Tonmind Security Microphone M01

User Manual



Xiamen Tonmind Technologies Co., Ltd.

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1. Introduction

Tonmind Security Microphone SIP-M01 is a high-performance omnidirectional condenser mic with high sensitivity, enabling 8M full-range sound capture with clear, natural audio. Built-in AGC balances volume from different distances, and it boasts strong anti-interference ability for stable performance. With support for standard SIP and ONVIF protocols, the SIP-M01 integrates easily with popular NVRs and ONVIF-compliant VMS platforms. It supports POE power supply for easy wiring, plus remote management and online upgrades for continuous optimization. With comprehensive security features and wide temperature adaptability, it's a reliable choice for indoor security audio monitoring.

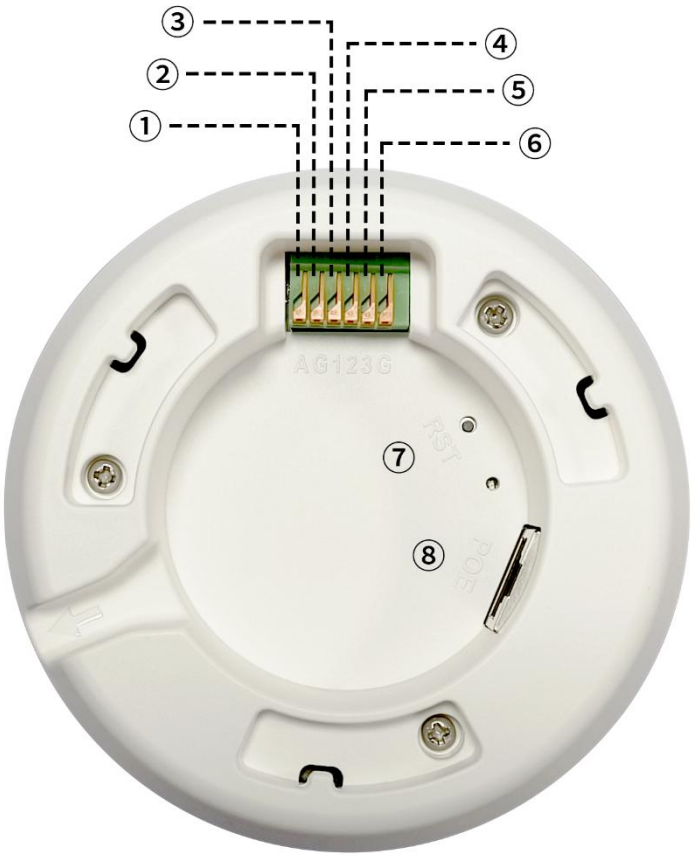








2. Interface Specification



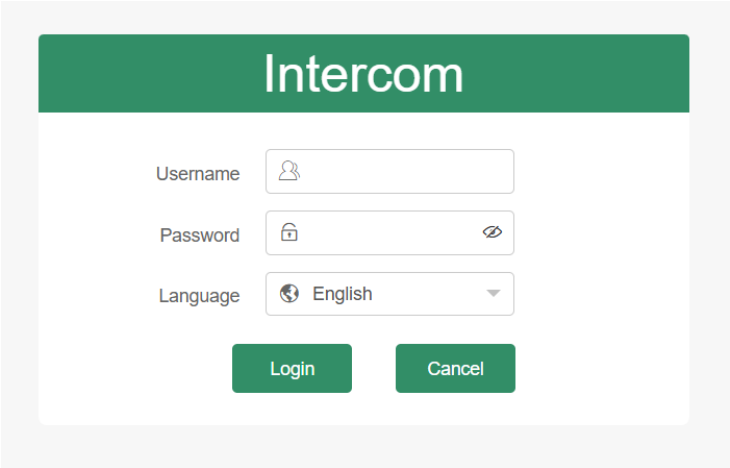
①	HST: Audio Output
②	GND: Ground
③	IO Input
④	3V Output
⑤	12V Output
⑥	GND: Ground

3. Web Configuration

Web configuration includes complete function setting, after the device and PC are connected to a same network, type the device's IP address in a web browser, the default IP address is 192.168.5.200, then log in with defaulted username and password as below.

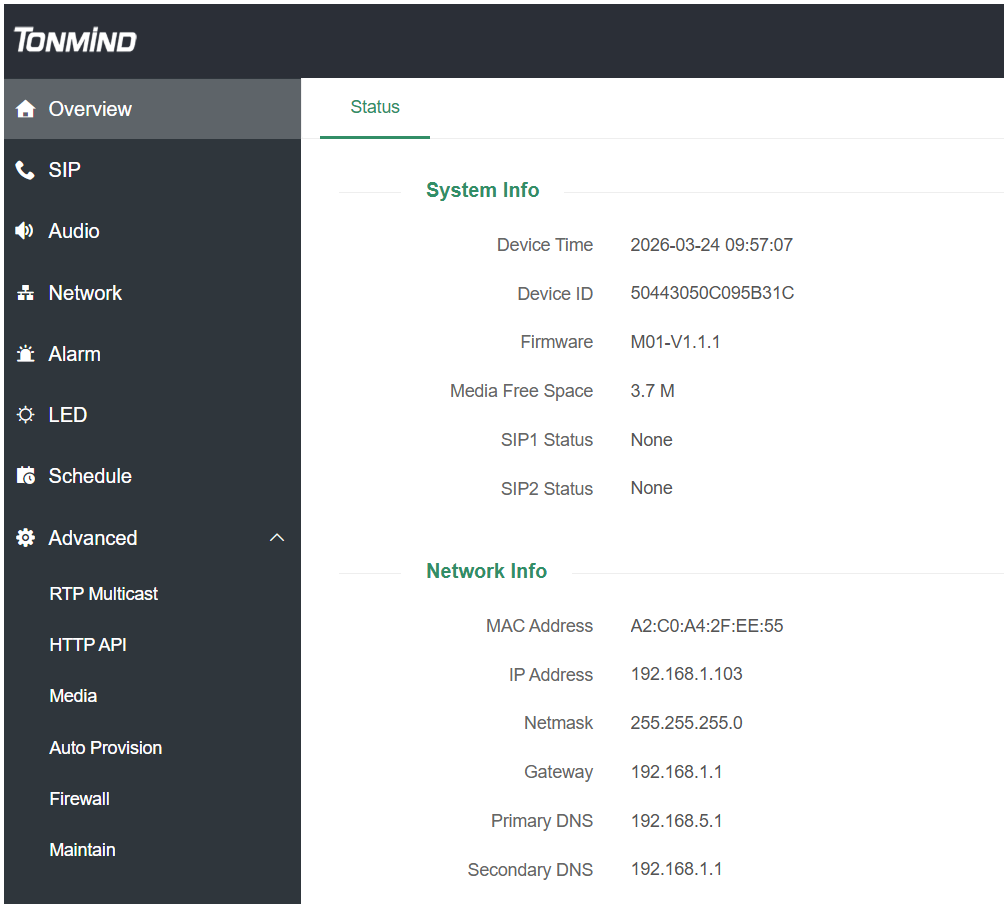
Username: admin

Password: tm1234



3.1 Overview

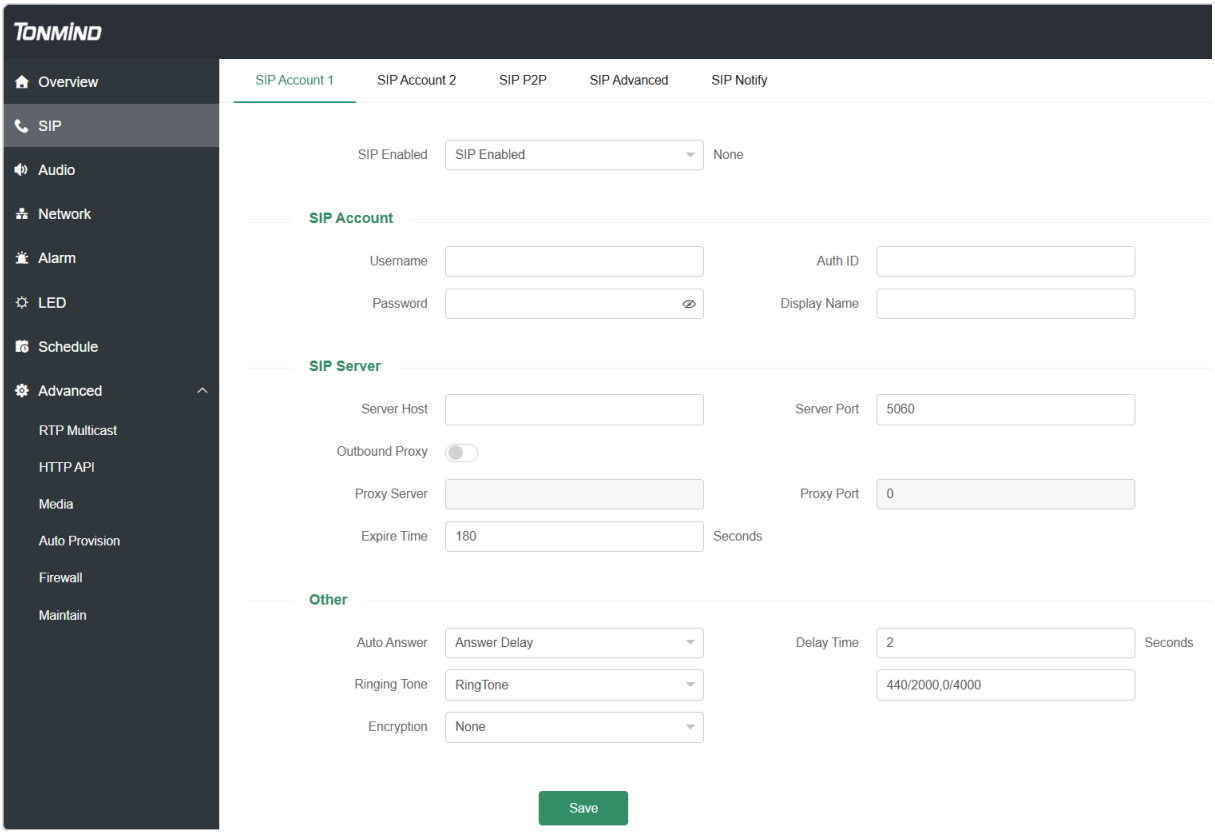
The device status page displays the device time, firmware version, available storage space, SIP account status, and network information including MAC address, IP address, subnet mask, and gateway.



3.2 SIP

3.2.1 SIP Account

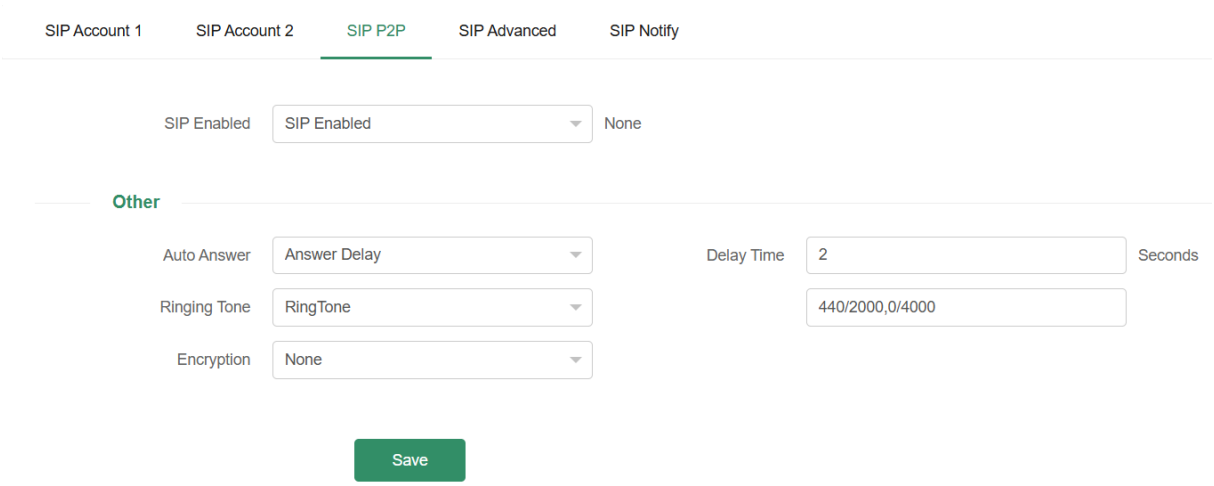
Each Microphone supports two SIP accounts. Enter the SIP server and extension information into the corresponding fields and save the configuration, then check the registration status to confirm whether the account has successfully registered.



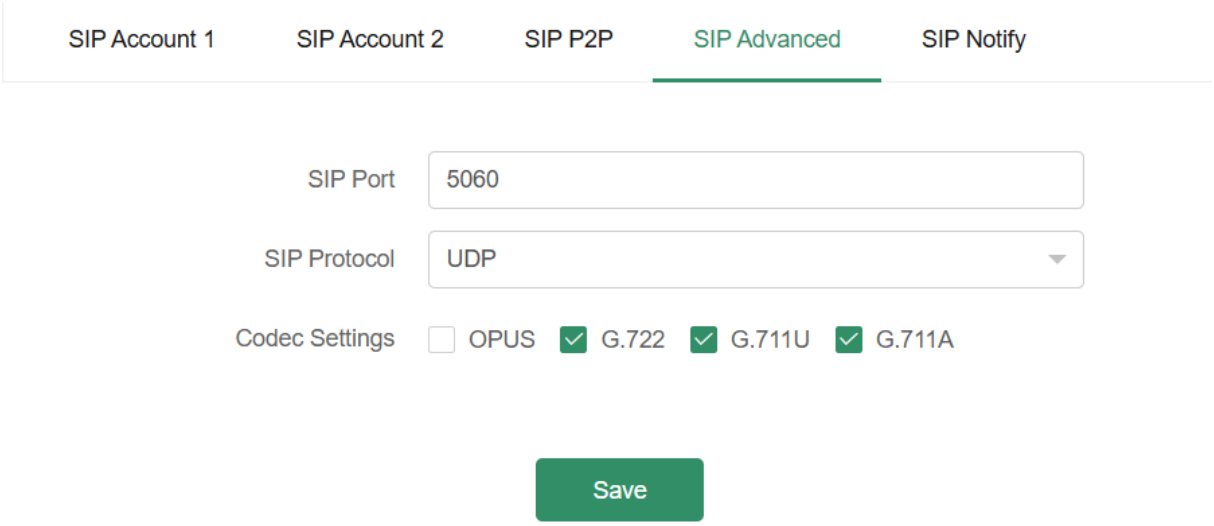
User Name	User account, provided by SIP server.
Auth ID	SIP service subscriber's ID used for authentication.
Password	Account password provided by SIP server.
Display Name	SIP service subscriber's name.
Server Host	SIP server address.
Server Port	SIP port, default to be 5060.
Outbound Proxy	It is used to process signals and help data streams to go through firewall or NAT if there have.
Expire Time	Set the expire time of registered account information.
Auto Answer	Answer immediately and answer delay when a calling income.
Ringing Tone	5 system ringtones and 10 users upload media files.
Encryption	Select None (no encryption) or SRTP (Secure Real-time Transport Protocol) to enable encrypted audio transmission.

3.2.2 SIP P2P and SIP Advanced

SIP Enabled: Select “SIP Enabled” to activate SIP communication (server-based or P2P), or “Disabled” to disable all SIP functions.



SIP Advanced Settings: Configure the SIP port, select the SIP protocol (UDP, TCP, or TLS), and choose audio codec settings (OPUS, G.722, G.711U, G.711A).

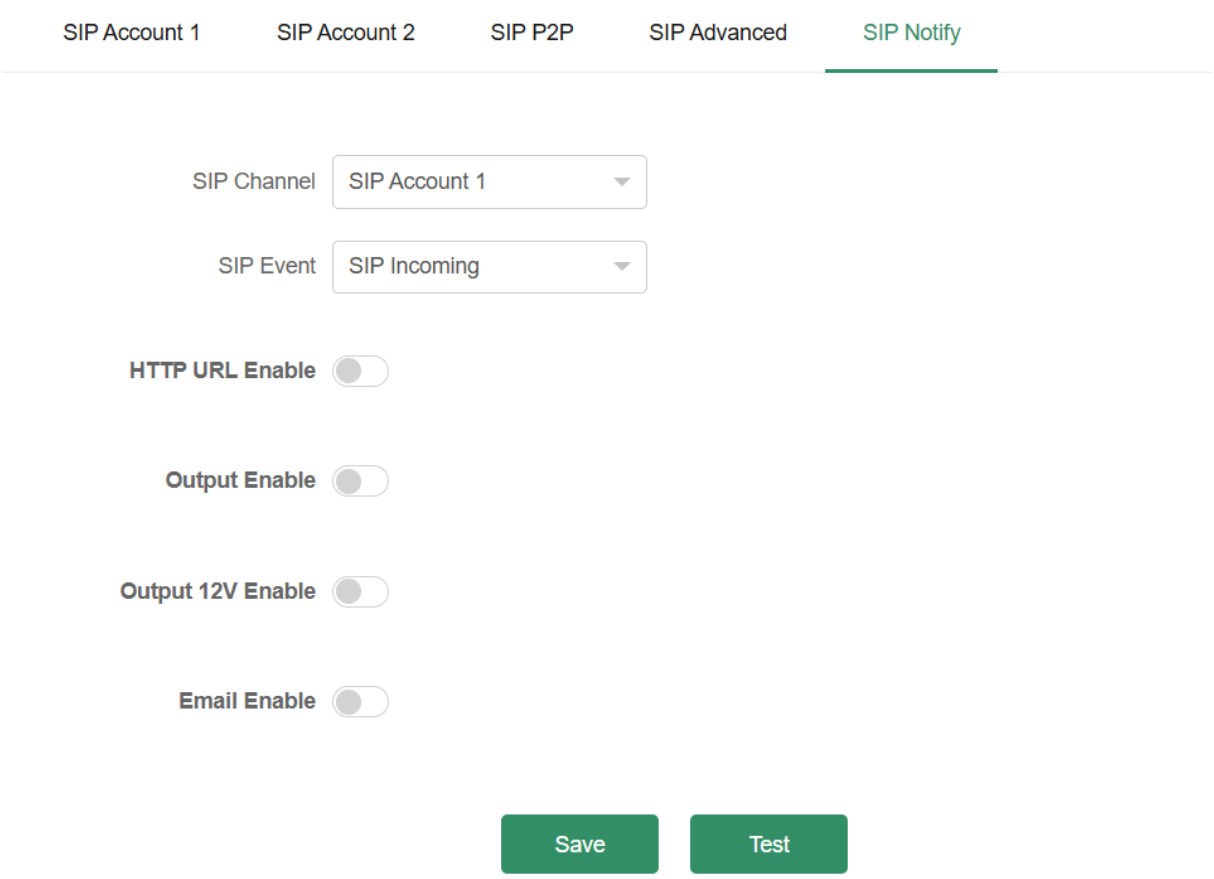


3.2.3 SIP Notify

SIP Notify: Allows you to configure actions triggered by different SIP events, including HTTP URL, Output, Output 12V, and Email.

SIP Channel: Select the channel to configure: SIP Account 1, SIP Account 2, or SIP P2P.

SIP Event: Choose the event to trigger actions, such as SIP Incoming, SIP Answer, SIP Close, SIP DTMF, or SIP DTMF2.



HTTP URL Enable: When enabled, enter a URL to be triggered by the selected SIP event. For example, if "SIP Incoming" is selected, the URL will be activated when an incoming call is ringing, which can be used to play an HTTP audio stream.

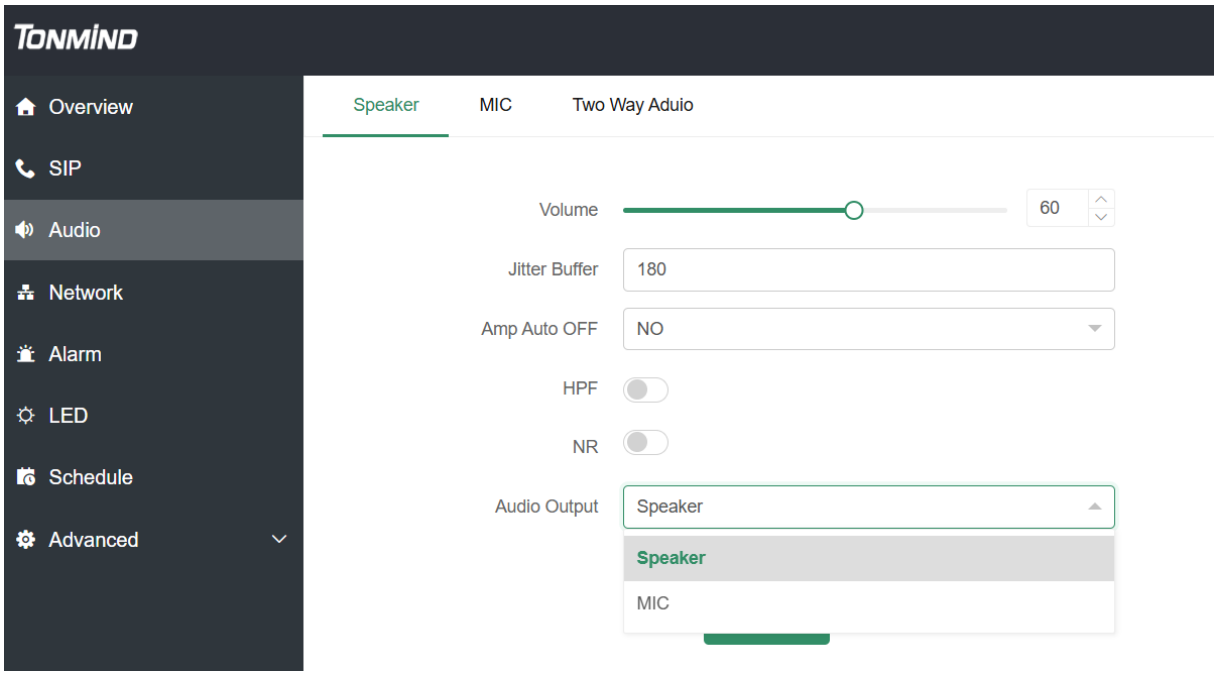
Output Enable / Output 12V Enable: When enabled, you can set the action to ON or OFF and define the duration in seconds.

Email Enable: When enabled, configure the recipient email address and customize the email content for notifications.

3.3 Audio

3.3.1 Speaker

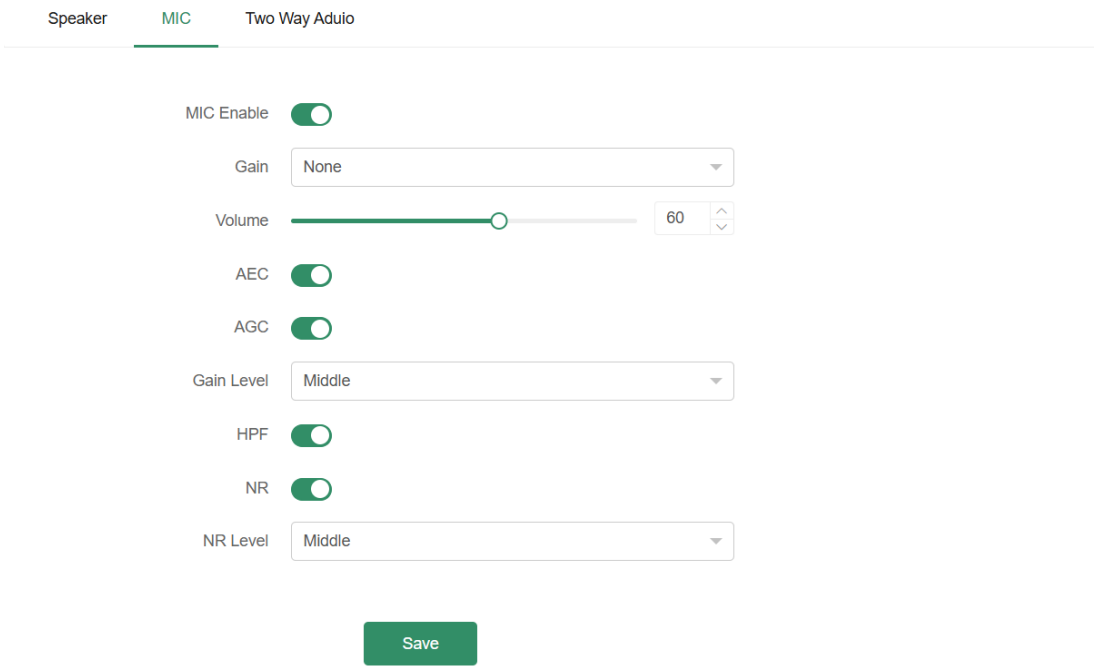
The Security Microphone M01 is equipped with an Audio Output interface, which can be configured and adjusted in this section.



- Volume: Adjusts the audio output volume level.
- Amp Auto OFF: Default is NO, meaning the built-in amplifier remains continuously enabled.
- Jitter Buffer: Improves audio playback stability by buffering data.
- HPF (High Pass Filter): Filters out low-frequency noise from the audio signal.
- NR (Noise Reduction): Reduces background noise from the audio input to enhance sound quality; this function is processed by the internal chip.
- Audio Output: Select the output mode, either Speaker or MIC.

3.3.2 MIC

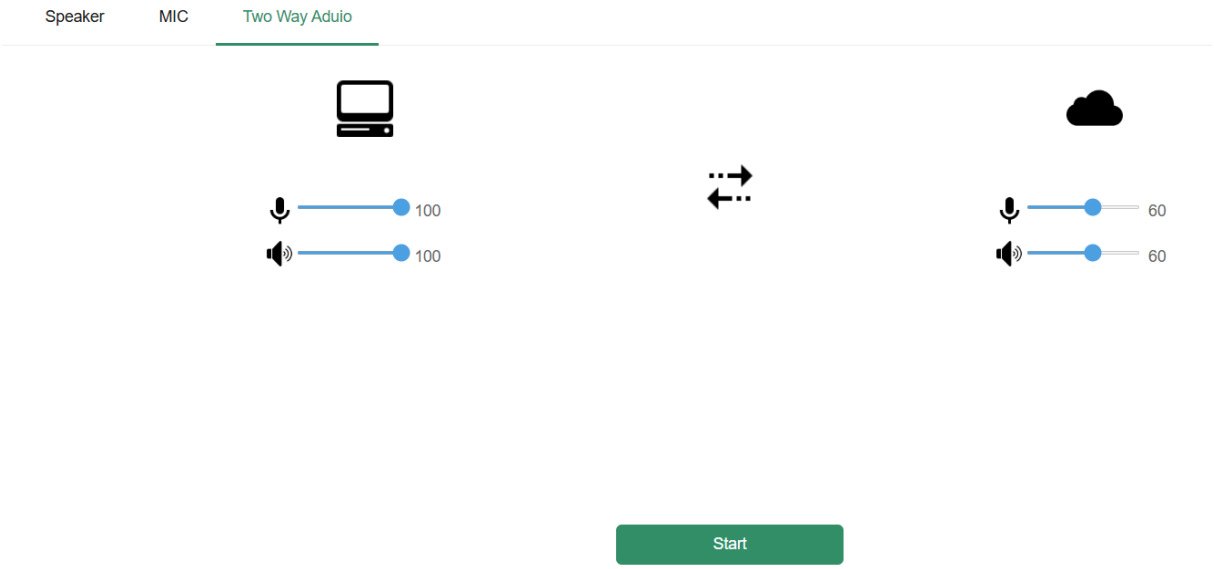
This section lets you easily adjust and optimize the built-in microphone.



- Gain: Provides four gain levels from None to High for different input sensitivities.
- Volume: Adjusts the built-in microphone output volume.
- AEC (Acoustic Echo Cancellation): Reduces echo during communication.
- AGC (Automatic Gain Control): Automatically adjusts the microphone gain for consistent audio levels.
- Gain Level: Sets the AGC gain level, with options High, Middle, and Low.
- HPF (High Pass Filter): Filters out low-frequency noise from the audio signal.
- NR (Noise Reduction): Reduces ambient noise from the speaker/microphone side to improve listening quality; three levels are available (High, Middle, Low), processed by the internal chip.

3.3.3 Two Way Audio

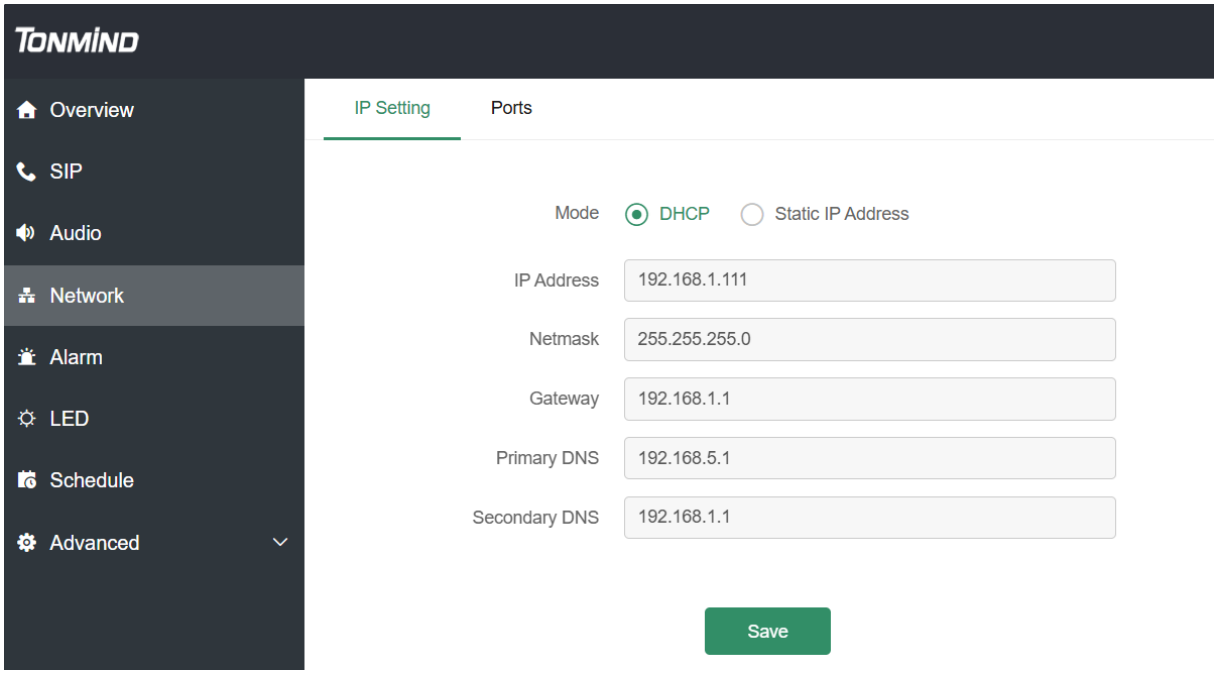
This section allows real-time two-way audio directly from the Web interface.
Click Start to begin a live talk session with the Security Microphone M01.



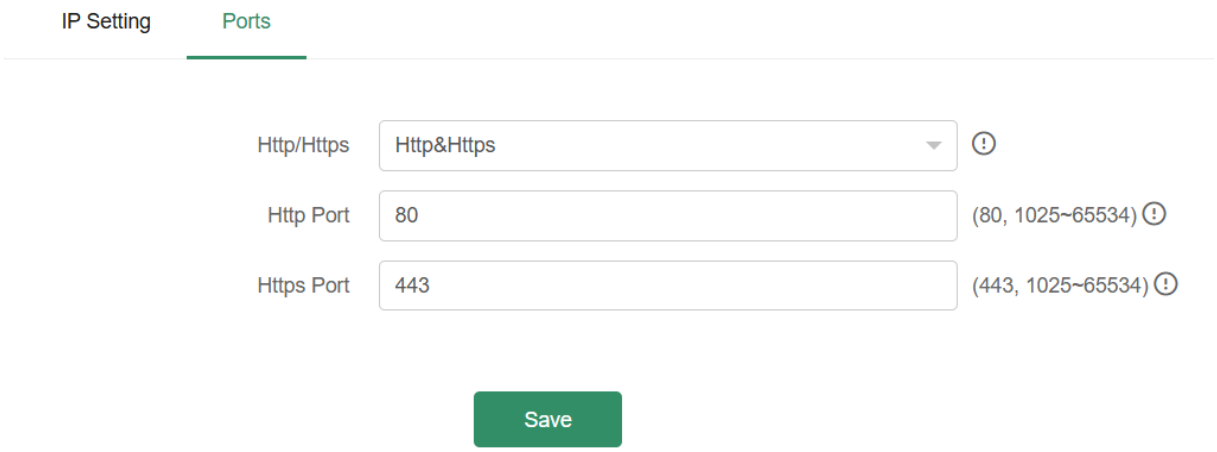
3.4 Network

IP Setting: Select DHCP or Static IP Address.

- DHCP: The IP address is automatically assigned by a DHCP server.
- Static IP Address: Manually configure the IP Address, Subnet Mask, Gateway, Primary DNS, and Secondary DNS as required.



Ports: Configure the HTTP and HTTPS port numbers.



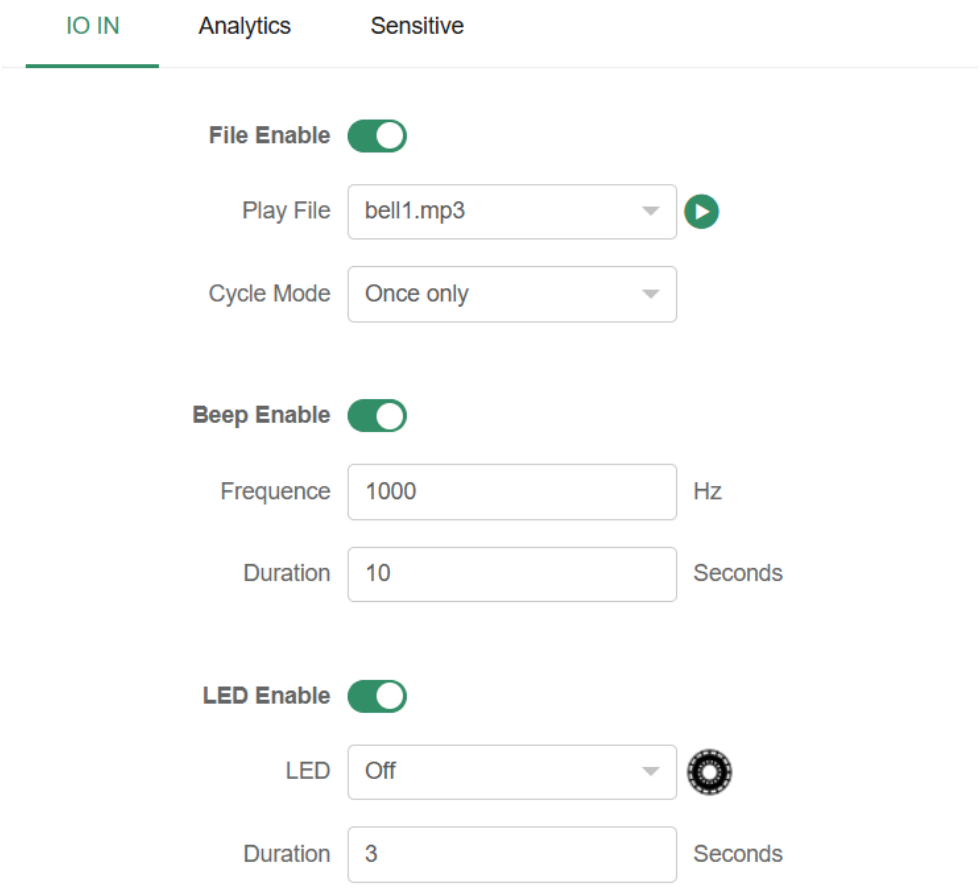
3.5 Alarm

This section includes IO IN, Analytics, and Sensitive settings for alarm and event triggering.

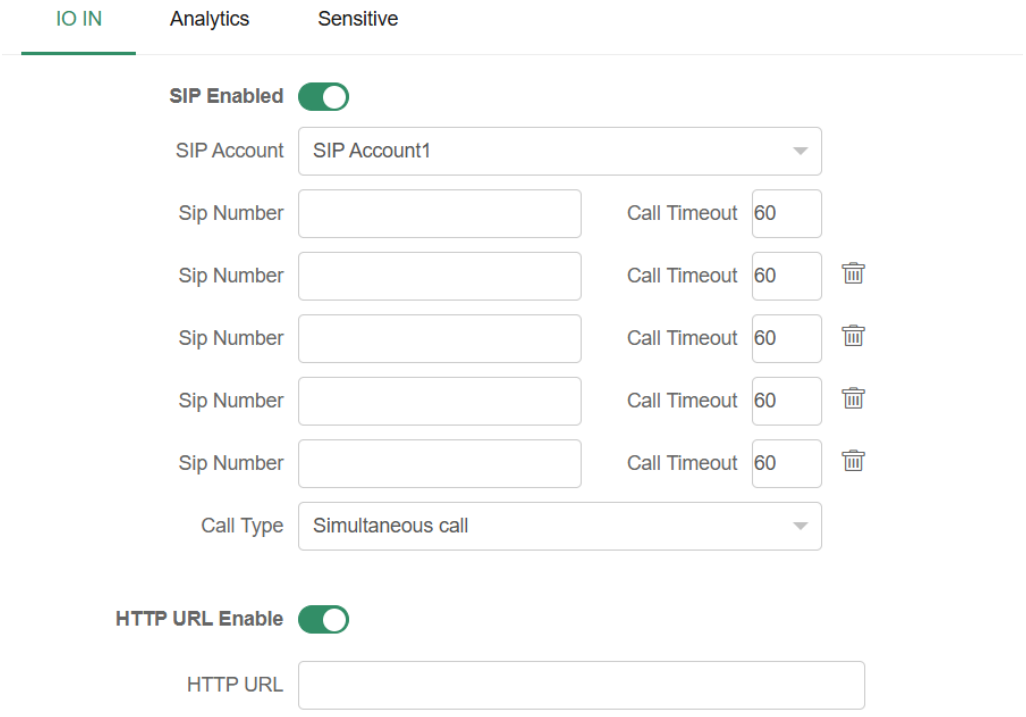
3.5.1 IO IN

Configure actions triggered when the IO IN interface is short-circuited. Supported actions include File, Beep, LED, SIP, HTTP URL, Output, and Email.

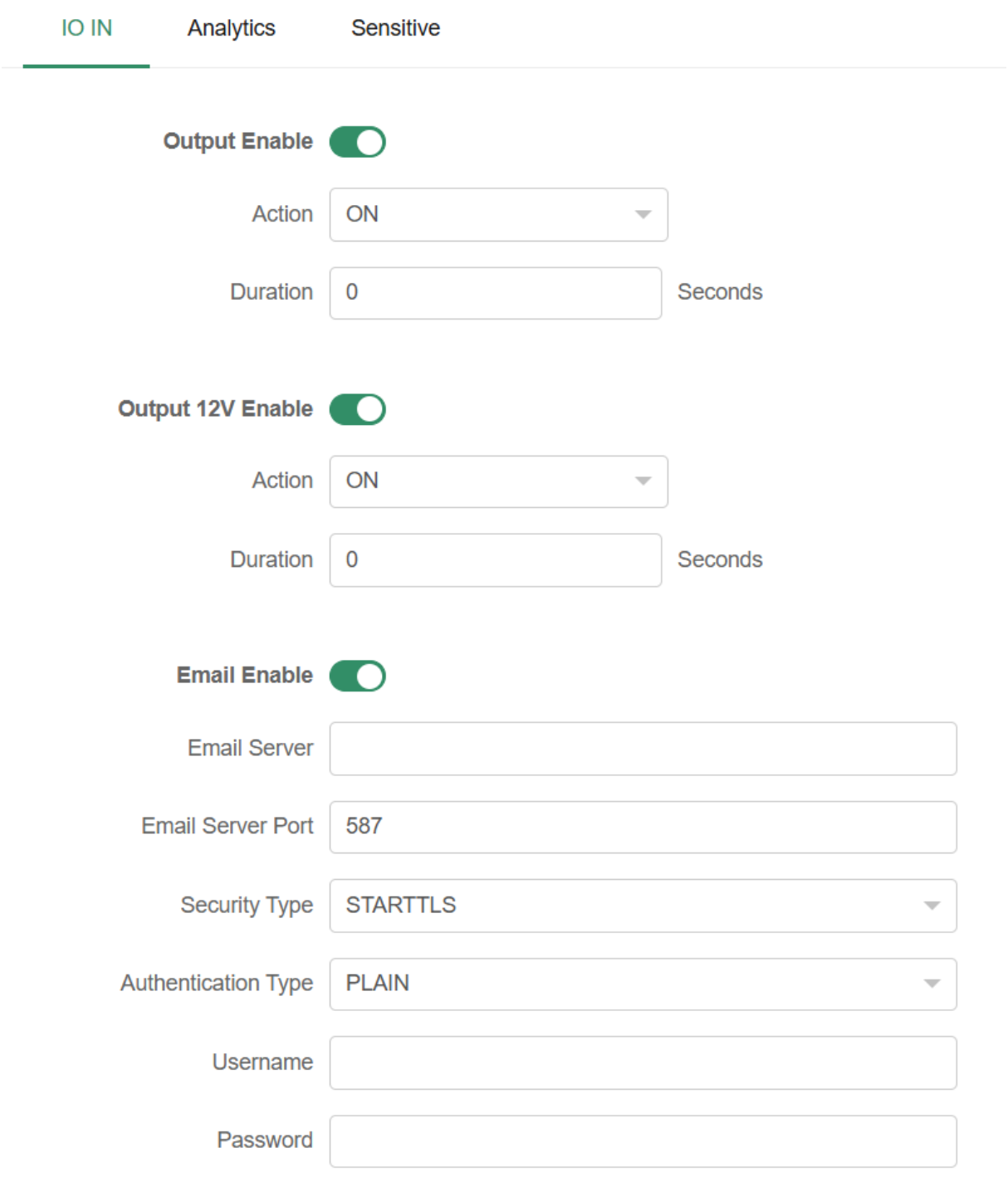
- File Enable: Enable to play a selected uploaded user file. Choose playback mode: Once Only, Multiple Times, or Duration.
- Beep Enable: Enable to set the beep frequency (Hz) and duration.
- LED Enable: Enable to select LED mode and duration.



- SIP Enable: Enable to trigger SIP calls. Select the SIP account and dial up to 5 SIP numbers. Call type can be Simultaneous Call or Sequential Call.
- HTTP URL Enable: Enable and enter the URL to be triggered.

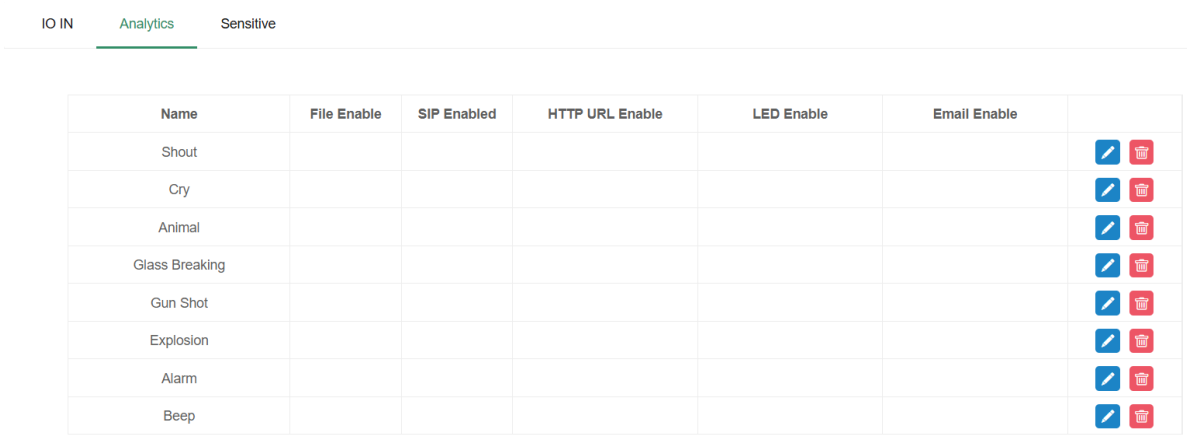


- Output Enable / Output 12V Enable: Enable to set the output action (ON/OFF) and duration (seconds).
- Email Enable: Enable to send email notifications by setting recipient address and content.



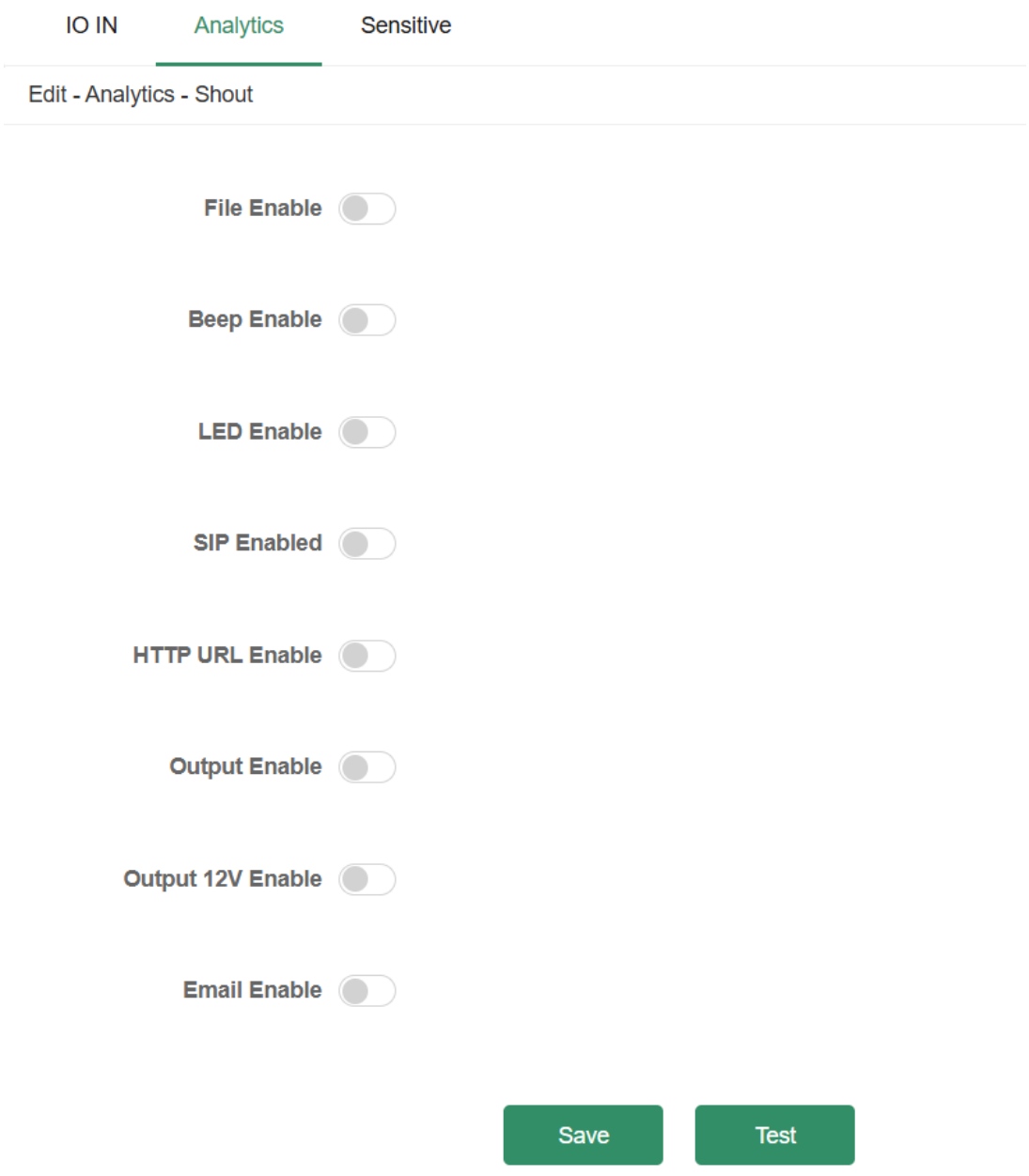
3.5.2 Analytics

The device can detect sounds such as Shout, Cry, Animal, Glass Breaking, Gun Shot, Explosion, and Beep.



Click  to configure triggered actions, with the same options as IO IN events.

The available actions are the same as IO IN (File, Beep, LED, SIP, HTTP URL, Output, Email).



3.5.3 Sensitive

Enable or disable detection for specific sounds (Shout, Cry, Animal, Glass Breaking, Gunshot, Explosion, Beep) and adjust the sensitivity level.

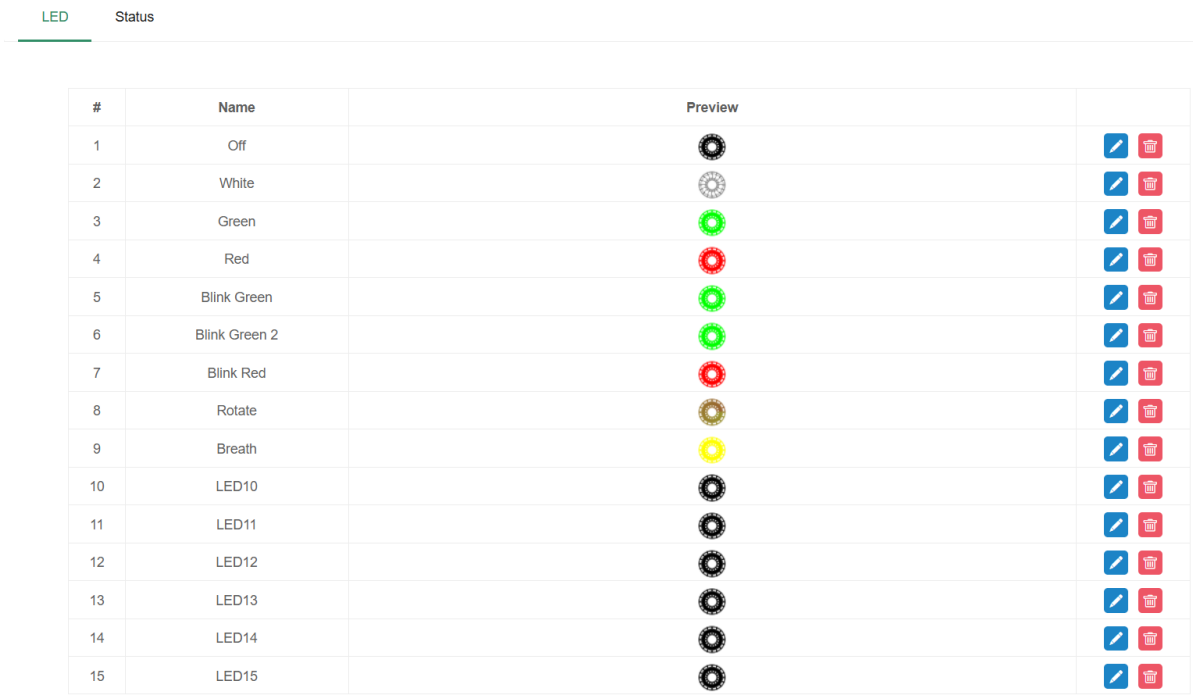


3.6 LED

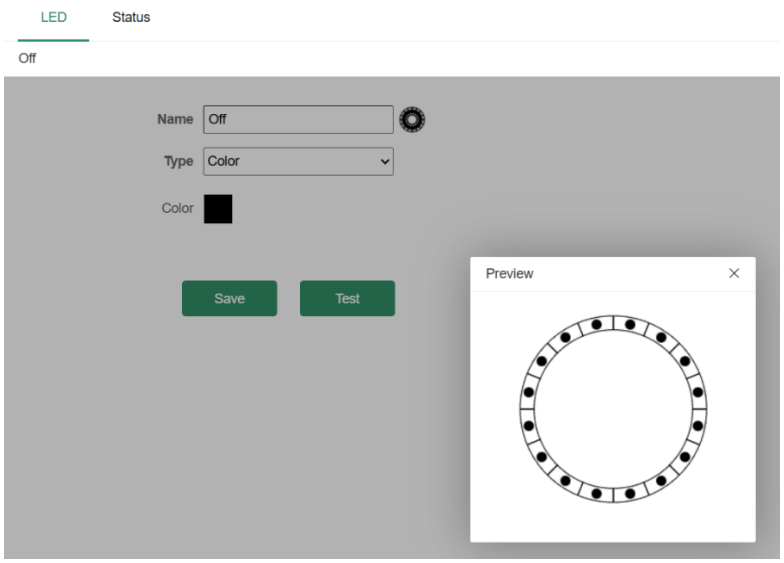
The LED section allows you to customize LED effects and assign them to different device statuses. It includes LED Setting and Status configuration.

3.6.1 LED Setting

Up to 15 LED modes can be configured and named. Click the  to enter the settings:

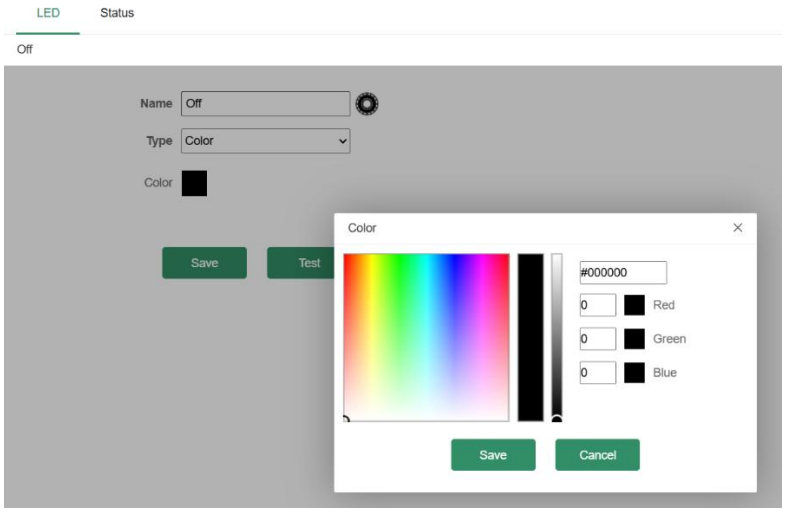


● Name: Customize the mode name. The icon on the right can be clicked to preview the LED effect.

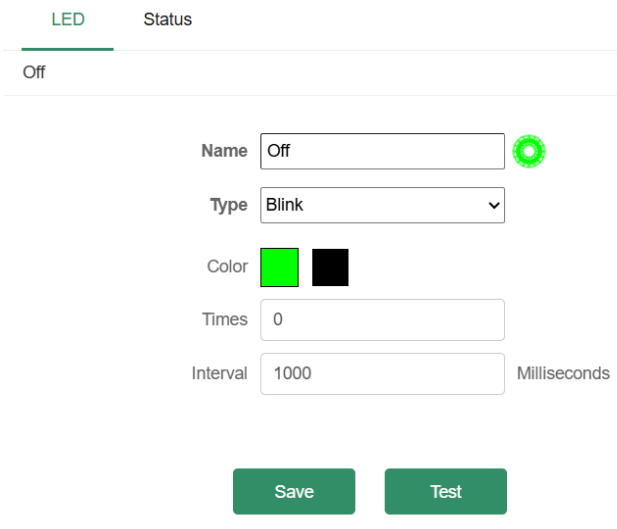


● Type: Four modes are available: Color, Blink, Rotate, Breath.

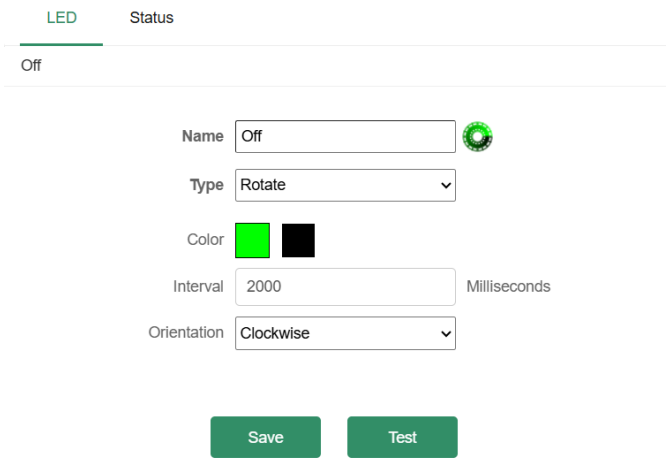
● Color: Keeps a constant color. If you need the LED to stay off, you can create a mode (e.g., "OFF") and set the color to black.



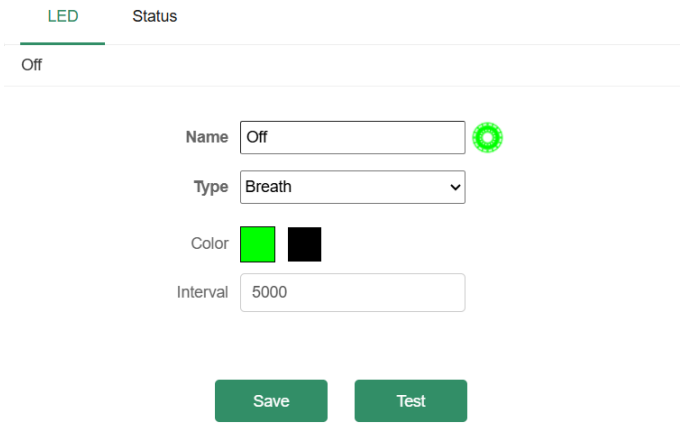
● Blink: Alternates between two colors. You can set Times (number of flashes) and Interval (time in milliseconds for one flash cycle).



● Rotate: Displays a rotating color effect. You can select the colors, set the Interval (time in milliseconds for one rotation), and choose the Orientation (clockwise or counterclockwise).

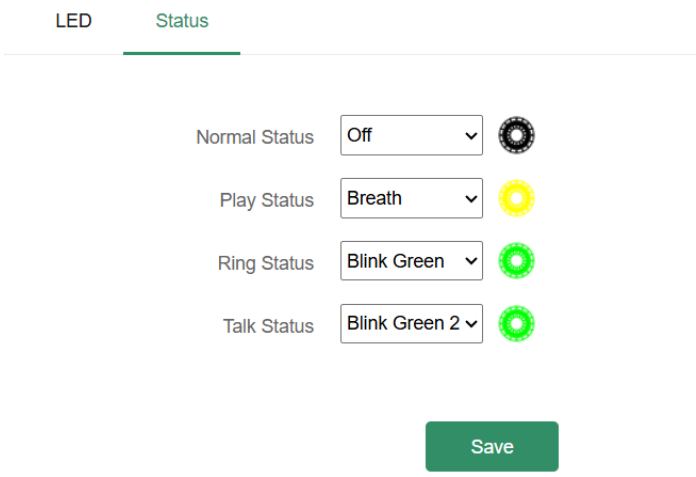


● Breath: Gradually transitions between two colors in a smooth "breathing" effect. You can set the Interval (time in milliseconds for one transition cycle).



3.6.2 Status

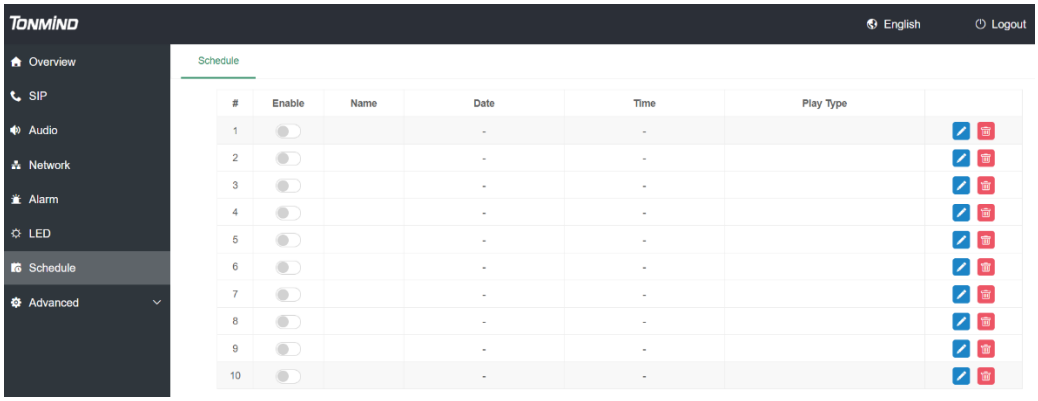
There are four device status modes: Normal, Play, Ring, and Talk. Each status can be linked to one of the configured LED modes.



- Normal Status: LED behavior when the device is idle or in standby. For example, if set to the "OFF" mode created previously, the LED will remain off when the device is idle.
- Play Status: LED behavior when the device is playing audio files.
- Ring Status: LED behavior when there is an incoming call.
- Talk Status: LED behavior during an active call.

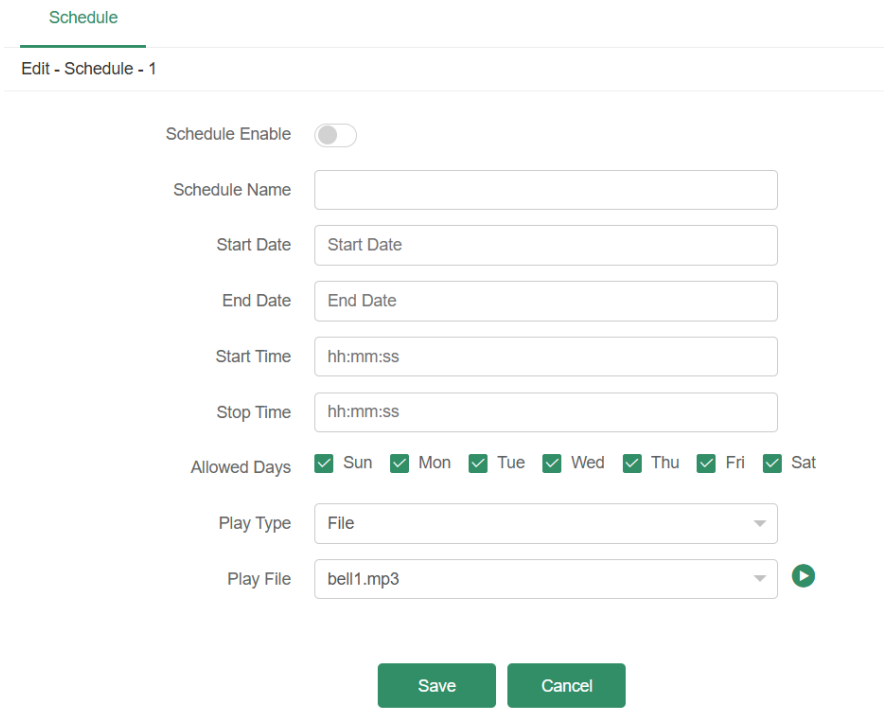
3.7 Schedule

The Schedule section allows you to create and manage up to 10 schedules, and select which ones to enable as needed.



Click the  to enter the schedule configuration page:

- Schedule Name: Assign a custom name to the schedule.
- Start Date / End Date: Define the active date range.
- Start Time / Stop Time: Set the daily start and end time.
- Allowed Days: Select the days of the week when the schedule is active.



- Play Type: Choose one of three playback types:
  - File: Play an audio file uploaded to the device.

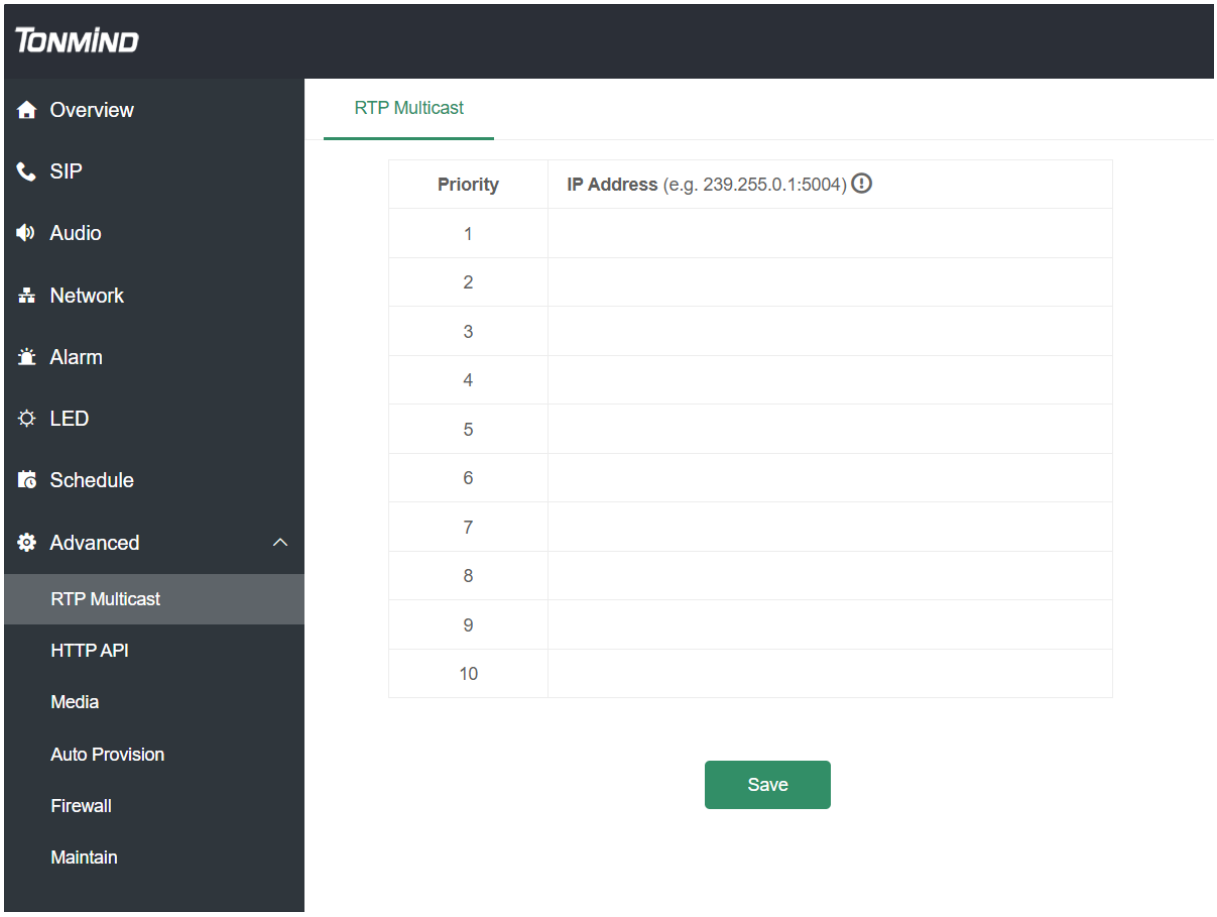
- Ring Tone: Set ring frequency and duration (format example: 440/2000,0/4000).
- Stream: Enter an HTTP audio stream URL for playback.

3.8 Advanced

3.8.1 RTP Multicast

Support 10 RTP addresses, please note that: port numbers do not use continuous numbers when setting the same RTP addresses. Use discontinuous numbers. e.g.:
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（√）

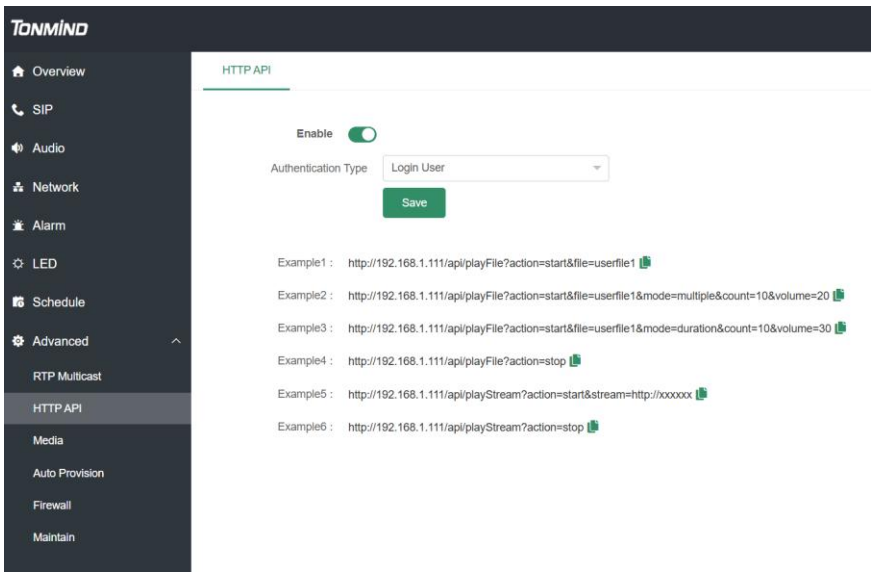
- Multicast address range: 224.0.0.0-239.255.255.
- Ports range: 1024-65536



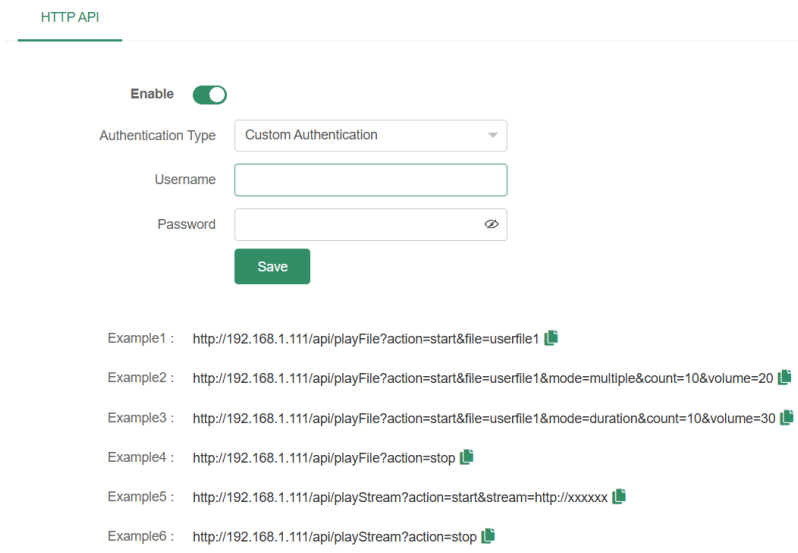
3.8.2 HTTP API

The HTTP API section allows you to enable and configure API control for the device. Click Enable to activate the HTTP API and view several usage examples.
Authentication Type: Defines how authentication is handled.

- Login User: Uses the device's login username and password for API access.

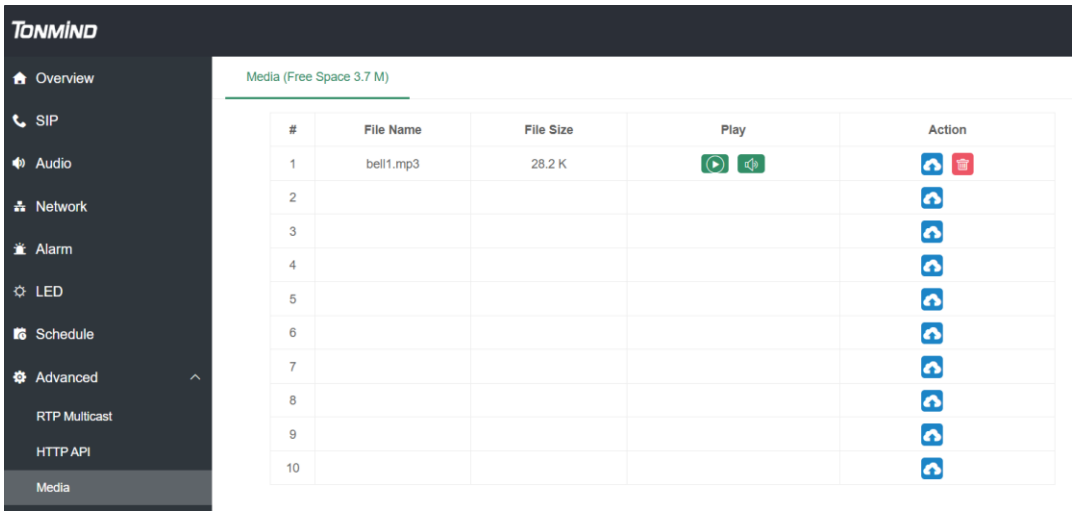


● Custom Authentication: Allows you to create a separate username and password specifically for HTTP API access, useful when you do not want to share the device login credentials.



3.8.3 Media

The Media section allows you to upload and manage audio files stored on the device.



3.8.4 Auto Provision

The Auto Provision section allows automatic device configuration based on MAC address. It supports third-party servers using DHCP, PnP, TFTP, FTP, and HTTP protocols.

There are three provisioning methods available:

- DHCP Option:

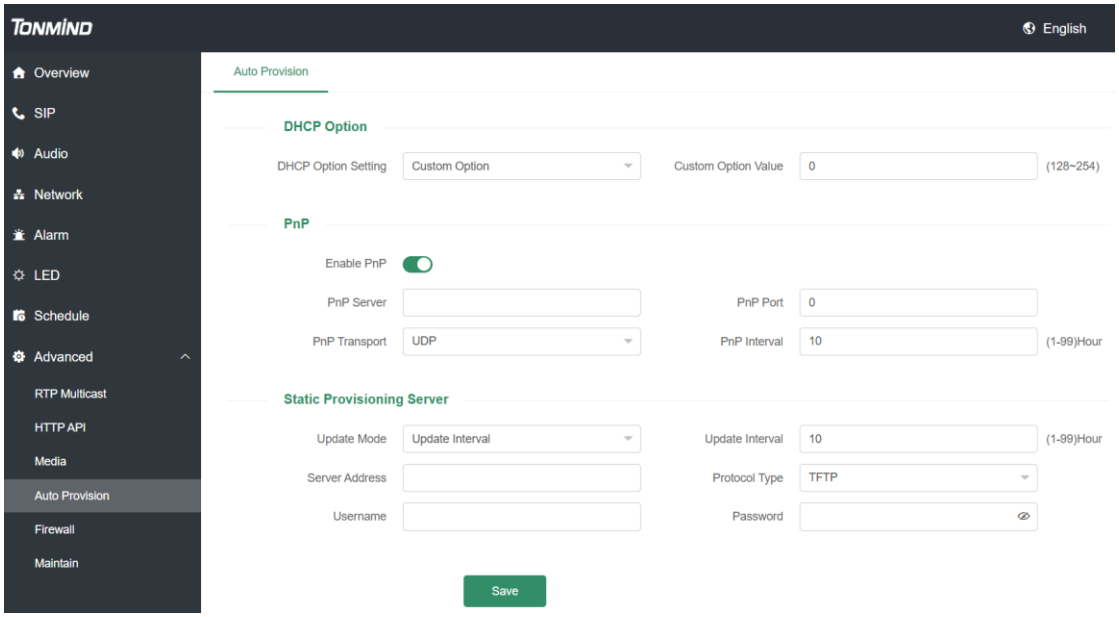
Set up a DHCP server first, then select the option code (Option 66, Option 43, or Custom Option). Configure the path to the provisioning file and run the DHCP server.

- PnP (Plug and Play):

Set up a PnP server, configure the provisioning file path, and run the PnP service for automatic device discovery and configuration.

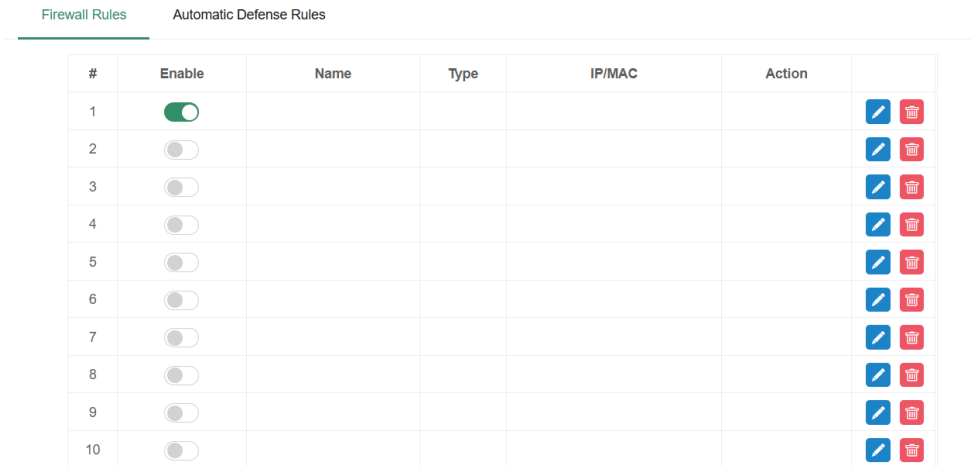
- Static Provisioning Server:

Supports TFTP, FTP, and HTTP protocols. Prepare the corresponding server, then configure the server address and file path for the provisioning file. If authentication is required, enter the username and password.



3.8.5 Firewall

The Firewall section provides two types of protection: Firewall Rules and Automatic Defense Rules.



- Firewall Rules:

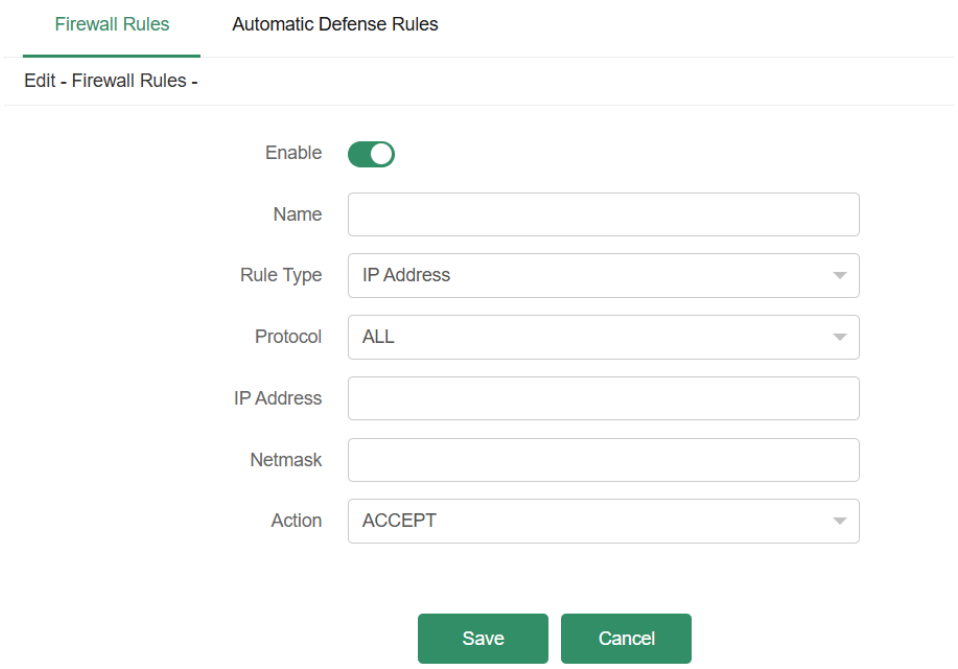
Name: Set a custom rule name.

Rule Type: Choose IP Address or MAC Address.

IP Address: Select protocol (ALL, TCP, or UDP), then enter the IP Address and Netmask.

MAC Address: Enter the MAC address directly.

Action: Choose ACCEPT or DROP.



- Automatic Defense Rules

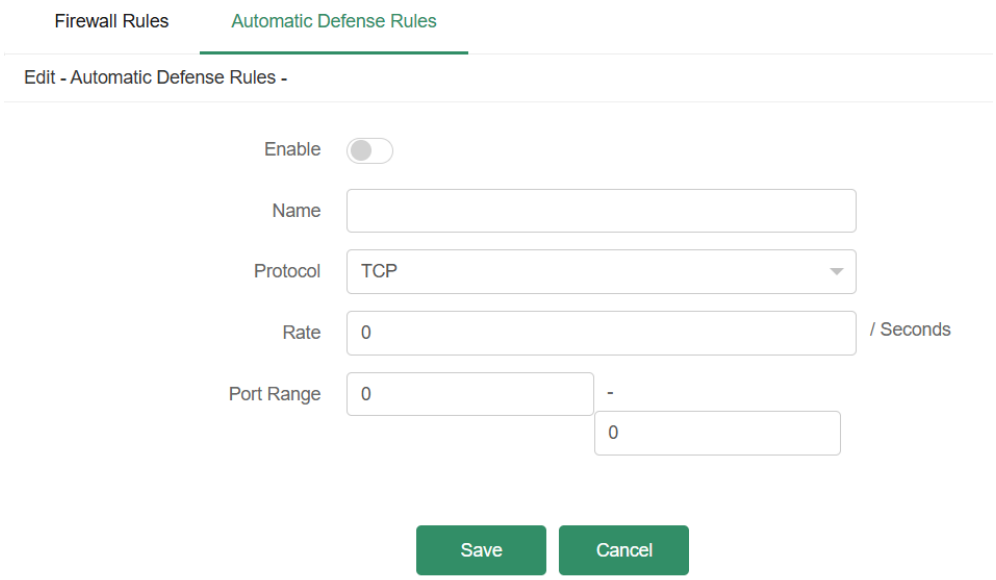
Used to automatically protect against abnormal traffic:

Name: Set a custom rule name.

Protocol: Select TCP, UDP, or ICMP.

Rate: Define the allowed request rate (per second).

Port Range: Set the applicable port range.



3.8.6 Maintain

The Maintain section includes Maintain, Password, and Date/Time settings for device management and system configuration.

- Maintain

Download Log File: Click Log to view and download device logs.

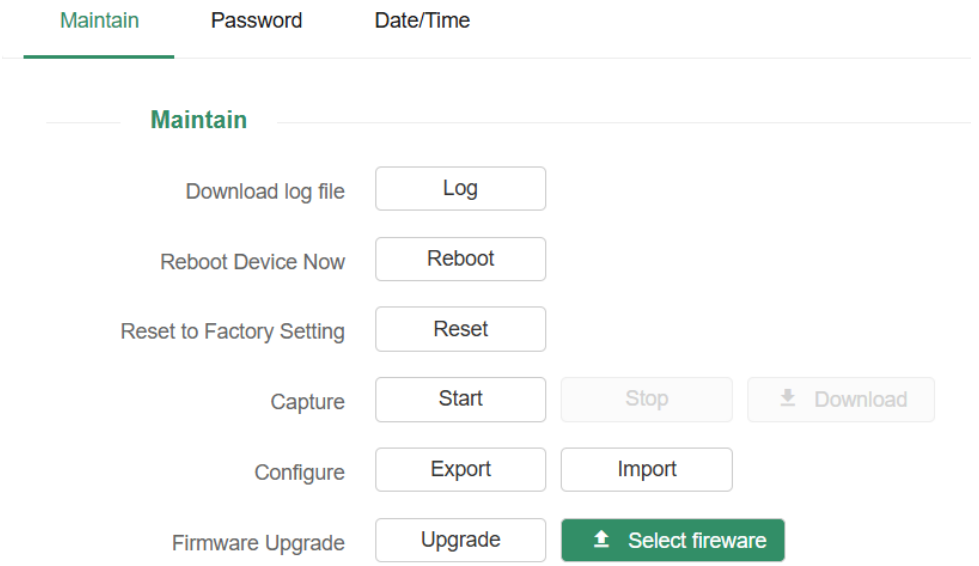
Reboot Device Now: Click Reboot to restart the device.

Reset to Factory Setting: Click Reset to restore factory defaults.

Capture: Used for packet capture. Click Start to begin, Stop to end, and Download to export the capture file.

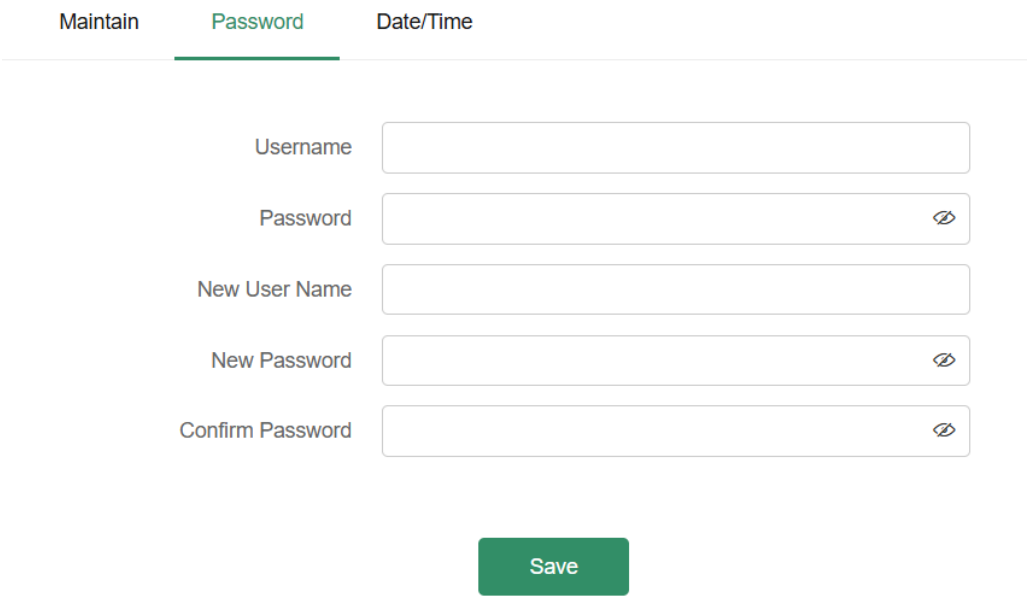
Configure: Click Export to back up device configuration, or Import to restore settings.

Firmware Upgrade: Click Select Firmware to choose the upgrade file, then click Upgrade to update the device firmware.



- Password

Set a new username and password. Save the configuration and log in again after changes take effect.



- Date/Time

Supports two time setting modes:

NTP: Synchronize time automatically with an NTP server.

Local Time: Sync with the local PC time.

