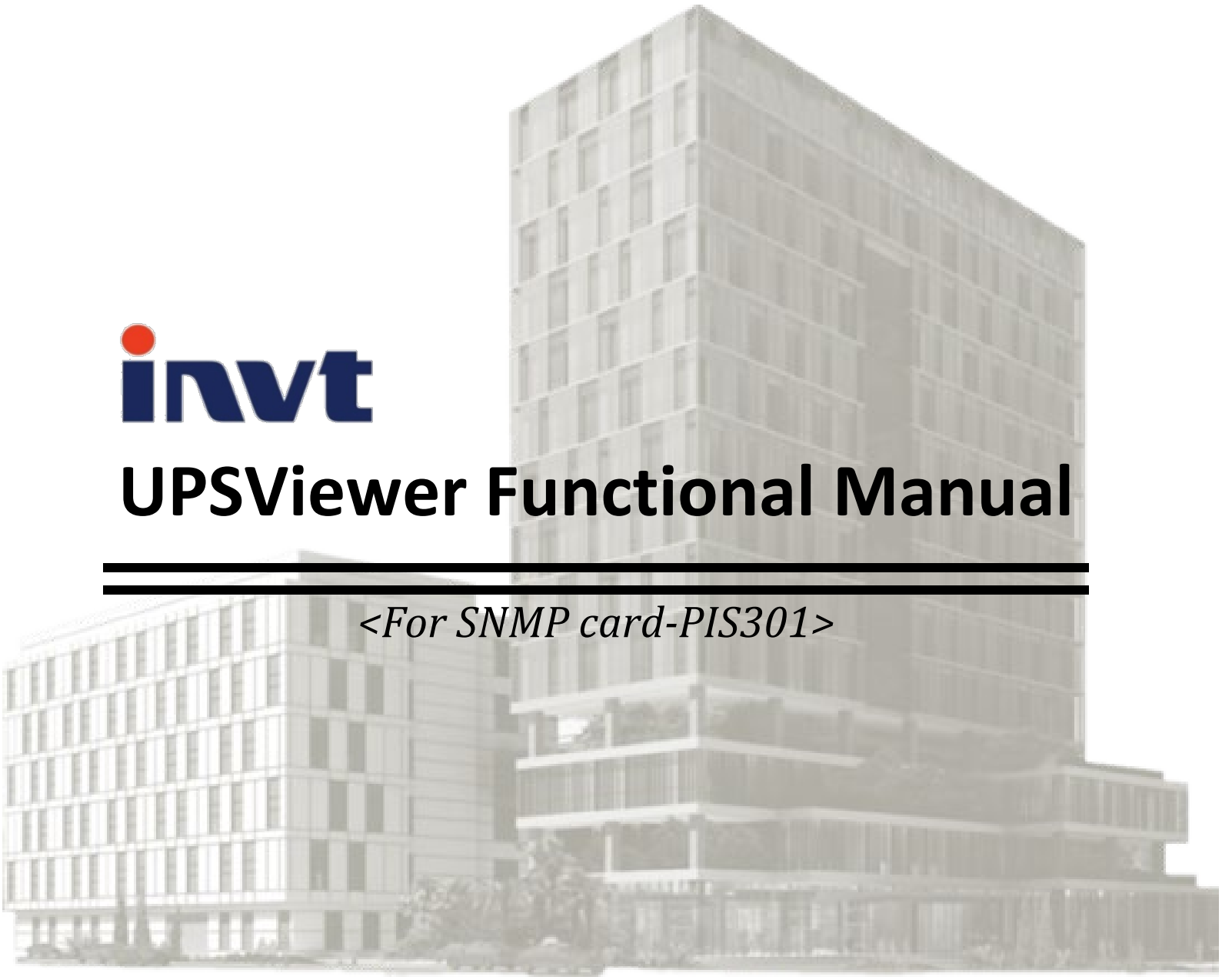

# UPSViewer Functional Manual

*<For SNMP card-PIS301>*

www.invt-power.com

Overseas Department
Stock Code：002334
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# 1 Brief introduction

## 1.1 Function introduction

UPSViewer is an intelligent UPS network monitoring card that allows UPS to have network monitoring functions. This product provides multiple network access interfaces, which can easily meet the UPS monitoring requirements in various scenarios.

If you want to see the current working status of the UPS, you can simply open any browser and log in to UPSViewer directly to see all the UPS operating data. If you want to connect the UPS to a centralized management platform, UPSViewer provides rich third-party interfaces such as SNMP (Simple Network Management Protocol), Modbus TCP, and MQTT. UPSViewer itself is also equipped with its own centralized management software and Internet of Things monitoring platform to meet the different needs of customers.

UPSViewer comes with a complete alarm mechanism. When a UPS fails, it can quickly report the failure to relevant personnel via email, SMS, voice, etc., so that the administrator can quickly troubleshoot the failure. UPSViewer also has a powerful data analysis function, which can save UPS data, alarms, logs, etc., and can visually display them in the form of charts.

UPSViewer also provides shutdown assistants under different systems. When the UPS mains power is abnormal or the battery is low, in order to avoid sudden power failure caused by IT server hardware damage or software failure, the shutdown assistant can automatically receive the shutdown information sent by UPSViewer shut down the UPS system.

**The list of features is as follows:**

It supports accessing from web, so all the data can be checked conveniently and set UPSViewer from web.

It supports protocols such as SNMP, Modbus TCP, and MQTT, providing rich interfaces for third-party monitoring.

It provides IP search software, and can automatically search devices within LAN, and process software upgrade, parameters setting functions.

UPS failure can trigger SNMP TRAP, E-mail, message, voice etc. to inform the administrator.

It can add expansion function of temperature and humidity, water immersion, etc.

It provides shutdown software of different software, and the computer server can be closed when there is failure.

It can provide centralized monitoring projects such as local centralized monitoring and cloud Internet of Things Monitoring.

## 1.2 Brief uses introduction

***UPSViewer connects your UPS with internet***

When your UPS is equipped with the UPSViewer, after accessing the network through the Network port of the UPSViewer, you can check the UPS status by input the UPSViewer IP address on any computer equipped with a Browser.

***UPSViewer allows you to manage the UPS transparent***

When your UPS is connected to the network, you can view the UPS data messages and UPS parameter settings in your browser. UPSViewer will detect UPS abnormal information at any time and send it to the administrator by electronic mail and Trap. If you have also installed a message alarm, you will also receive a message in the form of an alert message.

When your UPSViewer is connected with the water immersion sensor, temperature and humidity sensor and other extension devices, you can see the information of your UPS working environment.

***When to use the UPSViewer?***

If you want to monitor the UPS status remotely through the network, for example, in the case of network interconnection of each subsidiary, the system administrator only needs to install the UPSViewer on each UPS, so that the system administrator can remotely monitor the UPS status information of each subsidiary on the network at any time. If you want to monitor the computer room, warehouse, office environment information through the network, but do not want to go to the warehouse test, at this time you only need to install the expansion equipment to meet the needs.

# 2 Product appearance

## 2.1 Product appearance drawing

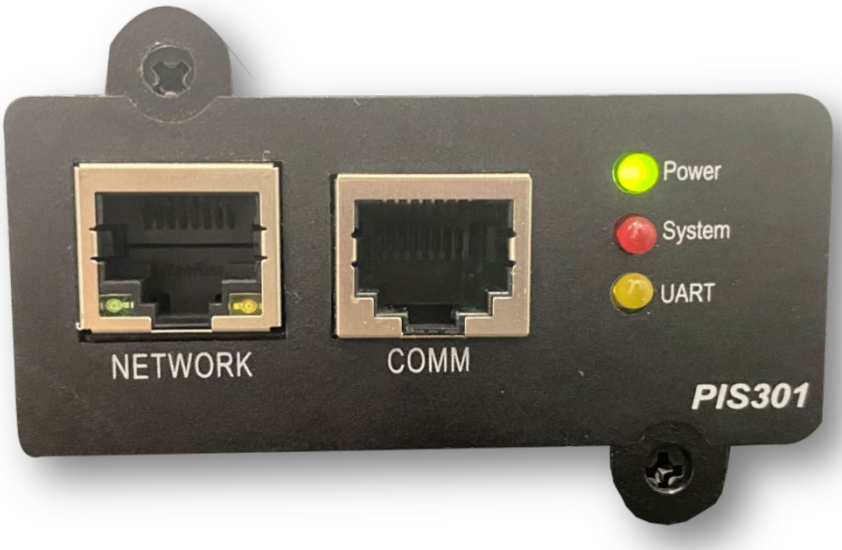



Figure-1

Figure-2

Figure 1 is the front of UPSViewer, figure 2 is the side profile of UPSViewer.

In figure 1:

① **NETWORK:** RJ45 network interface;

② **COMM:** Expanded COMM port;

③ **Signal light**.

## 2.2 Product port introduction

| Port | Function |
|---|---|
| NETWORK port | Network communications |
| COMM port | External extension devices：<br>Water immersion sensor<br>Temperature and humidity sensor |

## 2.3 Introduction of product signal light

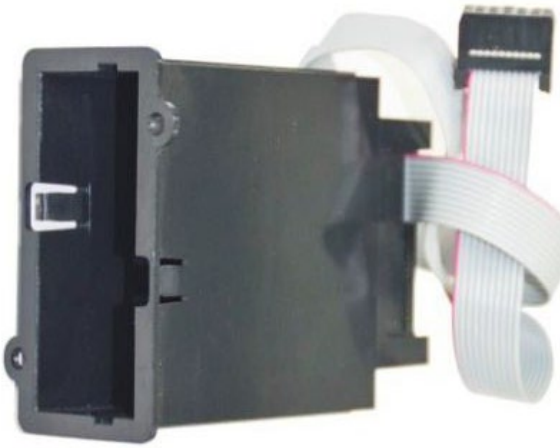
| Signal light | Status and meaning |
|---|---|
| Power light (green) | Power light：UPSViewer power supply status.<br>1. on：UPSViewer normal power supply;<br>2. off：UPSViewer Without electricity. |
| System light (red) | System light：UPSViewer system status.<br>1. off：System normal；<br>2. flicker：Normal alarm；<br>3. normally on：Serious warning. |
| UART light (yellow) | UART light：Indicates the communication status of UPSViewer and UPS.<br>1. off：UPSViewer and UPS communicate normally；<br>2. flicker：UPSViewer and UPS communicate abnormally. |

# 3 UPSViewer setting

## 3.1 Hardware installation

### 3.1.1 UPSViewer card slot installation

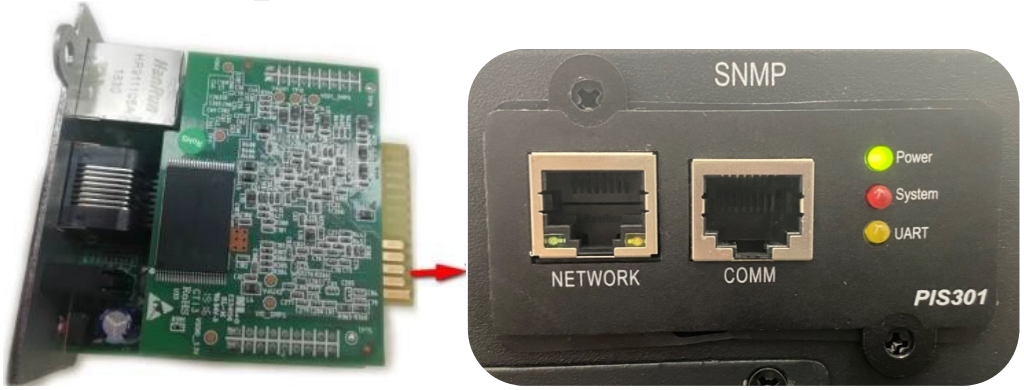
*Notice: please turn off the UPS before install UPSViewer.*



### 3.1.2 UPSViewer installation

① Dismantle socket protection cover screw and remove the cover;

② Push the UPSViewer to the bottom along the track inside the slot;

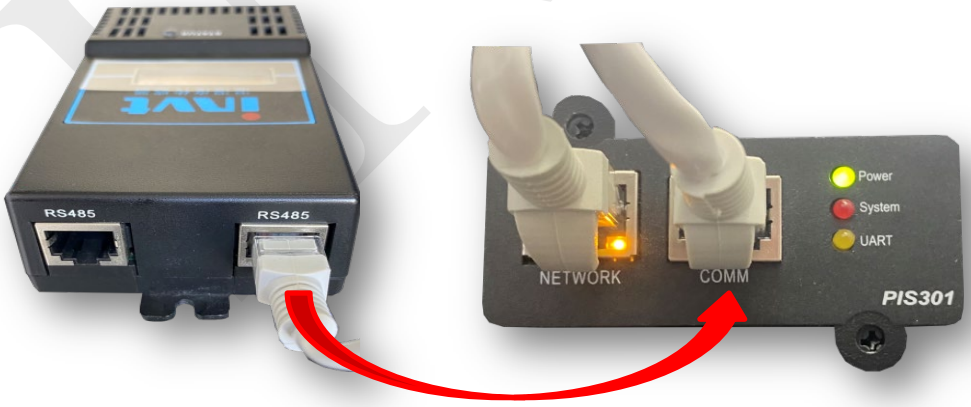



③ Screw two sides of card to fix screws;

④ Plug the network cables；

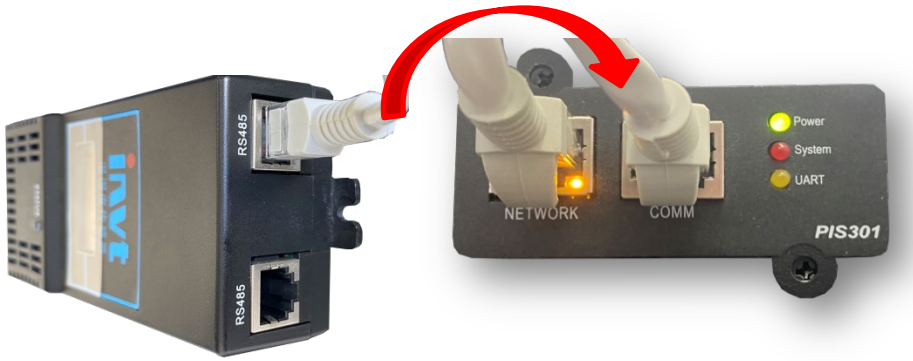
⑤ Turn on the UPS.

### 3.1.3 Temperature & humidity sensor installation




*Connect the RS485 port of the temperature and humidity sensor to the COMM port of the UPSViewer with the RJ45 network cable to check whether the LCD interface of the temperature and humidity sensor is on and whether there is temperature and humidity information. If there is, the connection is successful.*

### 3.1.4 Water leakage sensor installation




*Connect the RS485 port of the flood sensor to the COMM port of the UPSViewer with a network cable (or the COMM port of other devices that have been connected to the UPSViewer) to check whether the liquid crystal interface of the flood sensor is lit up and whether there is any information display. If so, the connection is successful.*

✧ **Temperature & humidity sensor and Water leakage sensor installation：**

### 3.1.5 SMS alarm installation

Connect the SMS Alarm communication interface to the COMM port of the UPSViewer with a network cable. Refer to "4.6.1 Manual Add Devices" for the device addition procedure.

## 3.2 Software installation

Omit.

## 3.3 UPSViewer using step

When software and hardware installation are completed for UPSViewer, below is a flow chart for using UPSViewer for the first time.

1. Plug UPSViewer into the special card slot of UPS.

↓

2. Open IPSearch software.

↓

3. Set IP for UPSViewer with IPSearch software.
   (1) DHCP allocates dynamic IP.
   (2) Set static IP manually.

↓

4.1 Log in with IP directly by browser (under the same network).
4.2 Log in with IPSearch software (under the same network).

↓

5. Sets the communication protocol between UPSViewer and UPS.

↓

6. Set additional parameters for the UPSViewer to manage Web pages.

- **Check whether the Power light of UPSViewer is always on to ensure that the power supply of UPSViewer is normal.**

When the power light of UPSViewer is always on, it indicates that the power supply of UPSViewer is normal.

- **Complete the connection between UPSViewer and the computer.**

- **Open the IPSearch software to set the IP address information.**

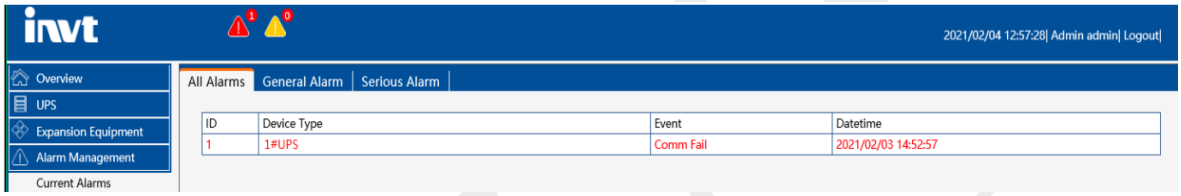
When you use UPSViewer for the first time, open the IPSearch software to search for the default information of UPSViewer. Please set the IP address information first. After the setting is successful, you can enter this IP address in the browser IP address bar to log in to the UPSViewer webpage or use the [in IPSearch] launch Web] button to open UPSViewer web page.

- **UPSViewer login page.**

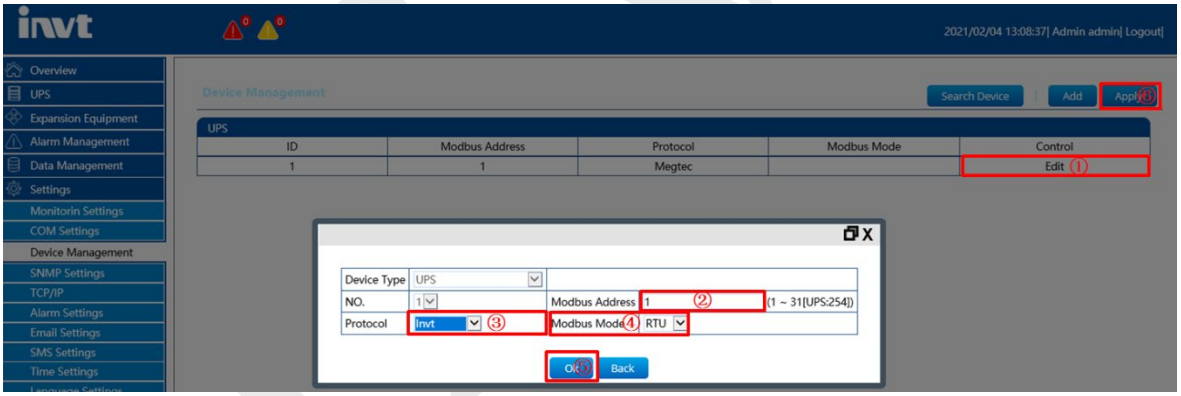
UPSViewer initial administrator login account and password: account: admin, password: 123456. If the computer and UpsViewer are in the same network condition, use the IPSearch software to login or use the browser to login directly.

- **UPSViewer communications with UPS Settings.**

If there is a "communication failure", it means there is an alarm event.




Please go to [Settings]→[Device Management] to set the communication between UPSViewer and UPS product.




① Click the [Edit] button;

② Set [Modbus address] to input the modbus address of the UPS product;

③ Select [Protocol]: The protocol selection here must be consistent with the communication port protocol of the UPS;

④ Select [Modbus Mode]: ASCII or RTU mode, the mode selection here must be consistent with the Modbus communication mode of the UPS.

If you do not know how to check the Modbus address, port protocol, and Modbus mode of the UPS product, you can refer to the UPS manual or consult the UPS vendor, or refer to 4.9.3 Device Management. After setting, click "OK" button and then click "Apply" button. Refresh the interface and check the alarm event. If there is no "communication failure" alarm event, the communication is normal.

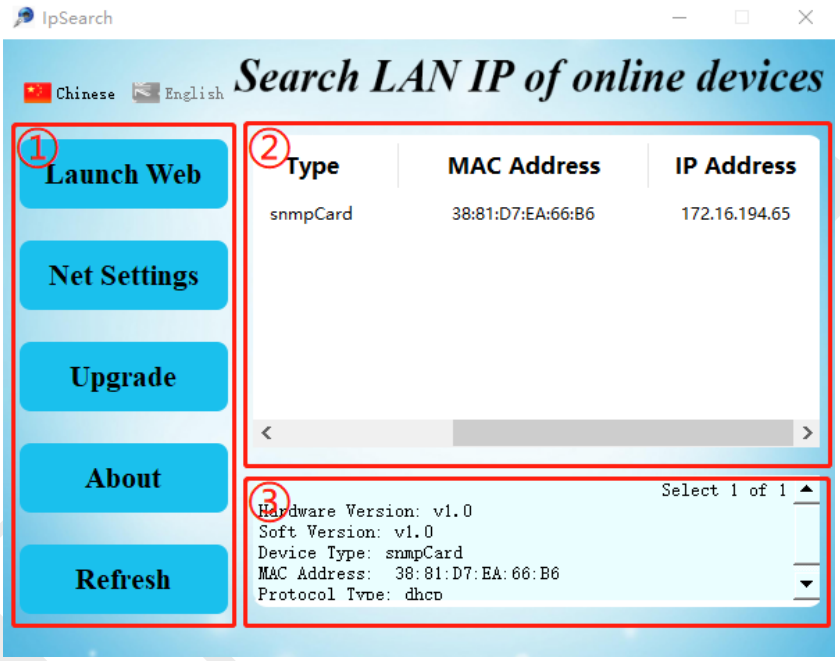
## 3.4 IPsearch function introduction

IPsearch: is a search tool that can quickly find information about the online UPSViewer that is already online on the LAN.

### 3.4.1 IPsearch instruction

**IPsearch Interface**

*IPsearch consists of two regions: UPSViewer device information display area, operation area. (The list refreshes automatically every 15s.) When the user opens the IPsearch tool, it will automatically search the UPSViewer information that is currently online on the LAN, and retrieves the device type, MAC address, IP address, software version, hardware version, and IP address type (DHCP, Static IP).*



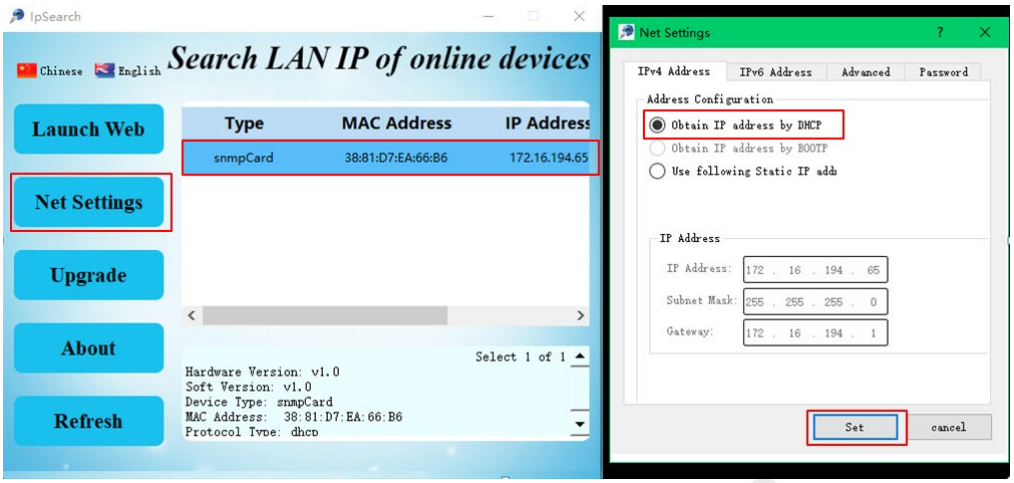

① Operating area;
② Online device list;
③ Equipment information.

*When there are multiple devices in the list, the first one is selected as the default device by default. When the user clicks on any device in the list, the device information box will display the corresponding device type, software version, hardware version, MAC address, IP type (manually set static IP and DHCP dynamically assign IP).*

### 3.4.2 Use IPsearch software to assign dynamic IP address to UPSViewer

The steps are as follows:

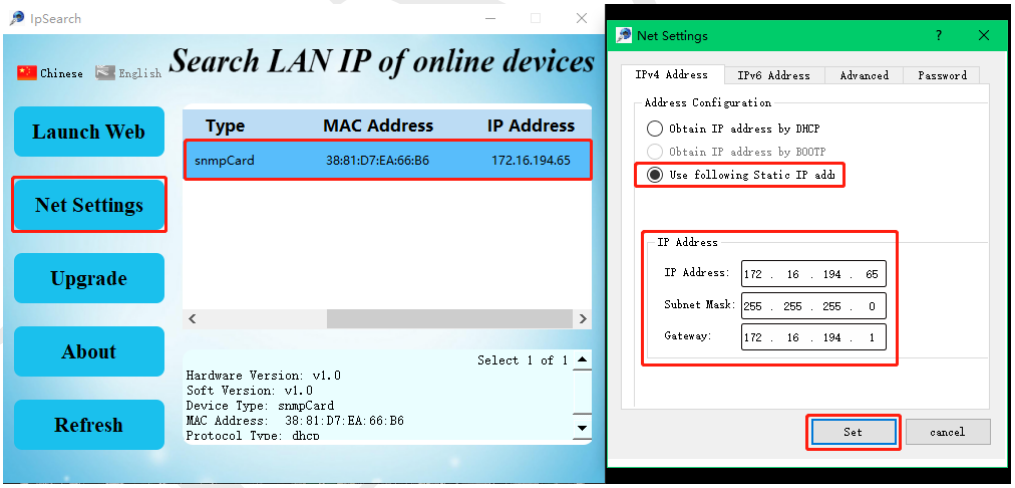
Note: This DHCP service can only successfully allocate IP when there is a DHCP server.




① Click device IP from online device list.
② Click [Net Settings] button.
③ Choose [Obtain IP address by DHCP].
④ Click [Set] button.

### 3.4.3 Use IPsearch software to manually set a static IP address for UPSViewer

The user uses IPsearch software to set IP for UPSViewer in static IP mode. The steps are as follows:

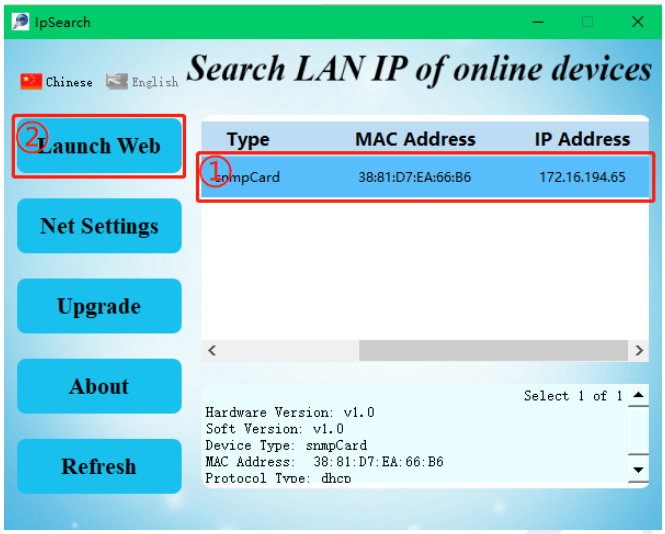



① Click device IP from online device list.
② Click [Net Settings] button.
③ Choose [Use following Static IP address].
④ Input the IP information.
⑤ Click [Set] button.

### 3.4.4 Use IPSearch to open UPSViewer webpage

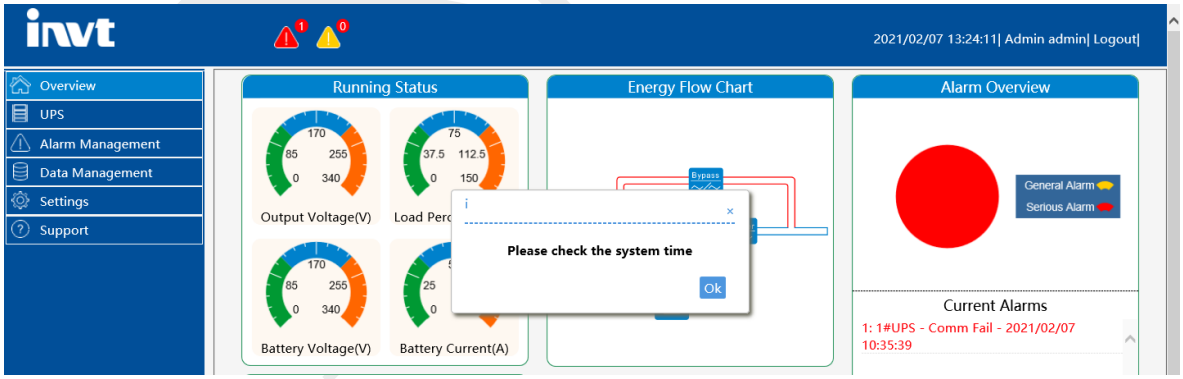
The user uses the IPsearch software to open the UPSViewer webpage as follows:

Note: The following operations must ensure that the computer and UPSViewer are in the same local area network, otherwise it will fail to open the webpage.




① Click device IP from online device list.
② Click [Launch Web] button.
③ Enter the initial administrator username: admin, password: 123456.

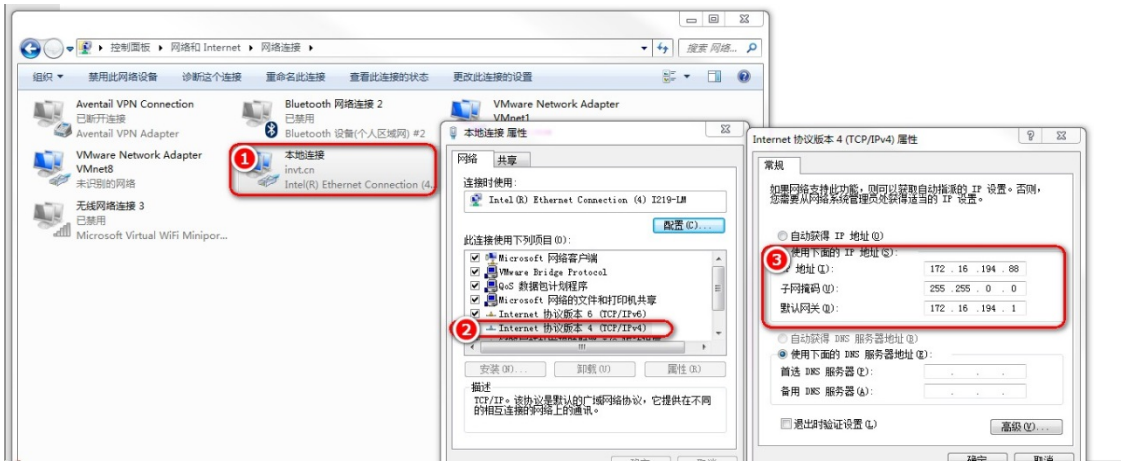
④ Go to the webpage.




## 3.5 Check computer network information

Before logging in, make sure that UPSViewer and the computer are on the same network. When the UPSViewer IP and the computer IP are not in the same network, you can use the following methods to set or view. For Windows10 system, the process of viewing IP information and setting IP is as follows: (same for other Windows operating systems)

【Control Panel】→【Network and Internet】→【Network Connection.】



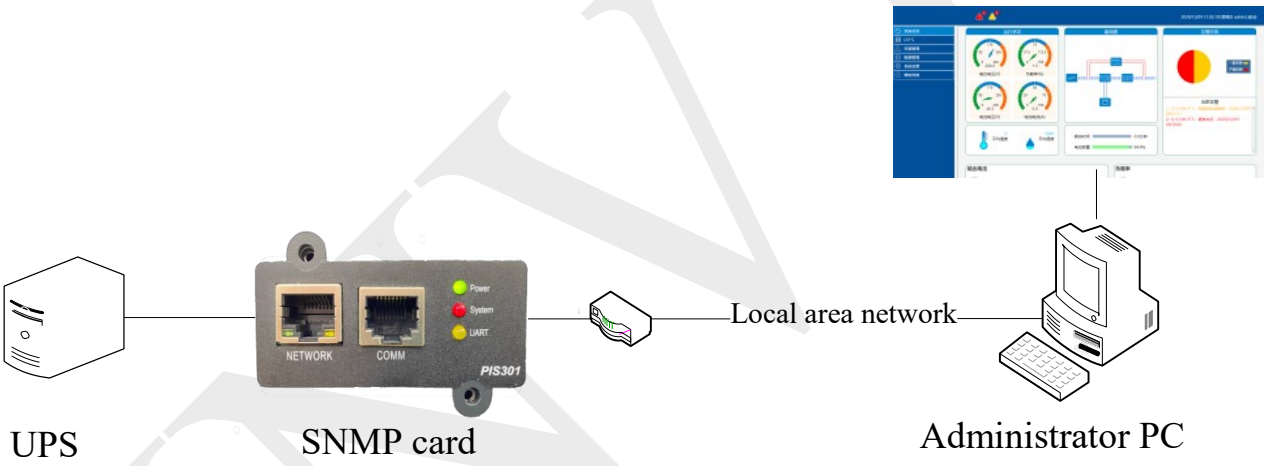

① Right-click on the local connection and select ‘Properties’.
② Select Internet Protocol Version 4 (TCP/IPv4) and click Properties.
③ View or set IPv4 information.

# 4 UPSViewer webpage introduction

## 4.1 UPSViewer webpage functions

The UPSViewer page provides users with IP access to the network management interface to view UPS status and set up information. When you connect UPS to the central Management platform, the UPSViewer page provides configuration management for SNMP (Simple Network Management Protocol), MODBUSTCP, and MQTT third-party interfaces.

## 4.2 Open UPSViewer webpage



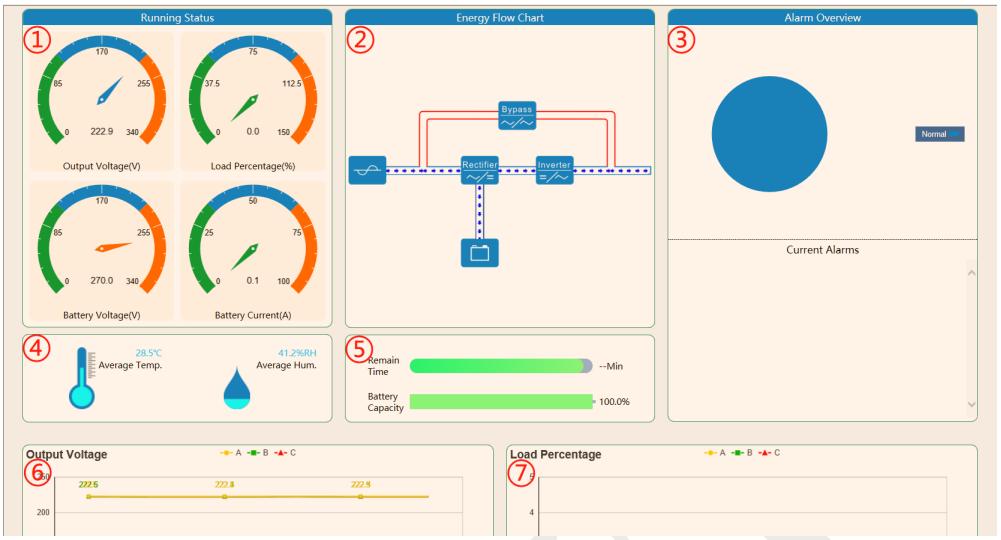

Before opening the management webpage, make sure that your computer and UPSViewer are connected normally and in the same network.

## 4.3 Introduction to user navigation with different permissions

The information displayed is different according to different user permissions. The navigation bar for different users is as follows, where admin is the highest authority administrator.

## 4.4 System overview

The figure below is the system overview interface:




- **Running Status**

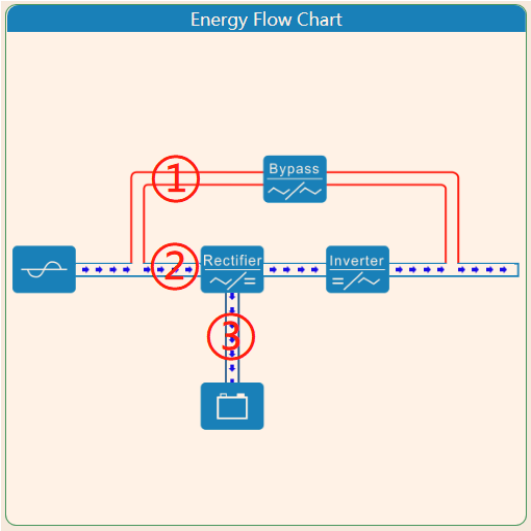
There are 4 display meters, which display the current output voltage, load rate, battery voltage and battery current respectively. It is convenient for users to quickly obtain current UPS data.

The meaning of the color segment of "load rate running status meter":

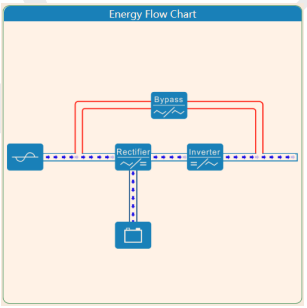
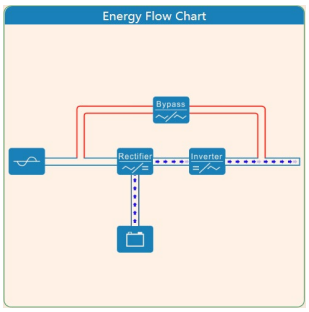
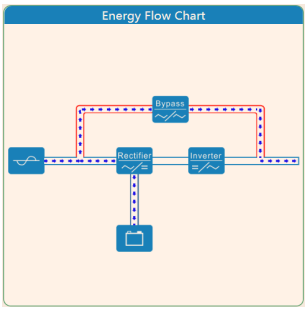
| Signal light | Status and meaning |
|---|---|
| Color | Meaning |
| Green | UPS light load |
| Blue | UPS heavy load |
| Orange | UPS overload（alarming color） |

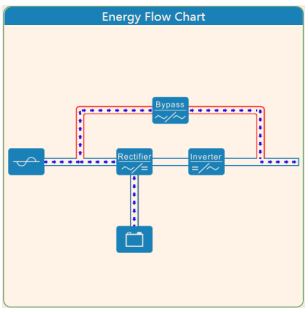
- **Energy Flow Chart**

Display UPS power flow state. Through the energy flow chart, the user can quickly distinguish the UPS power flow direction, bypass, rectifier, inverter working state.




① There will be an energy flow animation when UPS takes a bypass;
② There will be an energy flow animation when the UPS is in rectifying invert;
③ When the battery is charged and discharged, there will be an energy flow animation.

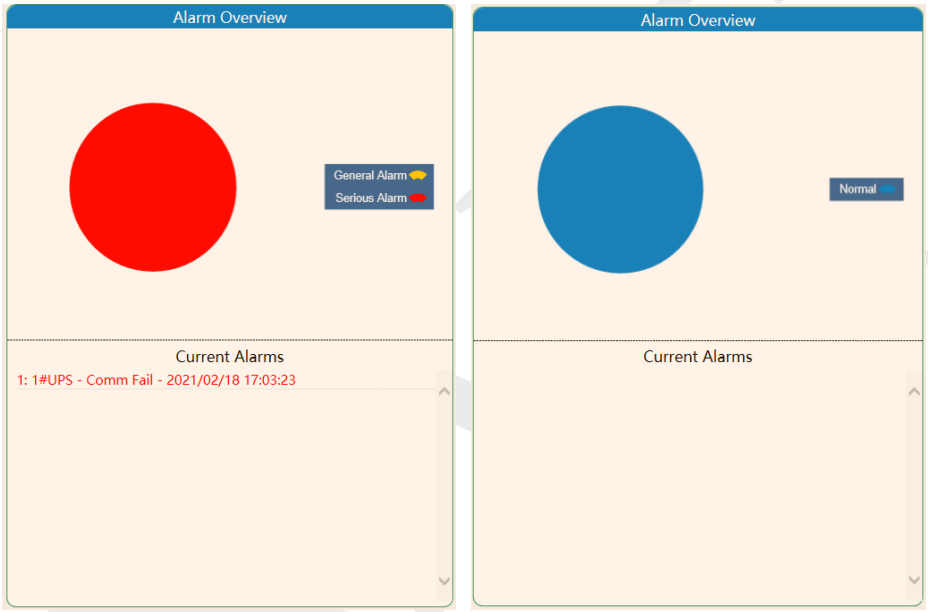
| UPS working mode | Corresponding energy flow |
|---|---|
| Normal mode |  |
| Battery mode |  |
| Bypass mode |  |

| | |
|---|---|
| Manual bypass mode |  |



- **Alarm Overview**

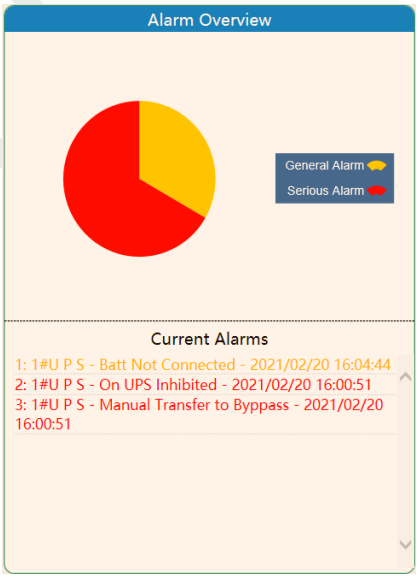
The alarm information is divided into levels: no alarm (blue), general alarm (yellow), serious alarm (red). The alarm overview is displayed as a percentage in a circular chart.





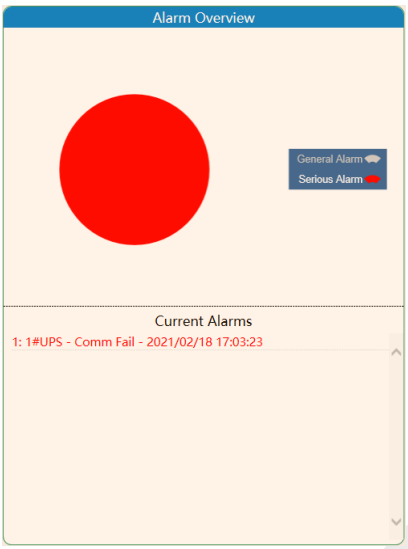
The user can click "General Alarm" "Serious Alarm" to determine the chart display form.

The default mixed display of "General Alarm" and "Serious Alarm":

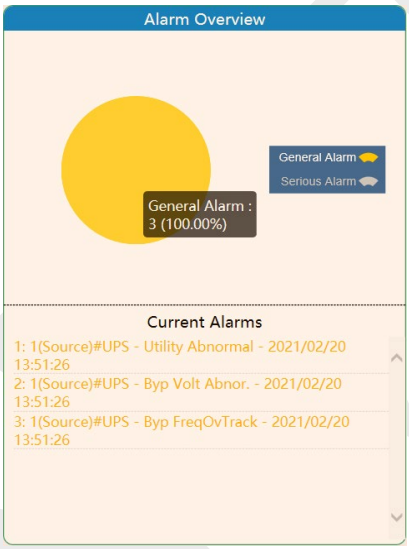




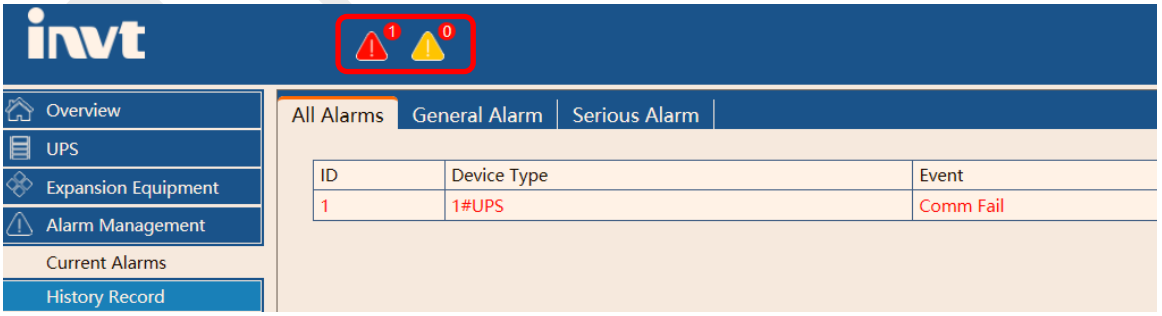
Hide "General Alarm":




Hide "Serious Alarm":

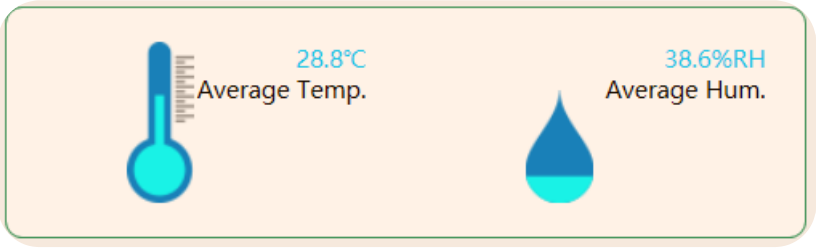



Alarm indicator icon:

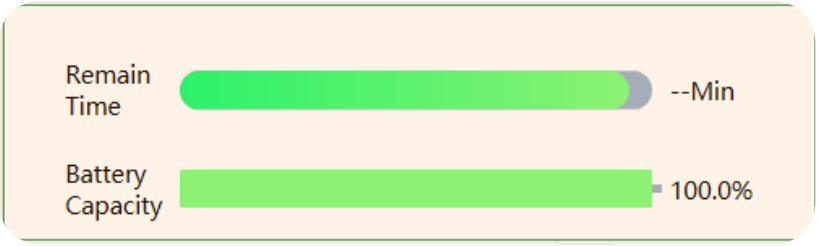



Here, in a more prominent position, indicates the number of general and serious alarms. It is convenient for users to quickly grasp the alarm information. Users can click the alarm indicator icon to quickly jump to the alarm management interface.

- **Temperature and Humidity information**

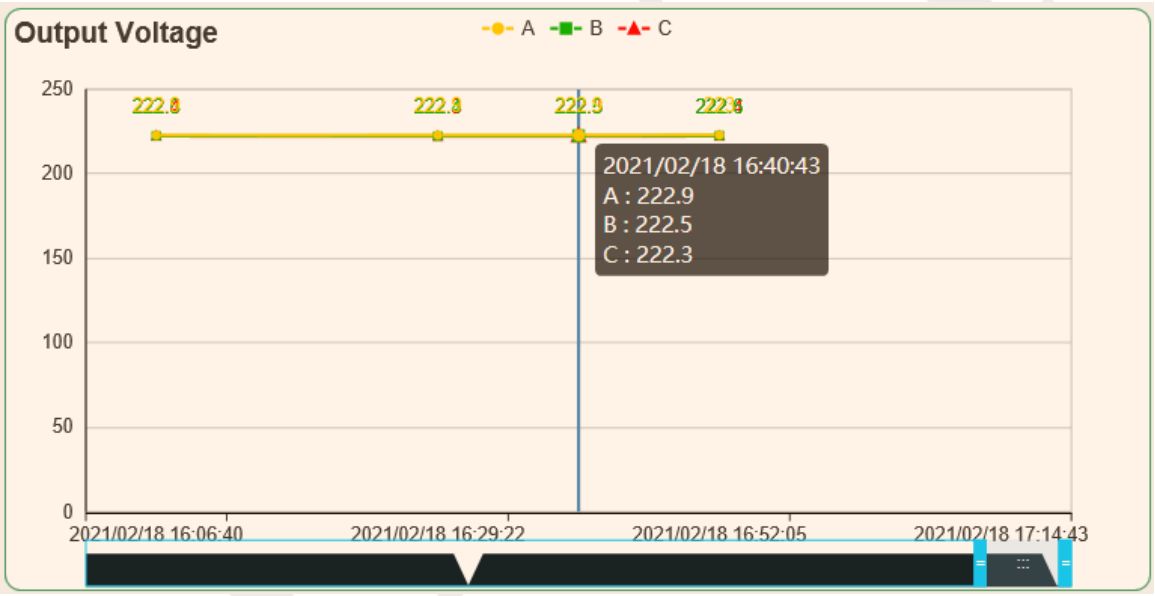



- **Battery information**



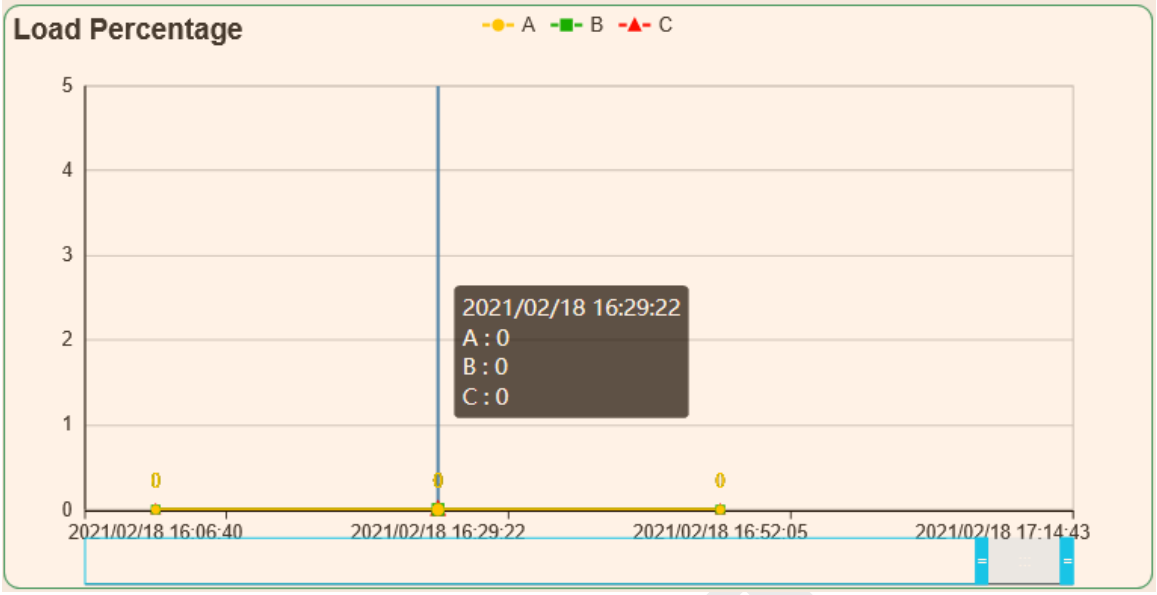

Display the remaining battery time and battery capacity. (The battery information will only be displayed when the UPS battery module is connected).

- Output Voltage




The abscissa is the time axis, and the time interval can be adjusted by pulling the slider. When the output voltage is abnormal or sudden, it is convenient for users to quickly lock the abnormal voltage time point.

- **Load Percentage**



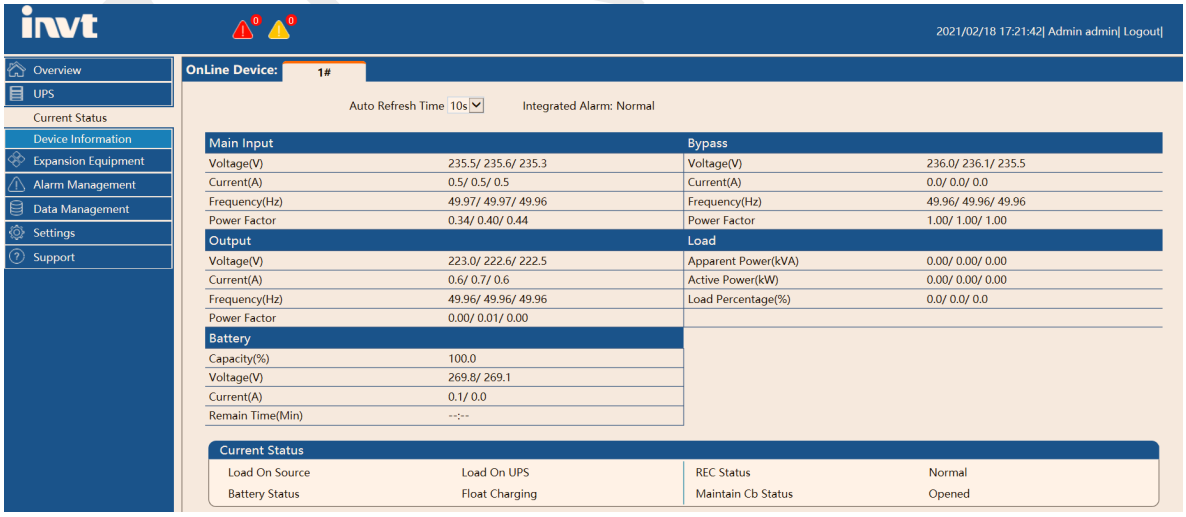

When the UPS product is three-phase type, there will be three-phase data display of phase A、phase B and phase C, which can be set to display data items in the chart through optional settings.

## 4.5 UPS

### 4.5.1 Current Status

【UPS】→【Current Status】

UPS is divided into three-phase and single-phase. According to the number of input and output phases, the model monitored by UPSViewer here is a three-phase, and each item of data is divided by '/', corresponding to "A-phase data/B-phase data/C-phase data", while a single-phase has only one data item.




- **Main Input、Bypass、Output:**

  These three areas all show: voltage, current, frequency, power factor data in different states.

- **Load:**

  Apparent power, active power, and load factor information.

- **Battery：**
  Capacity, Voltage, Current, Remain Time (Min).
- **Current Status:**

Current status bar: Display UPS power supply mode and battery status. The user can select the refresh time in the [Auto Refresh Time] drop-down list (5s/10s/30s/60s) to set the update speed of the UPSViewer webpage data.

According to the UPS type, it can be displayed in two forms (cabinet, module). The following figure shows the three-phase data of the cabinet (the same applies to other cabinet models).

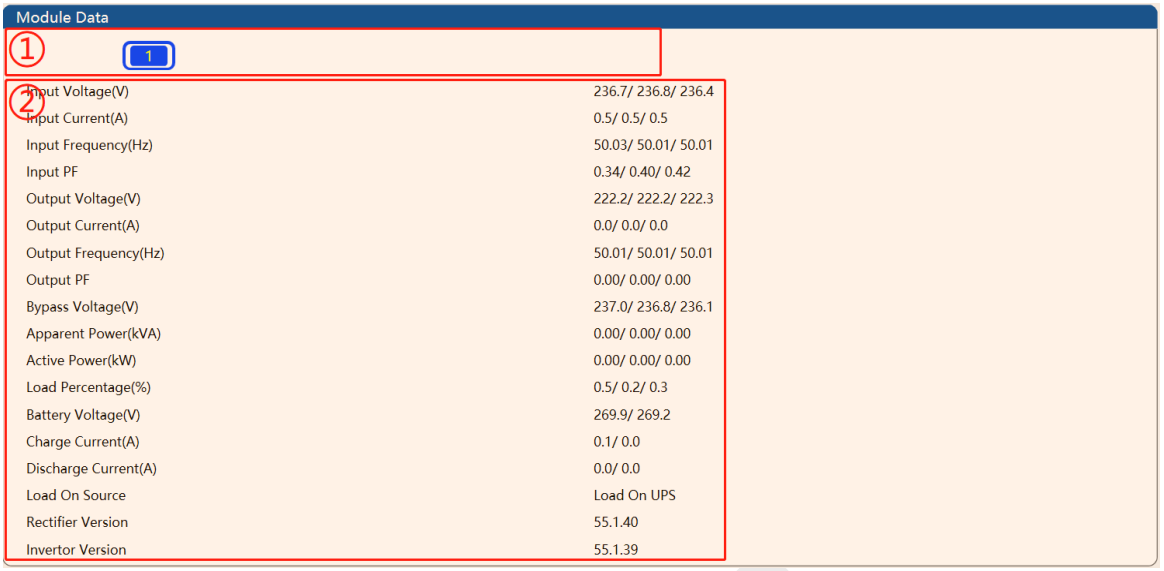
| Main Input | | Bypass | |
|---|---|---|---|
| Voltage(V) | 236.5/ 236.6/ 236.4 | Voltage(V) | 236.8/ 237.0/ 236.2 |
| Current(A) | 0.5/ 0.5/ 0.5 | Current(A) | 0.0/ 0.0/ 0.0 |
| Frequency(Hz) | 49.96/ 49.95/ 49.96 | Frequency(Hz) | 49.96/ 49.96/ 49.96 |
| Power Factor | 0.32/ 0.40/ 0.42 | Power Factor | 1.00/ 1.00/ 1.00 |
| **Output** | | **Load** | |
| Voltage(V) | 223.1/ 222.7/ 222.6 | Apparent Power(kVA) | 0.00/ 0.00/ 0.00 |
| Current(A) | 0.0/ 0.0/ 0.0 | Active Power(kW) | 0.00/ 0.00/ 0.00 |
| Frequency(Hz) | 49.95/ 49.95/ 49.95 | Load Percentage(%) | 0.0/ 0.0/ 0.0 |
| Power Factor | 0.13/ 0.00/ 0.00 | | |
| **Battery** | | | |
| Capacity(%) | 99.1 | | |
| Voltage(V) | 269.8/ 269.1 | | |
| Current(A) | 0.1/ 0.0 | | |
| Remain Time(Min) | --:-- | | |

The following picture shows the monitoring UPS module (other module machines, the same model), display module data

**Module Data**

1

| | |
|---|---|
| Input Voltage(V) | 236.5/ 236.5/ 236.3 |
| Input Current(A) | 0.5/ 0.5/ 0.5 |
| Input Frequency(Hz) | 50.03/ 50.03/ 50.03 |
| Input PF | 0.34/ 0.40/ 0.43 |
| Output Voltage(V) | 222.1/ 222.2/ 222.3 |
| Output Current(A) | 0.0/ 0.0/ 0.0 |
| Output Frequency(Hz) | 50.03/ 50.03/ 50.03 |
| Output PF | 0.00/ 0.00/ 0.00 |
| Bypass Voltage(V) | 236.8/ 236.4/ 235.8 |
| Apparent Power(kVA) | 0.00/ 0.00/ 0.00 |
| Active Power(kW) | 0.00/ 0.00/ 0.00 |
| Load Percentage(%) | 0.5/ 0.2/ 0.5 |
| Battery Voltage(V) | 269.8/ 269.1 |
| Charge Current(A) | 0.1/ 0.0 |
| Discharge Current(A) | 0.0/ 0.0 |
| Load On Source | Load On UPS |
| Rectifier Version | 55.1.40 |
| Invertor Version | 55.1.39 |




① Online module number

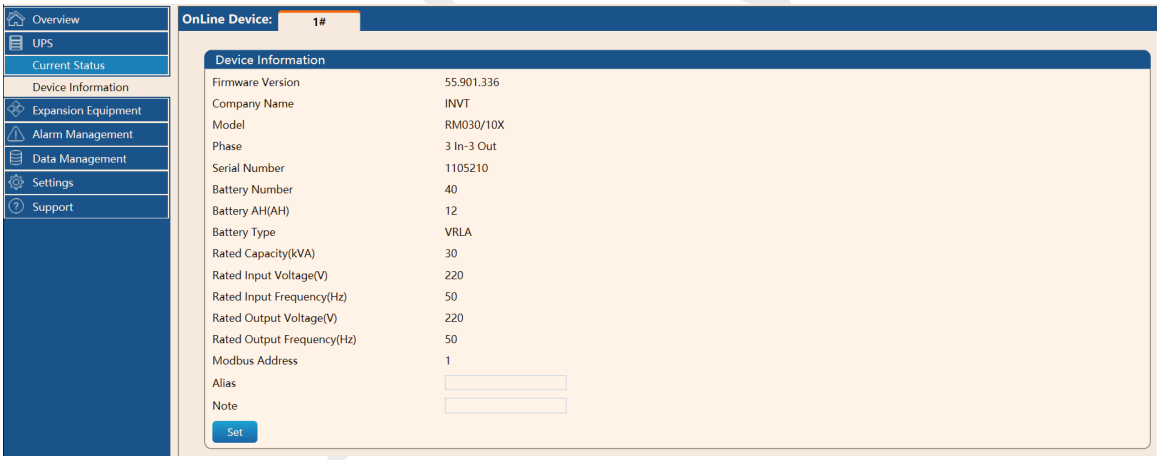
② Module UPS data

You can click the module number to switch, which is convenient to view the UPS information of each module. The figure above shows the UPS information of module 10.

### 4.5.2 Device Information

【UPS】→【Device Information】

This page mainly displays UPS information, company information, and Modbus address.



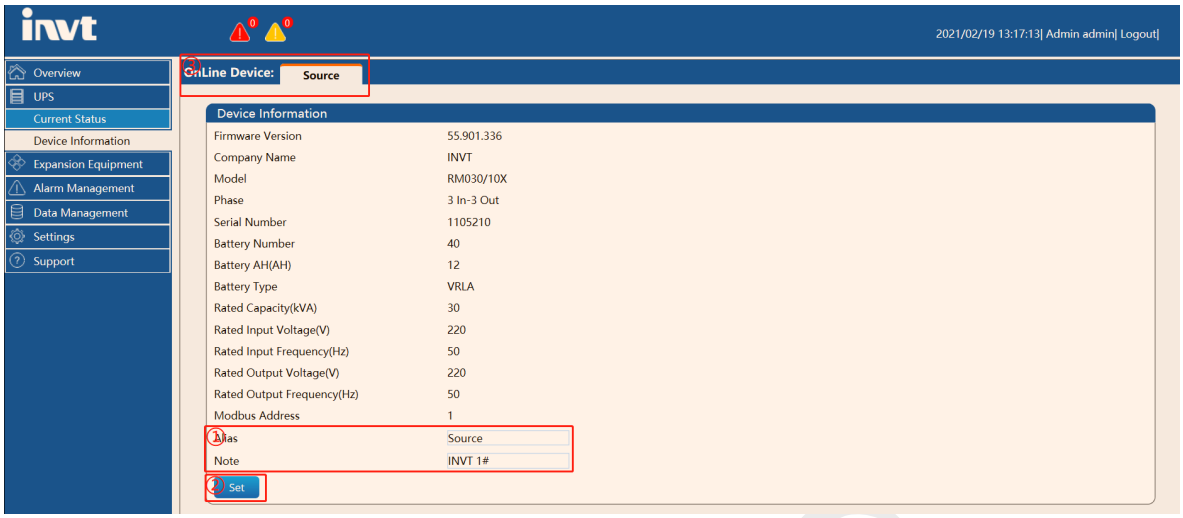

【Alias】【Note】Information setting: The alias remarks here are mainly identification letters added for the convenience of user management.

Specific applications are as follows:

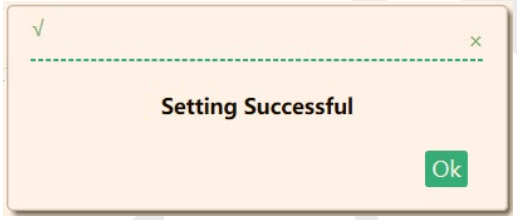
① Enter alias information in the alias information input box, and input remarks in the remark information input box;

② Click the【Settings】button;

③ After refreshing the web page, you can see the corresponding device alias.




If the setting is successful, the following prompt message box will be returned.



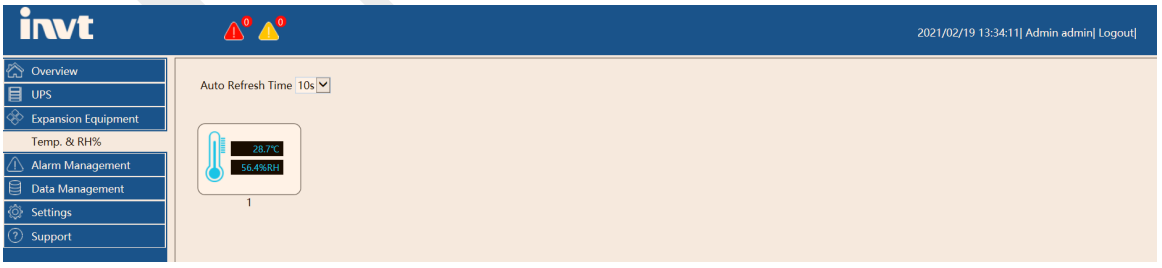

Refresh the interface, you can see the alias and remark information.

*Note: This setting function will not take effect after UPS communication fails.*

## 4.6 Expansion Equipment (this navigation bar will only be displayed when the expansion device is connected)

【Expansion Equipment】

Expansion equipment: equipment other than UPS.




### 4.6.1 Automatically search and add devices (search for devices)

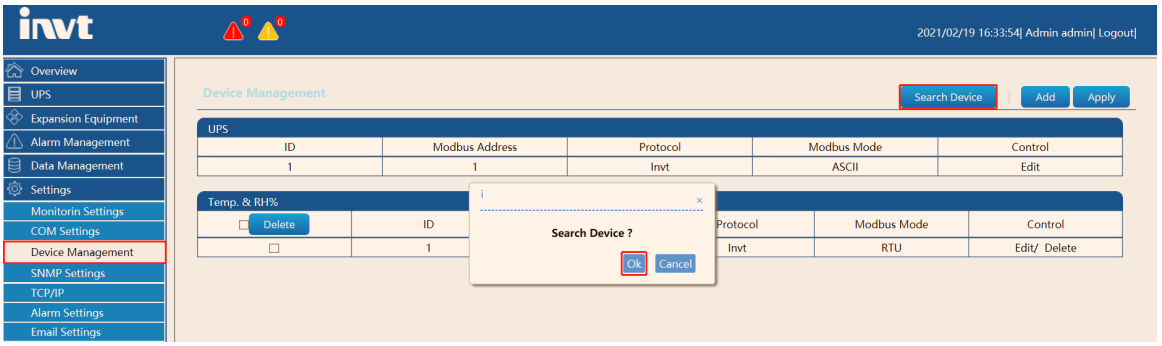
*Note: This function currently supports water immersion expansion equipment, temperature and humidity expansion equipment. For expansion devices of other manufacturers, refer to "Adding Devices Manually".*

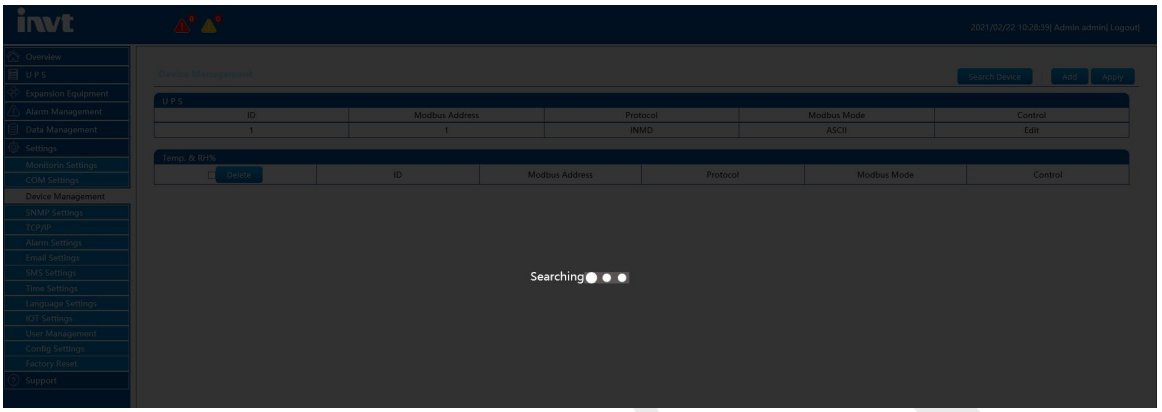
The physical map of the water immersion expansion equipment, temperature and humidity expansion equipment is as follows:

The following is the specific process of automatically searching and adding devices:

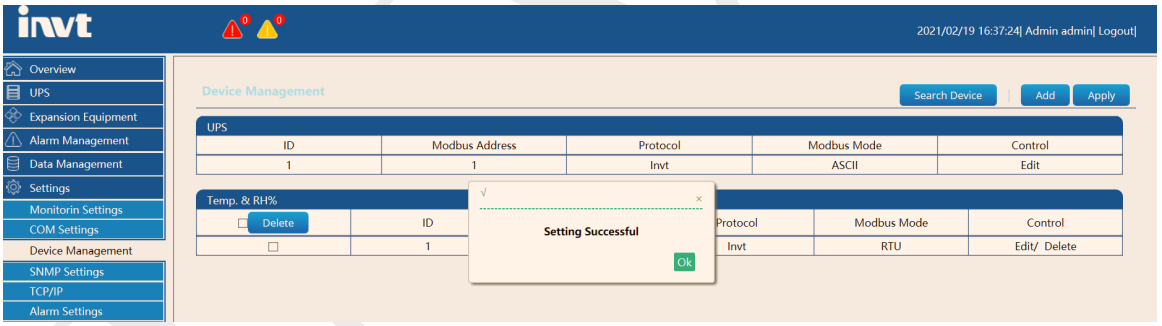
① Expand the device as shown below：

'COMM' interface is connected to the 'RS485' interface of the expansion device. Pay attention to the LCD of the expansion device. When the LCD screen lights up and there is a display, the physical connection is successful. Go to the【Settings】interface, click【Device Management】, click【Search Device】, and click【OK】in the pop-up dialog box.

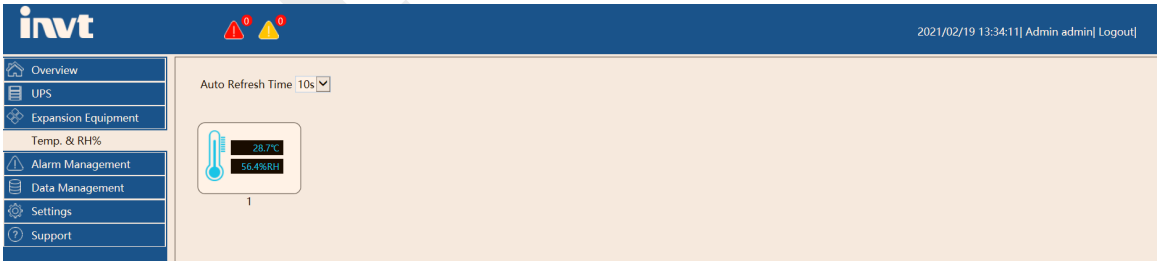


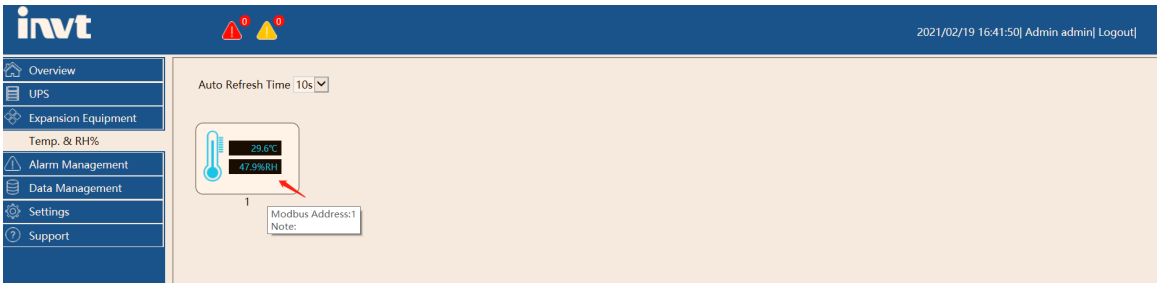

② After searching for the device, click【Apply】. After the application is successful, a prompt dialog box will pop up and the device information will be searched.

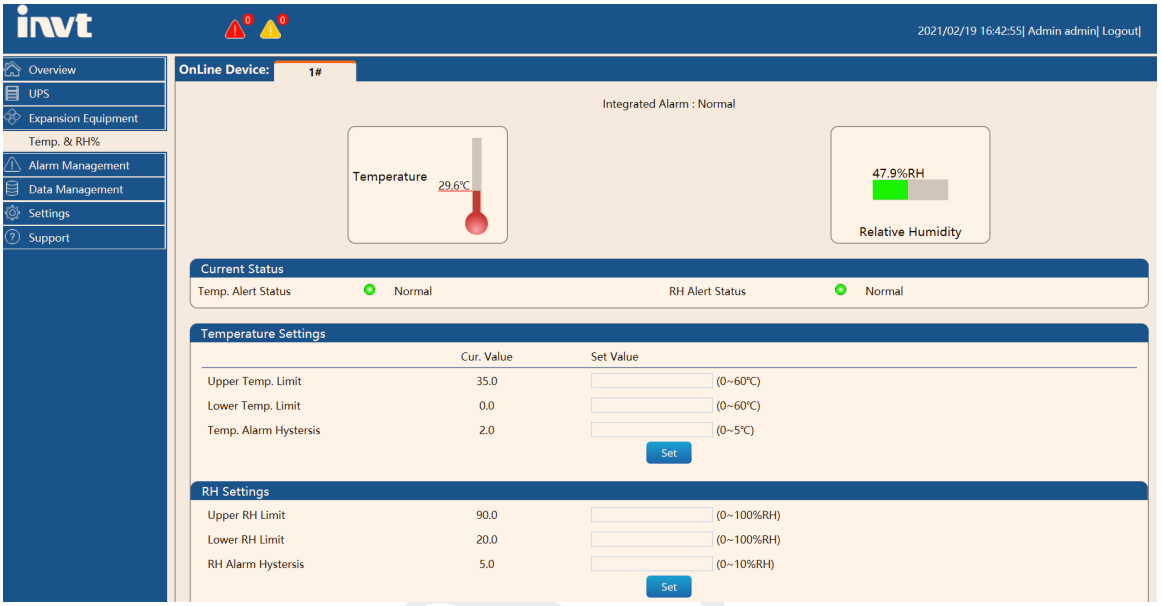



At this time, the expansion device has been added successfully, and the refresh interface will display the expansion device under the【Expansion Equipment】navigation bar.




③ Click the icon to open the extended device interface.



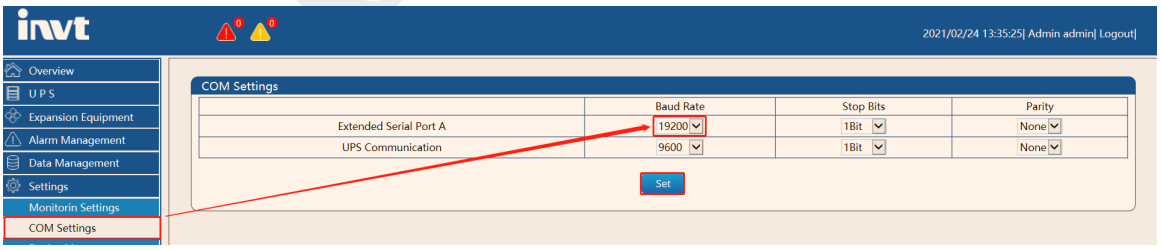

Temperature and humidity expansion device interface: provide, temperature alarm upper limit, temperature alarm lower limit, temperature alarm return difference threshold setting. This setting value will be used as the temperature and humidity alarm judgment condition, and the user can set it according to the actual working environment.

### 4.6.2 Manually add device

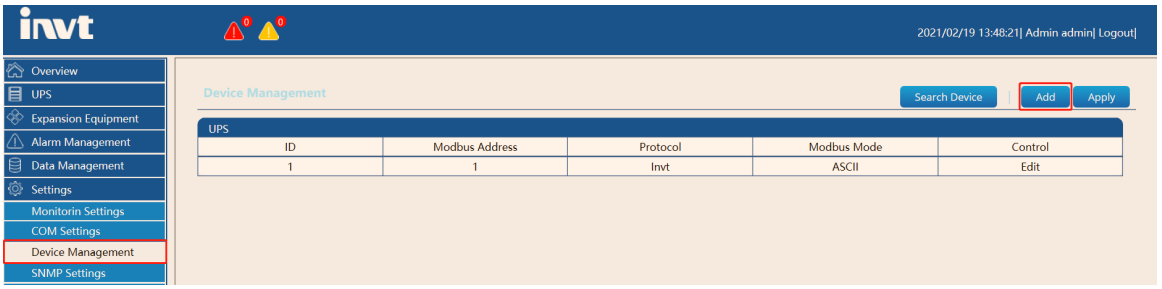
■ **Manually add "SMS Alarm"**

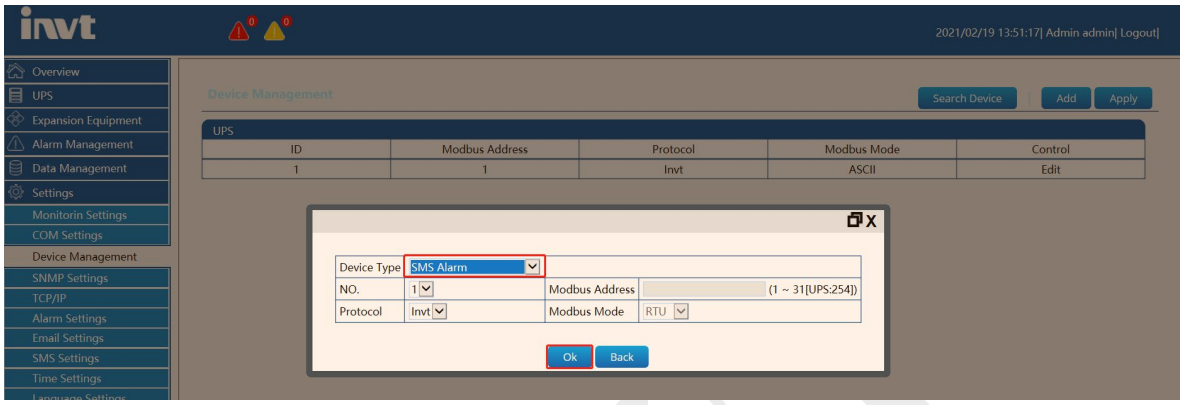
The detailed operation process is as follows:

① Set the baud rate to "19200", [Settings] → [COM Settings] → "Extended Serial Port A" baud rate to 19200, and click the [Set] button to save the settings. As shown below

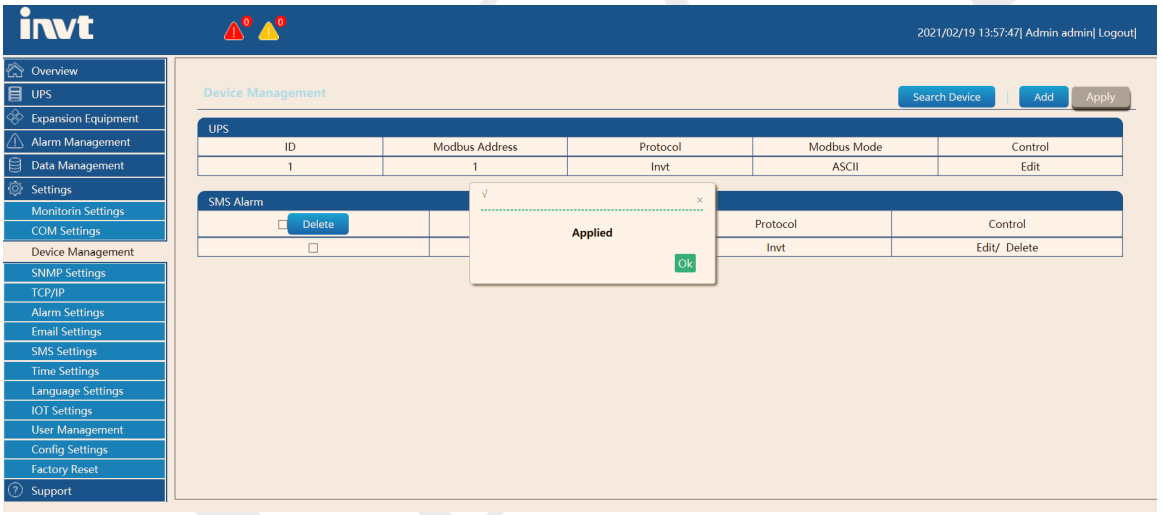



②【Setting】→【Device Management】→【Add】



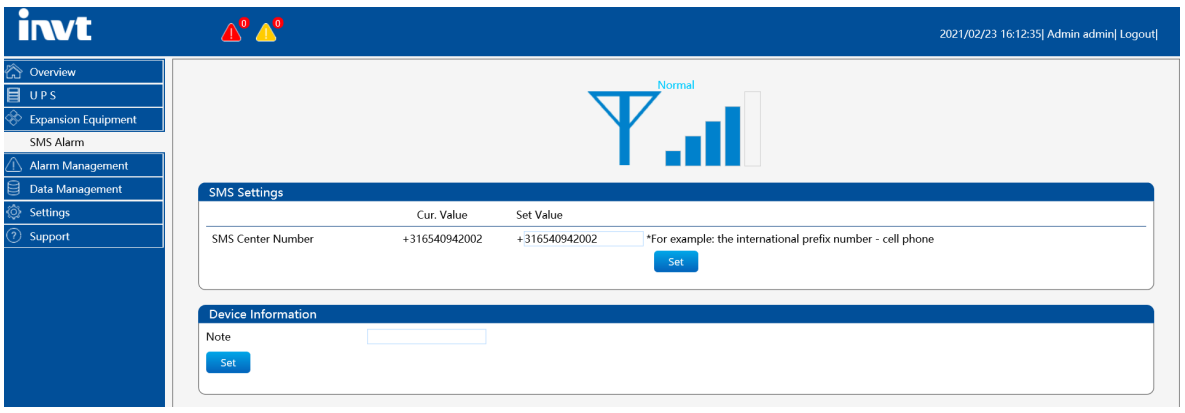




③ Enter the corresponding information in the pop-up information input box, and click the【OK】button.




④ Click the【Apply】button. So far, manually add the application successfully.

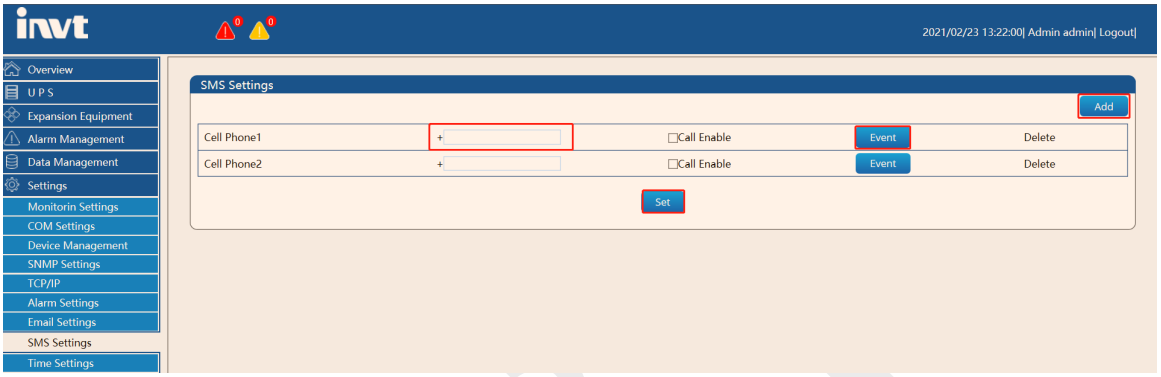
⑤ Enter the [Expansion Equipment] → [SMS Alarm] page to check whether the communication is normal;



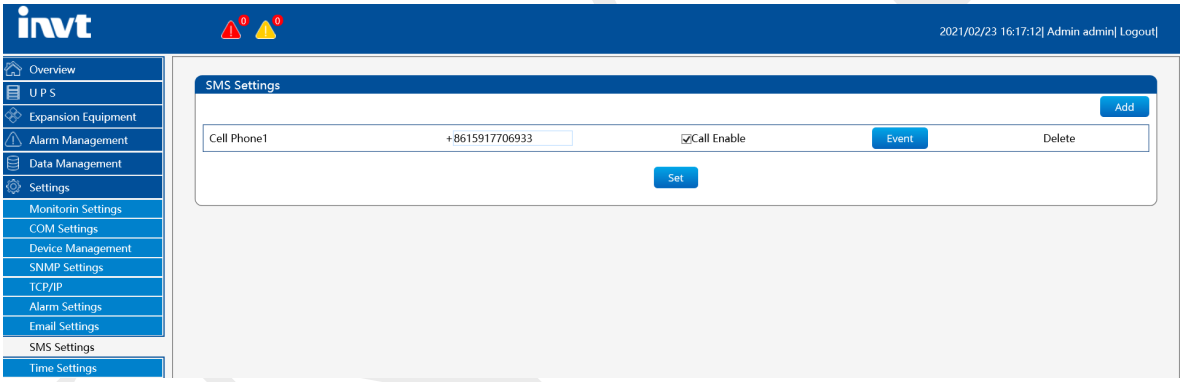
⑥ Under normal communication conditions, check if there is a SMS center number.

*Note: By default, if you insert different operators, there will be a corresponding SMS center number by default. If not, manually fill in the SMS center number that the card matches. The SMS alarm signal is best to be above 3 bars to ensure that the SMS can be sent out in time.*

Users can customize the alarm events to be sent.




&




① Click the "Add" button. If there is no such requirement, you can ignore this step (supports up to 20 mobile phone numbers);

② Fill in the recipient's phone number;

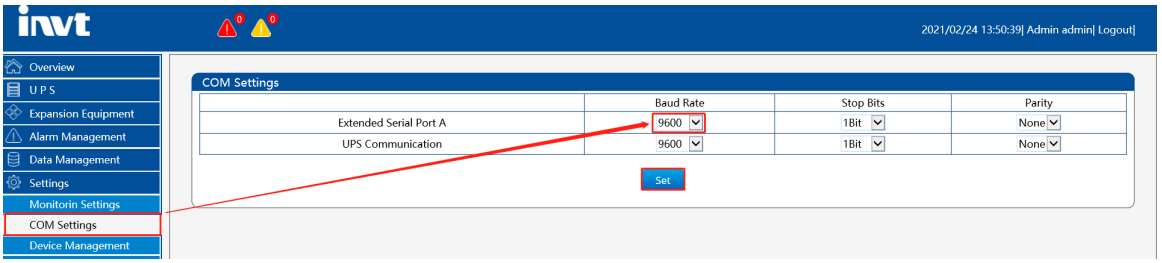
③ Click the "Event" on the right of the recipient in step.

④ Check the events that need to trigger the sending of SMS. After checking, you must click the X in the upper right corner to close.

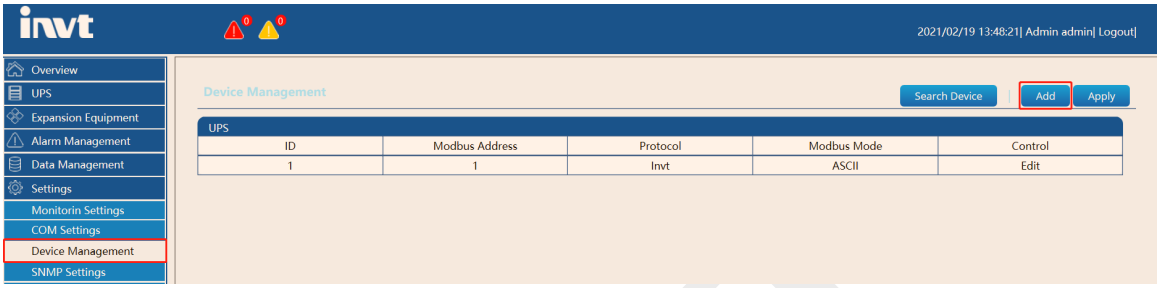
## ■ Manually add "Temperature and Humidity Sensor".

The detailed operation process is as follows:

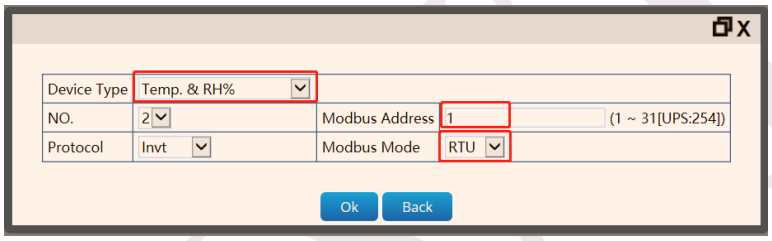
① Set the baud rate to "9600", [Settings] → [COM Settings] → "Extended Serial Port A" baud rate to 9600, and click the [Set] button to save the settings. As shown below




② 【Setting】→【Device Management】→【Add】




&

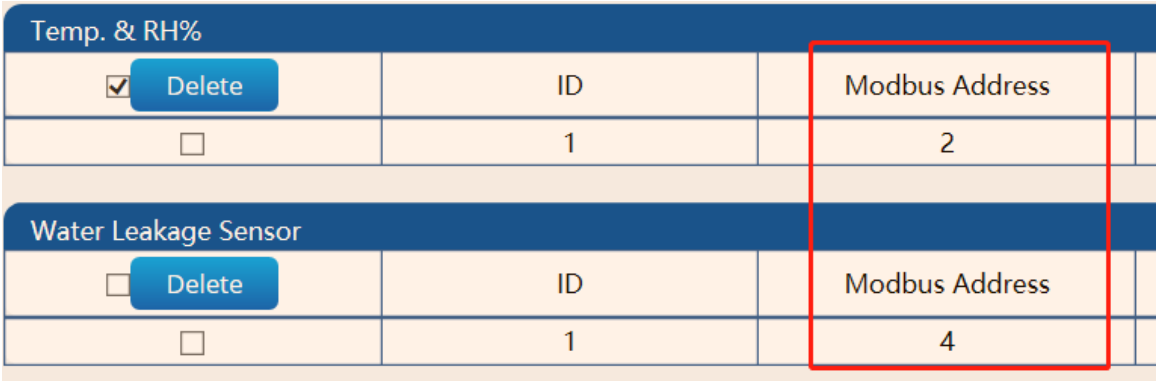



Select RTU mode for Modbus mode.

*Note: The Modbus address here is read and filled on the LCD screen of the device. If the address is wrong, it will cause the failure to add the device.*

③ Click the【Apply】button. So far, manually add the application successfully.

When there are multiple expansion devices, the Modbus address of the temperature and humidity sensor or the water sensor cannot be the same. If the Modbus address is the same, it will cause communication abnormality.



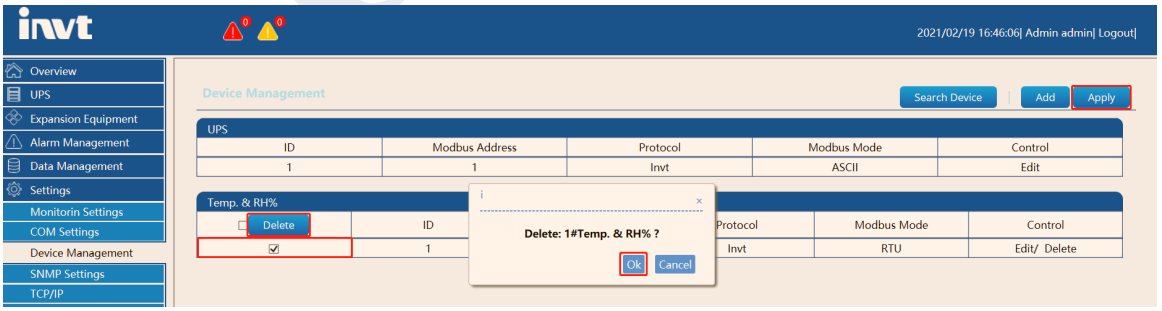

The Modbus address of the expansion device can be manually set through the DIP switch.

■ **Manually add "Water Leakage Sensor".**

Omit.

### 4.6.3 Delete expansion device

Take deleting the SMS alarm as an example:




Specific steps are as follows:

① Enter the 【Settings】interface, and click 【Device Management】;

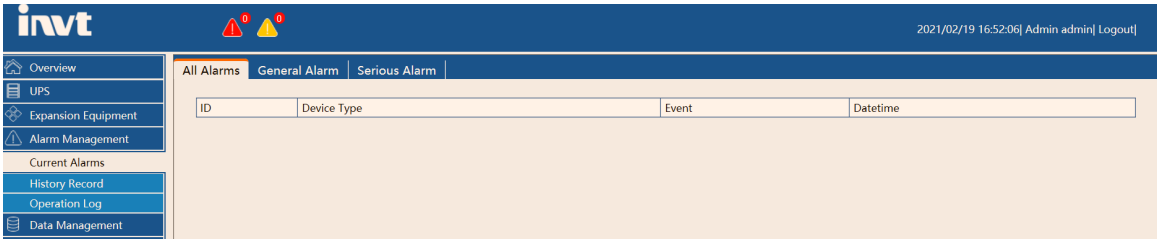
② Find the device and click the 【Delete】 button;

③ Click the 【Apply】 button.

# 4.7 Alarm Management

## 4.7.1 Current Alarms

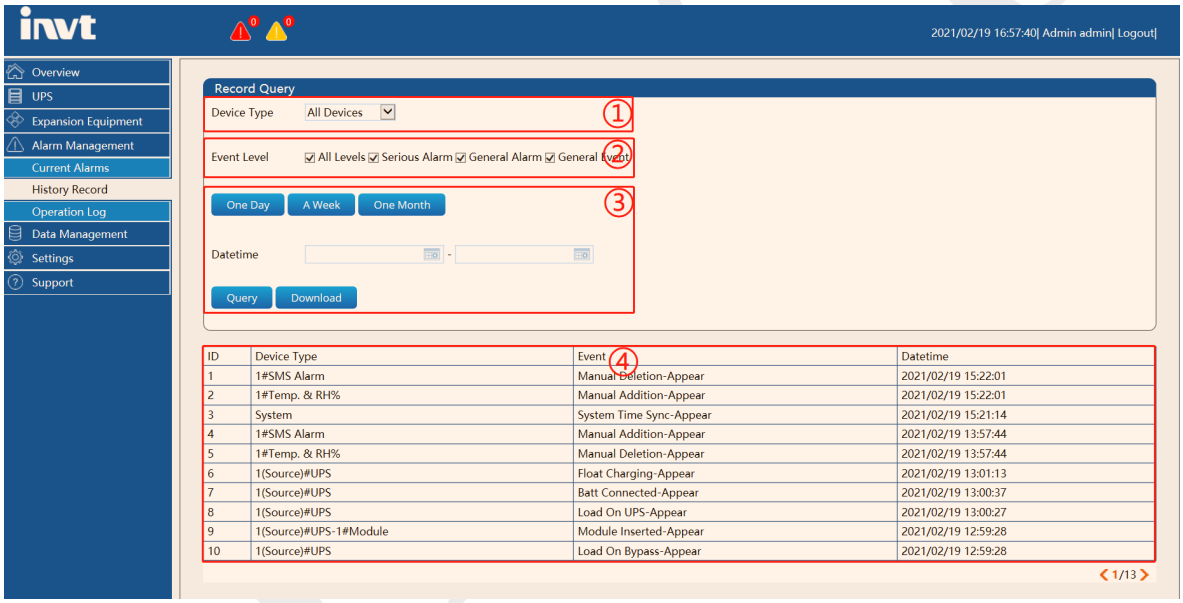
【Alarm Management】→【Current Alarms】




All alarm information will be displayed here in the form of a list, and the data information includes device type, event, date and time. General alarms: filter to display general alarm information, and severe alarms to filter to display severe alarm information.

## 4.7.2 History Record

【Alarm Management】→【History Record】




History query:

① **Device type:**

In the drop-down list of device type, you can select (all devices/UPS/system) for data filtering.

② **Event level:**

Set up (all levels, serious alarms, general alarms, common events) options.

③ **Query by time:**

Quick query button (last day, last week, and last month) is set, and users can also customize the start time and end time. After selecting the query conditions, click the【query】button.

④ **Query information display.**

*Note: When the storage space of UPSViewer is less than or equal to 10MB, a serious warning of "Insufficient memory space" will be issued. When the storage space of UPSViewer is less than or equal to 5MB, historical data will not be stored. Please clean up the data space and delete unnecessary historical data.*

### 4.7.3 Operation Log

【Alarm Management】→【Operation Log】

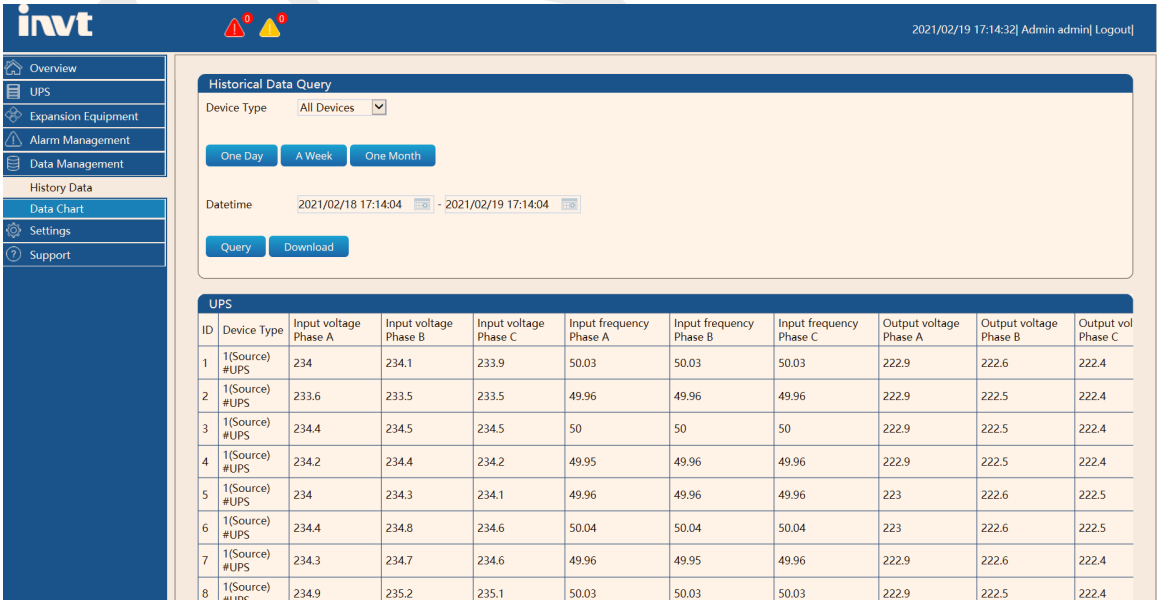
Operation log records the operation information of the manager.

## 4.8 Data Management

### 4.8.1 History Data

【Data Management】→【History Data】

This is the historical data page, and the "Last Day", "Last Week" and "Last Month" query buttons are set here.

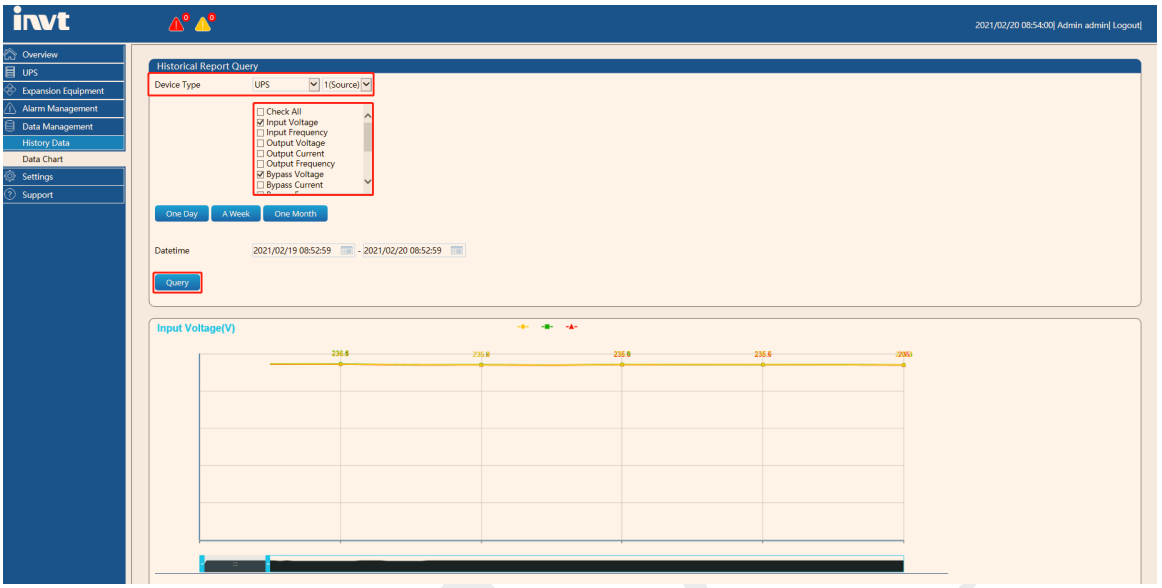



### 4.8.2 Data Chart

【Data Management】→【Data Chart】

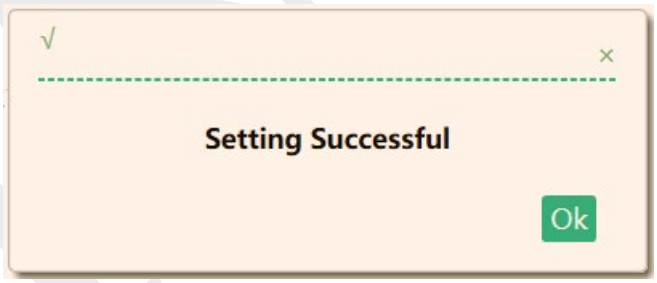
Historical reports show historical data in the form of charts to improve

the efficiency of information extraction. In the【equipment type】drop-down list, you can select #1 UPS, #2 expansion equipment and equipment number. You can select the number of charts to be generated according to your needs, select all, input voltage, input frequency, output voltage, and output current, output frequency, bypass voltage, bypass current, etc. Check the desired information and click the query button to generate the corresponding chart.



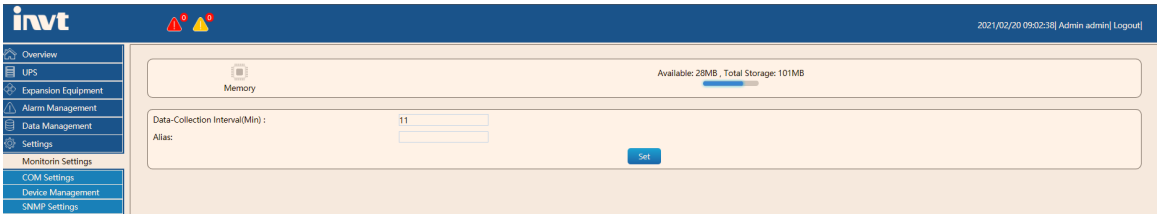

## 4.9 Settings (administrator user specific permissions)

*Note: 【Settings】is a special authority for the administrator user. After filling in the various setting information, you must click the【OK】button to prompt "Settings successful" to take effect.*




### 4.9.1 Monitoring Settings

【Settings】→【Monitoring Settings】




The information displayed on this page is as follows:

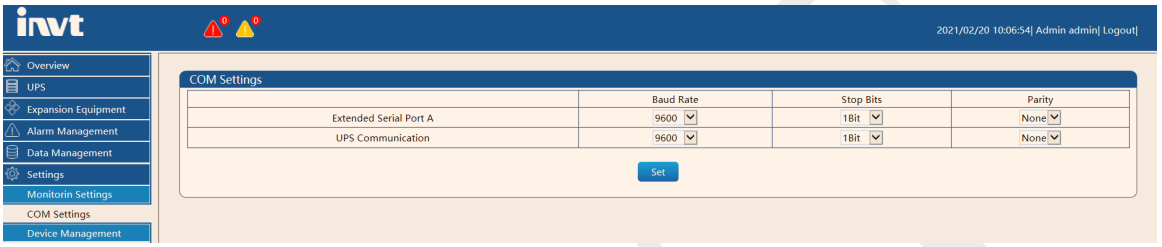
- Provide internal storage space information, total storage space size, remaining capacity size information display.
- History save time interval, alias Settings.

History records time interval, the default for 1 minute interval keep records of history, the user can set according to their own requirements to save history records the time interval The alias Settings, set the alias of buy here Mainly used in the email alarm SMS alarm Set an alias, post a message warning will send alarm information as the sender information, convenient for the user The UPS a place

### 4.9.2 COM Settings

【Settings】→【COM Settings】

This is the serial port communication setting page, which provides users with settings for the baud rate, stop bit, and verification type of the extended serial port and UPS communication.

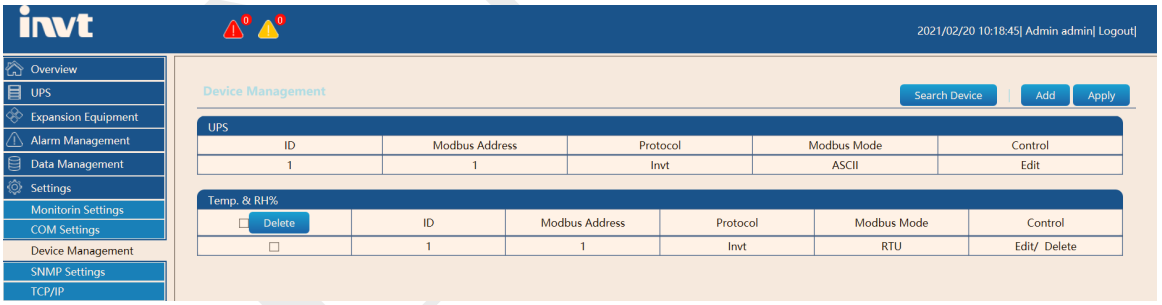



*Note: The setting information in the【COM Settings】interface must be consistent with the communication setting information of the UPS, otherwise it will cause the management webpage to fail to communicate with the device.*

### 4.9.3 Device management

【Settings】→【Device management】

The Device management is divided into two areas:



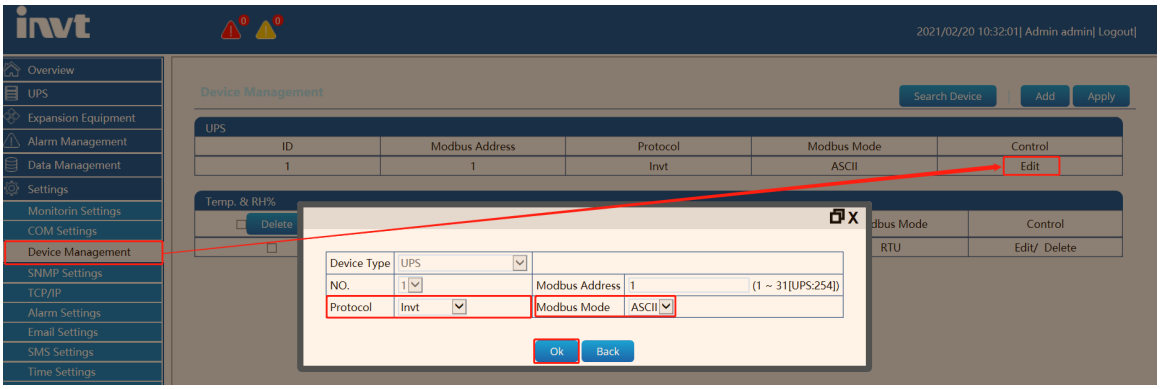

- **Device management（UPS）**

UPS device management, provide users with the modification operation of UPS Modbus address UPS communication protocol Modbus mode. UPS here is the default device. As long as the UPSViewer is powered on and works normally, it will display by default without the need for users to add devices.

Modbus Address: The web page is set to '1' by default, but here must enter the Modbus address for the UPS product.

Now support: Invt, Megtec31, Megtec33 communication protocols. As for 'Invt' protocol (Invt small capacity UPS 1-3KVA and HTX 6~ 20 KVA currently does not apply)

Modbus mode is divided into: RTU, ASCII.




*Note: The modification of the UPS device management information is related to whether the UPSViewer can communicate with the UPS normally. The Modbus address protocol Modbus mode setting here is consistent with the setting information on the UPS control panel; otherwise it will cause a communication failure event to occur.*

How to check the communication information of the UPS, if necessary, please refer to the UPS《User manual》or consult the UPS distributor.

The specific setting steps are as follows:

① 【System Settings】→【Device Management】;

② Click the【Edit】button;

③ Select your communication protocol;

④ Select your Modbus mode;

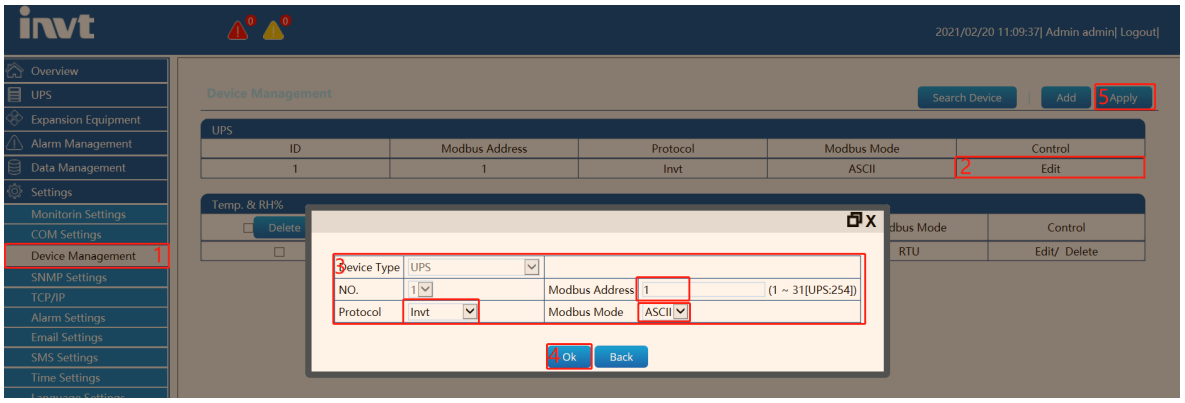
⑤ Click 【OK】&【Apply】button.

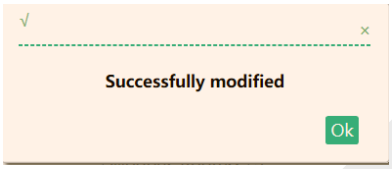
At the same time，change communication settings on the UPS.

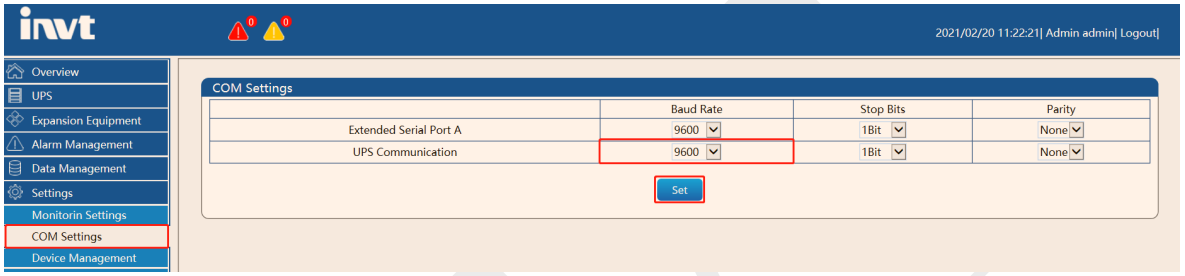
Different series of Invt UPS have different display screens, and the specific setting methods are also different. Users can refer to the corresponding UPS《User manual》for setting.

- **How to connect the 3-phase UPS?**

① On the UPSViewer webpage:

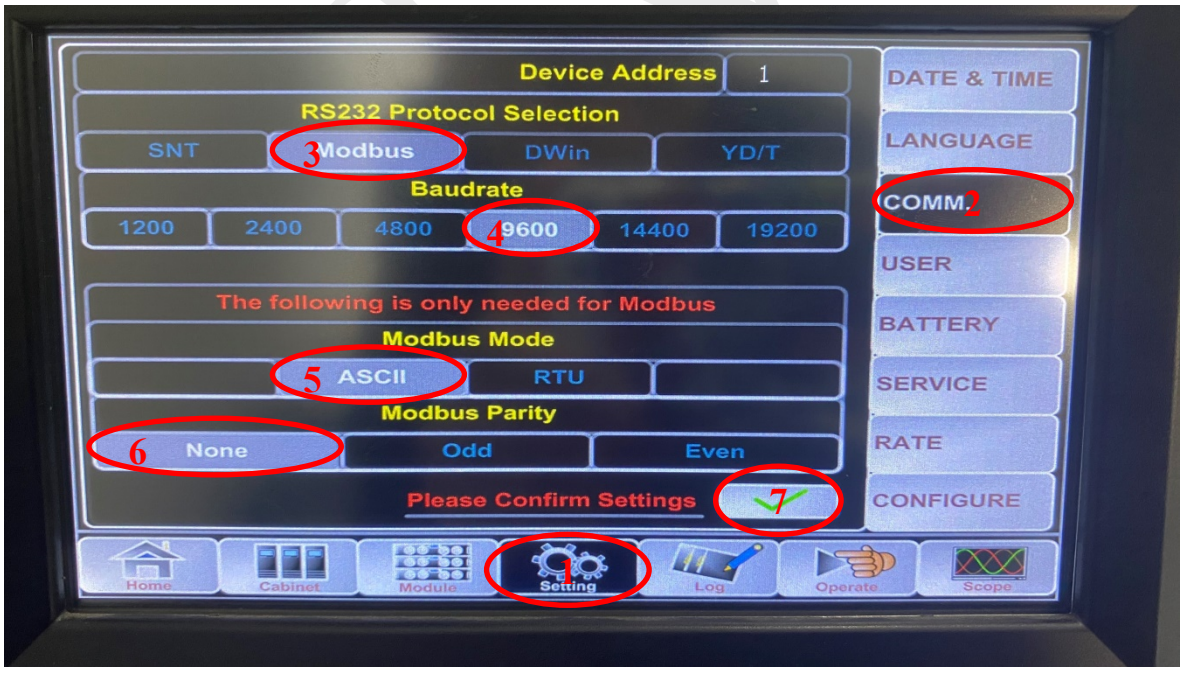



② On the 3-phase UPS control panel:

E.g. RM030/10X:




【Setting】→【COMM.】

① Read the "Device Address", fill in the Modbus address column of the UPSViewer webpage, and select "Modbus" in the 'R232 port protocol selection' ;

② 'Baud rate' selection: "9600". (Must be consistent with the UPSViewer webpage);

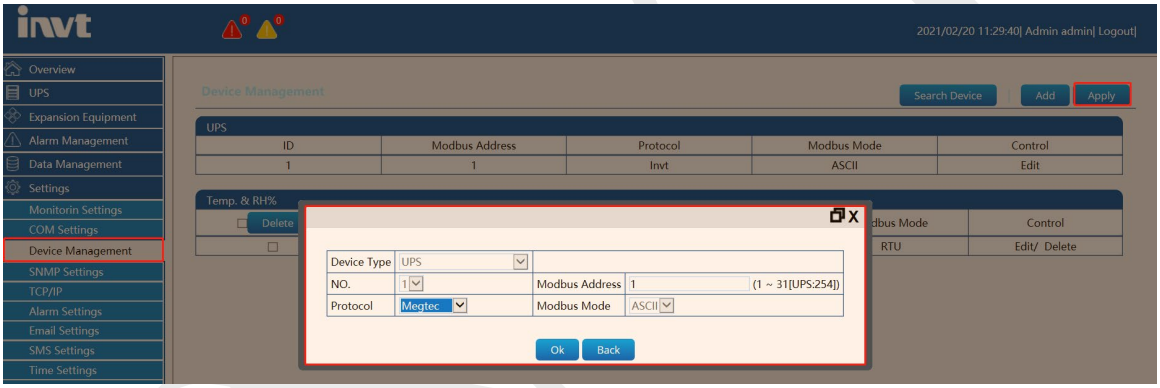
③ 'Modbus Mode' selection: "ASCII". (Must be consistent with the UPSViewer webpage);

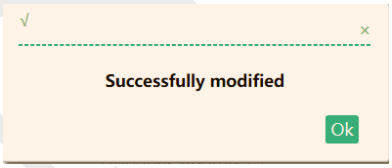
④ 'Modbus Parity' selection: "None". (Must be consistent with the management page);

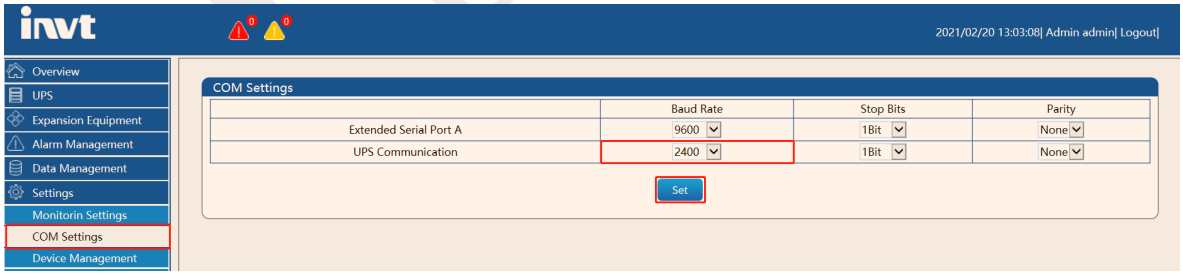
⑤ Select to confirm the settings.

➢ **How to connect the Single-phase UPS?**

① On the UPSViewer webpage:




② On the single-phase UPS control panel:

E.g. HT1103XS:

Omit.

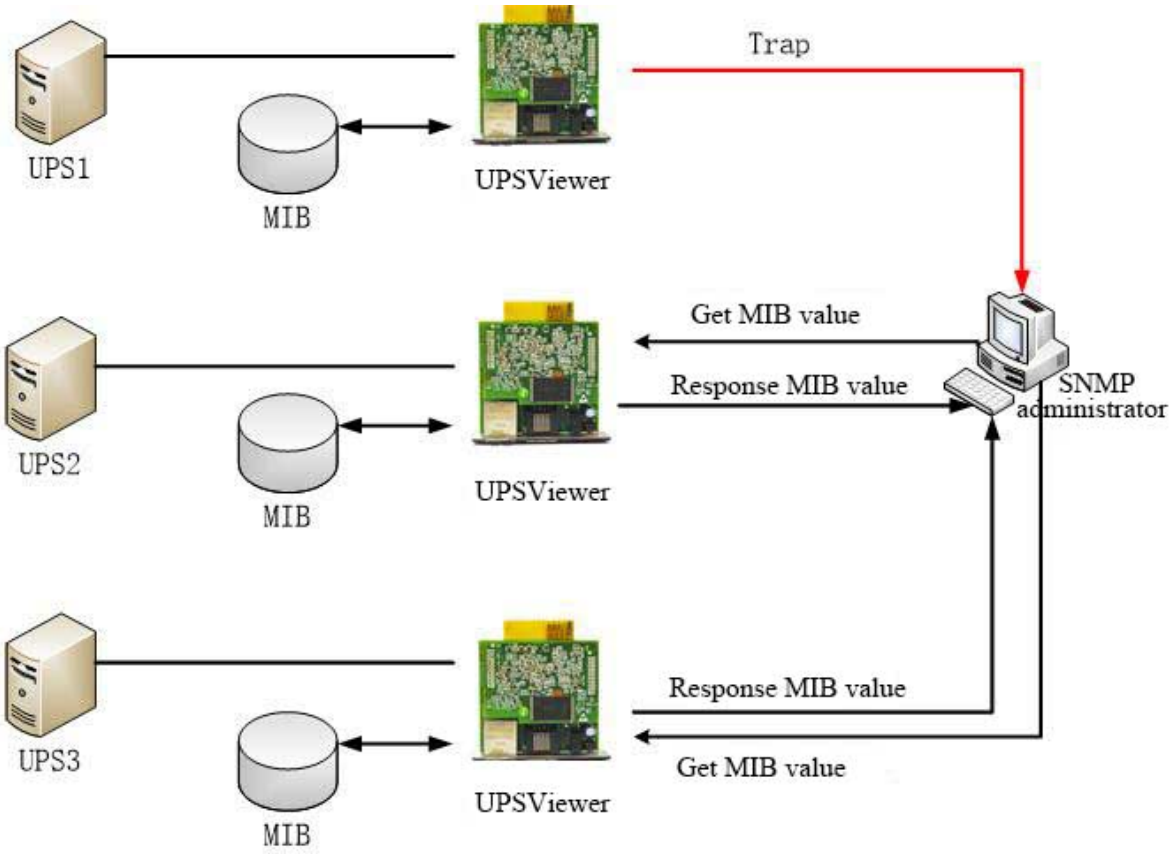
- **Device management（Expansion Equipment）**

Please refer to the previous chapter 4.6 Expansion Equipment.

### 4.9.4 SNMP Settings

【Setting】→【SNMP Settings】

Through the SNMP protocol, UPSViewer can also be monitored by NMS hosts on the network and actively send traps to specific hosts. It is convenient for users to centrally monitor and manage.




The commonly used versions of SNMP protocol are SNMPV1, SNMPV2, and SNMPV3. UPSViewer supports SNMP version:

| Webpage | SNMP protocol version support |
|---|---|
| UPSViewer Webpage | SNMPV1 |
| UPSViewer Webpage | SNMPV2 |
| UPSViewer Webpage | SNMPV3 |

**【General】**

**System Name:**

The name of this UPSViewer can be customized by the user for easy identification by management。

**System Location:**

It is up to the user to indicate the location of the upsViewer. When an online UPS has an alarm, the administrator can quickly find the location of the device, which is convenient for user management and maintenance.

**System Contact:**

**SNMP Port:**

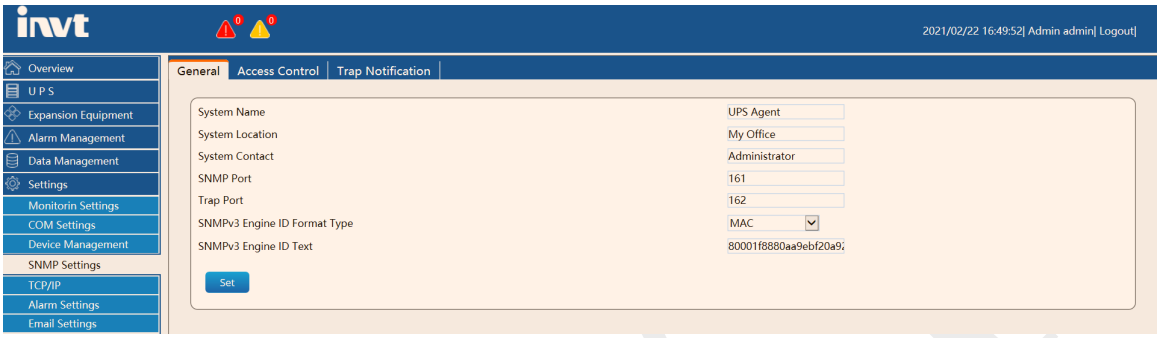
The port number for receiving and transmitting SNMP commands and information on the UPSViewer web page, the default is 161.

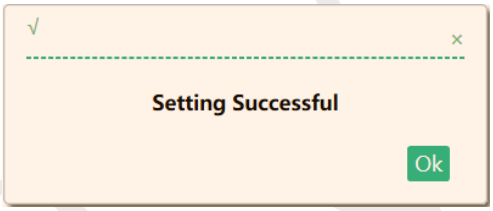
**Trap Port:**

Trap message receiving port number, the default is 162.

**SNMPv3 Engine ID Text:**

To use the SNMPv3 version, the UPSViewer web page must have a unique engine ID code as its unique identifier to generate authentication and encryption keys. The format of the identifier generation can be selected from the drop-down list (MAC Address / IPv4 / IPv6 / manual setting)

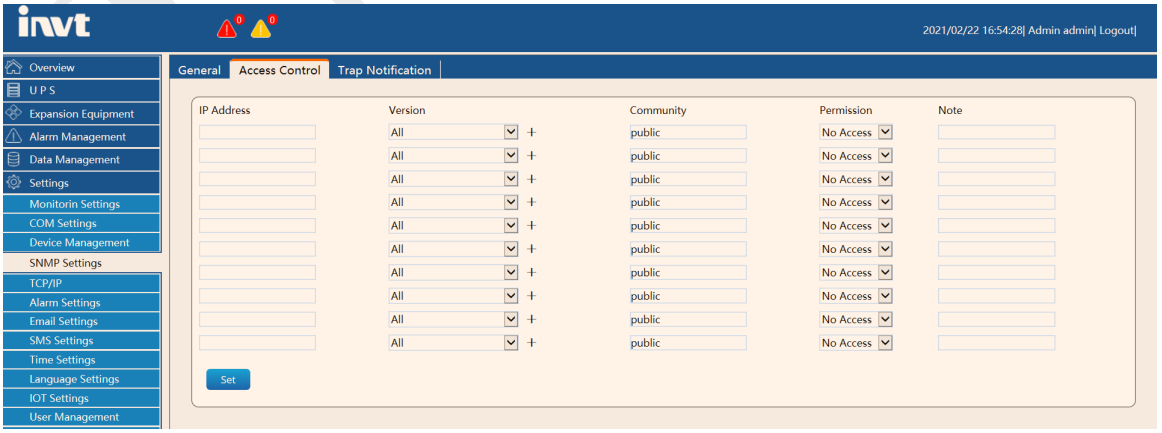



**【Access Control】**

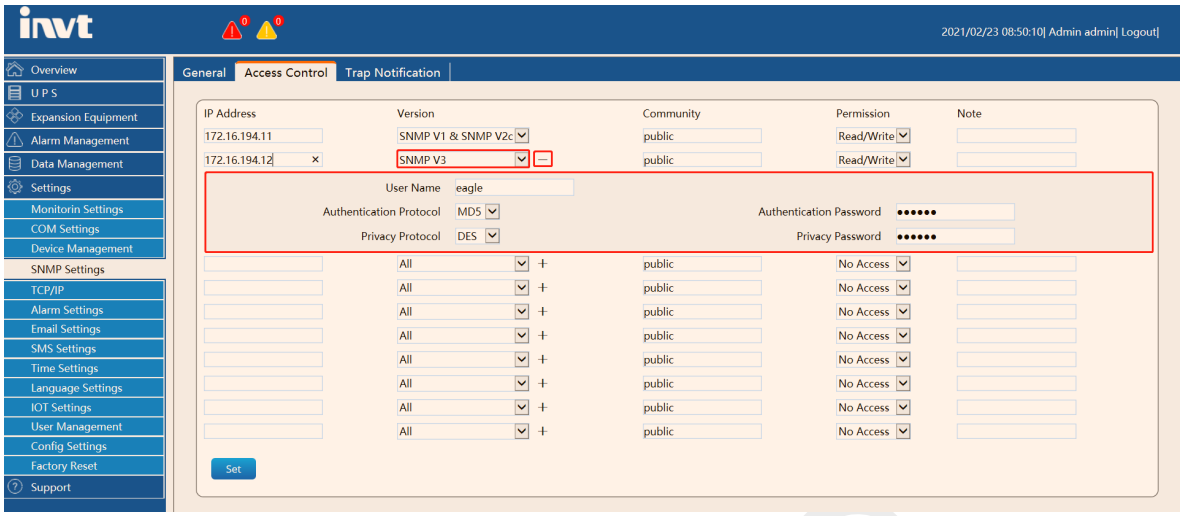
**IP Address:**

The user can designate ten hosts with specific IP addresses as the administrator, and just enter a legal IP address. If the administrator IP address is not set, any IP can be managed.




**Version:**

Set the SNMP version (All / SNMP V1&SNMP V2 / SNMP V3) used for communication with the administrator host. When you choose to use all and SNMP V3 versions, you need to set the user name / password / authentication / encryption information.




**Community:**

The administrator host and the UPSViewer web page need to set the same community string, otherwise communication will not be possible. The UPSViewer web community string is defaulted to public. The administrator host and the UPSViewer web page need to set the same community string, otherwise communication will not be possible. The UPSViewer web community string is defaulted to public.

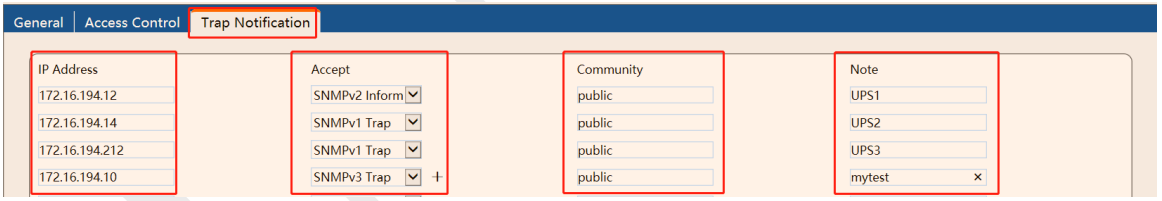
**Permission:**

Set the administrator's authority (no authority / read only / read & write).

**Note:**

Provide description information for easy query and management.

**【Trap Notification】**

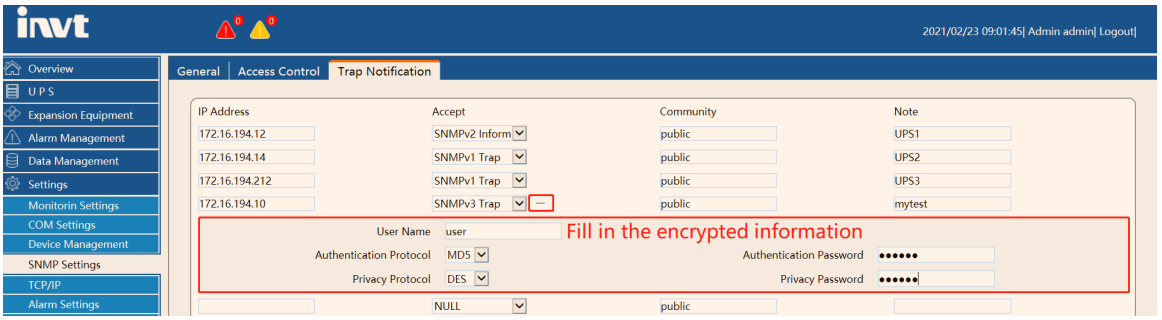



**IP Address:**

Ten people can be set to receive Trap notifications using IP addresses.

**Accept:**

Use the drop-down list to select which SNMP version Trap or Inform to receive. When selecting SNMPv3 Trap or Inform, please set the account password and authentication encryption information (SNMPv1 Trap / SNMPv2 Trap / SNMPv2 Inform / SNMPv3 Trap / SNMPv3 Inform).



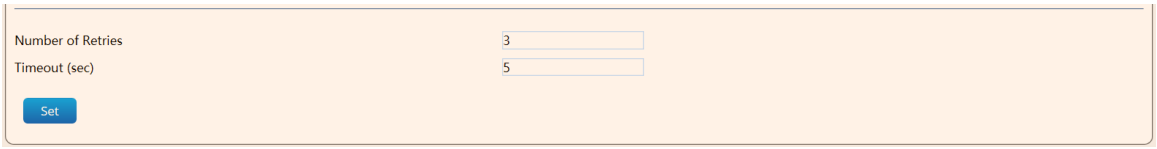

**Community:**

Trap recipients and UPSViewer web pages need to set the same string to communicate. The default is public.

**Note:**

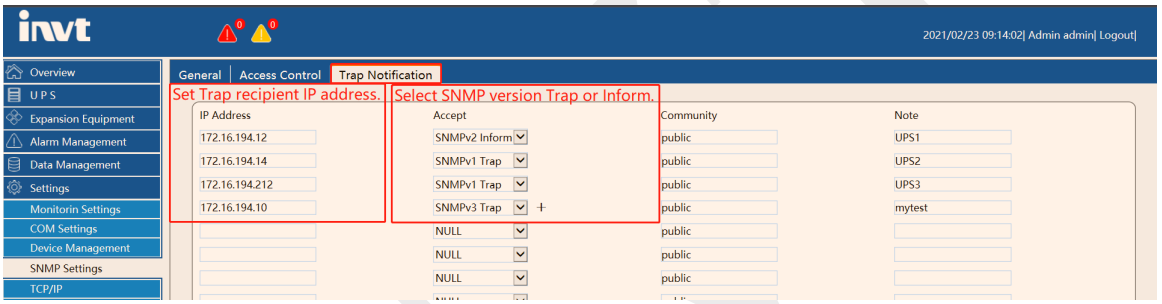
This field can provide management staff to mark the use of related content.

**SNMP notification request:**

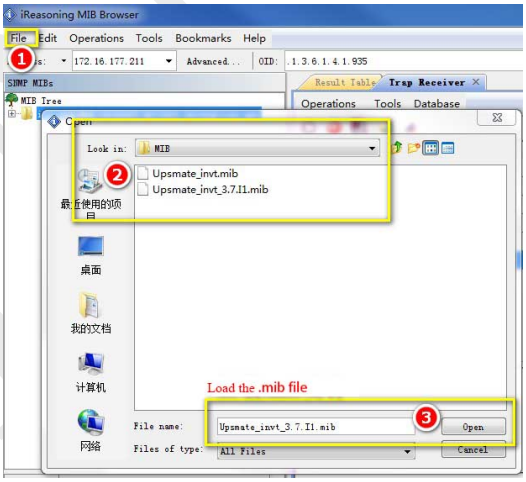



Set UPSViewer to request response times and interval time to send Inform host, the default value is 3 times every 5 seconds, users can adjust according to their needs.

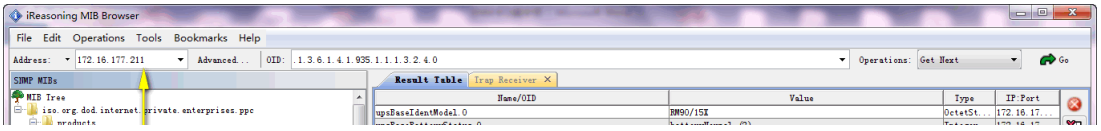
The following is the Trap viewing process. Note that after setting the Trap recipient IP, the recipient computer needs to install the Trap viewing software to view it.



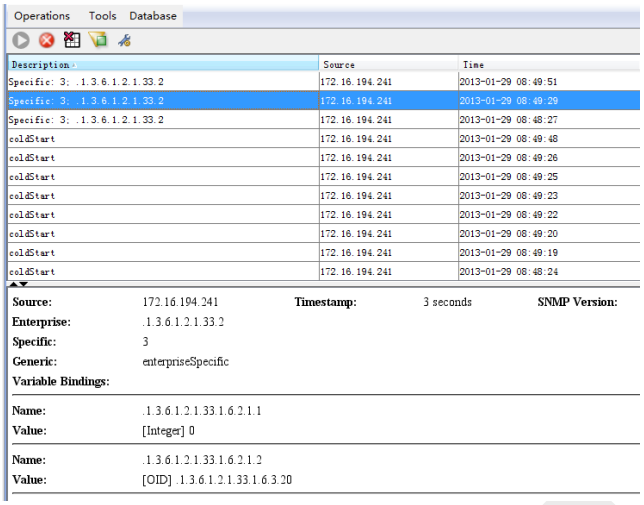

Take "MIB Browser Software" to view MIB information as an example:




- Open the "MIB Browser" software and load the .MIB file




- Enter the UPSViewer IP address to view or set MIB object information.

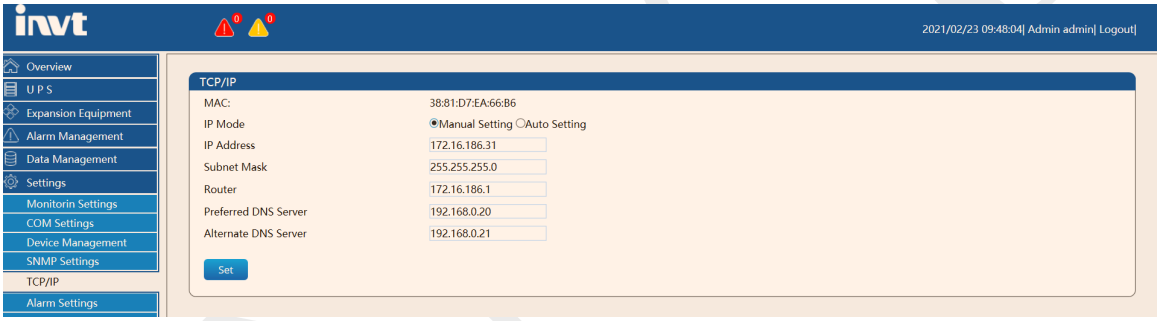



- Receive and view trap information

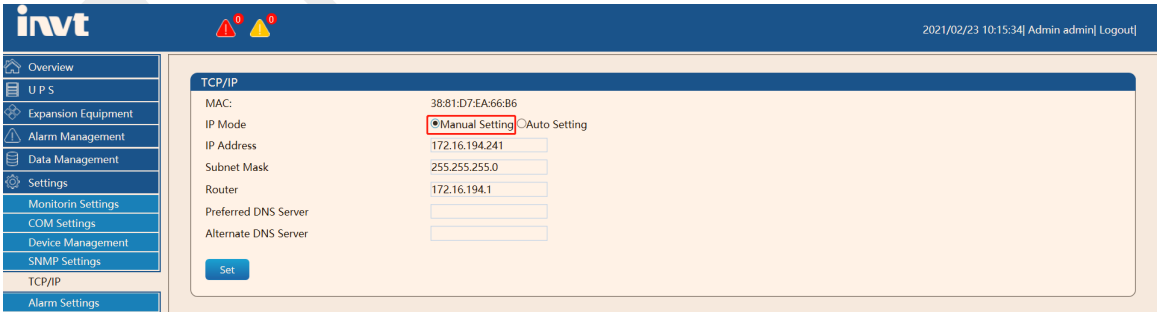
### 4.9.5 TCP/IP

【Setting】→【TCP/IP】

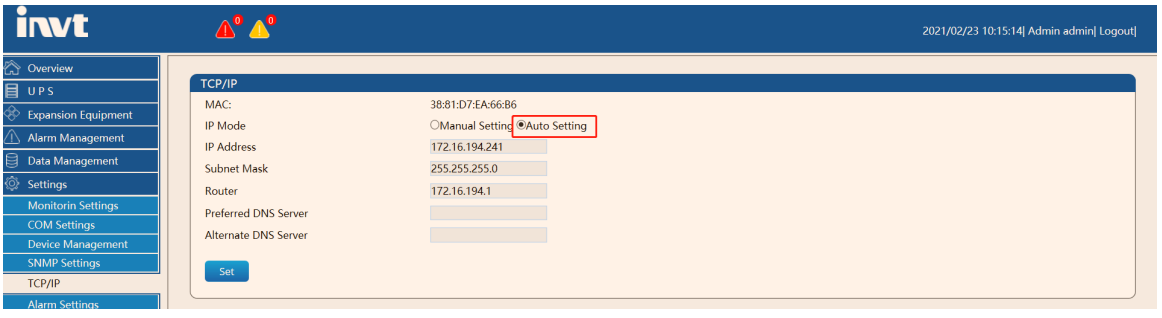
The network connection setting page provides basic network information for users to set up.




Select the【Manual Setting】button to set the IP address, subnet mask, default gateway, primary DNS server, and secondary DNS server.



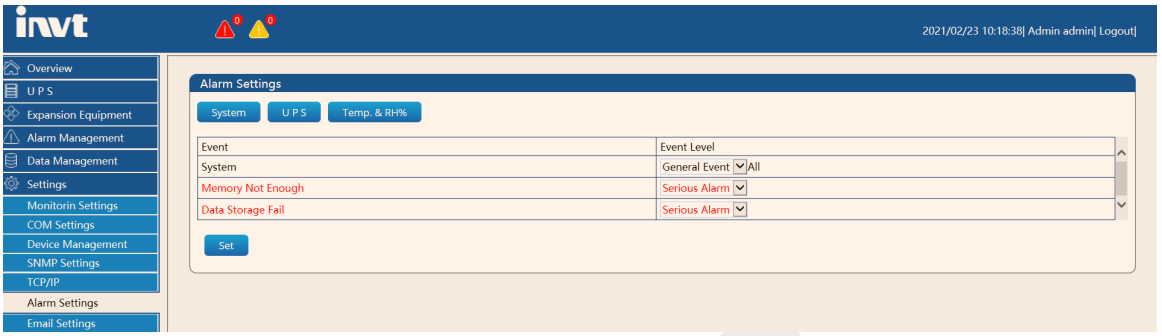

Select the【Auto Setting】button, the IP address, subnet mask, and gateway will be automatically set.



### 4.9.6 Alarm Settings

【Setting】→【Alarm Settings】

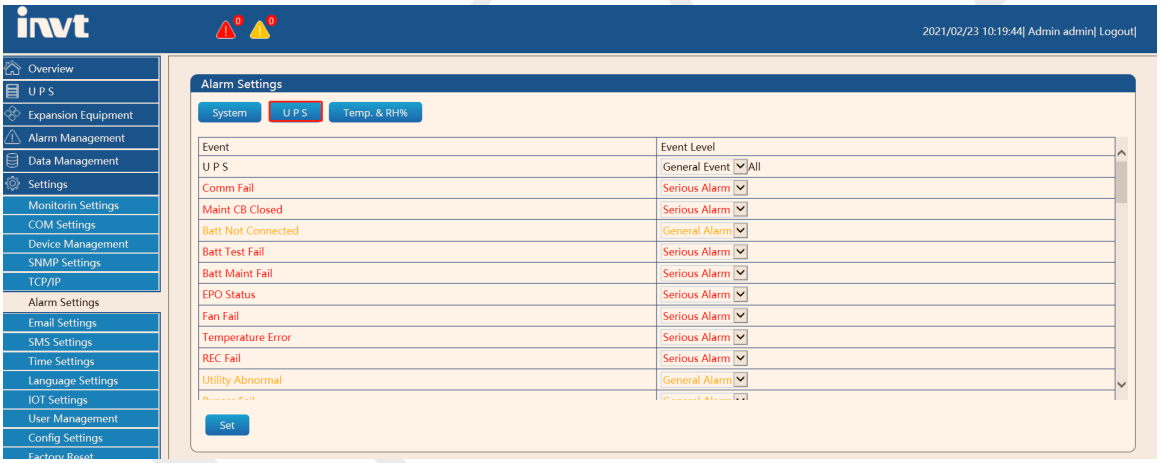
Alarm settings are divided into 3 modules of alarm settings, system alarm settings, UPS alarm settings, and extended equipment alarm settings (this module setting is only available when extended equipment is added).




The following figure shows the system alarm setting interface, which provides events:

1. The remaining memory space is insufficient;

2. The data storage fails. The alarm levels are divided into: ordinary events, general alarms, and severe alarms.

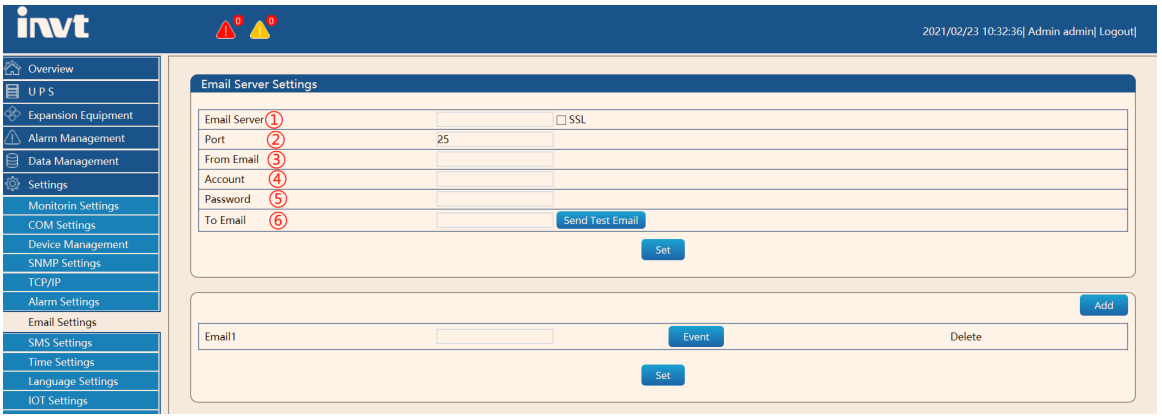



This is the UPS alarm setting. Users can set the alarm level according to their needs.

### 4.9.7 Email Settings

【Setting】→【Email Settings】

UPSViewer can send online UPS data and events to the designated mailbox through email notification.




**Email Server Settings**

① Email Server:

It is the SMTP mail server address, which can be an IP or domain name. The following check box

is to set whether to send emails in encrypted mode and the encrypted version. The currently supported encrypted version is "SSL". (This address can be an IP address or a domain name).

② Port:

Set the communication port number required to send mail, the default is 25, which needs to be determined according to the specific mailbox server.

③ From Email:

You need to write the email address ****@**.***, which is the default email address of the UPSViewer user account. After an alarm event occurs, the UPSViewer will be sent to this email address.

④ Account:

If the mailbox server requires permission authentication, please fill in the authentication account here

⑤ Password:

If the mailbox server requires permission authentication, please fill in the authentication password here.

⑥ To Email:

Recipient's Email addresses (receiving daily reports, alarm information).

*Note: The network where UPSViewer is located must have the permission to access the mailbox server.*

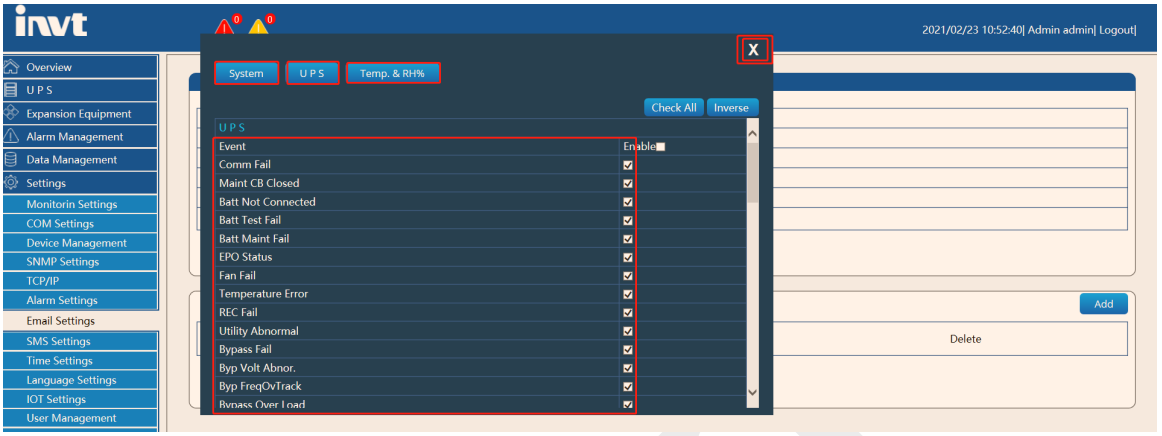
Users can customize the alarm events to be sent:

① Click the [Add] button. If there is no such requirement, you can ignore this step (up to 20 email addresses are supported);

② Fill in the recipient's email address;

③ Click the "Event" on the right corresponding to the recipient in the step ②;

&

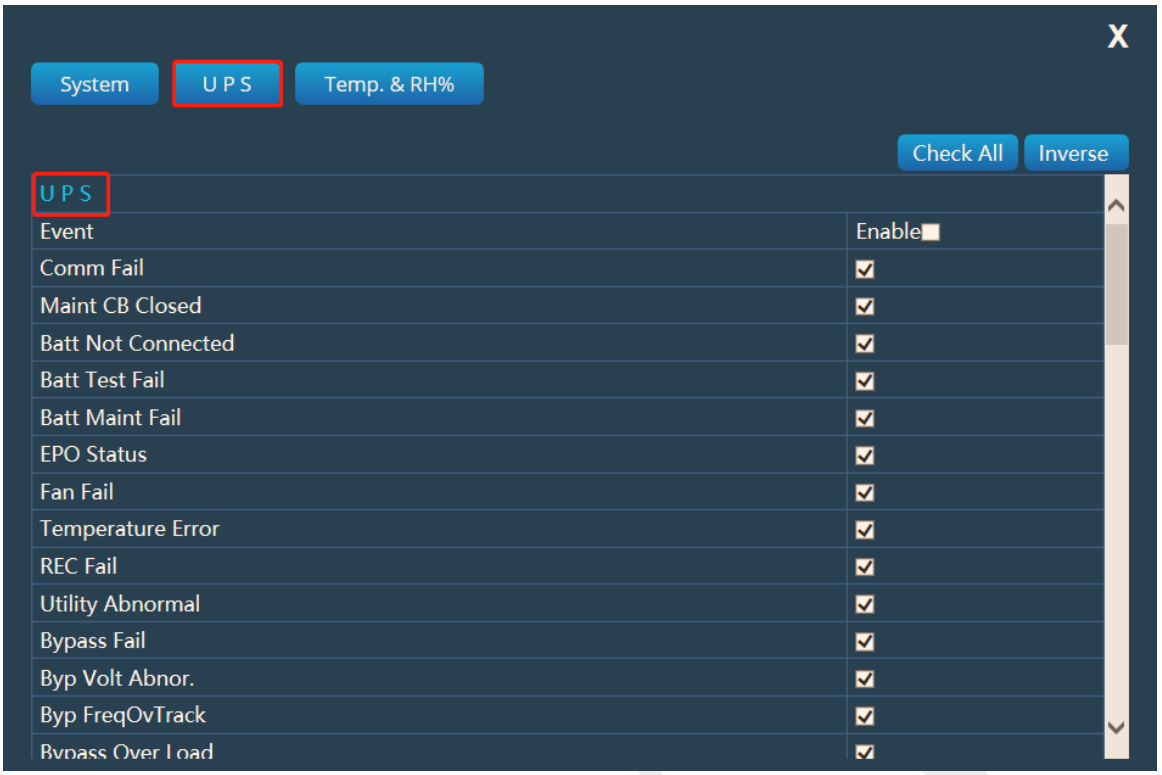



④ Check the events that need to trigger the sending of emails. After checking, you must click the X in the upper right corner to close.

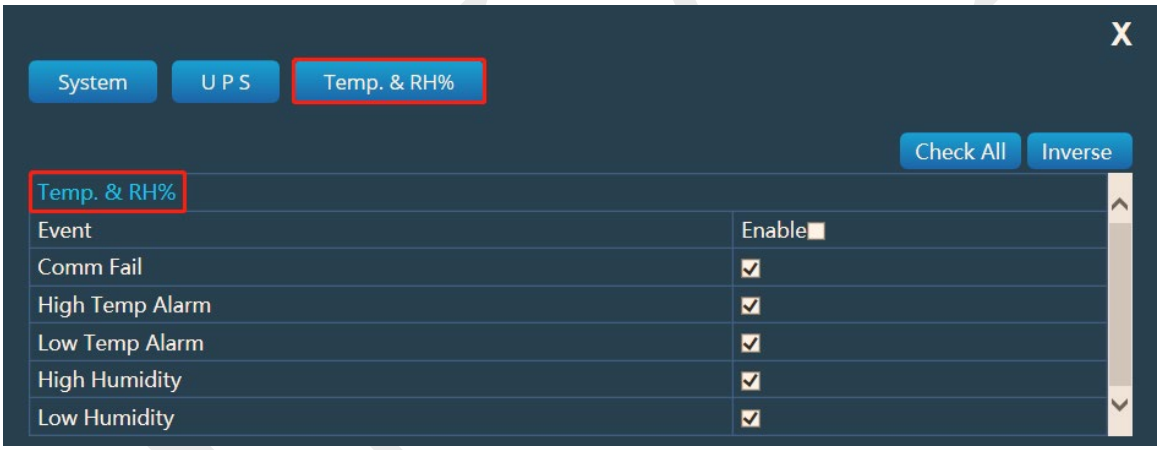
*Special note: If you perform the operations of "modify email address, add event mailbox, delete event mailbox or modify event check", you need to click [Set] to save, otherwise the background will continue to send emails according to the previous settings.*

The alarm events provided by the system are:

The alarm events provided by UPS are:




Expansion equipment alarm events:

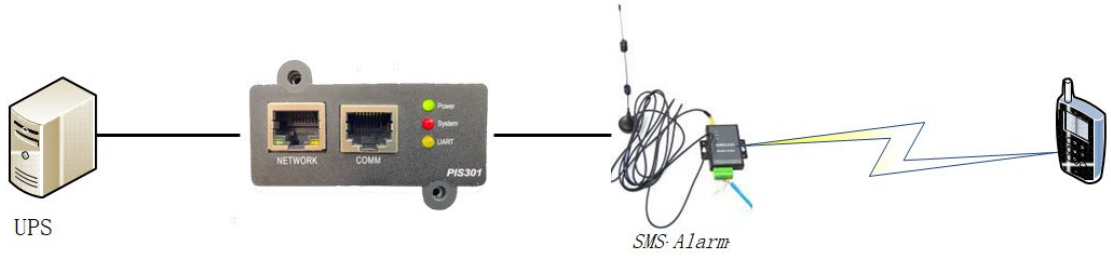



To sum up everything that has been stated so far is that users can select all or customize to add alarm events.

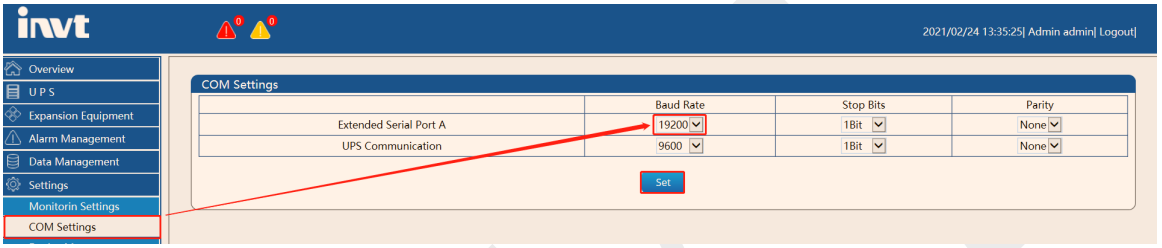
### 4.9.8 SMS Settings

【Setting】→【SMS Settings】

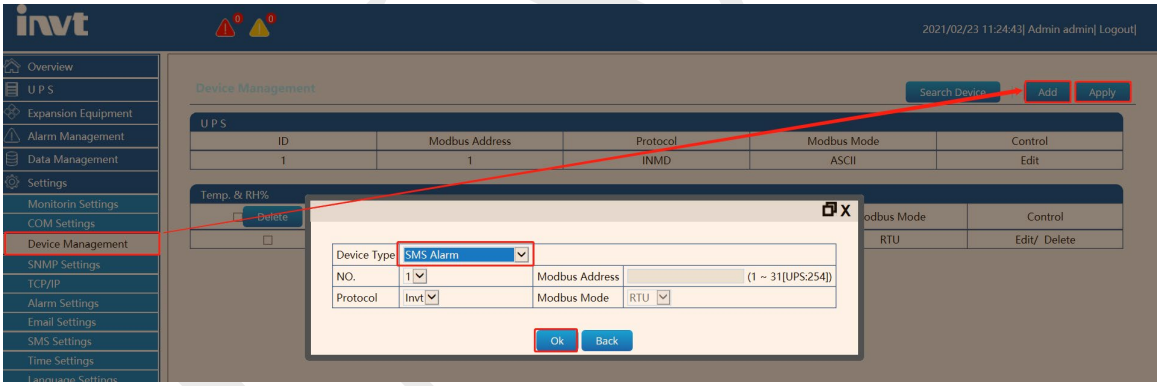
UPSViewer can add an extended device SMS alarm. When an alarm event occurs on the online UPS, the alarm information will be sent to the designated mobile phone number by SMS in time.



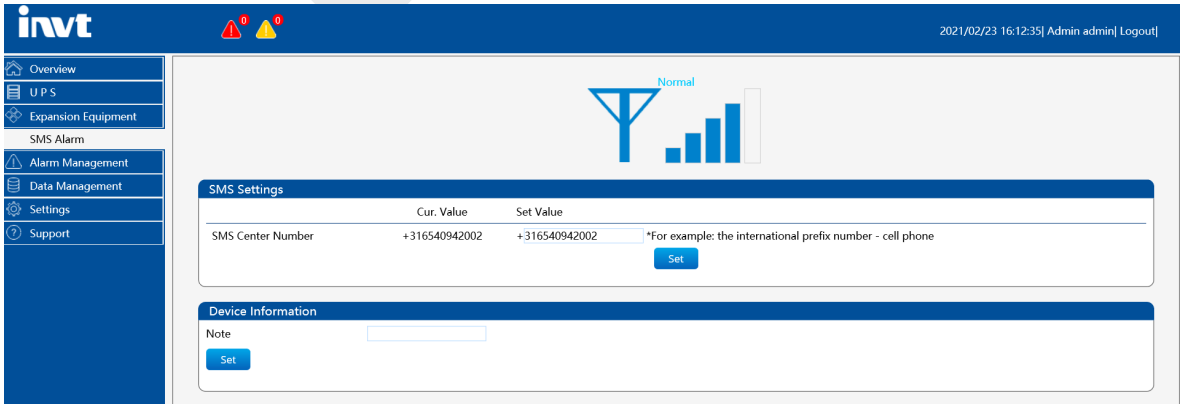

① Set the baud rate to "19200", [Settings] → [COM Settings] → "Extended Serial Port A" baud rate to 19200, and click the [Set] button to save the settings. As shown below




② Enter [Settings] → [Device Management] → Add SMS Alarm equipment;



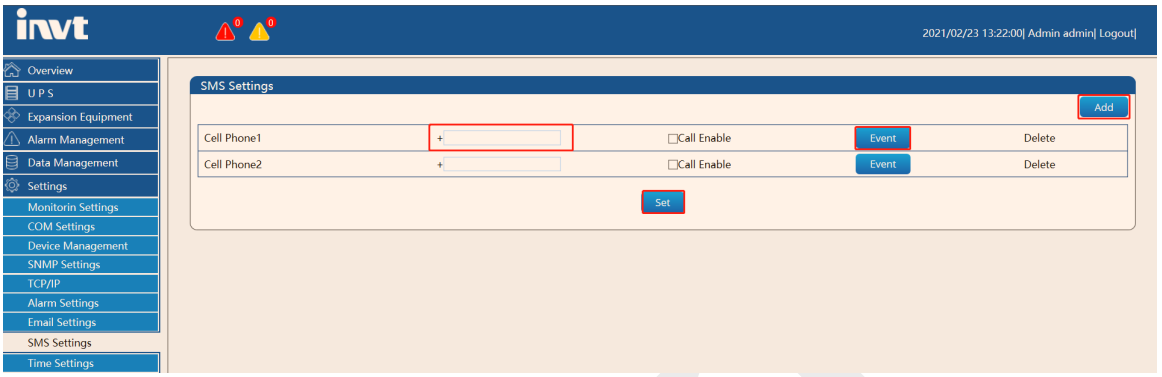

③ Enter the [Expansion Equipment] → [SMS Alarm] page to check whether the communication is normal;



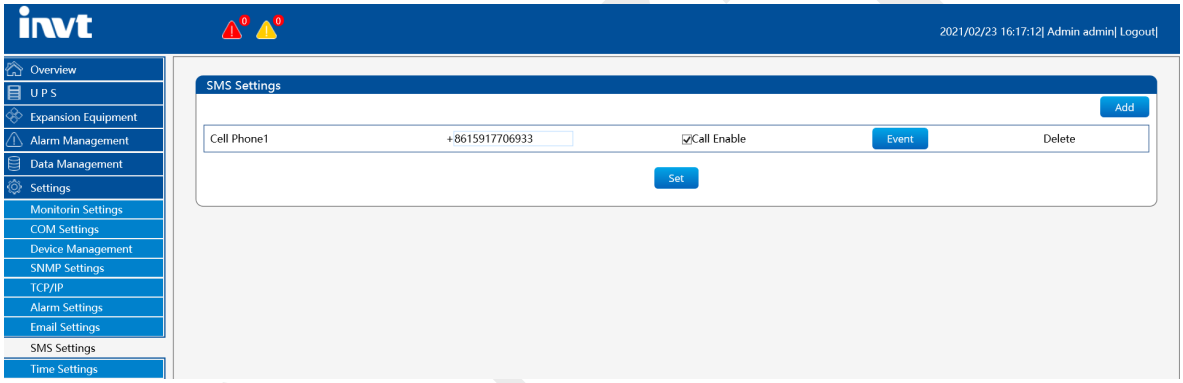

④ Under normal communication conditions, check if there is a SMS center number.

*Note: By default, if you insert different operators, there will be a corresponding SMS center number by default. If not, manually fill in the SMS center number that the card matches. The SMS alarm signal is best to be above 3 bars to ensure that the SMS can be sent out in time.*

Users can customize the alarm events to be sent.




&




① Click the "Add" button. If there is no such requirement, you can ignore this step (supports up to 20 mobile phone numbers);

② Fill in the recipient's phone number;

③ Click the "Event" on the right of the recipient in step.

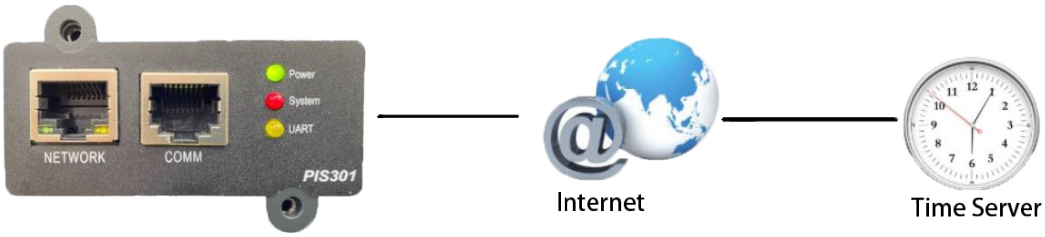
④ Check the events that need to trigger the sending of SMS. After checking, you must click the X in the upper right corner to close.

*Special note: If you perform the operations of "modify phone number, add phone number, delete phone number, or modify event check", you need to click [Set] to save; otherwise the background will continue to send SMS according to the previous settings.*

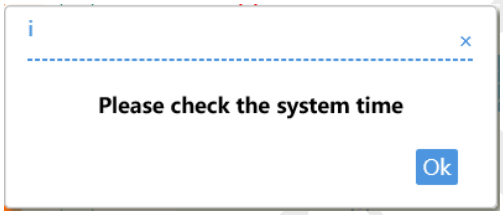
### 4.9.9 Time Settings

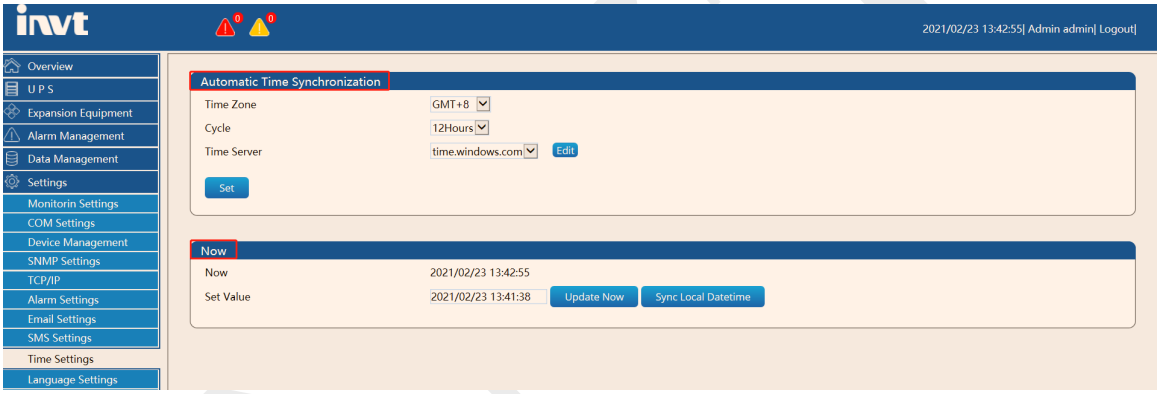
【Setting】→【Time Settings】

UPSViewer can automatically synchronize the clock with the time server on the external network or internal network through the NTP protocol. The administrator uses the NTP protocol to efficiently unify the running time of multiple UPSViewer and improve management efficiency.




The user needs to calibrate the time when entering the management webpage for the first time, and the dialog box [Please check the system time] will pop up, and click the [OK] button.




**【Automatic Time Synchronization】**

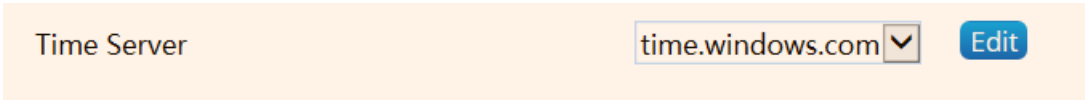
**Time Zone (Relative to Greenwich GMT):**

You can select (GMT+[1,12], GMT-[1,12]). At this time, you need to adjust the time zone attribution of the location of UPSViewer to obtain the correct time zone. For example, this UPSViewer uses Beijing time, so select GMT+8 for this time zone.

**Cycle:**

You can choose (off, 1 hour, 3 hours, 12 hours, 1 day, 10 days, 30 days) to automatically calibrate the time.

**Time Server:**




Click [Edit], enter the time server address or IP, click [Add], the list below appears, and the value is now filled in, it means that the time server address is successfully added.

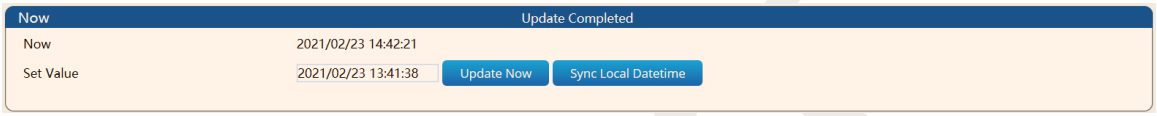
Select the previously filled IP in the time server column, select the time zone and automatic synchronization period, and click "Set".

When the middle area of the automatic synchronization time column displays the green word "Synchronization successful", it means that the time server can be connected.

*Note: This function can be used only when the LAN can access the external network and the server address will not be intercepted.*

**【Now】**

In [Now], you can use [Set Value] to update the time immediately, and you can also [Synch Local Date Time].

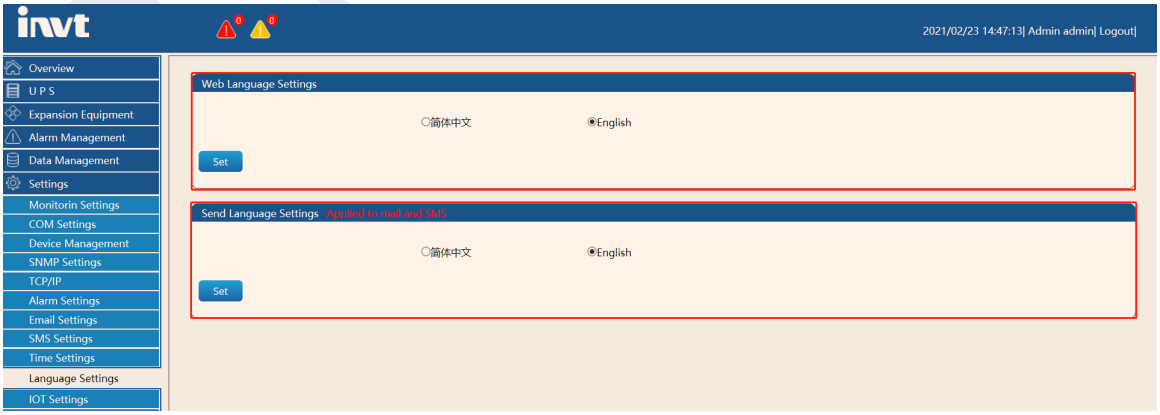



- Use the [Update Now] button to change the date and time. Enter the date and time in the corresponding time input box of the setting value, and click [Update Now]
- Use [Sync local date time]. Set the local time to the UPSViewer time. If the update or synchronization is successful, there will be a "Update Successful" Prompt information.

### 4.9.10 Language Settings

【Setting】→【Language Settings】

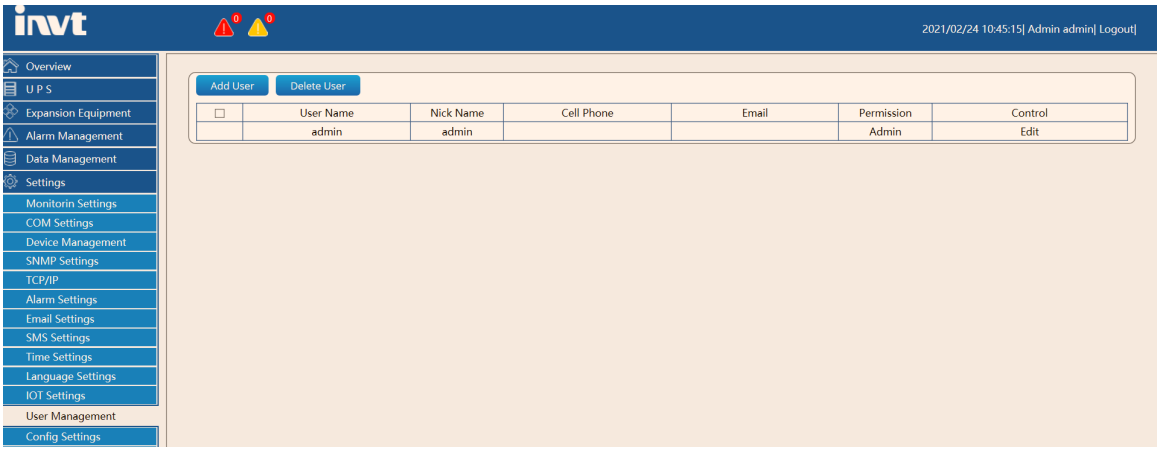
This is the webpage language setting page. The UPSViewer webpage will automatically adjust according to the user's operating system language. Currently, it supports "Simplified Chinese" and "English" languages, and users can also set it manually according to their own habits.



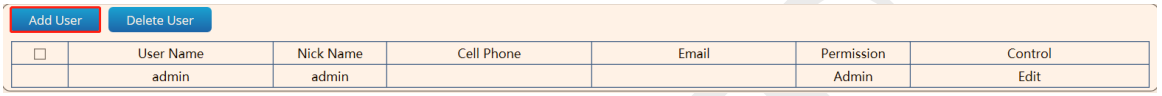

### 4.9.11 User Management

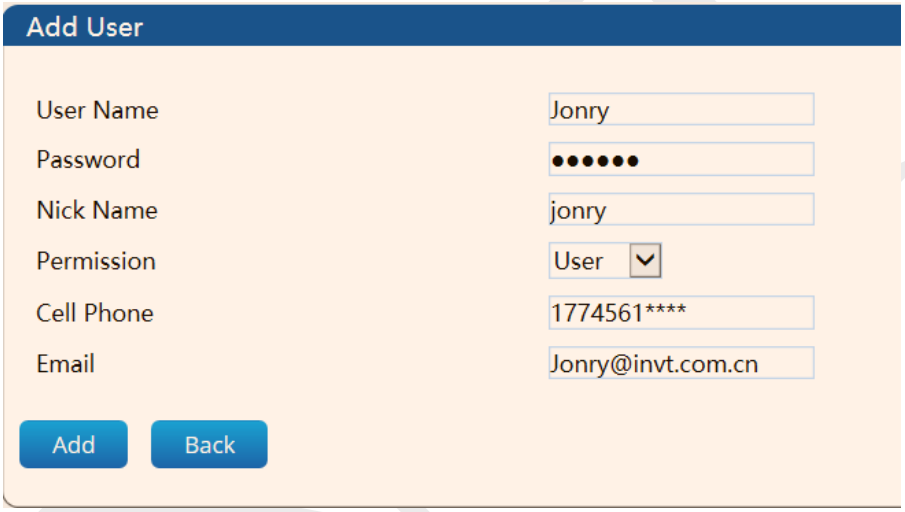
【Setting】→【User Management】

Note that only the "admin" account can access the [User Management] page, and other administrators cannot access this page. You can add users and delete users.




"admin" is the highest authority account and cannot be deleted.

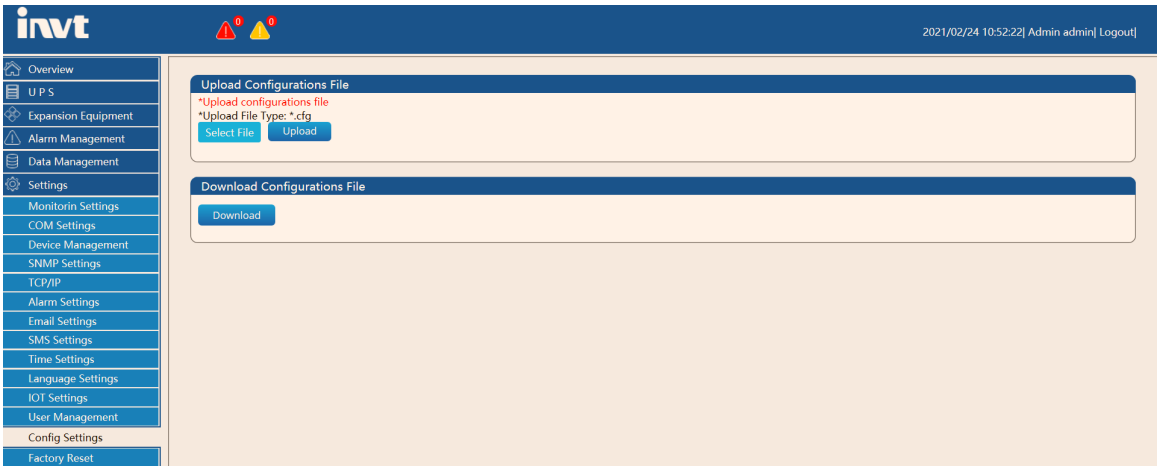



*Note: When adding a user, the user name and password are required. Username: It can only consist of English letters, underscores, and Chinese characters. When the "admin" administrator user modifies the passwords of other users, there is no need to confirm the user's password and can be modified directly.*

### 4.9.12 Config Settings

【Setting】→【Config Settings】




The batch configuration page can only be accessed by the "admin" account, and other administrators cannot access this page.

*Special note: When the browser is below IE9 or when the browser such as 360 has no response when clicking to select the file, please download the Adobe Flash Player plug-in from the Internet and refresh the page after installation.*

【Upload Configurations File】

① Select the configuration file type ".cfg"

② Click the "Upload" button and the progress bar below will show whether the upload is successful or not. The system will restart after uploading.

【Download Configurations File】

" Download Configurations File ": Download other setting information in the system settings except for mailbox settings, events and recipients in SMS settings.

### 4.9.13 Factory Reset

【Setting】→【Factory Reset】

**① Log Clear:**

Clear the history information.

**② Historical data Clear:**

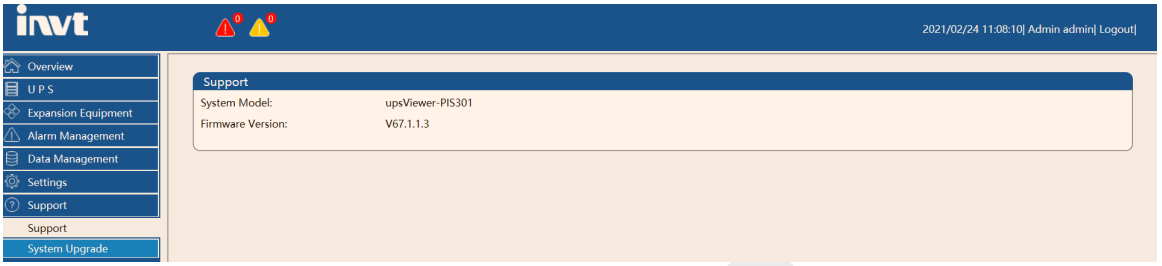
Clear historical data.

**③ Factory Reset**

*Note: After restoring the factory settings, all data information and setting information will be cleared, and the UPSViewer system will restart.*

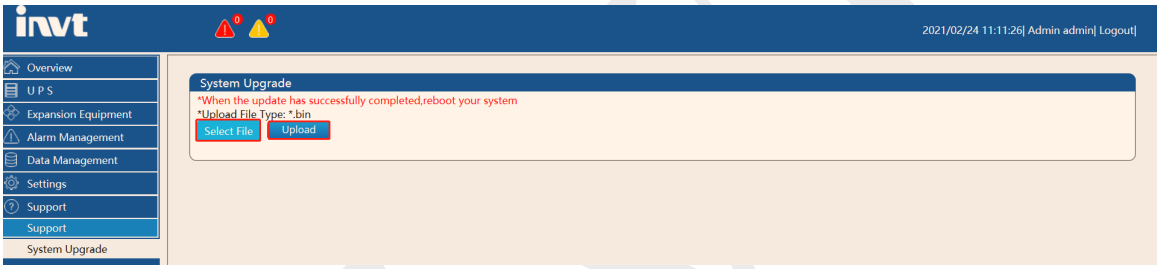
# 5 Support (Help)

【Support】displays, system permissions, UPSViewer software version.




【Support】→【System Upgrade】

[System upgrade] Provide UPSViewer system upgrade port.




*Note: After the upgrade, the UPSViewer system will restart and you need to log in to the web page again.*