



INVID-AQSENSOR Manual

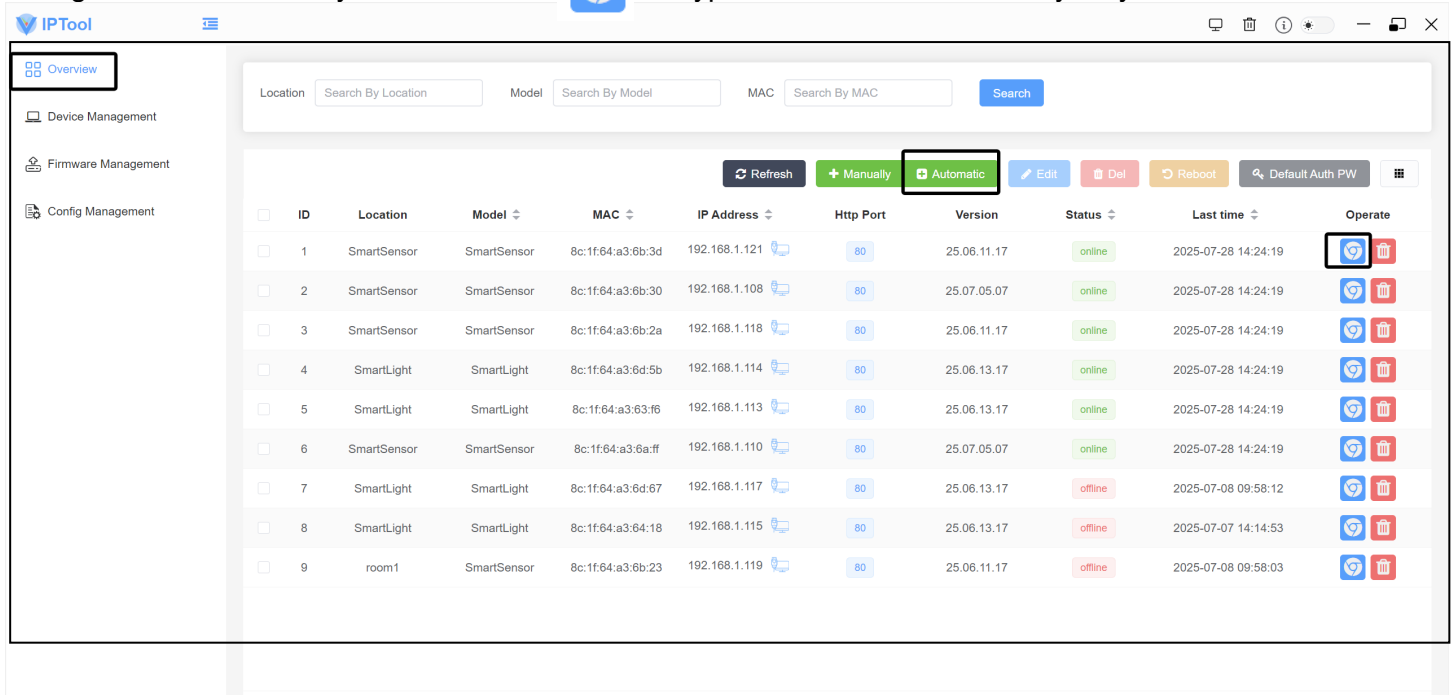
(V1.2)

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1. Device Connection

- a. Connect IP Sensor to PoE switch; Since IP sensor is DHCP enabled, so IP sensor will be automatically assigned a new IP address when powered on.
- b. Use IP Tool to find the IP sensor: Click “Overview”, then click “Automatic”, and IP sensor information will be shown on IP tool page, including IP address,MAC address,HTTP port,FW version,Location,etc.
- c. Log in IP sensor web by click the icon “” or type in the IP address directly on your web browser.



The screenshot shows the IPTool web interface. On the left is a sidebar with navigation links: Overview (highlighted), Device Management, Firmware Management, and Config Management. The main area has search filters for Location, Model, and MAC, followed by a Search button. Below the filters are action buttons: Refresh, + Manually, + Automatic (highlighted), Edit, Del, Reboot, and Default Auth PW. A table lists 9 IP sensors with columns: ID, Location, Model, MAC, IP Address, Http Port, Version, Status, Last time, and Operate. The Operate column contains icons for login and delete. The first sensor (ID 1) is highlighted.

ID	Location	Model	MAC	IP Address	Http Port	Version	Status	Last time	Operate
1	SmartSensor	SmartSensor	8c:1f:64:a3:6b:3d	192.168.1.121	80	25.06.11.17	online	2025-07-28 14:24:19	 
2	SmartSensor	SmartSensor	8c:1f:64:a3:6b:30	192.168.1.108	80	25.07.05.07	online	2025-07-28 14:24:19	 
3	SmartSensor	SmartSensor	8c:1f:64:a3:6b:2a	192.168.1.118	80	25.06.11.17	online	2025-07-28 14:24:19	 
4	SmartLight	SmartLight	8c:1f:64:a3:6d:5b	192.168.1.114	80	25.06.13.17	online	2025-07-28 14:24:19	 
5	SmartLight	SmartLight	8c:1f:64:a3:63:f6	192.168.1.113	80	25.06.13.17	online	2025-07-28 14:24:19	 
6	SmartSensor	SmartSensor	8c:1f:64:a3:6a:ff	192.168.1.110	80	25.07.05.07	online	2025-07-28 14:24:19	 
7	SmartLight	SmartLight	8c:1f:64:a3:6d:67	192.168.1.117	80	25.06.13.17	offline	2025-07-08 09:58:12	 
8	SmartLight	SmartLight	8c:1f:64:a3:64:18	192.168.1.115	80	25.06.13.17	offline	2025-07-07 14:14:53	 
9	room1	SmartSensor	8c:1f:64:a3:6b:23	192.168.1.119	80	25.06.11.17	offline	2025-07-08 09:58:03	 

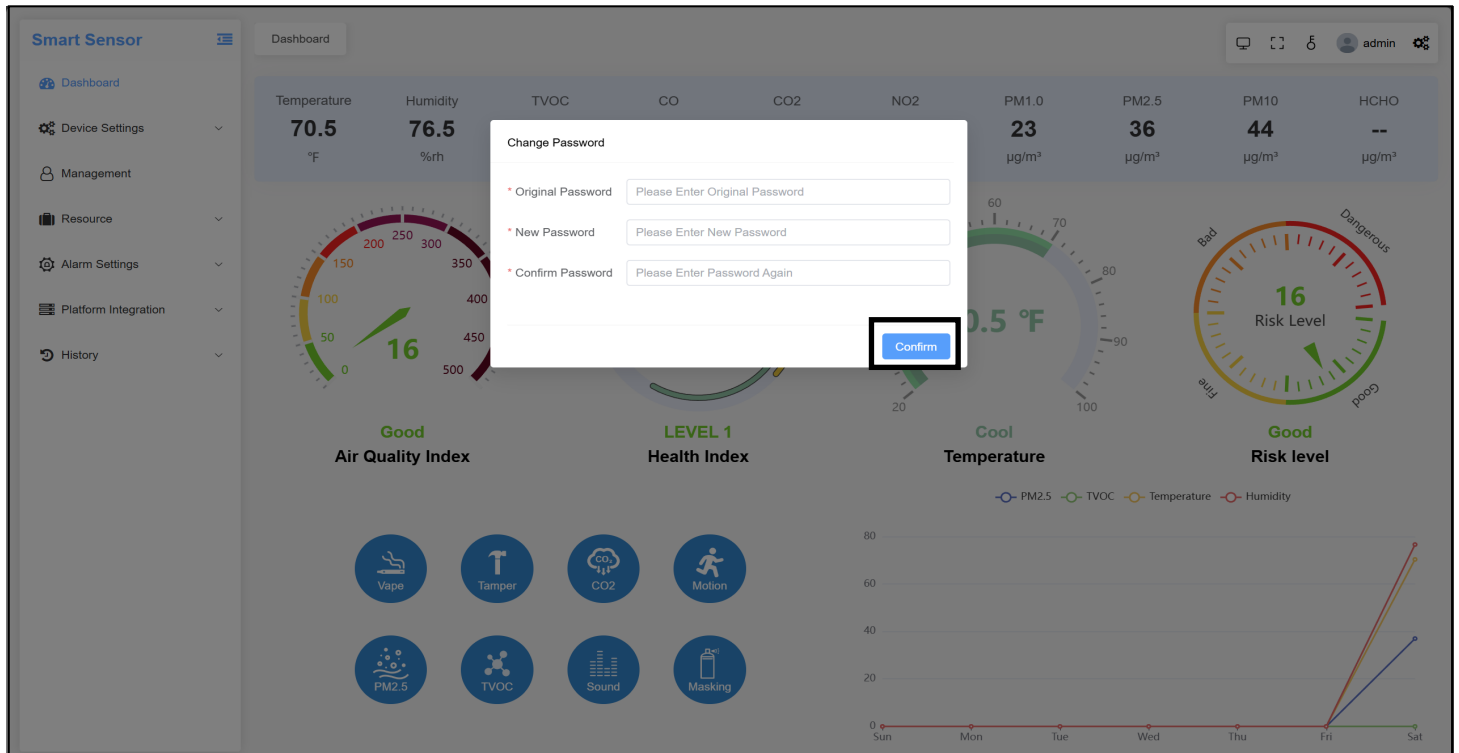
Note: Please ensure your computer is same network segment as IP sensors.

For example, if your sensor IP address is 192.168.1.100, then your PC address must be 192.168.1.xxx then you can log in the IP sensor’s web.

2. Web Log In

The default username is admin, and PW is: **1234567u**.

After type in default PW and enter into web page, you will be required to change the PW as must, please see below and change your PW and click “Confirm”.



3. Dashboard

Dashboard shows different sensors' live real/reference data, the built-in sensors are below:

Temp&Humidity

TVOC

CO

CO2

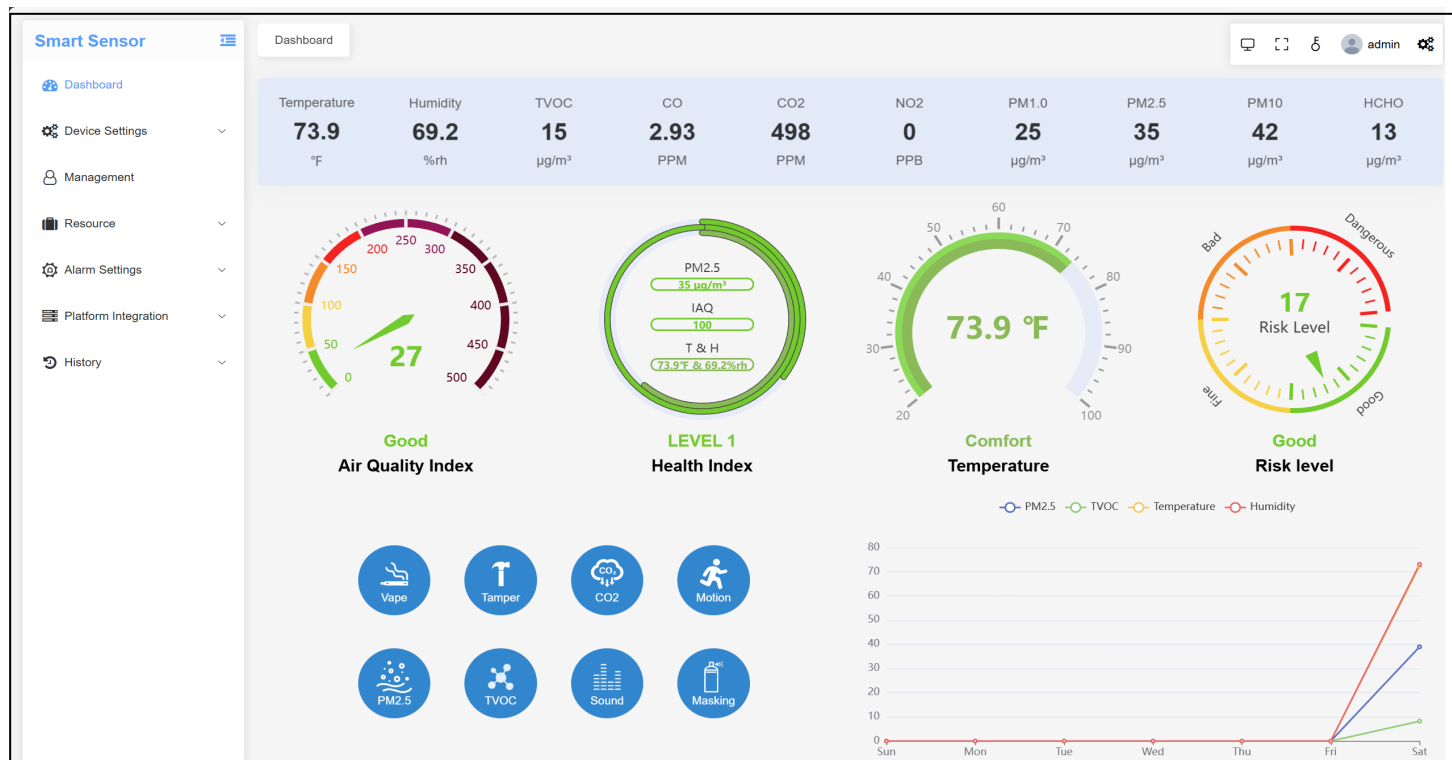
NO2

PM1.0/PM2.5/PM10

HCHO

Tamper Sensor

Motion Sensor



Dashboard also shows event status, including: Vape/Tamper/CO2/Motion/PM2.5/TVOC/Sound/Masking/AQI/HI/Temp and Risk Level. When event happens, blue icons will become yellow or red.

4. Device Settings

4.1 Device Info.

In this page, users can edit more information to more describe the device, this will help remind users where the device is exactly.

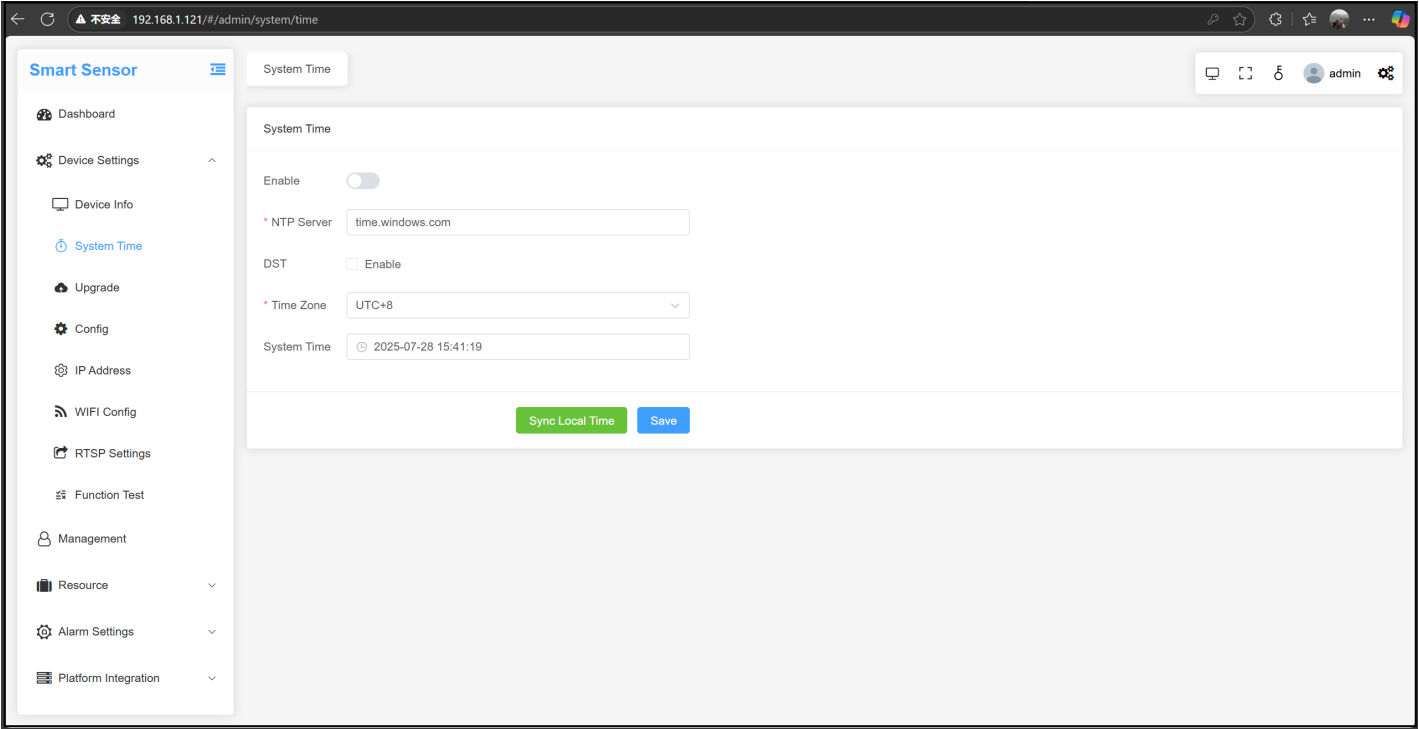
Note: When you edit the “Location”, the rtsp video page will show the information accordingly. So most time users do not need to enter into the web again to distinguish the IP sensor.

The Device Info page contains the following fields:

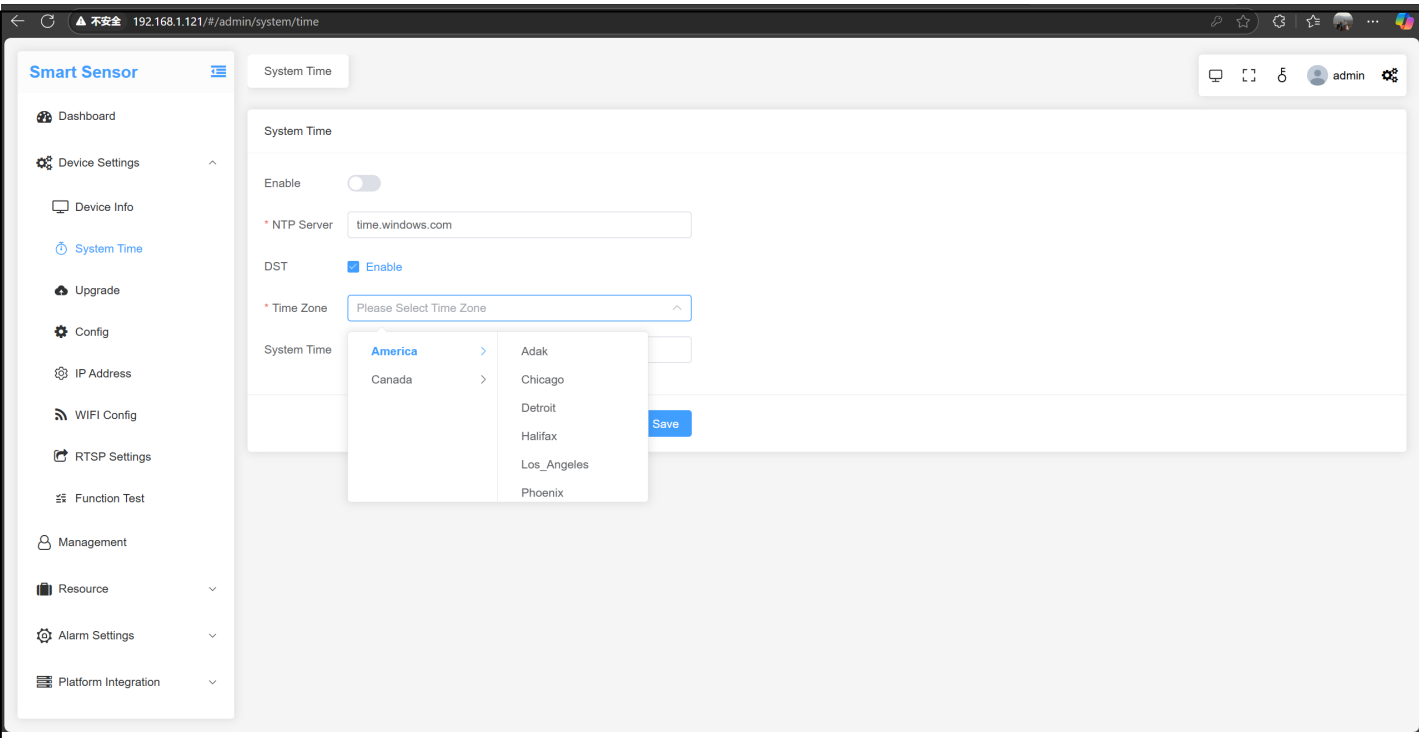
- MAC: 8c:1f:64:a3:6b:3d
- IP Address: 192.168.1.121
- SN: 2D5DC6D19AB52615
- Model: SmartSensor
- * Location: SmartSensor
- Lng And Lat: Longitude Latitude
- Building: Please Enter Building
- Floor: Please Enter floor
- Room Number: Please Enter Room Number
- Wing: Please Enter Wing
- Section: Please Enter Section
- Manager: Please Enter Manager
- Main Version: 25.06.11.10
- FW Version: 25.06.11.17

4.2 System Time

After the device installed,users need to set time based on its time zone, to ensure the device time is same as their local network system.
The NTP server is default as time.windows.com.



DST: Support USA and Canada.

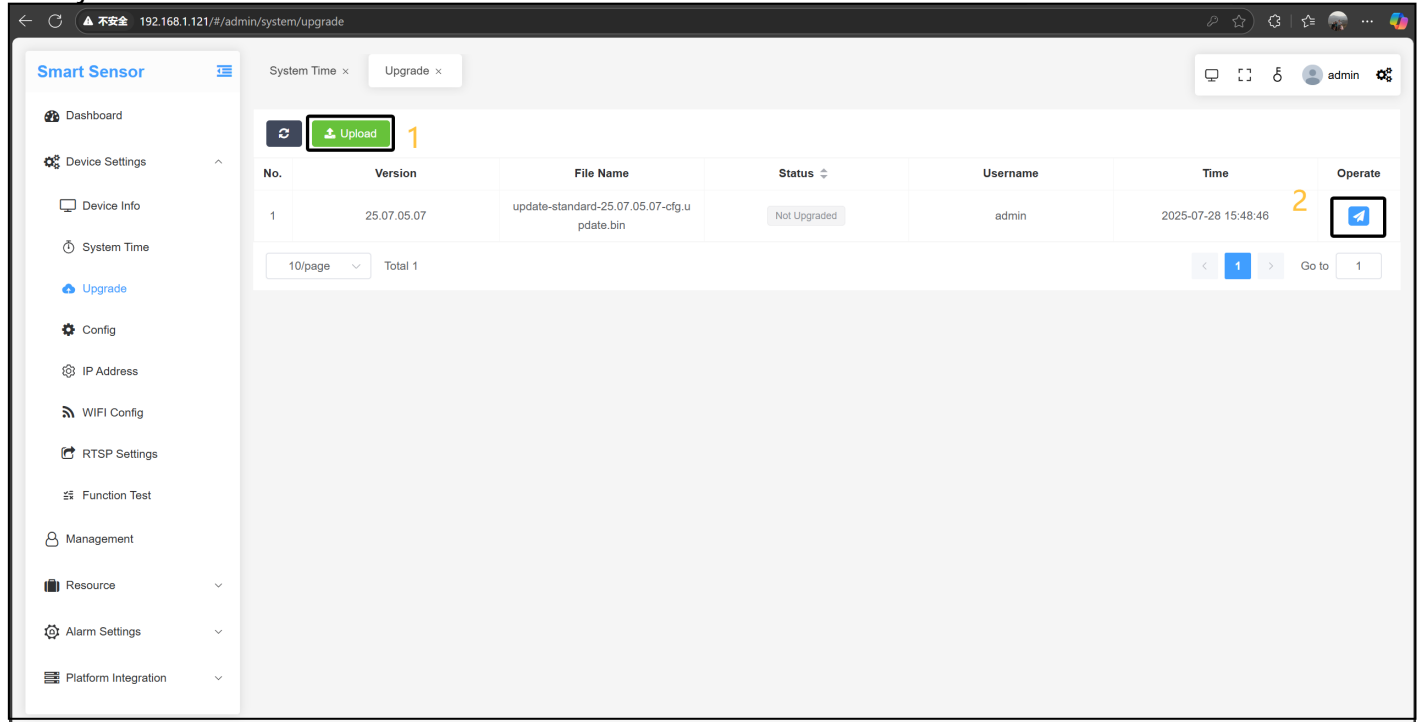


4.3 Upgrade

This page is used for FW upgrade.

Firstly, users need to click “Upload”, after FW upload done, then click “Operate”, then FW upgrading will start.

Normally the FW upgrading will take about 3 mins. During FW upgrading, please ensure power on always.



4.4 Config

Data Post: This is used with 3rd party platform, after enabled, all data will be sent to the platform for users' data analysis and work out new algorithms. **SO, PLEASE NOT ENABLE IT IF YOU DO NOT HAVE SPECIAL NEEDS.**

Vape Mixed Algorithm: This is another algorithm built-in the device, default OFF. When the sites need quicker vaping detection, customers can enable it. But after vaping detected, the detected area need to make the air clean first then next times vaping detection accuracy can be ensured.

Temp Type: Shows C or F.

Health Index Calc: Default with average value.

Download&Upload Config: When users have multiple IP sensors to be installed, users can copy one device's config file and use for other devices, this way will save your installation time.

HTTP Port: Default 80 Onvif Port: 80 RTSP Port: Default 554

Default: Factory Reset.

Reboot: For IP sensor's reboot/restart.

Smart Sensor

Dashboard

Device Settings

Device Info

System Time

Upgrade

Config

IP Address

WiFi Config

RTSP Settings

Function Test

Management

Resource

Alarm Settings

Platform Integration

History

Config

Download Config

Upload Config

Data Post

(For Development And Troubleshooting Only)

Vape Mixed Algorithm

Temperature Type

Centigrade

Fahrenheit

Health Index Calc

Average Value

Maximum Value

Device Port Info

HTTP Port

80

+

(Default 80)

ONVIF Port

80

+

(Same As HTTP Port)

RTSP Port

554

+

(Default 554)

Default

Reboot

Save

4.5 IP Address

This page is for users to modify IP address including DHCP enable/disabled.
The IP sensor IPv4 mask is 255.255.255.0.

Smart Sensor

Dashboard

Device Settings

Device Info

System Time

Upgrade

Config

IP Address

WiFi Config

RTSP Settings

Function Test

Management

Resource

Alarm Settings

Platform Integration

IP Address

Reset

Save

Enable DHCP

IPv4 Address

192.168.1.121

IPv4 Mask

255.255.255.0

IPv4 Gateway

192.168.1.1

Mac Address

8c:1f:64:a3:6b:3d

Preferred DNS

8.8.8.8

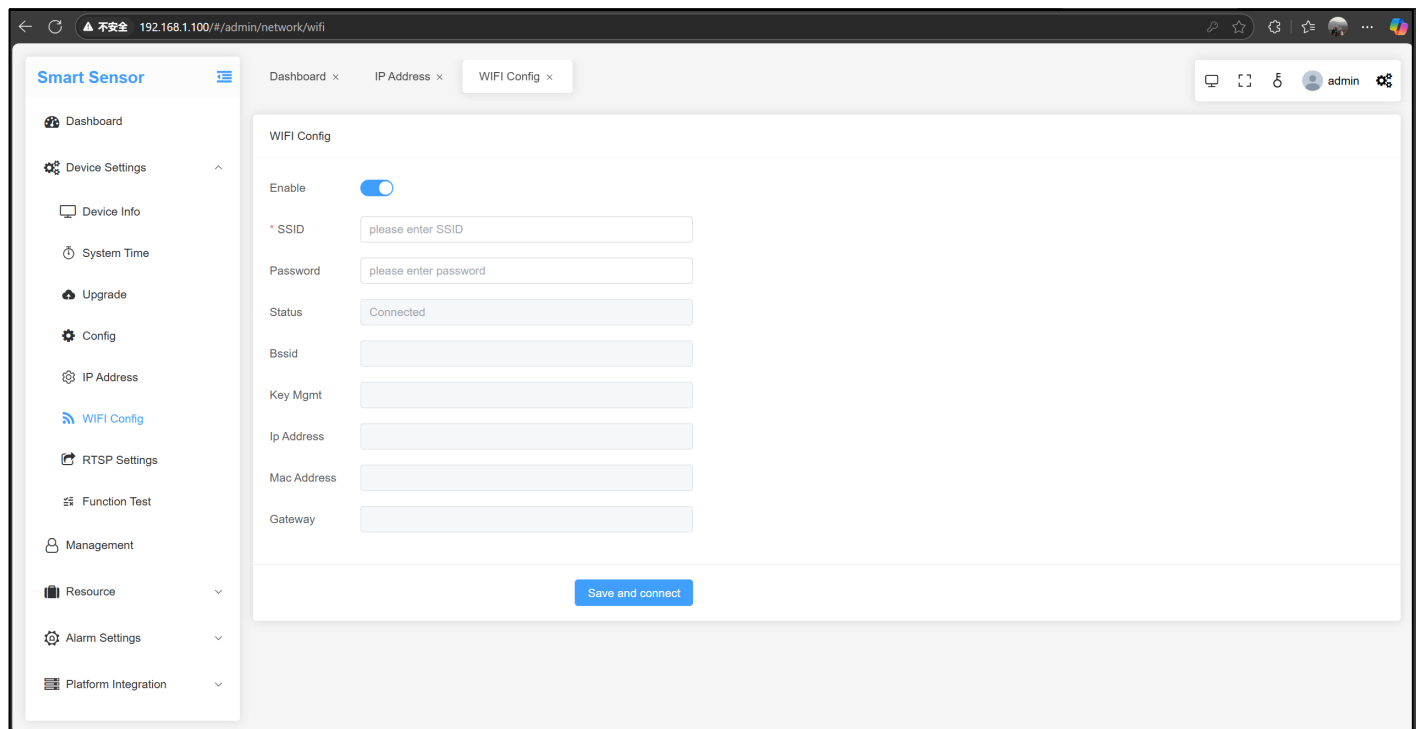
Alternate DNS

Please Enter Alternate DNS

7

4.6 WiFi Config

Users need to type in correct SSID and PW then can make the IP sensor WiFi Connected.



4.7 RTSP Settings

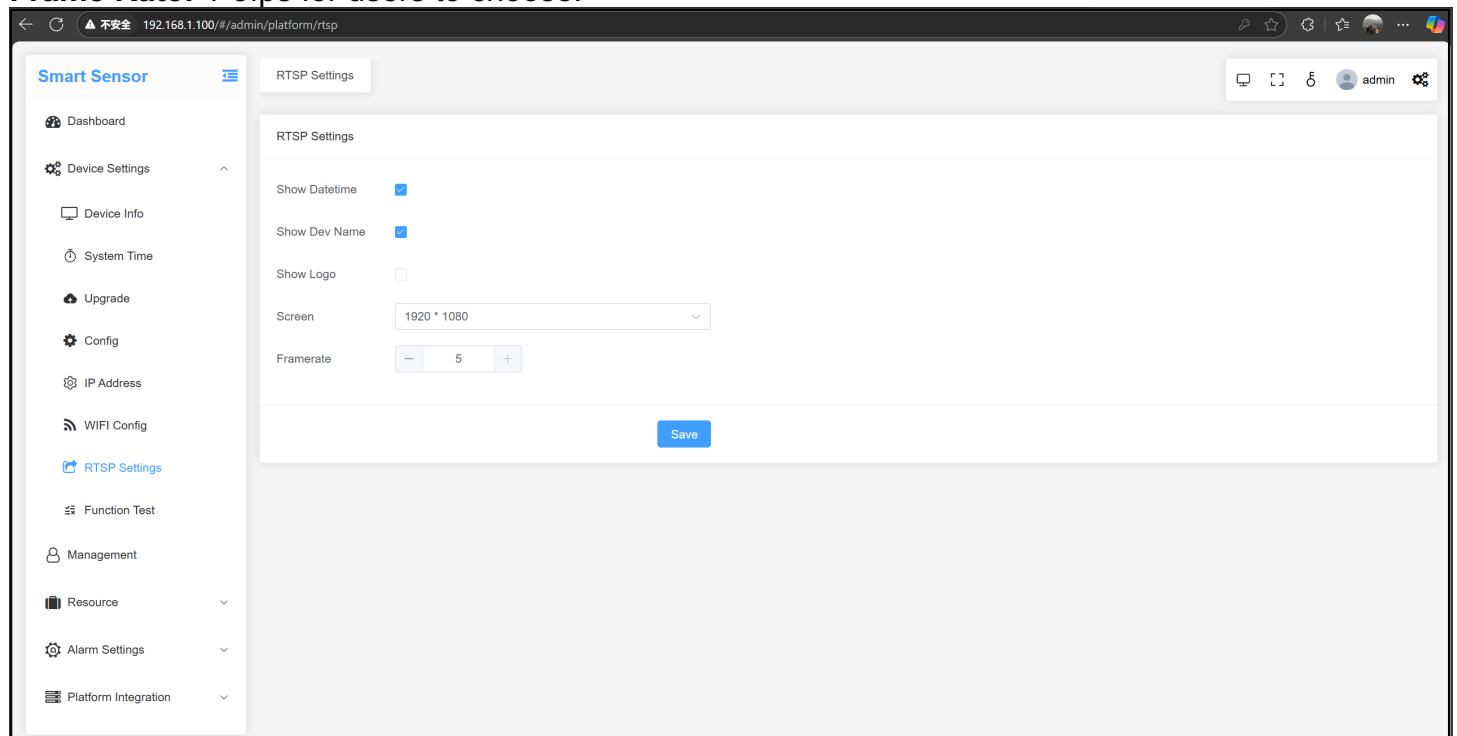
RTSP video address: rtsp://ip address:554

Users can show device datetime/device name and overlay customized logo on RTSP video.

The logo users need to upload from “Resource-RTSP Config”.

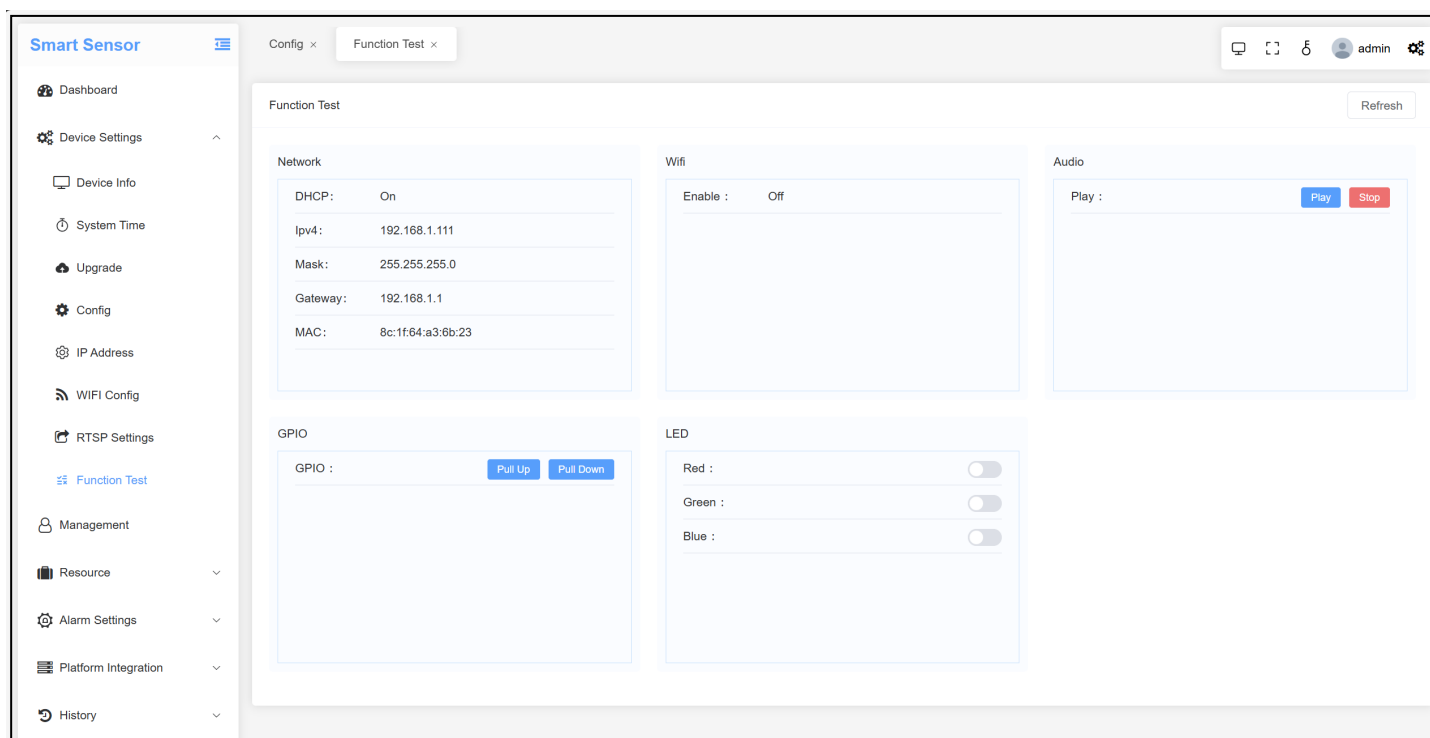
Screen: Users can choose rtsp video resolution, totally 3 sizes:1920x1080,1280x720,640x360.

Frame Rate: 1-5fps for users to choose.



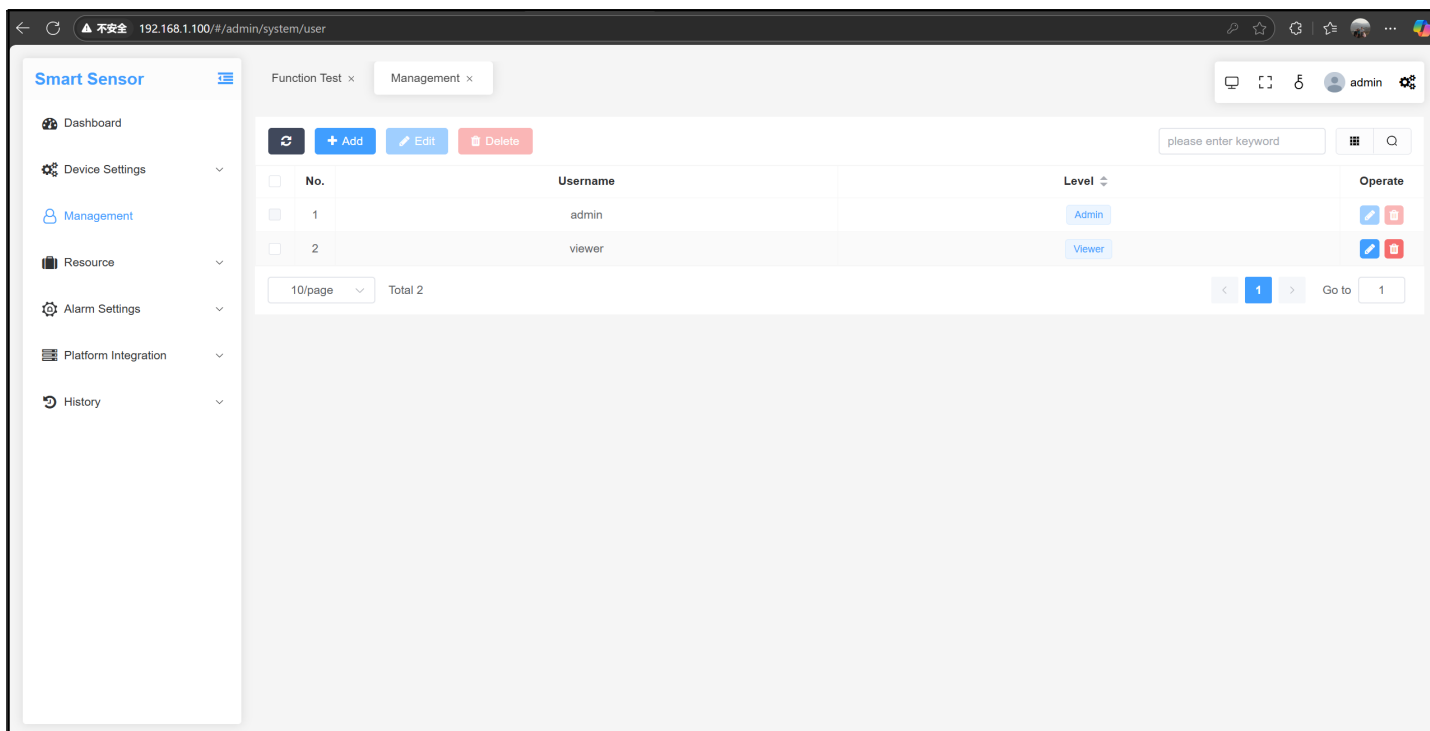
4.8 Function Testing

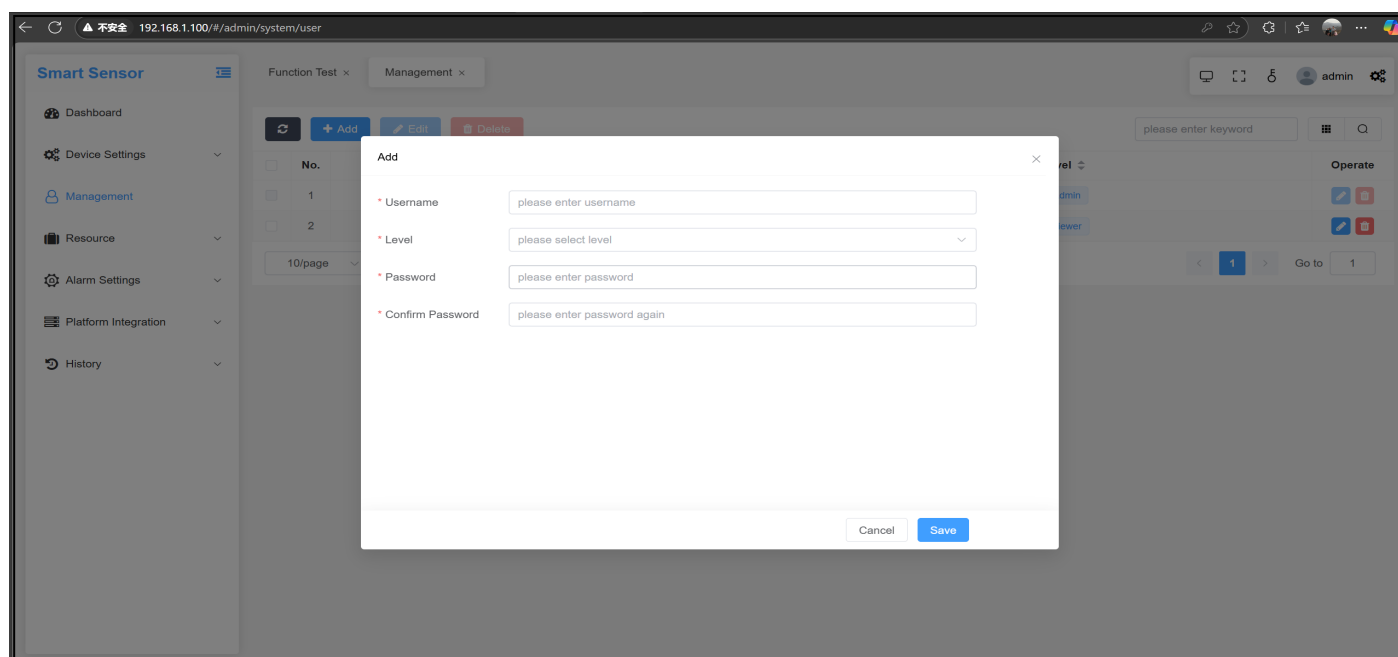
This page is for users to test whether some hardware components work normally or not, including Audio, Alarm output and RGB lights.



5. Management

If you want to have more viewers to log in the web, you can click "add", the "Level" you can choose "admin" or "viewer".





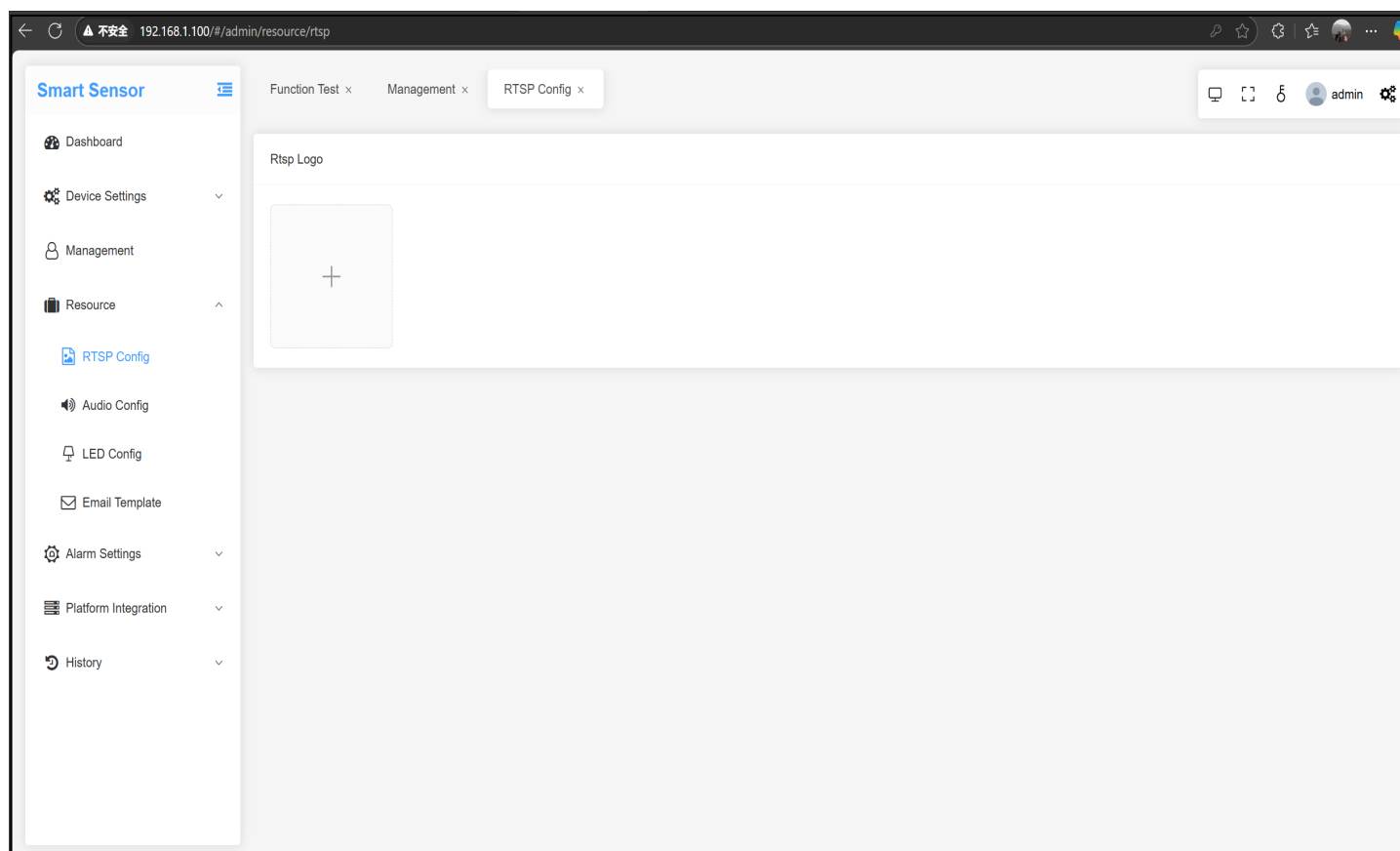
6. Resource

6.1 RTSP Config

Users can upload their customized logo to this page, and when users want to show the logo on rtsp video, they can enter into:

Device Settings-RTSPSettings, and choose this logo to show.

Logo size: 500Wx100H,PNG



6.2 Audio Config

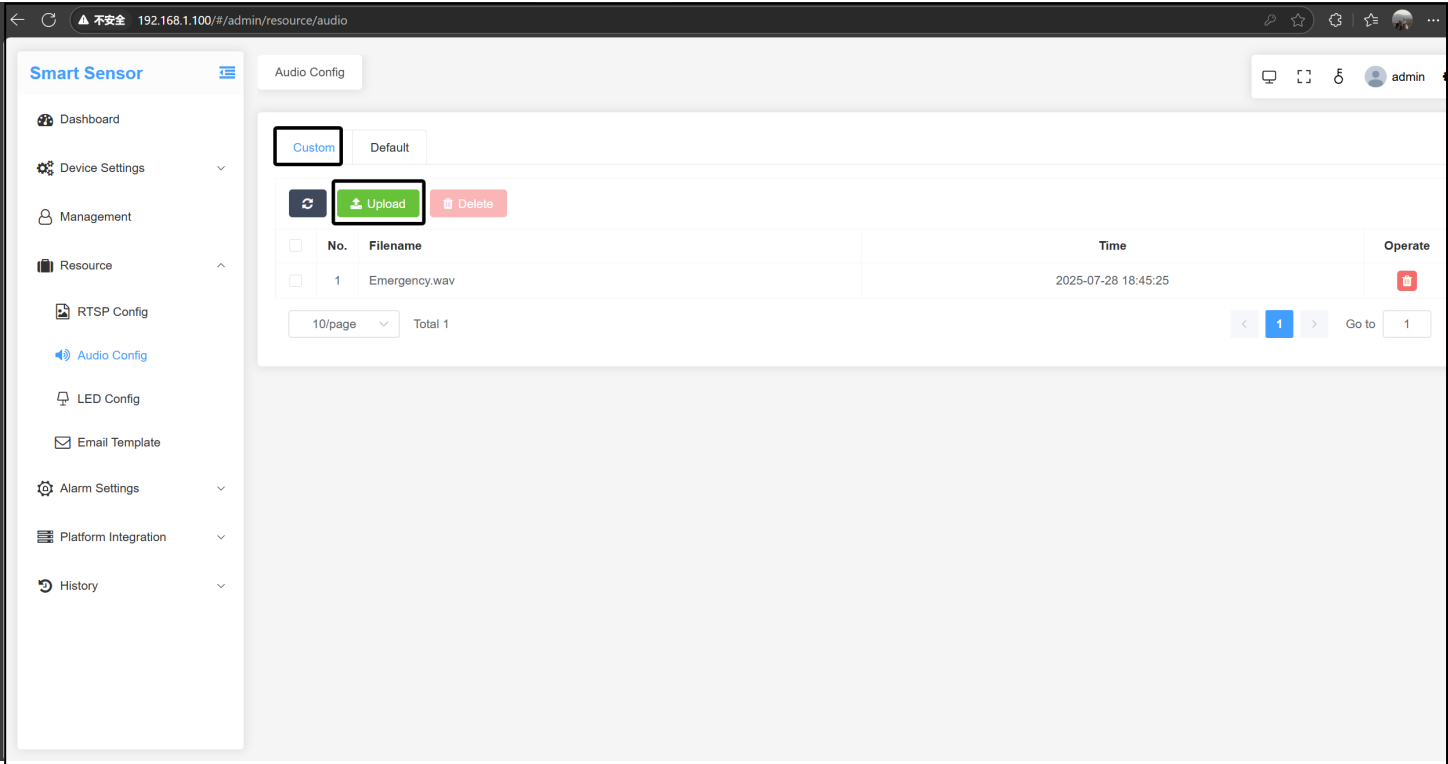
The IP sensor has built-in 8 audio files,users can also upload the pre-recorded more audio files to the device.

Audio file requirements:

- Format:WAV
- Max:10MB
- Channel Type:Mono
- Sampling Rate:16k
- Bit Rate:256KBps
- Max Audio Volumes: 17MB

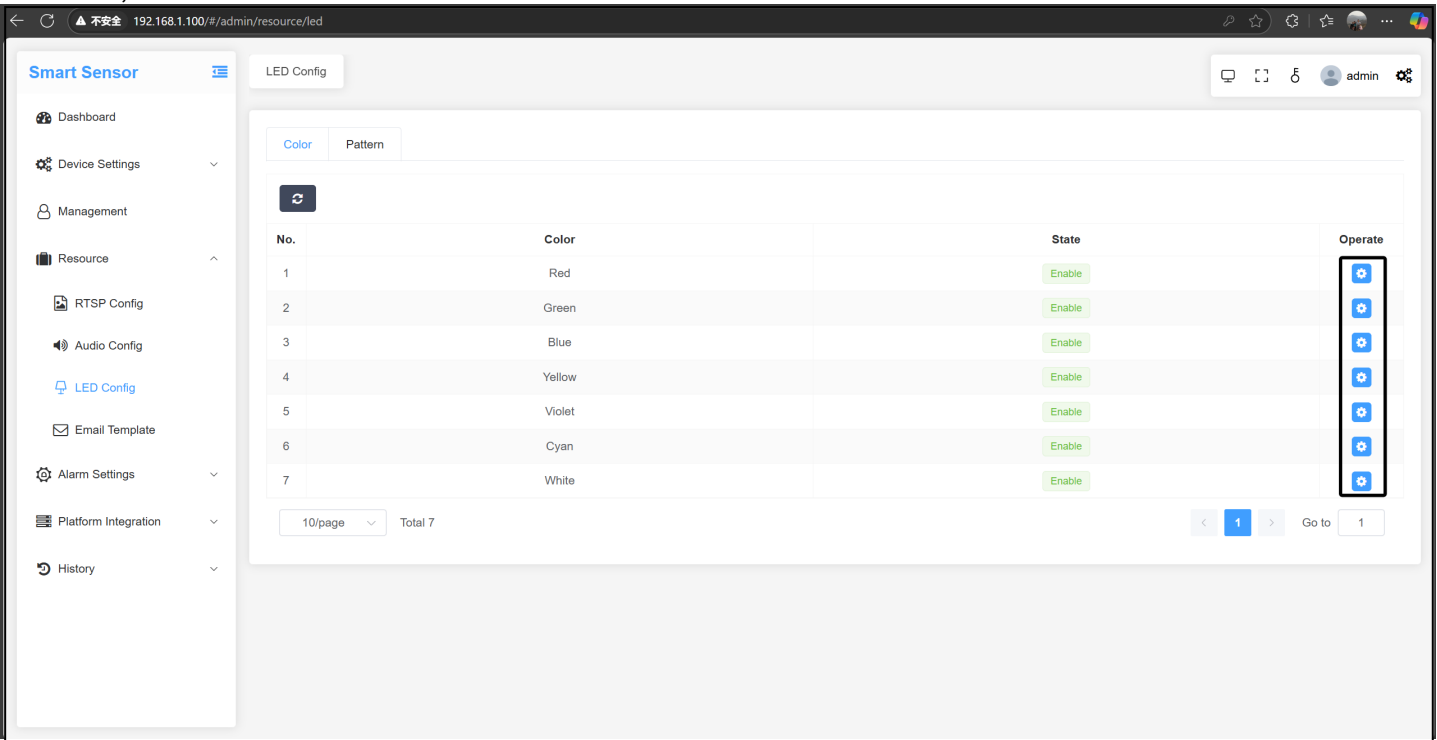
How to upload audio?

Click “Custom”, then click “upload”.

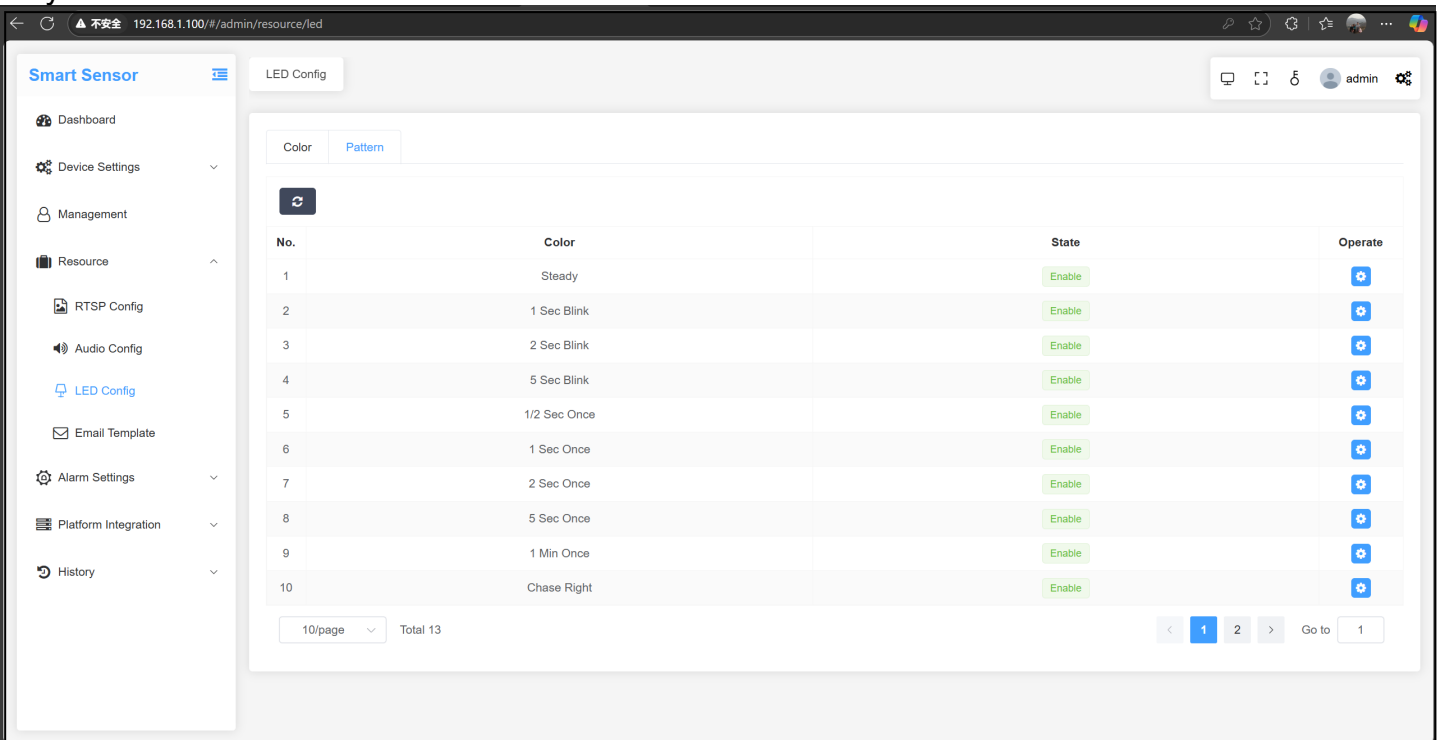


6.3 Led Config

Color: Totally 7 kinds:red/green/blue/yellow/violet/cyan/white.
Users can enable or disable the colors according to their needs. If disabled, then when they choose led color, these colors will be not available to choose to work.



Pattern: Totally 13 kinds for users to config, same as “Color”, when users disable some patterns, then they will not work.



6.4 Email Template

When event happens, users can choose send email to notify the receivers.

Same,when event released, users can also choose to send email to notify the receivers.

This page is for users to edit which contents will be included in the emails.

Email Template Set: it means when event happens, which contents need to be sent out.

Email Template Reset: it means when event released, which contents need to be sent out.

The screenshot shows the 'Email Template Set' configuration page. The left sidebar contains navigation options: Dashboard, Device Settings, Management, Resource, RTSP Config, Audio Config, LED Config, Email Template (selected), Alarm Settings, Platform Integration, and History. The main content area has a title 'Email Template' and a sub-header 'Email Template Set'. There is an 'Enable' toggle switch. The 'Subject' field is labeled '* Subject' and contains the placeholder text 'Please Input Subject'. To the right of the subject field are three dropdown menus: 'Device Info', 'System Info', and 'EID-TRIGGERNAME'. The 'Body' section contains a grid of wildcards for selection, including SN, MODEL, LOCATION, BUILDING, FLOOR, ROOM-NUMBER, WING, SECTION, MANAGER, LONGITUDE, LATITUDE, IP, DATE, TIME, MAC, MAIN-VERSION, FW-VERSION, RTSP-VERSION, APP-VERSION, WEB-VERSION, DATA-ALL, SENSOR-ALL, GSENSOR-ALL, PEOPLE-ALL, CALC-ALL, AUDIO-ALL, CENTIGRADE, FAHRENHEIT, HUMIDITY, TVOC, CO2, CO, NO2, HCHO, PM1, PM2, PM10, ETOH, X, Y, Z, MOTION, AQI, HEALTH-INDEX, RISK, MASKING, VAPE, TAMPER, NOISE, EID-ALL, EID-TRIGGER, and EID-TRIGGERNAME. Below the grid is a rich text editor with a toolbar and a text area containing the placeholder text '%CALC@AQI%%DEVICE@MODEL%%DEVICE@LOCATION%%SYSTEM@IP%'. A 'Save' button is at the bottom.

The screenshot shows the 'Email Template Reset' configuration page. The left sidebar is identical to the previous screenshot. The main content area has a title 'Email Template' and a sub-header 'Email Template Reset'. There is an 'Enable' toggle switch. The 'Subject' field is labeled '* Subject' and contains the value '2'. To the right of the subject field are three dropdown menus: 'Device Info', 'System Info', and 'EID-TRIGGERNAME'. The 'Body' section contains the same grid of wildcards as the 'Email Template Set' page. Below the grid is a rich text editor with a toolbar and a text area containing the placeholder text '%DEVICE@MODEL%%SYSTEM@IP%%DEVICE@SN%%SYSTEM@FWVERSION%'. A 'Save' button is at the bottom.

Subject: Email Subject

Users can type in the subject as they need, or choose the wildcards on the right side to fulfill automatically to set up an email subject.

About Wildcards: To make users easier operate, different wildcards have been listed on the page, so when users decide to show some specific information when event happens or released, users only need to click these wildcards and they will be fulfilled automatically in the “Body”.

7. Alarm Settings

7.1 Event Settings

Event settings include: Event Identifier(EID)/Data Source/Trigger Alarm/Release Alarm/Alarm Interval/Advanced.

EID is editable, but data source is fixed. We do not suggest users to modify.

EID: Vape/Masking/Aggression/Tamper/Motion/Health-Index/AQI/PM2.5/PM10/TVOC/CO2/Humidity/HCHO/ETOH/Noise/Temp-C/Temp-F.

Trigger Alarm: it mean under which situation the event will be triggered.

Vape/Masking/Motion is fixed algorithm, there is no data for users to config which situation the event should happen.

Other EID has data range for users to config.

Release Alarm: It means under which situation the event alarm will be released.

Taking “Vape” as an example, if you set RESET TIME to 60(s), it means after vape alarm happens,within 60s, if IP sensor did not detect vape again, then the vape alarm will be released.

Alarm Interval: It means the last time alarm and new alarm time duration.

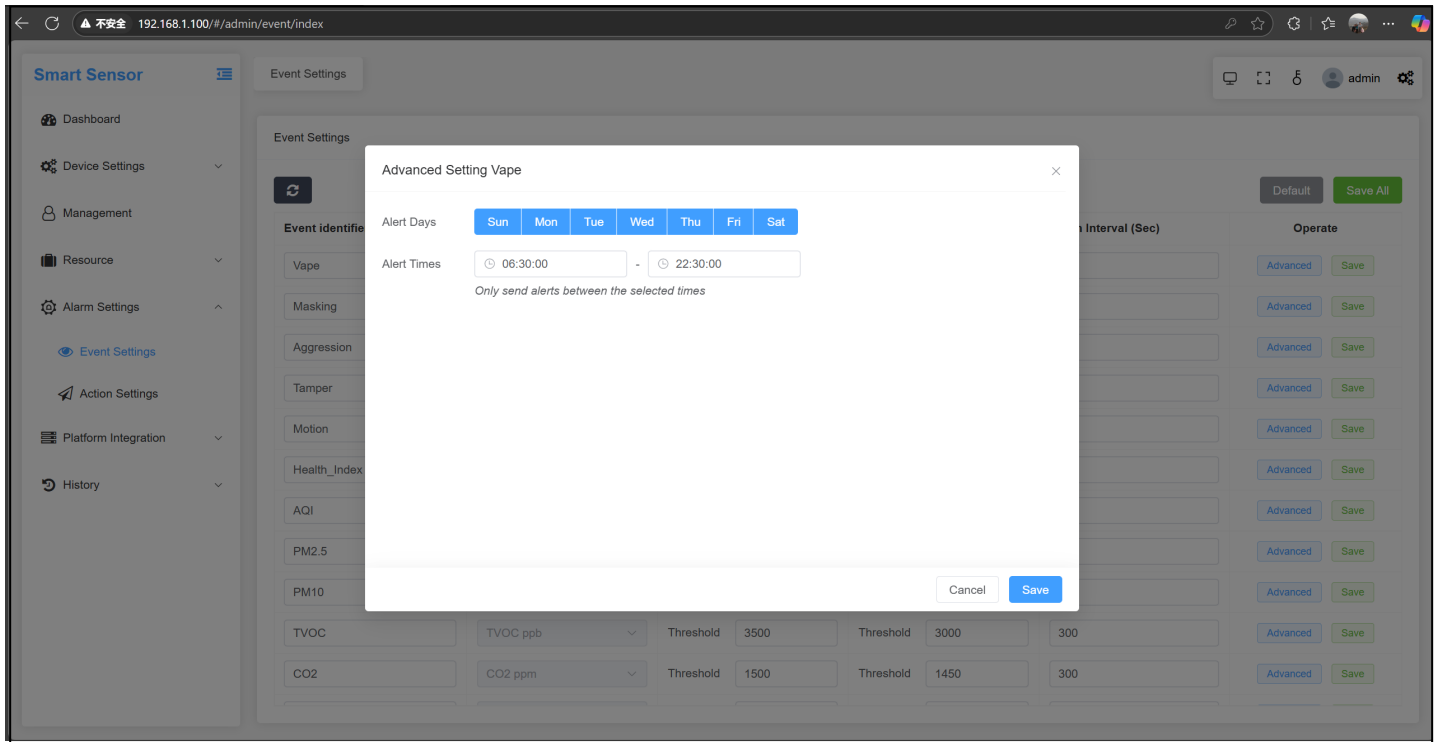
For example,if we set with 300s,then new alarm will only be triggered again after 300s.

Advanced: It is about alarm time config.

For example, if we set to Monday time from 06:30 to 20:00, it means the event will be only triggered during this date time.

The screenshot displays the 'Event Settings' page in a web application. The left sidebar contains navigation links: Dashboard, Device Settings, Management, Resource, Alarm Settings (expanded), Action Settings, Platform Integration, and History. The main content area is titled 'Event Settings' and features a table with the following columns: Event identifier, Data Source, Trigger Alarm, Release Alarm, Alarm Interval (Sec), and Operate. The table lists 11 events, each with its specific configuration. The 'Operate' column contains 'Advanced' and 'Save' buttons for each row. At the top right of the table, there are 'Default' and 'Save All' buttons.

Event identifier	Data Source	Trigger Alarm	Release Alarm	Alarm Interval (Sec)	Operate
Vape	Vape	At Once -	Reset Time 60	200	Advanced Save
Masking	Masking	At Once -	Reset Time 60	200	Advanced Save
Aggression	Aggression (Noise)	Threshold 85	Threshold 82	300	Advanced Save
Tamper	Tamper	Threshold 500	Threshold 400	300	Advanced Save
Motion	Motion	At Once -	Reset Time 60	300	Advanced Save
Health_Index	Health Index	Threshold 20	Threshold 30	300	Advanced Save
AQI	AQI	Threshold 90	Threshold 85	300	Advanced Save
PM2.5	PM2.5 µg/m³	Threshold 1000	Threshold 900	300	Advanced Save
PM10	PM10 µg/m³	Threshold 1500	Threshold 1000	300	Advanced Save
TVOC	TVOC ppb	Threshold 3500	Threshold 3000	300	Advanced Save
CO2	CO2 ppm	Threshold 1500	Threshold 1450	300	Advanced Save



7.2 Action Settings

Action settings is for event settings. It means when event alarm happens or released, what the device should respond.

The IP sensor’s action will include below:

- Set/Reset Email,
- Send event to 3rd party platform by HTTP/TCP/IP/MQTT,
- Alarm output wired triggered and how long time;
- Led Color and Pattern,
- Sound play(audio),
- Since the IP sensor has different events, so each event users can also define the priority.

Priority: High/2/3/4/5/6/7/8

Save: After users finish the settings, click “save”.

Test: This button is for users to approve whether their settings can work or not. After clicking “Test”, all above settings will imitate the event to happen and do actions.

8. Platform Integration

Smart Sensor

Action Settings

Default Save All

Event identifier	Email		HTTP		TCP		MQTT		Alarm Out By IO	LED		Sound	Priority	Operate
	Set	Reset	Set	Reset	Set	Reset	Set	Reset		Color	Pattern			
Vape	☒	☐	☐	☐	☐	☐	☐	☐	None	Red	5 Sec Once	Stop_Vaping.1	High	Save Test
Masking	☒	☒	☐	☐	☐	☐	☒	☐	None	Yellow	2 Sec Blink	Masking_Defr	High	Save Test
Aggression	☐	☐	☐	☐	☐	☐	☒	☐	None	None	Steady	None	High	Save Test
Tamper	☐	☐	☐	☐	☐	☐	☒	☐	None	None	Steady	None	High	Save Test
Motion	☐	☐	☐	☐	☐	☐	☐	☐	None	None	Steady	None	High	Save Test
Health_Index	☐	☐	☐	☐	☐	☐	☒	☐	None	None	Steady	None	High	Save Test
AQI	☐	☐	☐	☐	☐	☐	☒	☐	None	None	Steady	None	High	Save Test
PM2.5	☐	☐	☐	☐	☐	☐	☒	☐	None	None	Steady	None	High	Save Test
PM10	☐	☐	☐	☐	☐	☐	☒	☐	None	None	Steady	None	High	Save Test
TVOC	☐	☐	☐	☐	☐	☐	☒	☐	None	None	Steady	None	High	Save Test
CO2	☐	☐	☐	☐	☐	☐	☒	☐	None	None	Steady	None	High	Save Test

8.1 TCP/MQTT Settings

When event happens, device can send event details by TCP/MQTT to 3rd party platform to remind. The content users can choose “text” or “json” formats.

Set String: when alarm happens, send alarm information to platform;

Reset String: it is to notify the 3rd party platform alarm canceled.

Smart Sensor

TCP Settings

Enable ☒

* Host

* Port

* Set String ☒ On ☐ Off

Json

SN MODEL LOCATION BUILDING FLOOR ROOM-NUMBER WING SECTION MANAGER LONGITUDE LATITUDE

IP DATE TIME MAC MAIN-VERSION FW-VERSION RTSP-VERSION APP-VERSION WEB-VERSION

DATA-ALL SENSOR-ALL GSENSOR-ALL PEOPLE-ALL CALC-ALL AUDIO-ALL CENTIGRADE FAHRENHEIT HUMIDITY TVOC CO2 CO NO2 HCHO PM1

PM2 PM10 ETOH X Y Z MOTION AQI HEALTH-INDEX RISK MASKING VAPE TAMPER NOISE

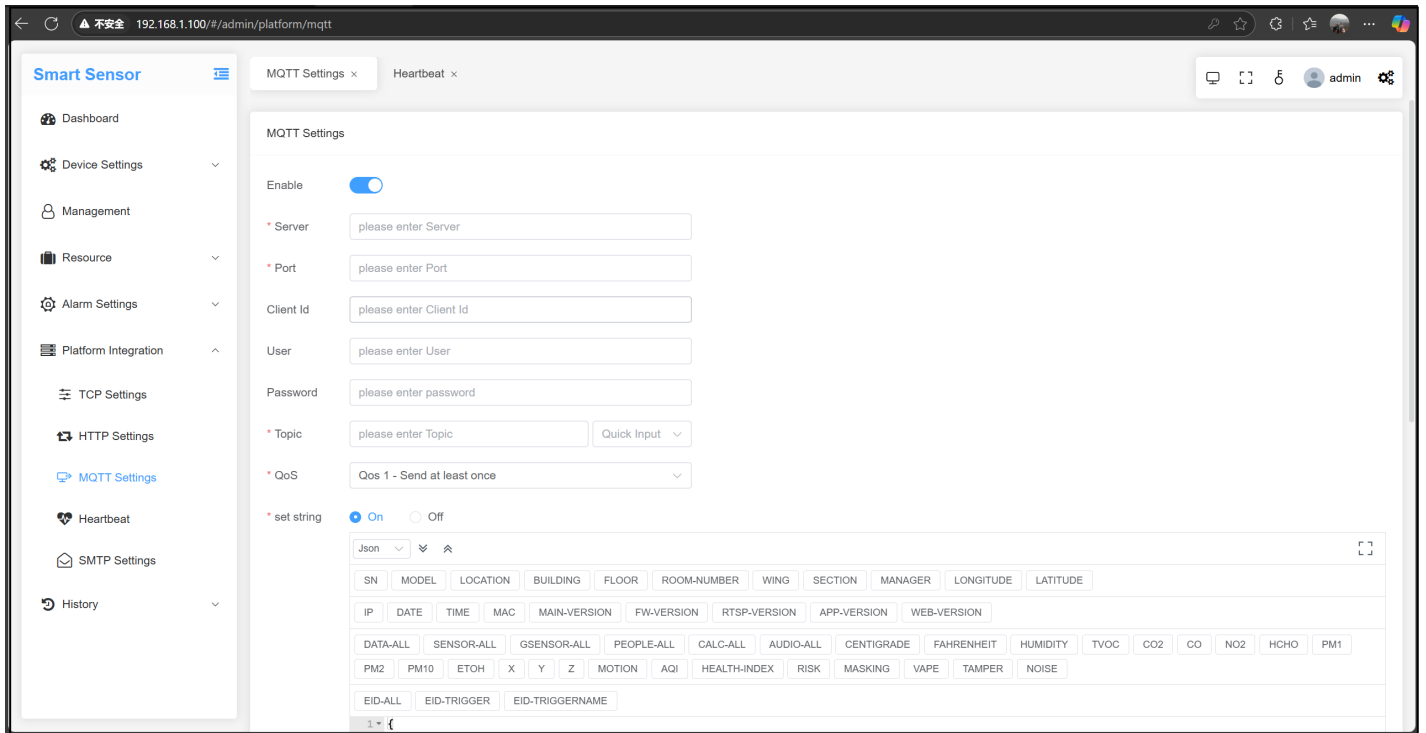
EID-ALL EID-TRIGGER EID-TRIGGERNAME

```
1 {
2   "sn": "%DEVICE@SN%",
3   "ip": "%SYSTEM@IP%",
4   "mac": "%SYSTEM@MAC%",
5   "date": "%SYSTEM@DATE%",
6   "time": "%SYSTEM@TIME%",
7   "trigger": "%EID@TRIGGER%",
8   "allData": "%DATA@ALL%"
9 }
```

Reset String ☒ On ☐ Off

Json

SN MODEL LOCATION BUILDING FLOOR ROOM-NUMBER WING SECTION MANAGER LONGITUDE LATITUDE



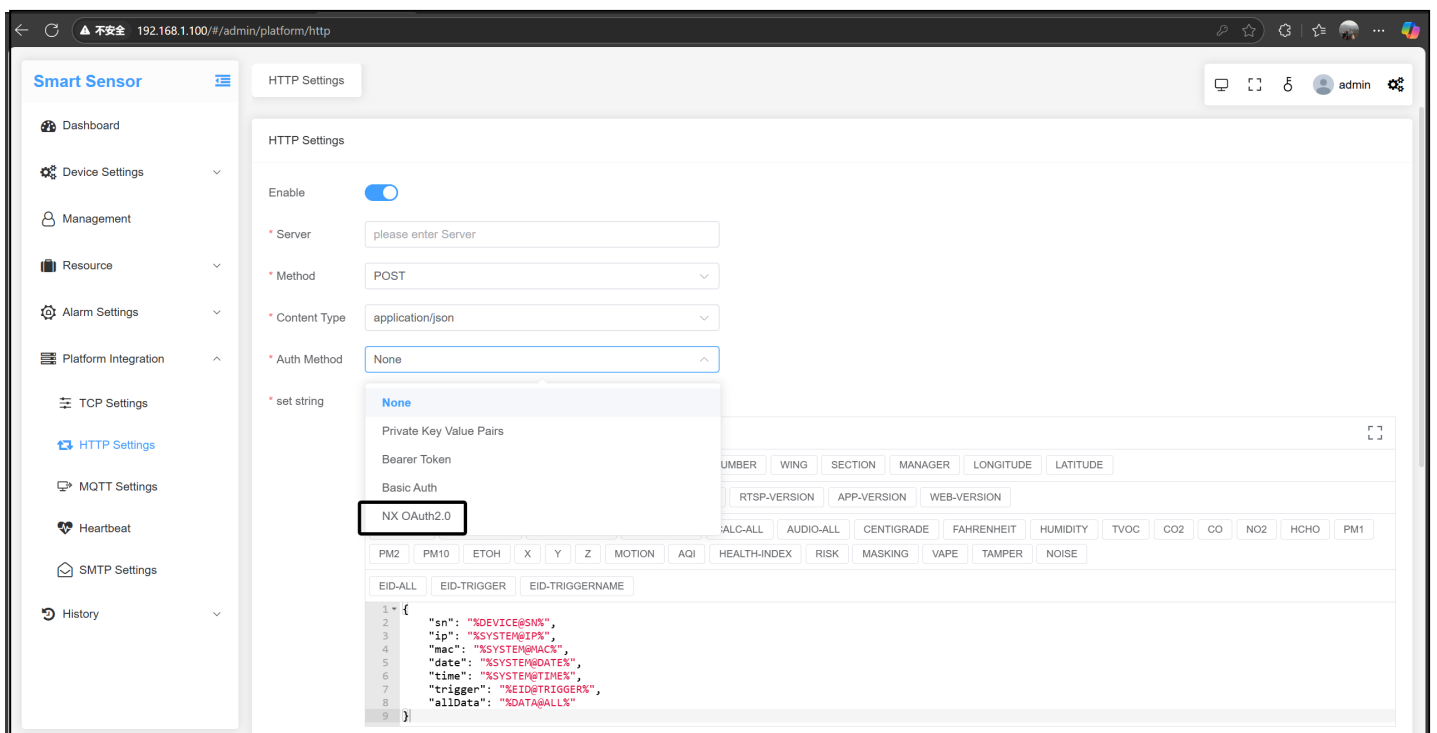
8.2 HTTP Settings

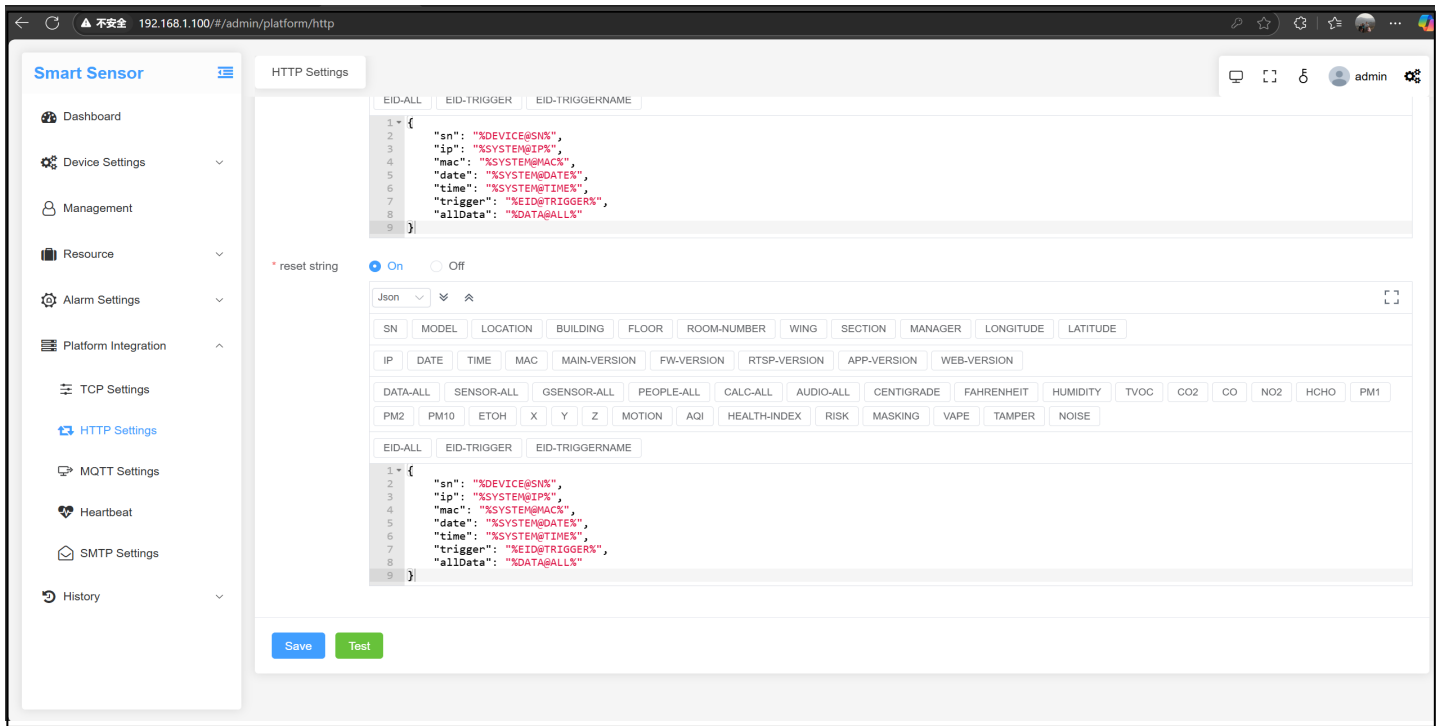
When event happens, device can send event details by TCP to 3rd party platform to remind. The content users can choose “text” or “json” formats.

Set String: when alarm happens, send alarm information to platform;

Reset String: it is to notify the 3rd party platform alarm canceled.

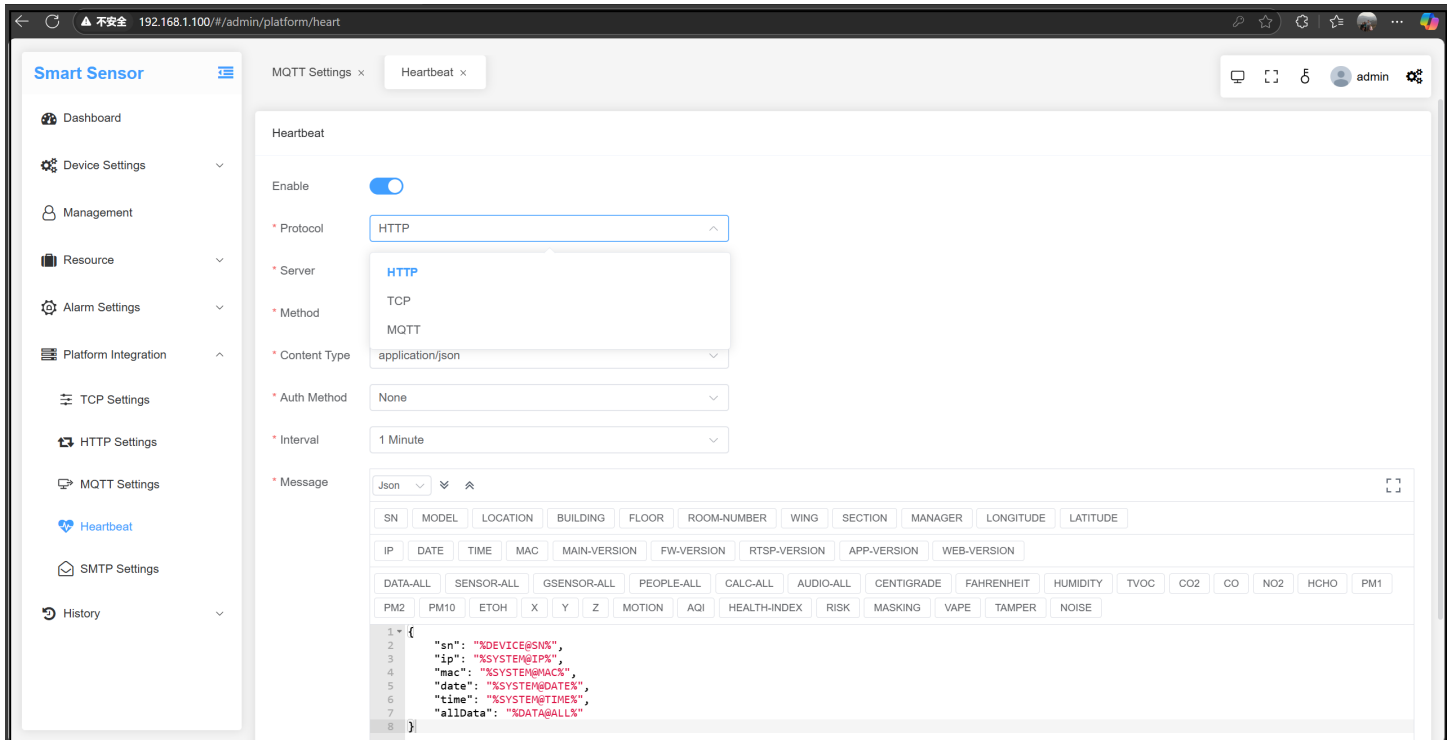
Test: it is to approve whether your settings are correct or not.





8.3 Heartbeat

Using heartbeat, users can send data by HTTP/MQTT/TCP to the platform.
The heartbeat interval can be chosen by users.

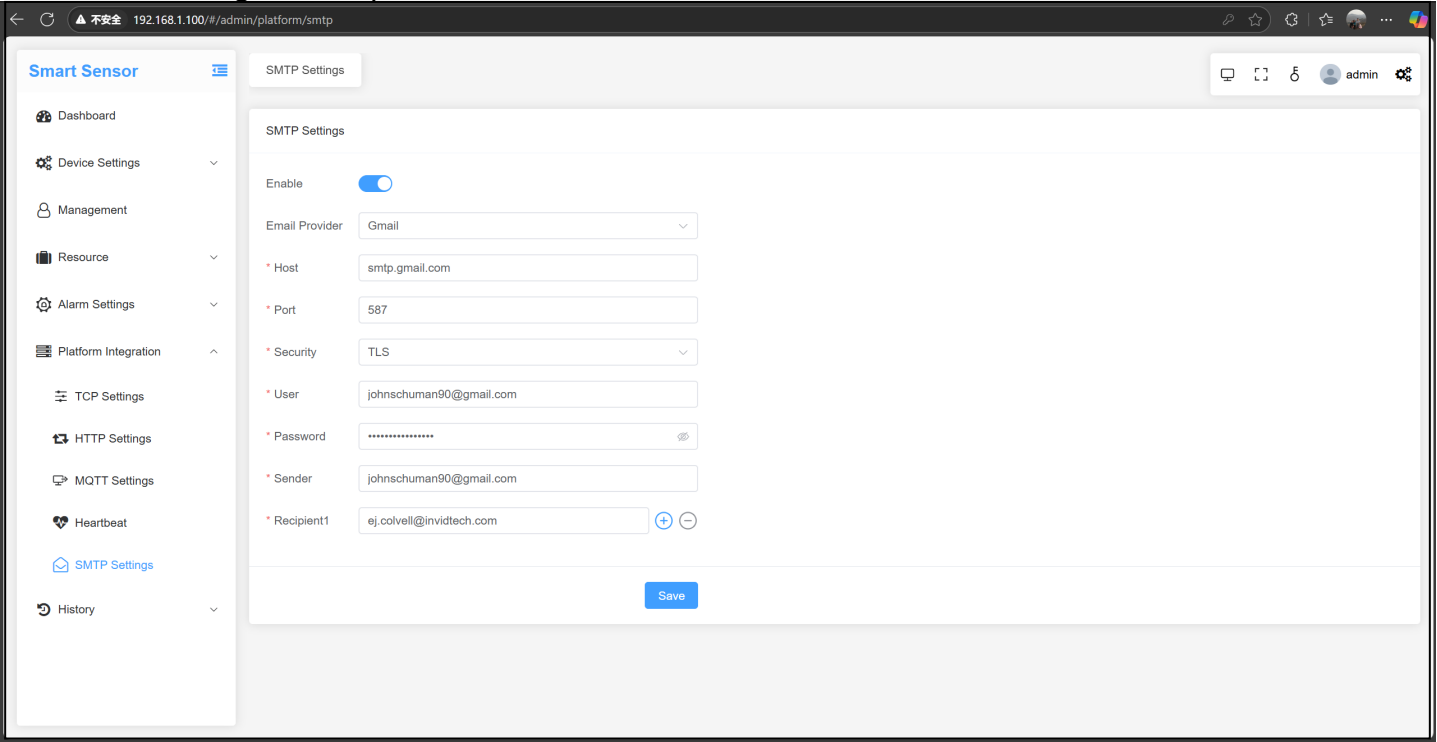


8.4 SMTP Settings

To send email for notification, firstly you need to config SMTP.

Email Provider: Support Gmail and Outlook.

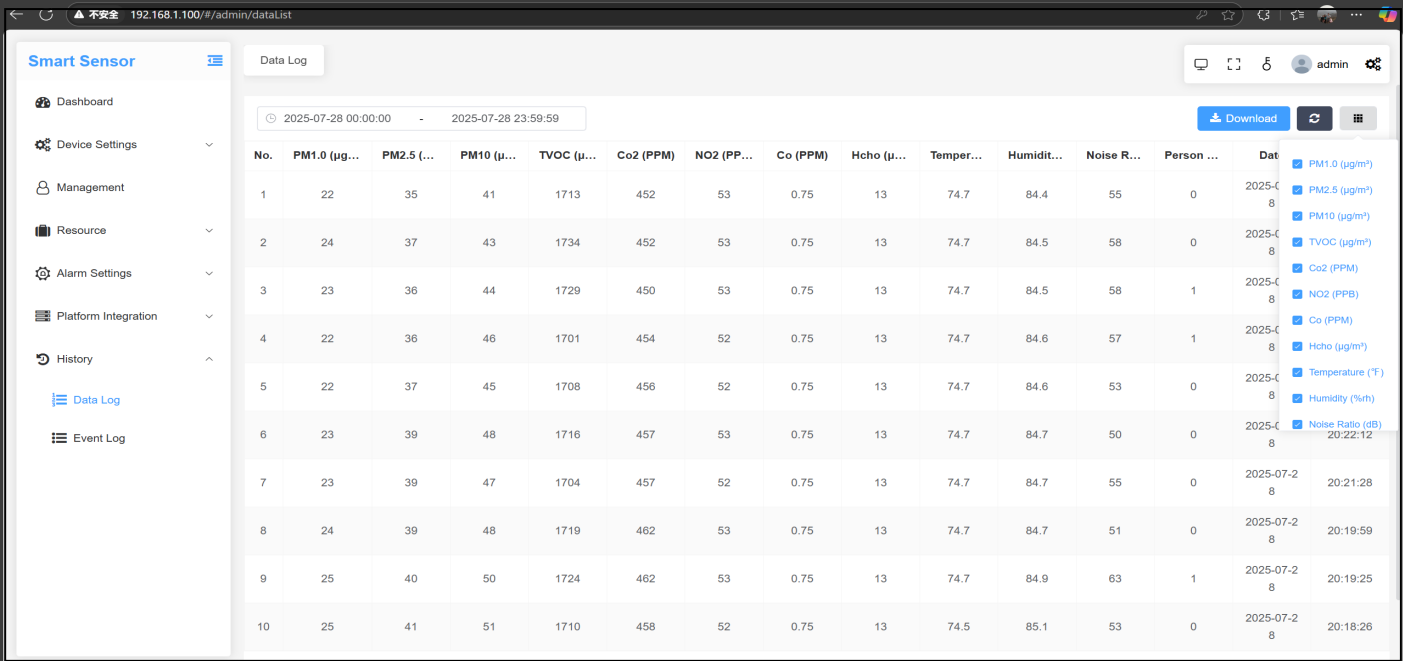
The Gmail setting is example as below:



There are multiple email recipients users can type in as long as the email address is correct, they can click “+” and click “Save”.

9. History
9.1 Data Log

On this page, users can have sensor data record,users can download as report according to time setting.User can also enable/disable which data to show on the page.



9.2 Event Log

User can also have event records and download as report according to time setting.

Smart Sensor

Dashboard

Device Settings

Management

Resource

Alarm Settings

Platform Integration

History

Data Log

Event Log

Event Log

2025-07-07 00:00:00 - 2025-07-28 23:59:59

Download

No.	Event ID	Type	Value	Date	Time
1	Vape	release	-	2025-07-24	19:30:16
2	Vape	trigger	-	2025-07-24	19:29:54
3	Masking	release	-	2025-07-24	19:28:23
4	Masking	trigger	-	2025-07-24	19:28:03
5	Vape	release	-	2025-07-24	19:27:25
6	Vape	trigger	-	2025-07-24	19:27:02
7	Vape	release	-	2025-07-24	19:26:12
8	Vape	trigger	-	2025-07-24	19:25:51
9	Vape	release	-	2025-07-24	19:25:44
10	Vape	trigger	-	2025-07-24	19:25:23

10/page

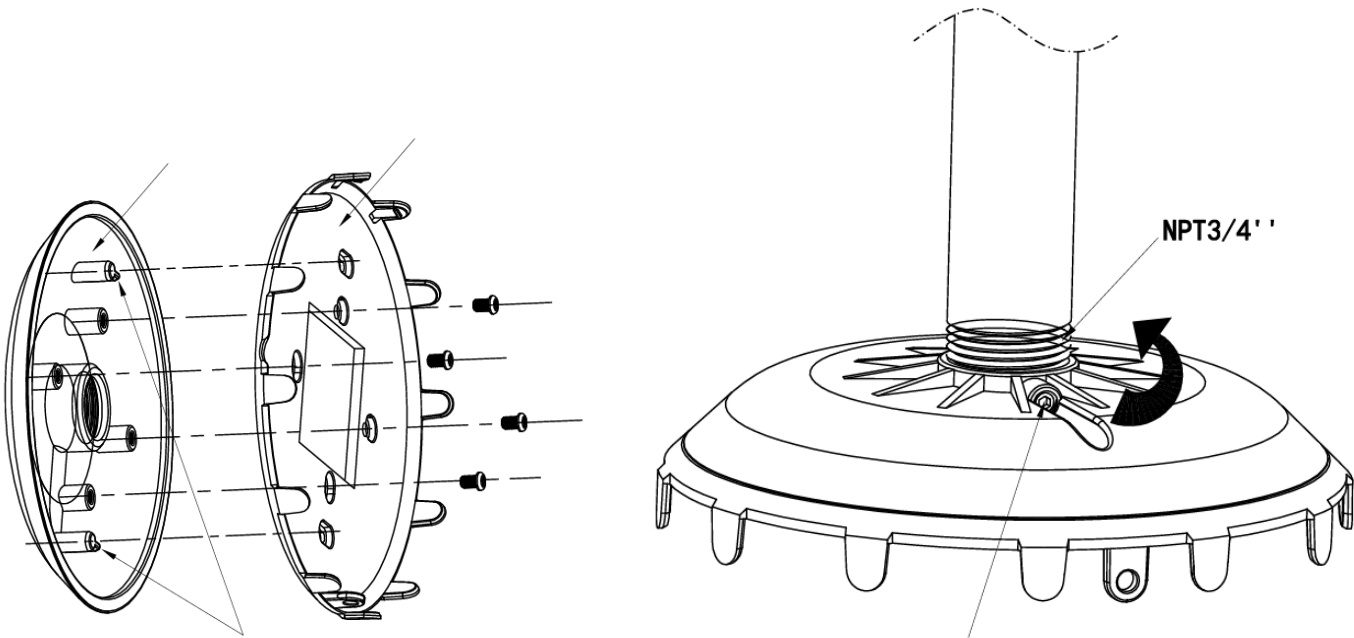
Total 222

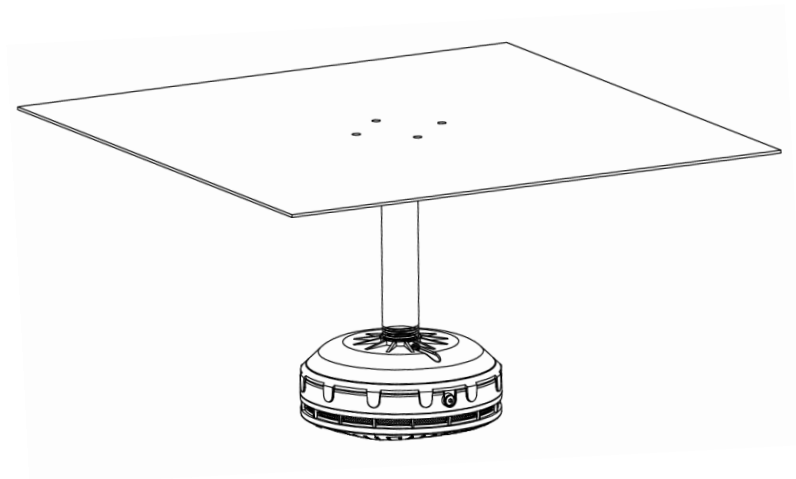
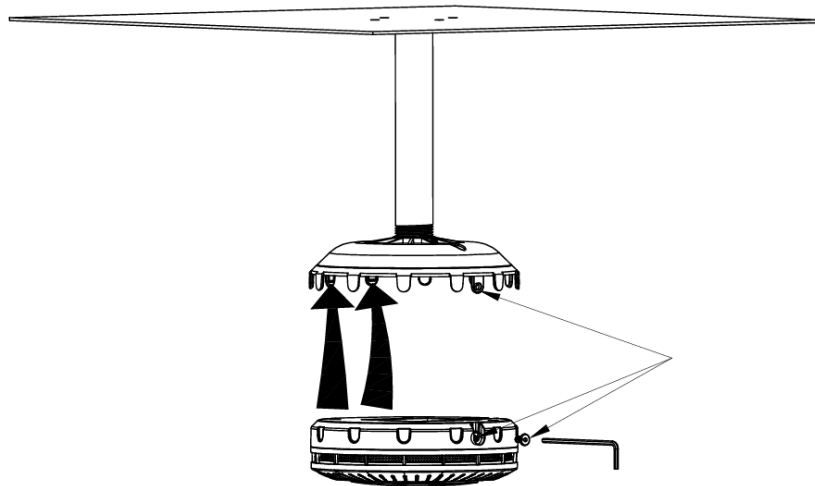
< 1 2 3 4 5 6 ... 23 >

Go to 1

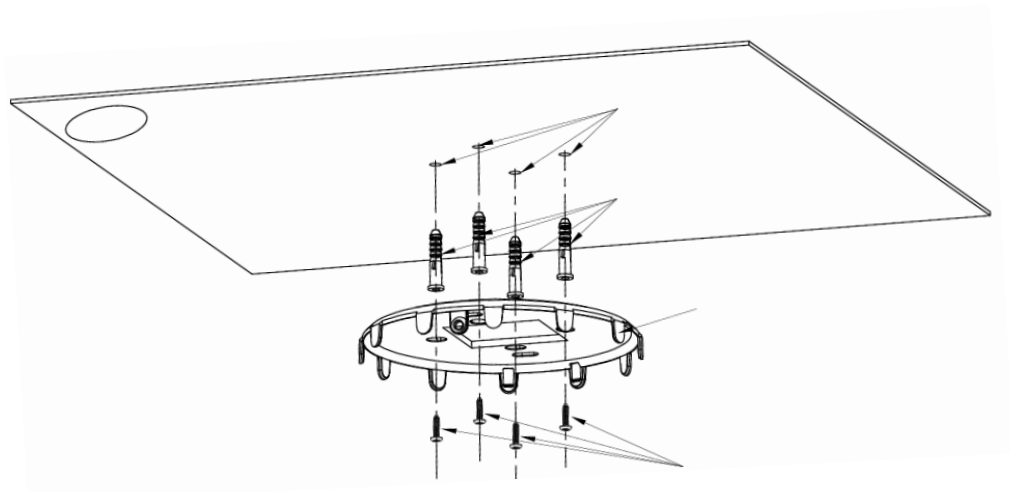
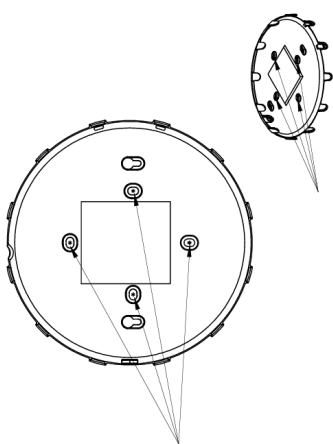
10. IP Sensor Installation

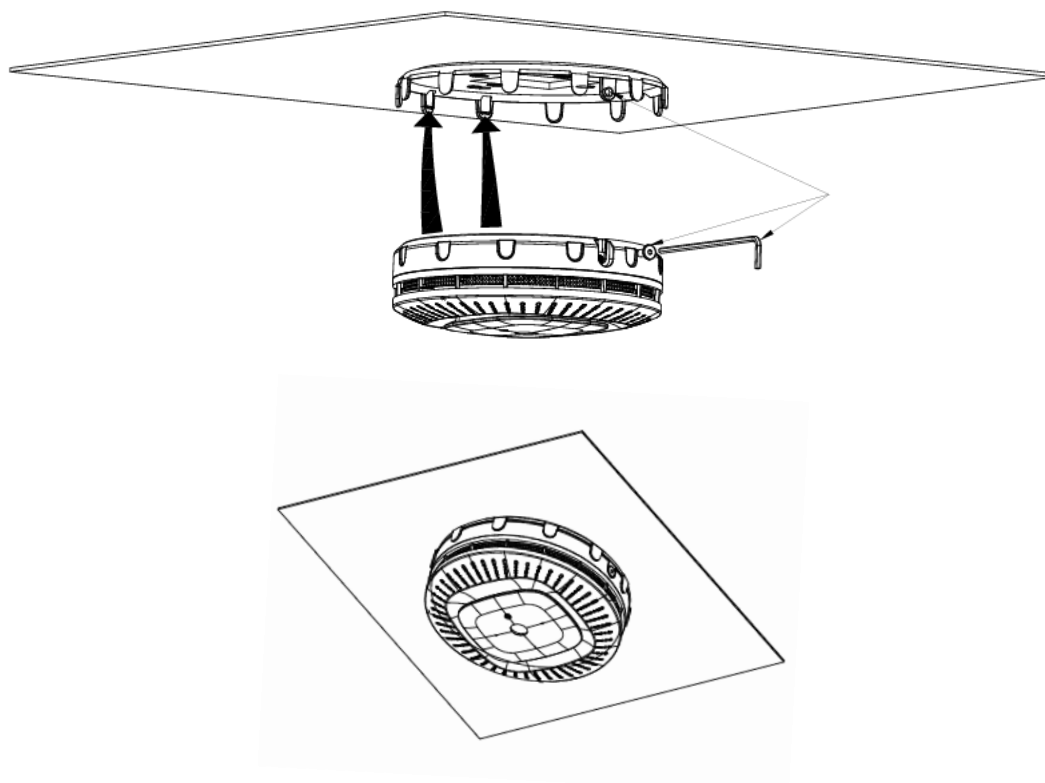
10.1 Pendant Mount





10.2 Ceiling Mount





11. Special Notice

11.1 Power Supply of the IP Sensor

The IP sensor supports DC12V input and also PoE powered.

11.2 TVOC Sensor

Each time users restart or first time power the IP sensor, users must wait for about 40 mins then TVOC can go to normal status to detect.

It means, each IP sensor when powered, please wait for 40 mins.

11.3 Maintenance

If users find the surface with dusts after long time working, please do not use wet cloth or cloth with alcohol or dishwashing liquid to clean. Users can use dry and clean cloth or brush to clean only.

11.4 Testing

To test vape, please do not blow air to the surface directly, such behavior will hurt the sensors inside, especially TVOC.

11.5 Monitoring Area

For fast respond, we suggest area not more than diameter 6meters, and IP sensor height not more than 3.3M(ceiling to ground).