Operation Manual of MS Big Data Platform

Note: all the functions of SIM described in this document refer to the premise of SIM provided by the company before the implementation of functions.

1. Log In

Visit: www.iisens.com/api_en/, the Log In page showed as below: (Figure 1)

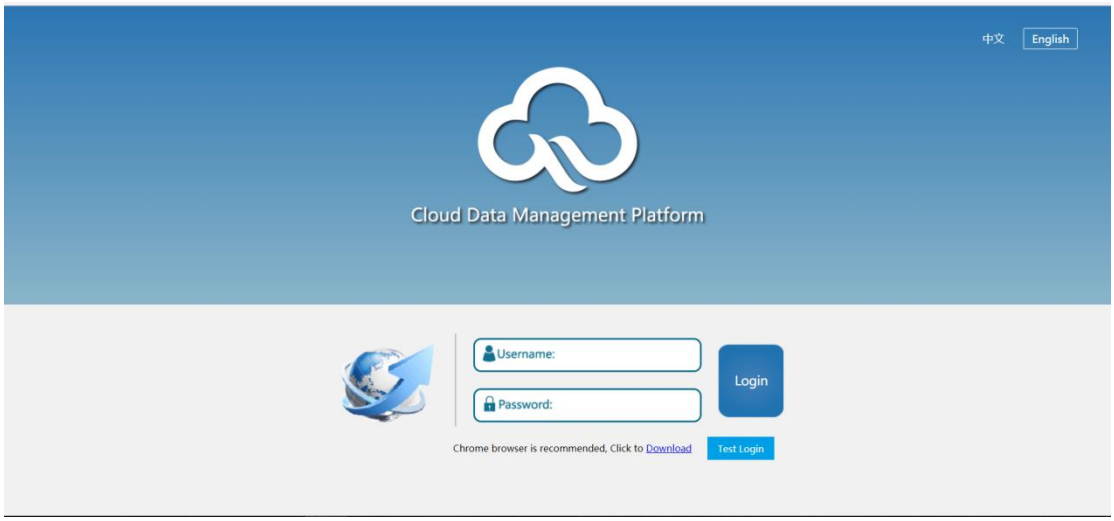


Figure 1

Below function zones in Log in page:

1) Click "中文" & "English" in top right corner to check Chinese and English page.
2) Input the given user name and password, click "Log in" to enter home page.
3) Click "Testing log in" to enter testing page and check testing data.
4) Click "Download" to download Chrome explorer (Chrome is recommended)

2. Data Overview

Before entering into the home page, please check whether the device under the login account and the SIM card fee expired or not. If it expires, an expiration prompt box will pop up (Figure2).

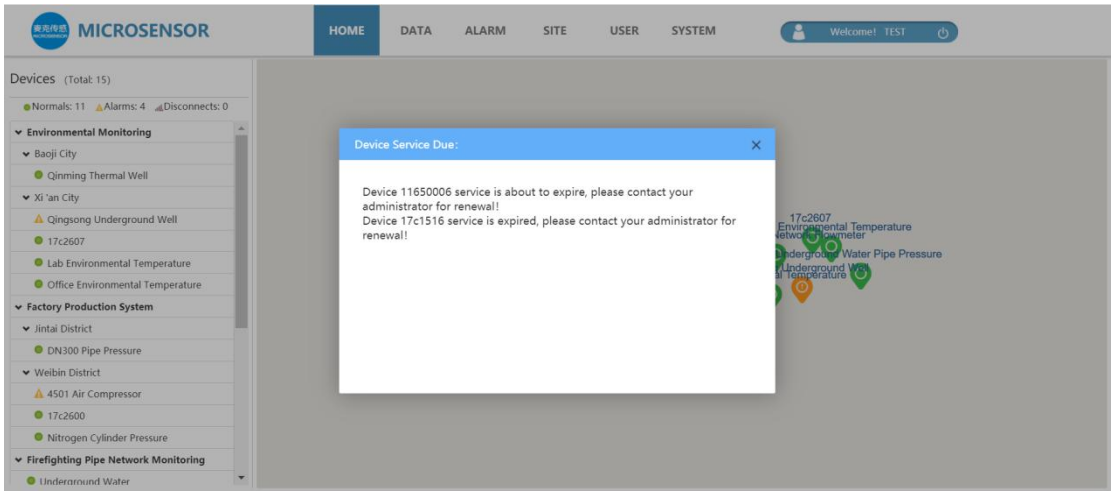


Figure 2

1. After entering the platform's home page, it is divided into the public toolbar, the public bottom, the public menu bar, and the main content display block (Figure 3).

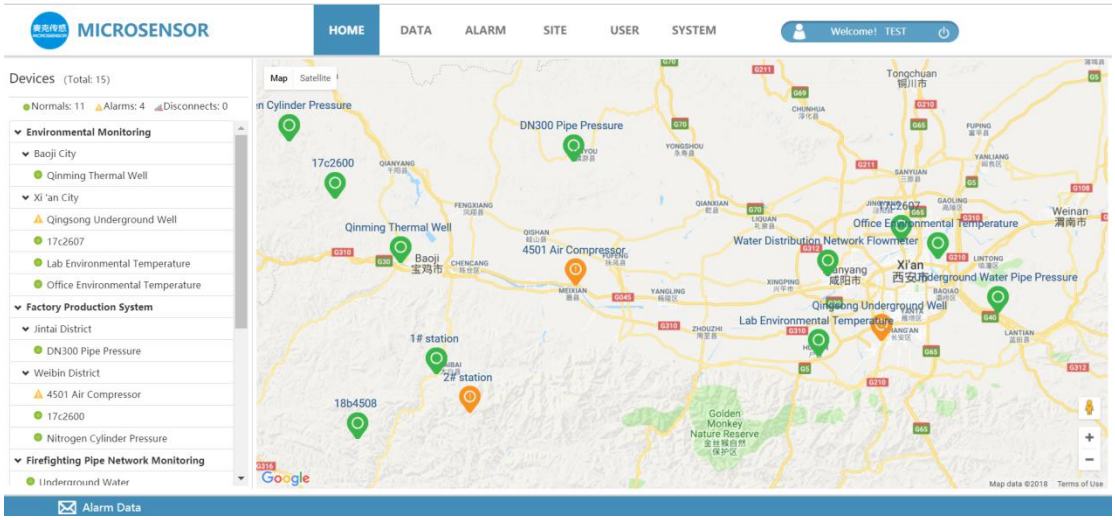


Figure 3

The public toolbar includes the home page, data query, alarm management, device management, user management, and system settings.

1.2 The public bottom includes alarm information.

1.2.1 Click on "Alarm information", then you will see the devices alarm information sheet. (Figure 4)

SN	ID	Device Name	Channel	Value	Unit	Status	Upper Limit	Lower Bound	Alarm Time
1	11650006	2# station	Level	5.46	m	↑	4.000	0.500	2018-06-01 08:21:50
2	17c1599	Qingsong Underground Well	Level	0.99	m	↓	1.400	0.100	2018-06-01 08:21:00
3	17c2606	4501 Air Compressor	Pressure	-0.001	MPa	↓	2.400	0.100	2018-06-01 08:21:00

Figure 4

1.3 The public menu bar mainly displays the total number of devices, the number of devices in the three states of normal, alarm, and loss, and the device grouping information (Figure 5).

Figure 5

1.4 The main display area mainly has the following functions (Figure 6):

1.4.1 Display the main contents of each module in the public toolbar

1.4.2 Click on a device in the menu bar and it will appear in the home page map center.

1.4.3 Check the specific location of all devices under the login account.

1.4.4 Use the icon to check the latest status of the device (the device is normal when the icon is green; the device

alarms when the icon is orange; and device is disconnected when icon is gray).

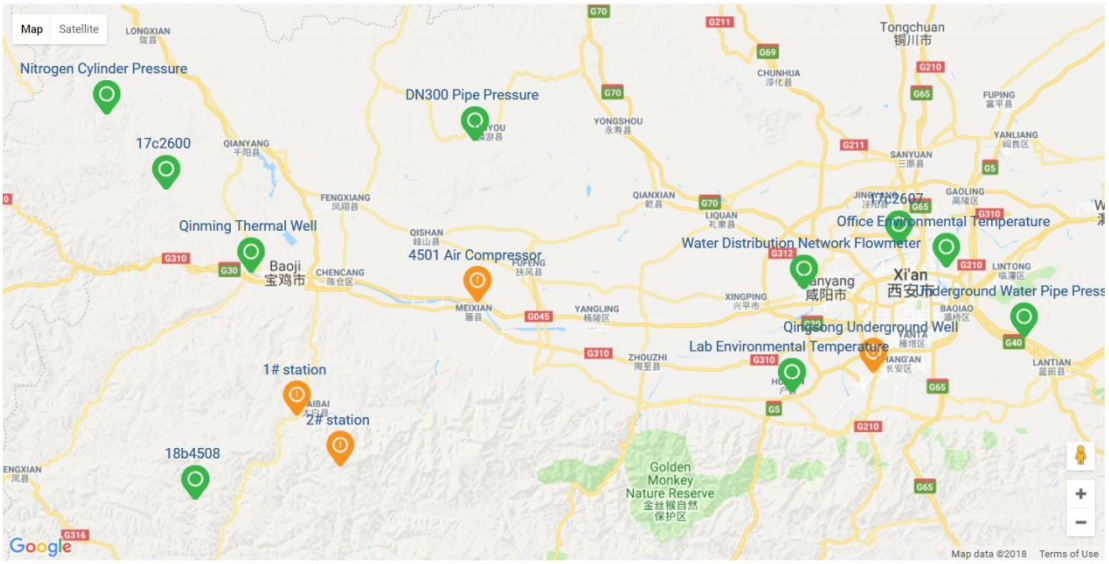


Figure 6

1.4.6 Click the icon , you can see the specific information of the device channel (channel name, value, status, the latest upload time) (Figure 7).

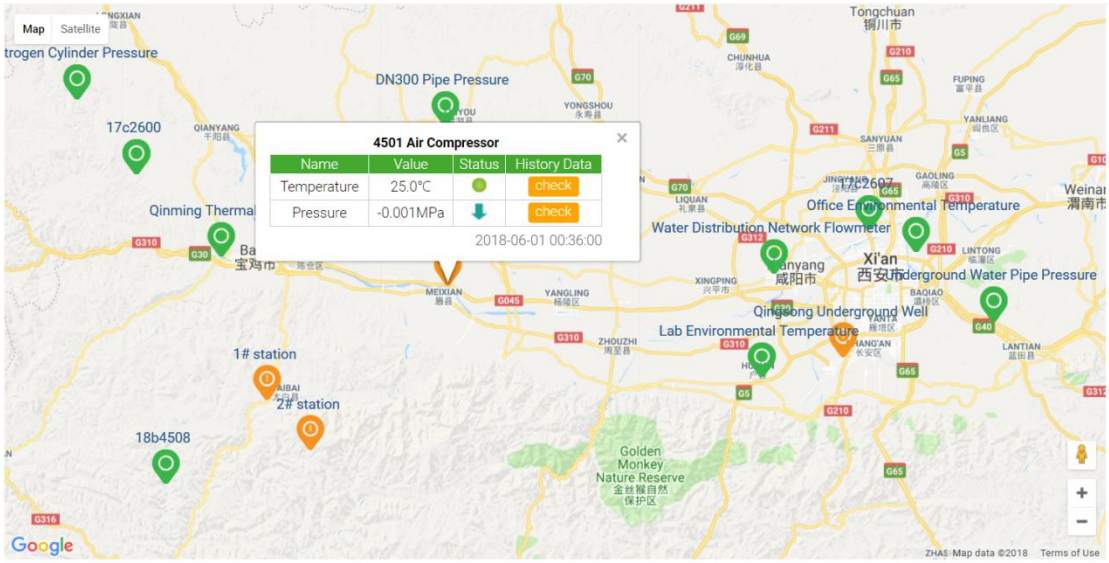


Figure 7

1.4.7 Click the "View" button in Figure 7, this can check the historical data of the most recent day on the specified channel of the current device (Figure 8).

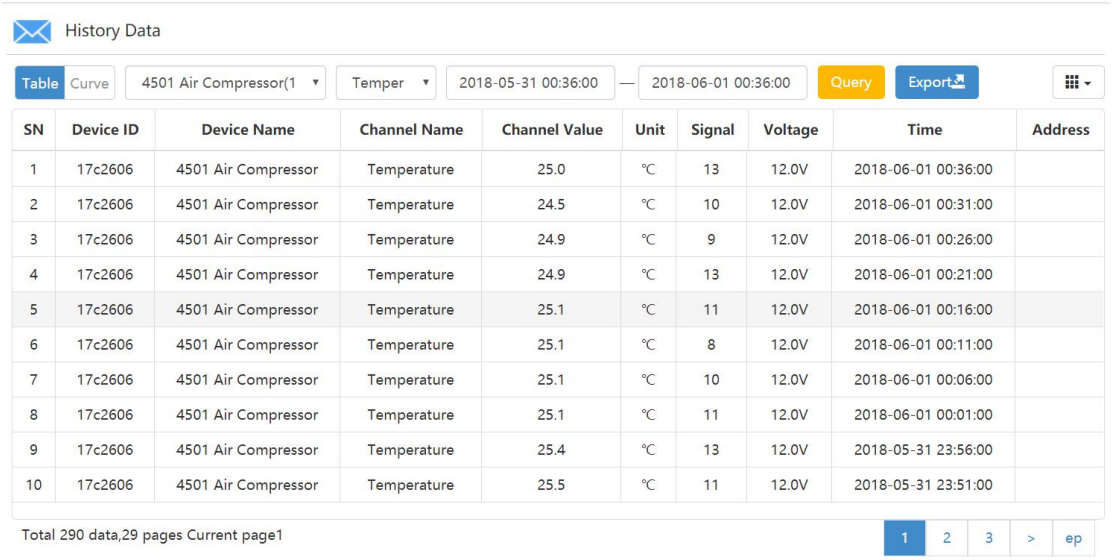


Figure 8

Due to the large number of public toolbar module contents and the different display directions, the individual modules are explained separately below.

2. Click on the "Data Query" module, you can see the data query is divided into: real-time data, historical data in drop-down list(Figure 9).

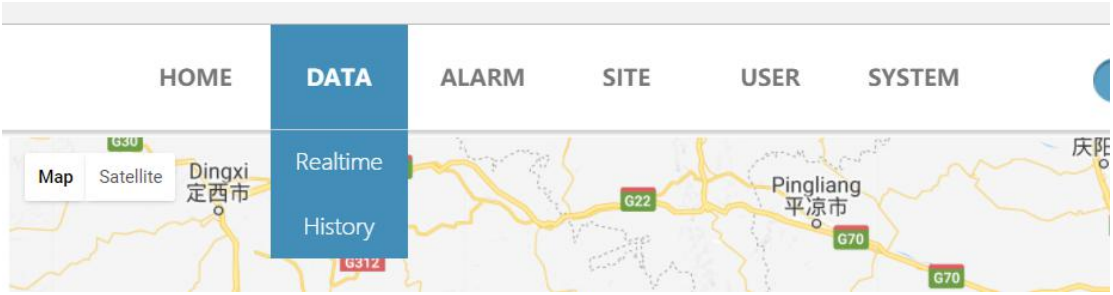


Figure 9

2.1 The real-time data page displays the real-time data of the device through lists and tables. The list is displayed by default. The list mainly shows the status of each parameter of the device in the form of an icon (Figure 10).

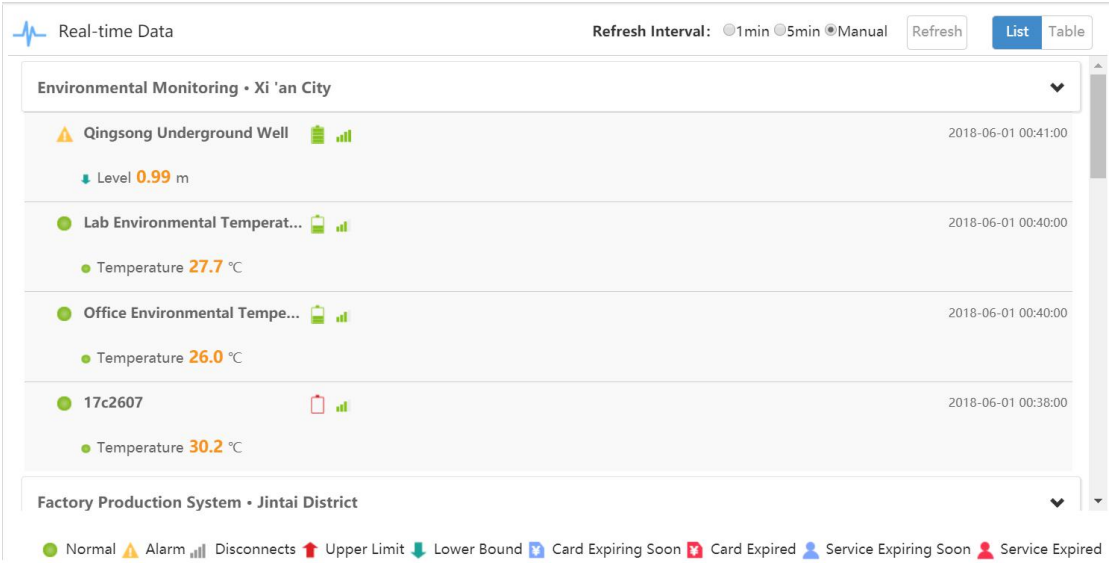


Figure 10

2.1.1 Set the time interval (1 minute, 5 minutes) or manually click the "Refresh" button to refresh the data.

2.1.2 Click “Table” to view real-time data and relevant parameter information of the device in the form of a table (Figure 11).

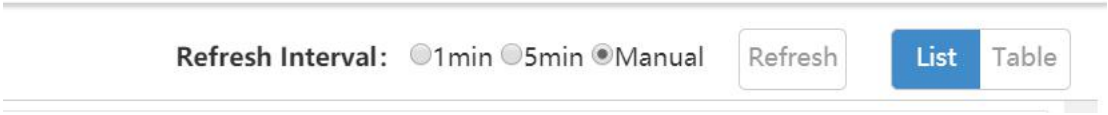
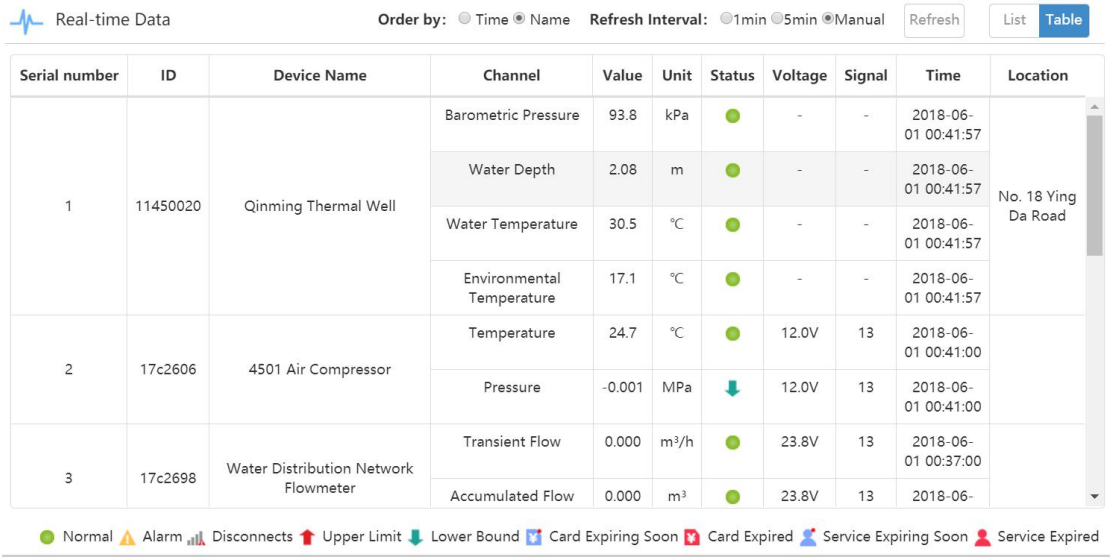


Figure 11

2.1.3 Page refresh and conversion in the form page works the same as the list page operation (Figure 11)

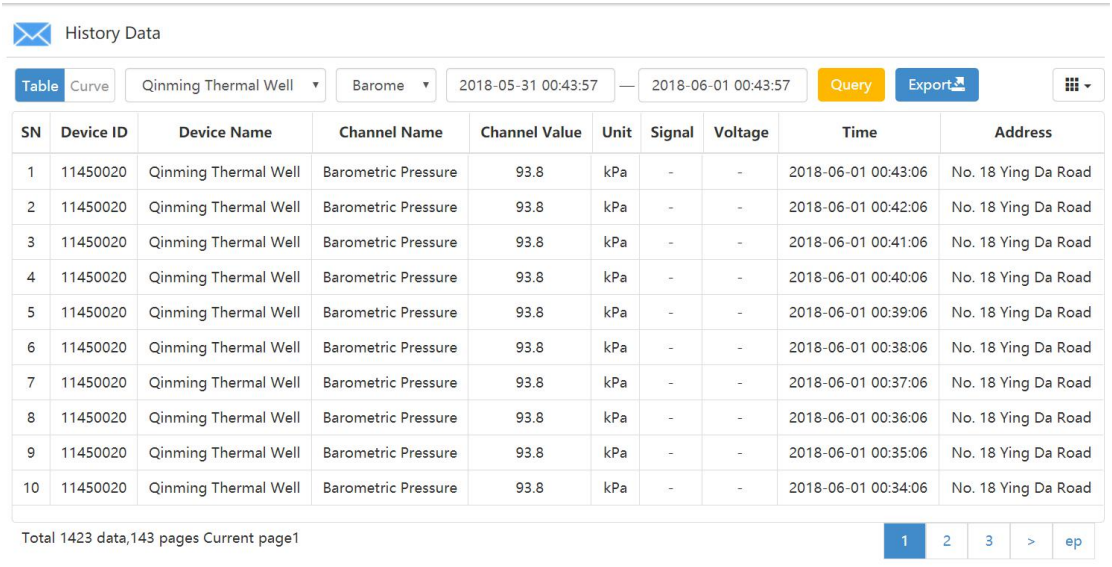
2.1.4 In the form page, select the arrangement of the data by clicking on the dots in front of “Time” and “Name”. The default is by name (Figure 12).



Serial number	ID	Device Name	Channel	Value	Unit	Status	Voltage	Signal	Time	Location
1	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa		-	-	2018-06-01 00:41:57	No. 18 Ying Da Road
			Water Depth	2.08	m		-	-	2018-06-01 00:41:57	
			Water Temperature	30.5	℃		-	-	2018-06-01 00:41:57	
			Environmental Temperature	17.1	℃		-	-	2018-06-01 00:41:57	
2	17c2606	4501 Air Compressor	Temperature	24.7	℃		12.0V	13	2018-06-01 00:41:00	
			Pressure	-0.001	MPa		12.0V	13	2018-06-01 00:41:00	
3	17c2698	Water Distribution Network Flowmeter	Transient Flow	0.000	m³/h		23.8V	13	2018-06-01 00:37:00	
			Accumulated Flow	0.000	m³		23.8V	13	2018-06-	

Figure 12

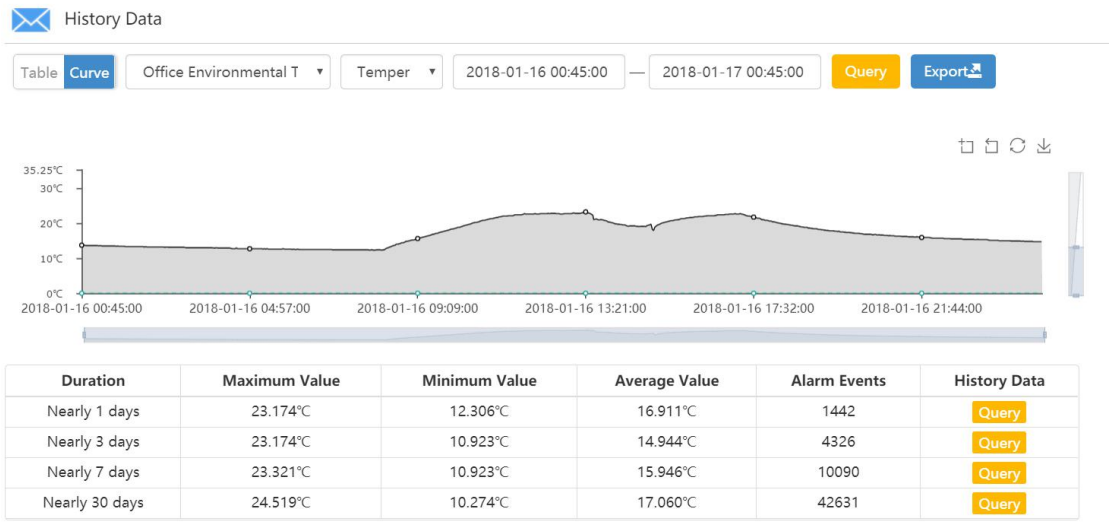
2.2 The historical data page shows the historical data of the most recent day under the default device and channel in the form of tables and curves and is displayed by default in a table (Figure 13).



SN	Device ID	Device Name	Channel Name	Channel Value	Unit	Signal	Voltage	Time	Address
1	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa	-	-	2018-06-01 00:43:06	No. 18 Ying Da Road
2	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa	-	-	2018-06-01 00:42:06	No. 18 Ying Da Road
3	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa	-	-	2018-06-01 00:41:06	No. 18 Ying Da Road
4	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa	-	-	2018-06-01 00:40:06	No. 18 Ying Da Road
5	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa	-	-	2018-06-01 00:39:06	No. 18 Ying Da Road
6	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa	-	-	2018-06-01 00:38:06	No. 18 Ying Da Road
7	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa	-	-	2018-06-01 00:37:06	No. 18 Ying Da Road
8	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa	-	-	2018-06-01 00:36:06	No. 18 Ying Da Road
9	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa	-	-	2018-06-01 00:35:06	No. 18 Ying Da Road
10	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa	-	-	2018-06-01 00:34:06	No. 18 Ying Da Road

Figure 13

Click the "curve" button in the table page, then jump to the page of curve and data analysis (Figure 14)



Duration	Maximum Value	Minimum Value	Average Value	Alarm Events	History Data
Nearly 1 days	23.174℃	12.306℃	16.911℃	1442	Query
Nearly 3 days	23.174℃	10.923℃	14.944℃	4326	Query
Nearly 7 days	23.321℃	10.923℃	15.946℃	10090	Query
Nearly 30 days	24.519℃	10.274℃	17.060℃	42631	Query

Figure 14

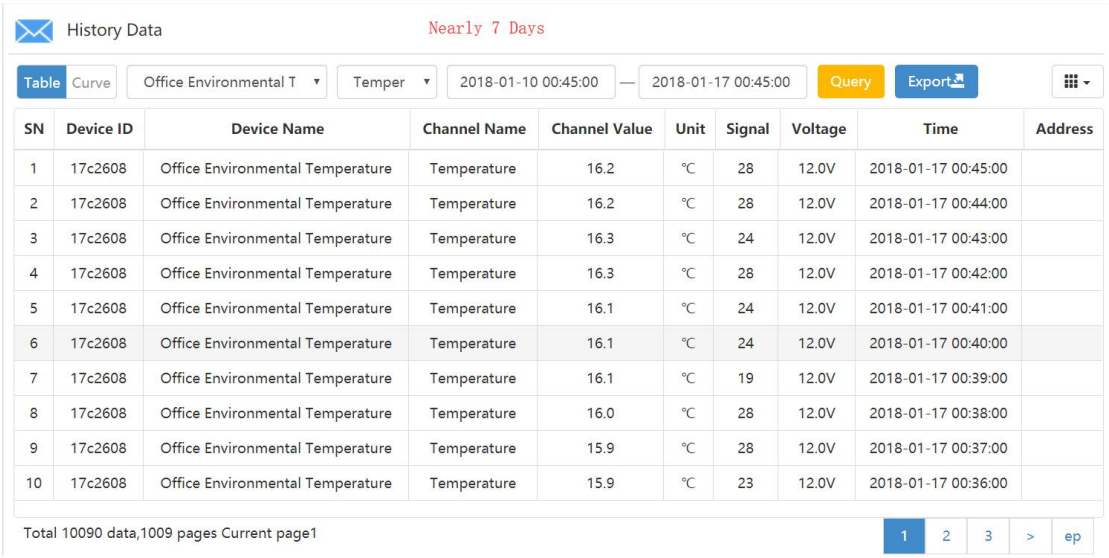
There are the following functional points in the tabular page, curve, and data analysis page of historical data:

2.2.1The upper table and curve buttons can switch pages.

2.2.2 Device, channel drop-down box, time selector, select, fill in the data, click "Query" button to view the historical data and history curve of the selected device, channel, time period, and data analysis of the corresponding time period. (The query period cannot exceed 1 month)

2.2.3 Click the "Data Export" button to export all the data for the specified device, channel, and time period.

2.2.4 Click on the "View" button of the data analysis to quickly view historical data for the specified days(figure 15).



SN	Device ID	Device Name	Channel Name	Channel Value	Unit	Signal	Voltage	Time	Address
1	17c2608	Office Environmental Temperature	Temperature	16.2	℃	28	12.0V	2018-01-17 00:45:00	
2	17c2608	Office Environmental Temperature	Temperature	16.2	℃	28	12.0V	2018-01-17 00:44:00	
3	17c2608	Office Environmental Temperature	Temperature	16.3	℃	24	12.0V	2018-01-17 00:43:00	
4	17c2608	Office Environmental Temperature	Temperature	16.3	℃	28	12.0V	2018-01-17 00:42:00	
5	17c2608	Office Environmental Temperature	Temperature	16.1	℃	24	12.0V	2018-01-17 00:41:00	
6	17c2608	Office Environmental Temperature	Temperature	16.1	℃	24	12.0V	2018-01-17 00:40:00	
7	17c2608	Office Environmental Temperature	Temperature	16.1	℃	19	12.0V	2018-01-17 00:39:00	
8	17c2608	Office Environmental Temperature	Temperature	16.0	℃	28	12.0V	2018-01-17 00:38:00	
9	17c2608	Office Environmental Temperature	Temperature	15.9	℃	28	12.0V	2018-01-17 00:37:00	
10	17c2608	Office Environmental Temperature	Temperature	15.9	℃	23	12.0V	2018-01-17 00:36:00	

Figure 15

3 Click the "Alarm Management" module, you can see that the alarm management module is divided into: alarm preview, historical alarm (Figure 16).

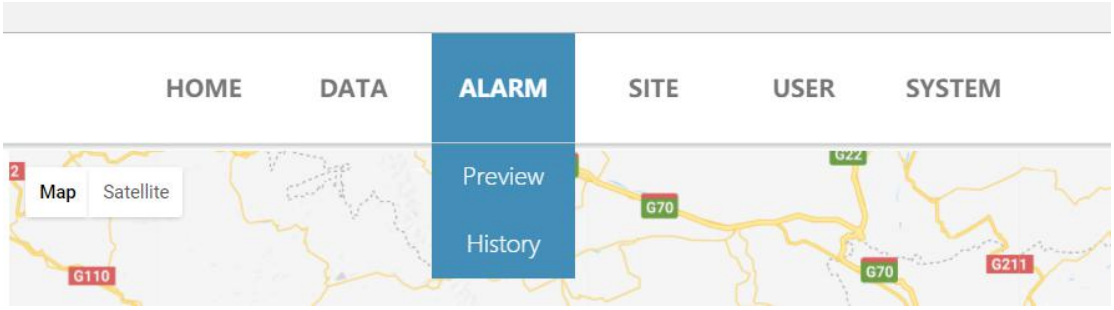
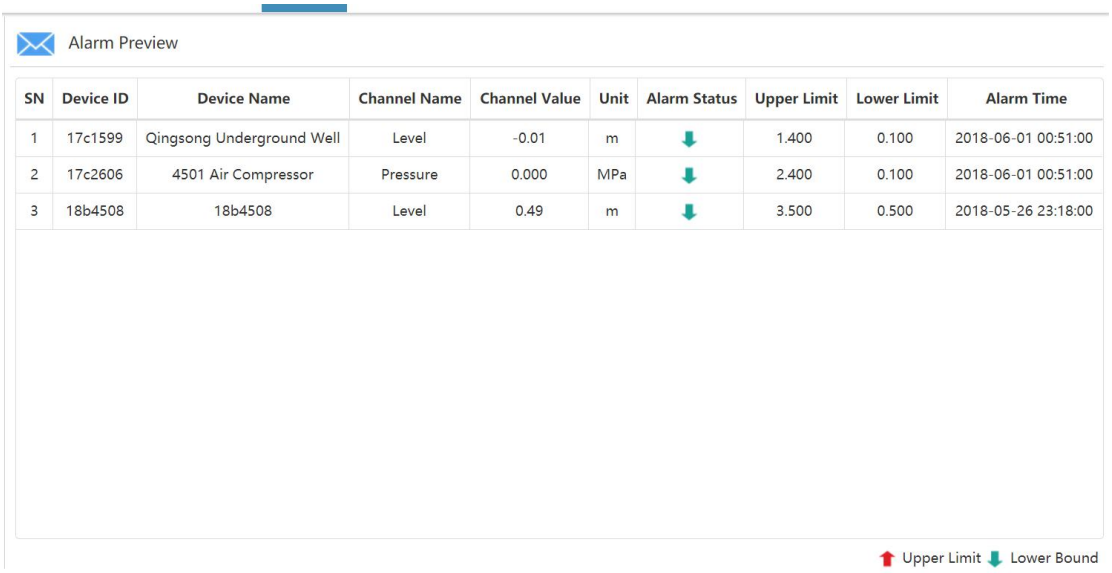


Figure 16

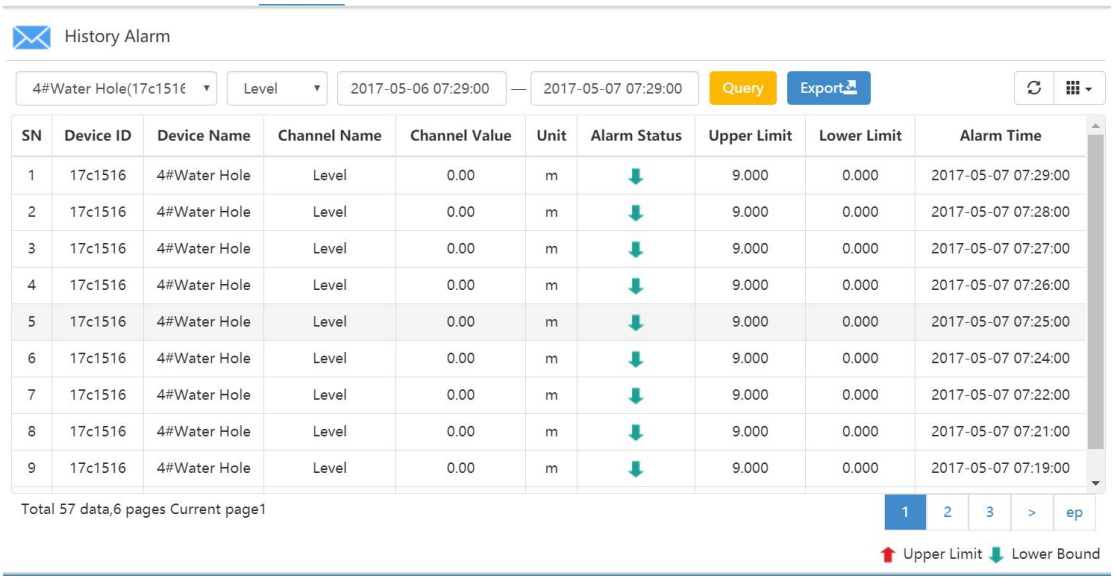
3.1 The alarm preview page displays the latest alarm data information of the login account device and channel in a table format (Figure 17).



SN	Device ID	Device Name	Channel Name	Channel Value	Unit	Alarm Status	Upper Limit	Lower Limit	Alarm Time
1	17c1599	Qingsong Underground Well	Level	-0.01	m		1.400	0.100	2018-06-01 00:51:00
2	17c2606	4501 Air Compressor	Pressure	0.000	MPa		2.400	0.100	2018-06-01 00:51:00
3	18b4508	18b4508	Level	0.49	m		3.500	0.500	2018-05-26 23:18:00

Figure 17

3.2 The History Alarms page displays the default device and channel alarm data for the most recent day in a tabular format (Figure 18).



SN	Device ID	Device Name	Channel Name	Channel Value	Unit	Alarm Status	Upper Limit	Lower Limit	Alarm Time
1	17c1516	4#Water Hole	Level	0.00	m		9.000	0.000	2017-05-07 07:29:00
2	17c1516	4#Water Hole	Level	0.00	m		9.000	0.000	2017-05-07 07:28:00
3	17c1516	4#Water Hole	Level	0.00	m		9.000	0.000	2017-05-07 07:27:00
4	17c1516	4#Water Hole	Level	0.00	m		9.000	0.000	2017-05-07 07:26:00
5	17c1516	4#Water Hole	Level	0.00	m		9.000	0.000	2017-05-07 07:25:00
6	17c1516	4#Water Hole	Level	0.00	m		9.000	0.000	2017-05-07 07:24:00
7	17c1516	4#Water Hole	Level	0.00	m		9.000	0.000	2017-05-07 07:22:00
8	17c1516	4#Water Hole	Level	0.00	m		9.000	0.000	2017-05-07 07:21:00
9	17c1516	4#Water Hole	Level	0.00	m		9.000	0.000	2017-05-07 07:19:00

Figure 18

3.2.1 For historical alarm query and export data functions, refer to 2.2.2.

4 Click on the "Device Management" module, you can see the device management module is divided into: device list, group management (Figure 19).

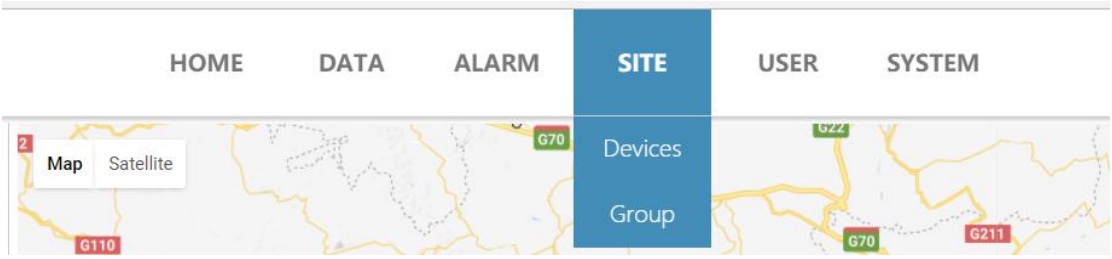
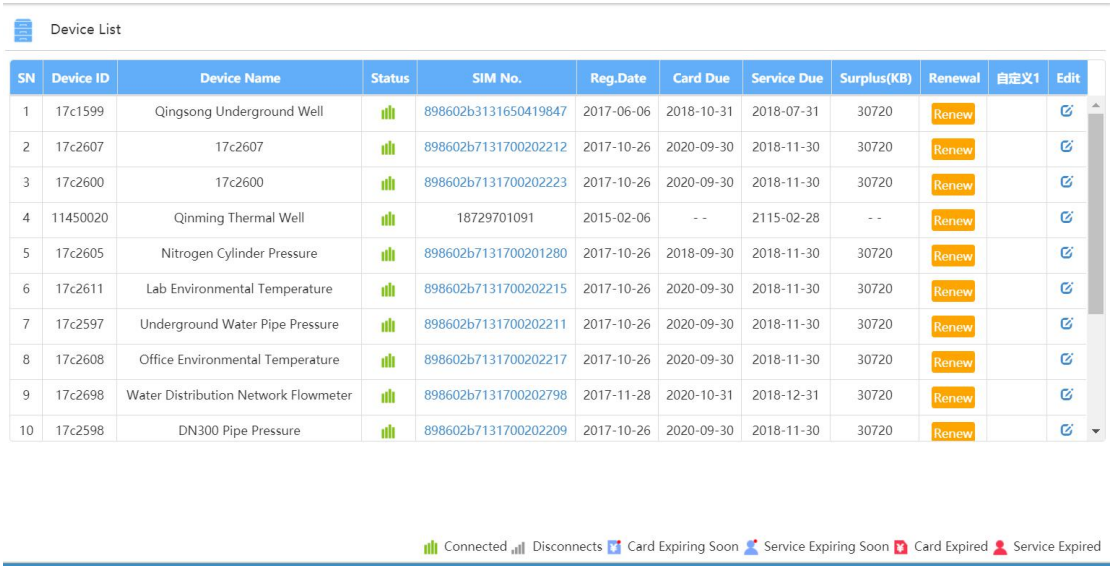


Figure 19

4.1The device list page displays the information and status of all devices under the login account with a list(Figure 20).



SN	Device ID	Device Name	Status	SIM No.	Reg.Date	Card Due	Service Due	Surplus(KB)	Renewal	自定义1	Edit
1	17c1599	Qingsong Underground Well		898602b3131650419847	2017-06-06	2018-10-31	2018-07-31	30720	Renew		
2	17c2607	17c2607		898602b7131700202212	2017-10-26	2020-09-30	2018-11-30	30720	Renew		
3	17c2600	17c2600		898602b7131700202223	2017-10-26	2020-09-30	2018-11-30	30720	Renew		
4	11450020	Qinming Thermal Well		18729701091	2015-02-06	- -	2115-02-28	- -	Renew		
5	17c2605	Nitrogen Cylinder Pressure		898602b7131700201280	2017-10-26	2018-09-30	2018-11-30	30720	Renew		
6	17c2611	Lab Environmental Temperature		898602b7131700202215	2017-10-26	2020-09-30	2018-11-30	30720	Renew		
7	17c2597	Underground Water Pipe Pressure		898602b7131700202211	2017-10-26	2020-09-30	2018-11-30	30720	Renew		
8	17c2608	Office Environmental Temperature		898602b7131700202217	2017-10-26	2020-09-30	2018-11-30	30720	Renew		
9	17c2698	Water Distribution Network Flowmeter		898602b7131700202798	2017-11-28	2020-10-31	2018-12-31	30720	Renew		
10	17c2598	DN300 Pipe Pressure		898602b7131700202209	2017-10-26	2020-09-30	2018-11-30	30720	Renew		

Figure 20

4.1.1 When the service expiration column value is red, it indicates that the service expires.

4.1.2 The value of red in the month's remaining traffic indicates that the traffic has exceeded the package value (30M/month).

4.1.3 Click on the blue value in the SIM card number column to view the SIM card information (Figure 21).

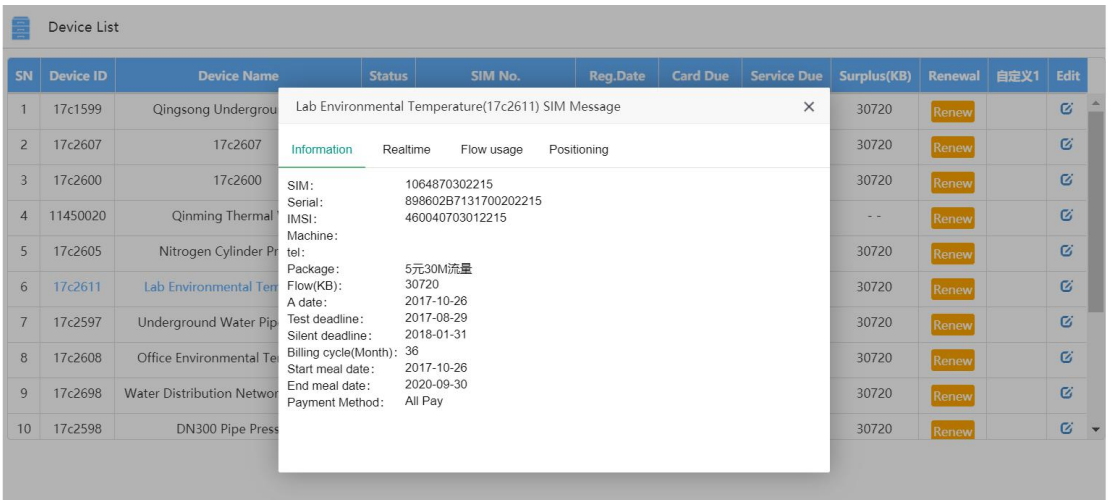


Figure 21

4.1.4 Click the "Renew" button to contact the administrator to renew the appointed device (Figure 22).

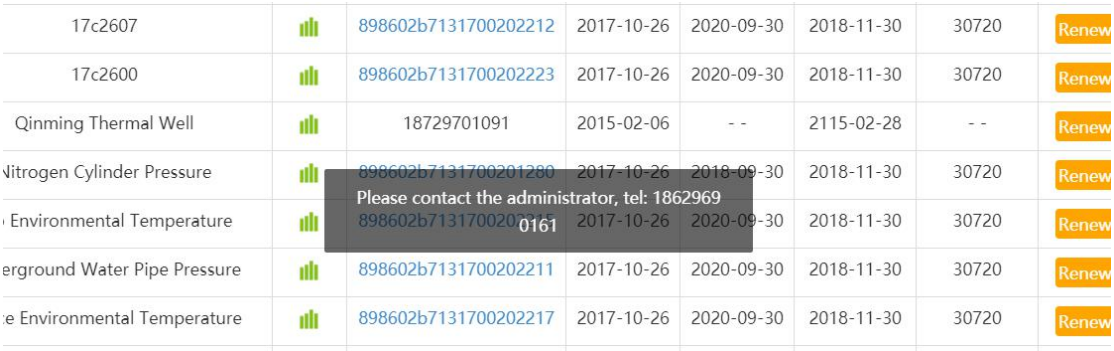


Figure 22

4.1.5Click the Details/Edit button to enter the page of information configuration & modification to modify the device information, grouping, and channel parameters (Figure 23).

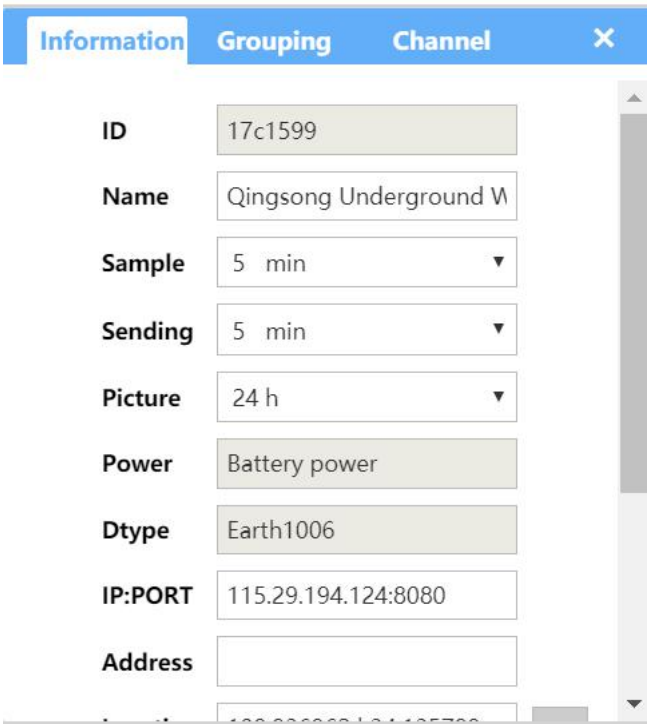


Figure 23

4.2 The group management page shows the grouping of devices in tabular form (Figure 24).

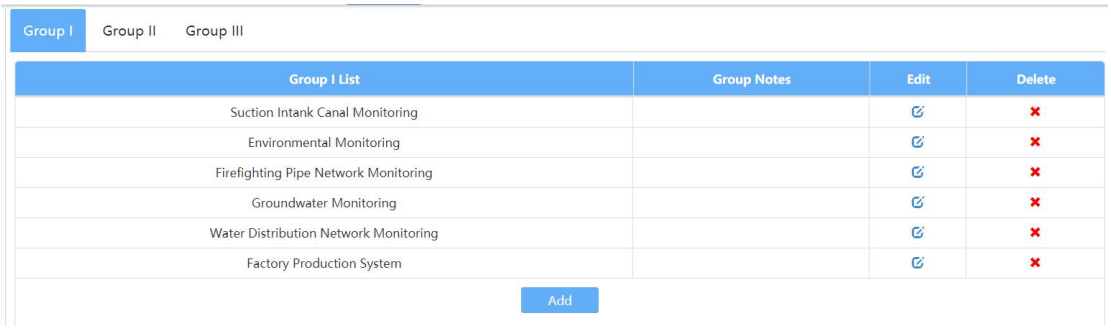


Figure 24

4.2.1 Click the "Add", "Details/Edit", "Delete" buttons on the page to add, edit, and delete groups.

5 Click on the "User Management" module to display the user information in a tabular format (Figure 25).

Figure 25

5.1 Click on "Managed Devices" to enter the page of display, add and edit. (Figure 26).

Figure 26

5.2 Click the "Details/Edit" button to enter the user edit page and edit the users information(Figure 27).

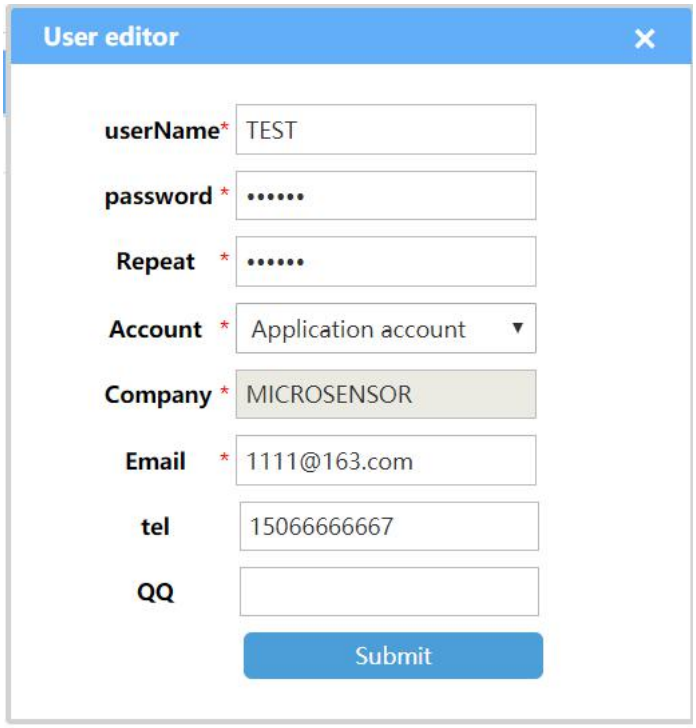


Figure 27

6 Click the "System Settings" module, you can see the system settings are divided into: map setting, company setting, self-defining in three areas (Figure 28).

Figure 28

6.1 The default display is the map settings page, you can modify the map's latitude and longitude, also zoom level (Figure 29).

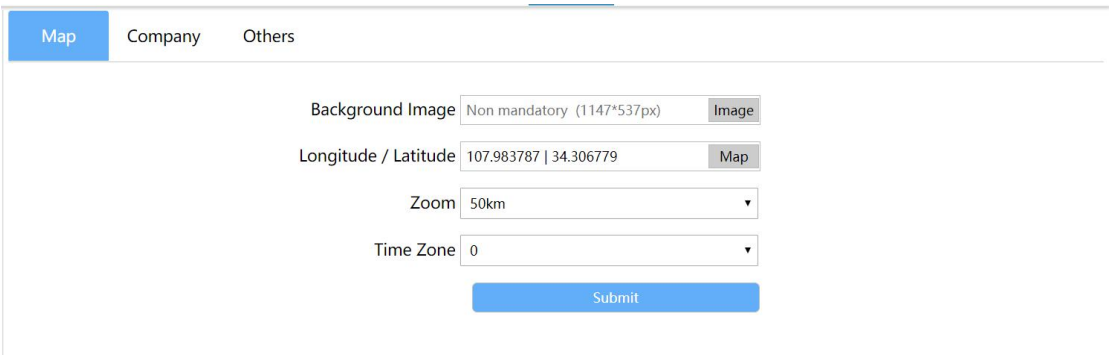


Figure 29

6.2 Click "Company Settings" to enter the company information display page (Figure 30).

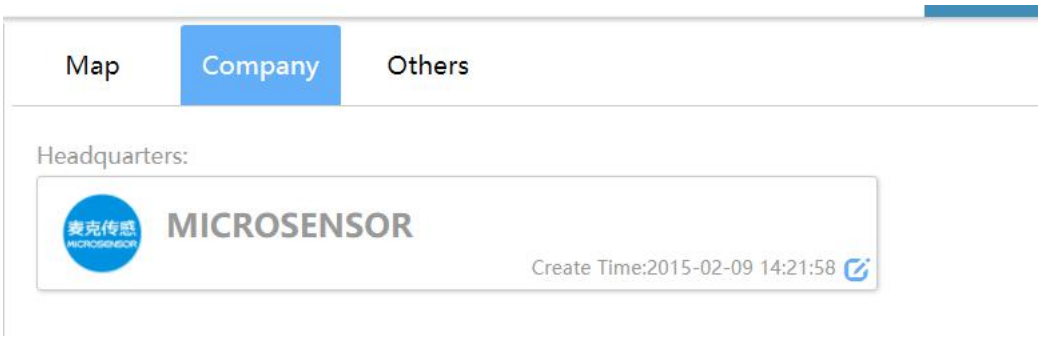


Figure 30

6.2.1 Click the " " button at the bottom right to enter the company information edit page. You can modify the company name and logo (Figure 31).

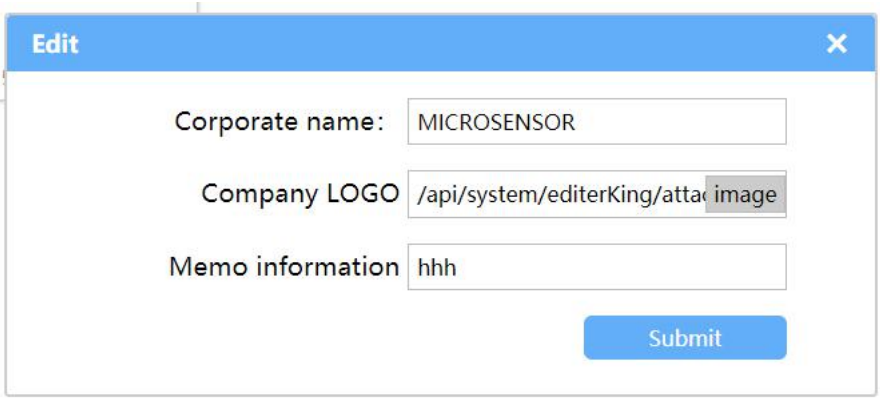


Figure 31

6.3 Click the "Self-defining term" button to enter the self-defining modification page and modify accordingly (Figure 32).

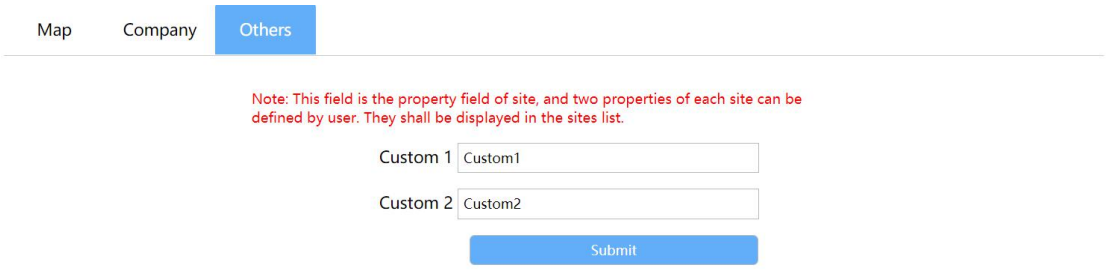


Figure 32

一、Website Configuration:

With the development of the Internet of Things, remote configuration of devices has become a reality. The information parameters of a web page configuration device are delivered to devices through a network, and the purpose of remotely modifying device information has been achieved. The following detailed descriptions are for the web page configuration of the sensor big data platform:

Please follow the steps to click "Device Management" -> "Device List" -> "Detail/Edit" to enter the modification page (Figure 33).

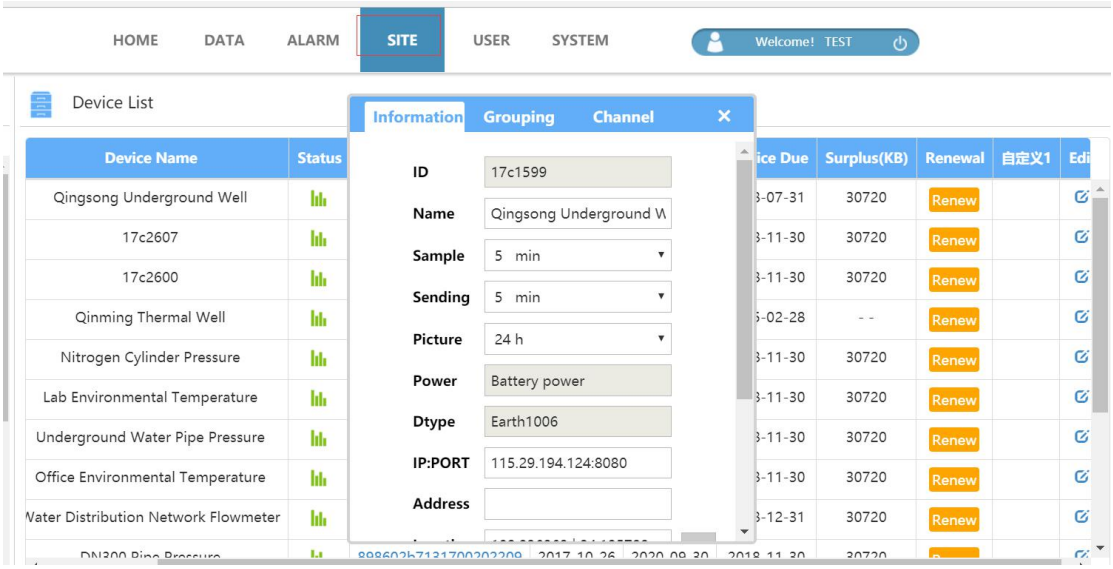


Figure 33

1.1 The device information modification page, collection frequency, transmission frequency, photo frequency, and remote address are all modified and sent to the device. Please note the following:

1.1.1 The acquisition frequency must be greater than or equal to the transmission frequency.

1.1.2 The remote address transfers data to the IP and port of the specified server. Please modify it with caution.

1.2 Click the "Channel Parameters" button to enter the channel parameter modification page (Figure 34).

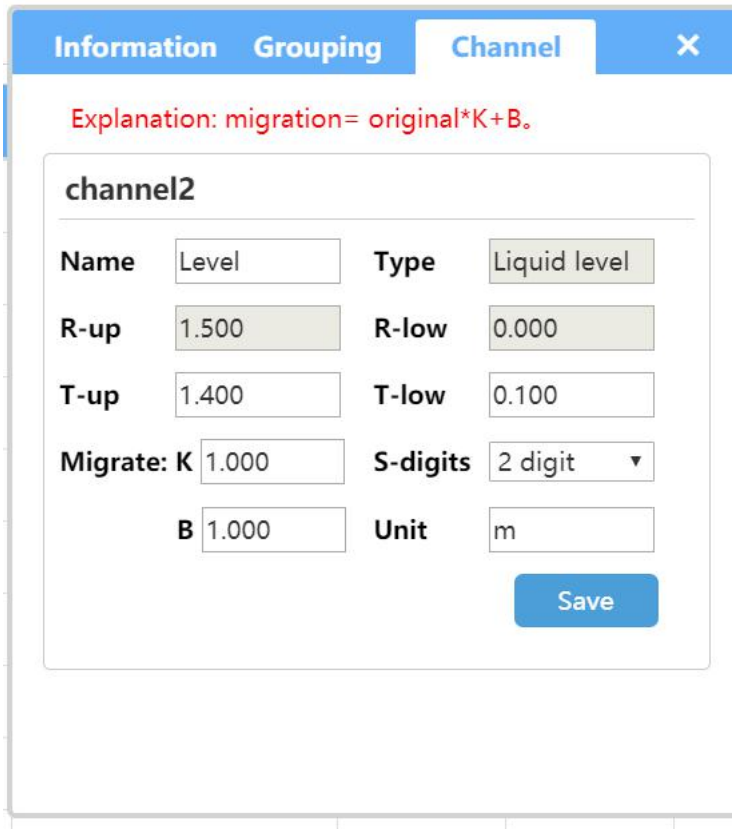


Figure 34

The following points need to be noted in the channel parameter modification:

1.2.1 The Web page cannot modify the upper and lower limits of the range.

1.2.2 The upper threshold must be less than or equal to the upper range, the lower threshold must be greater than the lower range, and the upper threshold must be greater than the lower threshold.