<input type="text" value="e.g. 239.255.0.1:8010"/>
7	<input type="text" value="e.g. 239.255.0.1:8012"/>
8	<input type="text" value="e.g. 239.255.0.1:8014"/>
9	<input type="text" value="e.g. 239.255.0.1:8016"/>
10	<input type="text" value="e.g. 239.255.0.1:8018"/>

2.10 Firewall

2.10.1 Firewalls Rules

Firewall Add/Edit

Enable

Name

Rule Type

Protocol

Port Range -

IP Address

Net Mask

Action

Firewall Add/Edit

Enable

Name

Rule Type

MAC Address

Action

Parameter	Description
Name	A name for this rule Eg. rule1
Rule Type	IP/MAC optional.
MAC Address	The format of MAC Address is XX:XX:XX:XX:XX:XX, X means 0~9 or A~F in hex, the A~F are not case sensitive.

Protocol	All/TCP/UDP three options.
Port Range	Initial port should be on the left and end port should be on the right.The port must be equal to or greater than start port. Eg. 2000 - 3000
IP Address Net Mask	The IP address and netmask are used in combination Eg. 192.168.5.20 & 255.255.255.255 for ip 192.168.5.20 Eg. 192.168.5.0 & 255.255.255.0 for ip from 192.168.5.0 to 192.168.5.255
Action	Accept: Accept the access from remote hosts Drop: Drop the access from remote hosts

2.10.2 Automatic Defense Rules

Automatic Defense Add/Edit

Enable

Name

Protocol

Port Range -

Rate (1-10000) /s

Parameter	Description
Rule Type	IP/MAC optional.
Protocol	TCP/UDP two options.
Port Range	Initial port should be on the left and end port should be on the right.The port must be equal to or greater than start port.
Rate(1-10000)	The maximum packets can be handled per unit time. Eg.(IP:192.168.6.88/32 Protocol:UDP Rate:10/sec)means maximum 10 UDP packets from 192.168.6.88 can be handled per minute,and drop the redundant packets.

2.11 System

2.11.1 Upgrade

When reboot and reset the system, system will turn to original setting, and you need to re-login the web page.

How to upgrade IP Speaker firmware version in web interface?

- (1) Select the latest version firmware CS20-xxx-bin.
- (2) Click upgrade to refresh, it would require about 10-20s.
- (3) Re-login the web interface, latest version has upgraded.

2.11.2 Security

Set a new user name and password as you need, save the configuration and restart login.

The screenshot shows a web interface with a sidebar on the left containing menu items: Status, Basic, ONVIF, SIP Account, Audio, Media File, Alarm, Schedule, RTP Multicast, Firewall, and System (highlighted in green). The main content area is divided into two sections:

- Upgrade Section:** Contains three buttons: 'Reboot' (with text 'Reboot Device Now'), 'Reset' (with text 'Reset to Factory Setting'), and 'Upgrade' (with a '选择文件' button and text '未选择任何文件').
- Security Section:** Contains five input fields: 'User Name' (pre-filled with 'admin'), 'Password' (masked with '*****'), 'New User Name', 'New Password', and 'Confirm Password'. A green 'Save' button is located at the bottom right of this section.

3. IPTool Configuration

Apart from Web configuration, IPTool is the other option that configure quickly basic information such as SIP account setting, volume setting, RTP Multicast setting, upgrade. Please follow below steps.

- (1) Download IPTool in <https://www.tonmind.com/category/downloads/5>
- (2) Enter IPTool, scan local network, the device will appear and then start setting.

IPToolCS20

Network Search RTP Multicast Settings

<input type="checkbox"/> No.	UID	Name	MAC	IP address	Netmask	Gateway	SIP Settings	RTP Settings	Version	Audio	System
<input type="checkbox"/> 1	5023428330897A1C	CS20	a2:c0:a4:26:a0:ce	192.168.5.192	255.255.255.0	192.168.5.1		239.255.0.0:5008	CS20-V2.8.1N	12,7	admin

Current Device CS20-5023428330897A1C

SIP Account 1	SIP Account 2
User Name <input type="text"/>	User Name <input type="text"/>
Password <input type="text"/>	Password <input type="text"/>
Display Name <input type="text"/>	Display Name <input type="text"/>
Server Host <input type="text"/>	Server Host <input type="text"/>
Server Port <input type="text"/>	Server Port <input type="text"/>