

SPON

SOUND PICK-UP SYSTEM PLATFORM

User Manual



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Summary

The Sound Pick-up system platform provides sound pick-up device management, audio management (audio preview, audio playback), video management (video preview, video playback), notification alarm and platform setting functions.

Feature

- ◆ Device Management: Support centralized management of multiple sound pickups and sound pickup gateways, and making partition settings, NVR add configuration, device add, delete, etc.
- ◆ Audio Preview: Support real-time monitoring to each connected sound pick-ups, and local recording can be performed during monitoring.
- ◆ Audio Playback: Support audio playback for each sound pick-up audio stored in NVR, it can directly drag the timeline playback or set a specific time period for playback.
- ◆ Video Preview: Preview IPC videos, it can view monitoring with audio tracks. For Intelligent zoom sound pick-up, it can play in zoom.
- ◆ Video Playback: Play back IPC video stored in NVR, and play back monitoring with the sound pick-up audio stored in NVR.
- ◆ Notification Alarm: Manage all alarm information of the platform, support query and processing alarm information, and displays all alarm information and data in statistical data charts.
- ◆ Platform Setting: Support user management function, you can add, delete, modify the user/role, and assign device permissions, role permissions to user, support database settings, alarm task settings.

Software Installation

Operating Environment

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

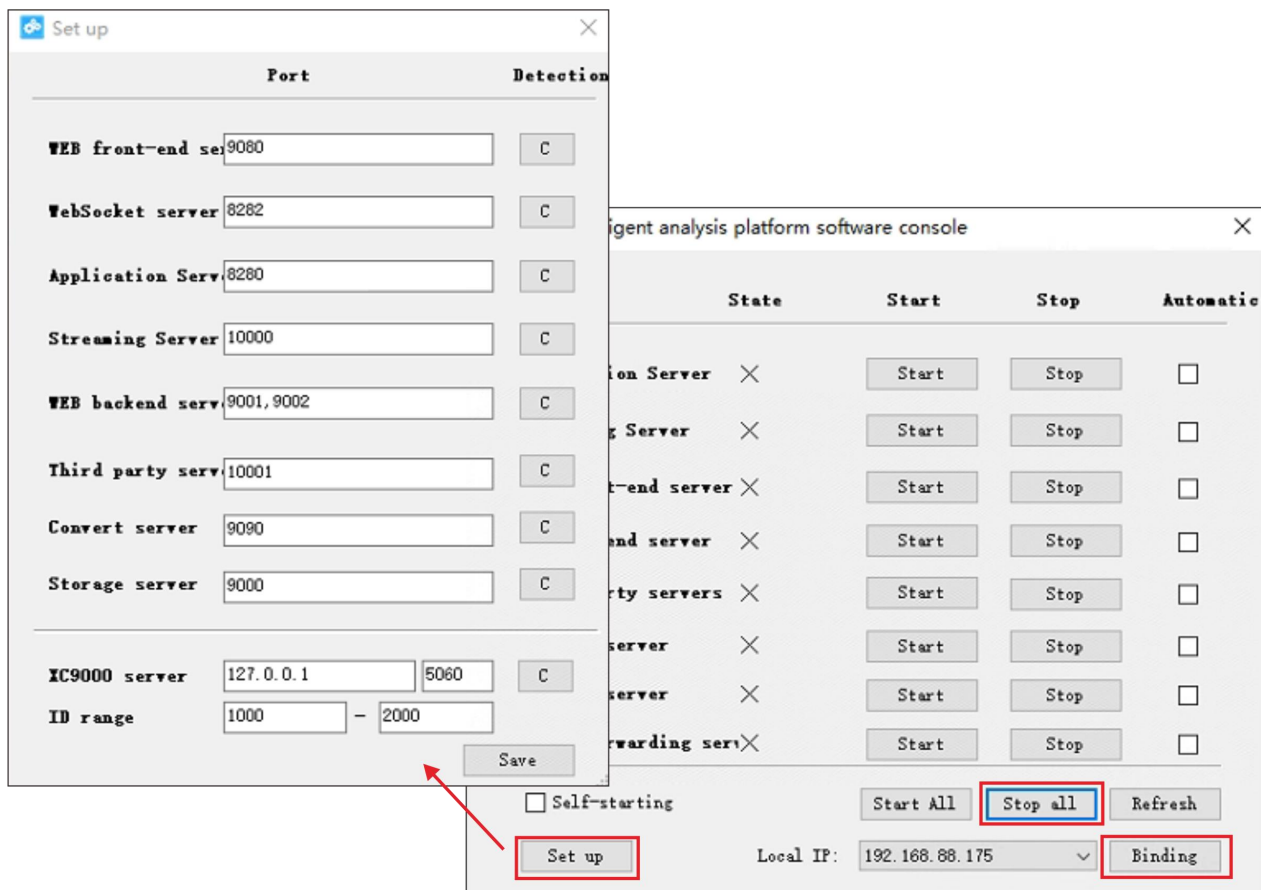
Installation Procedure

Server Installation

- (1) Run the server software installation package as an administrator, enter to the installation interface, click on "Next", the installation path can be customized, others choose default choices. After the installation is completed, a shortcut icon will be generated on the desktop, as shown in the following figure. **(Note: Do not include Chinese in the installation path, otherwise it may cause an error)**



- (2) Right click on the shortcut icon, choose "Properties" - "Compatibility", and select "Run as Administrator".
- (3) Double click on the "TS900Controler" icon to enter to the server console.



Start server: After starting the console, please check whether the IP address of "Local IP" column is correct (if there are multiple network adapters, bind one network adapter to the audio intelligent analysis platform), and then check whether all servers are started.

Restart server: Click on the "Stop all" button first, then press the "Start all" button;

Note: The normal status of the server is displayed as √. If × is displayed, please press the "Stop All" button to stop all servers, and then click on the "Set up" button to check whether the server port is occupied.

(4) Access server IP address through web, for example: <http://192.168.88.175:9080> (default port is 9080, configure it in the "Set up", if there is no special needs no need to modify it), the default username and password are both **admin**.

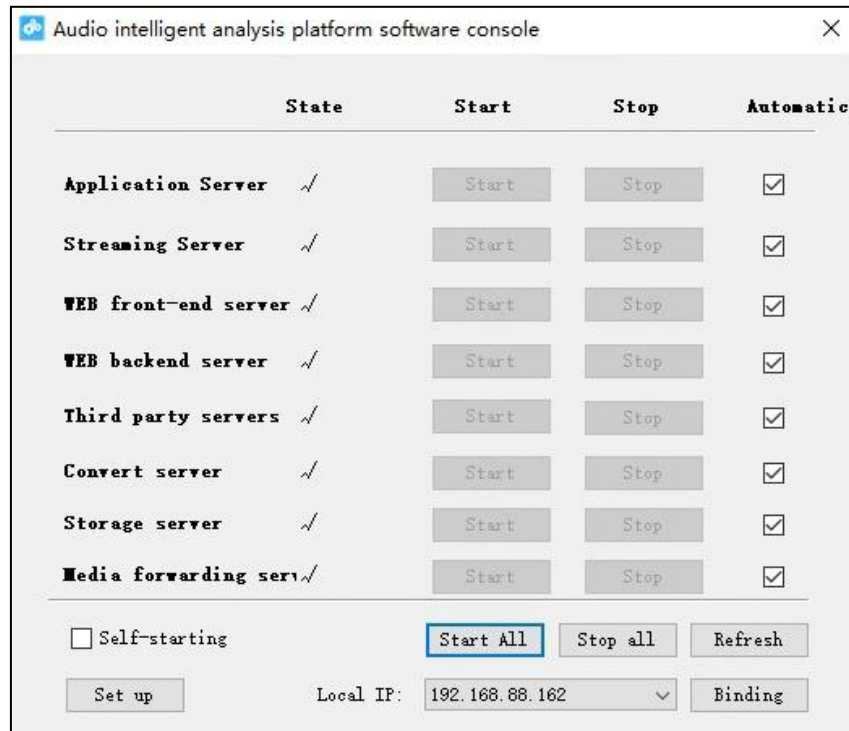
Software Operation Instruction

Software Login

(1) Platform server startup

To use platform services, you must to start the platform server first .

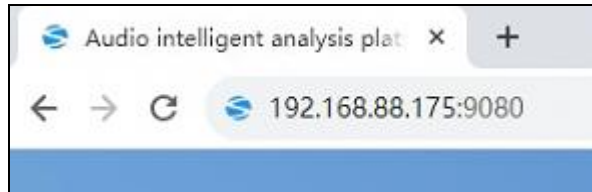
Double click on the "TS900Controler" application  to launch the server. After the audio intelligent analysis platform is started, if there is no special needs, please use the default setting. Check the binding local IP(generally keep the default), after confirming, directly click "Start All" to start all servers of the platform.



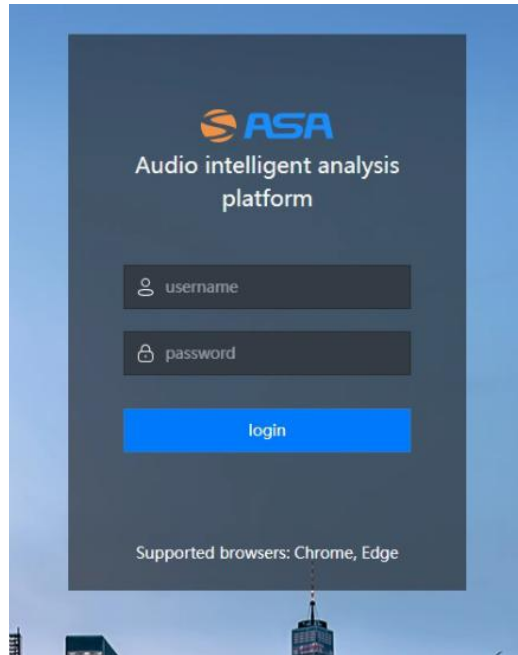
(2) Platform server startup

1) Enter the IP address and port of platform server in the address bar of web browser.

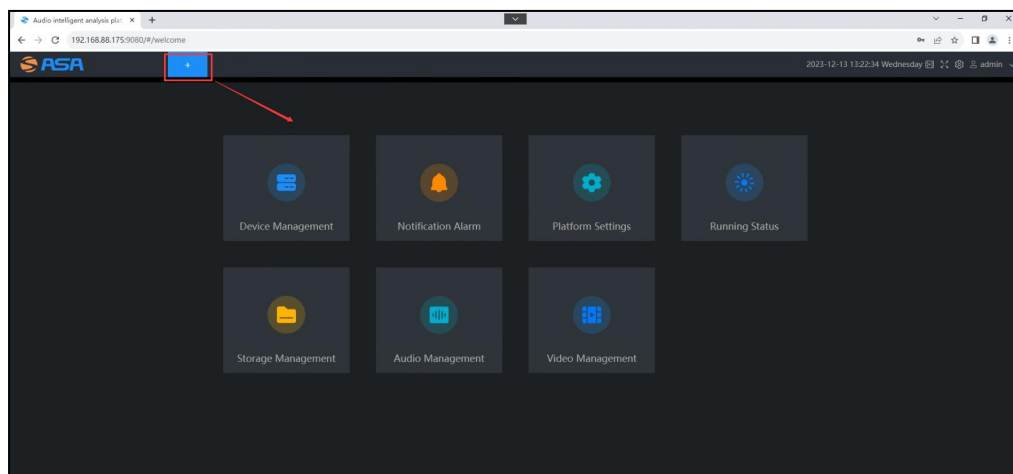
For example: <http://192.168.88.175:9080> (The port is 9080 by default, you can set it on “Set up” of control console. If no special needs, no need to modify it.)



2) Enter the username and password in the login window. (The default username and password are both **admin**)



3) Press “Login” to enter to the web page of the platform server, you can view the basic operation interface module of the platform server



Icon Introduction

The main Icons involved in the platform application are described as follows:

Icon	Description
	The device is a sound pick-up, and it is online.
	The device is a sound pick-up, and it is offline.
	The sound pick-up has been added to the NVR channel.
	The device is a camera, and the camera is online.
	The device is a camera, and the camera is offline.
	The device is a multi-channel sound pick-up or gateway, and it is online.
	The device is a multi-channel sound pick-up or gateway, and it is offline.
	The multi-channel sound pick-up or gateway has been added to the NVR channel.
	The device is a NVR, and it is online.
	The device is a NVR, and it is offline.
	The device is a signaling gateway, and it is online.
	The device is a signaling gateway, and it is offline.
	The device is an Intelligent zoom sound pick-up, and it is offline.
	The device is an Intelligent zoom sound pick-up, and it is online.
	The Intelligent zoom sound pick-up has been added to the NVR channel.
	Main partition
	Sub partition
	Unpartitioned

Device Management

Device management, it is used for centralized management of multiple sound pickups and sound pickup gateways, this page is divided into device tree list and device detailed list.

Device tree list: You can add partitions, modify partitions, delete partitions, and add devices to selected partitions.

Device detailed list: Display device details (device name, device status, device partition, device IP address, device port number, device version, etc.), query devices, delete devices, and manage devices (you can access the web page of devices).

Batch operation button: (1) Batch Settings: it can do unified function operation configuration to sound pick-ups. Such as:

Restart, System Time Sync.etc.

(2) Batch Upgrade: The sound pick-ups can be upgraded in batches.

(3) Batch Move: The sound pickups can be divided into the required partitions in batches.

(4) Batch Deletion: The sound pick-ups can be deleted in batches.

The screenshot displays the ASA Device Management interface. On the left, the 'Device Tree List' shows a hierarchical structure under 'Audio Intelligent analysis ...' with 'Unpartitioned' and 'SPON' partitions. The 'SPON' partition is expanded, showing 'channel 1' through 'channel 4' and several 'external chann...' entries. A red arrow points to this list. The main area, labeled 'Device Detailed List', shows a table of devices. The table has columns for S/N, Device Name, Status, Device Partition, Device IP, Parent IP, Port, Product Code, Version, and Action. Two devices are listed: 'Surveillance Microphone' and 'SPON'. Above the table, there are tabs for 'Add Device' (Quick Add, Specify Add, Batch Add, Host Add) and 'Batch Processing' (Batch Move, Batch Settings, Batch Upgrade, Batch Deletion, Export Table). To the right of the table, there are 'Partition Settings' tabs (Add Partition, Modify Partition, Delete Partition). A red arrow points to the 'Device Tree List' label at the bottom left.

S/N	Device Name	Status	Device Partition	Device IP	Parent IP	Port	Product Code	Version	Action
1	Surveillance Microphone	Online	Unpartitioned	192.168.88.33	192.168.88.162	8080	P0030929E0TS0113	0000929_V1.0.2_202369...	[Edit] [Delete]
2	SPON	Online	Unpartitioned	192.168.88.34	192.168.88.162	8080	P0040100E0XV0613	0000100_V1.0.0_2023120...	[Edit] [Delete]

Quick Add: Click on **Quick Add** button to add online devices to the sound pick-up system platform which are on the same network but not logged in to the pickup system platform.

Devices available for adding

Refresh Query IP and Product Code

Total: 20 Selected: 0

IP	Device Name	Port Number	Parent Device IP	Superior Device Port	Product Code
192.168.88.139		8081	192.168.1.4	2048	P0050101A0TS0000
192.168.88.17	100E-17	8080	192.168.88.244	8081	P0040100E0XV0600
192.168.88.21	12 #21	8080	192.168.88.148	8081	P0040100E0XV0600
192.168.88.213		8081	192.168.88.244	8081	P0050901A0XV0000
192.168.88.23	12 #23	8080	192.168.88.148	8081	P0040100E0XV0600
192.168.88.202		8081	192.168.88.244	8081	P0050901A0XV0000
192.168.88.198		8081	192.168.88.185	8280	P0051001A0TS0000
192.168.88.111		8081	192.168.88.244	8081	P0050901A0XV0000
192.168.88.47		8080	192.168.88.244	8081	P0030901A0TS0200
192.168.88.47		8081	192.168.88.244	8081	TS-proxy
192.168.88.142		8081	192.168.1.4	8280	P0050101A0TS0000

Cancel OK

Specify Add: click on **Specify Add** to manually enter the device IP, device Port, and parent device Port of the device to be added to add the device to the sound pickup platform.

Manually Add Devices

Adding Method ☒ Single Addition ☐ Segment Addition

Device IP

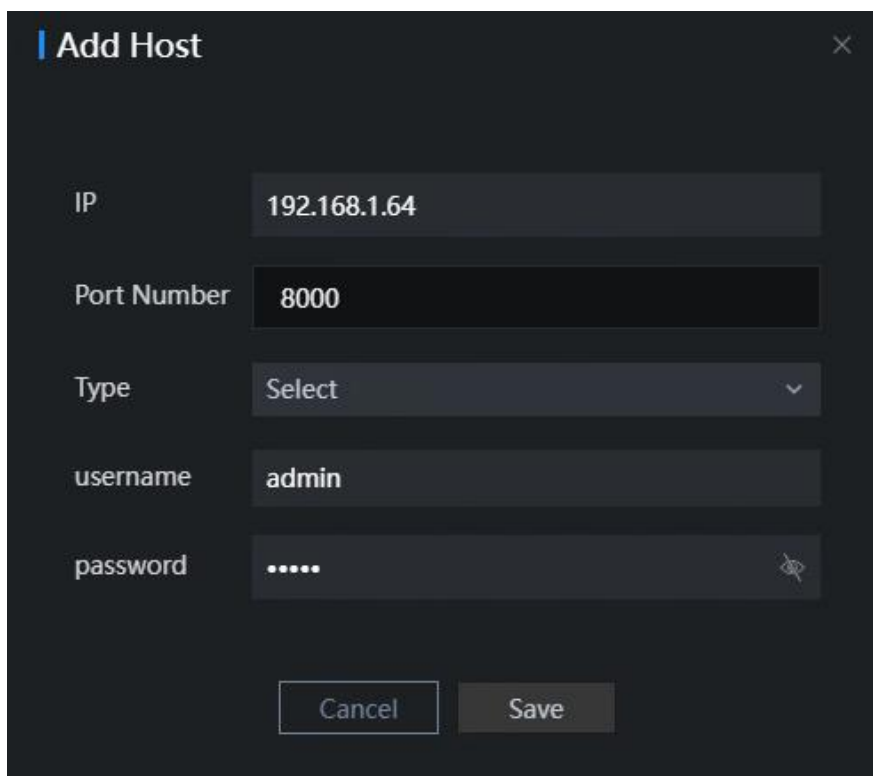
Device Port

Parent Device IP

Superior Device Port

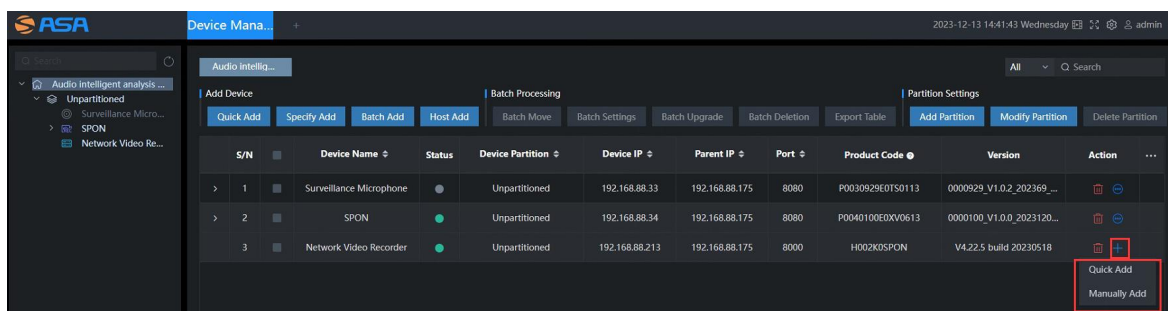
Cancel OK

Host Add: Add platform-bound NVR host device information. The port number is the host service port, and the user name and password are NVR host login account.



The 'Add Host' dialog box is a dark-themed window with a title bar containing the text 'Add Host' and a close button. It contains five input fields: 'IP' with the value '192.168.1.64', 'Port Number' with the value '8000', 'Type' with a dropdown menu showing 'Select', 'username' with the value 'admin', and 'password' with masked characters '.....' and an eye icon to toggle visibility. At the bottom are 'Cancel' and 'Save' buttons.

Add storage channel: For an added host device, click on  button next to the device to add storage channel to the host device.



The 'Device Management' interface shows a table of devices. The table has columns for S/N, Device Name, Status, Device Partition, Device IP, Parent IP, Port, Product Code, Version, and Action. Three devices are listed: Surveillance Microphone, SPON, and Network Video Recorder. The 'Action' column for the 'Network Video Recorder' device shows a plus icon, which is highlighted by a red box. Below the plus icon, the options 'Quick Add' and 'Manually Add' are visible.

S/N	Device Name	Status	Device Partition	Device IP	Parent IP	Port	Product Code	Version	Action
1	Surveillance Microphone	●	Unpartitioned	192.168.88.33	192.168.88.175	8080	P0030929E0TS0113	0000929_V1.0.2_202369...	[+]
2	SPON	●	Unpartitioned	192.168.88.34	192.168.88.175	8080	P0040100E0XV0613	0000100_V1.0.0_2023120...	[+]
3	Network Video Recorder	●	Unpartitioned	192.168.88.213	192.168.88.175	8000	H002K0SPON	V4.22.5 build 20230518	[+] Quick Add Manually Add

Quick Add: Click on  button next to the host device and select "Quick Add" to add devices which on the same network with host device as the host storage channel.

Quickly Add Storage Channels

Refresh

Total: 15 Selected: 0

☐	IP	Port Number	Protocol Type
☐	192.168.88.14	8000	HIKVISION
☐	192.168.88.15	8000	HIKVISION
☐	10.16.4.26	8000	HIKVISION
☐	10.16.4.104	8000	HIKVISION
☐	192.168.88.29	8080	ONVIF
☐	192.168.88.135	8080	ONVIF
☐	192.168.88.154	8080	ONVIF
☐	192.168.88.17	8080	ONVIF
☐	192.168.88.21	8080	ONVIF

Close OK

Manually Add: Click on  button next to the host device, then select "Manually Add" and manually enter the device's IP address, ONVIF user name and password to add the device as a storage channel for the host device.

Manually Adding Storage Channels

IP

Port Number

Protocol Type

username

password

Cancel Save

Audio Previews

Audio previews interface, it is used for real-time monitoring of each sound pick-up. First, select any free audio box in the middle of the interface, and then double click on the sound pickup name in the device tree list on the left to pull up the live audio of the sound pick-up.

This page is divided into three parts: device tree list, audio box, alarm prompt box.

Device tree list: Displays all devices within the current permission.

Audio box: Display audio pull track;

Alarm prompt box: display device online, offline and self-check alarm information, information can be viewed in details, you can handle alarm information;

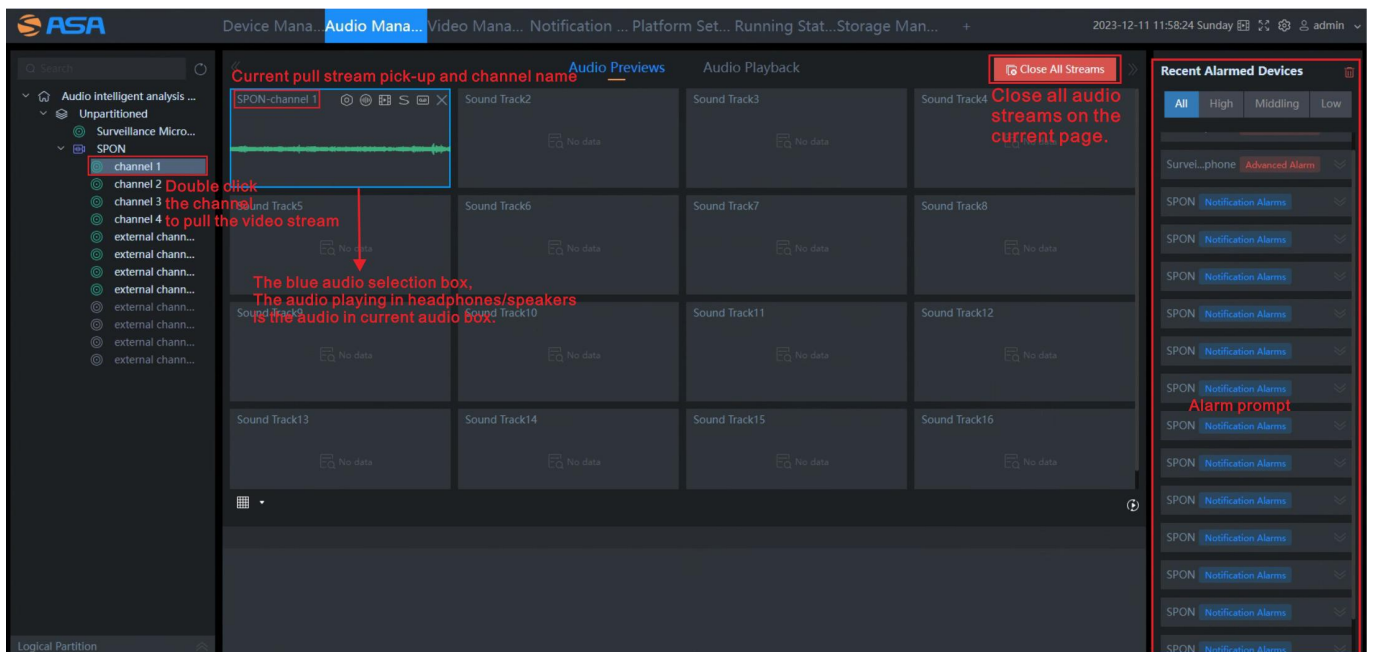
Selection box: Which selection box is in blue, which audio is playing.

Alarm linkage video: the sound pick-up is bound to a camera IPC, if the sound pick-up be triggered to alarm will produce a video pop-up frame.

Audio Structuring: The abnormal sound alarm information generated by the sound pick-up can be visually operated on the waveform;

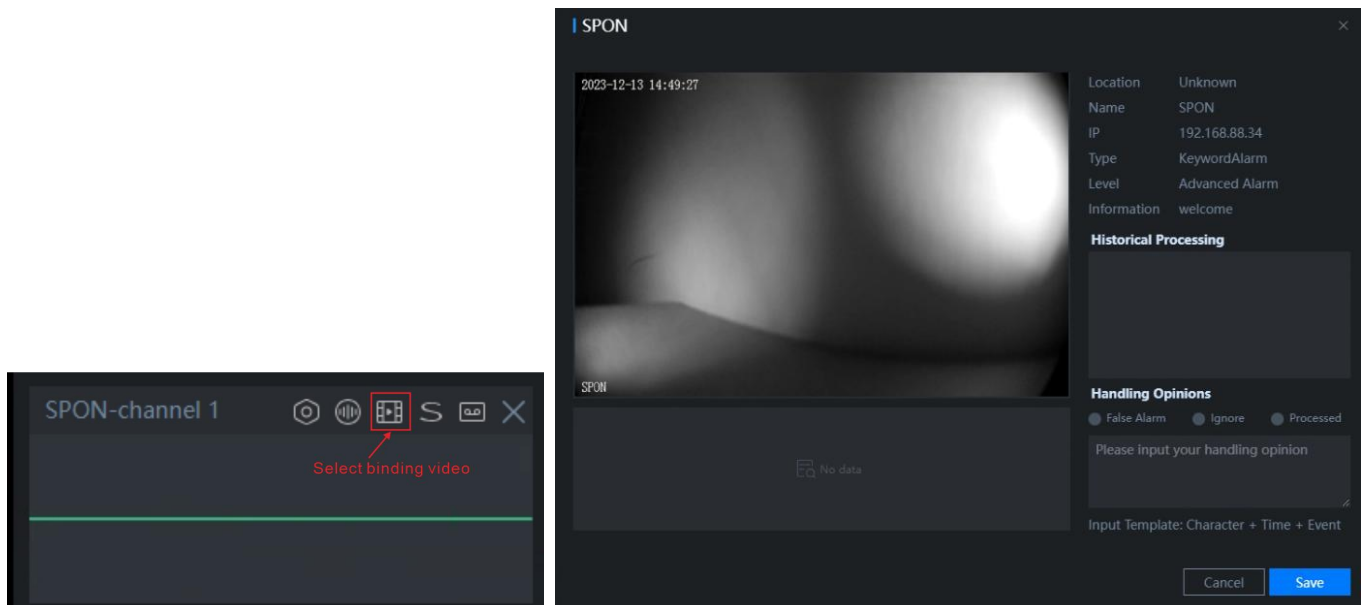
Icon function: it is closed by default, if needed, please manually to open it when pulling the stream;

	Recording button, stop recording.
	Recording button, Start recording; Start recording audio in real time, click on the button again, the audio file is saved in the default configuration folder.
	Sound pressure level button, when it is disabled, it displayed as a normal audio waveform.
	Sound pressure level button, when it is enabled, The audio waveform is the sound pressure level waveform; Detect the amplitude of the sound, when it reaches to the configured peak, count plus 1.
	Video binding button, if a camera IPC video is not bound, when the device be triggered to alarm will not pop up a prompt frame.
	Video binding button, the camera IPC video has been bound, if the device be triggered to alarm will produce a pop-up prompt, prompt content will display video.
	GAIN adjustment button, it used for audio digital amplification, noise reduction and other operations.
	Function operation button, it can enable audio structuring, speech recognition and other functions.



Alarm pop-up frame video: the sound pick-up is bound to the stream address of the camera, if the sound pick-up be triggered to alarm will produce alarm frame display video.

Note: It is necessary to add the alarm task of the device in the module of “Platform Settings” -- “Alarm Tasks”, so that the alarm linkage video can be displayed (please view the description of “Platform Settings” -- “Alarm Tasks” module for details).



Audio Playback

The audio playback interface is used to play back the audio of each sound pick-up stored in NVR. First, you can drag the timeline or directly set a specific time, then select the free window on the middle, and finally double click on the sound pick-up channel in the device tree list on the left to pull up the audio of the sound pick-up which is stored in NVR (some operations are the same as real-time monitoring).

Playback time Settings: 1.Select the date of audio playback in the calendar (NVR storage has playback time, date subscript shows yellow dots);

2.Click on the left mouse button and drag the timeline to set the playback time.

Selection box: Which selection box is in blue, which audio is playing.

Icon function: It is the same with audio previews.

Playback timeline: Playback timeline display, you can intuitively see whether the playback audio video exists, the time axis will display label of sound pick-up alarms.

The screenshot shows the ASA Audio Playback interface. The top bar includes navigation tabs: Device Mana..., Audio Mana..., Video Mana..., Notification ..., Platform Set..., Running Stat..., and Storage Man... The main area is divided into several sections:

- Left Panel:** A tree view showing the device hierarchy. Under 'SPON', 'channel 1' is selected and highlighted with a red box. An annotation 'Double click the channel to pull the video stream' points to it.
- Top Right:** A calendar for selecting the playback date. The date '2023-12-11' is selected, highlighted with a red box, and labeled 'Set the audio playback date'.
- Center:** A grid of 16 'Sound Track' windows. 'Sound Track1' is selected and highlighted with a blue box, labeled 'The blue audio selection box, The audio playing in headphones/speakers is the audio in current audio box.'.
- Bottom:** A 'Timeline' view showing the playback time axis from 00:00 to 24:00. A specific time '2023-12-11 12:00:00' is marked with a red box and labeled 'Set the playback time point'.

Annotations in red text provide guidance on how to use these features:

- 'Current pull stream pick-up and channel name' points to the top of the selected channel in the left panel.
- 'Double click the channel to pull the video stream' points to 'channel 1' in the left panel.
- 'The blue audio selection box, The audio playing in headphones/speakers is the audio in current audio box.' points to the selected 'Sound Track1'.
- 'Set the audio playback date' points to the selected date in the calendar.
- 'Set the playback time point' points to the selected time on the timeline.

Video Preview

Video previews interface, it is used to preview the audio and video of each sound pick-up. First, select any free audio box in the middle of the interface, and then double click on the sound pickup name in the device tree list on the left to pull up the live video of the sound pick-up.

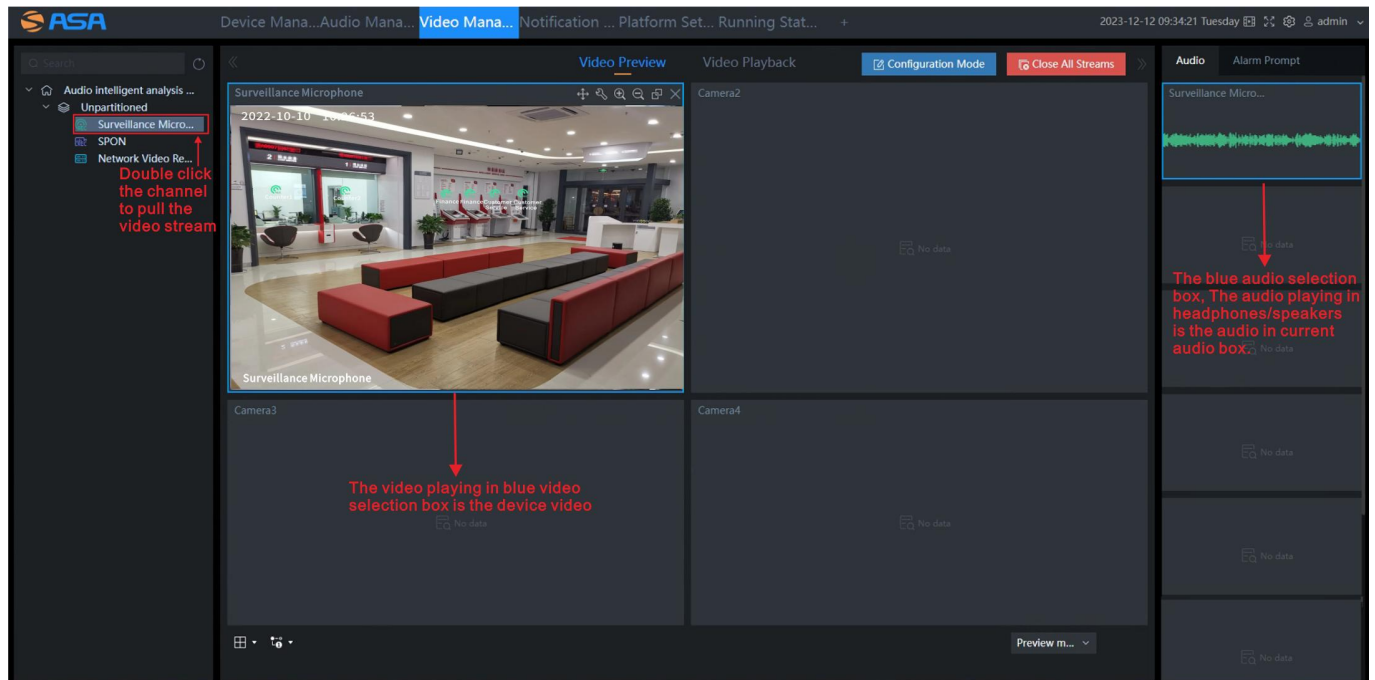
This page is divided into three parts: device tree list, video box, audio box.

Device tree list: Displays all devices within the current permission.

Video box: Display video pulled.

Audio box: Display audio pull track.

Selection box: Which selection box is in blue, which audio is playing. The corresponding blue video selection box in the middle is the video of the device.



Intelligent zoom sound pick-up operation function: It used for the integration play of audio and video of the intelligent zoom sound pick-up equipment stored in NVR. It can control intelligent zoom sound pick-up focus playback, sound amplitude change size, binding configuration point.

Intelligent zoom pickup device point setting, first, pull the video stream of the device, click on "Configuration mode", the password is "admin" (the password to login client), and then set Intelligent zoom pickup play point, right click on the screen, add a point, save the configuration after the setting.

Video drag and drop mode, first click on the Magnifier,  click on the left mouse button and drag it, it will form a blue rectangular box, the video in the box can be enlarged. Click on "drag and drop mode" button,  click the left mouse button and drag it, the mouse will turn into a hand then you can drag the screen back and forth.



Video Playback

The video playback interface is used to play back the video and audio of each sound pick-up stored in NVR. First, you can drag the timeline or directly set a specific time, then select the free window on the middle, and finally double click on the sound pick-up channel in the device tree list on the left to pull up the video and audio of the sound pick-up which is stored in NVR (some operations are the same as real-time monitoring).

Playback time Settings: 1.Select the date of video and audio playback in the calendar (NVR storage has playback time, date subscript shows yellow dots);

2. Click on the left mouse button and drag the timeline to set the playback time.

Selection box: Which selection box is in blue, which audio is playing. The corresponding blue video selection box in the middle is the video of the device.

Icon function: Hide blinding icon, hide point name, restore original video, enable zoom video, stop video playback etc.

Playback timeline: Playback timeline display, you can intuitively see whether the playback audio video exists, the time axis will display label of sound pick-up alarms.

Intelligent zoom sound pick-up playback: It is the same with Video Preview, The configured point can be played back, and the played back video stream can also be played in zoom.

The screenshot displays the ASA VMS interface. At the top, the ASA logo is visible on the left, and the system status bar shows the date and time as 2023-12-12 10:28:11 Tuesday. The main interface is divided into several sections:

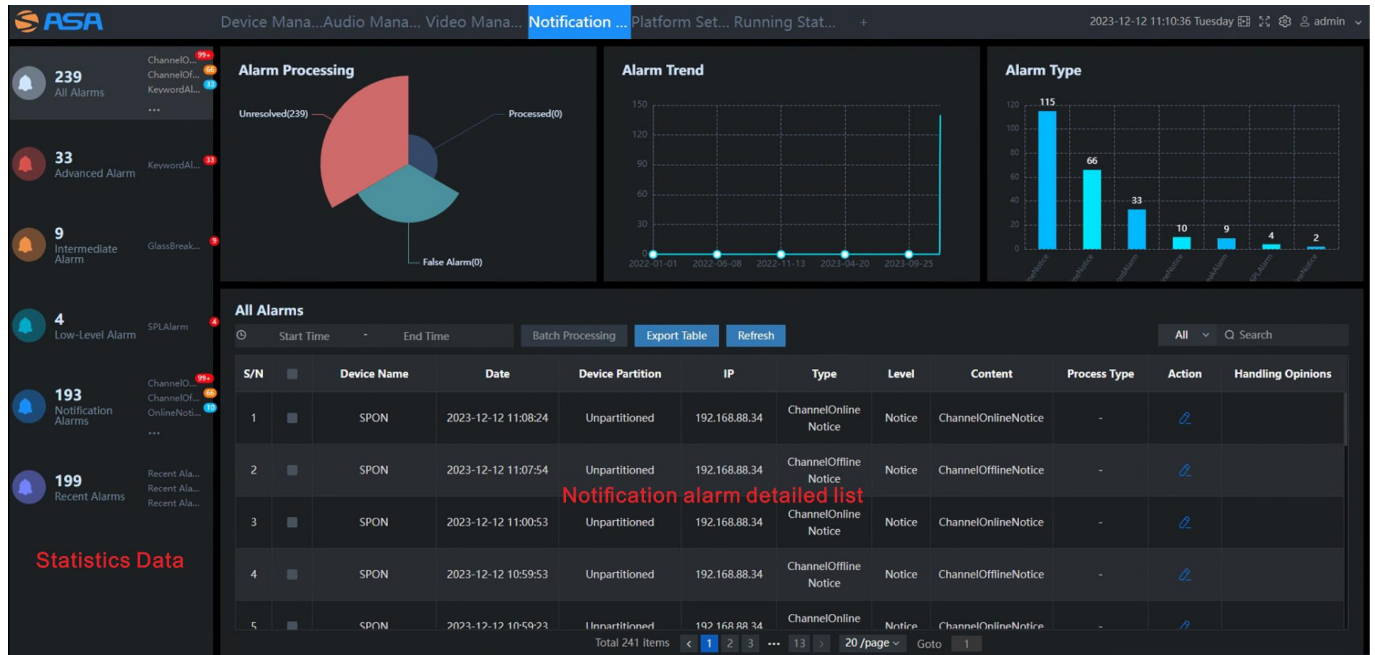
- Top Bar:** Contains the ASA logo, system status (Device Mana..., Audio Mana..., Video Mana..., Notification ..., Platform Set..., Running Stat...), and user information (admin).
- Left Sidebar:** Lists various analysis and recording channels:
 - Audio Intelligent analysis ...
 - Unpartitioned
 - Surveillance Micro...
 - SPON
 - Network Video Re...
- Main Preview Area:** Displays video feeds from different cameras. The top feed is labeled "Network Video Recorder" and shows a timestamp of "2022-10-10". Below it, there are sections for "Camera3" and "Camera4", both showing "No data".
- Right Panel:** Contains an "Audio" section with a "Date Selection" dropdown and a "Network Video Re..." section with a timeline slider.
- Bottom Section:** Features a "Playback timeline" with a date and time selector set to "2023-12-12 08:41:33". Below the timeline is a legend for various alarm types: Storage Continuity, Voice Information, Cough Alarm, Acoustooptic Alarm, Quality Inspection Alarm, Keyword Alarm, and Other.

Red annotations and arrows highlight specific features:

- A red box around "Network Video Re..." in the left sidebar with the text: "Double click the channel to pull the video stream".
- A red box around the "Audio" tab in the right panel with the text: "Set the playback date".
- A red box around the "Network Video Re..." section in the right panel with the text: "The blue audio selection box, The audio playing in headphones/speakers is the audio in current audio box".
- A red box around the "2023-12-12 08:41:33" timestamp in the playback timeline with the text: "Set the playback time point".

Notification Alarm

Manage all alarm information of the platform, you can query and process alarm information. Statistical data chart shows all alarm information data, and it has filter function.



Platform Settings

Setting the basic platform parameters, database parameters, and user management functions.

(1)Parameter Settings

If there is no special needs, basic parameters do not need to be modified. (The comments information can be displayed when the mouse touches the text box.)

The screenshot displays the ASA Platform Settings interface. The left sidebar shows navigation options: Parameter Settings, Database Settings, User Management, and Alarm Tasks. The main area is titled 'Server Settings' and contains a 'Save' button. Below the button are several input fields for configuration: Signaling Multicast Address (224.0.1.2), Signaling Multicast Port (8889), Terminal Multicast Address (224.0.1.3), Terminal Multicast Port (8888), WEB Alarm Port (8282), WEB Access Port (9080), Management Platform Name (Audio intelligent analysis platform), Platform Server IP (192.168.88.175), Signaling Sending Port (8210), Signal Receiving Port (8280), and Pull Flow Mode (Microphone Pull Flow). A red text overlay 'Notification alarm detailed list' is present over the table in the previous screenshot.

(2) Database Settings

Set the database IP address, port, user name, password, and database table name.

The screenshot shows the ASA Platform Settings interface. The left sidebar contains a menu with 'Parameter Settings', 'Database Settings' (selected), 'User Management', and 'Alarm Tasks'. The main content area is titled 'Database Settings' and includes a 'Save' button and a 'Backups' button. Below these are five input fields: 'Database Address' (127.0.0.1), 'Database Port' (3306), 'Database Username' (root), 'Database Password' (masked with dots), and 'Database Table Name' (ts_900_server). The top navigation bar shows 'Device Mana...', 'Audio Mana...', 'Video Mana...', 'Notification ...', 'Platform Set...' (selected), and 'Running Stat...'. The top right corner displays the date and time: '2023-12-12 11:28:27 Tuesday' and the user 'admin'.

(3) User Management

You can add, delete, and modify users, roles, and user groups, and also can assign device permissions, specific permissions (all permissions: device management, audio preview, audio playback, video preview, video playback, notification alarm, platform settings, and other functions) to them.

The screenshot shows the ASA User Management interface. The left sidebar contains a menu with 'Parameter Settings', 'Database Settings', 'User Management' (selected), and 'Alarm Tasks'. The main content area is titled 'User Management' and includes a 'Add User' button. Below this is a table with columns: 'S/N', 'username', 'Role', and 'Action'. The table contains one row with '1' in the 'S/N' column, 'User' in the 'username' column, 'User' in the 'Role' column, and an 'Action' column with edit and delete icons. The top navigation bar shows 'Device Mana...', 'Audio Mana...', 'Video Mana...', 'Notification ...', 'Platform Set...' (selected), and 'Running Stat...'. The top right corner displays the date and time: '2023-12-12 11:34:40 Tuesday' and the user 'admin'.

S/N	username	Role	Action
1	User	User	

(4) Alarm Tasks

Setting alarm task: filter the alarm information generated by devices, the user can select the required alarm information and do operations.

Task Name: Set the alarm task name.

Task Priority: Set the task priority. The higher the level, the first to trigger. 0-9 level can be set, 0 is the highest level.

Task State: Set to enable or disable the task.

Trigger Event Type: Select the type of alarm triggered by the device.

Trigger Action Type: Select the action which is linkage to the alarm.

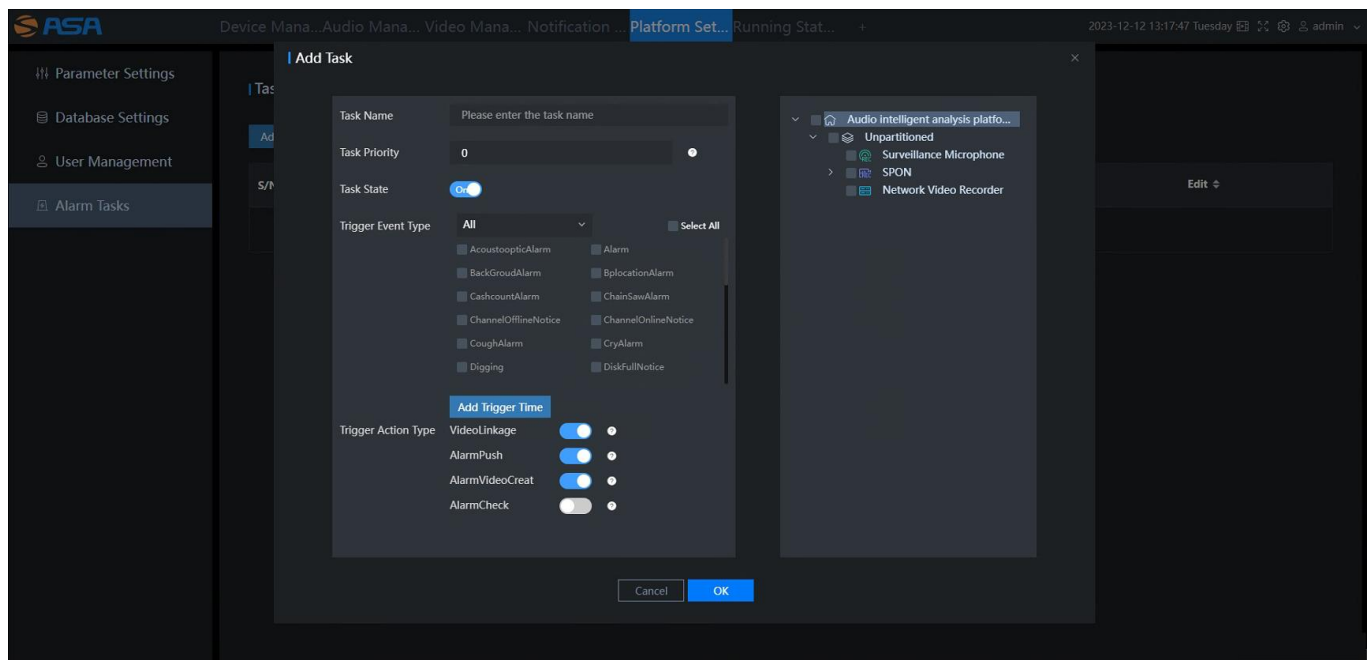
VideoLinkage: Alarm triggers alarm pop-up frame video.

AlarmPush: When alarm be triggered, the alarm event will be pushed to the platform.

AlarmVideoCreate: Alarm triggers video generate.

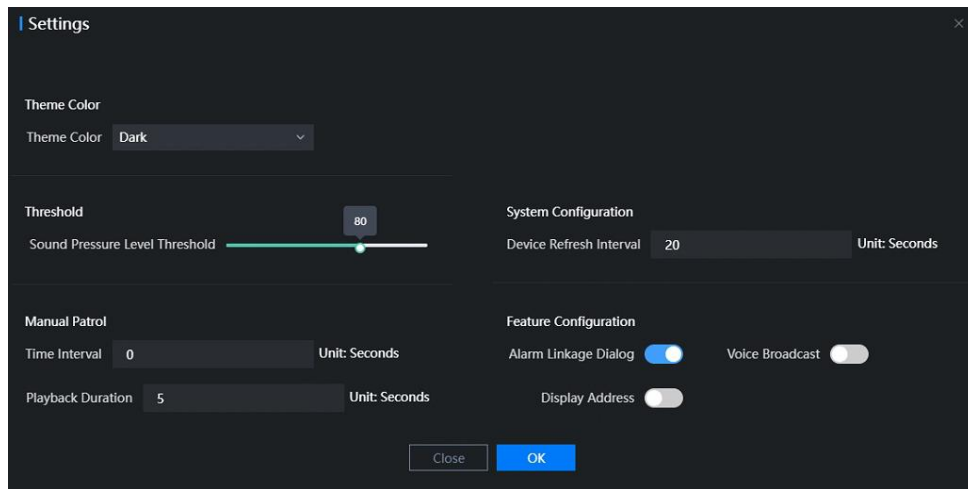
AlarmCheck: Alarm triggers alarm check.

Device selection: Select the alarm device.



Setting

Click on the Settings icon  on the upper right corner of the screen to enter to the Settings interface. Support theme color configuration, sound pressure level threshold settings, patrol settings, feature configuration, system configuration.



Video Player

Click on the  icon on the upper right corner of the screen to open the video player. The video file downloaded by the intelligent zoom sound pick-up can be played by this player to achieve playing in zoom.

Troubleshooting

The user cannot log in

First, check whether the server is started. If it is not started, the client cannot log in. Secondly, check whether the network between the computer and the server of the current login client is work. If the above two conditions are met, the user still cannot log in, please refer to the following steps:

1. Check whether the user name and password are correct.
2. Check whether the server binding is incorrect: Find the server console, click on "Stop All" to stop the current server program, then click on "Set up" to check whether the port configuration is correct, and then check the IP address in "Local IP" column on the server control panel, click on binding again, indicating that the server binding is successful, and then start all service programs.

Copyright Announcement

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SPON Communications Co., Ltd.
www.sponcomm.com
Service Hotline: +86-731-85570190
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