

SIP Paging Adapter User Manual



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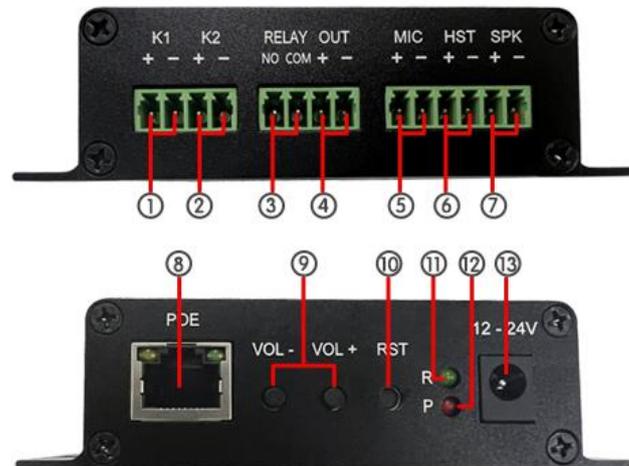
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1. Overview

SIP Paging Adapter is a IP based paging adapter that can convert 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.



2. Interface Description



① K1 DSS Key	Connect to: <ol style="list-style-type: none"> external keys infrared probe and emergency switch door sensor and other switch components
② K2 DSS Key	Connect to: <ol style="list-style-type: none"> external keys infrared probe and emergency switch door sensor and other switch components
③ Relay NO COM Interface	Control the alarm system on/off
④ IO Onput Interface	Responding to: <ol style="list-style-type: none"> control the external amplifier power switch the short-circuit input interface login device security page settings control the alarm light, electric locks and other equipment with the adjacent power port connection for external equipment
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	WAN port, standard RJ45 interface, 10/ 100M adaptive, support POE input.

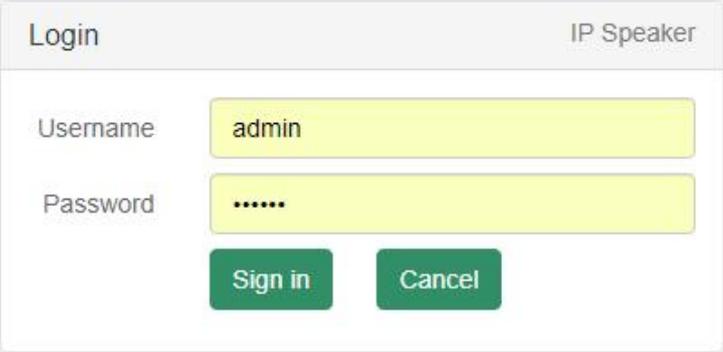
⑨ Volume Control Key	This two keys is to adjust the volume of the device's, bell, phone call and broadcasting, etc.
⑩ System Reset Key	Press Rest key and hold for 3 seconds, the devices will restart to factory setting.
⑪ Run Indicator	The light is on shows that the device is working well.
⑫ Power Indicator	The light on shows that the power is connected.
⑬ Power Input Interface	12V ~ 24V 2A input, according to the input voltage to determine the maximum output power amplifier.

3. 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 browser window with the title 'Login' and 'IP Speaker'. The page contains a login form with two input fields: 'Username' and 'Password'. The 'Username' field contains the text 'admin' and the 'Password' field contains '*****'. Below the input fields are two buttons: 'Sign in' and 'Cancel'. At the bottom left of the form, there is a link that says 'Forgot Password?'.

3.1 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.

IP AUDIO

Status	Status
Basic	Device Time 2022-06-16 11:12:55
ONVIF	Serial Number 50346849A878571C
SIP Account	Firmware Ver T20-V3.2.0N
Audio	Free Space 3900KB
Media File	SIP1 Status NONE
Alarm	SIP2 Status NONE
Http URL	
Schedule	
RTP Multicast	
Firewall	
System	

Network
MAC Address A2:C0:A4:75:3B:99
IP Address 192.168.5.217
Subnet Mask 255.255.255.0
Gateway 192.168.5.1
Primary DNS 218.85.152.99
Secondary DNS 218.85.157.99

[Refresh](#)

3.2 Basic

3.2.1 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	2022-04-28 13:47:36
Update Mode	<input type="text" value="NTP"/>
TimeZone	<input type="text" value="GMT+08:00"/>
NTP Server	<input type="text" value="pool.ntp.org"/>
NTP Interval	<input type="text" value="10"/> Minutes

[Save](#)

Date/Time

Device Time	2022-06-16 10:43:09
Update Mode	<input type="text" value="LocalTime"/>
LocalTime	2022-06-16 10:43:09

3.2.2 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 following.

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"/>

3.3 ONVIF

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

Default user name: admin, password:tm1234.

3.4 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

3.5 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

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

3.6 Media File

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

3.7 Alarm

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

Alarm In

Status

Basic

ONVIF

SIP Account

Audio

Media File

Alarm

Http URL

Schedule

Input

File Enable

Sip Enable

Url Enable

Output Enable

Relay Enable

3.7.1 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.

The screenshot shows the 'Alarm In' configuration interface. It includes the following fields and options:

- Input:** Key 1 (dropdown)
- File Enable:**
- Action Type:** Start (dropdown)
- Play File:** bell1 (dropdown) with a play button icon to its right.
- Cycle Mode:** Once only (dropdown menu is open, showing options: Once only, Multiple times, Duration)
- Sip Enable:**
- Url Enable:**
- Output Enable:**
- Relay Enable:**

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

- 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.

The screenshot shows the 'Alarm In' configuration interface with the following settings:

- Input:** Key 1 (dropdown)
- File Enable:**
- Sip Enable:**
- Sip Account:** Account 1 (dropdown)
- Sip Action:** Call Out (dropdown)
- Sip Number:** 8112 (text input field)

- 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

File Enable

Sip Enable

Uri Enable

Http URL

Output Enable

Output Action S

Relay Enable

Relay Action S

3.8 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.

Http URL

Play File Enable

Example1: `http://192.168.5.200/api/play?action=start&file=bell1`

Example2: `http://192.168.5.200/api/play?action=start&file=userfile1&mode=once&volume=10`

Example3: `http://192.168.5.200/api/play?action=start&file=userfile1&mode=multiple&count=10&volume=20`

Example4: `http://192.168.5.200/api/play?action=start&file=userfile1&mode=duration&count=10&volume=30`

Example5: `http://192.168.5.200/api/play?action=stop`

Sip Call Enable

Example1: `http://192.168.5.200/api/sipcall?action=call&number=100&line=auto`

Example2: `http://192.168.5.200/api/sipcall?action=call&number=100&line=1`

Example3: `http://192.168.5.200/api/sipcall?action=hangup`

Output Enable

Example1: `http://192.168.5.200/api/output?action=on`

Example2: `http://192.168.5.200/api/output?action=on&duration=10`

Example3: `http://192.168.5.200/api/output?action=off`

Relay Enable

Example1: `http://192.168.5.200/api/relay?action=on`

Example2: `http://192.168.5.200/api/relay?action=on&duration=10`

Example3: `http://192.168.5.200/api/relay?action=off`

3.9 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

Play File

Cycle Mode

Times (1-1000)

Duration (1-60000) Seconds

3.10 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"/>

3.11 Firewall

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

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			-	

3.12 System

3.12.1 Upgrade

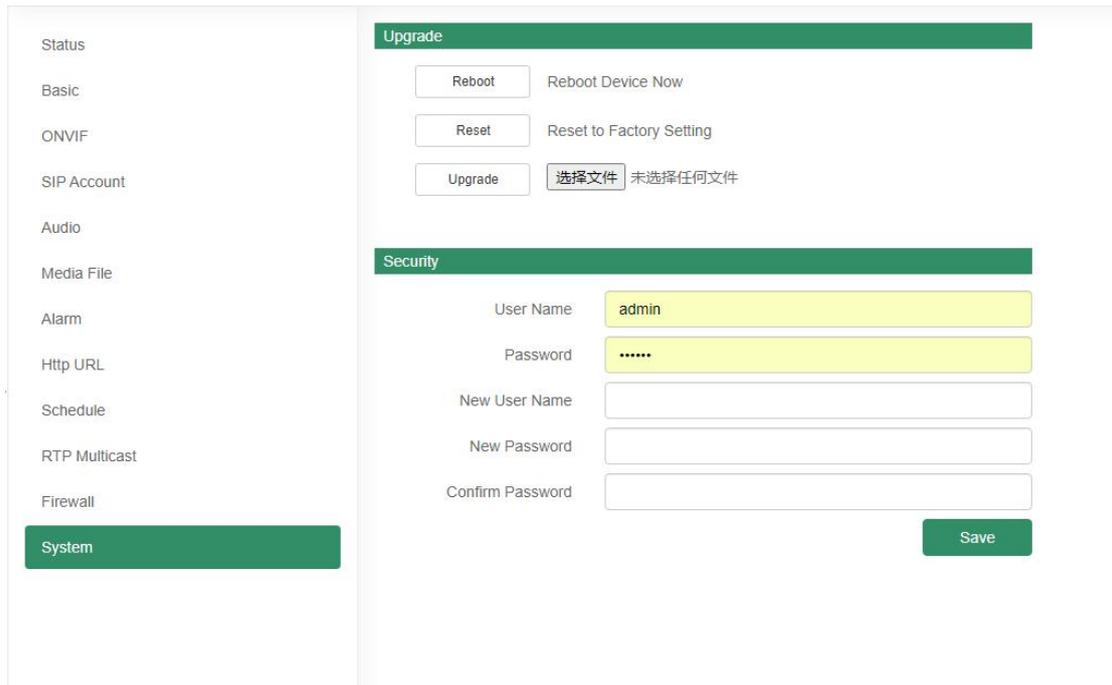
When reboot and reset the system, system will turn to original setting, and you need to re-login the web page.

How to upgrade 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.

3.12.2 Security

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



4. 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(contact sales or support to get one).
- (2) Enter IPTool, scan local network, the device will appear and then start setting.

