



# TONMiND SIP-T20 SIP Paging Adapter User Manual

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# TONMiND

**TONMiND SIP-T20 SIP Paging Adapter**

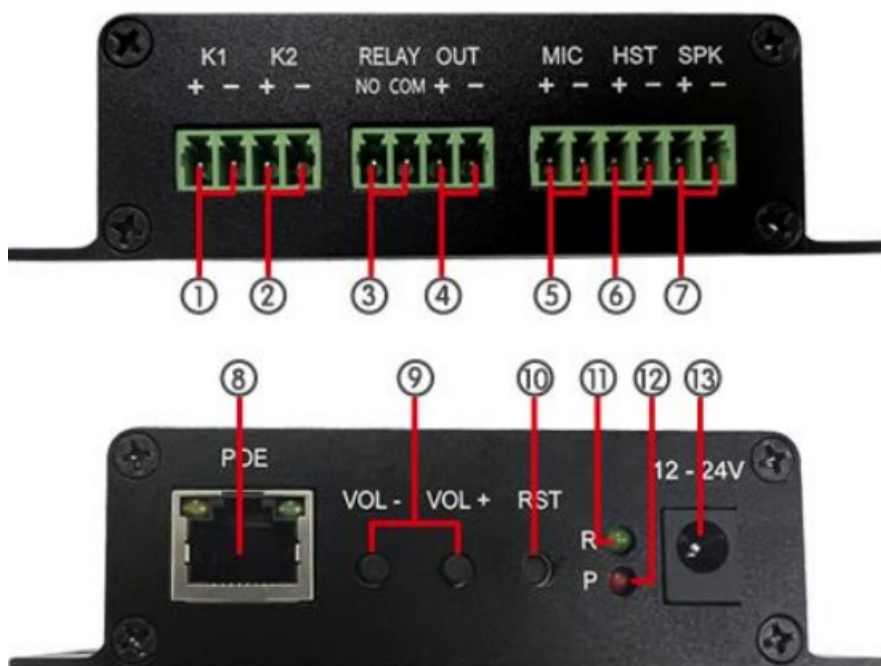


## Overview

SIP-T20 is a IP based paging adapter that can covert analog to SIP. It's small and portable design with black outlook. The various interfaces (MIC, headset and speaker) make it possible for quickly configure intercom and paging solution. It's compatible with SIP & ONVIF protocol that can be used in VoIP and security field. It supports two-way intercom communication. Flexible Alarm in and out solutions( GPIO, HTTP URL, and relay out) are widely applied in daily life. The 48K OPUS Audio Codec enables excellent sound quality to make announcement, play background music, security alarm in school, factory and hospital, etc.



## Interface Description



① K1 DSS Key	<p>Connect to:</p> <ol style="list-style-type: none"> <li>external keys</li> <li>infrared probe and emergency switch</li> <li>door sensor and other switch components</li> </ol>
② K2 DSS Key	<p>Connect to:</p> <ol style="list-style-type: none"> <li>external keys</li> <li>infrared probe and emergency switch</li> <li>door sensor and other switch components</li> </ol>
③ Relay NO COM Interface	Control the alarm system on/off
④ IO Onput Interface	<p>Responding to:</p> <ol style="list-style-type: none"> <li>control the external amplifier power switch 2.the short-circuit input interface</li> <li>login device security page settings</li> <li>control the alarm light, electric locks and other equipment</li> <li>with the adjacent power port connection for external equipment</li> </ol>
⑤ Microphone Interface	2.2K Ohm impedance electric condenser microphone is recommended.
⑥ Headset Interface	Speaker audio line signal output impedance 32 Ohm, single ended output voltage 1.2V, used for external headphones or amplifier.
⑦ Speaker Interface	Maximum support 15W speaker.
⑧ Ethernet Interface	<p>WAN port, standard RJ45 interface, 10/ 100M adaptive, support POE input.</p>

⑨ Volume Control Key	This two keys is to adjust the volume of the device's, bell, phone call and broadcasting, etc.
⑩ System Reset Key	Press Rest key and hold for 3 seconds, the devices will restart to factory setting.
Run Indicator	The light is on shows that the device is working well.
Power Indicator	The light on shows that the power is connected.
Power Input Interface	12V ~ 24V 2A input, according to the input voltage to determine the maximum output power amplifier.

## 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

The screenshot shows a web-based login interface for an 'IP Speaker'. The interface is contained within a light gray box. At the top, there's a header with 'Login' on the left and 'IP Speaker' on the right. Below this, there are two input fields with yellow backgrounds. The first is labeled 'Username' and contains the text 'admin'. The second is labeled 'Password' and contains masked characters '.....'. Below these fields are two green buttons: 'Sign in' and 'Cancel'. At the bottom of the login area, there is a green link that says 'Forgot Password?'.

## Status

You can check out firmware version, free space and two SIP accounts status of SIP-T20, also can locate the current network information here, like MAC, IP address and gateway etc.

## Status

Basic

ONVIF

SIP Account

Audio

Media File

Alarm

Http URL

Schedule

RTP Multicast

Firewall

System

## Status

Device Time 2022-03-01 09:02:31  
Serial Number 50346849A878571C  
Firmware Ver T20-V3.1.2  
Free Space 184KB  
SIP1 Status NONE  
SIP2 Status NONE

## Network

MAC Address A2:C0:A4:75:3B:99  
IP Address 192.168.5.200  
Subnet Mask 255.255.255.0  
Gateway 192.168.5.1  
Primary DNS 192.168.5.1  
Secondary DNS 218.85.152.99

Refresh

## Basic

### ◦ 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 2022-04-28 13:47:36

Update Mode

TimeZone

NTP Server

NTP Interval  Minutes

Save

Date/Time

Device Time

2022-04-28 13:47:36

Update Mode

LocalTime

▼

LocalTime

2022-04-28 14:04:02

Save

- **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 following.

Network

☒ DHCP

☐ Static IP Address

IP Address

192.168.5.200

Subnet Mask

255.255.255.0

Gateway

192.168.5.1

Primary DNS

192.168.5.1

Secondary DNS

218.85.152.99

Save

## ONVIF

Select Enable ONVIF, then the device be searched by ONVIF VMS. Default user name: admin, password:tm1234.

Status

Basic

ONVIF

SIP Account

Audio

Media File

ONVIF

ONVIF Enable

☒

User Name

admin

Password

tm1234

Save

## SIP Account

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

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

The screenshot displays the 'SIP Set' configuration page. On the left, a sidebar lists various system settings, with 'SIP Account' currently selected. The main panel contains the following configuration options:

- Account:** A dropdown menu set to 'Account 1'.
- User Name:** An empty text input field.
- Password:** An empty text input field.
- Display Name:** An empty text input field.
- Server Host:** An empty text input field.
- Server Port:** An empty text input field.
- Expire Time:** A text input field containing '3600', followed by a 'Seconds' label.
- Ringing Tone:** A dropdown menu set to 'bell1', with a play button icon to its right.
- Auto Answer:** A dropdown menu set to 'Answer Immediately'.
- Incoming Notify:** A text field with the placeholder '\* Please set incoming notify at Alarm In'.
- Answer Notify:** A text field with the placeholder '\* Please set answer notify at Alarm In'.
- Close Notify:** A text field with the placeholder '\* Please set close notify at Alarm In'.

A green 'Save' button is located at the bottom right of the configuration area.

## Audio

- **ACE(acoustic echo canceling):** to make a perfect sound quality.
- **Mic / out volume:** adjust mic and output volume at 0-100.
- **Jitter buffer:** to make the audio more stable.
- **Amp auto off:** It's set defaulted as ON, then there is no noise when not broadcasting.
- **Code setting:** four audio codes to compatible with major audio sources.



Audio

AEC Enable

☒

Mic volume (0-100)

Out Volume (0-100)

↕

Jitter Buffer (60 - 2000)

ms

Amp Auto OFF

▼

Codec Setting

☒ OPUS

☒ G.722

☒ G.711U

☒ G.711A

Save

### Media File

There are five system ringtones, and you can upload 10 media files as customers' demands: music, announcement, bells, etc.

### Alarm

We can set 2 DSS keys and 2 SIP accounts to realize alarm function, to ready the combination with alarm system.

- **DSS Key Setting**

- Enable the file, you select a action type(start/ stop), play file and cycle mode, save the configuration, then press buttonK1 & K2, the bell will ring/close.

Alarm In

Input

Key 1

File Enable

☒

Action Type

Start

Play File

bell1

Cycle Mode

Once only

Once only  
Multiple times  
Duration

Sip Enable

☐

Url Enable

☐

Output Enable

☐

Relay Enable

☐

Save

- **SIP enable:** choose a SIP account you register, SIP action: call out/hang up, you can put the SIP number, eg: 8112 make sure it's the extensions which connected to the same IP sever with SIP account 1&2. If you select call out, and press K1/K2 button, then extension 8112 will receive a call.

Alarm In

Input

Key 1

File Enable

☐

Sip Enable

☒

Sip Account

Account 1

Sip Action

Call Out

Sip Number

8112

- **Enable URL:** put the HTTP URL, after pressed K1/K2, the URL will be working.
- **Output enable:** turn on/off the output, press K1/K2 the output succeeds.
- **Relay enable:** turn on/off the output, press K1/K2 the relay succeed.

**Alarm In**

Input

Key 1

▼

File Enable

☐

Sip Enable

☐

Url Enable

☒

Http URL

Output Enable

☒

Output Action

On

▼

10

S

Relay Enable

☒

Relay Action

On

▼

10

S

Save

## HTTP URL

User can control the alarm by HTTP URL:

1. Enable the selection;
2. Open any browser you have in computer;
3. Put the URL as the following examples, enter it.

Status	<b>Http URL</b>
Basic	
ONVIF	
SIP Account	
Audio	
Media File	
Alarm	
<b>Http URL</b>	<p><b>Play File Enable</b> <input type="checkbox"/></p> <p>Example1: <code>http://192.168.5.200/api/play?action=start&amp;file=bell1</code></p> <p>Example2: <code>http://192.168.5.200/api/play?action=start&amp;file=userfile1&amp;mode=once&amp;volume=10</code></p> <p>Example3: <code>http://192.168.5.200/api/play?action=start&amp;file=userfile1&amp;mode=multiple&amp;count=10&amp;volume=20</code></p> <p>Example4: <code>http://192.168.5.200/api/play?action=start&amp;file=userfile1&amp;mode=duration&amp;count=10&amp;volume=30</code></p> <p>Example5: <code>http://192.168.5.200/api/play?action=stop</code></p> <p><b>Sip Call Enable</b> <input type="checkbox"/></p> <p>Example1: <code>http://192.168.5.200/api/sipcall?action=call&amp;number=100&amp;line=auto</code></p> <p>Example2: <code>http://192.168.5.200/api/sipcall?action=call&amp;number=100&amp;line=1</code></p> <p>Example3: <code>http://192.168.5.200/api/sipcall?action=hangup</code></p> <p><b>Output Enable</b> <input type="checkbox"/></p> <p>Example1: <code>http://192.168.5.200/api/output?action=on</code></p> <p>Example2: <code>http://192.168.5.200/api/output?action=on&amp;duration=10</code></p> <p>Example3: <code>http://192.168.5.200/api/output?action=off</code></p> <p><b>Relay Enable</b> <input type="checkbox"/></p> <p>Example1: <code>http://192.168.5.200/api/relay?action=on</code></p> <p>Example2: <code>http://192.168.5.200/api/relay?action=on&amp;duration=10</code></p> <p>Example3: <code>http://192.168.5.200/api/relay?action=off</code></p>
Schedule	
RTP Multicast	
Firewall	
System	

## Schedule

This function is widely use in school, factory and office projects. Making a regular bell, announcement and alarm. Enable the schedule, you can name the schedule. then setting it step by step.

Status
Basic
ONVIF
SIP Account
Audio
Media File
Alarm
Http URL
Schedule
RTP Multicast
Firewall
System

### Schedule Add/Edit

Schedule Enable
☒

Schedule Name

Start Date
2022/01/01

End Date
2099/12/31

Allowed Days
☒ Mon
☒ Tue
☒ Wed
☒ Thu
☒ Fri
☒ Sat
☒ Sun

Action Time
08:00

Action Type
Start

Play File
bell1

Cycle Mode
Once only

Times (1-1000)
1

Duration (1-60000)
1
Seconds

## RTP Multicast IP

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 to make RTP multicast.

Status
Basic
ONVIF
SIP Account
Audio
Media File
Alarm
Http URL
Schedule
RTP Multicast
Firewall
System

### RTP Multicast

Priority	IP Address (e.g. 239.255.0.1:5004)
1	<input type="text" value="239.255.1.2:8000"/>
2	<input type="text" value="239.255.1.2:8002"/>
3	<input type="text" value="239.255.1.2:8004"/>
4	<input type="text" value="239.255.1.2:8006"/>
5	<input type="text" value="239.255.1.2:8008"/>
6	<input type="text" value="239.255.1.2:8010"/>
7	<input type="text" value="239.255.1.2:8012"/>
8	<input type="text" value="239.255.1.2:8014"/>
9	<input type="text" value="239.255.1.2:8016"/>
10	<input type="text" value="239.255.1.2:8018"/>

## Firewall

This function is use to protect your network safety. You can edit the firewall automatic defence rules as you need as follows.

Status

Basic

ONVIF

SIP Account

Audio

Media File

Alarm

Http URL











Schedule

RTP Multicast











**Firewall**

System

Firewall Rules

#	Name	Type	IP/MAC	Action
1				 
2				 
3				 
4				 
5				 

Automatic Defense Rules

#	Name	Protocol	Port Range	Rate
1			-	 
2			-	 
3			-	 
4			-	 
5			-	 

## System

### • 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 SIP-T20 firmware version in web interface?

1. Select the latest version firmware T20-xxx-bin.
2. Click upgrade to refresh, it would require about 20s.
3. Re-login the web interface, latest version has upgraded.

### • Security

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

Status  
Basic  
ONVIF  
SIP Account  
Audio  
Media File  
Alarm  
Http URL  
Schedule  
RTP Multicast  
Firewall  
System

### Upgrade

Reboot Reboot Device Now

Reset Reset to Factory Setting

Upgrade 选择文件 未选择任何文件

### Security

User Name admin

Password \*\*\*\*\*

New User Name

New Password

Confirm Password

Save

## 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

No.	UID	Name	MAC	IP address	Netmask	Gateway	SIP Settings	RTP Settings	Version	Audio	System
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

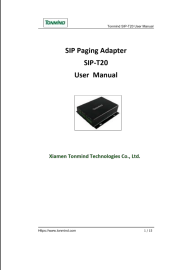

SIP Account 1
User Name
Password
Display Name
Server Host
Server Port

SIP Account 2
User Name
Password
Display Name
Server Host
Server Port

Set Set All

<https://www.tonmind.com>

## Documents / Resources

	<p><a href="#">TONMiND SIP-T20 SIP Paging Adapter</a> [pdf] User Manual</p> <p>SIP-T20 SIP Paging Adapter, SIP-T20, SIP-T20 Paging Adapter, SIP Paging Adapter, SIP Adapter, Paging Adapter, Adapter, SIP-T20 Adapter</p>
	<p><a href="#">TONMiND SIP-T20 SIP Paging Adapter</a> [pdf] User Guide</p> <p>SIP-T20 SIP Paging Adapter, SIP-T20, SIP Paging Adapter, Paging Adapter, Adapter</p>

References

- [T PA System,IP Speaker,SIP Paging Adapter | Tonmind](#)
- [T PA System,IP Speaker,SIP Paging Adapter | Tonmind](#)
- [T www.tonmind.com](#)