# **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: <a>www.iisens.com/api\_en/</a>, the Log In page showed as below: (Figure 1)

Clou	ud Data Management Platform	中文 English	
	Chrome browser is recommended, Click to <u>Download</u>		



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 (Figure 2).

	номе	DATA	ALARM	SITE	USER	SYSTEM		ال Welcome! TEST ال
Devices (Total: 15)								
•Normals: 11 Alarms: 4 dl Disconnects: 0								
← Environmental Monitoring								
🐱 Baoji City	Dev	ice Service Di	ue:				×	
Qinming Thermal Well								
✓ Xi 'an City	De	vice 1165000	6 service is ab	out to expire	, please cont	act your		
A Qingsong Underground Well	De	vice 17c1516	service is exp	ired, please o	ontact your a	dministrator for		17c2607 Environmental Temperature
17c2607	re	newal!						etwor owmeter
Lab Environmental Temperature								Inderground Water Pipe Pressure
Office Environmental Temperature								al lemperature
← Factory Production System								
← Jintai District								
DN300 Pipe Pressure								
✓ Weibin District								
🛕 4501 Air Compressor								
17c2600								
Nitrogen Cylinder Pressure								
← Firefighting Pipe Network Monitoring								
Underground Water	×							

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)

1 11650006 2#station Level 5.46 m 🕇 4.000 0.500 2011	118-06-01 08:21:50
2 17c1599 Qingsong Underground Well Level 0.99 m I 1.400 0.100 201	018-06-01 08:21:00
3 17c2606 4501 Air Compressor Pressure -0.001 MPa 🤳 2.400 0.100 2011	018-06-01 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).

Table	Curve 45	01 Air Compressor(1 🔹	Temper 🔻 201	8-05-31 00:36:00	_ 201	8-06-01 00	0:36:00	Query Export	
SN	Device ID	Device Name	Channel Name	Channel Value	Unit	Signal	Voltage	Time	Addres
1	17c2606	4501 Air Compressor	Temperature	25.0	°C	13	12.0V	2018-06-01 00:36:00	
2	17c2606	4501 Air Compressor	Temperature	24.5	°C	10	12.0V	2018-06-01 00:31:00	
3	17c2606	4501 Air Compressor	Temperature	24.9	°C	9	12.0V	2018-06-01 00:26:00	
4	17c2606	4501 Air Compressor	Temperature	24.9	°C	13	12.0V	2018-06-01 00:21:00	
5	17c2606	4501 Air Compressor	Temperature	25.1	°C	11	12.0V	2018-06-01 00:16:00	
6	17c2606	4501 Air Compressor	Temperature	25.1	°C	8	12.0V	2018-06-01 00:11:00	
7	17c2606	4501 Air Compressor	Temperature	25.1	°C	10	12.0V	2018-06-01 00:06:00	
8	17c2606	4501 Air Compressor	Temperature	25.1	°C	11	12.0V	2018-06-01 00:01:00	
9	17c2606	4501 Air Compressor	Temperature	25.4	°C	13	12.0V	2018-05-31 23:56:00	
10	17c2606	4501 Air Compressor	Temperature	25.5	°C	11	12.0V	2018-05-31 23:51:00	

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).

nvironmental Monitoring • Xi 'an City	•
🛕 Qingsong Underground Well 📋 📶	2018-06-01 00:41:
Level 0.99 m	
🔵 Lab Environmental Temperat 🚊 📶	2018-06-01 00:40:
● Temperature 27.7 °C	
😑 Office Environmental Tempe 🚊 📶	2018-06-01 00:40:
● Temperature <mark>26.0</mark> °C	
o 17c2607	2018-06-01 00:38:
● Temperature <mark>30.2</mark> °C	
actory Production System • Jintai District	

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).

Refresh Interval: 01min 05min Manual

Refresh

List Table

### 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).

erial number	ID	Device Name	Channel	Value	Unit	Status	Voltage	Signal	Time	Location	
			Barometric Pressure	93.8	kPa	•		-	2018-06- 01 00:41:57		
1 1	11450000	Oinveine Thermal Well	Water Depth	2.08	m	•	-		2018-06- 01 00:41:57	No. 18 Yin	
	11450020	Qinning Thermal Weil	Water Temperature	30.5	°C	•	-	-	2018-06- 01 00:41:57	Da Road	
			Environmental Temperature	17.1	°C	•	-	(23)	2018-06- 01 00:41:57		
2	17-2606	4501 Air Common	Temperature	24.7	°C	•	12.0V	13	2018-06- 01 00:41:00		
2	1702000	4501 Air Compressor	Pressure	-0.001	MPa	Ŧ	12.0V	13	2018-06- 01 00:41:00		
	17.0000	Water Distribution Network	Transient Flow	0.000	m³/h	•	23.8V	13	2018-06- 01 00:37:00		
3	1702698	Flowmeter	Accumulated Flow	0.000	m <sup>3</sup>	•	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).

Tabl	e Curve	Qinming Thermal Well	Barome 2	018-05-31 00:43:5	7 _	2018-00	5-01 00:43:5	57 Query Expo	ort.Z
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 Roa
2	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa	~		2018-06-01 00:42:06	No. 18 Ying Da Roa
3	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa	1.7	-	2018-06-01 00:41:06	No. 18 Ying Da Roa
4	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa	-	553	2018-06-01 00:40:06	No. 18 Ying Da Roa
5	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa	-	<u>w</u>	2018-06-01 00:39:06	No. 18 Ying Da Roa
6	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa			2018-06-01 00:38:06	No. 18 Ying Da Roa
7	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa	-	-	2018-06-01 00:37:06	No. 18 Ying Da Roa
8	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa			2018-06-01 00:36:06	No. 18 Ying Da Roa
9	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa			2018-06-01 00:35:06	No. 18 Ying Da Roa
10	11450020	Qinming Thermal Well	Barometric Pressure	93.8	kPa		-	2018-06-01 00:34:06	No. 18 Ying Da Roa



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°C	10.923°C	14.944°C	4326	Query
Nearly 7 days	23.321°C	10.923°C	15.946°C	10090	Query
Nearly 30 days	24.519℃	10.274°C	17.060°C	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).

Tabl	Curve	Office Environmental T 🔻 Temper	▼ 2018-01-10	00:45:00 - 2	018-01-	17 00:45:0	00 Que	ery Export	
SN	Device ID	Device Name	Channel Name	Channel Value	Unit	Signal	Voltage	Time	Addres
1	17c2608	Office Environmental Temperature	Temperature	16.2	°C	28	12.0V	2018-01-17 00:45:00	
2	17c2608	Office Environmental Temperature	Temperature	16.2	°C	28	12.0V	2018-01-17 00:44:00	
3	17c2608	Office Environmental Temperature	Temperature	16.3	°C	24	12.0V	2018-01-17 00:43:00	
4	17c2608	Office Environmental Temperature	Temperature	16.3	°C	28	12.0V	2018-01-17 00:42:00	
5	17c2608	Office Environmental Temperature	Temperature	16.1	°C	24	12.0V	2018-01-17 00:41:00	
6	17c2608	Office Environmental Temperature	Temperature	16.1	°C	24	12.0V	2018-01-17 00:40:00	
7	17c2608	Office Environmental Temperature	Temperature	16.1	°C	19	12.0V	2018-01-17 00:39:00	
8	17c2608	Office Environmental Temperature	Temperature	16.0	°C	28	12.0V	2018-01-17 00:38:00	
9	17c2608	Office Environmental Temperature	Temperature	15.9	°C	28	12.0V	2018-01-17 00:37:00	
10	17c2608	Office Environmental Temperature	Temperature	15.9	°C	23	12.0V	2018-01-17 00:36:00	



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	۰.	1.400	0.100	2018-06-01 00:51:0
2	17c2606	4501 Air Compressor	Pressure	0.000	MPa	+	2.400	0.100	2018-06-01 00:51:0
3	18b4508	18b4508	Level	0.49	m		3.500	0.500	2018-05-26 23:18:0

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).

4#'	Water Hole(1	7c1516 ¥ Lev	vel 🔻 2017-0	05-06 07:29:00	2017	-05-07 07:29:00	Query	Export		S
N	Device ID	Device Name	Channel Name	Channel Value	Unit	Alarm Status	Upper Limit	Lower Limit	Alarm Ti	me
1	17c1516	4#Water Hole	Level	0.00	m	۰.	9.000	0.000	2017-05-07 0	07:29:00
2	17c1516	4#Water Hole	Level	0.00	m	+	9.000	0.000	2017-05-07 0	07:28:00
3	17c1516	4#Water Hole	Level	0.00	m	+	9.000	0.000	2017-05-07 0	07:27:00
4	17c1516	4#Water Hole	Level	0.00	m	+	9.000	0.000	2017-05-07 0	07:26:00
5	17c1516	4#Water Hole	Level	0.00	m	+	9.000	0.000	2017-05-07 0	07:25:00
5	17c1516	4#Water Hole	Level	0.00	m	+	9.000	0.000	2017-05-07 0	07:24:00
7	17c1516	4#Water Hole	Level	0.00	m	+	9.000	0.000	2017-05-07 0	07:22:00
3	17c1516	4#Water Hole	Level	0.00	m	+	9.000	0.000	2017-05-07 0	07:21:00
9	17c1516	4#Water Hole	Level	0.00	m	+	9.000	0.000	2017-05-07 0	07:19:00
ota	57 data,6 pa	ges Current page1	ĺ					1	2 3	> e

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).





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

	Device Lis	t										
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	uli	898602b3131650419847	2017-06-06	2018-10-31	2018-07-31	30720	Renew		Ø	•
2	17c2607	17c2607	uli	898602b7131700202212	2017-10-26	2020-09-30	2018-11-30	30720	Renew		Ø	
3	17c2600	17c2600	ult	898602b7131700202223	2017-10-26	2020-09-30	2018-11-30	30720	Renew		Ø	
4	11450020	Qinming Thermal Well	alt	18729701091	2015-02-06		2115-02-28		Renew		Ø	
5	17c2605	Nitrogen Cylinder Pressure	alt	898602b7131700201280	2017-10-26	2018-09-30	2018-11-30	30720	Renew		Ø	
6	17c2611	Lab Environmental Temperature	dl	898602b7131700202215	2017-10-26	2020-09-30	2018-11-30	30720	Renew		ß	
7	17c2597	Underground Water Pipe Pressure	ult	898602b7131700202211	2017-10-26	2020-09-30	2018-11-30	30720	Renew		Ø	
8	17c2608	Office Environmental Temperature	alt	898602b7131700202217	2017-10-26	2020-09-30	2018-11-30	30720	Renew		Ø	
9	17c2698	Water Distribution Network Flowmeter	ult	898602b7131700202798	2017-11-28	2020-10-31	2018-12-31	30720	Renew		Ø	
10	17c2598	DN300 Pipe Pressure	alt	898602b7131700202209	2017-10-26	2020-09-30	2018-11-30	30720	Renew		Ø	•

🏨 Connected 📶 Disconnects 😰 Card Expiring Soon 🙎 Service Expiring Soon 🛐 Card Expired 💄 Service Expired

#### 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).

	Device Lis	t											
SN	Device ID	Device Name	Stat	tus SIM No.		Reg.Date	Card Due	Service Due	Surplus(KB)	Renewal	自定义1	Edit	
1	17c1599	Qingsong Undergrou	Lab Environmen	tal Temperature(17c2611)	) SIM M	lessage		×	30720	Renew		Ø	*
2	17c2607	17c2607	Information R	tealtime Flow usage	Positi	oning			30720	Renew		Ø	
3	17c2600	17c2600	SIM:	1064870302215	-				30720	Renew		Ø	
4	11450020	Qinming Thermal '	Serial: IMSI:	460040703012215	5					Renew		Ø	
5	17c2605	Nitrogen Cylinder Pr	tel: Package:	5元3014流景					30720	Renew		Ø	
6	17c2611	Lab Environmental Terr	Flow(KB): A date:	30720 2017-10-26					30720	Renew		C	
7	17c2597	Underground Water Pip	Test deadline: Silent deadline:	2017-08-29 2018-01-31					30720	Renew		Ø	
8	17c2608	Office Environmental Ter	Billing cycle(Month) Start meal date:	): 36 2017-10-26					30720	Renew		C	
9	17c2698	Water Distribution Networ	End meal date: Payment Method:	2020-09-30 All Pay					30720	Renew		Ø	
10	17c2598	DN300 Pipe Press							30720	Renew		Ø	¥

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

17c2607	db	898602b7131700202212	2017-10-26	2020-09-30	2018-11-30	30720	Renew
17c2600	alt	898602b7131700202223	2017-10-26	2020-09-30	2018-11-30	30720	Renew
Qinming Thermal Well	ult	18729701091	2015-02-06		2115-02-28		Renew
Nitrogen Cylinder Pressure	alt	898602b7131700201280	2017-10-26	2018-09-30	2018-11-30	30720	Renew
Environmental Temperature	ah	Please contact the admini 898602b7131700200161	2017-10-26	2020-09-30	2018-11-30	30720	Renew
erground Water Pipe Pressure	it.	898602b7131700202211	2017-10-26	2020-09-30	2018-11-30	30720	Renew
e Environmental Temperature	ıth	898602b7131700202217	2017-10-26	2020-09-30	2018-11-30	30720	Renew

### 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).

Information	Grouping	Channel	×
ID	17c1599		-
Name	Qingsong U	nderground W	
Sample	5 min	•	- 1
Sending	5 min	¥	- 1
Picture	24 h		- 1
Power	Battery pow	er	
Dtype	Earth1006		
IP:PORT	115.29.194.1	24:8080	
Address			
	100 00 00 00	12112700	

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

Group I List	Group Notes	Edit	Delete
Suction Intank Canal Monitoring		Ø	×
Environmental Monitoring		ø	×
Firefighting Pipe Network Monitoring		ø	×
Groundwater Monitoring		ø	×
Water Distribution Network Monitoring		ø	×
Factory Production System		G	×



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).

<b>ι</b>	Jsers								
SN	User Name	Account	Company	Cell Number	Email	Creat Time	Devices	Edit	Delete
1	TEST	Management account	MICROSENSOR	15066666667	1111@163.com	2015-02-09 14:21:58	G	ß	×

#### 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).

User editor	×
userName*	TEST
password *	•••••
Repeat *	••••••
Account *	Application account
Company *	MICROSENSOR
Email *	1111@163.com
tel	15066666667
QQ	
	Submit
	Submit



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).



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

Map Company Others		
Background Image	Non mandatory (1147*537px)	Image
Longitude / Latitude	107.983787   34.306779	Мар
Zoom	50km	•
Time Zone	0	۲
	Submit	



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

Map	Company	Others	
adquarte	ers:	60B	
the second se	MICKOSEN	SUK	

Figure 30

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

Edit	
Corporate name:	MICROSENSOR
Company LOGO	/api/system/editerKing/attac image
Memo information	hhh
	Submit

Figure 31

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

Мар	Company	Others				
		Note: This	field is the property	field of site, and two properties of e	ach site can be	
		defined by	Custom 1	Custom1		
			Custom 2	Custom2		
				Submit		
				Figure 32		

—, 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).

HOME DATA	ALARM	SITE	JSER SYSTEM	👌 Welc	ome! TEST	୯		
Device List		Information	Grouping Channel	×				
Device Name	Status	ID	17c1599	<sup>▲</sup> ice I	Due Surplus(K	B) Renewal	自定义1	Edi
Qingsong Underground Well	hte	Namo	Oingcong Linderground M	3-07	-31 30720	Renew		Ø
17c2607	hh	Name		3-11	-30 30720	Renew		Ø
17c2600	hh	Sample	5 min •	3-11	-30 30720	Renew		ø
Qinming Thermal Well	hh	Sending	5 min 🔻	5-02	-28	Renew		ø
Nitrogen Cylinder Pressure	hh	Picture	24 h 🔹	3-11	-30 30720	Renew		G
Lab Environmental Temperature	hh	Power	Battery power	3-11	-30 30720	Renew		Ø
Underground Water Pipe Pressure	hh	Dtype	Earth1006	3-11-	-30 30720	Renew		Ø
Office Environmental Temperature	hh	IP:PORT	115.29.194.124:8080	3-11	-30 30720	Renew		Ø
Vater Distribution Network Flowmeter	hte	Address		3-12	-31 30720	Renew		Ø
DNI200 Pipe Pressure	Li	202602b71217002	202200 2017 10 26 2020 00 3	• 2019 11	20 20720			<i>c</i> .

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).

channe	12		
Name	Level	Туре	Liquid level
R-up	1.500	R-low	0.000
T-up	1.400	T-low	0.100
Migrate:	<b>K</b> 1.000	S-digits	2 digit 🔹
	<b>B</b> 1.000	Unit	m
			Save



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.