



MHm-P

# Machine Health management Platform

## Operation Manual

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# A. About MHm-P Machine Health management Platform

MHm-P Machine Health management platform provides customers solutions for intelligent upgrade of traditional devices.

Users can connect their devices to the platform through simple installation, so as to obtain various real-time information, historical charts, abnormal alerts, statistical reports, analysis and diagnosis of the device and other information.

## B. Authorization

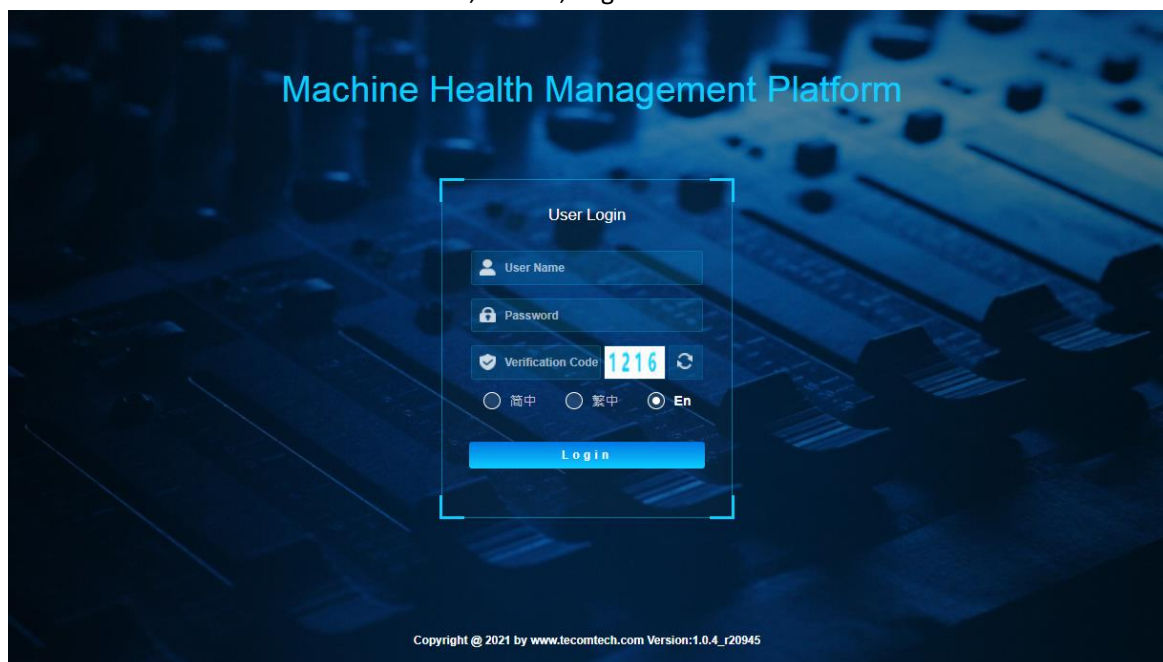
Please connect the MHm-P USB KeyPro to the computer to obtain the system login authorization. And the MHm-P USB KeyPro should be connected to the computer during operation.

## C. Login to the Platform

System Default User Name: admin

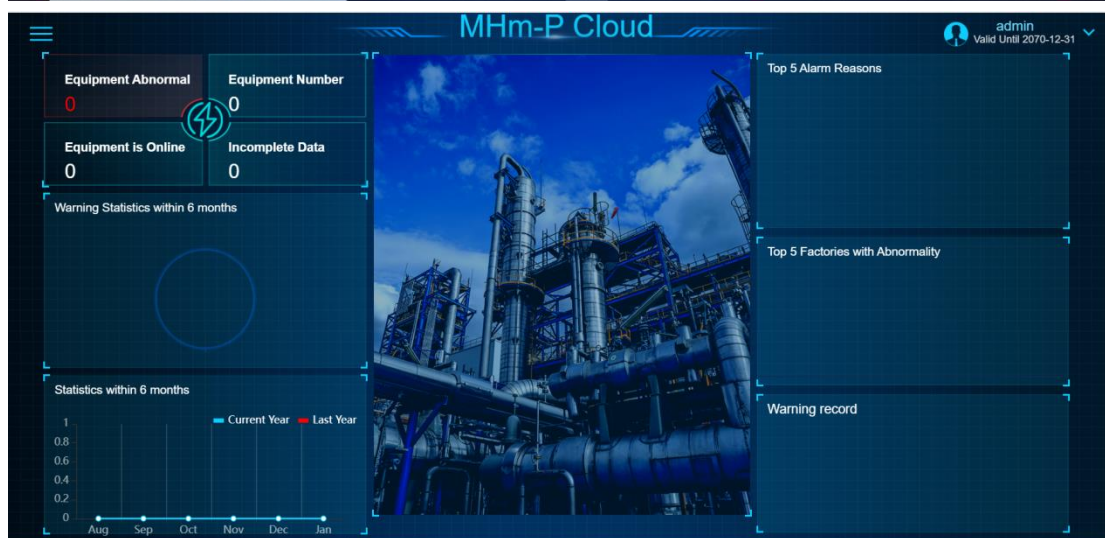
System Default Password is: 123456

Recommended browsers: Chrome, Firefox, Edge. Recommended resolution: 1440 X 900



## D. Homepage

When log in to the platform for the first time, the center picture of the homepage is empty. User can click the "+" sign to upload a picture no larger than 2MB and display it on the homepage.

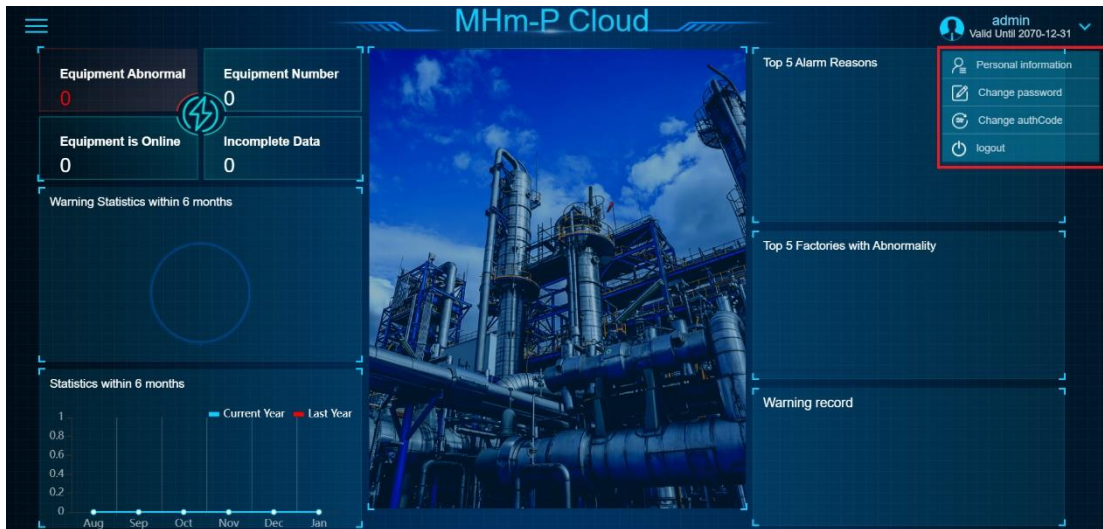


The picture can be replaced by clicking on it at any time.

## E. Drop down menu at top right corner

The top right corner will display the username currently logged in, and the following is the expiration date. The expiration date of the admin user is also the expiration date of the entire platform.

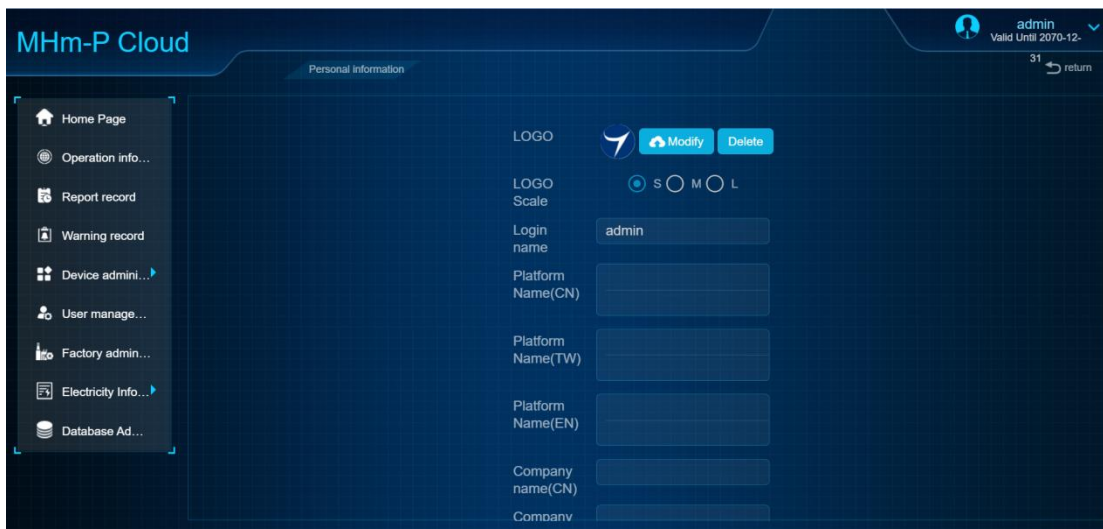
Through the drop-down menu at the top right corner, "Personal Information", "Change Password", "Change authority code" or "logout" can be selected.



### 1. Personal Information

Through the drop-down menu at the top right corner, user can enter the "Personal Information" page to modify the personal information.

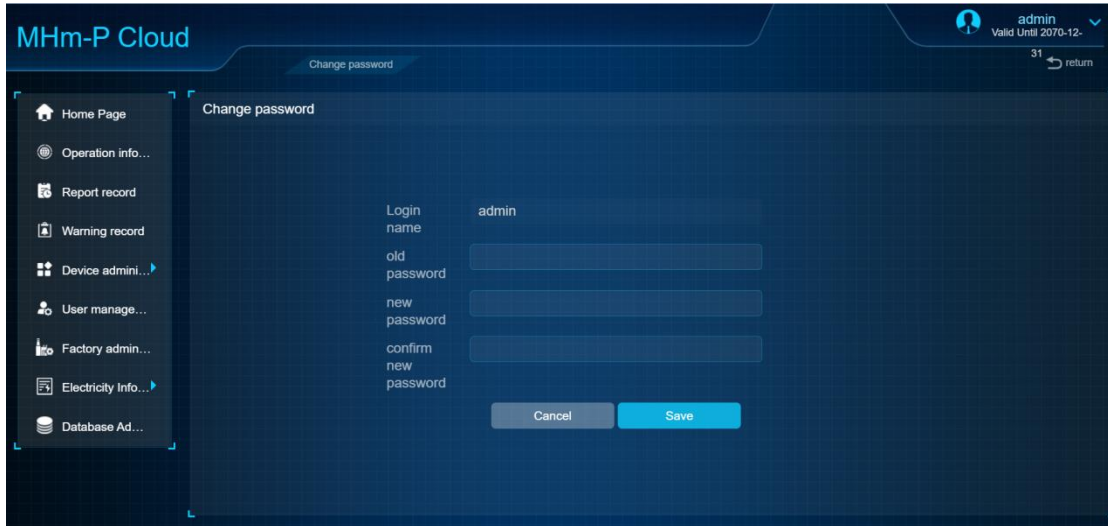
Note: The "Platform Name" and "Company name" modified by the "admin" account will be shared by all users of the platform



## 2. Change Password

From the drop-down menu at the upper right corner, user can enter the "Change Password" page to change your password.

The default password of all accounts is 123456. Users must manually change the password after logging in. The password length is at least 6 digits.

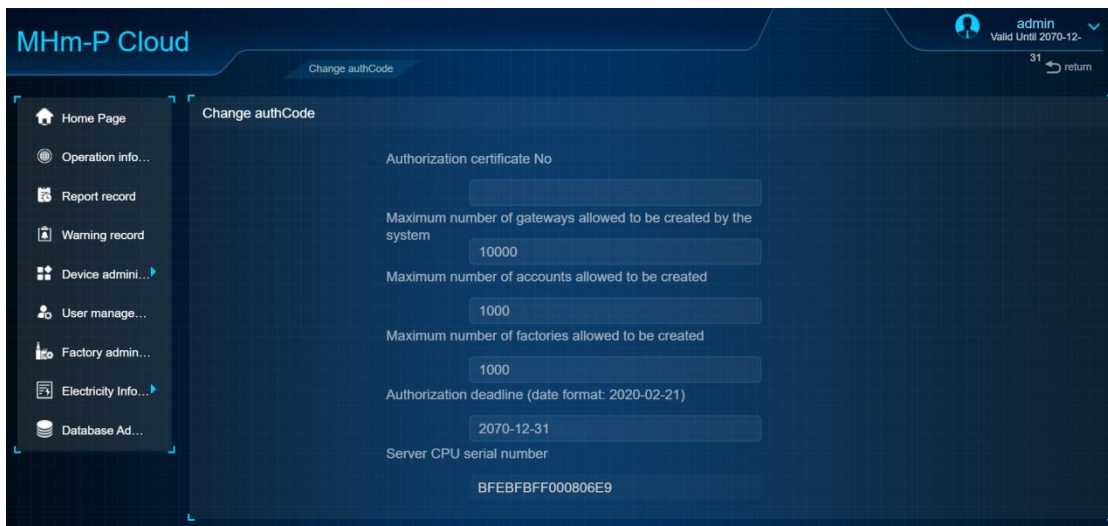


The screenshot shows the 'Change password' page in the MHm-P Cloud interface. The page title is 'Change password'. On the left, there is a navigation menu with items: Home Page, Operation info..., Report record, Warning record, Device admini..., User manage..., Factory admin..., Electricity Info..., and Database Ad... The main content area contains a form with the following fields: Login name (admin), old password, new password, and confirm new password. There are 'Cancel' and 'Save' buttons at the bottom of the form. The top right corner shows the user 'admin' with a valid until date of 2070-12-31 and a 'return' button.

## 3. Change Authority Code

If extend the deadline, or increase the number of devices, factories, accounts, etc. are required, user needs to apply for a new authorization code from the supplier. After a new authorization code is obtained, update the authorization code through the "Change Authorization Code" page.

If the new authorization code is correct, it will be updated to the new authorization code. If the new authorization code is incorrect, the old authorization code will be maintained.

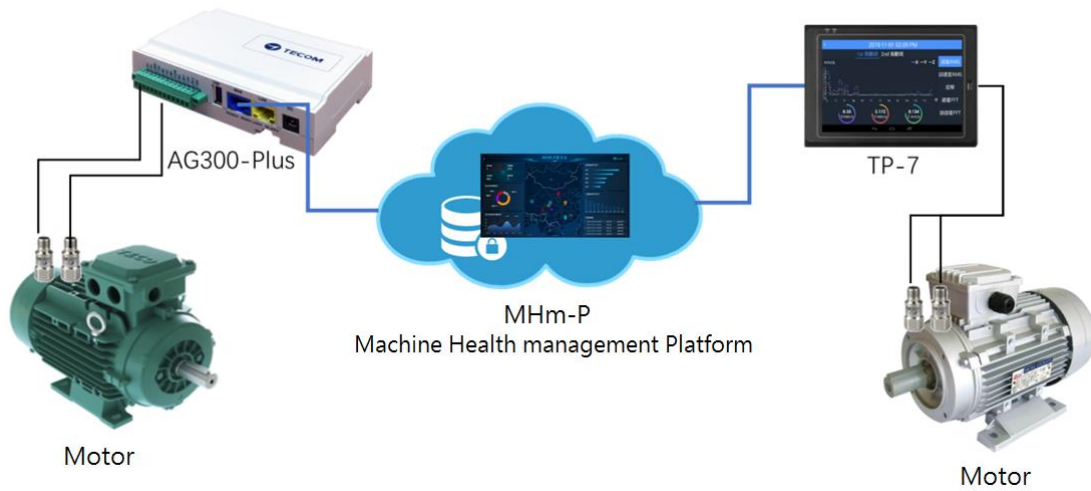


The screenshot shows the 'Change authCode' page in the MHm-P Cloud interface. The page title is 'Change authCode'. On the left, there is a navigation menu with items: Home Page, Operation info..., Report record, Warning record, Device admini..., User manage..., Factory admin..., Electricity Info..., and Database Ad... The main content area contains a form with the following fields: Authorization certificate No, Maximum number of gateways allowed to be created by the system (10000), Maximum number of accounts allowed to be created (1000), Maximum number of factories allowed to be created (1000), Authorization deadline (date format: 2020-02-21) (2070-12-31), and Server CPU serial number (BFEBFBFF000806E9). The top right corner shows the user 'admin' with a valid until date of 2070-12-31 and a 'return' button.

## 4. Logout

Log out of this account directly through the drop-down menu at the top right corner and return to the login page.

## F. Add Device



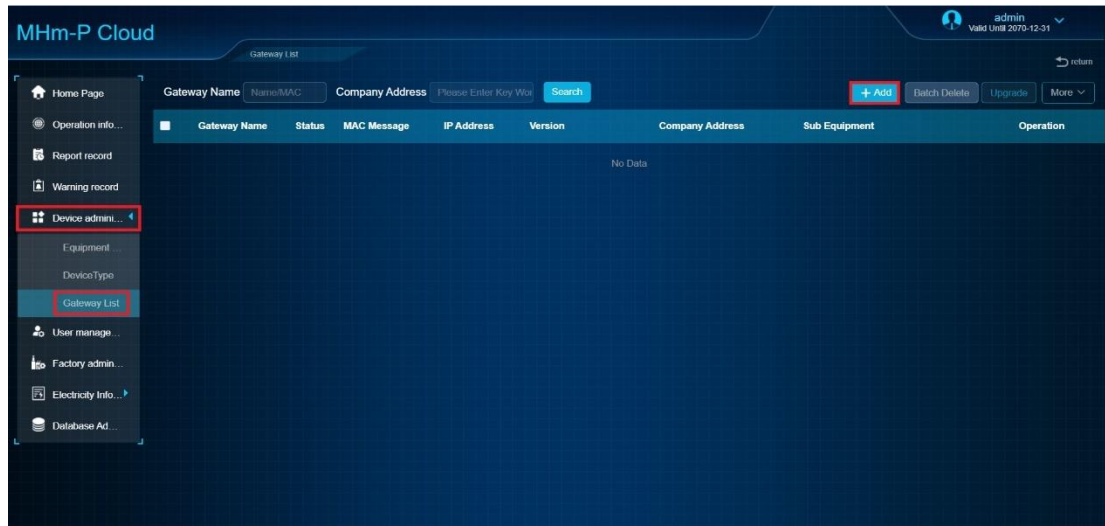
User can connect devices to the platform through AG300-Plus or xDAQ Gateway, or device such as a TP-7 tablet, depending on which device you get from your supplier.

This Operation Manual will introduce the connection methods for Gateway type.

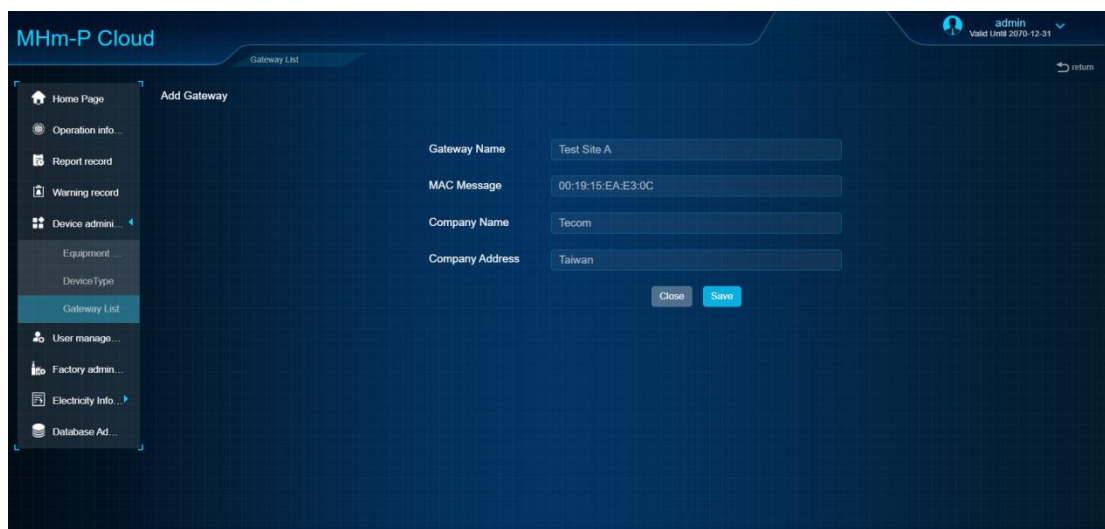
# 1. Add the MAC address of the Gateway to the platform

## b) Add the MAC address of the Gateway manually

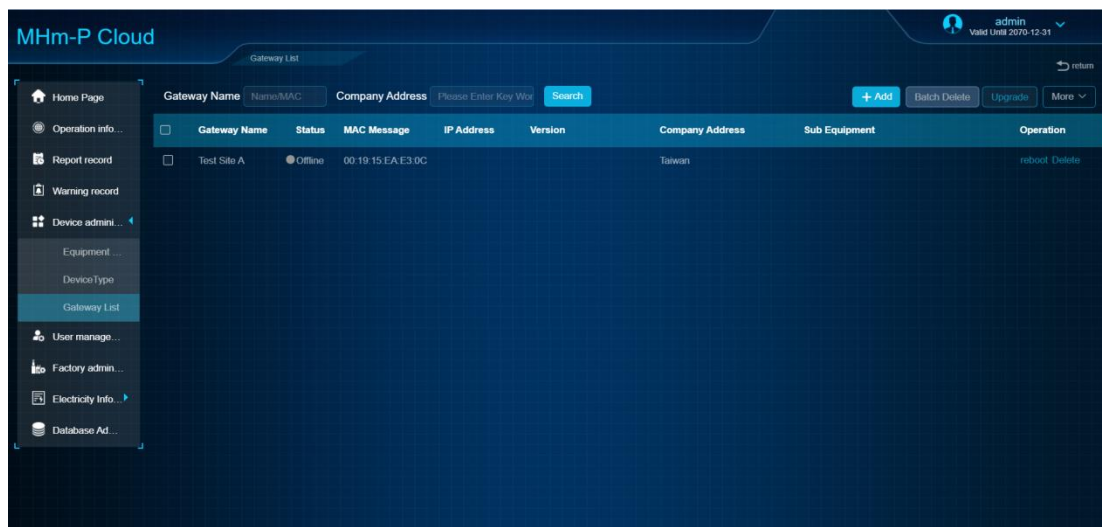
- ① Go to "Device Administration" and then "Gateway List" page, click the "Add" button:



- ② Add a new Gateway
  - Gateway Name: It is an easy-to-identify name for the gateway, which can be the same as other gateways, but cannot be empty.
  - MAC Message: It is not case sensitive and cannot conflict with the MAC address of other gateways already in the system.
  - Company Name, Company Address: Set the company name and company address to which the gateway belongs, for record use only.



Click “Save” and return to the “Gateway List” page. It shows that its subordinate equipment is empty, indicating that no device has been configured on the gateway.



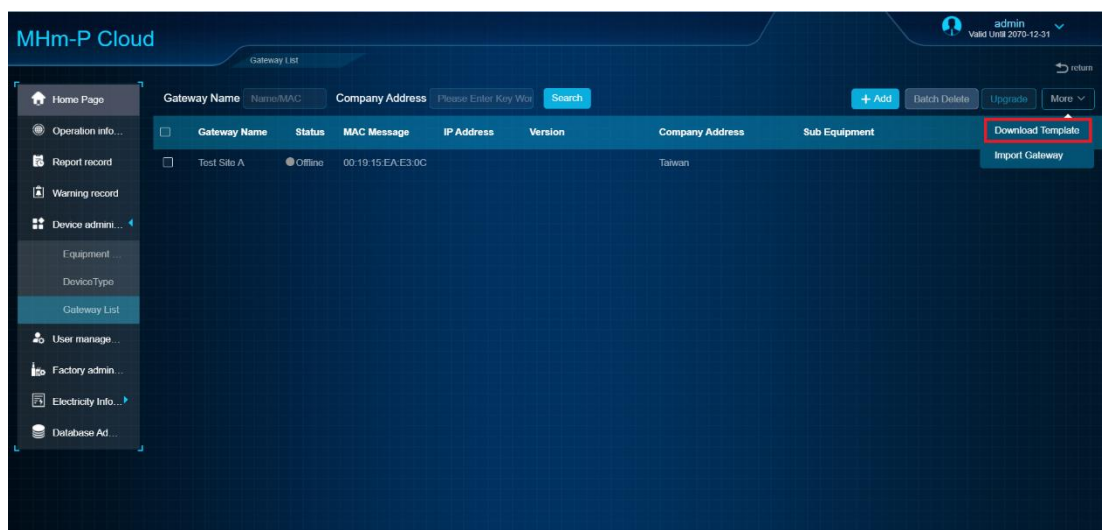
### c) Import the MAC addresses of gateways in batches

Besides adding a gateway MAC address manually, gateways' MAC addresses can also be imported in batches through an Excel sheet on the "Gateway List" page.

To create an Excel table, export the Excel file template to the computer through the “Download Template” button, and then input it on the computer and then import it.

#### ① Download Excel Template

Select the "Download Template" button from the "More" drop-down box in the upper right corner to download the Excel template for filling:



② Fill in the Excel file

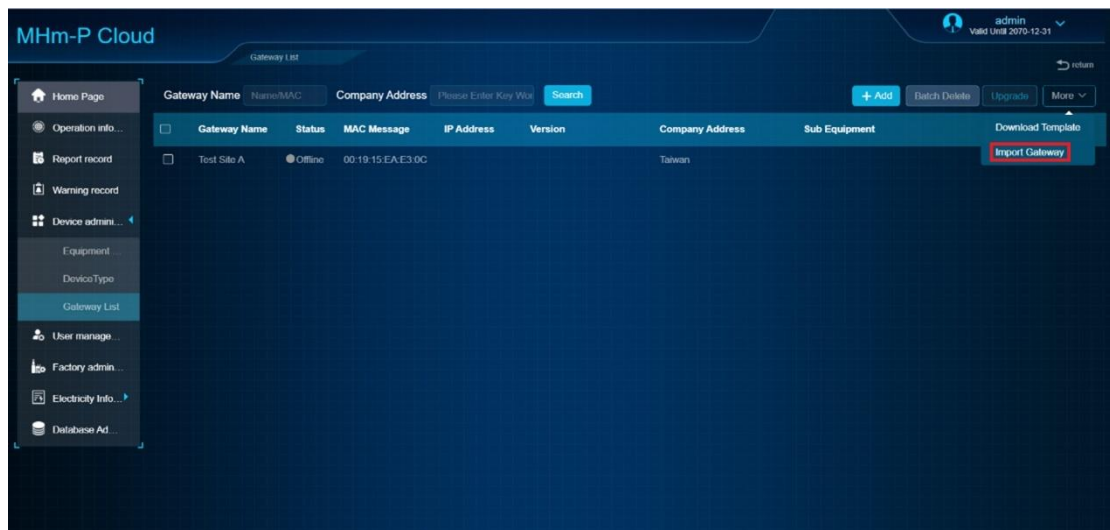
**Attention:**

- Do not modify the header of the Excel file.
- When filling in, the Name (Column A) and MAC address (Column B) are required. The others can be left blank.
- The format of the MAC address is as follows: 00:19:EB:6C:16, both upper and lower case are acceptable.

	A	B	C	D	E	F
1	Do not modify the header					
2	名称	MAC地址	公司名称	版本	公司地址	入库失败原因
3	Test Site B	00:19:15:EB:6C:16				
4	Test Site C	00:19:15:EB:7A:24				
5						
6						
7						
8						

③ Import the Excel file

Select the "Import Gateway" button from the "More" drop-down box in the upper right corner to import the completed gateway Excel table:

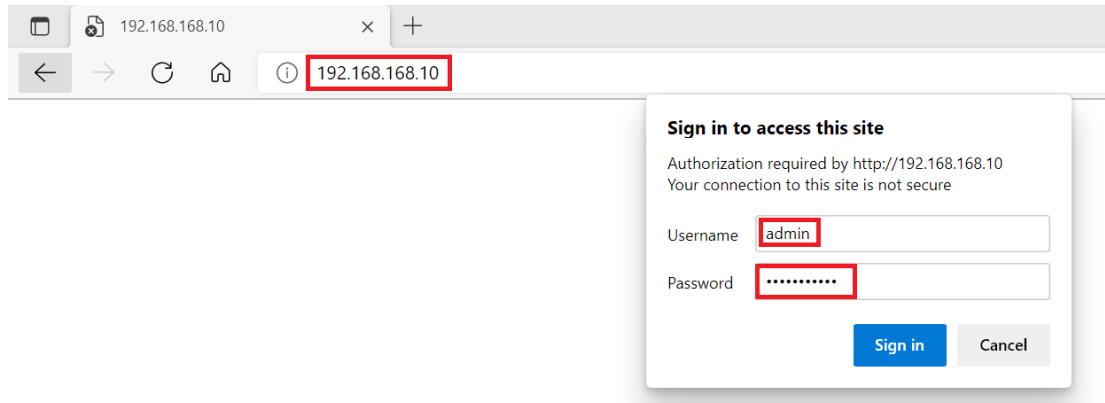


After the Excel file is imported, the newly added gateways are displayed. At this time, their subordinate devices are empty, indicating that no device has been configured on the gateway.

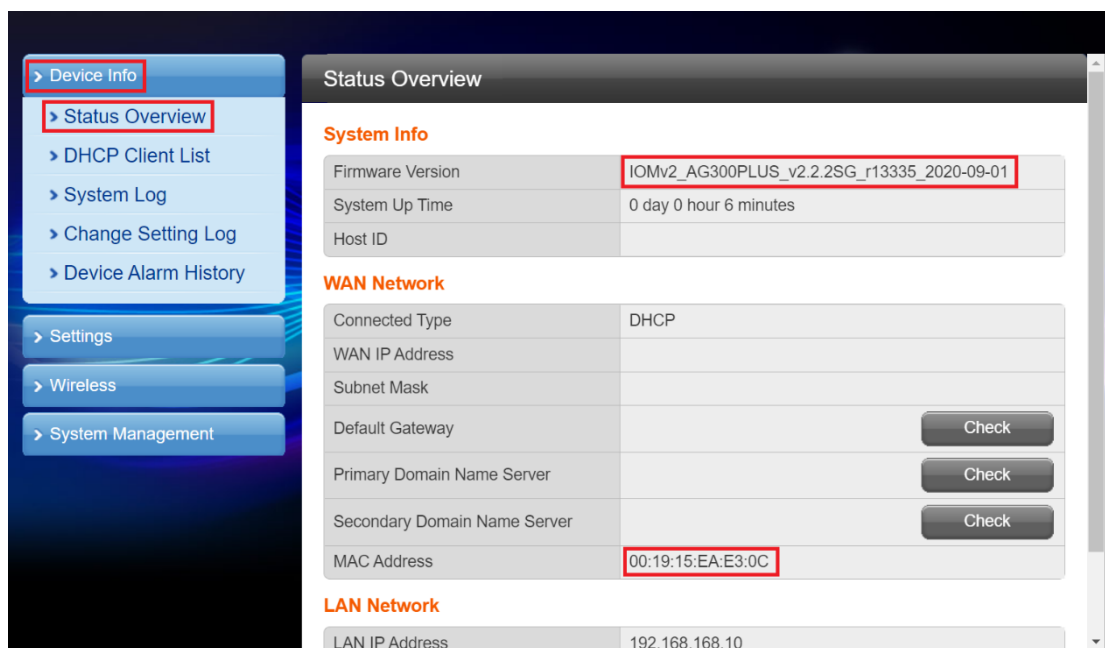
## 2. Log in to the gateway webpage and configure the gateway

The setting of AG-300 Plus will be briefly introduced here. The setting of other Tecom's Gateway is similar.

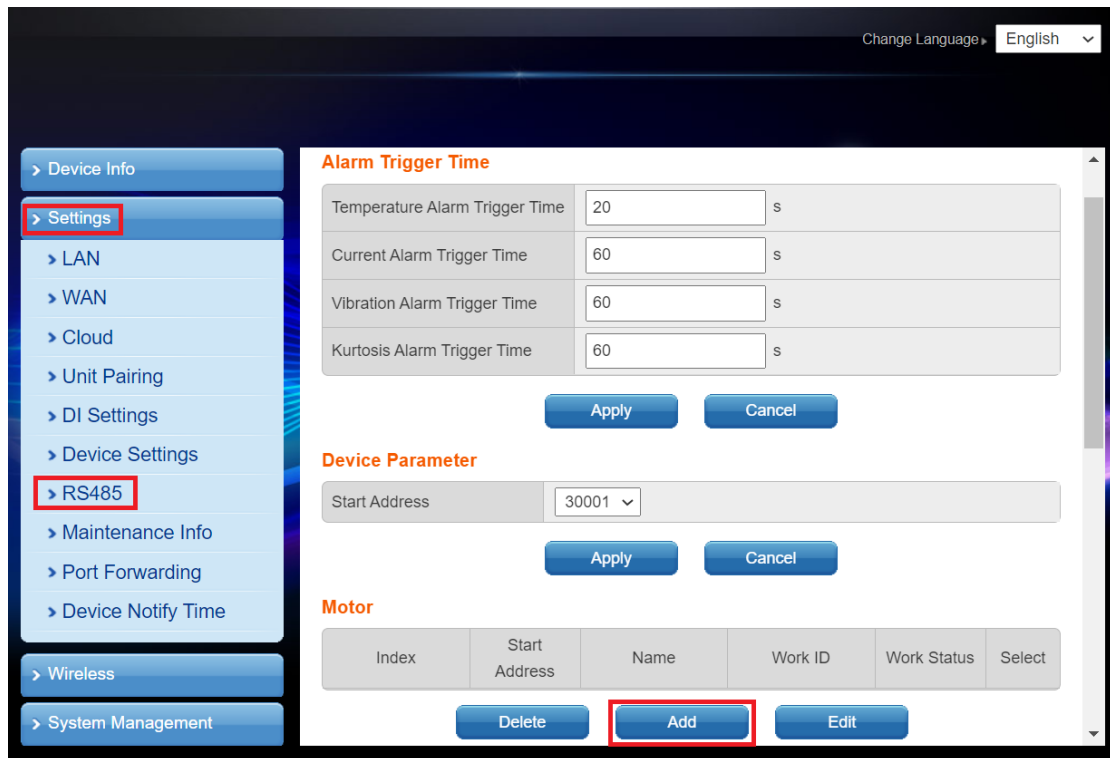
- (1) Connect the LAN (Yellow) Port of AG-300 Plus to Ethernet Port of Computer with Ethernet cable. Log in to the webpage of the gateway through a browser (default IP: 192.168.168.10, account: admin, password: IP585xAdmin).



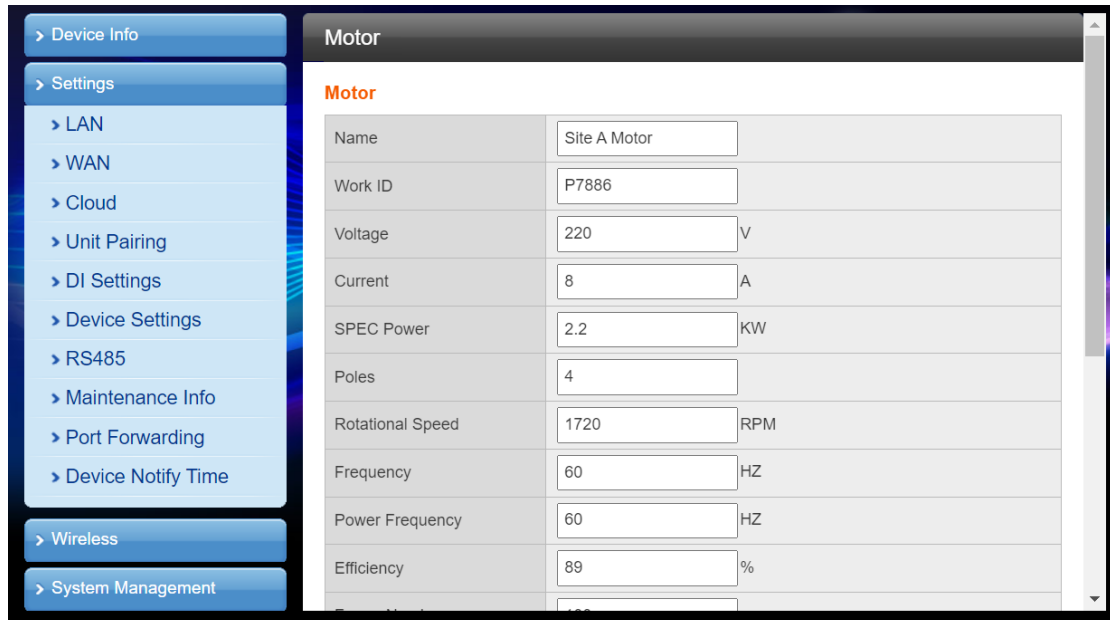
- (2) After login successfully, go to "Device Information" -> "Status Overview" page to confirm the Firmware Version and MAC address are correct:



(3) Click "Settings" → "RS485" → "Motor" → "Add" to enter Motor information page.



(4) In the "Motor" page, configure it according to the actual situation of the motor.



Frequency  HZ

Power Frequency  HZ

Efficiency  %

Frame Number

Bearing Designation

Maintenance Hours

Drive Mode

Load Status

Install Mode

FAE Information: There is not the FAE information

Engineer Information: There is not the engineer information

**Save**

(5) After clicking “Save”, the adding tables for sensors such as “VT200” “TT300”, “VB300 Series” and “ElecMeter” will appear at the bottom of the page. Please click “+” to add “VT200” “TT300”, “VB300 Series” and “ElecMeter”.

**Note:** It is recommended that the configuration should be according to the actual sensor installed on the motor. If a non-existing sensor is configured for the motor, the status of the motor may be displayed as gray "data incomplete" on the platform.

Engineer Information: There is not the engineer information

**Save**

**VT200**

Name	RS485 ID	Line	
			<b>+</b>

**TT300**

Name	RS485 ID	Line	HW Version	SW Version	CPU Temperature	
						<b>+</b>

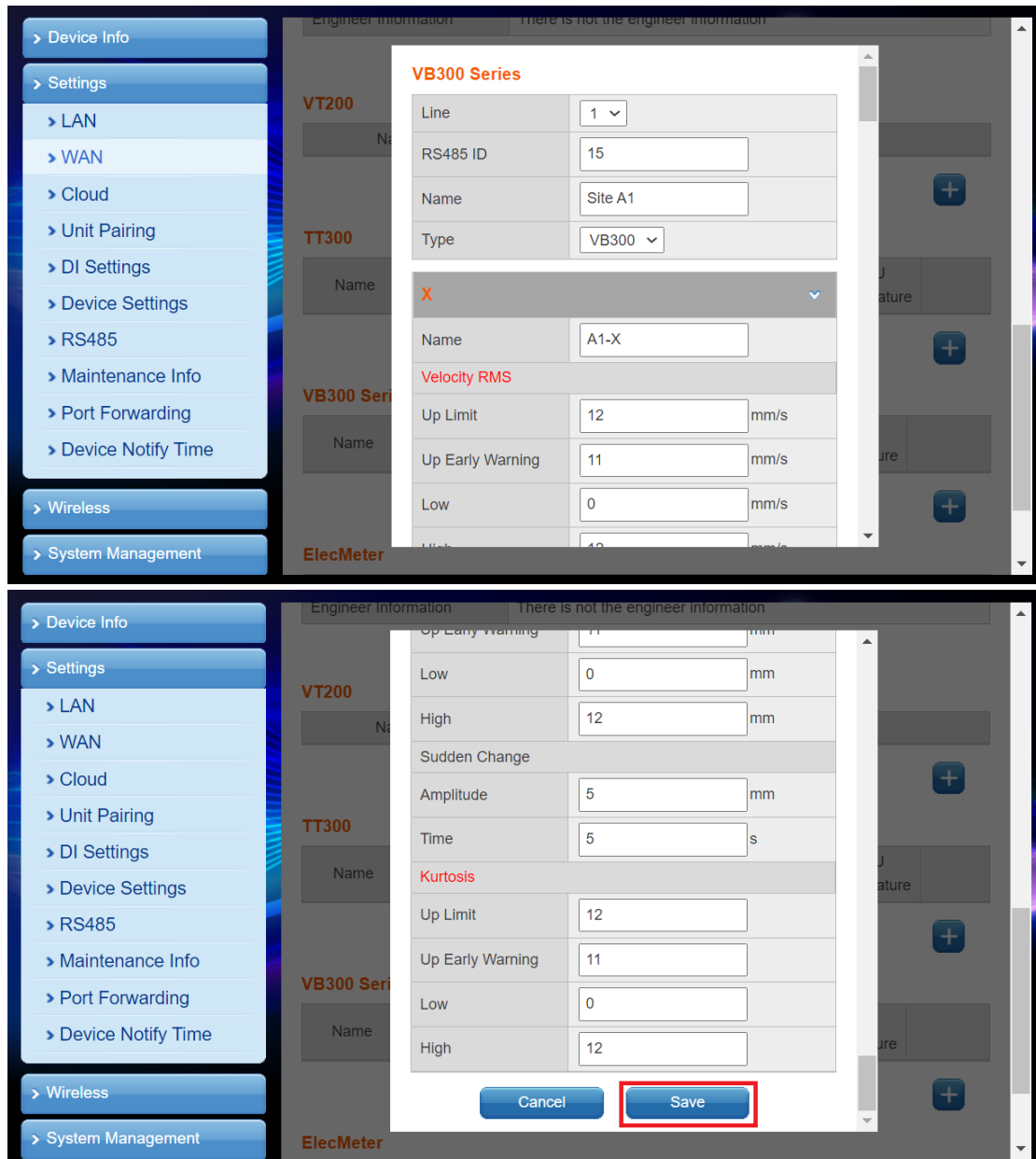
**VB300 Series**

Name	RS485 ID	Line	HW Version	SW Version	CPU Temperature	
						<b>+</b>

**ElecMeter**

Name	RS485 ID	Line	HW Version	SW Version	CPU Temperature	
						<b>+</b>

(6) After entering the page of adding “VT200” “TT300”, “VB300 Series” and “ElecMeter”, fill in the corresponding configuration parameters of the sensor correctly, and click the "Save" button.



- (7) After configuring “VT200” “TT300”, “VB300 Series” and “ElecMeter”, the successfully added sensor will be shown under the “Motor”.

The screenshot shows a web-based configuration interface. On the left is a navigation menu with categories: Device Info, Settings (expanded), Wireless, and System Management. Under Settings, there are sub-menus for LAN, WAN, Cloud, Unit Pairing, DI Settings, Device Settings, RS485, Maintenance Info, Port Forwarding, and Device Notify Time. The main content area displays three sensor configuration sections, each with a table and a plus icon for adding more sensors.

**VT200**

Name	RS485 ID	Line		
Site A - VT	13	1		

**TT300**

Name	RS485 ID	Line	HW Version	SW Version	CPU Temperature		
Site A-TT	14	1					

**VB300 Series**

Name	RS485 ID	Line	HW Version	SW Version	CPU Temperature		
Site A-VB	15	1					

- (8) Go to "Settings" -> "Cloud" page. Select whether AWS Cloud is enabled or Third Party's Cloud is enabled. If Third's Cloud is enabled, fill in the IP address and port of the Cloud:

The screenshot shows the "Cloud Configuration" page. The left navigation menu has "Settings" and "Cloud" highlighted with red boxes. The main content area has a warning message: "Please fill in the configuration of the Cloud correctly otherwise the program will not function properly." Below this are two configuration sections. The first, "Cloud Configuration", has an "Enable" dropdown set to "Enable" and a "Cloud" dropdown set to "AWS", with a blue link "Enable AWS Cloud". The second, "Third Cloud Configuration", has an "Enable" dropdown set to "Disable". Both sections have "Apply" and "Cancel" buttons.

**Cloud Configuration**

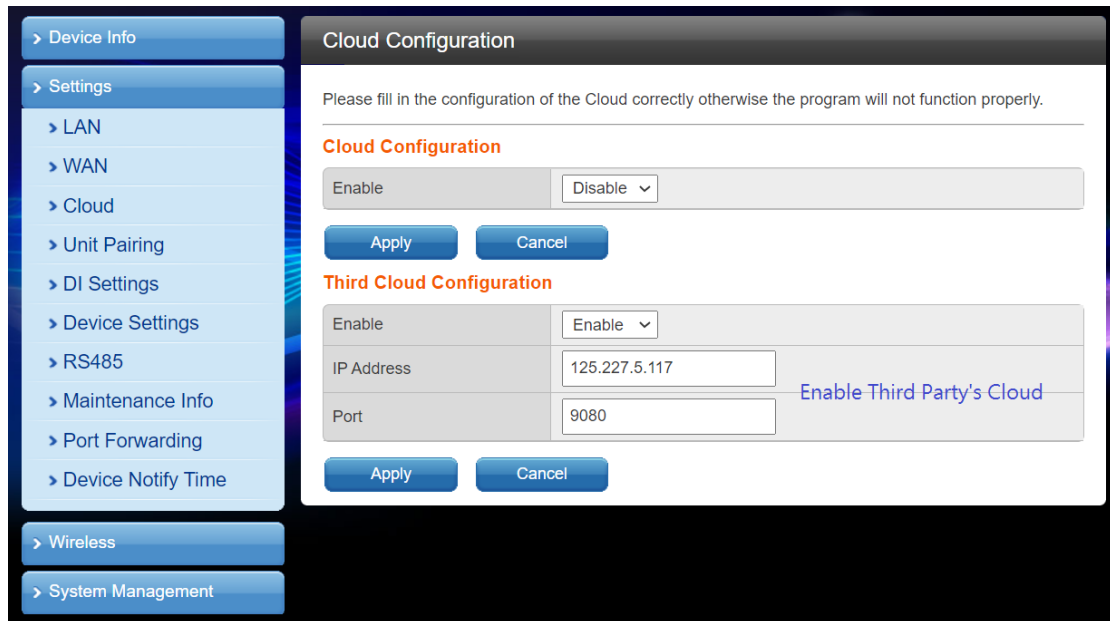
Please fill in the configuration of the Cloud correctly otherwise the program will not function properly.

**Cloud Configuration**

Enable: Enable   
Cloud: AWS  [Enable AWS Cloud](#)

**Third Cloud Configuration**

Enable: Disable



(9) At this point, the setting of Gateway has come to an end.

### 3. Go back to the "Gateway List" page of MHm-P to view the gateway status

After the gateway is successfully set, wait for a while. The name of the device will be shown in the "Subordinate Device" column of the "Gateway List".

If the device is not in a healthy state at the moment, the state of the device will be displayed by colored dots in front of the device name. Different colors represent different states. The following is the detailed meaning and priority relationship of various colors and icons:

Green: Normal (Healthy)

Purple: Sudden Change

Red: Alert

Orange: Pre-warning

Gray: For the device, it means that the data is incomplete. And for the gateway, it means offline.

Sudden Change > Alert > Pre-warning > Data Incomplete > Normal

Icon	Meaning	Note
	Device is in Normal state	Priority of Device state: Sudden Change > Alert > Pre-warning > Data Incomplete > Normal
	Device is in Sudden Change state	
	Device is in Alert state	
	Device is in Pre-warning state	
	Device is in Date Incomplete state	

# G. Operation Information

“Operation Information” is divided into two options: Items Display and Image Display. The Items Display page will display the basic information of the device row by row.

Serial Number	Equipment Name	Equipment ID	Equipment Type	Device Brand	Device Model	Factory Name	Report time	Vibration1			Vibration2	
								X	Y	Z	X	Y
56	Lisa19	291	Motor				2022-03-23 11:48:32	0.027	0.025	0.03	-	-
57	Lisa20	30	Motor				2022-03-23 11:38:41	0.029	0.026	0.028	-	-
58	Lisa21	31	Motor				2022-03-23 11:48:53	0.028	0.03	0.033	-	-
59	Lisa22	42	Motor				2022-03-23 11:54:11	0.031	0.027	0.031	-	-
60	Lisa22	42	Motor				2022-03-23 11:55:16	0.031	0.027	0.031	-	-
61	Lisa22	42	Motor				2022-03-23 11:46:43	0.028	0.029	0.028	-	-
62	Lisa23	3	Motor				2022-03-23 11:54:13	0.028	0.027	0.028	-	-
63	Lisa23	3	Motor				2022-03-23 11:55:20	0.028	0.027	0.028	-	-
64	Lisa23	3	Motor				2022-03-23 11:46:45	0.028	0.028	0.031	-	-
65	Lisa24	343	Motor				2022-03-23 11:54:16	0.026	0.029	0.028	-	-
66	Lisa24	343	Motor				2022-03-23 11:55:23	0.026	0.029	0.028	-	-

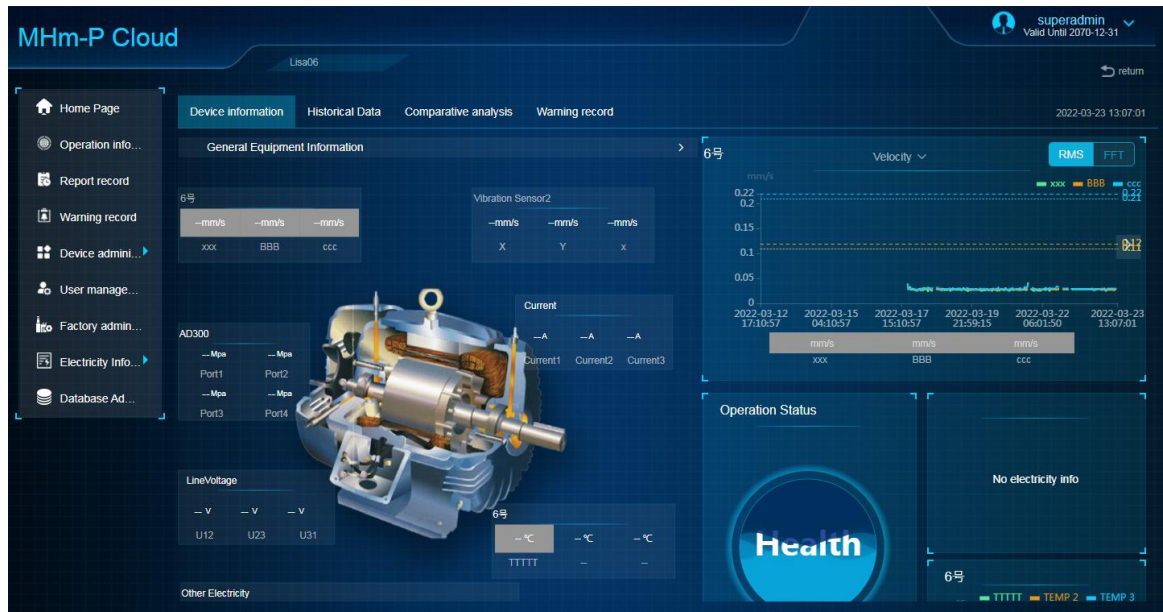
The Image Display page tiles all the factories and the devices. User can view a device by clicking the device picture. Or view a factory by clicking the factory name.

The search box supports fuzzy queries for device names and factory names, which are not case-sensitive. Devices and factories that do not match the search criteria will be filtered out.



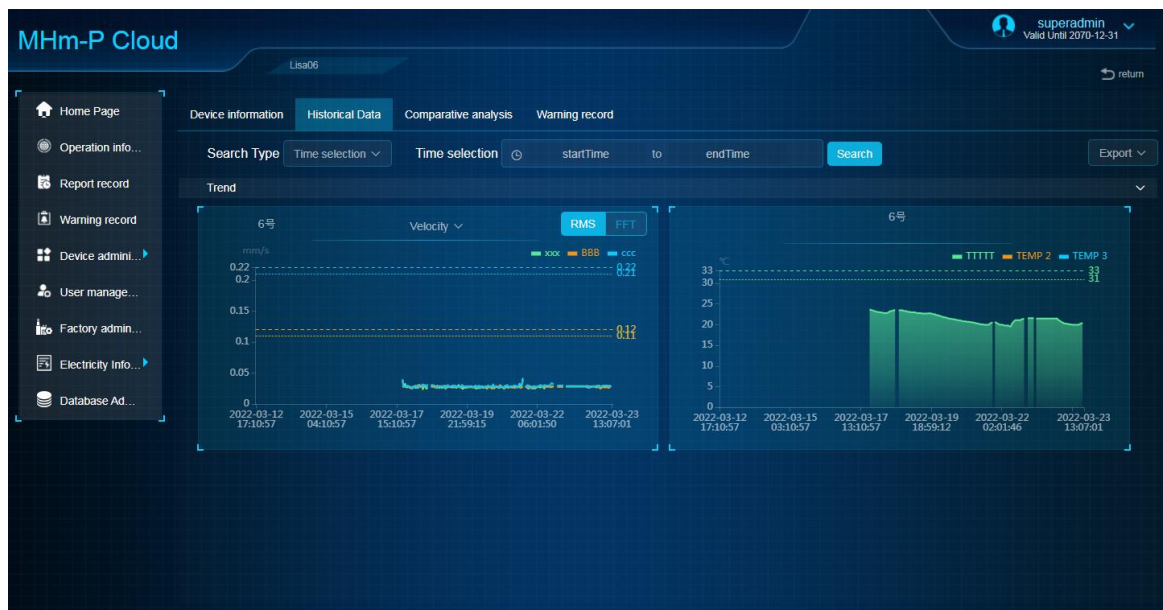
Click on any device to enter the “Device Information” page for that device:

# 1. Device Information



All the data and curves in this page will be refreshed every 10 seconds.

# 2. Historical Data



The Historical Data page displays the latest 300 data records of the device. Users can also query the data of other time periods according to their needs. If the selected time period is longer, 300 data records are evenly selected for display within this period of time.

Users can also choose Daily report and Monthly report. The daily report shows 24 data records of the day (average of hourly data), and the monthly report shows 28~31 data records of the current month (average of daily data).

### 3. Comparative Analysis

The Comparative Analysis page allows user to select two reports to be compared. Each data point of the two reports will be displayed in the same graph. The orange curve represents older data and the blue curve represents newer data.

The screenshot shows the 'Comparative analysis' tab for device Lisa06. It features a search bar for 'Exception type' and a table with columns for Time, Vibration, TEMP, Voltage, Current, Pressure, Discharge, water, and Operation. The table lists several data points with status indicators (Normal or Warning) and a 'To Compare' link for each row.

Time	Vibration	TEMP	Voltage	Current	Pressure	Discharge	water	Operation
2022-03-23 13:07:01	—	—	—	—	—	—	—	To Compare
2022-03-23 12:24:06	● Normal	● Normal	—	—	—	—	—	To Compare
2022-03-23 11:24:05	● Normal	● Normal	—	—	—	—	—	To Compare
2022-03-23 10:24:05	● Normal	● Normal	—	—	—	—	—	To Compare
2022-03-23 09:24:05	● Normal	● Normal	—	—	—	—	—	To Compare
2022-03-23 09:23:31	● Warning	● Normal	—	—	—	—	—	To Compare
2022-03-23 09:23:07	● Warning	● Normal	—	—	—	—	—	To Compare
2022-03-23 09:22:35	● Warning	● Normal	—	—	—	—	—	To Compare
2022-03-23 08:23:41	● Warning	● Normal	—	—	—	—	—	To Compare
2022-03-23 07:23:39	● Warning	● Normal	—	—	—	—	—	To Compare

The screenshot displays the 'Equipment Information' section for Lisa06, comparing two reports. Below this, there are two line graphs: 'Vibration 1' (Velocity) and 'Temperature' (node1). Both graphs show two data series: an orange line for older data and a blue line for newer data, allowing for direct comparison of trends over time.

Equipment Name	Lisa06	
Job Number	16	16
Current	12 A	12 A
Rated Power	12 kW	12 kW
Rotational Speed	12 RPM	12 RPM
Power Frequency	6000 Hz	6000 Hz
Motor Frame Number	12	12
Total Maintenance Hours	12	12
Load Condition	Full Load	Full Load
Control Point	None	None
Vibration Standard Valu...	0.18-0.71 mm/s	0.18-0.71 mm/s
Vibration Standard Valu...	1.80-4.50 mm/s	1.80-4.50 mm/s
Vibration Rotation Freq...	0.20 Hz	0.20 Hz

## 4. Warning Record

The Warning Record page displays a list of alarm records generated by the device. User can search according to the alarm type, or directly specify the alarm time to search.

The screenshot shows the 'Warning record' page in the MHm-P Cloud interface. The page includes a search bar with filters for Exception type, Alarm Type, Equipment Name, and Time. Below the search bar is a table of alarm records. The table has the following columns: Handle, Warning time, Warning device, Exception reason, and Diagnostic result. The records are sorted by time, showing various velocity RMS alarms and sudden changes for equipment AG700.

Handle	Warning time	Warning device	Exception reason	Diagnostic result
Not handl	2022-03-23 13:41:40	AG700马达woody	vb4 vb4velocity RMS Alarm(0.302);	Looseness;Bent Shaft;Unbalance;Misalignment;
Not handl	2022-03-23 13:41:29	AG700马达woody	vb1 vb1velocity RMS Warning(0.302);	Looseness;Bent Shaft;Unbalance;Misalignment;
Not handl	2022-03-23 13:40:46	AG700马达woody	vb1 vb1velocity RMS Warning(0.340);	Looseness;Bent Shaft;Unbalance;Misalignment;
Not handl	2022-03-23 13:40:33	AG700马达woody	vb1 vb1velocity RMS Warning(0.302);	Looseness;Bent Shaft;Unbalance;Misalignment;
Not handl	2022-03-23 13:39:30	AG700马达woody	vb3 vb3velocity RMS Alarm(4.450);	Looseness;Bent Shaft;Unbalance;Misalignment;
Not handl	2022-03-23 13:39:28	AG700马达woody	vb4 vb4velocity RMS Alarm(2.148)Warning(2.148);	Looseness;Bent Shaft;Unbalance;Misalignment;
Not handl	2022-03-23 13:39:27	AG700马达woody	vb3 vb3velocity RMS Warning(0.209); ...	Looseness;Bent Shaft;Unbalance;Misalignment;
Not handl	2022-03-23 13:39:25	AG700马达woody	vb3 vb3velocity RMS Sudden Change(12.1210); ...	Looseness;Bent Shaft;Unbalance;Misalignment;
Not handl	2022-03-23 13:39:23	AG700马达woody	vb4 vb4velocity RMS Alarm(0.331);	Looseness;Bent Shaft;Unbalance;Misalignment;
Not handl	2022-03-23 13:39:19	AG700马达woody	vb1 vb1velocity RMS Alarm(3.036)Warning(3.036); ...	Looseness;Bent Shaft;Unbalance;Misalignment;

Click any alarm record to view the alarm details:

The screenshot shows the 'Alarm Details' page for a specific alarm. The alarm is identified as '2 EBA8Temperature Alarm(21.5)Warning(21.5)'. The page displays two charts: a Velocity chart and a Temperature chart. The Velocity chart shows RMS and FFT data for EBA8X, EBA8Y, and EBA8Z. The Temperature chart shows EBA8T and TEMP 2, TEMP 3 data. The current temperature is 21.5°C.

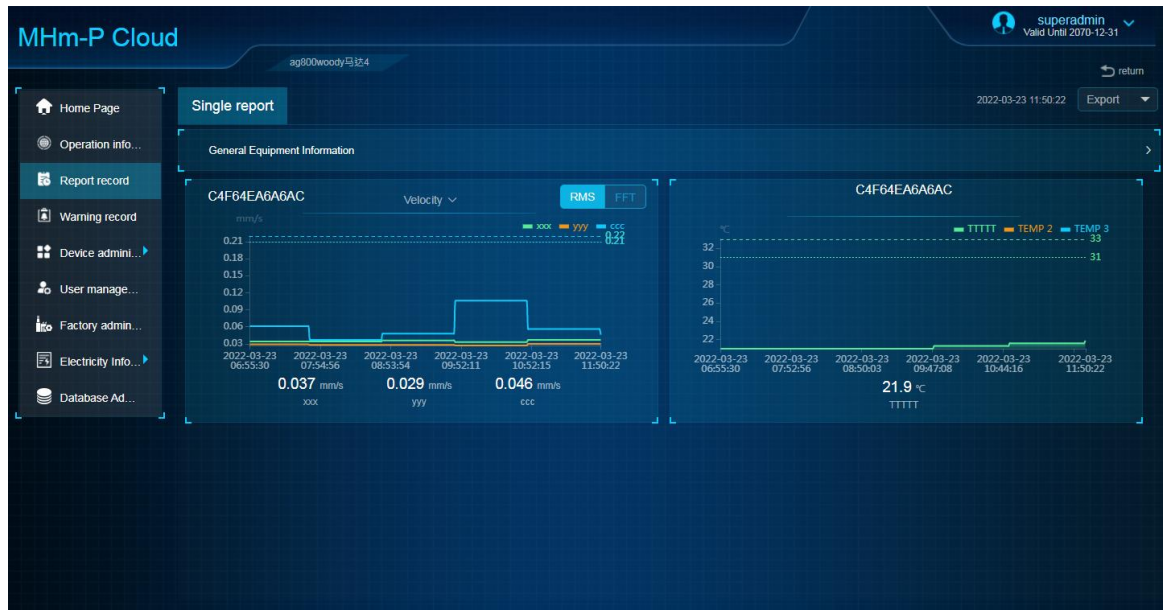
Equipment	Value
EBA8X	0.031 mm/s
EBA8Y	0.029 mm/s
EBA8Z	0.037 mm/s
EBA8T	21.5 °C

# H. Report Record

The Report Record page displays a list of reports of all equipment. User can search for reports of the corresponding factory or equipment by Alarm type and Equipment name. This page also supports the CSV export function.

Time	Factory name	Equipment Name	Vibration	TEMP	Voltage	Current	Pressure	Discharge	water	Operation
2022-03-23 13:54:47	I16	AG800...	● Normal	● Normal	--	--	--	--	--	To Compare
<b>2022-03-23 13:54:42</b>	<b>I16</b>	<b>ag800M...</b>	--	--	--	--	--	--	--	To Compare
2022-03-23 13:54:41	I16	AG800...	--	--	--	--	--	--	--	To Compare
2022-03-23 13:54:40	I16	AG800...	--	--	--	--	--	--	--	To Compare
2022-03-23 13:54:39	--19	AG300...	--	--	--	--	--	--	--	To Compare
2022-03-23 13:54:39	--19	AG300...	--	--	--	--	--	--	--	To Compare
2022-03-23 13:54:32	Lisa工厂0512	AG300...	● Normal	● Normal	--	--	--	--	--	To Compare
2022-03-23 13:54:33		AG700...	● Normal	● Normal	--	--	--	--	--	To Compare
2022-03-23 13:54:29		Lisa26	● Normal	● Normal	--	--	--	--	--	To Compare
2022-03-23 13:54:27		Lisa25	● Normal	● Normal	--	--	--	--	--	To Compare

Click any report record to view the details of a single report:



# I. Warning Record

The Warning Record page displays all warning records of all devices. User can search for warning records according to Alarm type, Equipment name, Report time and other conditions.

The colored dot in front of the abnormal cause indicates the highest alarm severity in this alarm.

Sudden Change > Alert > Pre-warning.

Handle	Warning time	Warning device	Exception reason	Diagnostic result
Not handl	2022-03-23 13:41:40	AG700马达woody	vb4 vb4zvelocity RMS Alarm(0.302);	Looseness,Bent Shaft,Unbalance,Misalignment;
Not handl	2022-03-23 13:41:29	AG700马达woody	vb1 vb1xvelocity RMS Warning(0.302);	Looseness,Bent Shaft,Unbalance,Misalignment;
Not handl	2022-03-23 13:40:46	AG700马达woody	vb1 vb1xvelocity RMS Warning(0.340);	Looseness,Bent Shaft,Unbalance,Misalignment;
Not handl	2022-03-23 13:40:33	AG700马达woody	vb1 vb1xvelocity RMS Warning(0.302);	Looseness,Bent Shaft,Unbalance,Misalignment;
Not handl	2022-03-23 13:39:30	AG700马达woody	vb3 vb3xvelocity RMS Alarm(4.450);	Looseness,Bent Shaft,Unbalance,Misalignment;
Not handl	2022-03-23 13:39:28	AG700马达woody	vb4 vb4yvelocity RMS Alarm(2.148)Warning(2.148);	Looseness,Bent Shaft,Unbalance,Misalignment;
Not handl	2022-03-23 13:39:27	AG700马达woody	vb3 vb3xvelocity RMS Warning(0.209); ...	Looseness,Bent Shaft,Unbalance,Misalignment;
Not handl	2022-03-23 13:39:25	AG700马达woody	vb3 vb3xvelocity RMS Sudden Change(12.1210); ...	Looseness,Bent Shaft,Unbalance,Misalignment;
Not handl	2022-03-23 13:39:23	AG700马达woody	vb4 vb4zvelocity RMS Alarm(0.331);	Looseness,Bent Shaft,Unbalance,Misalignment;
Not handl	2022-03-23 13:39:19	AG700马达woody	vb1 vb1zvelocity RMS Alarm(3.036)Warning(3.036); ...	Looseness,Bent Shaft,Unbalance,Misalignment;

Click any warning record to enter the warning record details page:



The General Equipment Information can be minimized.

The warning reason area will display the specific point information of the current warning.

If it is a vibration type warning, the "Analysis and Diagnosis" button will also be displayed. Click to enter the Analysis and Diagnosis page.

# J. Device Administration (Not visible by general users)

## 1. Equipment List

The Equipment List page displays all the devices mounted under the gateway created:

Equipment Name	Equipment ID	Device Brand	Device Model	Equipment Status	Company Address	Home Gateway
Lisa27	371212			Alarm	Address-ag968	AG968Lisa
Lisa26	36			Normal	Address-ag968	AG968Lisa
Lisa25	3512			Normal	Address-ag968	AG968Lisa
Lisa24	343			Normal	Address-ag968	AG968Lisa
Lisa23	3			Normal	Address-ag968	AG968Lisa
Lisa22	42			Normal	Address-ag968	AG968Lisa
Lisa21	31			Normal	Address-ag968	AG968Lisa
Lisa20	30			Normal	Address-ag968	AG968Lisa
Lisa19	291			Normal	Address-ag968	AG968Lisa
Lisa18	261			Normal	Address-ag968	AG968Lisa

Click on each row to edit the equipment:

### a) Basic Information

The configuration of the basic information here is similar to the configuration on the gateway. Please configure it according to the actual situation of your motor.

Equipment Image: [Image selection area]

Company Name: Name-ag968

Device Brand: [Text input]

Device Model: [Text input]

Factory: [Dropdown menu]

Common data reporting freq: 15 Minute

ft reporting freq: 15 Minute

Company Address: Address-ag968

Equipment Type: Motor

## b) Sensor

The configuration here is similar to the configuration on the gateway, which is used to set the Line, Name, RS485 ID and other information of the Sensor. Please configure it according to the actual situation of the motor.

The screenshot shows the 'Sensor' configuration page in the MHm-P Cloud interface. The page is titled 'Vibration Sensor 1' and contains the following fields:

Line	26
Name	Bluetooth
RS485 ID	C4A45A0F8C97
Type	VB168
Sleep Duration	1 min
Sampling Interval	15 min

At the bottom of the form, there are 'Cancel' and 'Save' buttons.

## c) Parameter

The configuration here is similar to the configuration on the gateway. Please configure it according to the actual situation of your motor.

The screenshot shows the 'Parameter' configuration page in the MHm-P Cloud interface. The page is titled '25' and contains two main sections: 'RMS Velocity' and 'Temperature'.

**RMS Velocity**

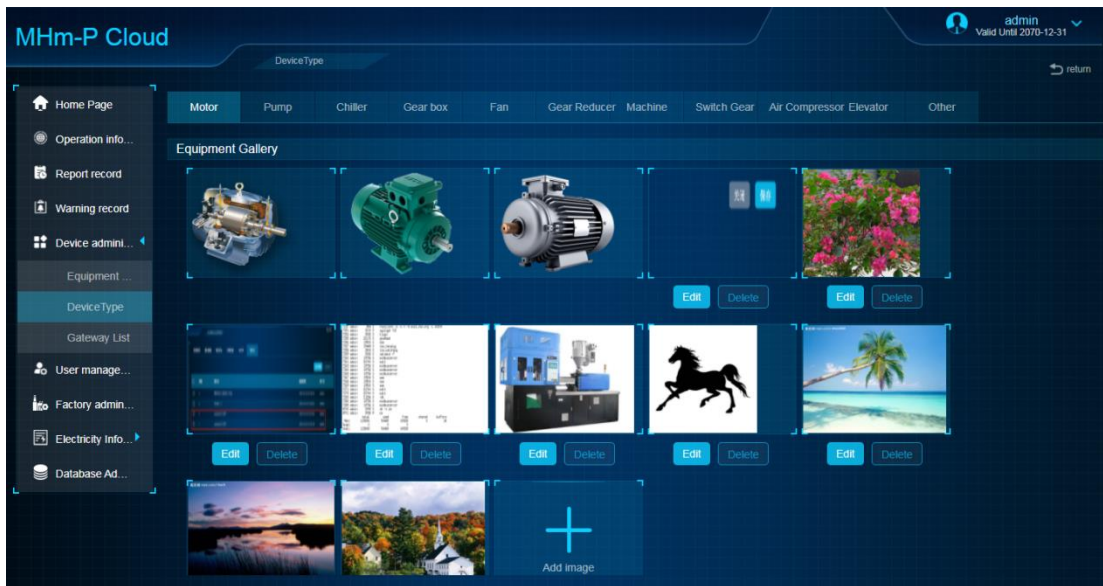
	X Axis	Y Axis	Z Axis
Name	VB800-EB/	E8A8Y	6acz
Up Limit(mm/s)	12	12	12
recommended	0.042	0.044	0.063
Up Early Warning(mm/s)	11	11	11
recommended	0.036	0.038	0.055
Low(mm/s)	1	1	1
High(mm/s)	111	111	111
Sudden Change Amplitude(mm/s)			
Sudden Change Time(s)			

**Temperature**

	Node 1
Name	E8A8T
Up Limit(°C)	33
recommended	38.438
Up Early Warning(°C)	33
recommended	33.312
Low(°C)	1
High(°C)	44
Sudden Change Amplitude(°C)	
Sudden Change Time(s)	
Compensation Temp1(°C)	
Compensation1(°C)	

At the bottom of the form, there are 'Cancel' and 'Save' buttons.

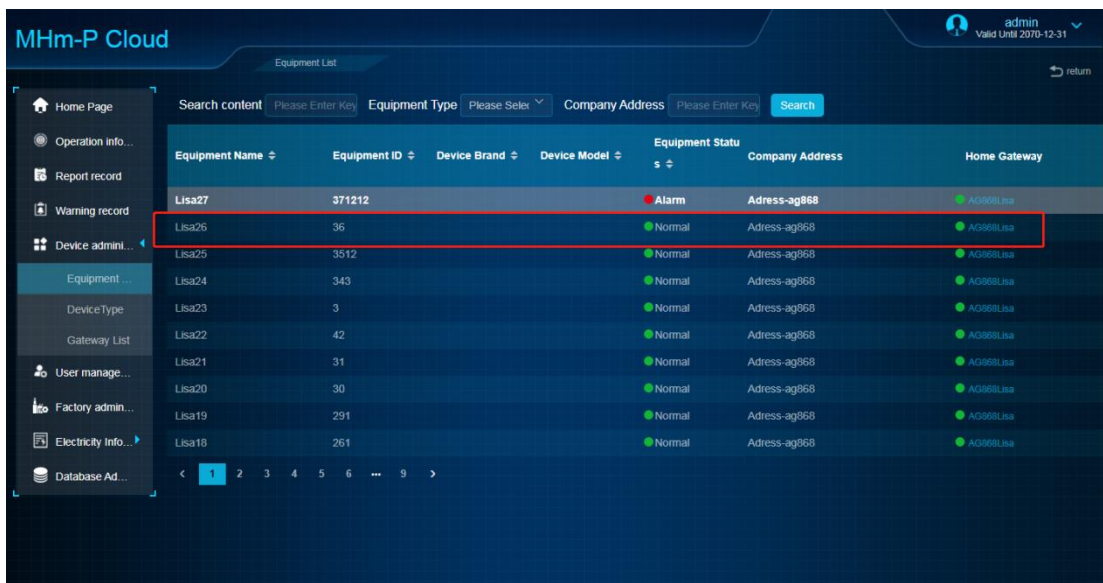
## 2. Device Type



The platform supports a variety of devices such as motors, water pumps, chillers, etc. Users can upload their own pictures for each device

**Note: Support .jpg, .png, .gif and other image formats, but the size cannot exceed 400KB.**

The picture in the Device Type is used to select a representative picture for the equipment in the Equipment List editing. For example, if a specific picture is selected for the equipment motor 36, the picture display page of the operation information will represent the equipment with this picture:




MHm-P Cloud admin Valid Until 2070-12-31

Equipment List return

- Home Page
- Operation info...
- Report record
- Warning record
- Device admini...
- Equipment ...
- DeviceType
- Gateway List
- User manage...
- Factory admin...
- Electricity Info...
- Database Ad...

Basic Infor
Sensor
Parameter

Equipment Image



Company Name

Device Brand

Device Model

Factory

Common data reporting freq


 

flt reporting freq

Company Address

Equipment Type



MHm-P Cloud admin Valid Until 2070-12-31

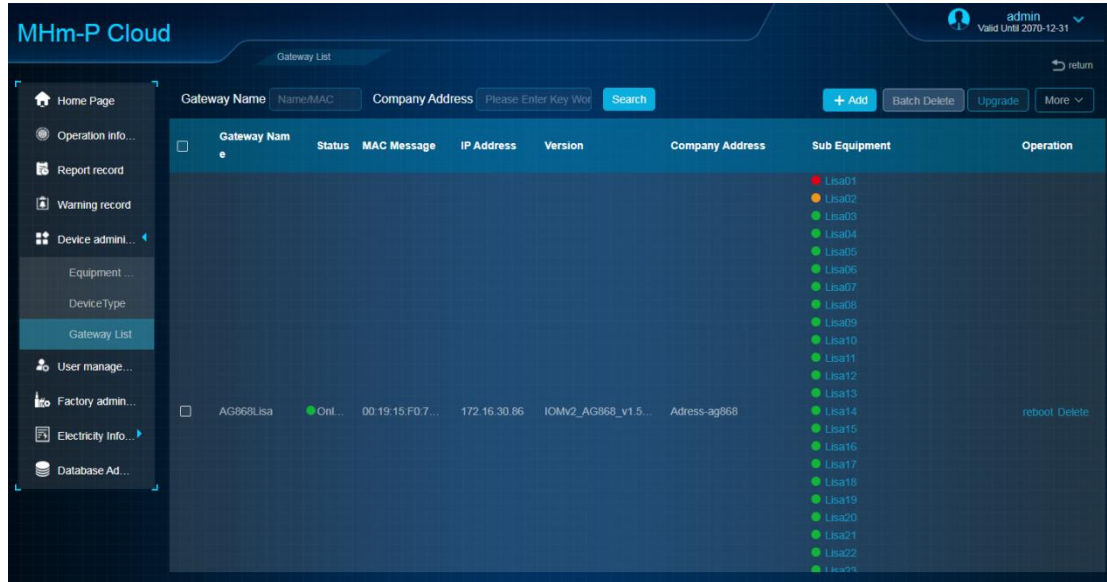
Operation information return

- Home Page
- Operation info...
- Report record
- Warning record
- Device admini...
- User manage...
- Factory admin...
- Electricity Info...
- Database Ad...

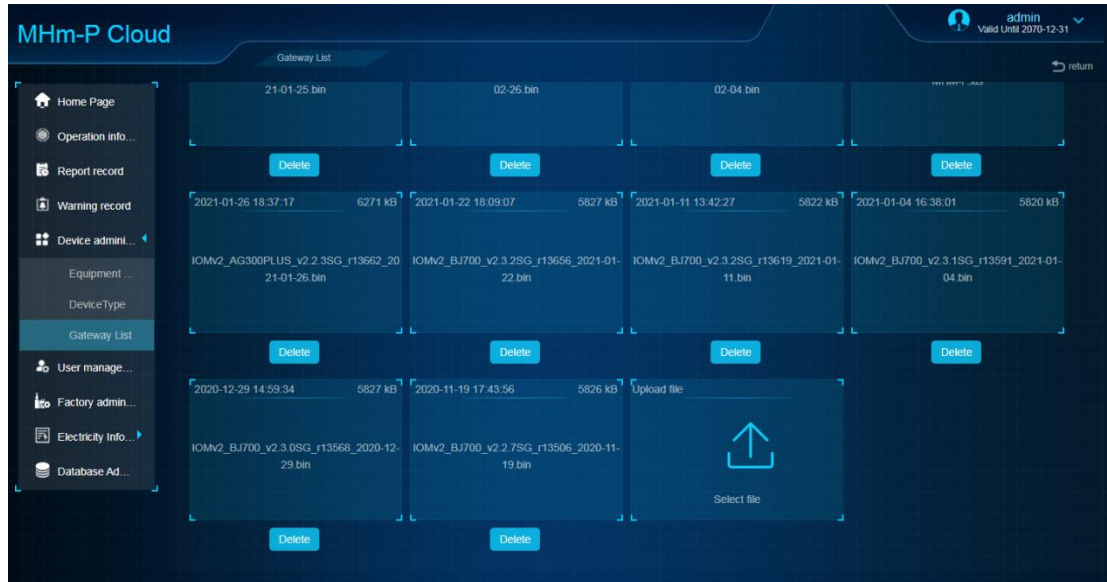
Lisa12	Lisa13	Lisa14	Lisa15	Lisa16
				
Lisa17	Lisa18	Lisa19	Lisa20	Lisa21
				
Lisa22	Lisa23	Lisa24	Lisa25	Lisa26
				
Lisa27	powerTest-00060	Pro9000马达xDA	StabilityTest1-112	TP7/vincnt_1

### 3. Gateway List

The gateway list page displays all gateways created. In addition to adding gateways, clicking on each row to configure gateways and upgrade gateways can also be performed.



If none of gateway is checked, gateway version can be uploaded after click the "Upgrade" button.

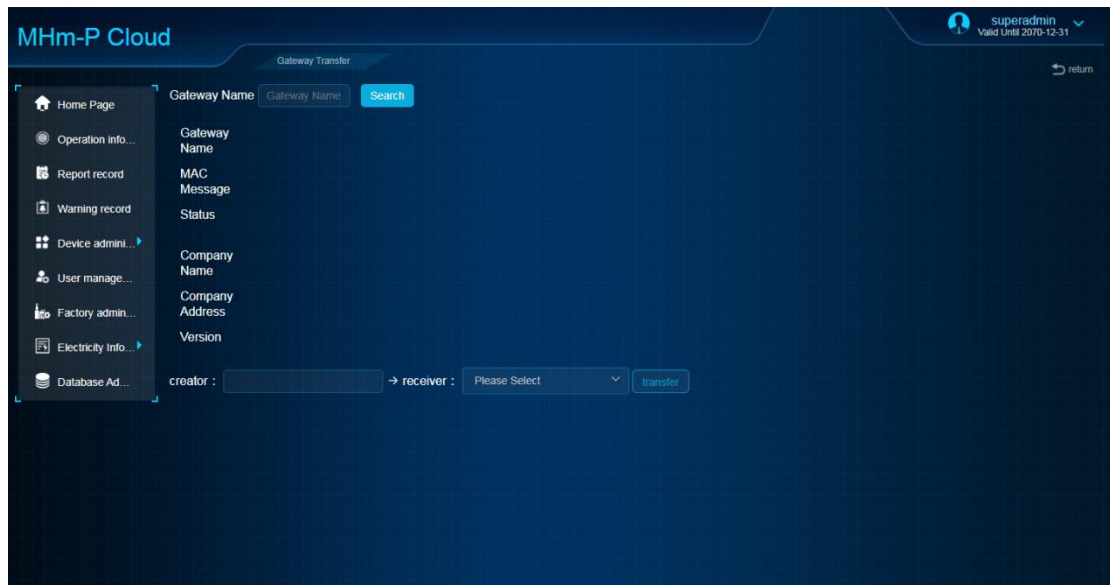


Check one or more gateways and then click the "Upgrade" button to upgrade the software version for the selected gateway(s).

**Note: Only online gateways can be upgraded.**

## 4. Gateway Transfer (Only visible by superadmin)

Gateway management can transfer a network administrator to another user account.



# K. User Management (Not visible by general users)

In addition to creating new users, admin can view the current resource usage of the system on the User Management page.

Note: Since admin has already occupied a number of users, the number of users that the admin will see on this page is one less than the "created account".

The screenshot displays the 'User management' page in the MHm-P Cloud interface. It features a sidebar with navigation options and a main content area with summary cards and a user list table.

Created Account	Created Factory	Online GW
4%	14.6%	970%
1000 Total Account	1000 Total Factory	97/10 Created/Total GW

Search content	Enter login name/email/phone	Search	+ Add	Batch Delete	Statistics		
Login name	Company Name	Mailbox	Phone number	Gateway Number(On/Off/Total)	Status	End date	Operation
<input type="checkbox"/>	admin	111111@111.com	027-99999999...	2/41/10000	Normal		Delete Set Reset password
<input type="checkbox"/>	peter1	gmhu@tecomtech...	-13027119000	1/0/8	Normal	2055-12-10 16:56:28	Delete Set Reset password
<input type="checkbox"/>	mayo	302545820@qq.c...	+86-18627187173	0/0/0	Normal	2055-12-10 16:56:28	Delete Set Reset password
<input type="checkbox"/>	peter			2/3/200	Normal	2065-01-26 09:14:35	Delete Set Reset password

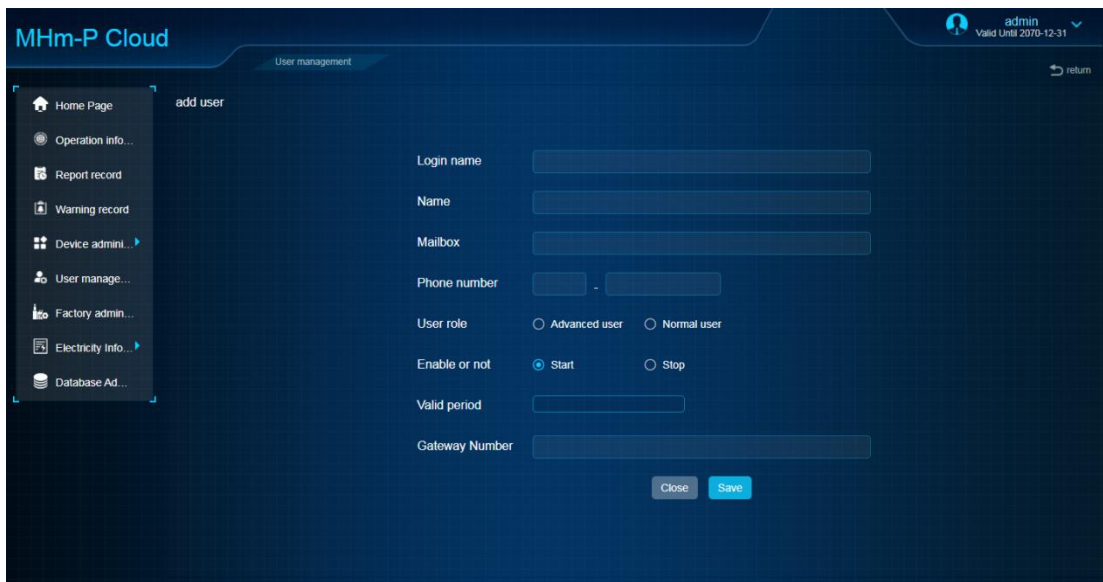
## 1. Admin user

Admin user can create advanced users. Advanced users can set the number of gateways allowed to be created, set a deadline for advanced users and general users, and "enable" or "disable" a particular user.

**Note:** To ensure the rights and interests of device owners, all important materials such as gateways, devices, factories, and users created by users can only be managed by themselves and cannot be managed by other users (including admin). However, users can authorize the devices and factories under their own names to the users they created for browsing access.

Once the user is deactivated or the valid date has been expired, the platform will deny the user's login.

The total number of gateways that all users can create is the number of licenses ordered when purchasing MHm-P.



The screenshot displays the 'MHm-P Cloud' interface for user management. The top navigation bar includes the logo, the title 'User management', and a user profile for 'admin' with a 'Valid Until 2070-12-31' status. A sidebar on the left lists various system functions, with 'User manage...' selected. The main content area is titled 'add user' and contains a form with the following fields and options:

- Login name:
- Name:
- Mailbox:
- Phone number:  -
- User role:  Advanced user  Normal user
- Enable or not:  Start  Stop
- Valid period:
- Gateway Number:

At the bottom of the form are 'Close' and 'Save' buttons.

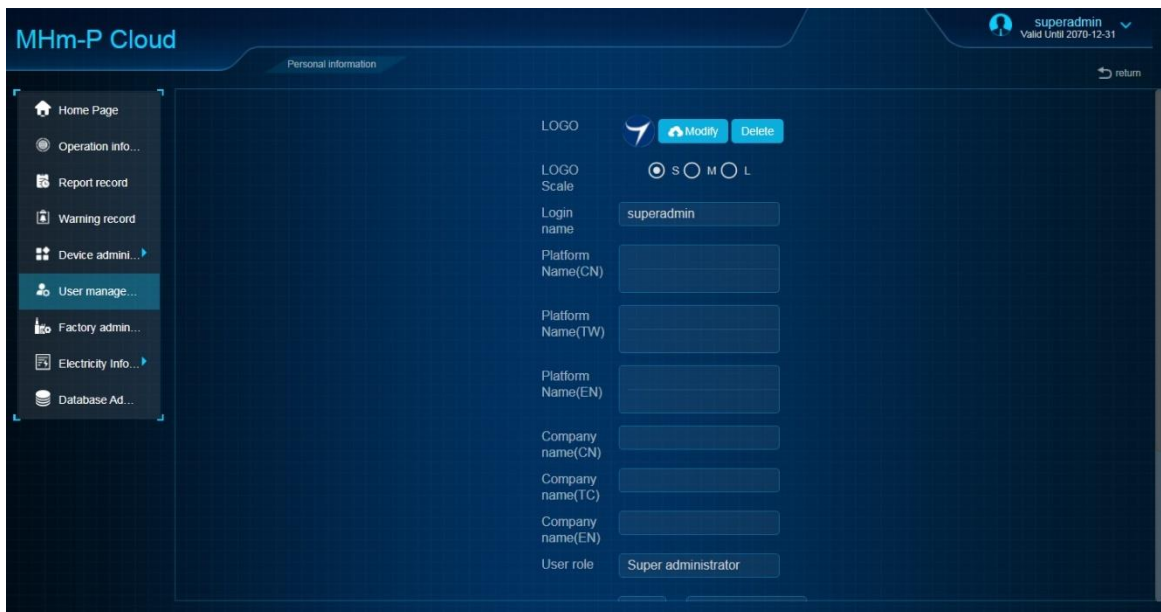
## 2. Advanced User

Advanced user can create general users. The expiry date of the created general users is the same as their own expiry date. Advanced users can also "enable" or "disable" a general user.

**Note:** To ensure the rights and interests of device owners, all important materials such as gateways, devices, factories, and users created by users can only be managed by themselves and cannot be managed by other users (including admin). However, users can authorize the devices and factories under their own names to the users they created for browsing access.

Once the user is deactivated or the valid date has been expired, the platform will deny the user's login.

The total number of gateways that all users can create is the number of licenses ordered when purchasing MHm-P.



The screenshot displays the 'MHm-P Cloud' user management interface. The top navigation bar includes the title 'MHm-P Cloud' on the left and the user profile 'Superadmin Valid Until 2070-12-31' on the right. A sidebar on the left contains a menu with options: Home Page, Operation info..., Report record, Warning record, Device admin..., User manage... (highlighted), Factory admin..., Electricity Info..., and Database Ad... The main content area is titled 'Personal information' and contains a form for editing user details. The form includes a 'LOGO' field with 'Modify' and 'Delete' buttons, a 'LOGO Scale' field with radio buttons for 'S', 'M', and 'L', and several text input fields for 'Login name' (pre-filled with 'superadmin'), 'Platform Name(CN)', 'Platform Name(TW)', 'Platform Name(EN)', 'Company name(CN)', 'Company name(TC)', 'Company name(EN)', and 'User role' (pre-filled with 'Super administrator'). A 'return' button is located in the top right corner of the form area.

Click "Set", permissions and authorization of devices & factories can be set for users under their own name to the corresponding users for browsing access:

The screenshot shows the 'User management' section of the MHm-P Cloud interface. At the top, there are three summary cards: '40 Created Account / 1000 Total Account' (4%), '146 Created Factory / 1000 Total Factory' (14.6%), and '8 Online GW / 97/1000 Created/Total GW' (9.7%). Below these is a search bar and a table of users. The 'Set' button in the 'Operation' column for the 'admin' user is highlighted with a red box.

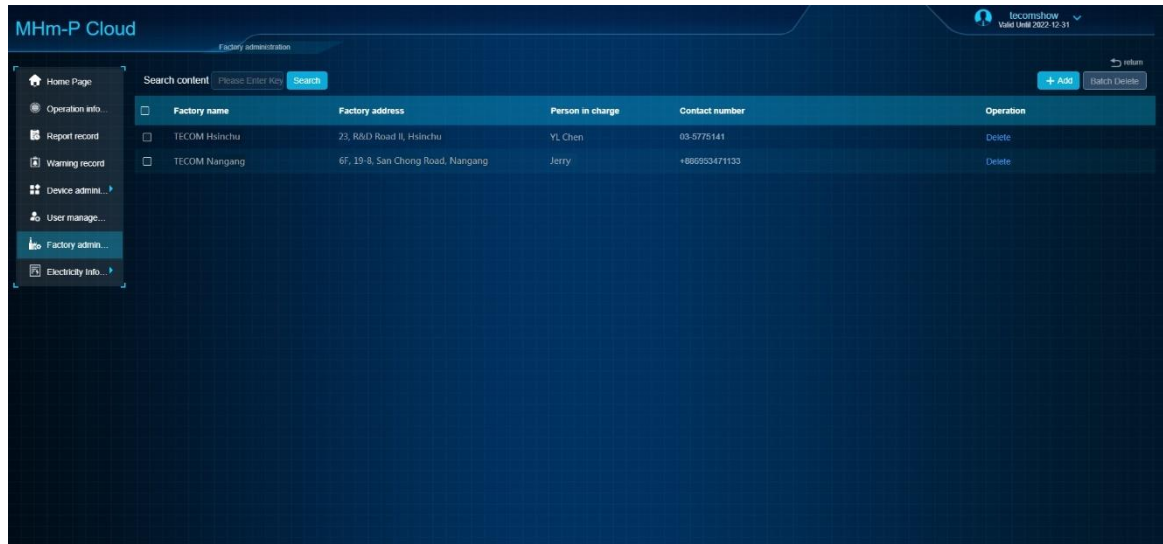
Login name	Company Name	Mailbox	Phone number	Gateway Number(On/Off/Total)	Status	End date	Operation
admin		111111@111.com	027-999999999...	1/42/10000	Normal		Delete Set Reset password
peter1		gmhu@tecomtech...	-13027119000	1/0/8	Normal	2055-12-10 16:56:28	Delete Set Reset password
mayo		302545820@qq.c...	+86-18627187173	0/0/0	Normal	2055-12-10 16:56:28	Delete Set Reset password
peter				1/4/200	Normal	2065-01-26 09:14:35	Delete Set Reset password

The screenshot shows the 'Selected Equipment' dialog box in the MHm-P Cloud interface. On the left, there is a grid of 18 device icons labeled Lisa06 through Lisa18. On the right, the 'Selected Equipment' panel shows 'self-contained device' selected, with 'Lisa13' moved to the right side of the panel. 'Cancel' and 'Save' buttons are at the bottom.

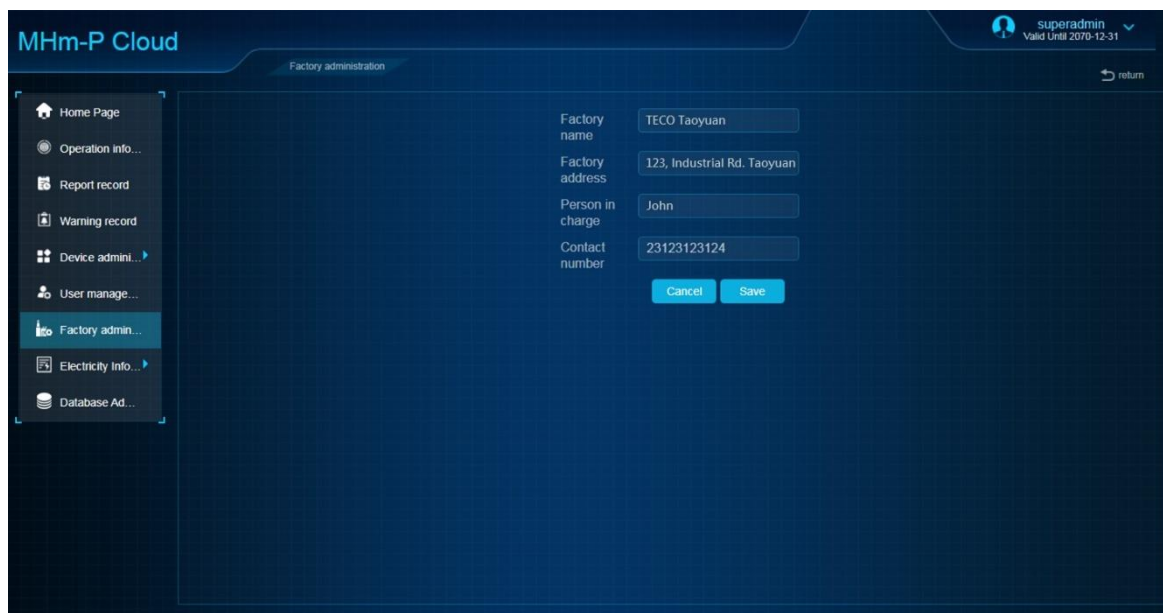
Note: When the device on the left is selected and moved to the right, the device browsing right is authorized to the user. The factory browsing right to which the device belongs to is also authorized to the user at the same time.

## L. Factory Administration (Not visible by general users)

New factories can be created on the Factory Management page. The factory management page can only see the factories created by user's own:



Click on the factory row to be edited:

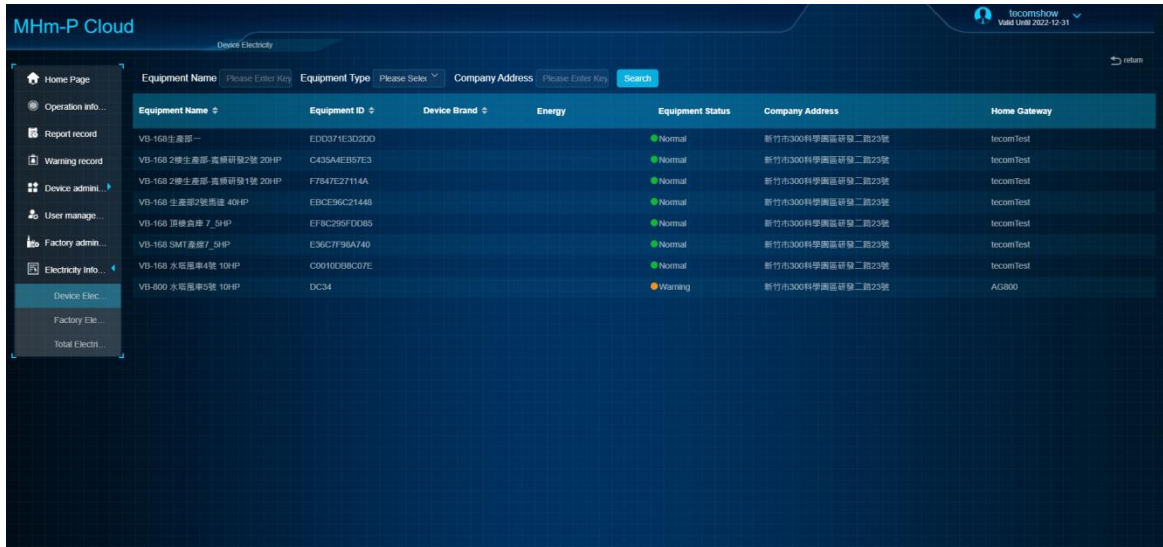


**Note:** Deleting a factory will not delete any devices under the factory. It will only cause all devices under it to become independent devices.

# M. Electricity Information

## 1. Device Electricity

The Device Electricity page displays all the devices mounted under the gateway configured:



Equipment Name	Equipment ID	Device Brand	Energy	Equipment Status	Company Address	Home Gateway
VB-168 生海部一	E00371E302D0			Normal	新竹市300科學園區研發二路23號	lccomTest
VB-168 2樓生海部 高研研發2號 20HP	C435AMEB57E3			Normal	新竹市300科學園區研發二路23號	lccomTest
VB-168 2樓生海部 高研研發1號 20HP	F7847E27114A			Normal	新竹市300科學園區研發二路23號	lccomTest
VB-168 生海部2號海邊 40HP	EDCE96C21449			Normal	新竹市300科學園區研發二路23號	lccomTest
VB-168 頂樓自庫 7_5HP	EF8C29FDD685			Normal	新竹市300科學園區研發二路23號	lccomTest
VB-168 SMT高研7_5HP	E36C7F96A740			Normal	新竹市300科學園區研發二路23號	lccomTest
VB-168 水保區車4號 10HP	C00100B8C07E			Normal	新竹市300科學園區研發二路23號	lccomTest
VB-800 水保區車5號 10HP	DC34			Warning	新竹市300科學園區研發二路23號	AG800

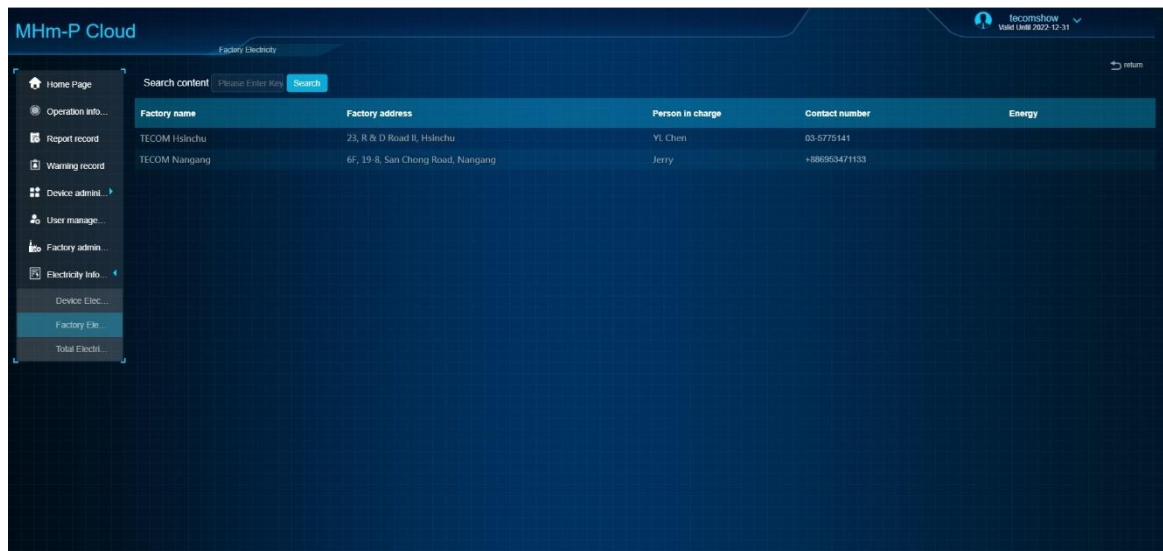
Click to enter a device and select “Search Type”. Enter the time range to query the power consumption histogram of the device within the time range.

There is an export button at the upper right corner. The queried power consumption data can be exported to PDF or Excel.



## 2. Factory Electricity

The Factory Electricity page shows a list of all created factories:

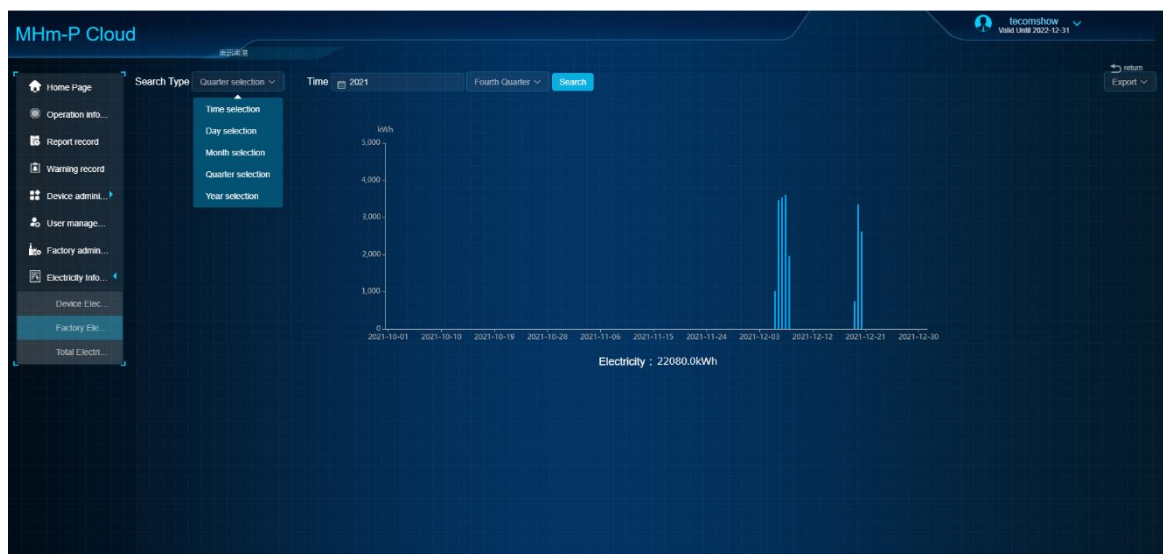


The screenshot shows the MHm-P Cloud interface with the 'Factory Electricity' page selected. A search bar is at the top, and a table lists two factories. The table has columns for Factory name, Factory address, Person in charge, Contact number, and Energy.

Factory name	Factory address	Person in charge	Contact number	Energy
TECOM Hsinchu	23, R. B. D Road II, Hsinchu	YL Chen	03-5775141	
TECOM Nangang	6F, 19-8, San Chong Road, Nangang	Jerry	+886953471133	

Click to enter a factory and select “Search Type”. Enter the time range to query the power consumption histogram of the factory within the time range.

There is an export button at the upper right corner. The queried power consumption data can be exported to PDF or Excel.



### 3. Total Electricity

Select "Search type" for total power consumption. Enter a time range to query the power consumption histogram of all devices within the time range.

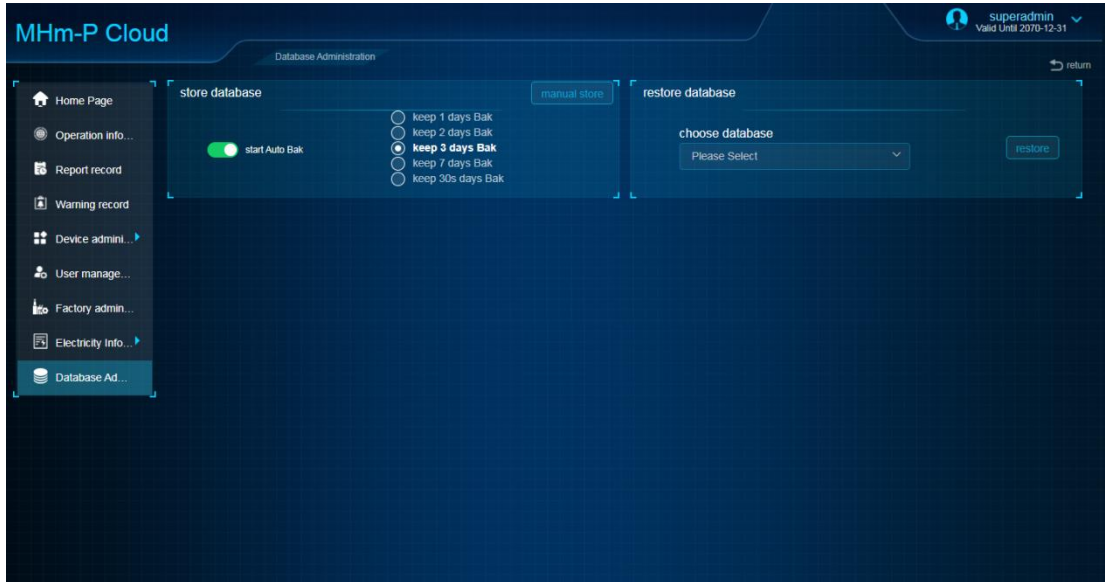
There is an export button at the upper right corner. The queried power consumption data can be exported to PDF or Excel.



# N. Database Administration

Auto Backup or Manual Backup of the database can be selected in “Store Database” section. When Manual Backup is selected, system will immediately back up the current database. When Automatic Backup is selected, system will regularly backup the database every day. The backup can be kept up to 30 days. User can determine according to the size of the hard disk.

“Restore Database” section allows users to restore a backed-up database.



# O. Alert Pop-up

As long as any device generates an alert, a real-time pop-up alert will pop up at the lower right corner no matter which operation is performing. The pop-up window will exit by itself after 10 seconds.

