

Univers EMS Application User Manual

Rev. 1.3.1

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Version Control

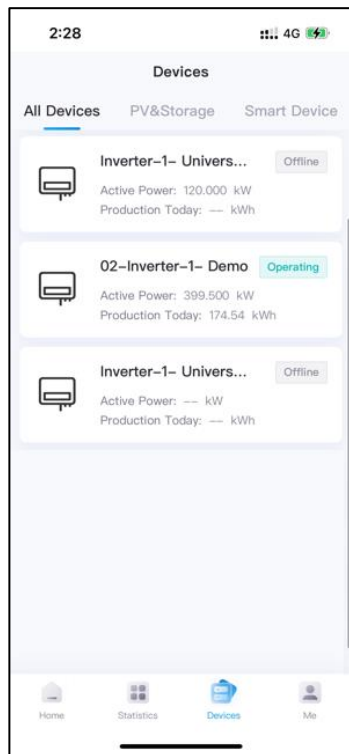
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Update Contents

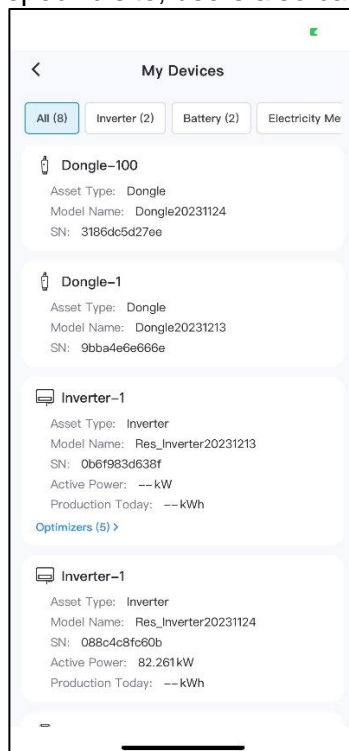
New Features

1. Implemented **Devices** list on **mobile app**.
 - For end user

- On Devices module, users can monitor all devices state and real-time data here.



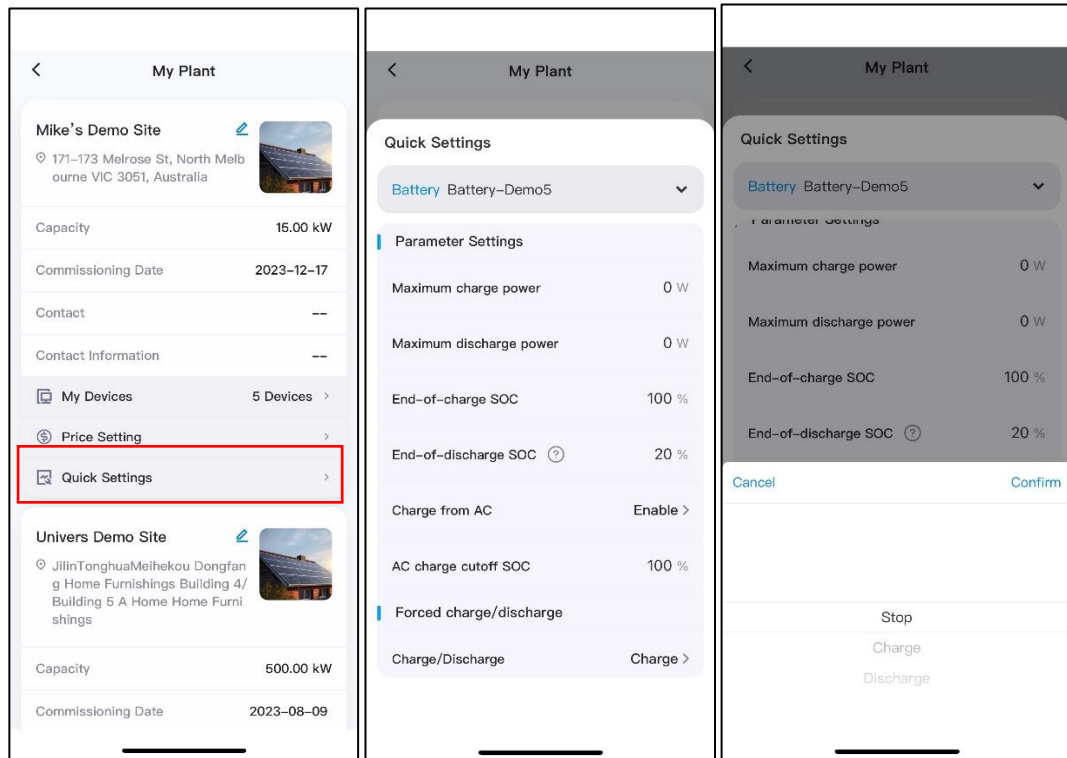
- On Me – My Plant – My Devices, users can monitor all the devices under the specific site, users also can filter the devices by selecting the device type.



- Refer to [Device Monitoring \(End User App\)](#)

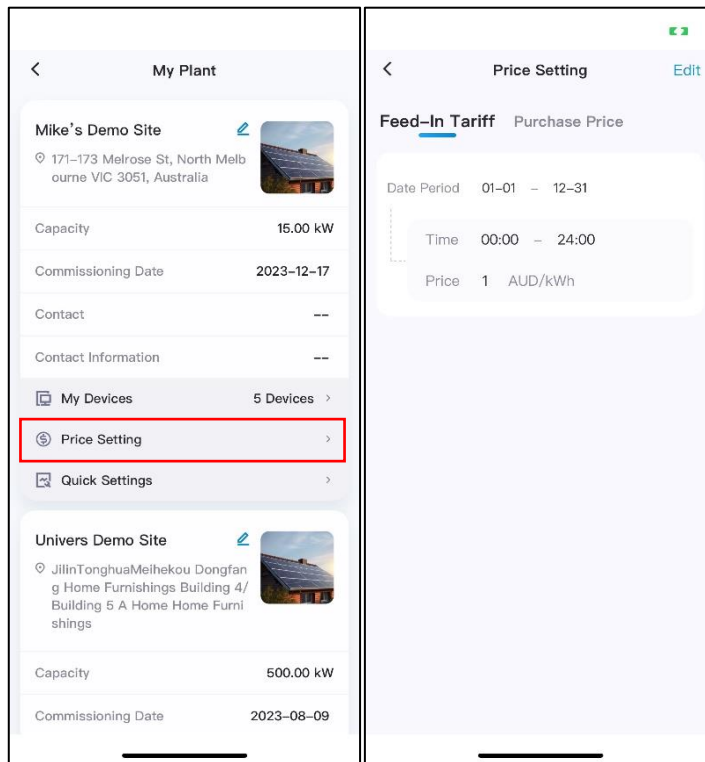
2. Implemented **device parameter setting** feature on **mobile app**.

- For end user
 - On Me – My Plant – Quick Setting, home users can control the device by editing device parameters like Battery TOU, charge and discharge limitation.
 - Device type available to control: Battery.
 - Refer to [Device Parameter Setting \(End User App\)](#)



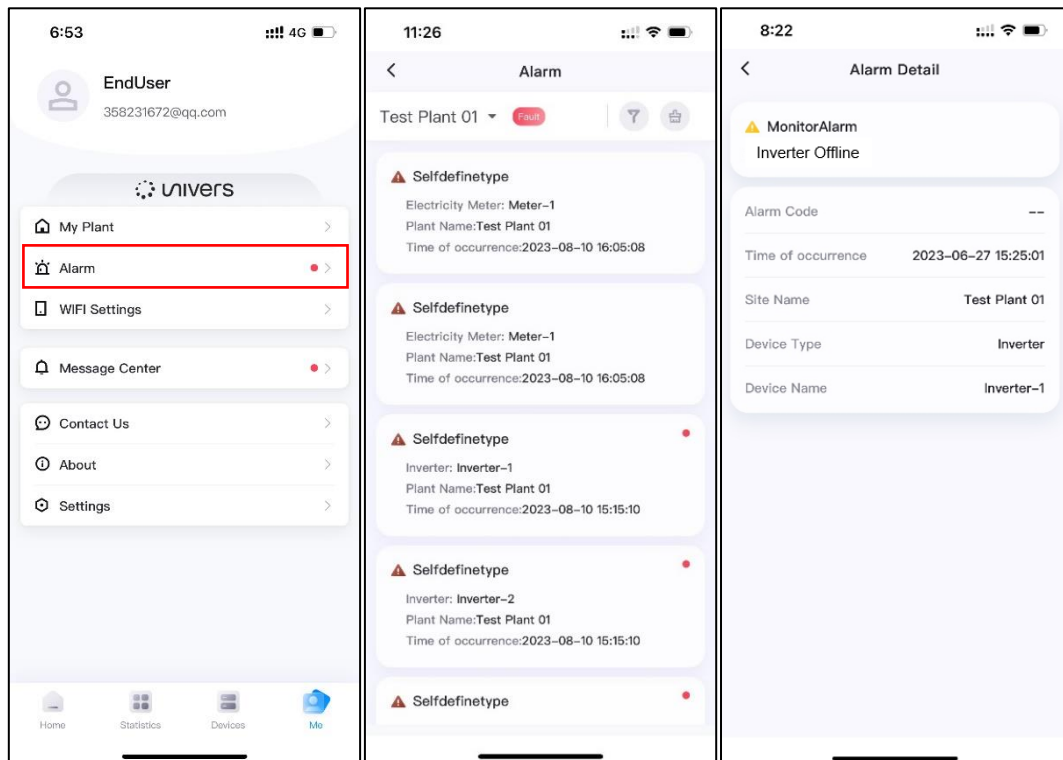
3. Implemented **Price Setting** feature on **mobile app**.

- For end user
 - On Me – My Plant – Price Setting, users can edit Feed-In Tariff and Purchase Price for the site
 - Refer to [Plant Price Setting \(End User App\)](#)

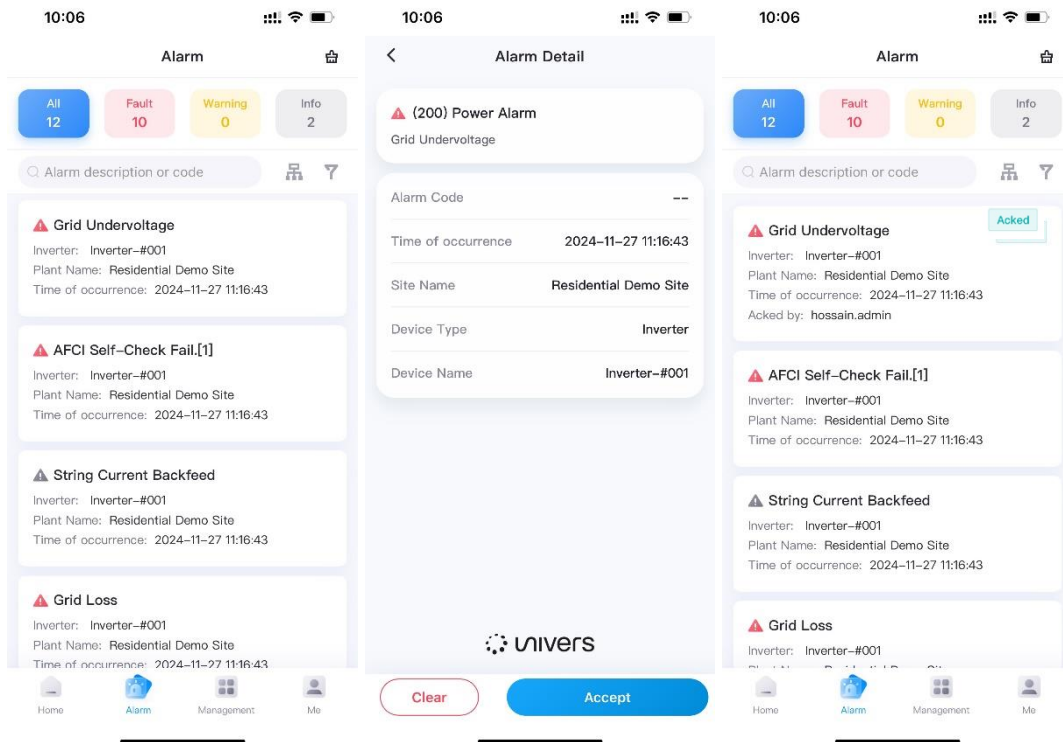


4. Added **Alarm Detail** for alarms on **mobile app**.

- For end user
 - On Me – Alarm, users can click each alarm to see the alarm details.
 - Refer to [Alarm \(End User App\)](#)

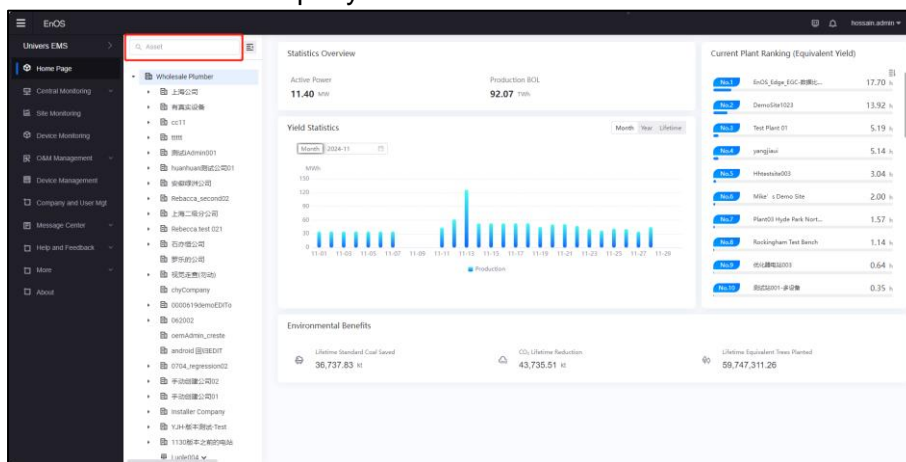


- For installer/admin
 - On Alarm module, users can click each alarm to see the alarm details.
 - On Alarm detail page, users can accept the alarm by clicking “Accept”, then the alarm will be marked as “Aked” on the alarm list.
 - On Alarm detail page, users can clear the alarm by clicking “Clear”, then the alarm will be deleted from the alarm list.
 - Refer to [Alarm Detail \(Installer Appl\)](#)

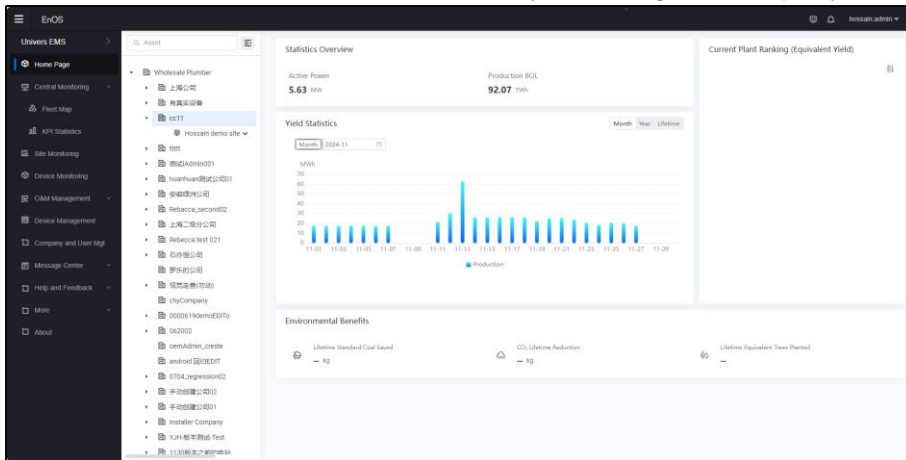


5. Implemented **Asset Tree navigation** to display information on specific company/site/device on web portal.

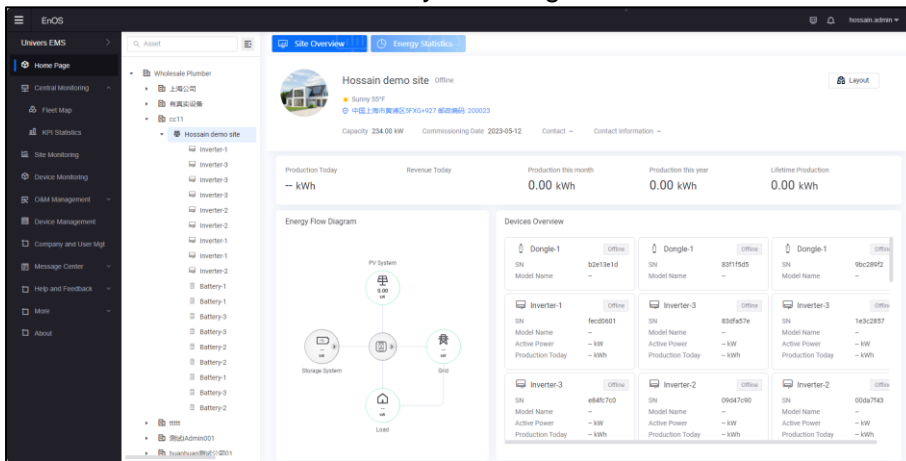
- On Home Page, default displays cross-site statistics of the root node company.
- Refer to [Home Page](#)
- Users can search company/site/device on the asset tree.



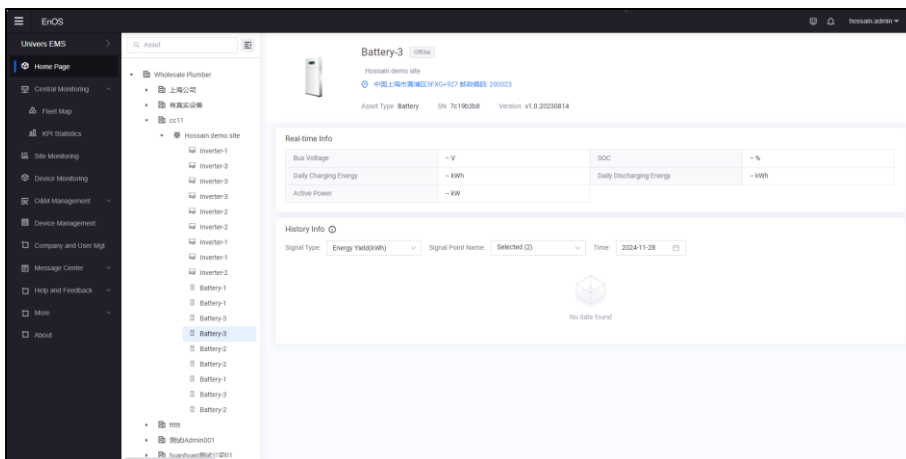
- Users can view the cross-site statistics by selecting the company on the asset tree.



- Users can view the site details by selecting the site on the asset tree.



- Users can view the device details by selecting the device under a specific site on the asset tree.



Main Enhancements

1. Enhanced the design of the fleet map.

- Users can view the KPI data of power site distribution and aggregation under the company / regional node flexibly.
- The column on the right shows the key metrics of all sites within the scope of user authority; the left shows the production, energy trend, consumption and EV station statistics of the selected level (integrated sites or single site).
- Refer to [Fleet Map](#)



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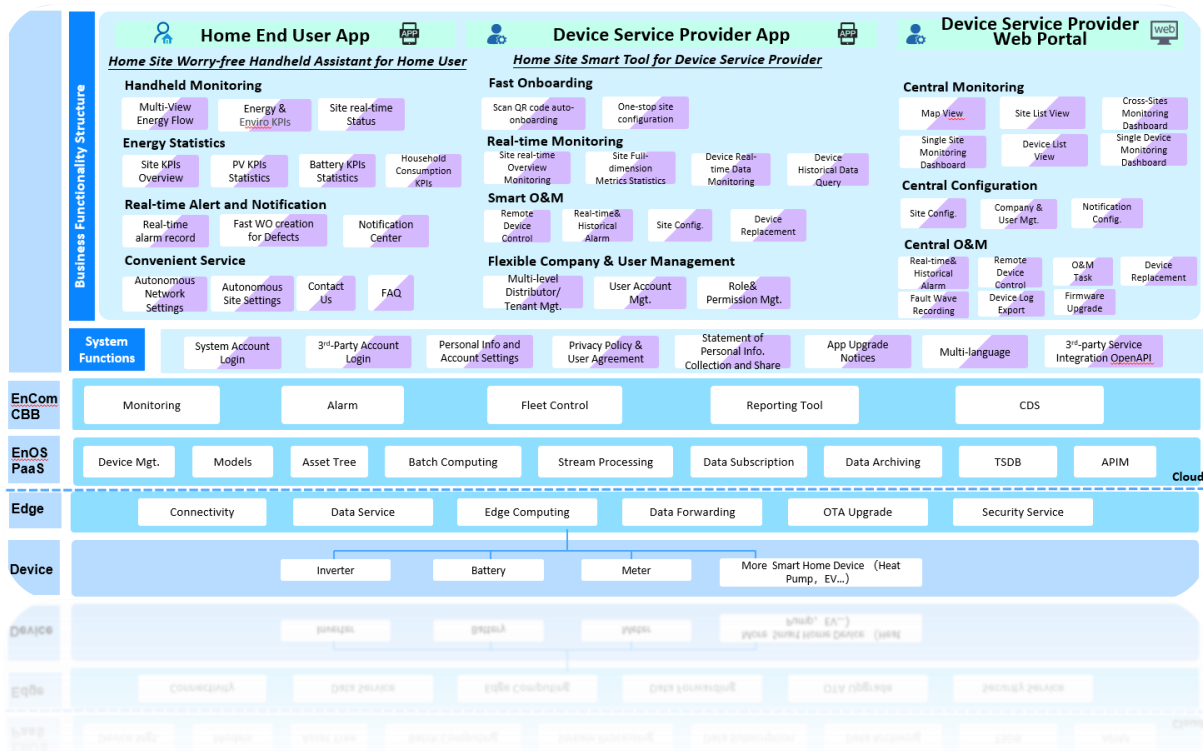
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1 About Univers EMS

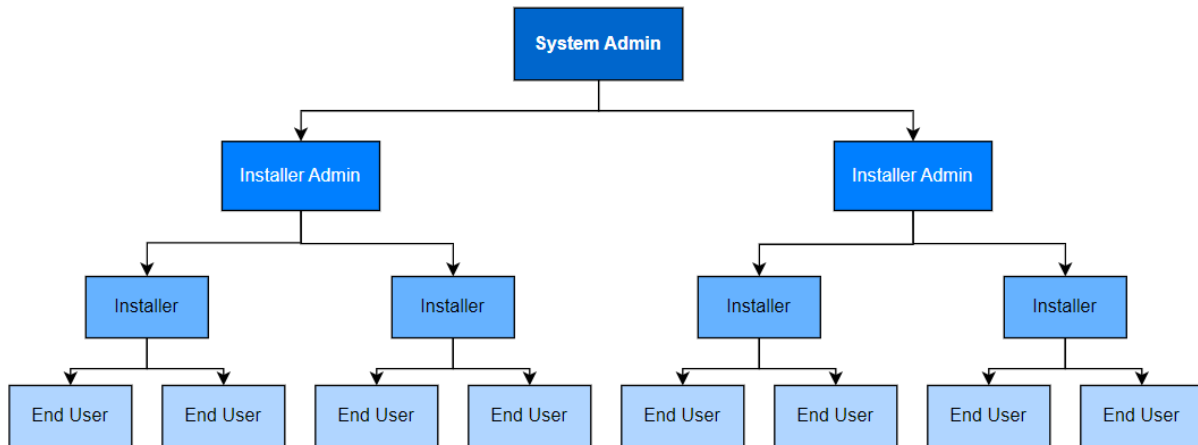
The Univers EMS Application has a simple design and well-developed features, oriented towards the actual needs of residential plant in the end-to-end process. It aims to solve business pain points faced by Device Manufacturer, Downstream Installer companies, Installer&O&M team and Home End Users involved in residential energy management. The system provides powerful functions such as Plant and Device Onboarding, Monitoring, Management, Remote Control, Operation and Maintenance, Company and User Management.

1.1 Product Architecture



1.2 Target Users

Univers EMS is designed for 4 types of User Roles: System Admin, Installer Admin, Installer and End User. Below is the user hierarchy diagram.



1.2.1 User Description & Permission

User	Description	Permission
System Admin	<p>OEM team users will be as System Admins. It is the top-level user that oversees system level settings such as setting up installer companies and Installer Admin user accounts.</p> <p>OEM contact Univers Team to initialize the first System Admin account and then this System User could create more System Users.</p>	<ul style="list-style-type: none"> • Company Management • User Management for all the User Accounts • Residential Site Management for all the Residential Sites • Device Management for all the onboarded devices • Residential Site Central Monitoring • Device Monitoring for all the onboarded devices • System Management
Installer Admin	<p>Admins user for a Installer Company, who oversees the settings of the Installer companies such as setting up sub-companies that is under the Installer company and managing Installer user accounts, plants and devices.</p>	<ul style="list-style-type: none"> • Sub-company Management • User Management within permission of Installer company and Sub Installer Companies • Residential Site Management within permission scope of Installer company and Sub Installer Companies • Device Management within permission of Residential Sites • Residential Site Monitoring within permission scope of Installer company and Sub Installer Companies

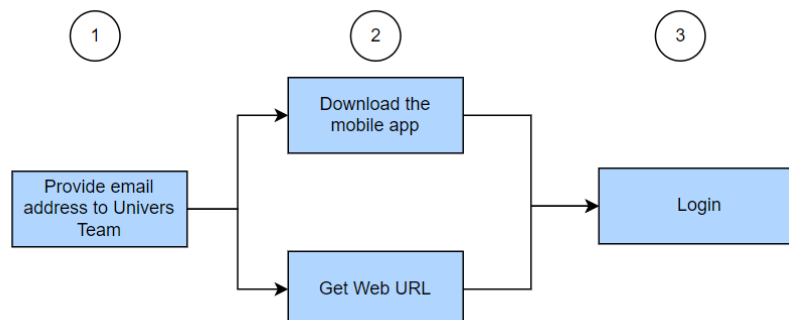
		<ul style="list-style-type: none"> • Device Monitoring within permission of Residential Sites
Installer	Installer oversees the Site level management within the permission scope, such as setting up residential sites, onboarding devices, monitoring&control and manage End User accounts.	<ul style="list-style-type: none"> • End User Management • Residential Site Management for the sites that they conduct onboarding or assigned by admin • Device Management within permission of Residential Sites • Residential Site Monitoring for the sites that they conduct onboarding or assigned by admin • Device Monitoring within permission of Residential Sites
End User	End User are the residential site owner who could monitor their installed PV plants and do the personal settings.	<ul style="list-style-type: none"> • Their own Residential Site Monitoring • Device Monitoring • Personal Setting

2 Getting Started

This section will introduce how to get started access to the Univers EMS Application, for different roles of users.

2.1 System Admin

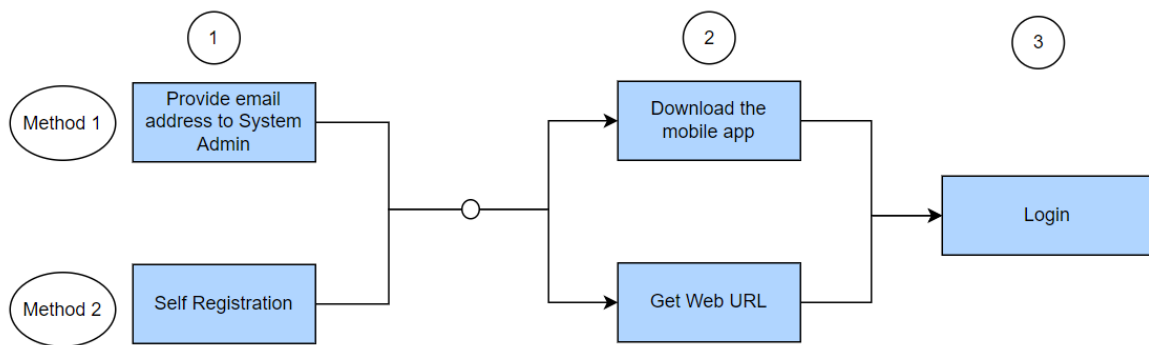
Here is the overall process for the initial setup:



1. System admin user will need to provide Email Address and Username to Univers team. Univers Team will create first System Admin Account based on the email and username provided by the OEM.
2. A registration email will be sent to the provided email address, which contains a link to set the password.
3. Login to the application.

2.2 Installer Admin

Here is the overall process for the initial setup:



1. Installer Admin user can either register an account through method 1 or method 2 as described below:

Method 1: Connect with OEM System Admin, provide your email address to System Admin to register an account.

OR

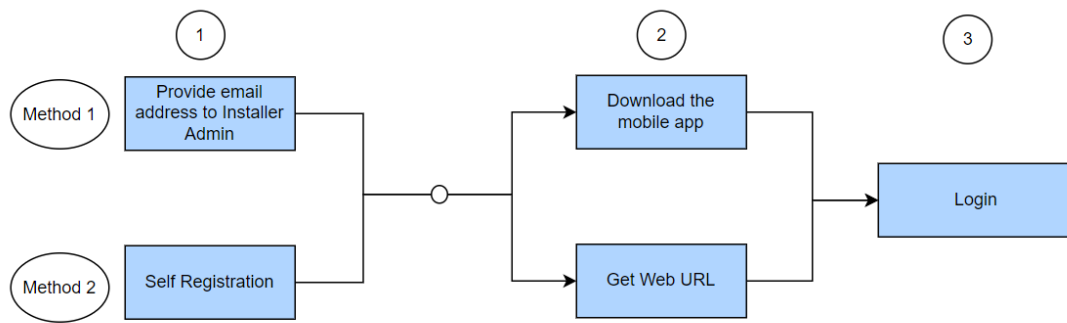
Method 2: Self-registration.

2. A registration email will be sent to the provided email address, which contains a link to reset the password to login Mobile App and Web Portal.
3. Login to the application.
4. Follow the detailed guide in [Installer Admin Account Setting](#).

2.3 Installer

Pre-requisite: You are using an Installer account.

Here is the overall process for the initial setup:



1. Installer user can either register an account through method 1 or method 2 as described below:

Method 1: Connect with Installer Admin, provide your email address to Installer Admin to register an account.

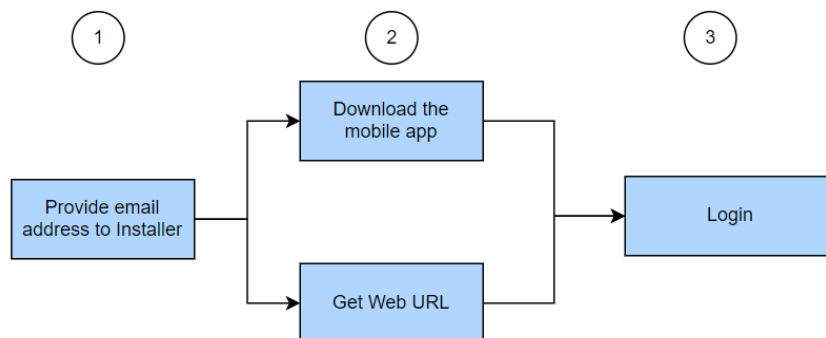
OR

Method 2: Self-registration, self-register account from entrance in Mobile Application Login Page. Follow the detailed guide in [Installer Account Setting](#).

2.4 End User

Pre-requisite: You are using an End User account.

Here is the overall process for the initial setup:

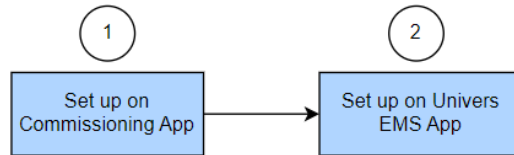


1. End User will need to provide Email Address and Username to Installer. Installer will create End User Account based on the email and username provided. (Note: System Admin and Installer Admin also have permission to create end user account.)
2. A registration email will be sent to the provided email address, which contains a link to reset the password to login Mobile App and Web Portal.
3. Login to the application.
4. Follow the detailed guide in [End User Account Setting](#).

2.5 Setting up Power Plants & Devices

Pre-requisite: You are using a System Admin/Installer Admin/Installer account.

Here is the overall process to set up power plants and devices:



Refer to Device Onboarding & Residential Plant Setting Up for the details.

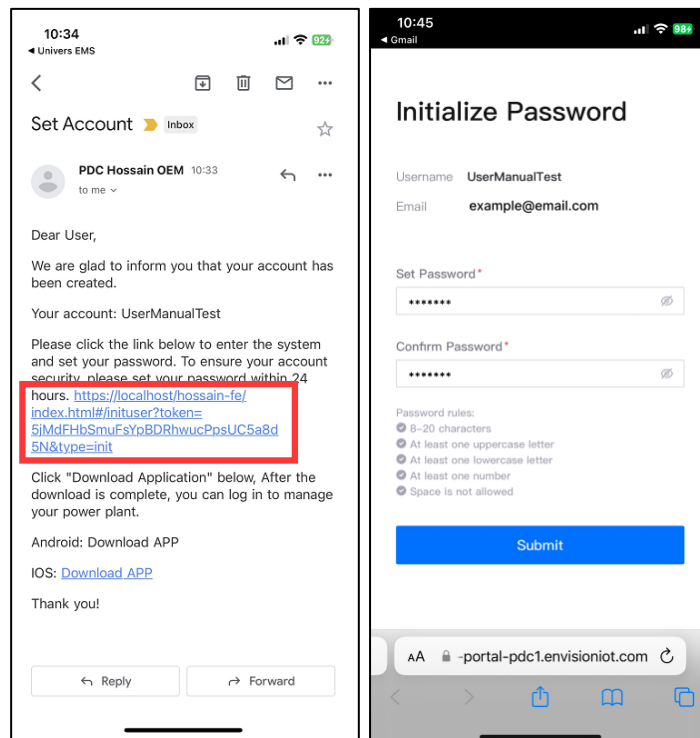
3 Mobile Application – Admin & Installer

3.1 Setup Account

3.1.1 Installer Admin Account Setting

Method1:

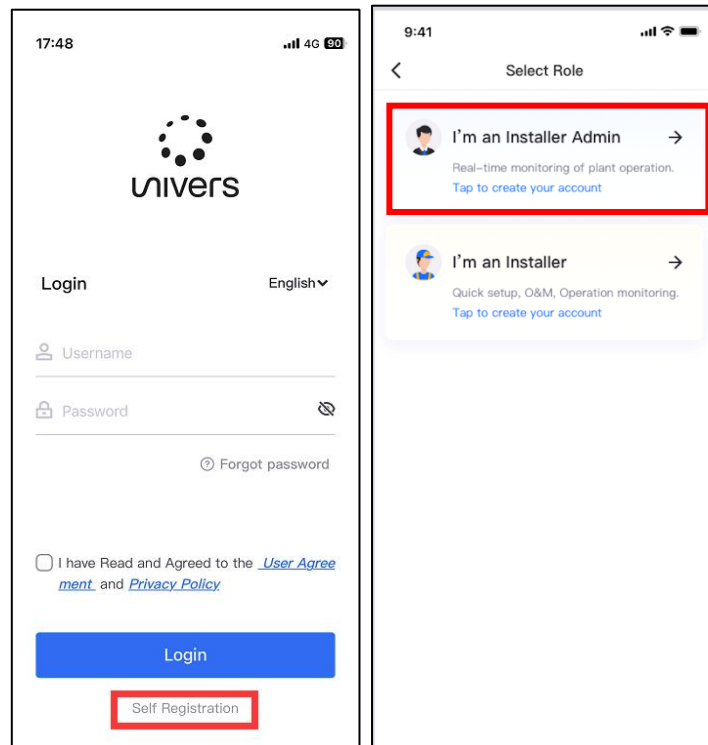
1. System admin will collect your email address and username, and create an account based on the email address and username.
2. You will receive a registration email by that email address after admin create for you.
3. Click the link in email to set the password in accordance with password policy requirements. You will be redirected to the website to set your password.



Note: If email is not in your inbox, please check your spam/junk email

Method2:

1. Download the mobile application in Google Play or App Store. The application name is Univers EMS
2. Open the application and click on **[Self Registration]** at the bottom of the page.
3. Tap on **[I'm an Installer Admin]**.



4. You will be directed to the Installer Admin Account Self-Registration page. **Please note that:** this process is creating new installer company and at the same creating your account as installer admin of this new company, so if your installer company has been registered, please contact corresponding installer admin to add account for you.
- a) **Company Invitation Code:** get from your parent company admin user, and new company your register will be the sub-company under this Company.
 - b) **Company name:** enter company name that you will register, this will create a sub company under the parent company which you have provided the invitation code.
 - c) **Username:** enter your preferred username.
 - d) **Password:** enter a password.
 - e) **Confirm Password:** enter your password again.
 - f) **User Email:** enter your **email** address.
 - g) **Verification Code:** press the **[Send]** button first, a verification code will be sent to your email address, key in the verification code here.

Note: If email is not in your inbox, please check your spam/junk email.

- h) Read and tick the button to consent the User Agreement and Privacy Policy.
- i) Press **[Register]** button to complete the registration.

17:48 4G

< Installer Admin Registration

Company Invitation Code *
Please enter the company invitation code

Company name *
Company name

Username *
Username

Password *
Password

Confirm password *
Confirm password

User Email *
User Email

Verification code *
Please enter the verification code

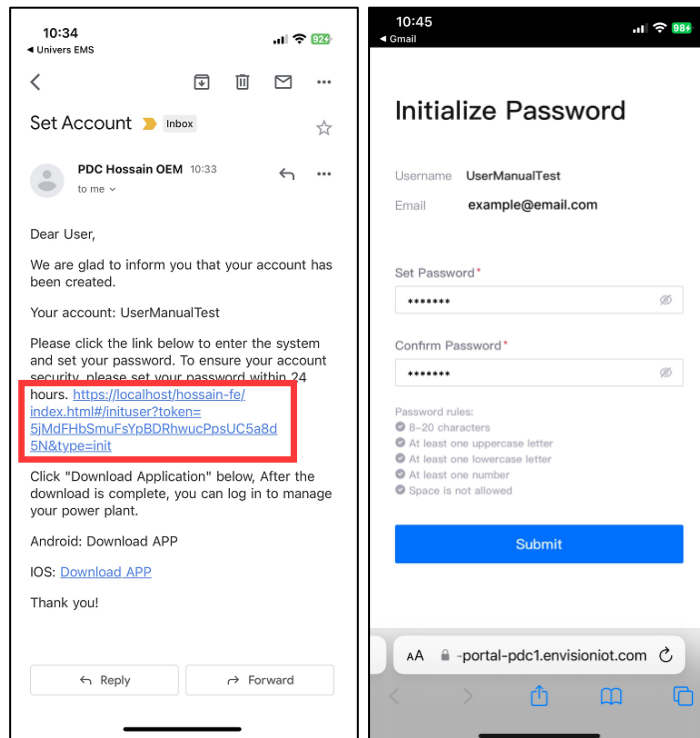
[More Information](#) ?

I have Read and Agreed to the [User Agreement](#) and [Privacy Policy](#)

3.1.2 Installer Account Setting

Method1:

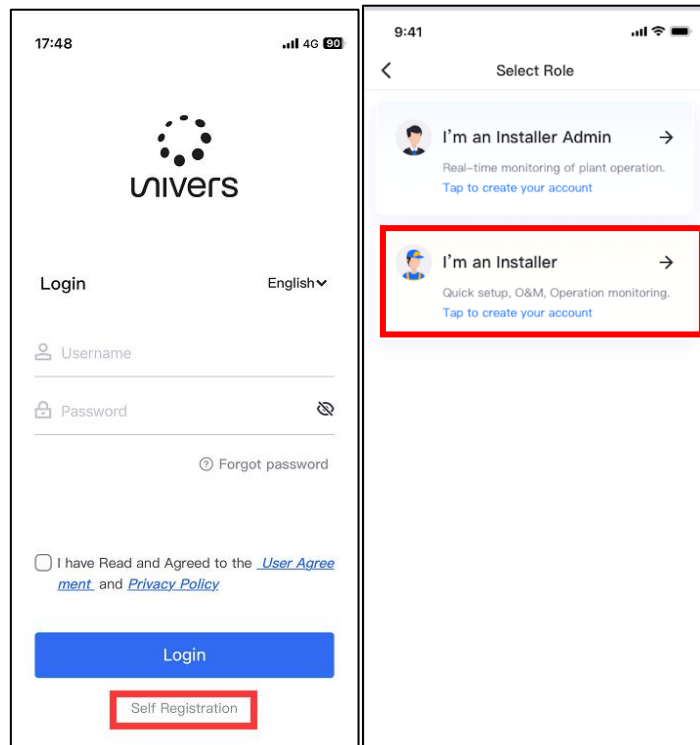
1. Installer admin will collect your email address and username, and create an account based on the email address and username.
2. You will receive a registration email by that email address after admin create for you.
3. Click link in email to set the password in accordance with password policy requirements. You will be redirected to the website to set your password.



Note: If email is not in your inbox, please check your spam/junk email

Method2:

1. Download the mobile application in Google Play or App Store. The application name is Univers EMS
2. Open the application and click on **[Self Registration]** at the bottom of the page.
3. Tap on **[I'm an Installer]**.



4. You will be directed to the Installer Account Self-Registration page.
 - a) **Company Invitation Code:** get from your Installer Company'Installer Admin
 - b) **Username:** enter your preferred username.
 - c) **Password:** enter a password.
 - d) **Verify Password:** enter your password again.
 - e) **User Email:** enter your **email** address.
 - f) **Verification Code:** press the **[Send]** button first, a verification code will be sent to your email address, key in the verification code here.
Note: If email is not in your inbox, please check your spam/junk email.
 - g) Read and tick the button to consent the User Agreement and Privacy Policy.
 - h) Press **[Register]** button to complete the registration.

16:07 📶 89

< **Installer Registration**

Company Invitation Code *
Please enter your installer company invitation code

Username *
Please enter user name

Password *
Please enter password 🗑

Confirm password *
Please repeat password 🗑

User Email *
Please enter an email address to register account

Verification Code *
Please enter verification code in email Send

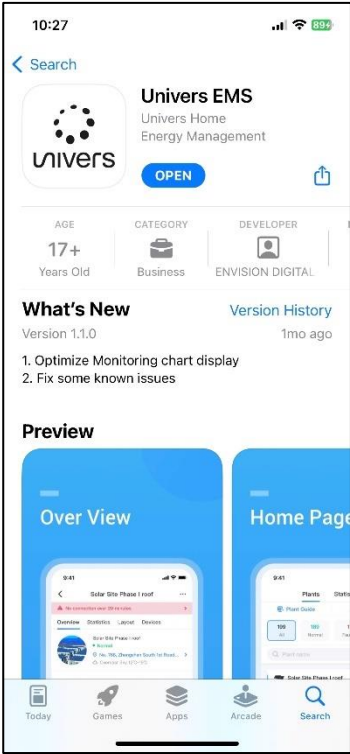
I have Read and Agreed to the [User Agreement](#) and [Privacy Policy](#)

Register

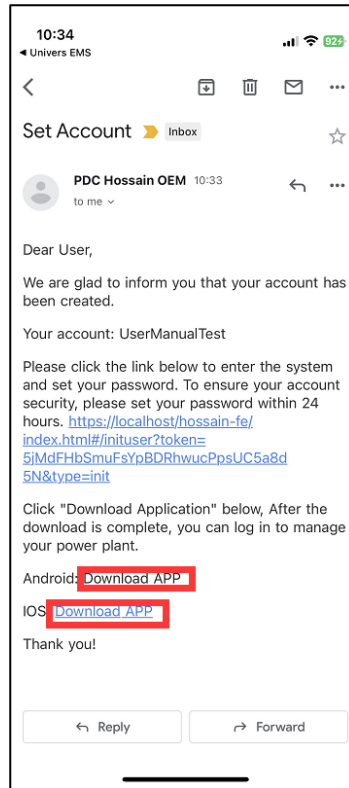
3.2 Login

3.2.1 Application Download

- 1. You can download the mobile application in Google Play for Android users or App Store for Apple users. The application name is Univers EMS as shown in Figure.

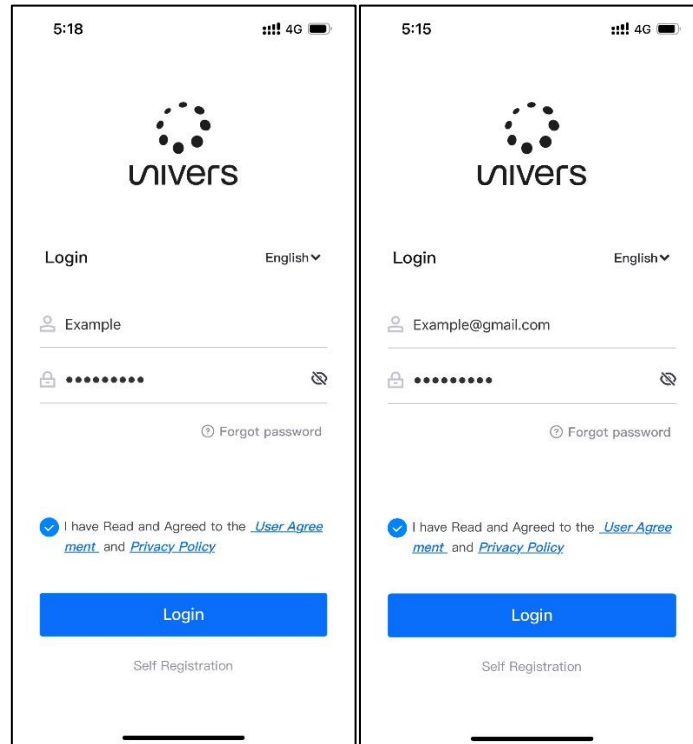


2. Or you can also download from the link provided in the Set Account email.

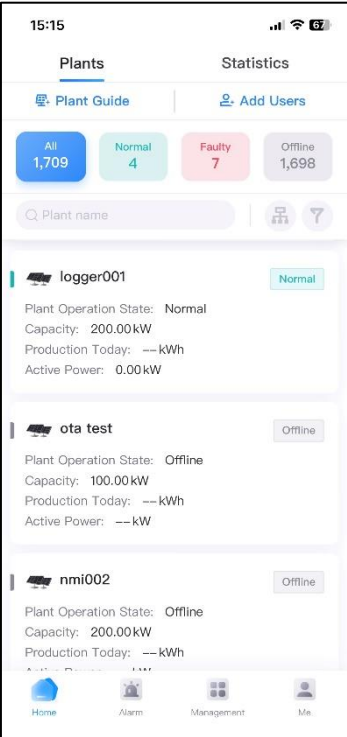


3.2.2 Application Login

1. Enter your **username** or **email address** and **password**.
2. Read and check the **box** to consent the User Agreement and Privacy Policy.
3. Press the **[Login]** button.

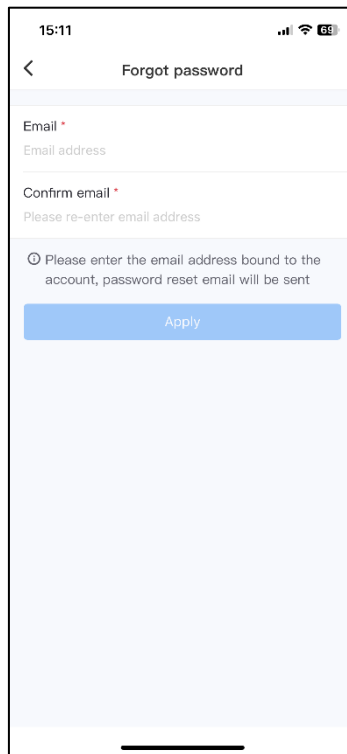


After logging, you will be directed to the Home page of Univers EMS where you can monitor your plants.



3.2.3 Forgot Password

If you forget the login password, click the 'Forgot password' button to reset the password.

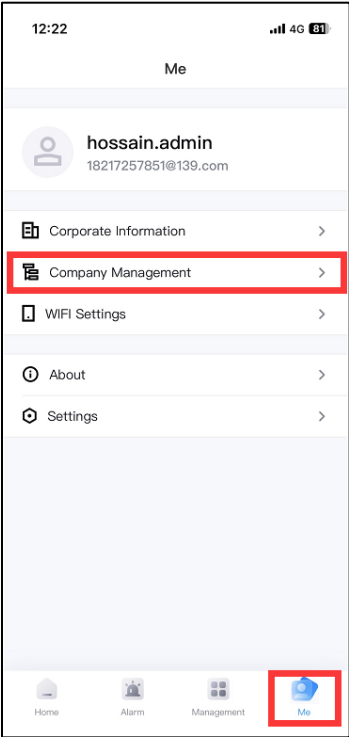


3.3 Company & User Management

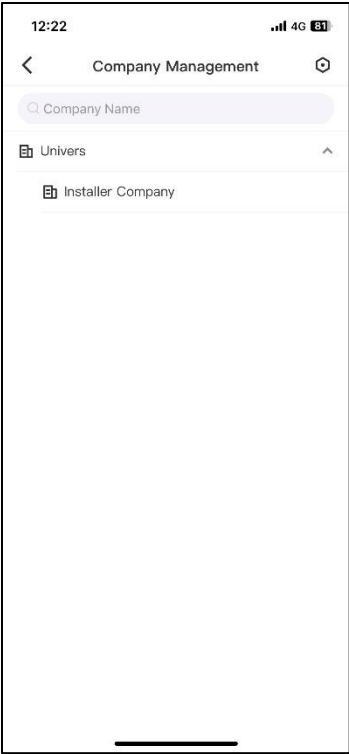
3.3.1 Company Management

The application provides the module of multi-level company management, which can be flexibly supported by the multi-level distributor and installer model of overseas household savings. Company Management module is for System Admin and Installer Admin to manage the sub-companies. The user can create, edit, or delete a sub-company. The user is allowed to create up to four levels of sub-companies under the root node.

You can access the page by go to **[Me]** page and press **[Company Management]**.



You will be directed to the Company Management page as shown below. The page will show a list of sub-companies that you have permission.



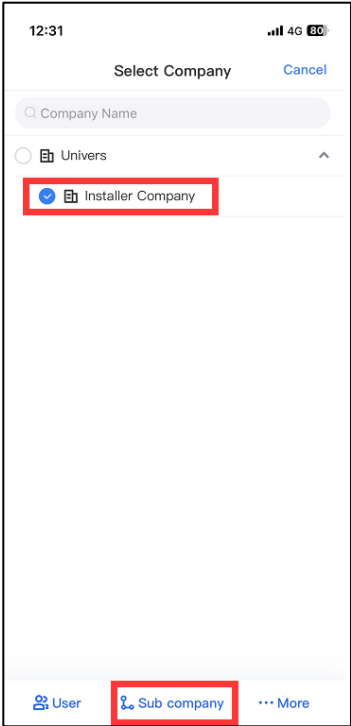
3.3.1.1 Create Sub-Company

You can create more sub-company if needed.

1. Press the **[Manage icon]** on the top right-hand corner.



2. Select a parent company that you want to add the sub-company to and press the **[Sub Company]** button on the bottom to add a sub-company to the selected parent company.



3. Enter the **Company name**, **Username** and **User email**. This user account will automatically be installer admin for this company.

12:33 4G

< Add Sub-company

Parent company
Installer Company

Company Name *
Please enter company name

Username *
Please enter username

User Email *
Please enter User's email address

More ▾

Cancel Apply

4. Press the **[More]** to enter the Company Email, Phone, Website, Address and Company Invitation Code if needed.
5. Company Invitation Code will be used for Installer Admin/Installer under the company to fill in during self-registration. Please provide it to the relevant installer users. If invitation code is changed, previous one will be invalid.
Note: It requires 8-64 characters and numbers, the invitation code must be unique.
6. Press the **[Apply]** button to create the sub-company.

The screenshot shows a mobile application interface for adding a sub-company. At the top, the time is 16:49 and the battery is at 82%. The title bar reads 'Add Sub-company'. Below the title bar are four input fields: 'Company Email' (placeholder: 'Please enter company contact email'), 'Company Phone' (placeholder: 'Please enter company contact phone number'), 'Company Website' (placeholder: 'Please enter company website', with a '0/500' character count), and 'Company Address' (placeholder: 'Please enter company address', with a '0/500' character count). Below these is a 'Company Invitation Code' field (placeholder: 'Please enter the company invitation code', with a question mark icon and a 'Generate' button). At the bottom, there is a 'Fold' link with an upward arrow, and two buttons: 'Cancel' and 'Apply'.

Note: Maximum four levels of company are allowed.

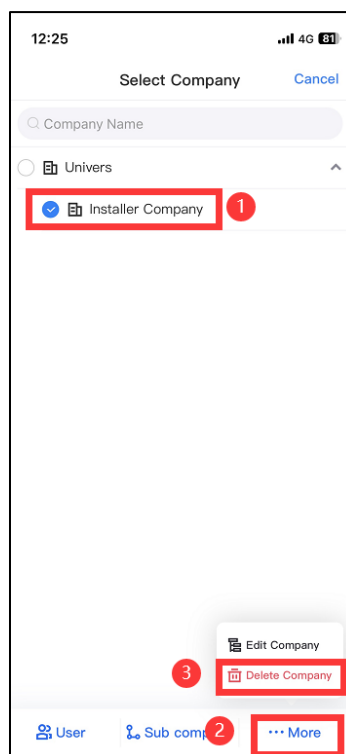
3.3.1.2 Delete Sub-Company

Pre-requisite: You only can delete a sub-company if there is no sub-companies, no users and no plants under this sub-company.

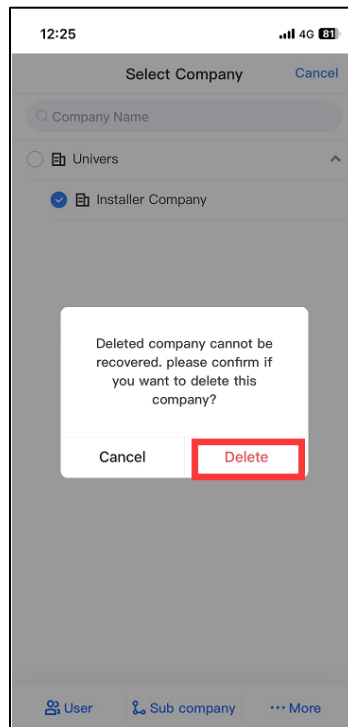
1. Press the **[Manage icon]** on the top right-hand corner.



2. Select a sub-company that you wish to delete and press the **[...More]** button on the bottom right-hand corner.
3. Press **[Delete Company]** button.



4. Press **[Delete]** on the pop-up window to confirm the deletion.

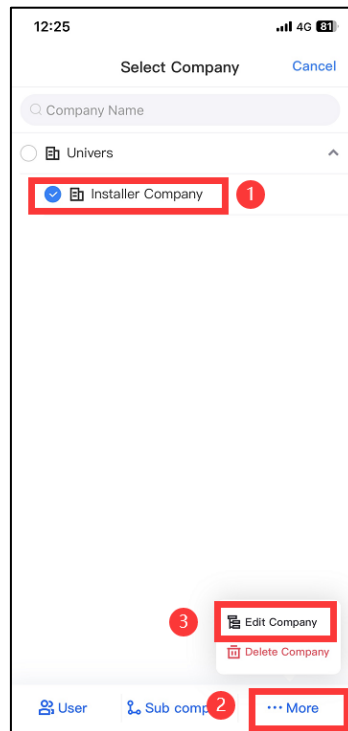


3.3.1.3 Edit Sub-Company

1. Press the **[Manage icon]** on the top right-hand corner.

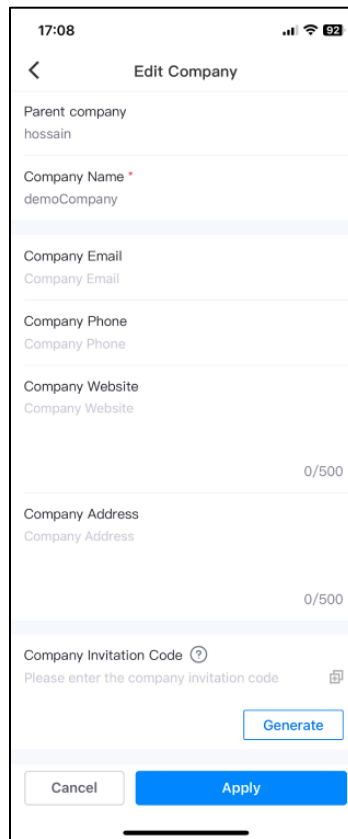


2. Select a sub-company that you wish to delete and press the **[...More]** button on the bottom right-hand corner.
3. Press **[Edit Company]** button.



4. You will be redirected to the Edit Company page where you can edit the company information such as the company name, email, phone, website, address and invitation code. Parent company is not editable.
5. Company Invitation Code is used for Installer Admin/Installer under the company to fill in during self-registration. Please provide it to the relevant installer users. If invitation code is changed, previous one will be invalid.

Note: It requires 8-64 characters and numbers, the invitation code must be unique.

A screenshot of a mobile application interface for editing company information. The screen is titled "Edit Company" and shows several input fields: "Parent company" (hossain), "Company Name" (demoCompany), "Company Email", "Company Phone", "Company Website" (with a 0/500 character limit), and "Company Address" (with a 0/500 character limit). Below these fields is a "Company Invitation Code" section with a question mark icon, a placeholder text "Please enter the company invitation code", and a "Generate" button. At the bottom, there are "Cancel" and "Apply" buttons.

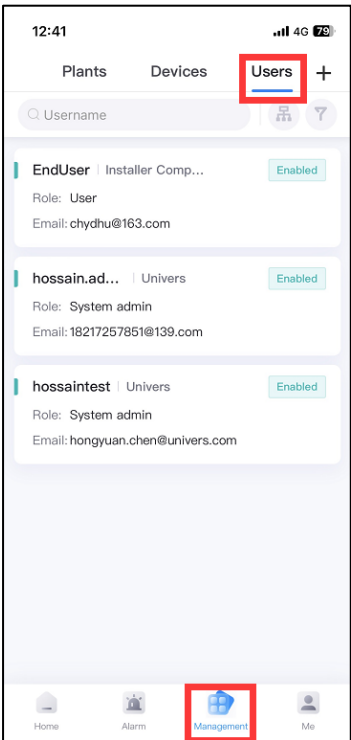
6. Press **[Apply]** to save the changes.

3.3.2 User Management

User Management is for Admin, Installer Admin, and Installer to manage the user accounts under his/her authority. This involves creating, deleting, and disabling a user account or reset password for a user account. Distinct roles have different management permissions:

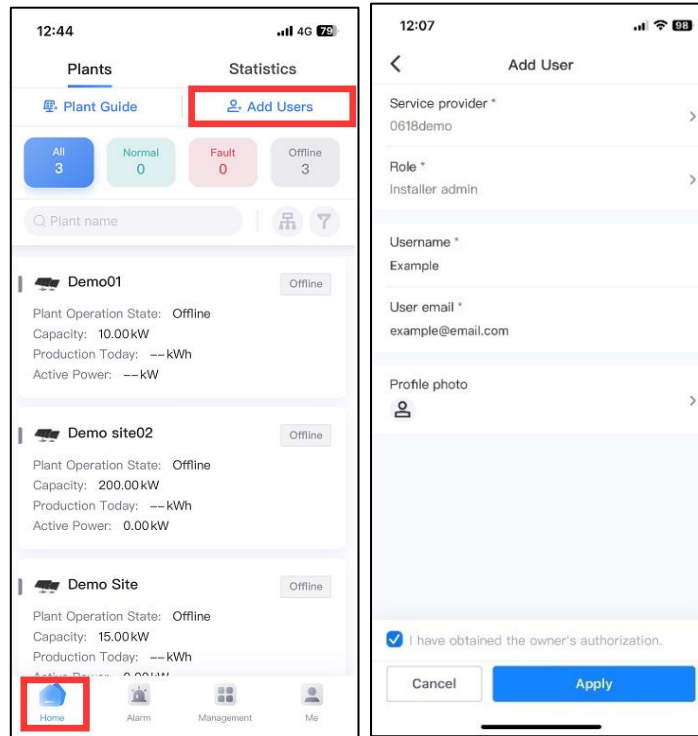
- System Admin: can manage Installer Admin, Installer and End User accounts.
- Installer Admin: can manage Installer and End User accounts.
- Installer: Installer could manage End User accounts.

You can access the page by go to the **[Management]** page and switch to the **[Users]** tab. This page shows a list of users that you have management permission.



3.3.2.1 User Account Creation through Home Page

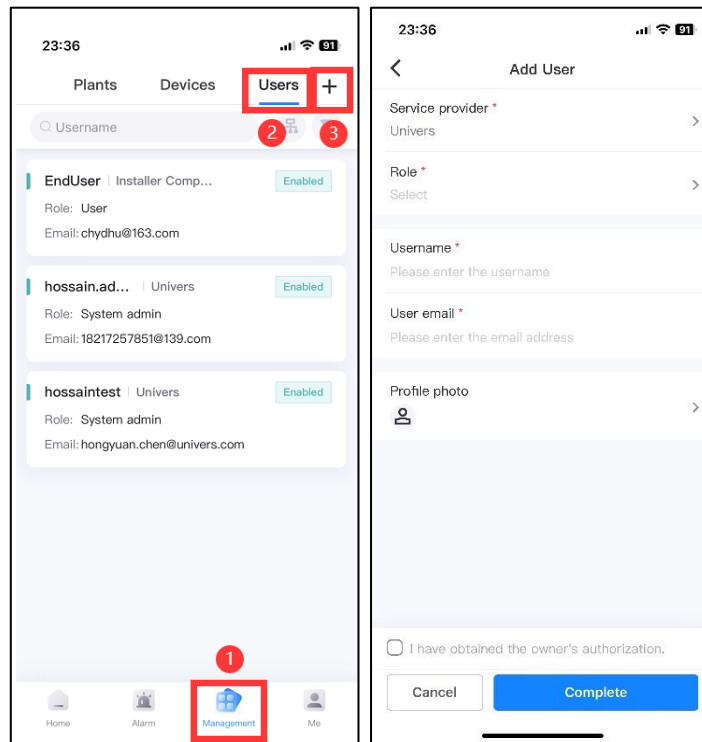
1. Go to **[Home]** page and press the **[Add Users]** button.



2. Service provider: select company this user belongs to
3. Role:
 - a. If you are a system admin, you can select **[System Admin]/[Installer Admin]/[Installer]/[End User]**.
 - b. If you are an installer admin, you can select **[Installer Admin]/[Installer]/[End User]**.
 - c. If you are an installer, you can select **[End User]**.
 - d. When creating **Installer** accounts, you can choose the related plant but it is not mandatory.
 - e. When creating **End User** accounts, it is mandatory to choose the related plant.
4. Username: enter the **Username** for the user.
5. User email: enter the user's **email** address.
6. Profile photo: set the profile phone if needed.
7. Check the **[box]** to confirm that you have obtained the owner's authorization.
8. Press the **[Apply]** button to create the account.

3.3.2.2 User Account Creation through Management Page

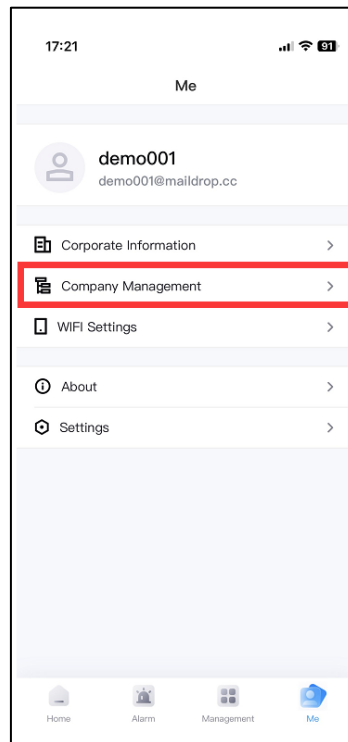
1. Go to **[Management]** page, switch to the **[Users]** tab and press the **[+]** button.



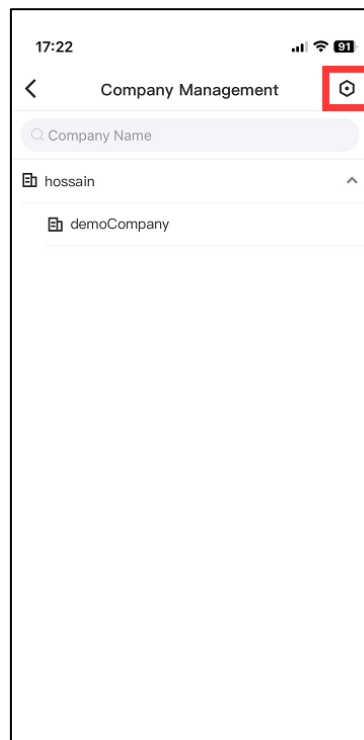
2. Service provider: select company this user belongs to
3. Role:
 - a. If you are a system admin, you can select **[System Admin]/[Installer Admin]/[Installer]/[End User]**.
 - b. If you are an installer admin, you can select **[Installer Admin]/[Installer]/[End User]**.
 - c. If you are an installer, you can select **[End User]**.
 - d. When creating **Installer** accounts, you can choose the related plant but it is not mandatory.
 - e. When creating **End User** accounts, it is mandatory to choose the related plant.
4. Username: enter the **Username** for the user.
5. User email: enter the user's **email** address.
6. Profile photo: set the profile photo if needed.
7. Check the **[box]** to confirm that you have obtained the owner's authorization.
8. Press the **[Apply]** button to create the account.

3.3.2.3 User Account Creation through Company Management

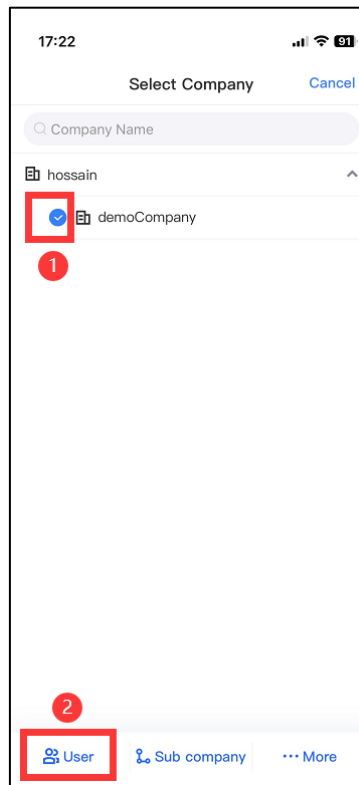
1. Go to **[Me]** page and press **[Company Management]**.



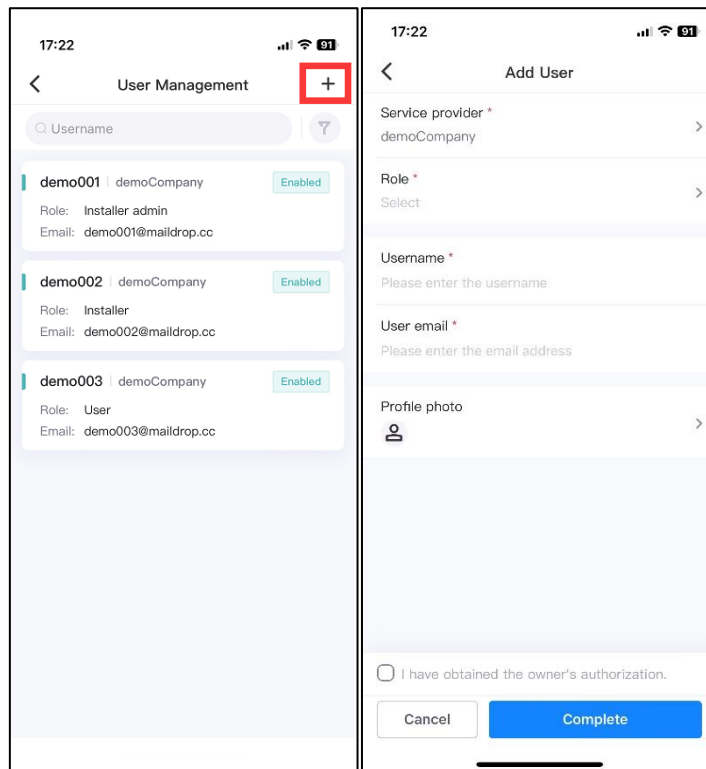
2. Press the **[Manage]** icon.



3. Select the company which you want to add the user into and press **[User]** button.



4. Press **[+]** button at the top right hand corner.



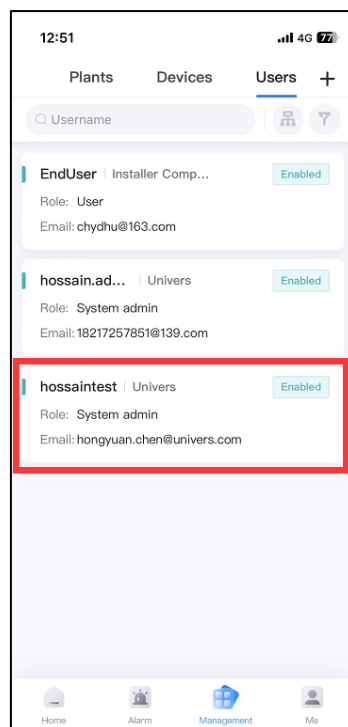
5. Service provider: select a sub-company this user belongs to

6. Role:

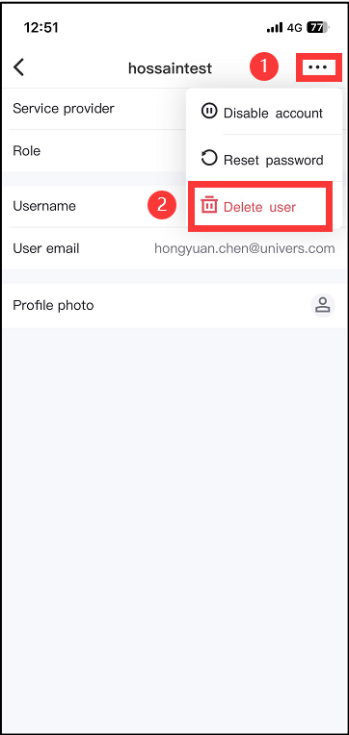
- a. If you are a system admin, you can select **[System Admin]/[Installer Admin]/[Installer]/[End User]**.
 - b. If you are an installer admin, you can select **[Installer Admin]/[Installer]/[End User]**.
 - c. If you are an installer, you can select **[End User]**.
 - d. When creating **Installer** accounts, you can choose the related plant but it is not mandatory.
 - e. When creating **End User** accounts, it is mandatory to choose the related plant.
7. Username: enter the **Username** for the user.
 8. User email: enter the user's **email** address.
 9. Profile photo: set the profile photo if needed.
 10. Check the **[box]** to confirm that you have obtained the owner's authorization.
 11. Press the **[Apply]** button to create the account.

3.3.2.4 User Account Deletion

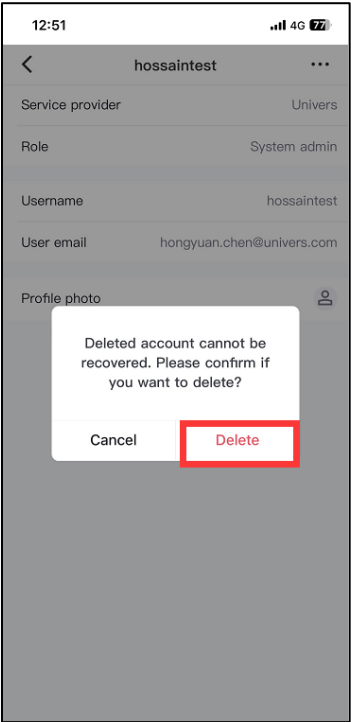
1. Choose a user account that you wish to delete and press on it.



2. You will be directed to the user information page, press the **[...]** button on the top right-hand corner.
3. Press **[Delete user]** button to delete the desired user account.

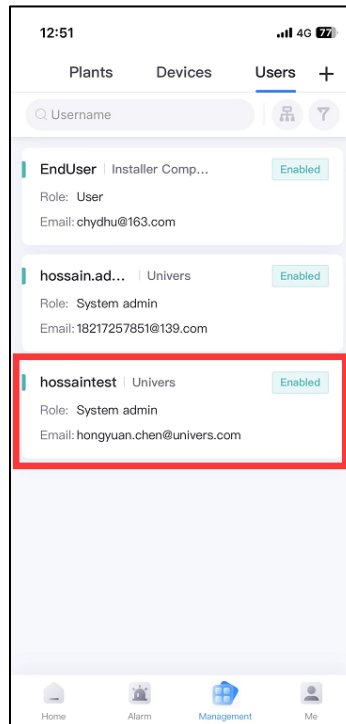


4. Press **[Delete]** on the pop-up window to confirm the deletion.

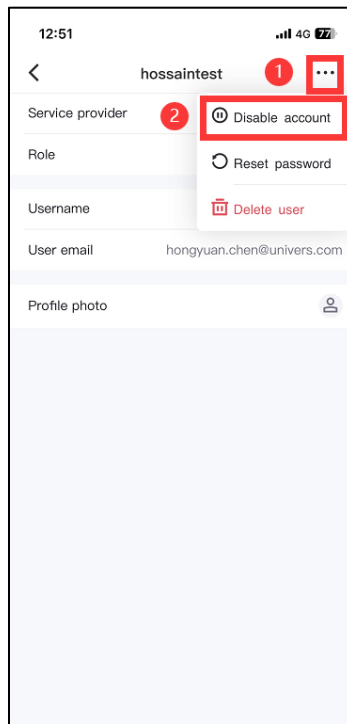


3.3.2.5 User Account Disabling

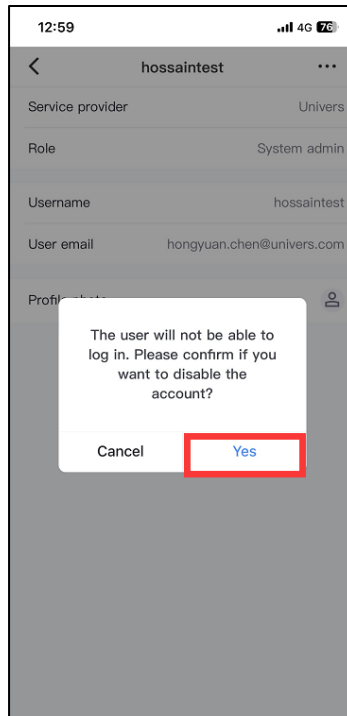
1. Choose a user account that you wish to disable and press on it. You could perform a fuzzy search by the User Name to look for the user account.



2. You will be directed to the user information page, press the [...] button on the top right-hand corner.
3. Press **[Disable account]** button to disable the desired user account.

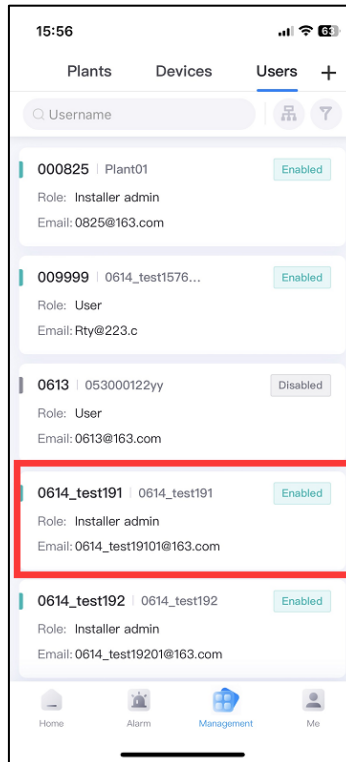


4. Press **[Yes]** on the pop-up window to confirm the disabling of the account. Disabled account is not able to login to the App. Support enabling back the disabled accounts.

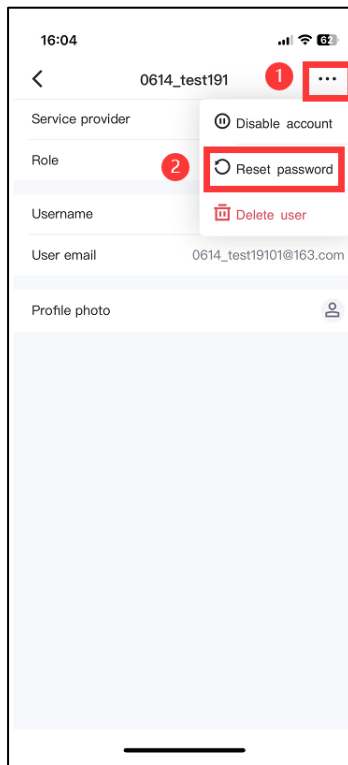


3.3.2.6 Password Resetting

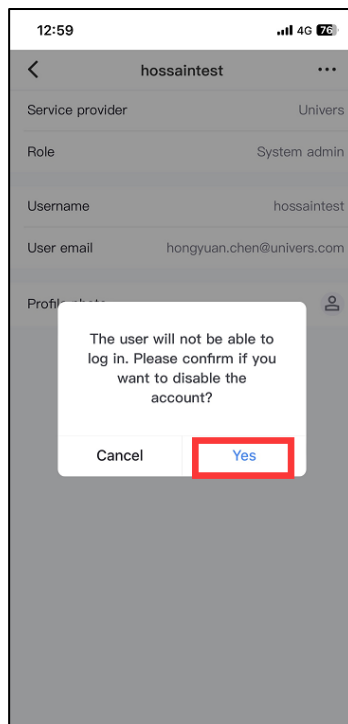
1. Choose a user account that you wish to reset the password and press on it.



2. You will be directed to the user information page, press the [...] button on the top right-hand corner.
3. Press **[Reset password]** button to reset the user's password.

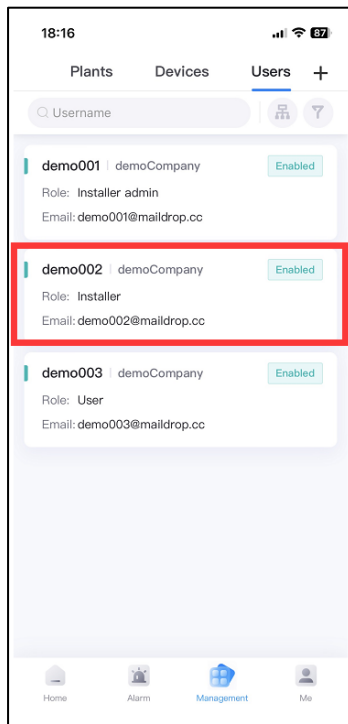


4. Press **[Yes]** on the pop-up window to confirm the resetting of this user's password. A password reset email will be sent to this user's email.

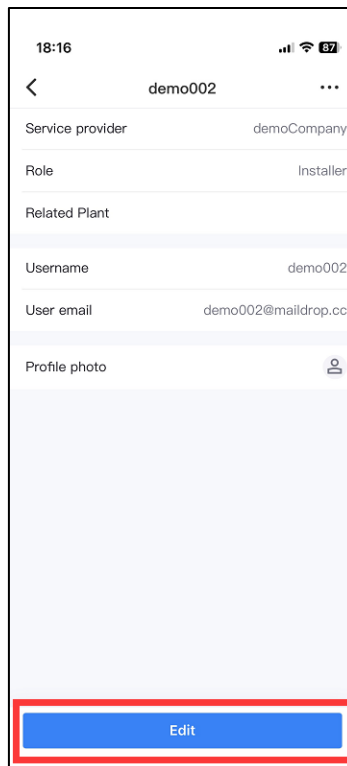


3.3.2.7 User Account Editing

1. Choose a user account that you wish to edit and press on it.



2. You will be directed to the user information page, press the **[Edit]** button at the bottom.



3. You could edit the company and the plant for the user.

The screenshot shows a mobile application interface for editing a user. At the top, the time is 18:17 and the battery level is 87%. The title is 'Edit user'. The form contains the following fields: 'Service provider *' with the value 'demoCompany', 'Role *' with the value 'Installer', 'Related Plant' with the value 'Select', 'Username *' with the value 'demo002', and 'User email *' with the value 'demo002@maildrop.cc'. There is a 'Profile photo' section with a placeholder icon. At the bottom, there is a checkbox labeled 'I have obtained the owner's authorization.' which is currently unchecked. Below the checkbox are two buttons: 'Cancel' and 'Complete'.

4. Tick the box after you have obtained the owner's authorization and press **[Complete]** to save the changes.

This screenshot shows the same 'Edit user' form as above, but with the checkbox 'I have obtained the owner's authorization.' now checked. The 'Complete' button is also highlighted. The time is now 18:26 and the battery level is 86%. All other form fields remain the same.

3.4 Residential Plant & Device Management

3.4.1 Device Onboarding & Residential Plant Setting Up

3.4.1.1 Setting Up on Commissioning App

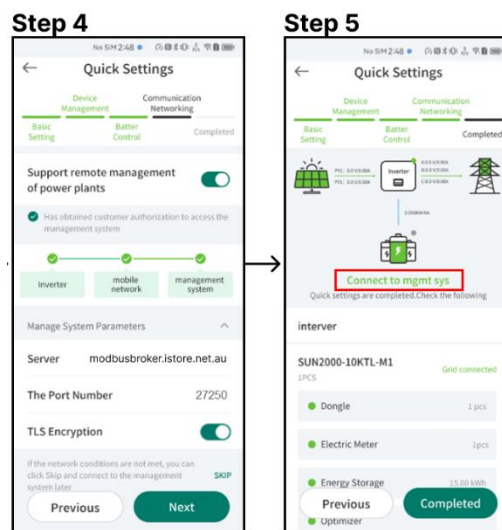
To set up residential site and devices, user needs to use the mobile application **Commissioning App “HiSolar”** to connect the device to the Univers EMS.

Set up the device by following the steps below:

Step 4: The server is modbusbroker.istore.net.au, you may approach system administrator if it is not available; Port Number is **27250**.

Note: If connection fail, please try Port Number is 27251, and disable “TLS Encryption”

Step 5: The set up on Commissioning App is only completed the page is displayed with the **Connect to mgmt sys.**

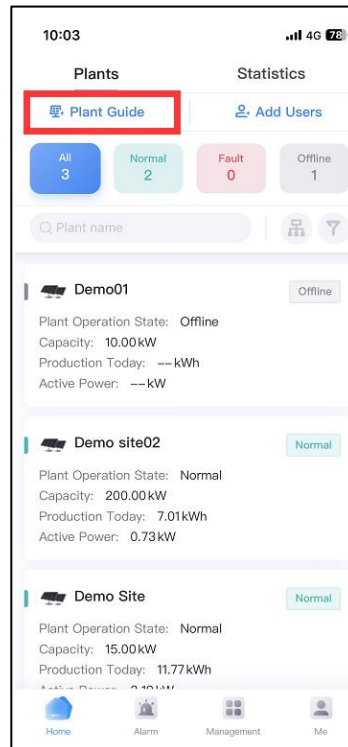


3.4.1.2 Setting Up on Univers EMS

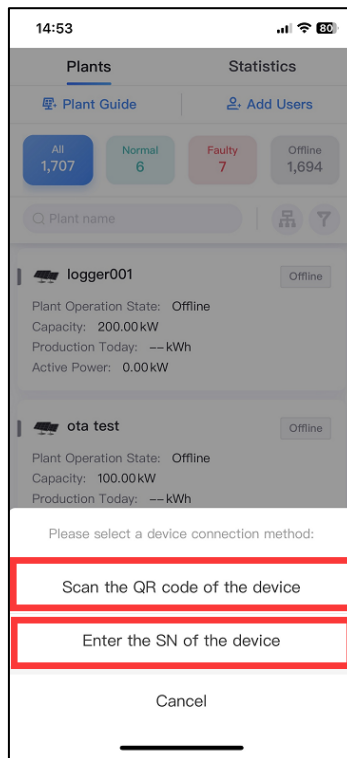
Pre-requisite: You need disconnect from device Wi-Fi first, make sure your phone is connected to a public network, and then enter the Univers app.

After the setup is completed and successful on Commissioning App, you will have to set up the residential site and connect device on the Univers EMS Mobile Application.

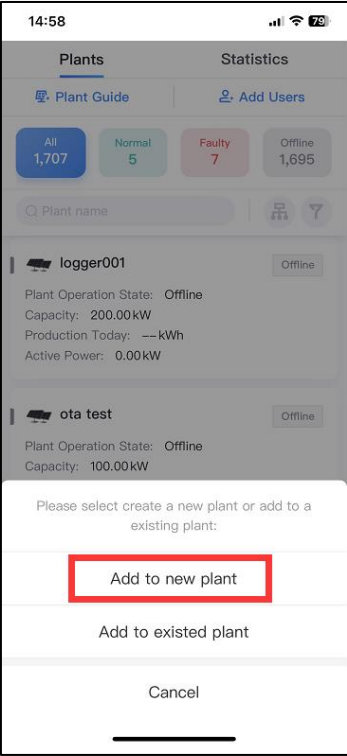
1. Go to **[Home]** page and press the **[Plant Guide]** button.



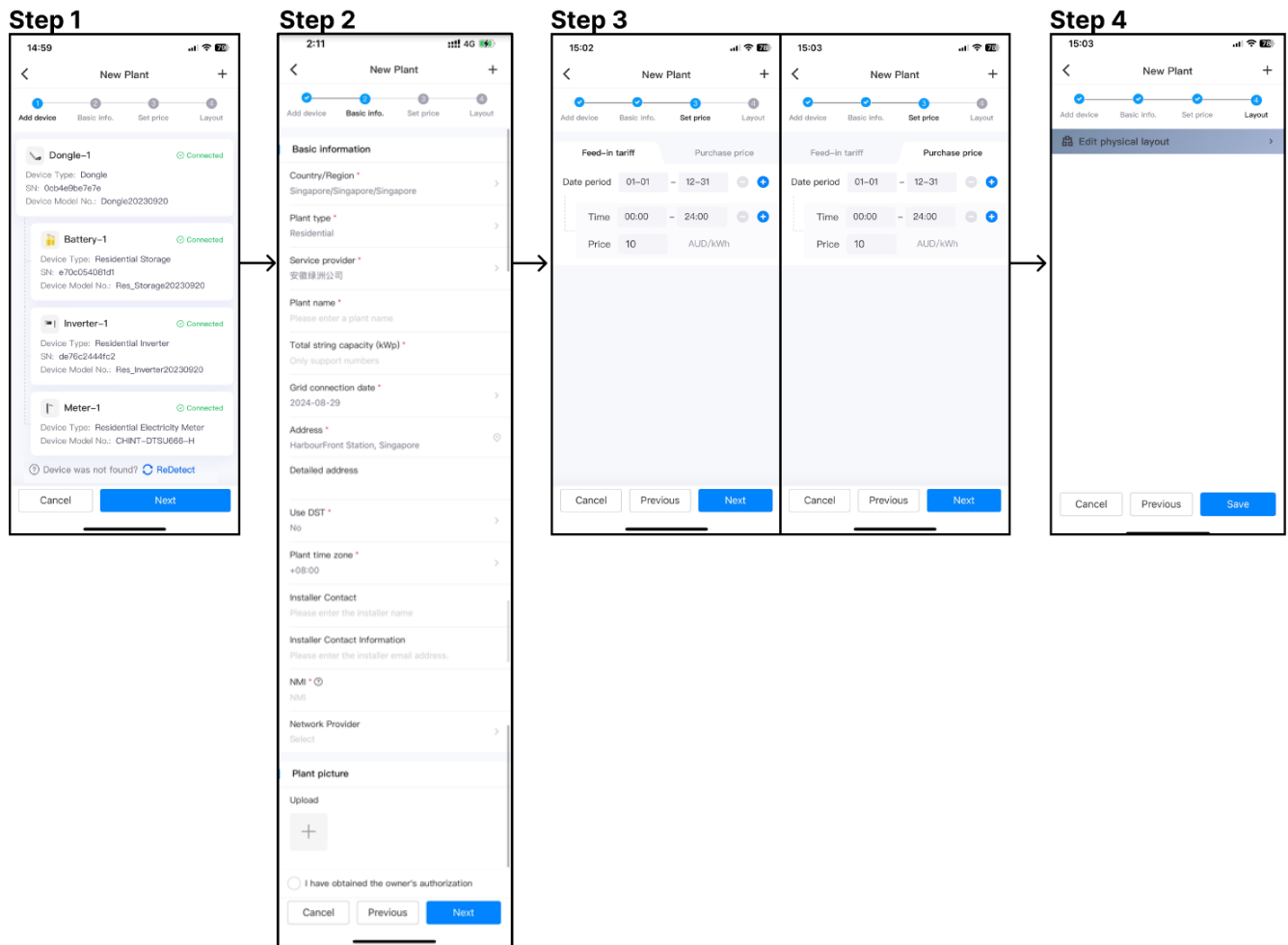
2. Connect the device through pressing **[Scan the QR code of the device]** or pressing **[Enter the SN number of the device]**.
 - a. For the Connectivity Scenario with Dongle, you could scan the QR or enter SN of Dongle device, or scan the QR or enter SN of Inverter device.
 - b. For the Connectivity Scenario without Dongle, you could scan the QR or enter SN of Inverter device.



- 3. After you have scanned the QR code or entered the SN of the device, press **[Add to new plant]** to the plant setup one-stop process.



4. You will be directed New Plant page to add in the devices to the new plant. Here are the steps:



Step 1: Add device.

1. Devices under a group of networking will be automatically connected, this process probably take a while.
2. Check the devices you have added in. When status of all devices is “Connected”, this step is finished.
3. If not all devices are displayed on the page, you could press **[ReDetect]** to refresh the device list. A pop-up window will appear, showing that the system is redetecting the device. You could press [OK] or wait on the page as the process could take a while. Then the newly detected device list will appear.
4. Press **[Next]**.

Step 2: Basic info.

1. Fill in the basic information of the new plant:
 - **Country/Region:** If you allow App access your location, App will automatically recognize corresponding Country/Region, Province and City

and then you also could change manually. If you do not allow, you need select the respective country, province, and city. Please ensure Country/Region, Province and City are filled in.

- **Plant type:** select the corresponding plant type, default is Residential.
- **Service provider:** select a company that this plant belongs to and to add this new plant.
- **Plant name:** enter a plant name.
- **Total string capacity (kWp):** enter the total string capacity of the plant.
- **Grid connection date:** select a grid connection date, default date is today.
- **Address:** enter the address of this plant.
- **Use DST:** if this site's region in using Daylight Saving Time(DST), select "Yes", otherwise it should be "No".
- **Plant time zone:** App could automatically recognize time zone according to **Country/Region** and you also could manually select a time zone for the this site.
- **Installer Contact (optional):** enter the installer name.
- **Installer Contact Information (optional):** enter the installer contact information.
- **NMI:** enter the NMI*.
*NMI is an eleven-character identifier assigned by Local Network Service Providers.
- **Network Provider (optional):** select the network provider, for Australia, you can find the network provider from the area group.
- **Plant picture(optional):** Upload a plant picture by pressing the + button.

2. Press **[Next]**.

Step 3: Set price.

1. Feed-in tariff: adjust the Date period and time if necessary and fill in the corresponding price.
2. Purchase price: adjust the Date period and time if necessary and fill in the corresponding price.
3. Press **[Next]**.

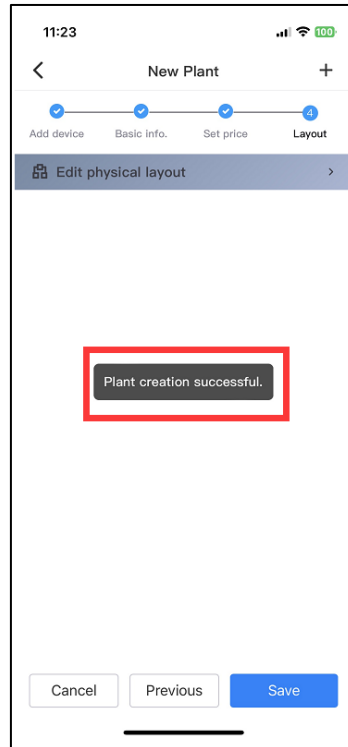
Note:

- There should be no overlap between the date segments, and it should cover the whole year from January 1st to December 31st. For each date segment, all time segments cannot overlap and must cover 00:00 to 24:00 of a day.
- This step could be skipped, and it support to configure in plant detailed page later, but if Electricity Price not been configured, Revenue will not be calculated.

Step 4: Layout.

1. If the plant is not equipped with an optimizer, you can press **[Submit]** to create the plant without setting the Layout.

After completing the four steps above, a message is displayed indicating that the plant is created successfully.



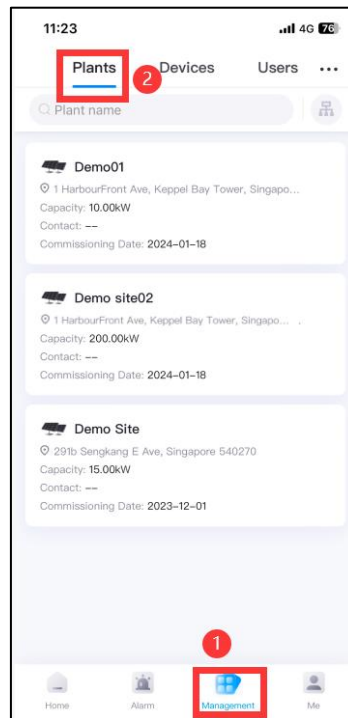
5. You will have this plant permission and conduct Management and Monitoring.

3.4.2 Power Plant Management

Residential Plant Management page provides a list of connected plant under the user's authority. The user can create, edit, and delete plant.

Each plant card on the Plant Management page provides information such as name, address, capacity, contact, and commissioning Date.

To go to page, press **[Management]** and switch to the **[Plants]** tab.



3.4.2.1 Device Adding

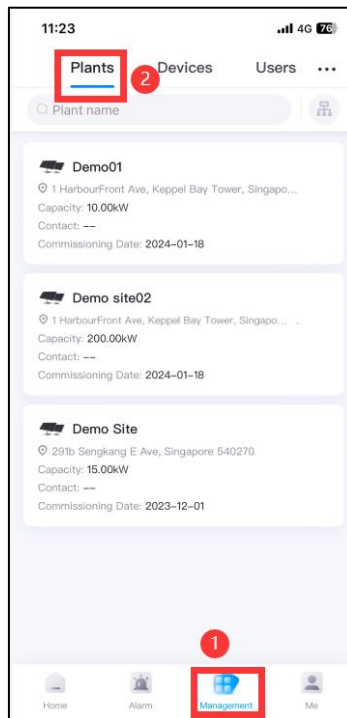
Make sure you have connected the device through the Commissioning App. Please refer to the section [Set up on Commissioning App](#) for more information.

If you want to add the devices to a **new plant**, follow the instructions described in the section [Set up on Univers EMS](#).

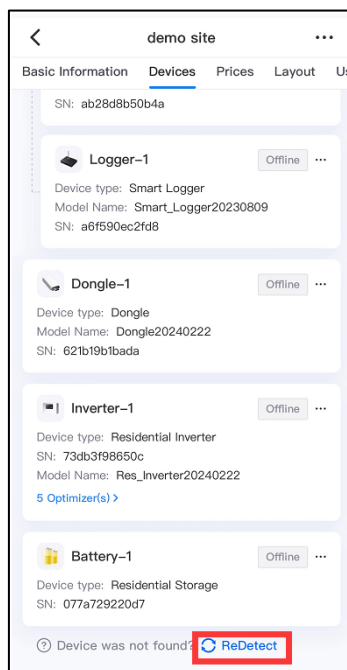
If you want to add the devices to **an existing plant**, follow the either of the two methods described below:

Method 1:

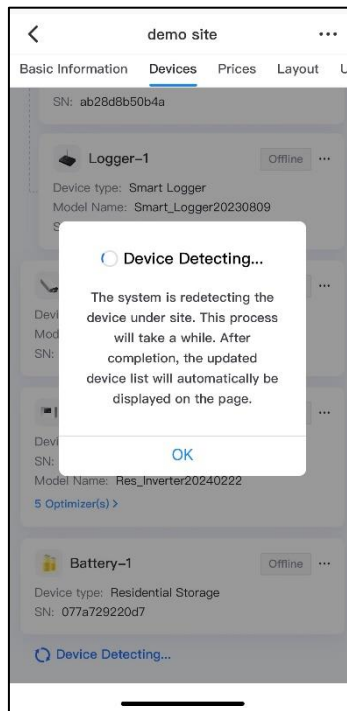
1. Go to **[Plant Management]** page and press the plant that you want to add device.



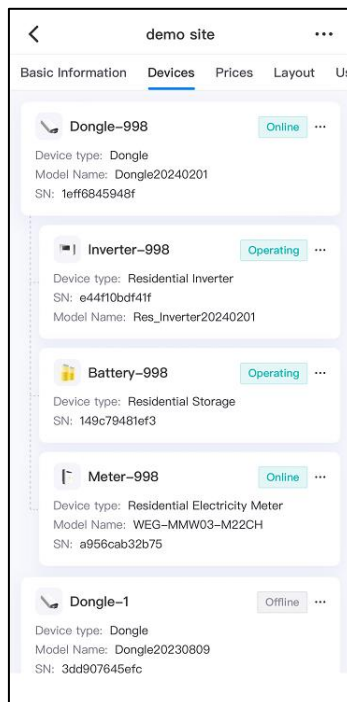
2. Press the **[Device]** tab.
3. Press **[ReDetect]** button to add the new device to the plant.



4. A pop-up window will appear and showing that the system is detecting the device. You can press **[OK]** to close the pop-up window. Or you could wait on this page.

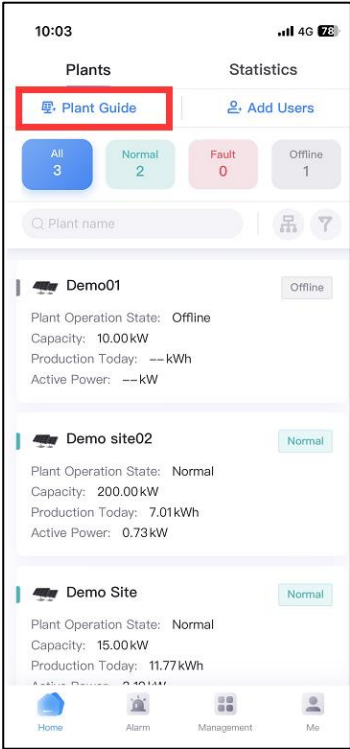


5. Once the new device is detected, it will appear in the device list.

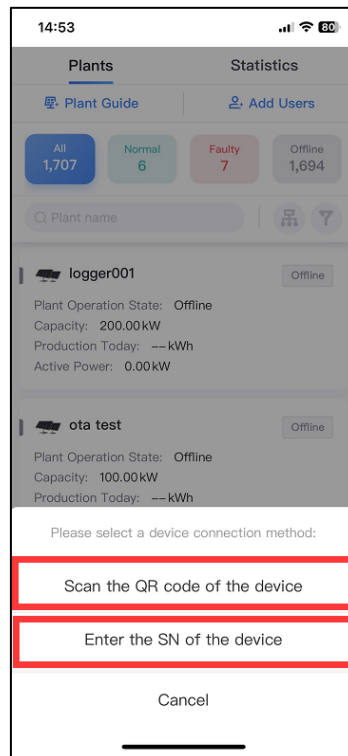


Method 2:

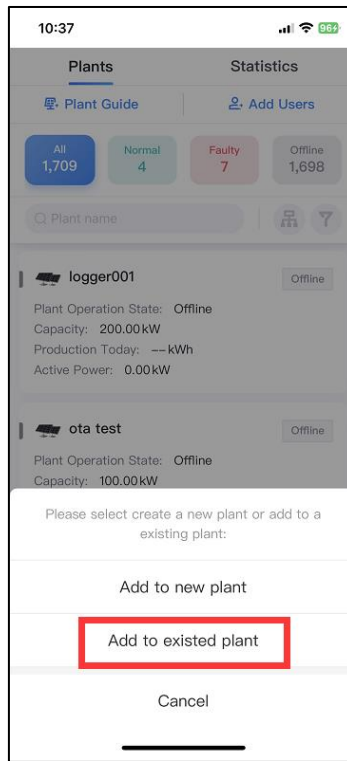
1. Go to [Home] page and press the [Plant Guide] button.



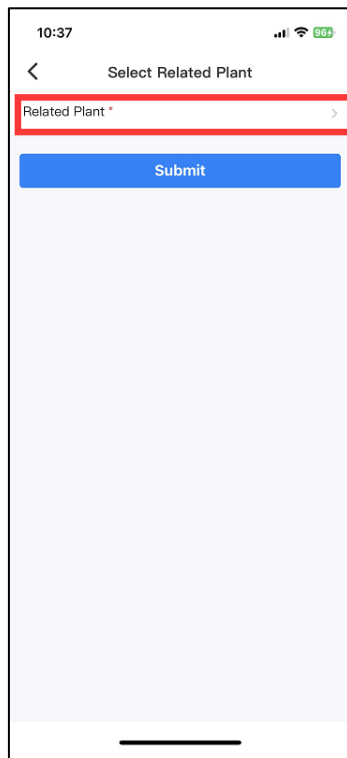
2. Connect the device through pressing **[Scan the QR code of the device]** or pressing **[Enter the SN number of the device]**.
 - a. **Please Note:** scan the QR code or enter SN of parent device, such as, add a meter under a existed site, please operate as following:
 - i. For the Connectivity Scenario with Dongle, you could scan the QR or enter SN of Dongle device, or scan the QR or enter SN of Inverter device.
 - ii. For the Connectivity Scenario without Dongle, you could scan the QR or enter SN of Inverter device.



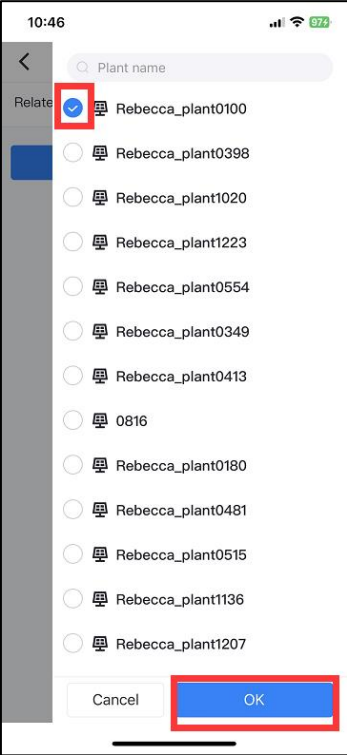
3. After you have scanned the QR code or entered the SN of the parent device, new device will be auto detected, press **[Add to existed plant]** to add the device.



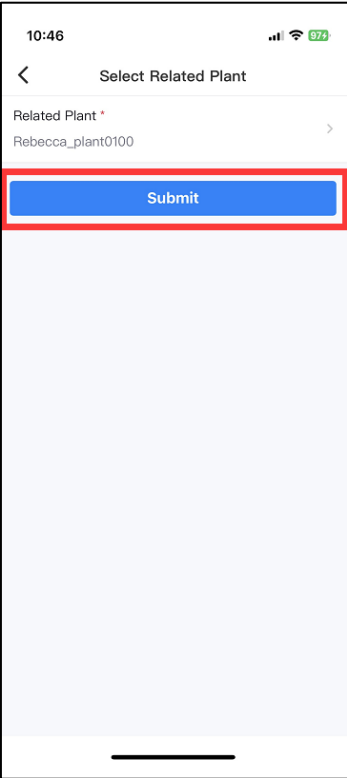
4. You will be directed to the Related Plant page where you need to choose a desired plant to add this device by pressing the **[Related Plant]**.



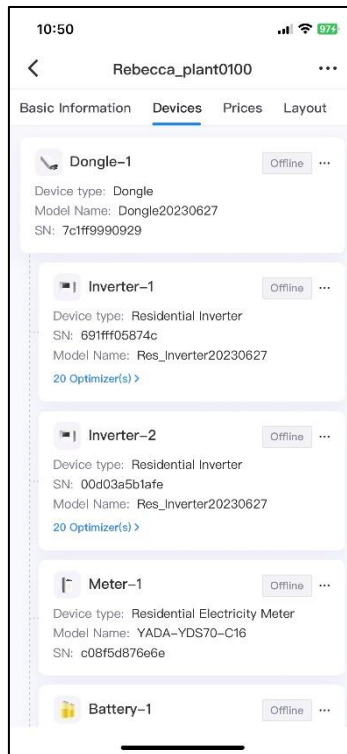
5. Select a plant and press **[OK]**.



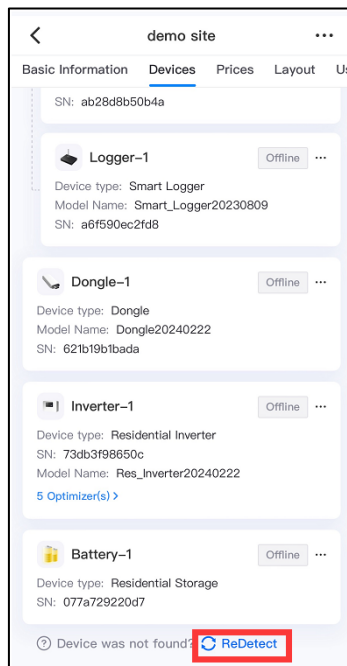
6. Press **[Submit]** to complete adding the device.



7. You will be directed to the Devices tab under the plant you have chosen, where you can see that the new device have been added to the desired plant.

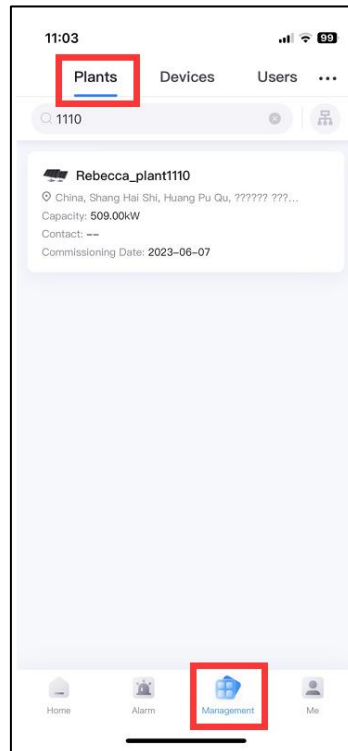


8. If not all devices are displayed, press **[ReDetect]** button to refresh the device list.

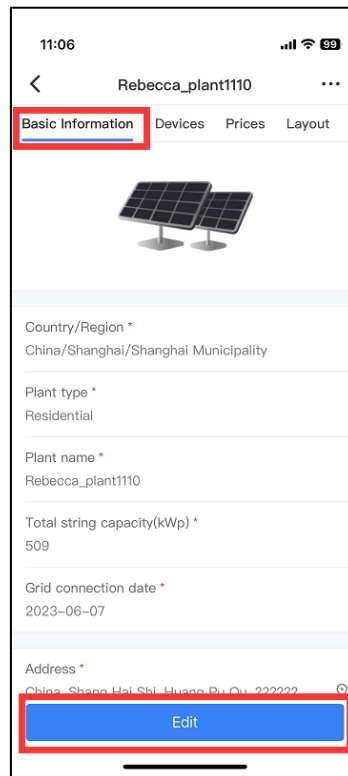


3.4.2.2 Plant Editing

1. Choose a desired plant that you want to edit from the Plants tab on the Management page.



2. Press on the plant and you will be directed to the details page of the chosen plant.
3. Press on the [Edit] button under Basic Information tab if you want to edit the basic information of the plant.



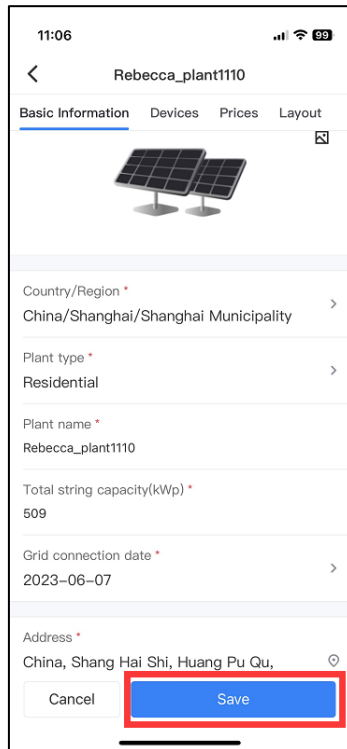
4. Edit the relevant information:

- **Country/Region:** If you allow App access your location, App will automatically recognize corresponding Country/Region, Province, and City and then you also could change manually. If you do not allow, you need select the respective country, province, and city.
- **Plant type:** select the corresponding plant type.
- **Service provider:** select a company that this plant belongs to and to add this new plant.
- **Plant name:** enter a plant name.
- **Total string capacity (kWp):** enter the total string capacity of the plant.
- **Grid connection date:** select a grid connection date, default date is today.
- **Address:** enter the address of this plant.
- **Use DST:** select whether you want to use DST.
- **Plant time zone:** App could automatically recognize time zone according to **Country/Region** and you also could manually select a time zone for the plant.
- **Installer Contact (optional):** enter the installer name.
- **Installer Contact Information (optional):** enter the installer contact information.
- **NMI:** enter the NMI*.

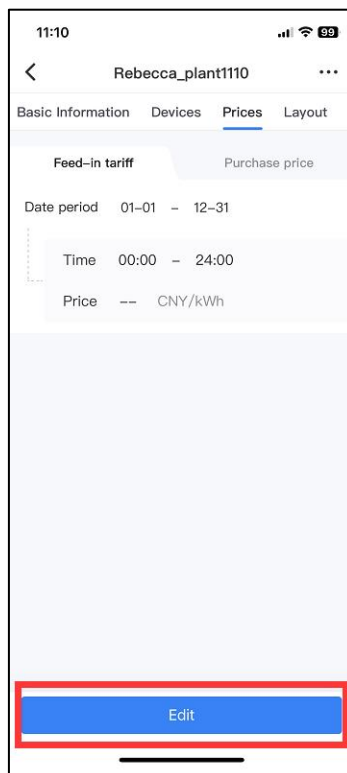
*NMI is an eleven-character identifier assigned by Local Network Service Providers.

- **Network Provider (optional):** select the network provider, for Australia, you can find the network provider from the area group.
- **Plant picture(optional):** Upload a plant picture by pressing the + button.

5. Press **[Save]**.



6. You can edit the Prices as well by pressing **[Edit]** button under the Prices tab.

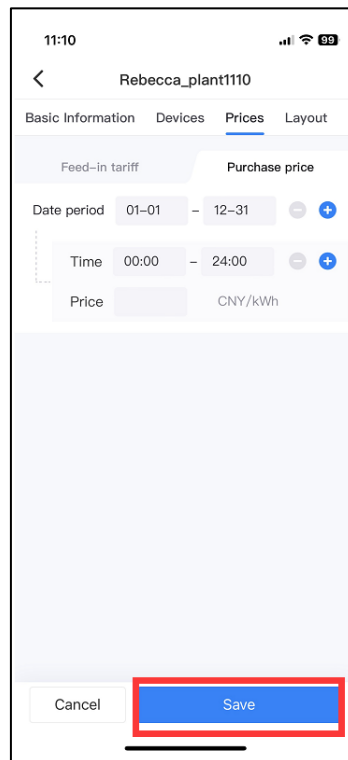


7. Edit relevant Feed-in tariff or Purchase price:

- Feed-in tariff: adjust the Date period and time if necessary and fill in the corresponding price.
- Purchase price: adjust the Date period and time if necessary and fill in the corresponding price.

Note: Feed in tariff and Purchase price will check the two electricity prices at the same time, and there should be no overlap. between the date segments, and it should cover the whole year from January 1st to December 31st. For each date segment, all time segments cannot overlap and must cover 00:00 to 24:00 of a day.

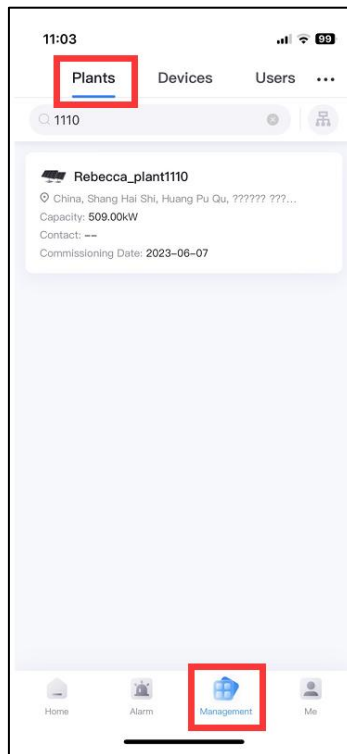
8. Press **[Save]**.



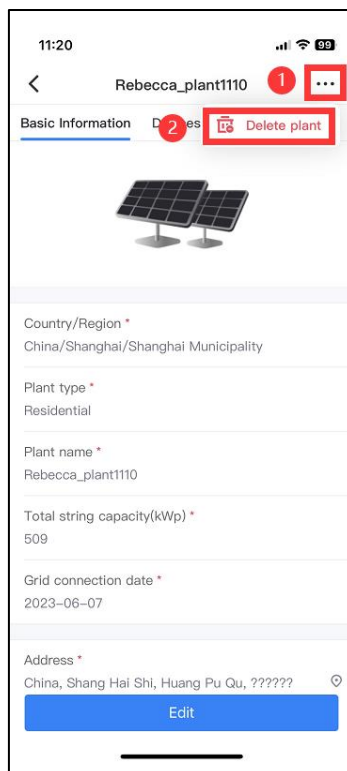
3.4.2.3 Plant Deletion

Pre-requisite: You only can delete a plant if there are no devices under this plant.

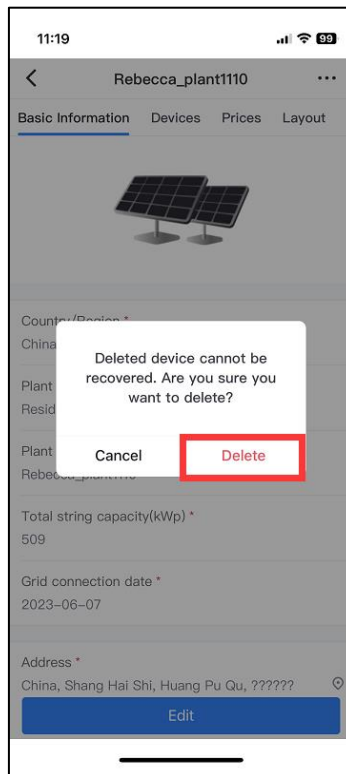
1. Choose a desired plant that you want to edit from the Plants tab on the Management page.



2. Press on the plant and you will be directed to the details page of the chosen plant.
3. Press on the [...] button on the top right-hand corner and press **[Delete plant]**.



4. Press **[Delete]** on the pop-up window to confirm the deletion.

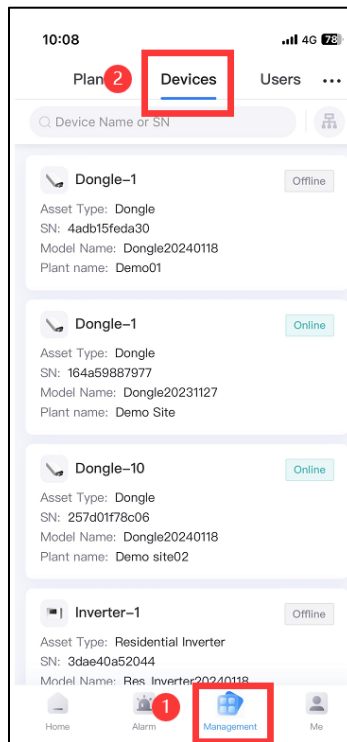


3.4.3 Device Management

Device Management page provides a list of connected devices under the user's permission. The user can edit, remote control, and parameter settings for the devices.

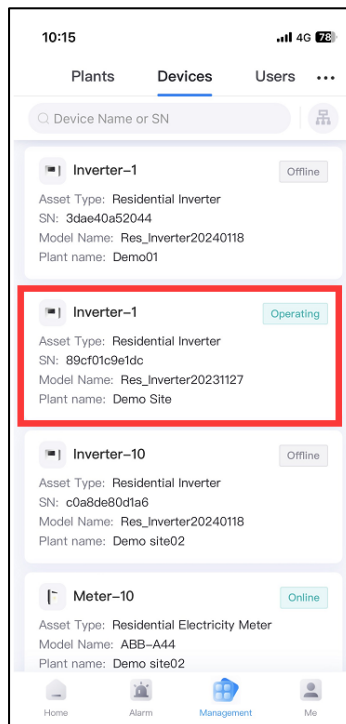
Each device card on the Device Management page provides information such as name, asset type, SN, model name, plant name, and the status of the device.

To go to page, press **[Management]** and switch to the **[Devices]** tab.

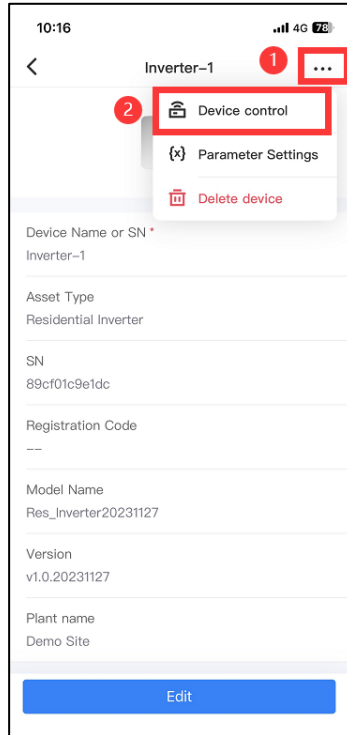


3.4.3.1 Device Remote Controlling

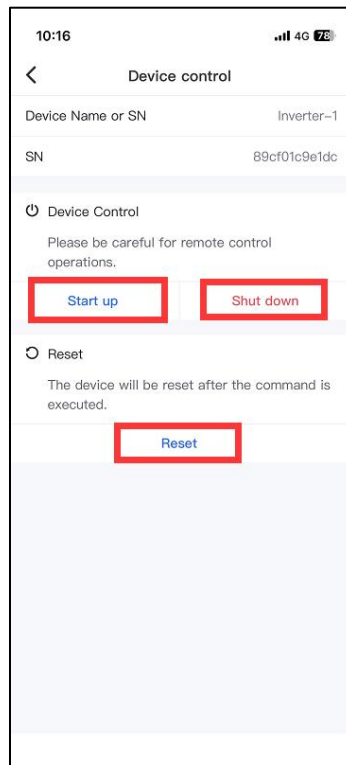
1. Go to the **[Management]** page and switch to the **[Devices]** tab.
2. Choose a device that you wish to control remotely. You could perform a fuzzy search by device name and or a exact search by SN to look for the device.



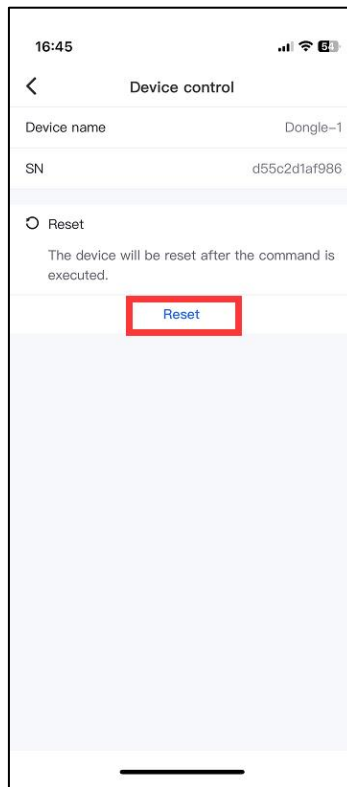
3. You will be directed to the device information page, press the [...] button on the top right-hand corner.
4. Press [**Device control**] button to control the device remotely.



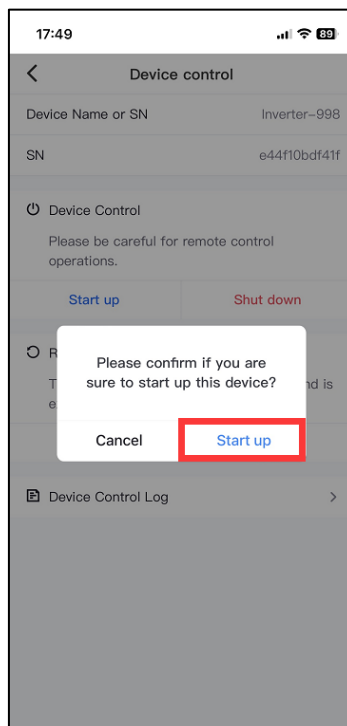
5. You will be directed to the Device control page where you can select a mode for the desired device.



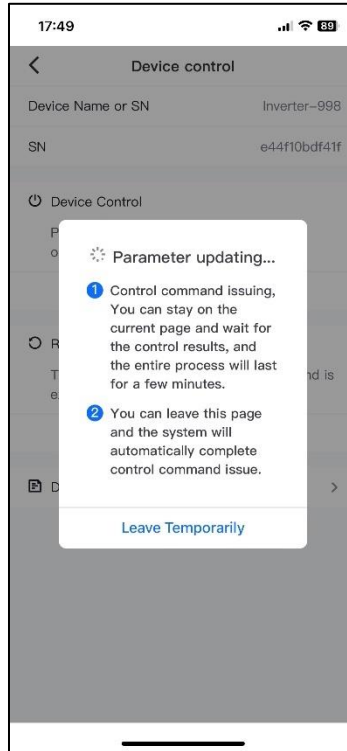
6. For **Inverter**, there are three control modes to the device:
 - a. **[Start up]**: Control the device to send the startup command.
 - b. **[Shut down]**: Control the device to send the shutdown command.
 - c. **[Reset]**: Control the device to send the reset command.



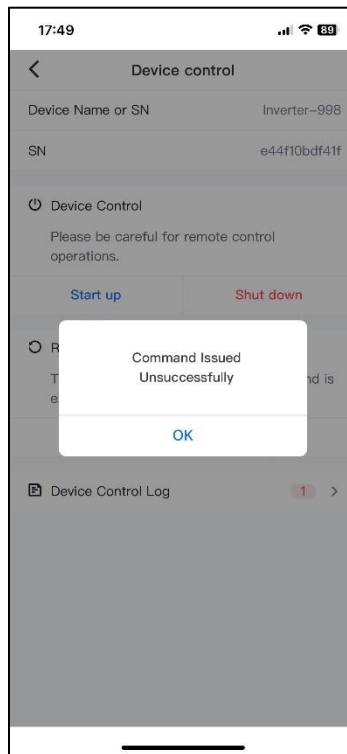
6. For **Dongle**, there is only one control mode to the device:
 - a. **[Reset]**: Control the device to send the reset command.
7. Choose a mode by pressing the desired mode button.
8. Double confirm the action.



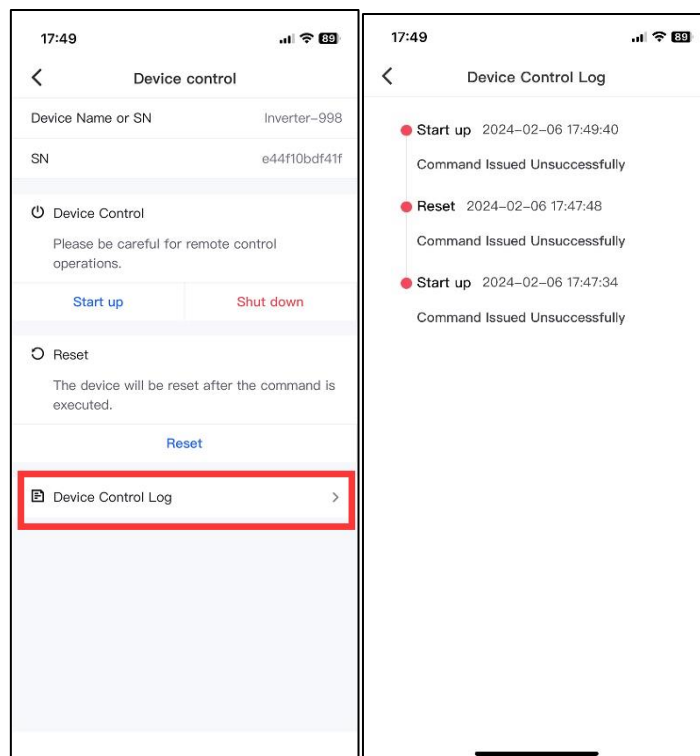
9. When the control command is sent to the device, the user can choose to:
 - a. wait on the current page or
 - b. leave temporarily and come back to the page later



10. If the user chooses to wait on the current page, the update might take a few minutes. After the control is sent, the pop-up window will show that the message: **Command Issued Successfully/Command Issued Unsuccessfully** as shown below.

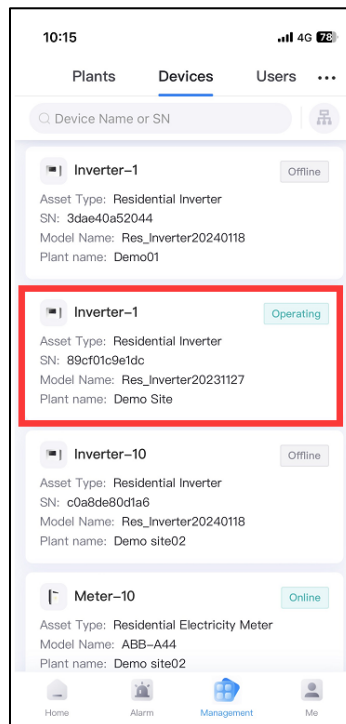


11. If the user chooses to leave temporarily, the user can come back to the Device Control page later to check the Device Control Log for the status.

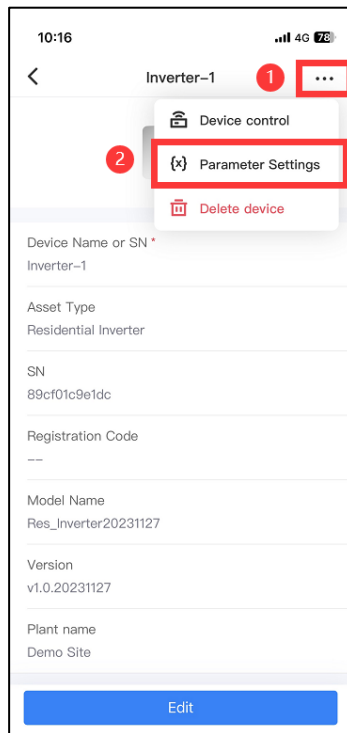


3.4.3.2 Device Parameter Setting

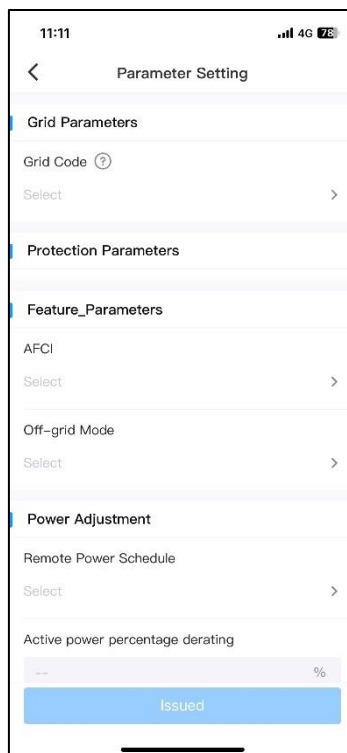
1. Go to the **[Management]** page and switch to the **[Devices]** tab.
2. Choose a device that you need to set the parameter.
For **dongle**, you can modify the operation mode and working mode.
For **inverter**, you can modify the power parameters, operation mode, characteristic parameters, and other parameter settings.
For **battery**, you can modify the charge and discharge mode, charge and discharge power and other parameter settings.
For **meter**, you can modify the meter direction.



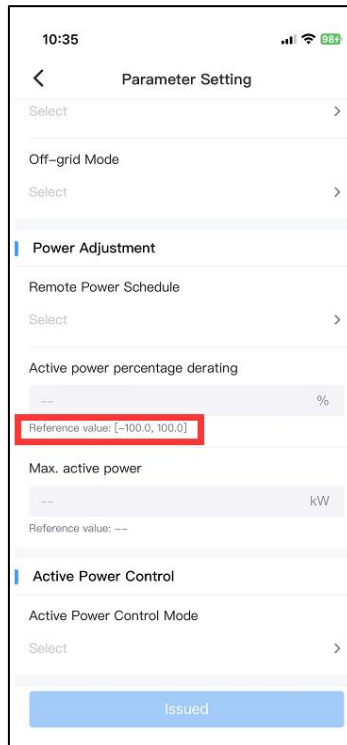
3. You will be directed to the device information page, press the **[...]** button on the top right-hand corner and then press **[Parameter setting]** button.



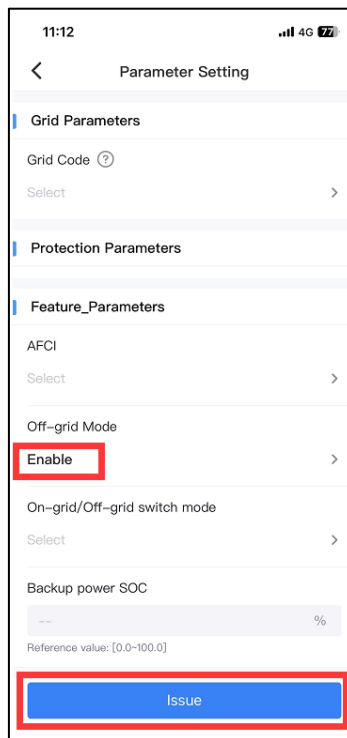
4. You will be directed to the Parameter Setting page where you can update the parameters of the selected device.



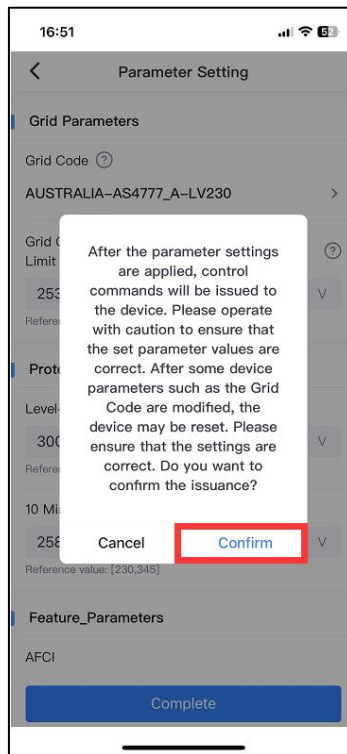
5. Please set the parameter value according to the threshold range and prompt description of the parameter as shown in the example below.



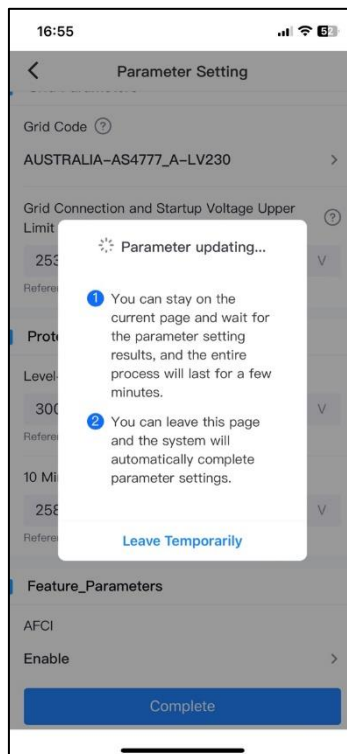
6. Update the preferred parameters and press **[Issue]**.



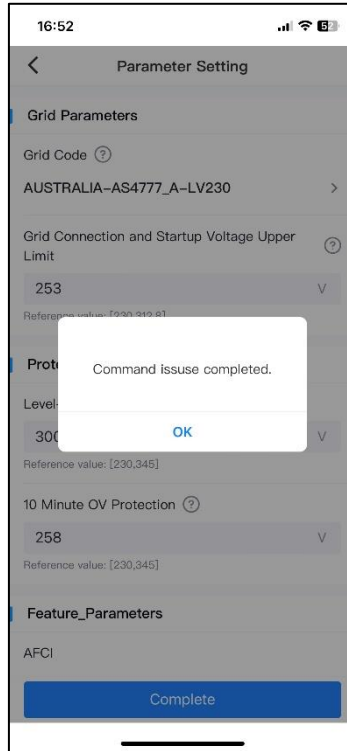
7. Double confirm the update by pressing the Confirm button.



8. When the parameter is updating, the user can choose to:
 - a. wait on the current page or
 - b. leave temporarily and come back later to check the parameter.



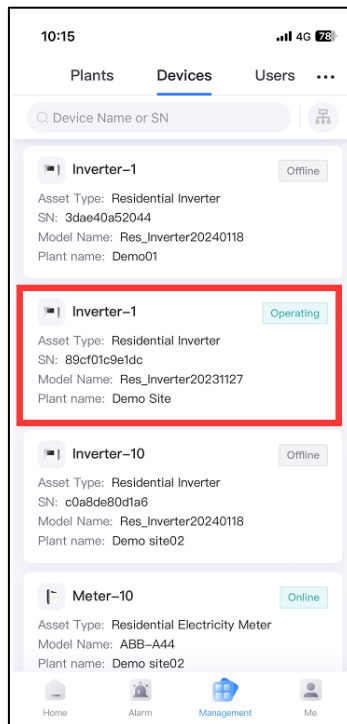
9. If the user chooses to wait on the current page, the update will take a few minutes. After the parameter is updated, the pop-up window will show that the message: **Command issue completed** as shown below.



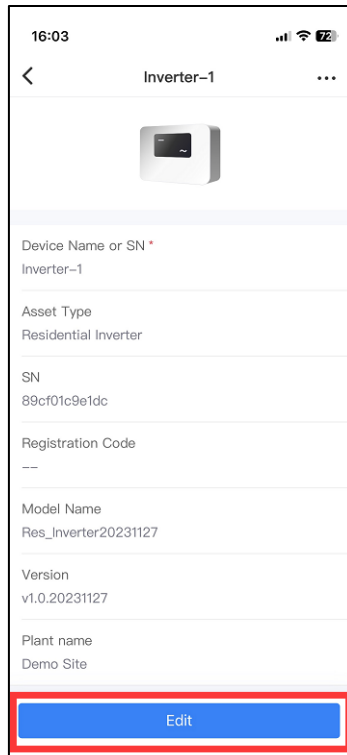
10. If the user chooses to leave temporarily, the user can come back to the parameter setting page later after 5mins, if parameter was set successfully, the parameter value will be updated.

3.4.3.3 Device Editing

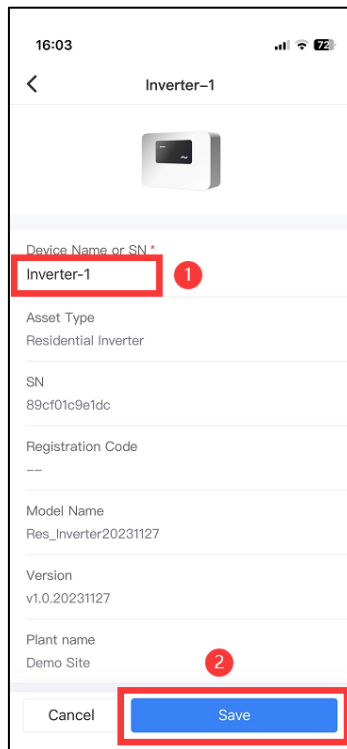
1. Go to the **[Management]** page and switch to the **[Devices]** tab.
2. Choose a device that you wish to delete.



3. You will be directed to the device information page, press the **[Edit]** button on the bottom of the page.



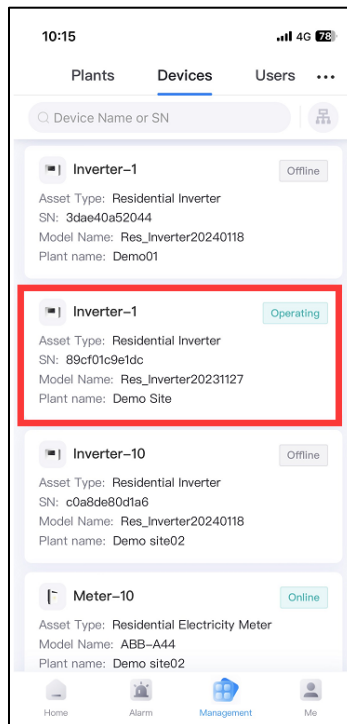
4. Change the name of the device and press **[Save]**.



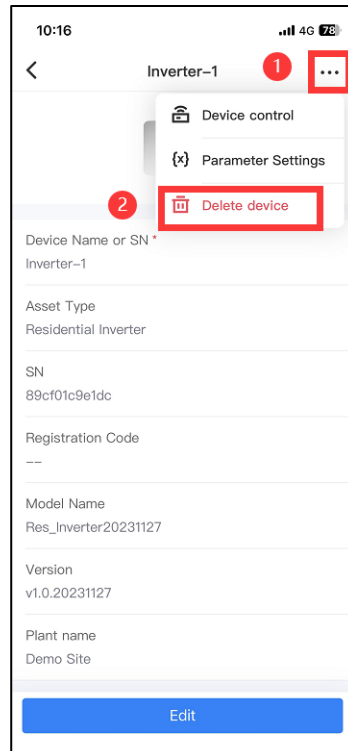
5. The edited information will be saved.

3.4.3.4 Device Deletion

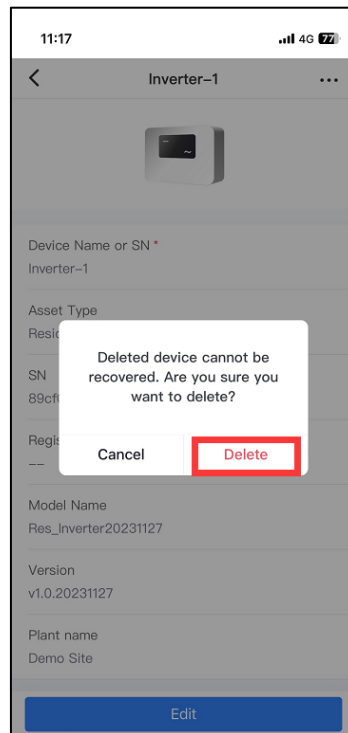
1. Go to the **[Management]** page and switch to the **[Devices]** tab.
2. Choose a device that you wish to delete.



3. You will be directed to the device information page, press the [...] button on the top right hand corner and then press **Delete device** button.



4. Press **Delete** on the pop-up window to confirm the deletion.



3.5 Residential Plant & Device Monitoring

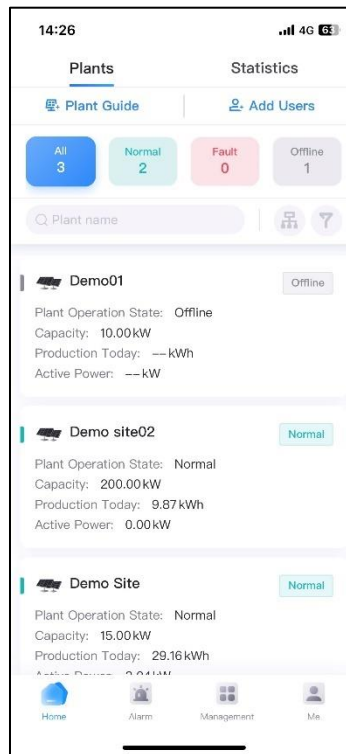
3.5.1 Plant Monitoring

Plant Monitoring module provides an overview of plant information under the user's authority. The user can view basic information, statistics, devices of the plants.

After the connection is completed, please wait for 5-10 minutes to see the real-time data displayed in Monitoring. The real-time data will be collected from the device to the cloud at the collection frequency of 5 minutes.

3.5.1.1 Single Plant Monitoring

1. On **[Home]** page under **[Plants]** tab, view the list of plants under the user's permission.



2. Enter the plant details page.
3. **[Overview]** tab: view the basic information of the plant and the display of the energy flow diagram.
 - 1) Display the photos of the plant, real-time operation status, the address of the plant, real-time weather data.
 - 2) Displays the core indicator data of daily production, daily revenue, daily, monthly, annual and life cycle production of the plant.
 - 3) Energy Flow Diagram:
 - i. show the real-time energy flow diagram of the plant.
 - ii. energy flow direction
 - iii. real-time operating power: PV production power, storage charge and discharge power, house load power, on-grid, and off-grid power.
 - iv. display the real-time status of the inverter, storage (if any), green colour represents Operating, yellow represents Standby, red represents Fault.
- You could dropdown to refresh page and displayed data.



4. **[Statistics] tab:** view the statistics data and chart display under the plant:
- 1) The Metrics of total daily consumption and self-consumption.
 - 2) Under energy management, you can view the Production and Consumption data under the day dimension, as well as the Site PV Active Power, Consumption Power, Self-consumption Power, Charge Power, Discharge Power and SOC in the graph display. For month, year and lifetime dimension, you will be able to view the Production and Consumption data, as well as the graph of Production, Consumption, Self-consumption, Charge and Discharge. You can move your two fingers to expand or shrink the size of the graph.

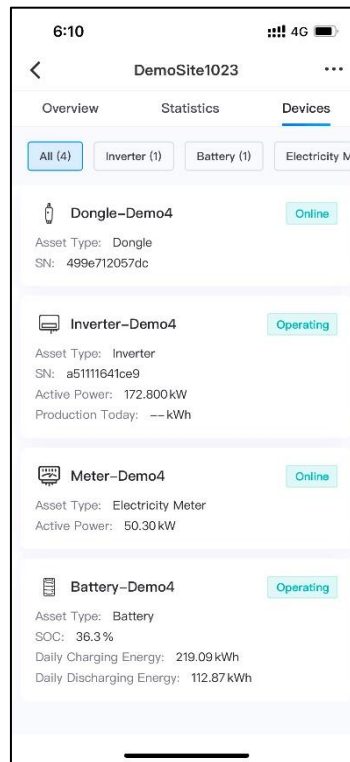
Graph Data	Description
Site PV Active Power	The amount of electrical power being actively generated by a photovoltaic (PV) system installed at the site.
Consumption Power	The amount of electrical power consumed by the site.

Self-consumption Power	The portion of the electricity generated by a renewable energy system, such as solar panels, that is consumed on-site rather than being exported to the grid.
Charge Power	The rate at which energy is supplied to a battery or energy storage system during the charging process.
Discharge Power	The rate at which energy is released or drawn from a battery or energy storage system during the discharging process.
SOC	"SOC" stands for State of Charge. The current level of charge stored within the battery, expressed as a percentage of the total capacity

- 3) Revenue of the plant is displayed in bar charts which can be viewed in the dimension of day, month, year or life period.
- 4) Environmental benefit metrics in lifetime: standard coal saved, CO2 Emissions Avoidance and Equivalent tree planted are displayed.



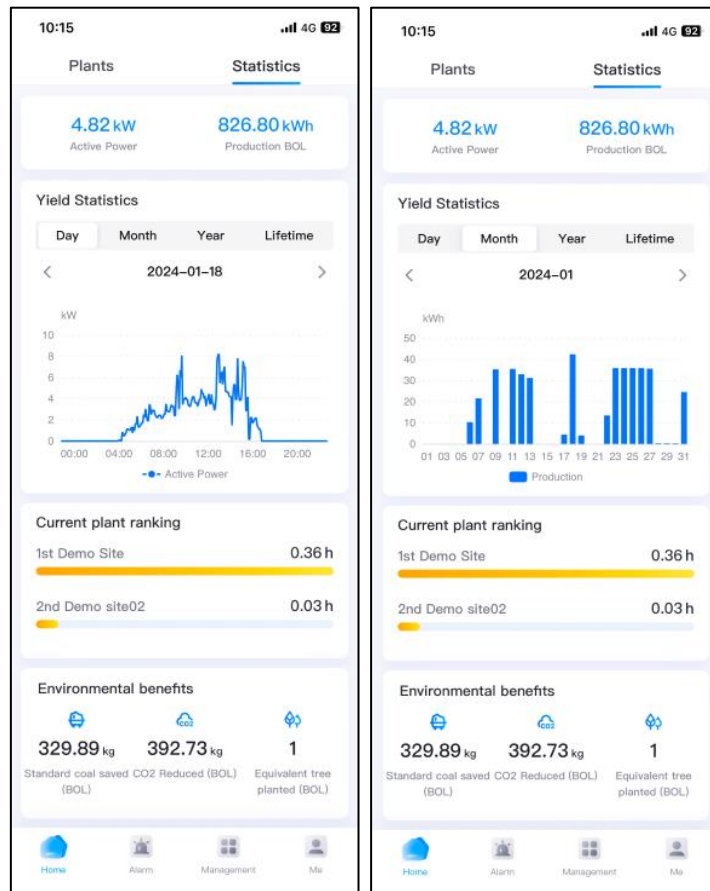
5. **[Device] tab:** view all the devices connected to the plant.
 - 1) Showing all the device cards with the name, SN, type and operating status.
 - 2) Clicking on the specific device card, It will the basic information, real-time information and historical information of the specific device



3.5.1.2 Cross Plant Monitoring

Cross Plant Monitoring display the statistical results of data from all authorized plants under the user.

1. On **[Home]** page under **[Statistics]** tab, view cross plant statistics data.
2. The total active power and production BOL data of all the plants under the user's authority is calculated. Yield statistics are graphically displayed according to the dimensions of day, month, year, and life cycle. Active power graph is displayed under the day dimension, while production graph is displayed under the month, year and lifetime dimension. Plants are ranked according to the utilization hours. And the total environmental benefits are displayed.



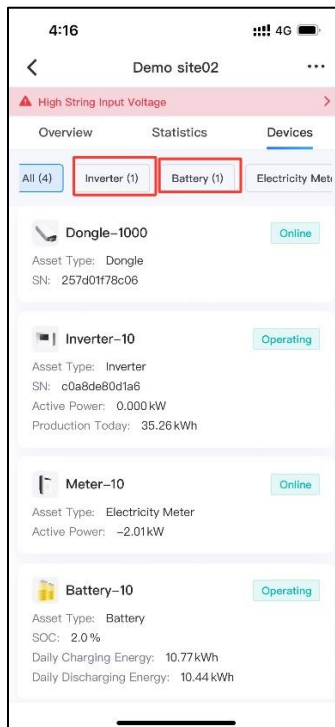
3.5.2 Device Monitoring

Device Monitoring module is designed for the user to monitor the devices under his/her authority. The user is able to view basic information, real-time information and history data of the selected device.

1. To visit the module, go to **[Home]** page **[Plants]** tab, choose and press on a plant to enter the plant details.
2. Switch to **[Devices]** tab to view the list of devices.

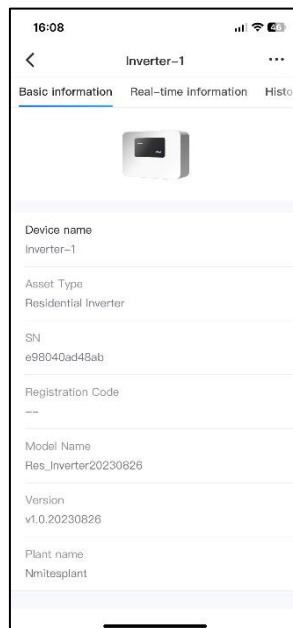
3.5.2.1 Device List

A list of devices under the selected plant is displayed. Device basic information is shown on each device card. You can also filter the devices according to the device type as shown below:

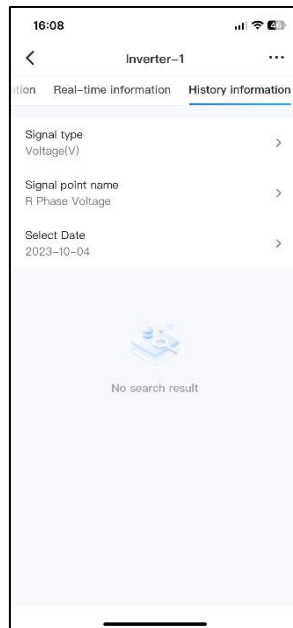


3.5.2.2 Device Details

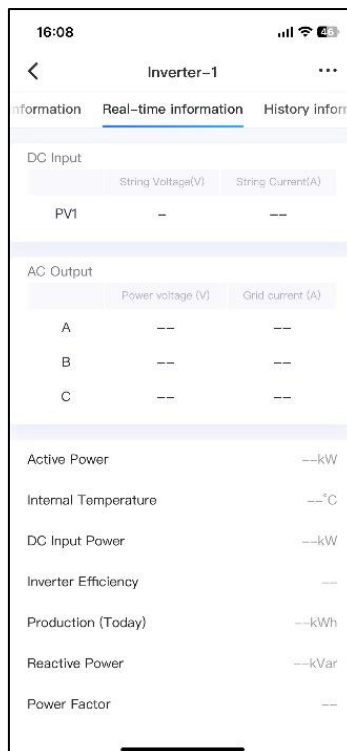
1. By pressing onto a device on the Device List, you will be directed to the Device Details page.
2. Basic Information Tab: displays the device name, asset type, SN, registration code, model name, version, and plant name.



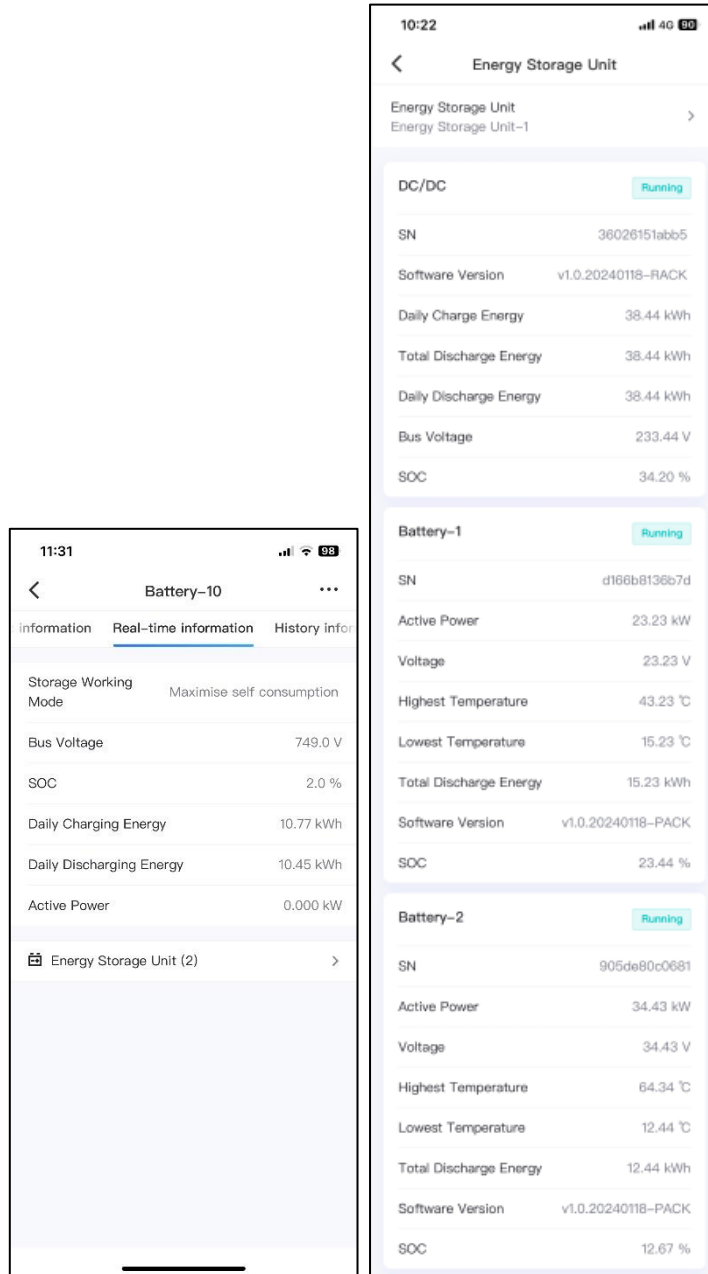
3. History Information tab: you can view the history information of the device by selecting the signal type, signal point name and the date.



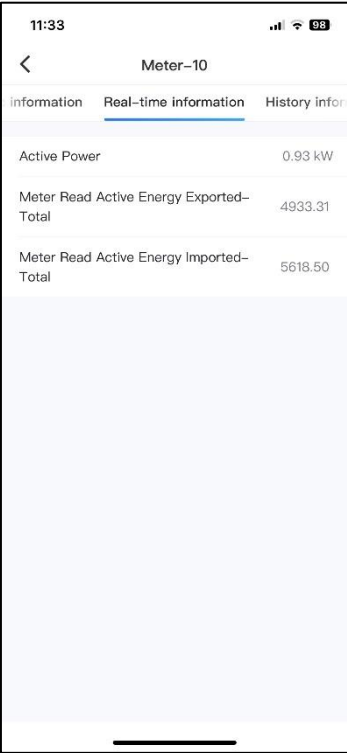
4. Real-time Data tab:
 - a) Inverter: real-time data such as DC input, AC output, active power, internal temperature, inverter efficiency, production (today) etc. are displayed



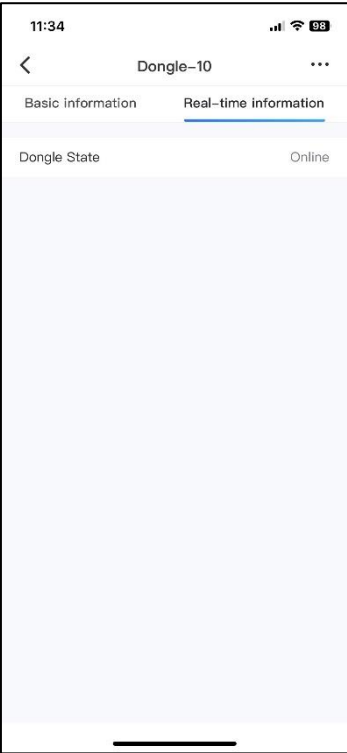
- b) Battery: real-time information such as working mode, bus voltage, SOC, daily charging/discharging energy, active power is displayed. You can press the **[Energy Storage Unit]** to view the real-time information of the storage unit and battery pack.



- c) Meter: real-time information such as active power, active energy exported/imported is displayed.



d) Dongle: real-time data of the dongle state is displayed.



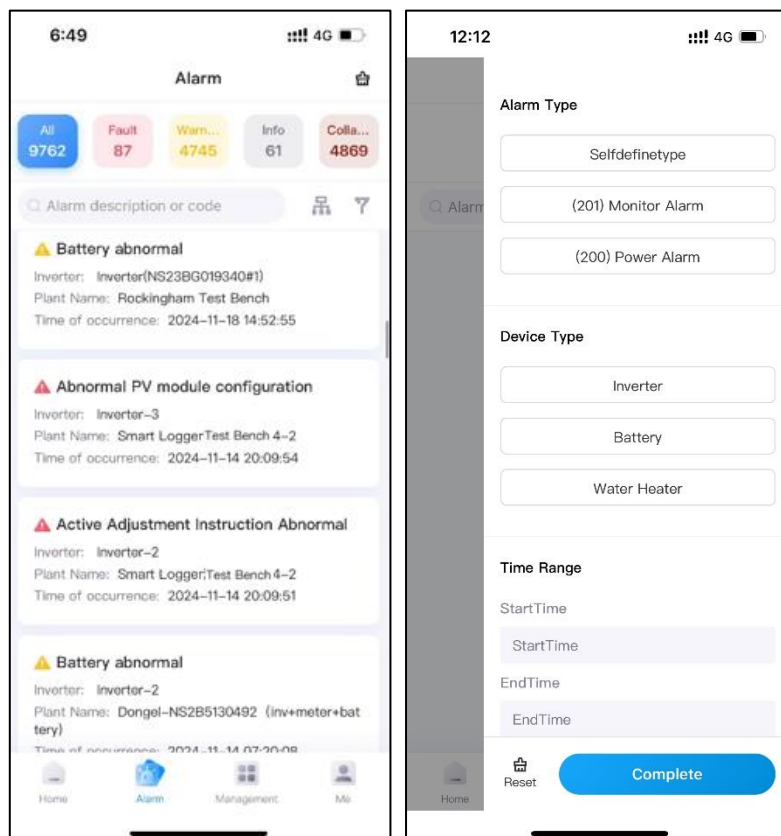
3.6 Alarm Management

3.6.1 Alarm List

On the **[Alarm]** tab, it displays all the active alarms. The fault information of all devices under the managed plant are summarized. The alarm is divided into four levels: Fault, Warning, Info and Collapse. The fault level is marked in red; the alarm severity is marked in yellow, the grey sign is used for info, and the brown sign is used for collapse.

On each alarm card, it will display the alarm, device name, plant name, alarm type and the time of occurrence of the alarm.

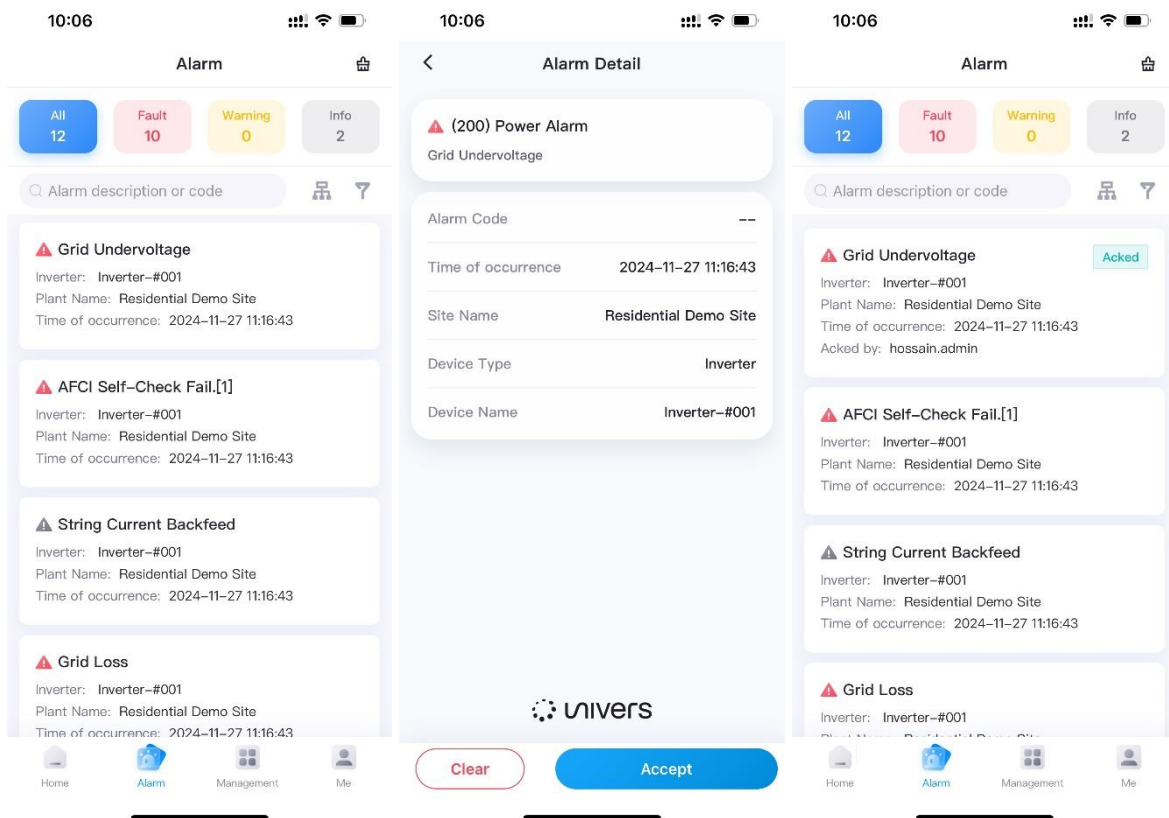
Users can search the alarm by the alarm description or code, and filter the alarm according to the alarm type, device type, time range and/or the status (Acked or not) of the alarm.



3.6.2 Alarm Detail

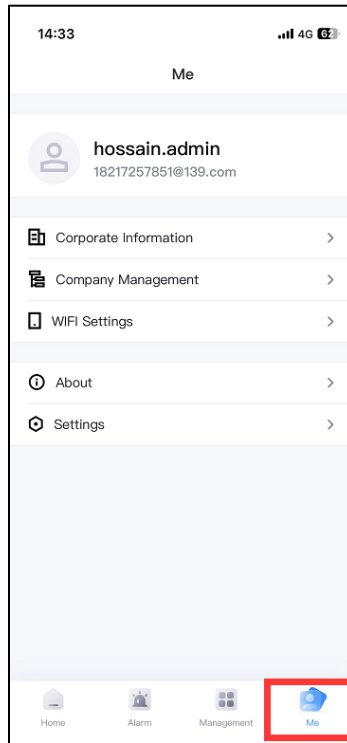
Users can click each alarm to see the alarm details. Alarm code, time of occurrence, site name, device type and device name will be displayed on the alarm detail page.

On Alarm detail page, users can accept the alarm by clicking “Accept”, then the alarm will be marked as “Acked” on the alarm list. Users also can clear the alarm by clicking “Clear”, then the alarm will be deleted from the alarm list.



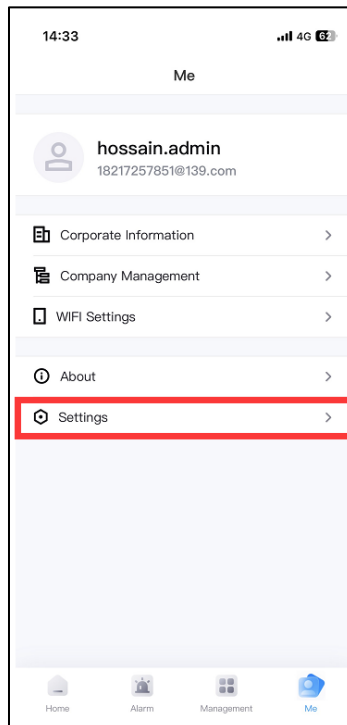
3.7 Account & System Management

Account & System module allows the user to configure system settings as well as account settings. They can be managed through the Me page as shown below:

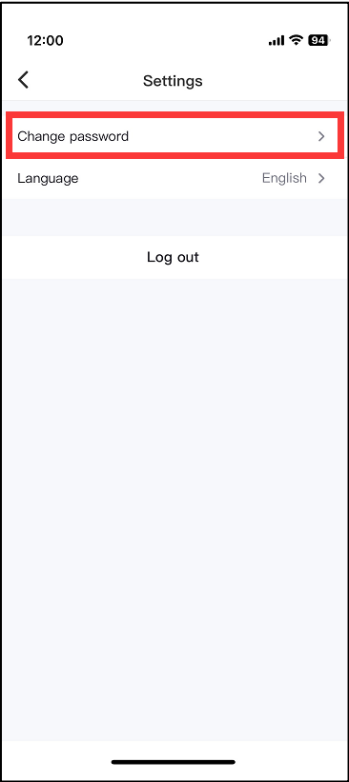


3.7.1 Password Changing

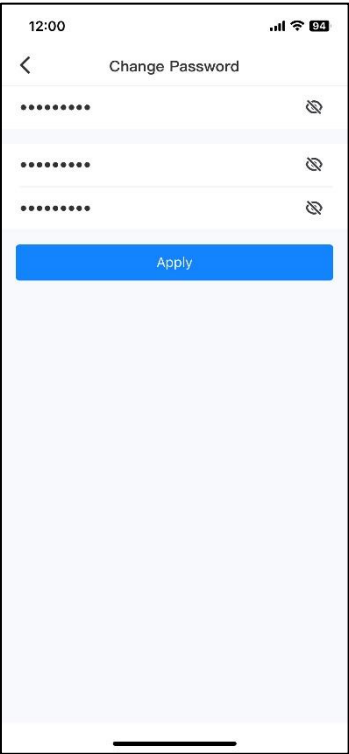
1. On **[Me]** page, press **[Settings]**.



2. Press **[Change Password]**.

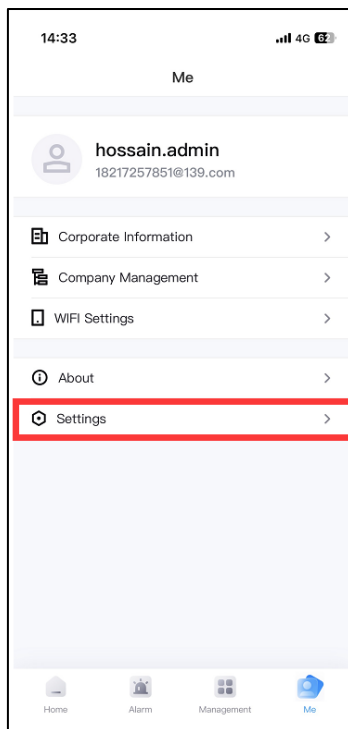


- 3. You will be directed to Change Password page.
- 4. Enter your old password.
- 5. Enter and confirm your new password.
- 6. Press **[Apply]** to change the password.

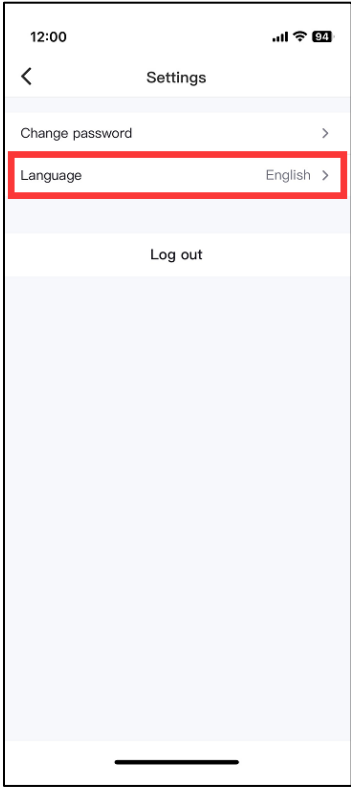


3.7.2 Language Switching

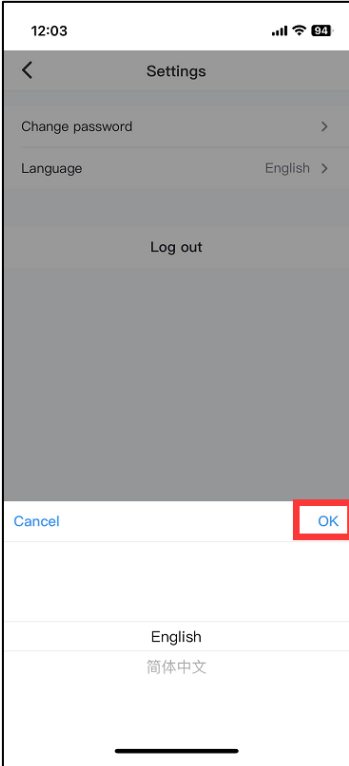
1. On Me page, press **[Settings]**.



2. Press **[Language]**.

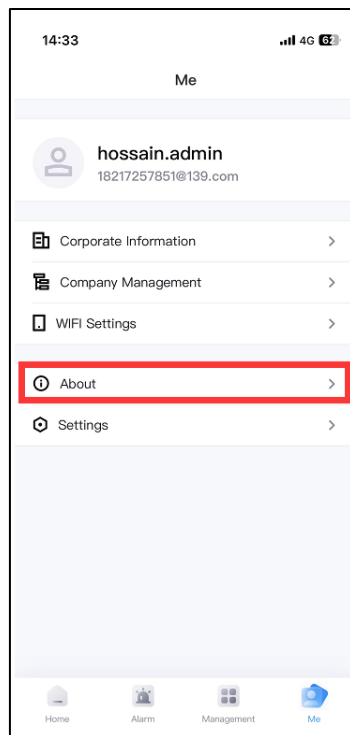


- 3. Swipe to choose a desired language. Univers EMS supports English and Chinese languages currently.
- 4. Press [OK] to confirm the switching of language.

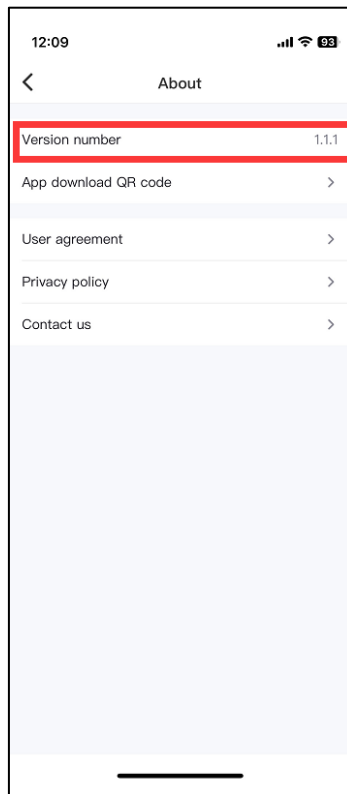


3.7.3 System Information

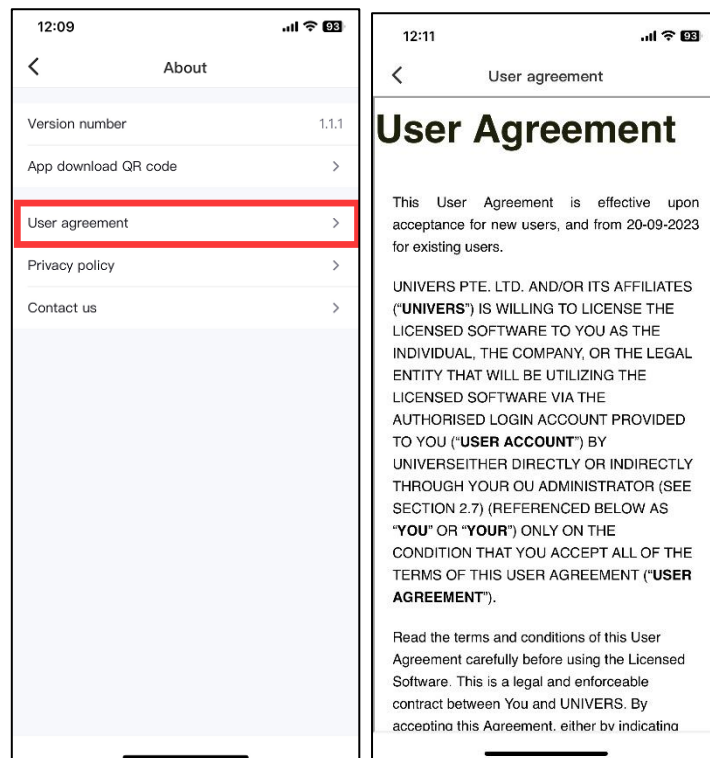
1. Go to **[Me]** page and press **[About]**.



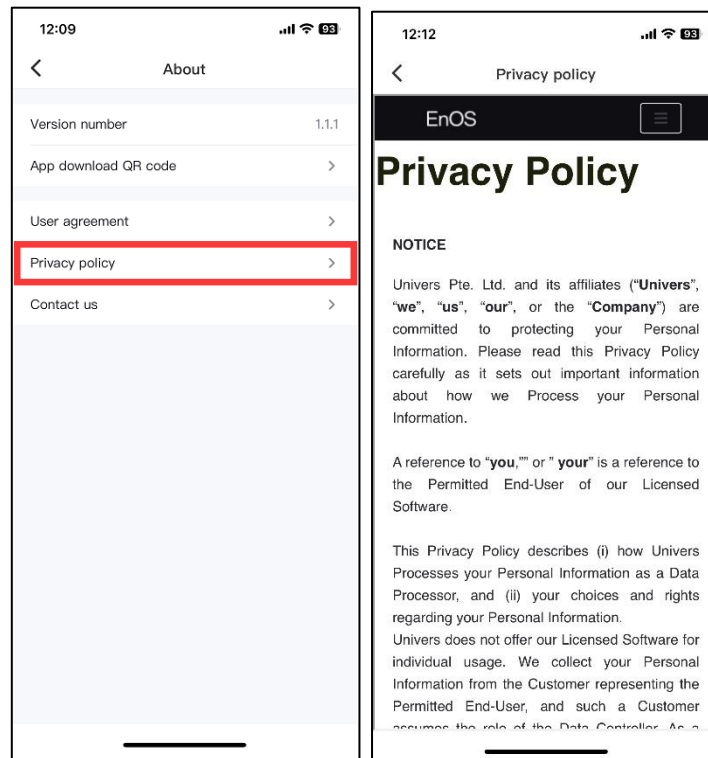
2. Version number is shown on the first line on the About page.



4. Press [**User Agreement**] and you will be directed to the User Agreement page.



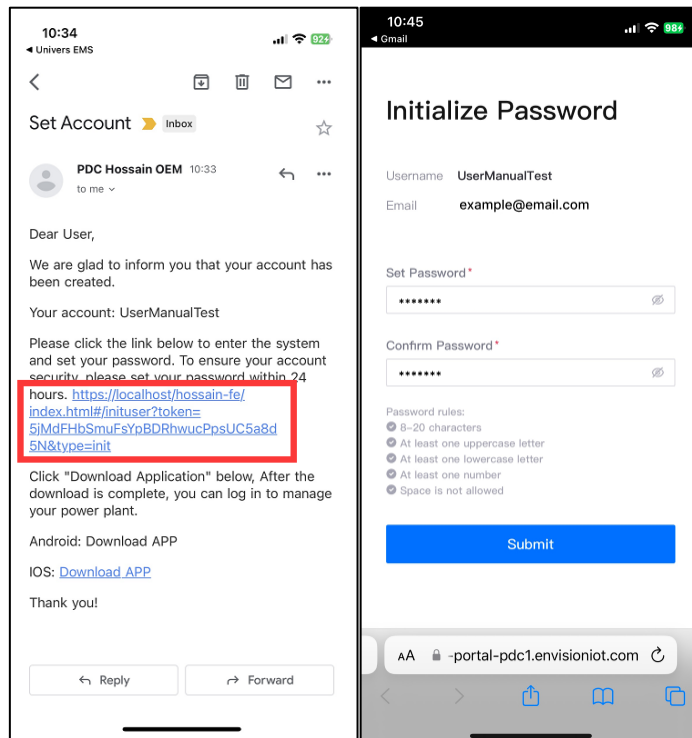
5. Press [**Privacy Policy**] and you will be directed to the Privacy Policy page.



4 Mobile Application – End User

4.1 End User Account Setting

1. Installer or admin will collect your email address and username, and create an account based on the email address and username.
2. You will receive a registration email by that email address after installer or admin create for you.
3. Click link in email to set the password in accordance with password policy requirements. You will be redirected to the website to set your password.

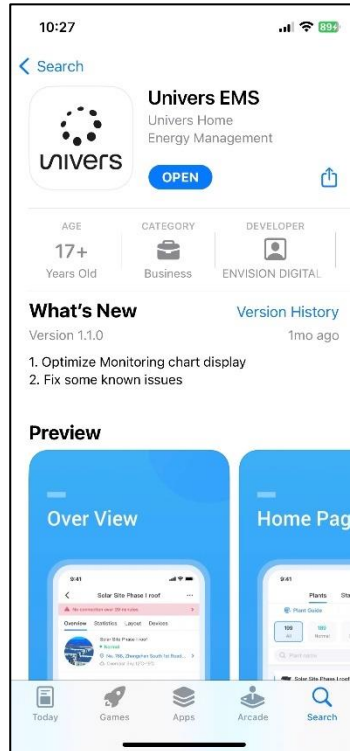


Note: If email is not in your inbox, please check your spam/junk email

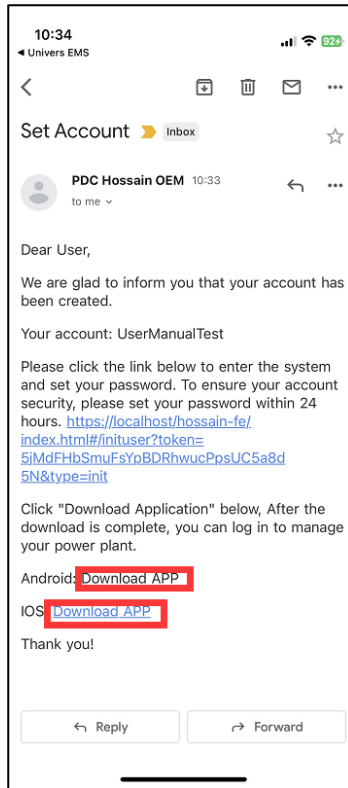
4.2 Login

4.2.1 Application Downloading

- You can download the mobile application Google Play for Android users or App Store for Apple users. The application name is Univers EMS as shown in below Figure.

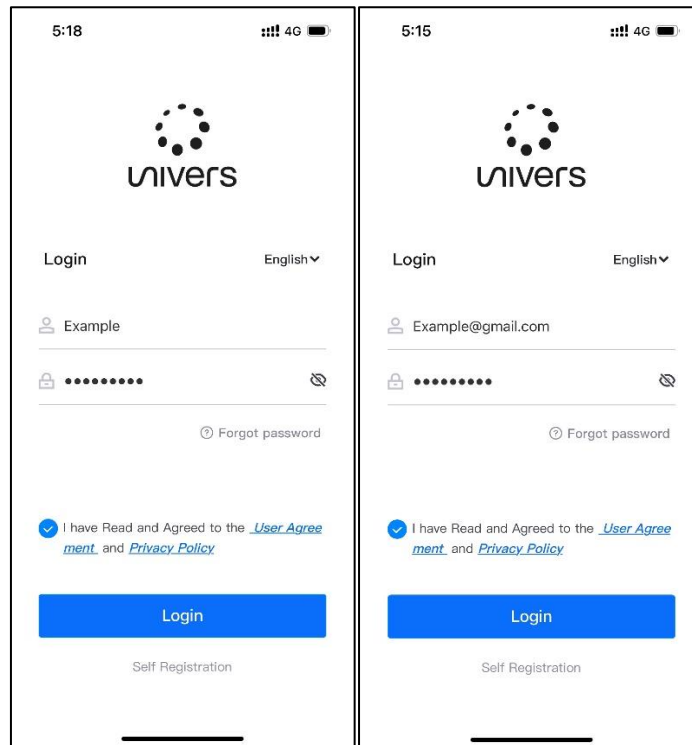


- You can also download from the link provided in the Set Account email.



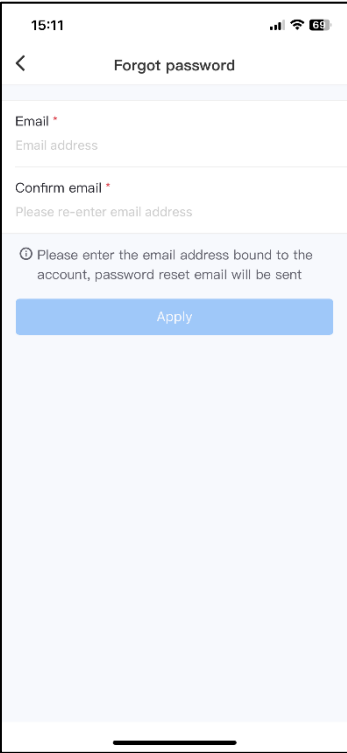
4.2.2 Application Login

4. Enter your **username** or **email address** and **password**.
5. Read and check the **[box]** to consent the User Agreement and Privacy Policy.
6. Press the **[Login]** button.



4.2.3 Forgot Password

If you forget the login password, click the 'Forgot password' button to retrieve the password.



7. You will be directed to the Home page where you can monitor your home plants.



4.3Home

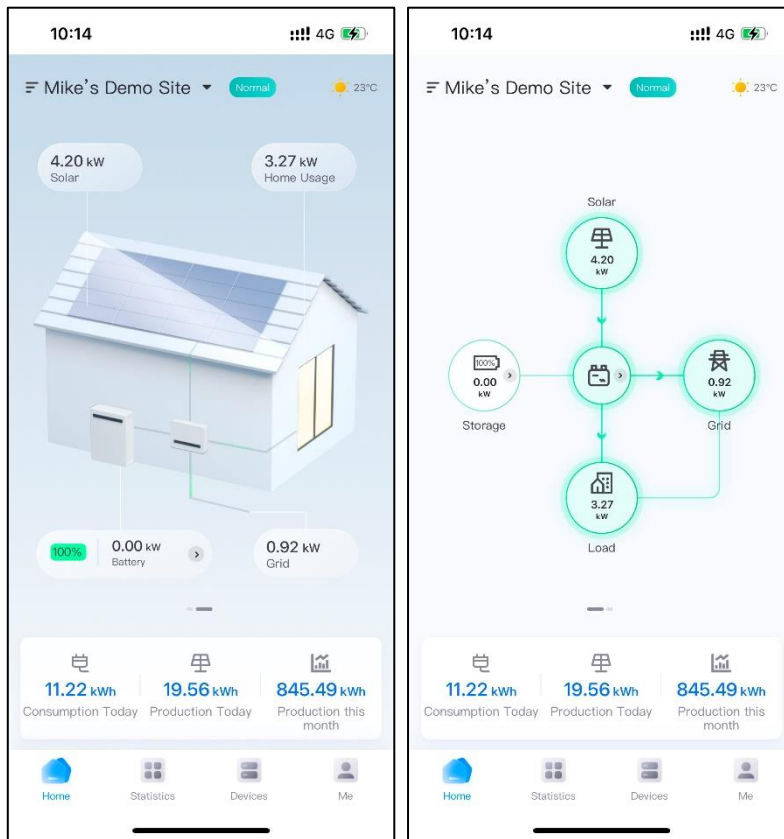
On the Home page, plant name, real-time weather data, operating status of the plant is displayed. If the you have multiple plants, you can switch between the plants.

Power Energy Flow Diagram:

The end user can monitor the operating state in real time for the operation status of PV and energy storage at home. The user can switch between 2D and 3D energy flow diagrams, and switch between dark and light theme styles.

The energy flow diagram shows:

- i. the real-time energy flow diagram of the plant.
 - ii. energy flow direction
 - iii. real-time operating power such as PV production power, storage charge and discharge power, houseload power, on-grid, and off-grid power data.
 - iv. display the real-time status of the inverter, storage (if any), green colour represents Operating, yellow represents Standby, red represents fault.
- You could dropdown to refresh page and displayed data.



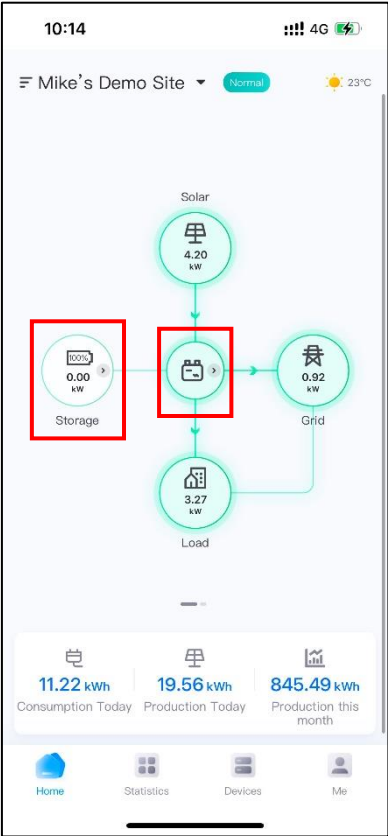
KPIs:

The KPI card on the home page will show the core indicators such as Consumption Today, Production Today, Production MTD.

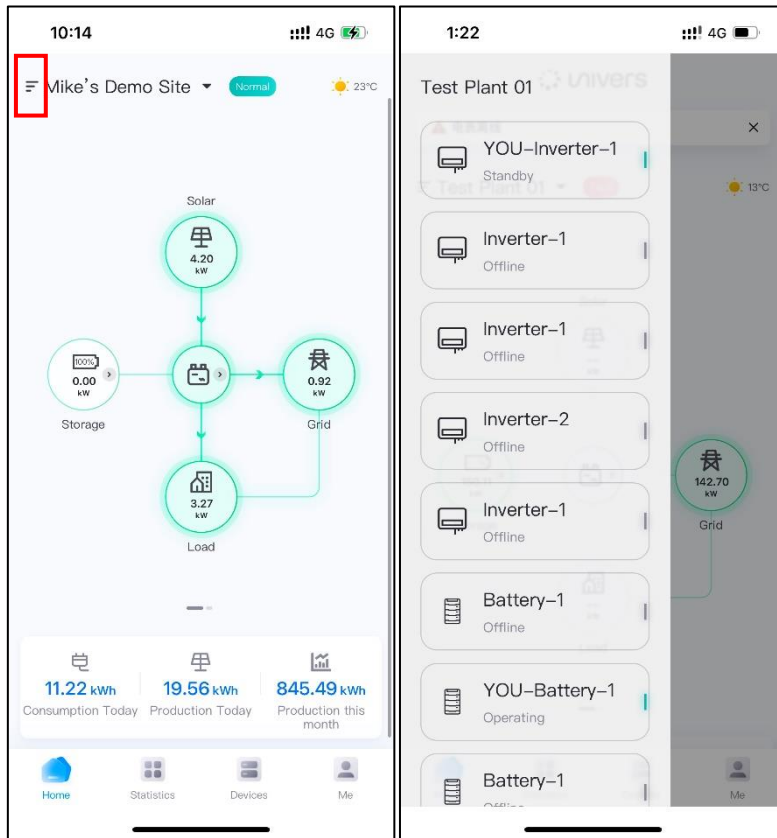


4.3.1 Device Monitoring

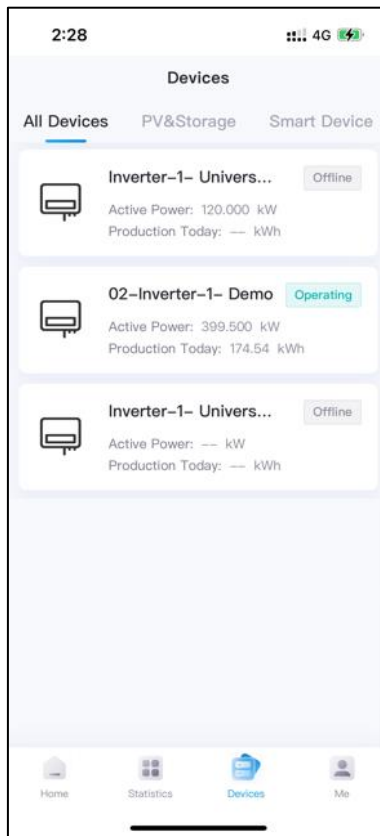
Entrance 1: From energy flow – Choose the plant first, and you can directly obtain the status of the device under this plant on the energy flow diagram, and drill down to view the real-time monitoring information of the device.



Entrance 2: On Home page, click on the list icon besides the plant name – A list of devices under the selected plants is displayed. By clicking a device on the Device List, you will be directed to the Device Details page.

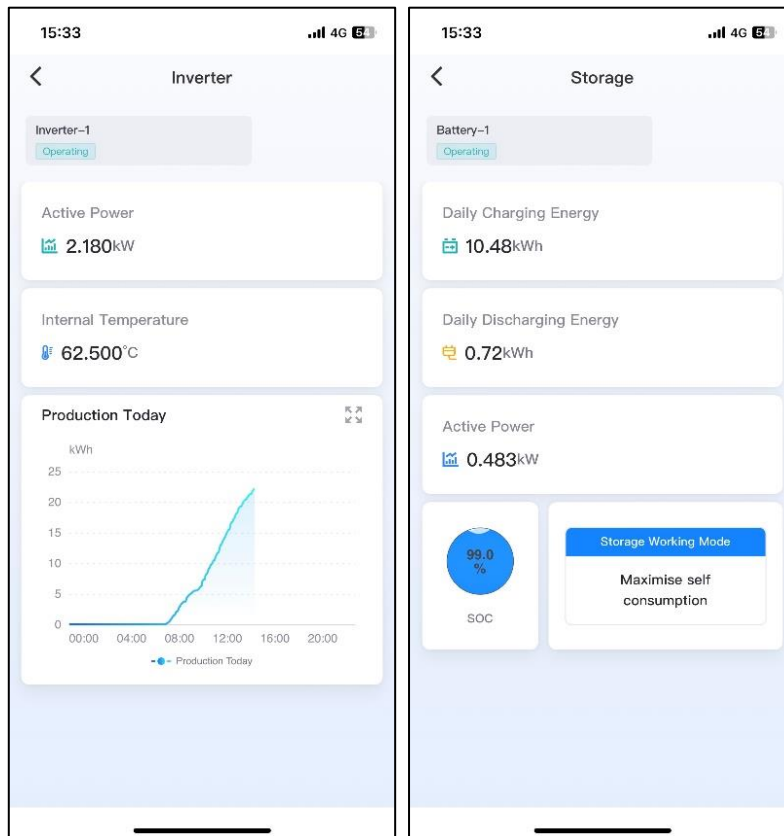


Entrance 3: On [Devices] tab – A list of devices under all the user's plants is displayed. Device's key real-time data is shown on each device card. You can also filter the devices according to the device type as shown below. By clicking a device on the Device List, you will be directed to the Device Details page.



1) Click the inverter node on the energy flow diagram, or click the inverter device on the device list, you can directly jump to the inverter monitoring page to show the inverter real-time operation status, active power, temperature, and production graph.

2) Click the storage node on the energy flow diagram, or click the battery device on the device list, to directly jump to the storage monitoring page to show the real-time operation status, charge and discharge energy, active power, SOC, and working mode of the storage.



4.4 Plant Statistics

Plant statistics module provides overall and individual KPI data from the solar, house load and storage.

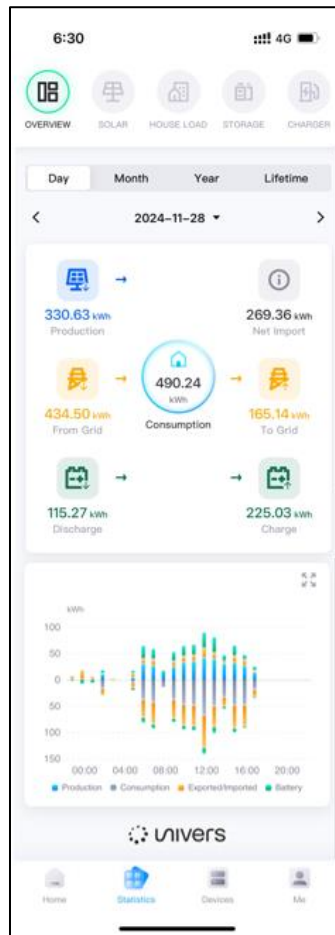
4.4.1 KPI Overview

KPI statistics are displayed according to the different time dimensions of day, month, year and life cycle, showing the following statistics metrics:

- Production: Total Home Site PV Production
- Consumption: Total Homehouse Electricity Consumption
- From Grid: Total Electricity Energy from Grid
- To Grid: Total Electricity Energy to Grid
- Battery Charge: Total Battery Charge Energy
- Battery Discharge: Total Battery DisCharge Energy
- Net Imported/Net Exported:

- a. If Energy from Grid is larger than Energy to Grid, Display Net Exported
- b. If Energy to Grid is larger than Energy from Grid, Display Net Imported

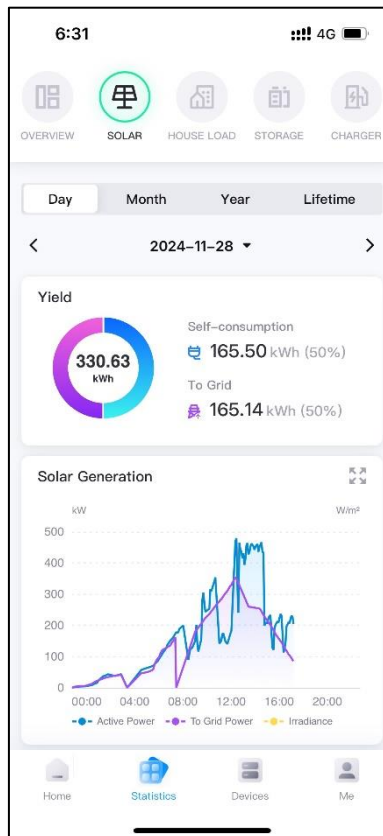
Different dimension metrics trend is also displayed in a bar chart format. Press on one of the graph to see the detailed break down of the bar chart. Production, From Grid and Charge are displayed on the positive axis. Consumption, To Grid and Discharge are displayed on the negative axis. Click on the legend to cancel the display of the corresponding indicator data and retain the indicator data you want to view.



4.4.2 Solar Statistics

Solar Statistics page shows yield, and solar production according to the daily, monthly, annual and life cycle time dimension.

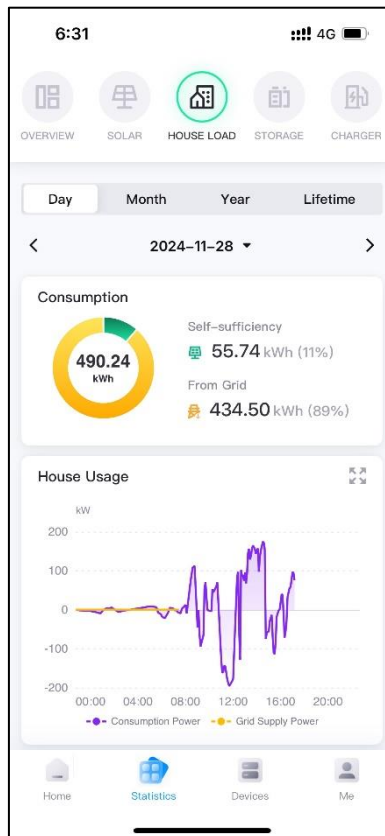
- Total Solar Production
- Total Self-consumption: Total Energy from PV production to Houseload Consumption and Battery Charge
- Total To Grid Energy: Total Energy from PV production to Grid



4.4.3 House Load Statistics

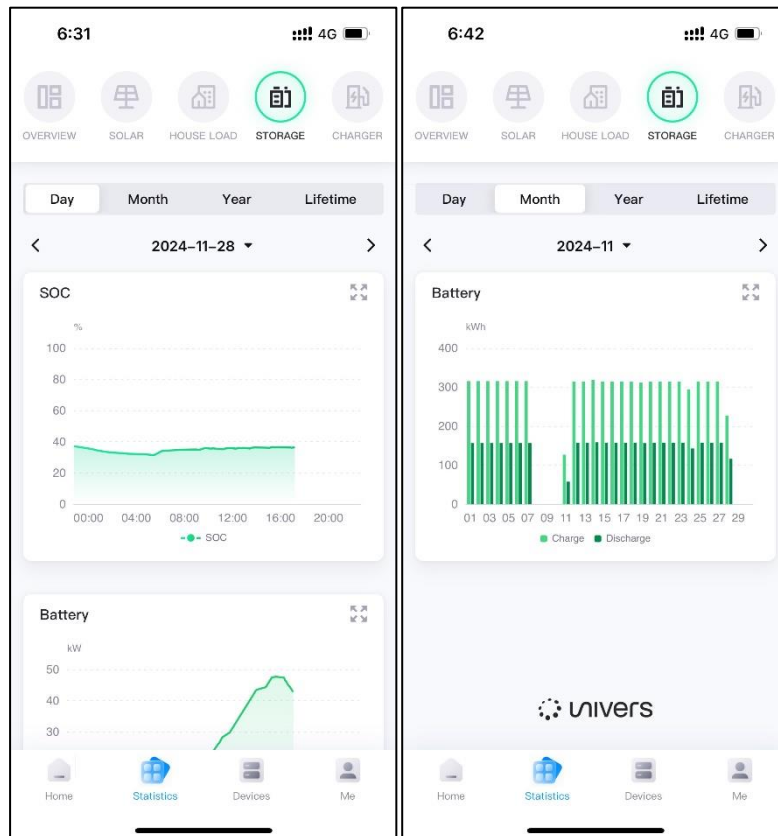
House Load Statistics page shows consumption, and house usage according to the daily, monthly, annual and life cycle time dimension.

- Total Houeload Consumption
- Total Self-sufficiency: Total Energy from PV production and Battery DisCharge to Houeload Consumption
- Total From Grid Energy: Total Energy from Grid production to Houeload Consumption



4.4.4 Storage Statistics

Storage page shows the energy storage charge and discharge power curve, and displays the total charge and discharge of energy storage according to the month, year, life cycle time dimension. The page also shows the SOC graph under day dimension.

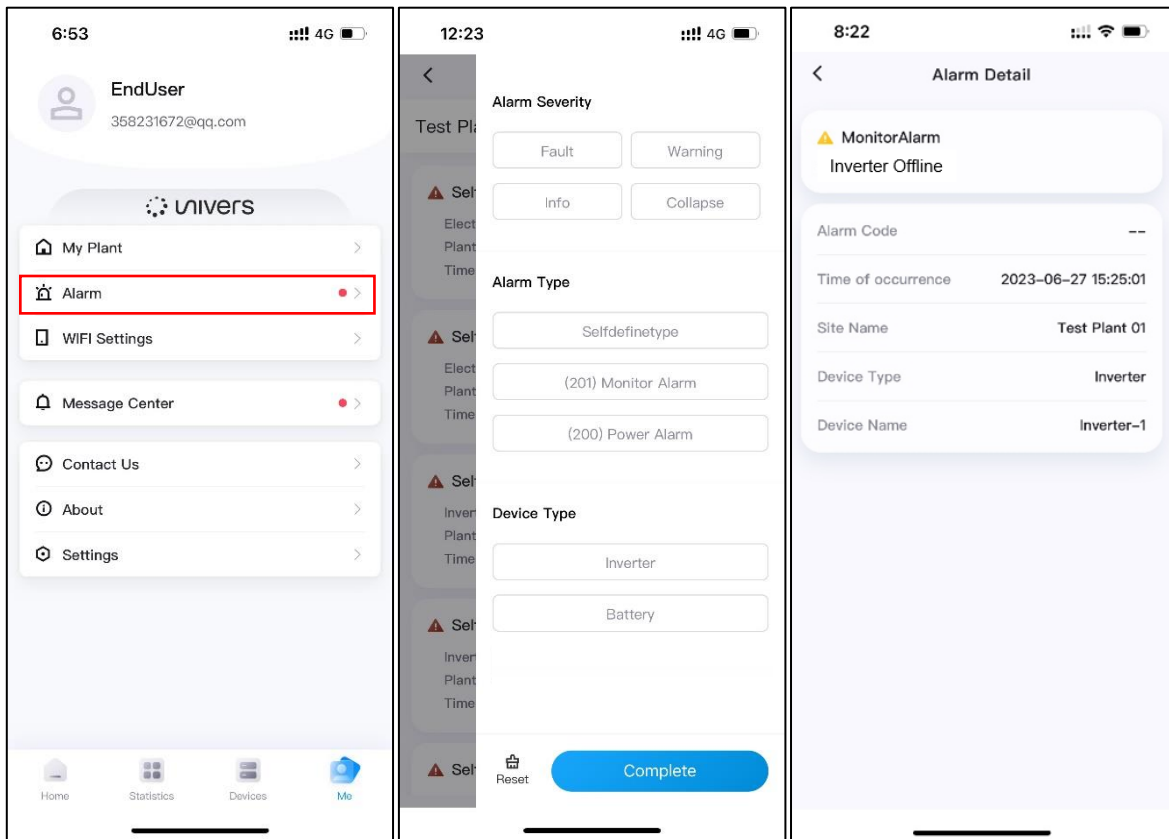


4.5 Alarm

On Me – Alarm, users can see active alarms under the plant selected. On each alarm card, it displays the alarm, device name, plant name, alarm type and the time of occurrence of the alarm.

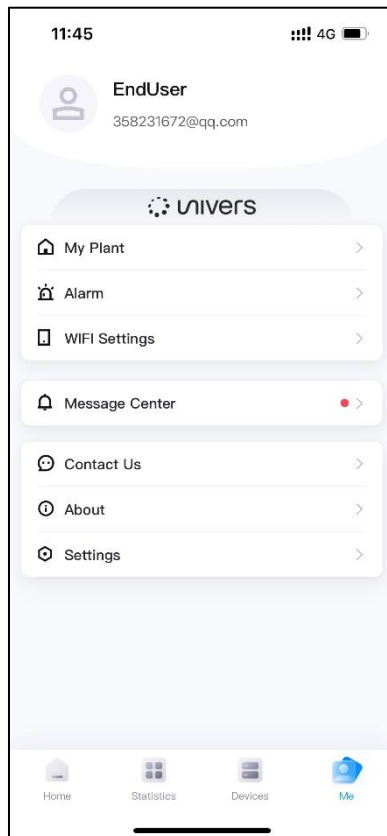
Users can sort them from according to the alarm severity, alarm type and/or device type.

Users can click each alarm to see the alarm details. Alarm code, time of occurrence, site name, device type and device name will be displayed on the alarm detail page.



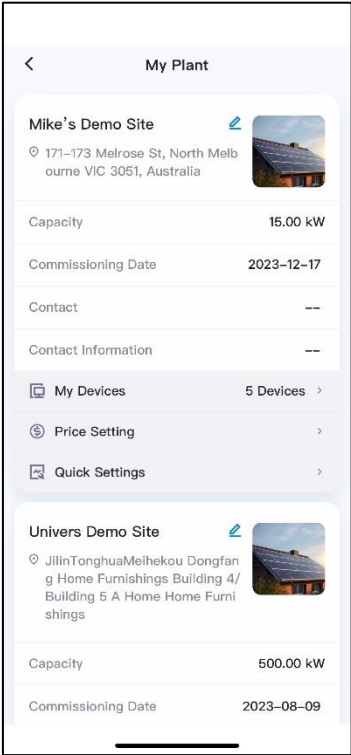
4.6 Account & System Management

“Me” menu allows user to configure account and system settings.



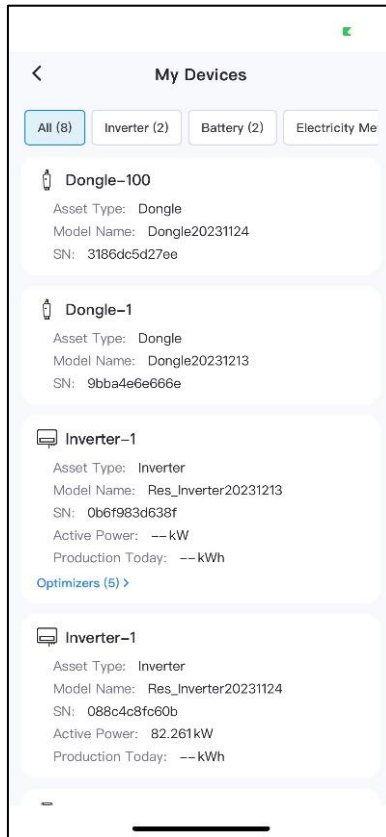
4.6.1 My Plant

The user can check the plant under his/her authority under My Plant. Each plant card displays the name, address, capacity, commissioning date and contact information of the plant. Under each plant, user can view the devices under the plant, set the price of the plant and set device parameter.



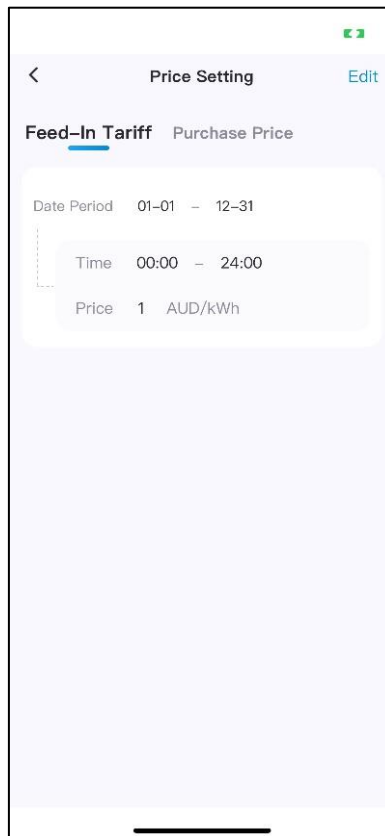
4.6.1.1 My Devices

Click on "My Devices" tab under a plant, users can monitor all the devices under the specific site, with basic attributes of the device. Users also can filter the devices by selecting the device type.



4.6.1.2 Plant Price Setting

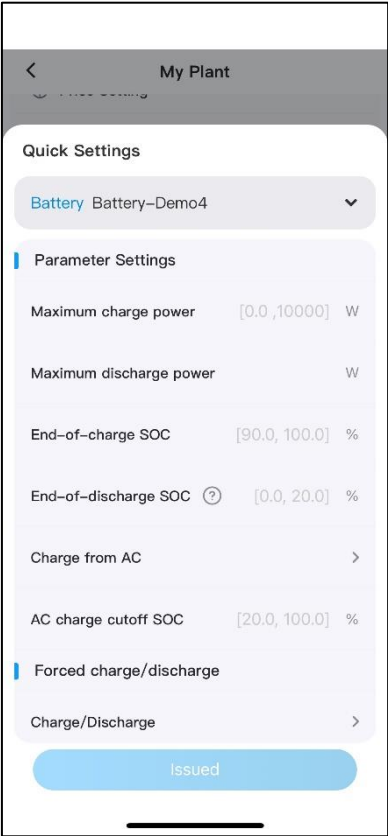
Click on “Price Setting” tab under a plant, users can edit Feed-In Tariff and Purchase Price for the specific site.



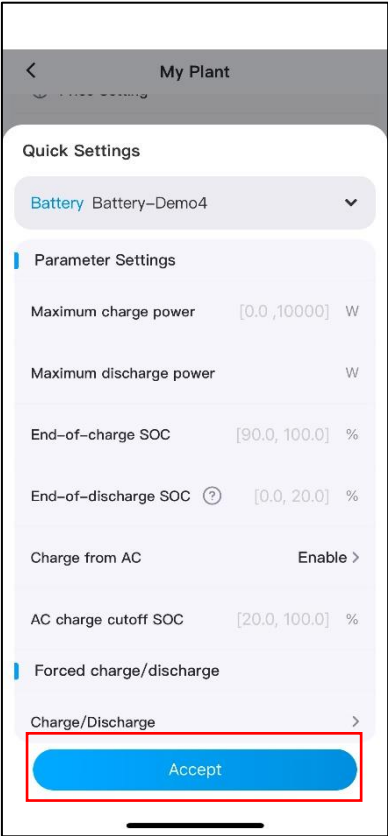
4.6.1.3 Device Parameter Setting

Click on “Quick Setting” tab under a plant, users can control the device by editing device parameters by following the steps below:

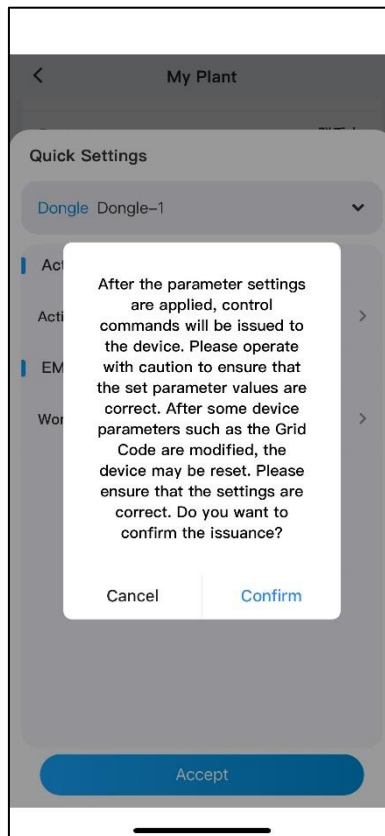
1. Currently for only support setting on battery parameters for end user.
For **battery**, you can modify the charge and discharge mode, charge and discharge power and other parameter settings.



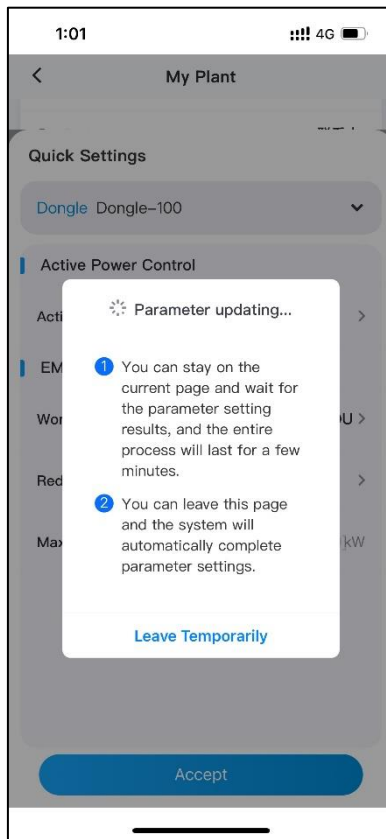
- 2. Update the preferred parameters according to the threshold range and prompt description of the parameter indicating on each parameter. Then press **[Accept]**.



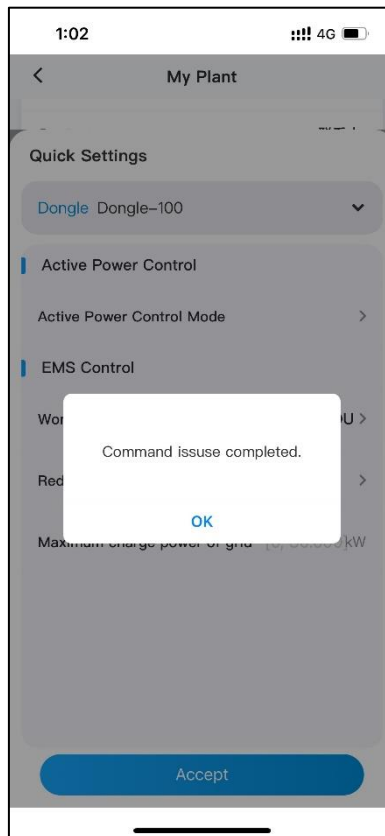
3. Double confirm the update by pressing the Confirm button.



4. When the parameter is updating, the user can choose to:
 - a. wait on the current page or
 - b. leave temporarily and come back later to check the parameter.



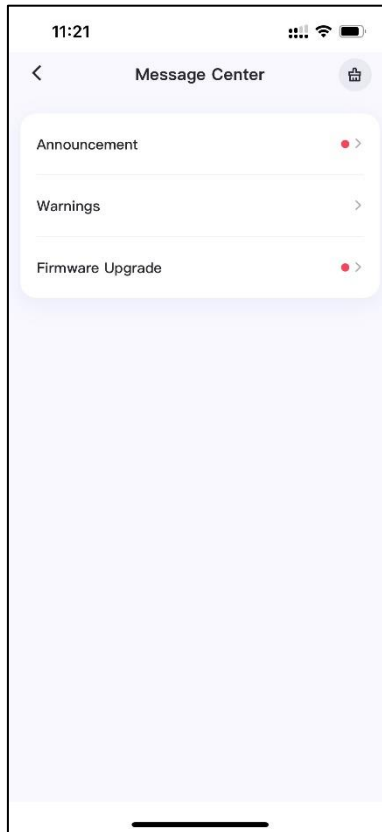
5. If the user chooses to wait on the current page, the update will take a few minutes. After the parameter is updated, the pop-up window will show that the message: **Command issue completed** as shown below.



6. If the user chooses to leave temporarily, the user can come back to the parameter setting page later after 5mins, if parameter was set successfully, the parameter value will be updated.

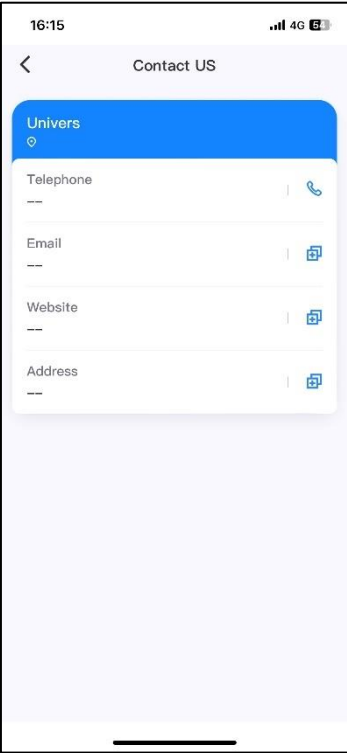
4.6.2 Message Center

Users can receive and read Announcement, Warnings and Firmware Upgrade related message.



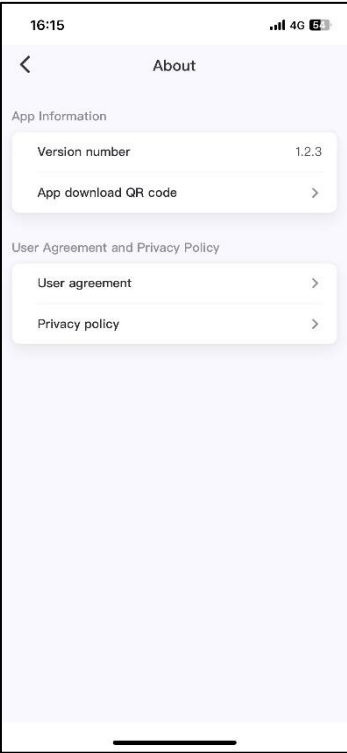
4.6.3 Contact Us

The user can check the contact information of device manufacturers and can contact them for after-sale or plant operation and maintenance needs.



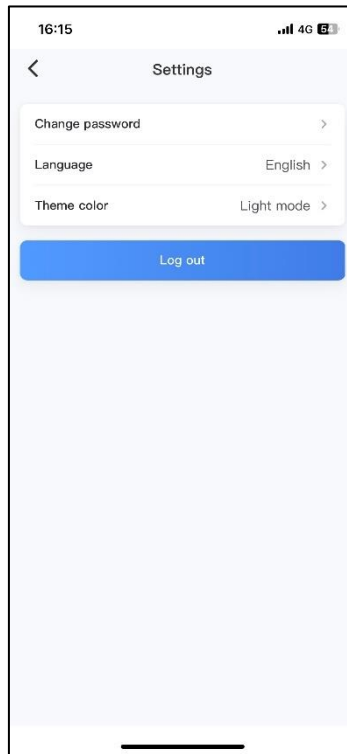
4.6.4 About

The user can view the version information of the mobile App, the user agreement and privacy policy of the system.



4.6.5 Settings

Under the settings, the user can log out, change account passwords, switch languages, and switch theme styles.



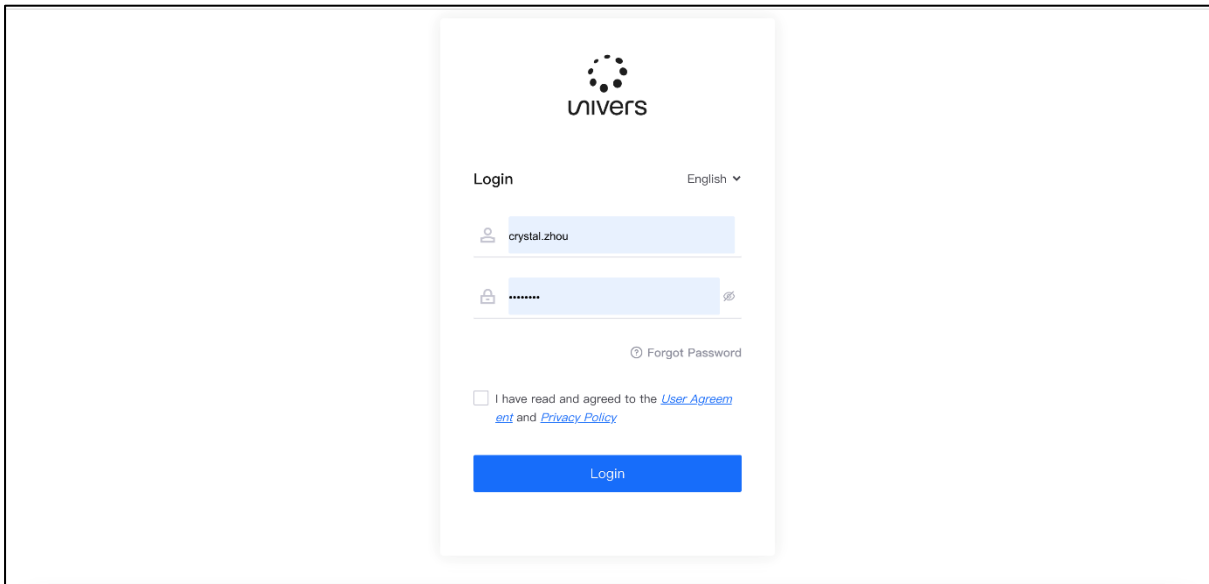
5 Web Application

Web Portal Application is for System Admin, Installer Admin and Installer Users to monitor, control and management residential sites and devices under their permission, and for End Users to monitor their own site and devices.

5.1 Login

Note: Web Portal Login account is the same with Mobile Application account.

Univers EMS Web portal provides a login access page when you first opened the application. To log in to Univers EMS, enter your credentials (**username** or **email address**, **password**) and check the **box** to consent the User Agreement and Privacy Policy.

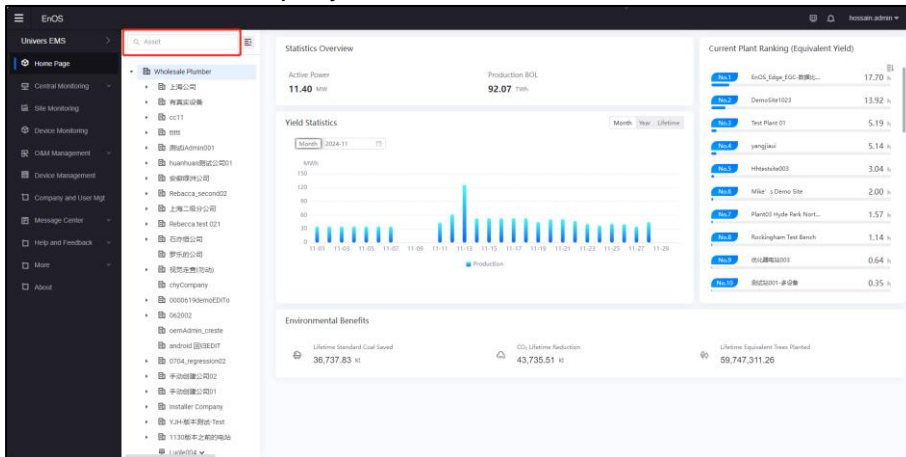


If you forget the login password, click the **[Forgot password]** button to retrieve the password.

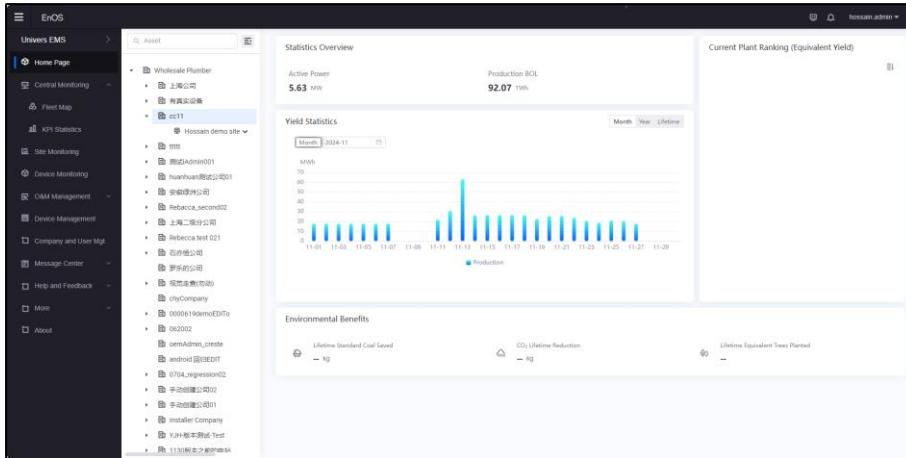
5.2 Home Page

On Home Page, it displays an asset tree navigation bar with information on specific company/site/device. Default displays the cross-site statistics of the root node company.

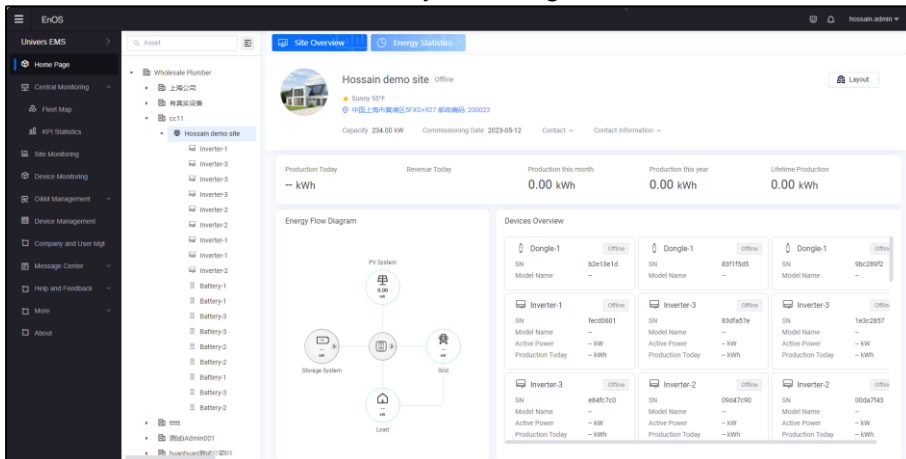
1. User can search company/site/device on the asset tree.



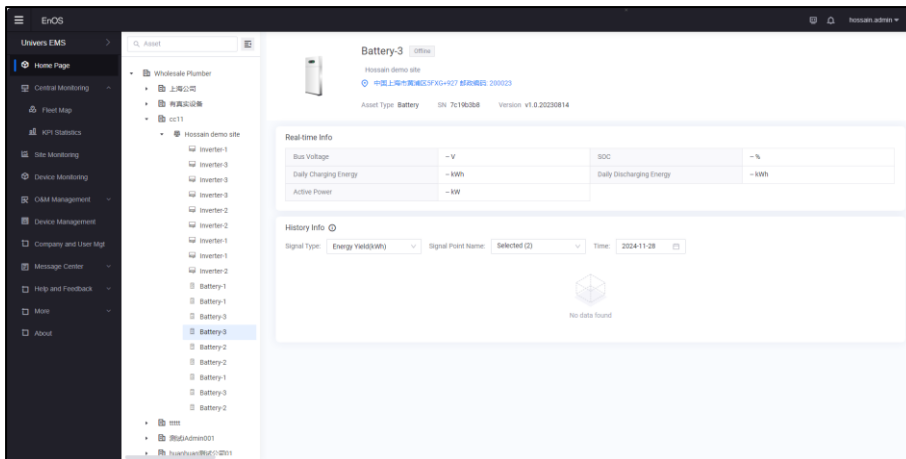
2. Users can view the cross-site statistics by selecting the company on the asset tree.



3. Users can view the site details by selecting the site on the asset tree.



4. Users can view the device details by selecting the device under a specific site on the asset tree.



5.3 Central Monitoring

5.3.1 Fleet Map

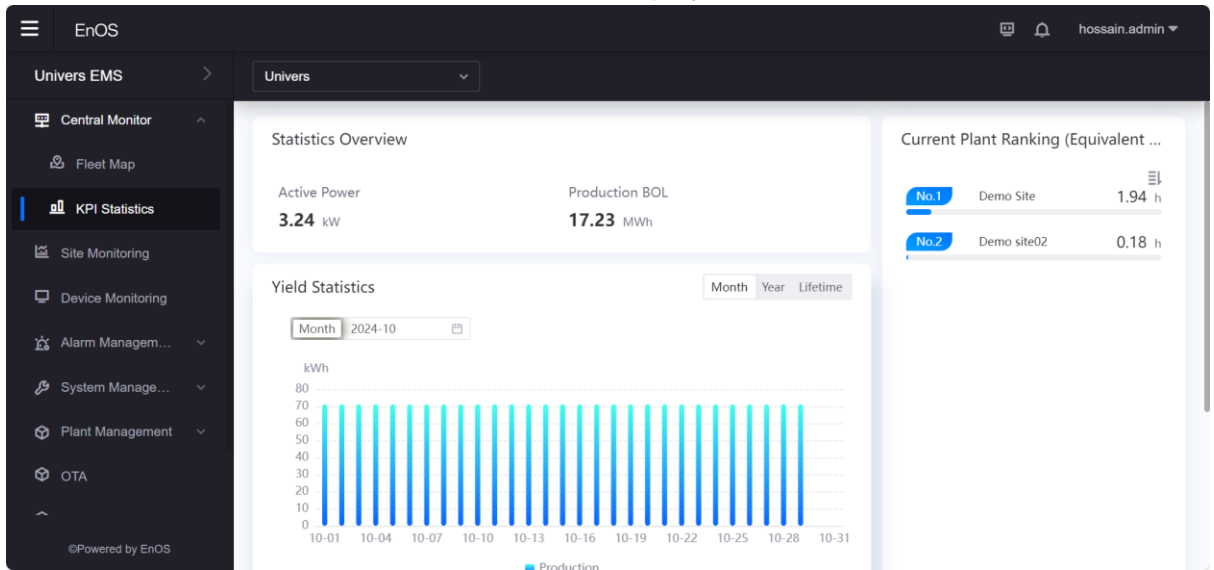
1. Click **[Central Monitor]** and then **[Fleet Map]** on the left menu.
2. Central Monitor provides a satellite world map, showing the geographical distribution and aggregated KPIs of household plants within the limits of user authority, and by scrolling up and down, the user can zoom in or out the map page.
3. Click the left mouse button to drag the map anywhere on the page.
4. Users can carry out centralized and hierarchical management according to the regional / company organizational structure and can view the KPI data of power plant distribution and aggregation under the company / regional node flexibly.
5. The column on the right shows the key metrics of all photovoltaic sites within the scope of user authority; the left shows the production, energy trend, consumption and EV station statistics of the selected level (integrated sites or single site).



5.3.2 KPI Statistics

1. Click **[Central Monitor]** and then **[KPI Statistics]** on the left menu.
2. The KPI statistics page of cross-plants to carry out automatic aggregation statistics of production indicators for all plants within the scope of user select in Management Structure Tree in Top Left Corner. Default is all plants that user have permission.
3. The statistics overview is provided with the total active power and production BOL data of all plants within the scope of user select in Management Structure Tree in Top Left Corner. Production statistics are graphically displayed according to the dimensions of day, month, year, and lifetime. Plants are ranked according to the

Yield. And the total environmental benefits are displayed.



5.4 Site Monitoring

5.4.1 Site Monitoring List

When first come to the Site Monitoring menu, it displays a list of all sites within the current user’s authority, and core information such as real-time operation status, capacity, production, revenue, active power, and other core information of the plant.

The user can filter the sites according to the operating status, whether the site has battery configured, the total string capacity, battery capacity, followed or all plants, grid connection date and located area.

The screenshot shows the Site Monitoring List interface with the following table:

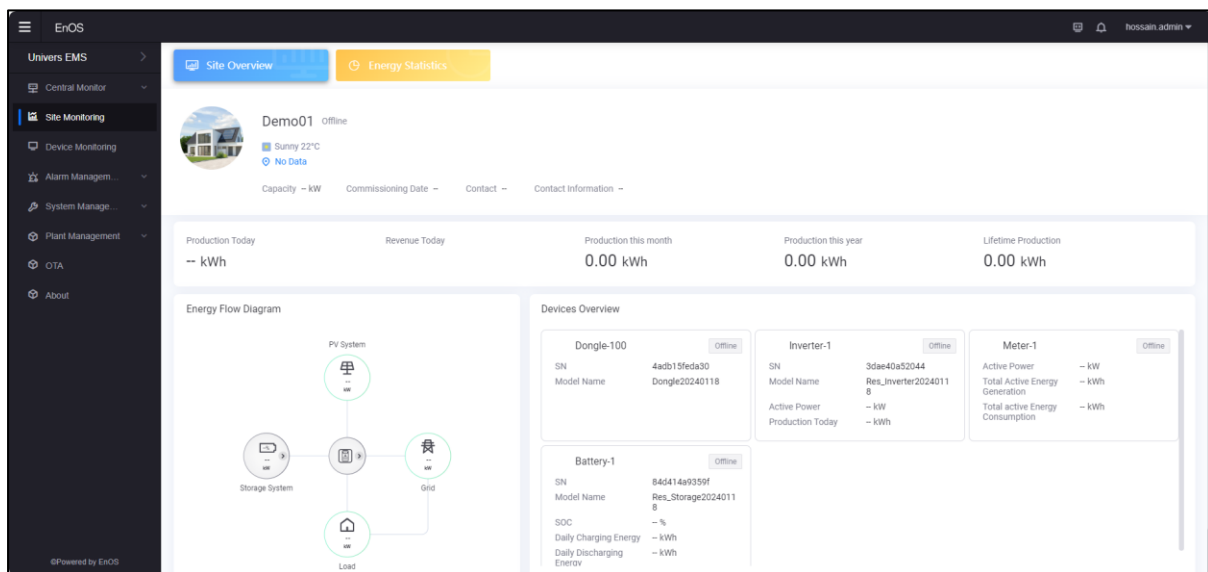
Site Name	Site Operation Status	Capacity (kW)	Production Today (kWh)	Revenue Today	Operation
Demo Site	Normal	15.00	29.50	0.00 \$	Detail
Yjh	Offline	68.00	--	--	Detail
Demo site02	Normal	200.00	35.49	4.52 ¥	Detail
Test123	Offline	10.00	--	--	Detail
Demo01	Offline	10.00	--	--	Detail

Total 5 Items

5.4.2 Site Overview

On the Site List page, click **site name** of a site to go to the overview monitoring page of a single site. Default is on the site overview page and it displays:

- a. Photo of site, real-time operation status of site, address of site, real-time weather data, contact information.
- b. Statistics of the core indicators of production, revenue in daily, monthly, annual and lifetime dimensions.
- c. The energy flow diagram shows:
 1. the real-time energy flow diagram of the site.
 2. energy flow direction
 3. real-time operating power such as PV production power, inverter output power, storage charge and discharge power, load power, on-grid, and off-grid real-time data.
 4. display the real-time status of the inverter, storage (if any), green colour represents Operating, yellow represents Standby, red represents Fault.
- d. All the devices under the site are displayed according to the device type, with the operation status and core information of all the devices.

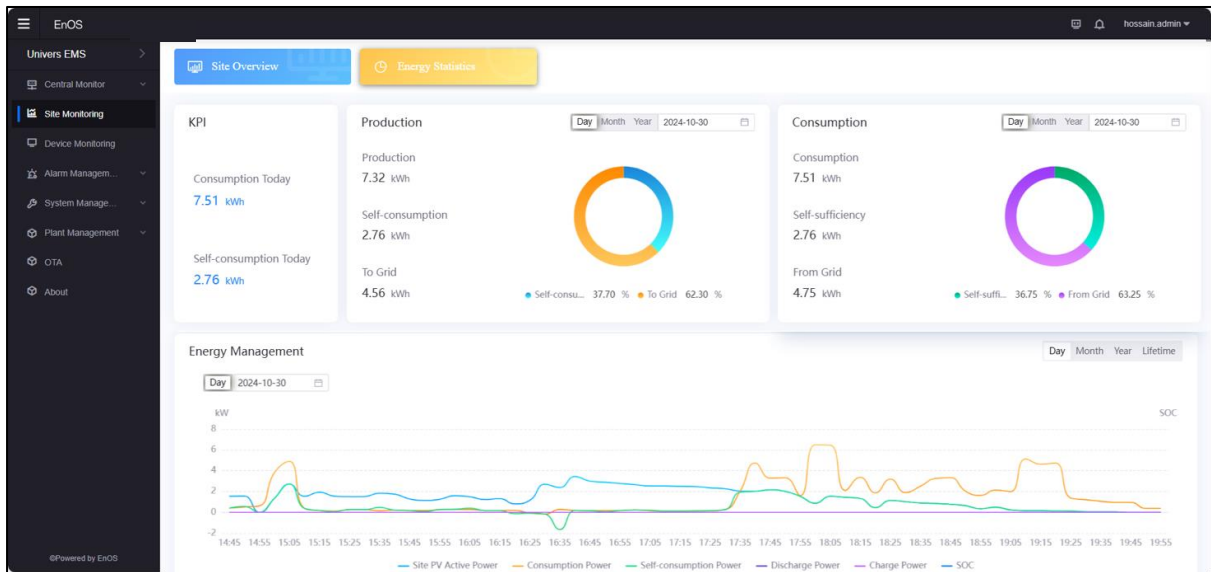


5.4.3 Site KPI

On the site overview page, click the tap **[Energy Statistics]** on the top to go to the KPI statistics monitoring page and it displays:

1. The KPI: consumption and self-consumption statistics.
2. Production and consumption of the chosen plant by day, month, year, and lifetime dimension.
3. Energy Management graph showing the PV output and consumption graph according to day, month, year, and lifetime dimension.
4. Revenue bar chart by day, month, year, and lifetime dimension.

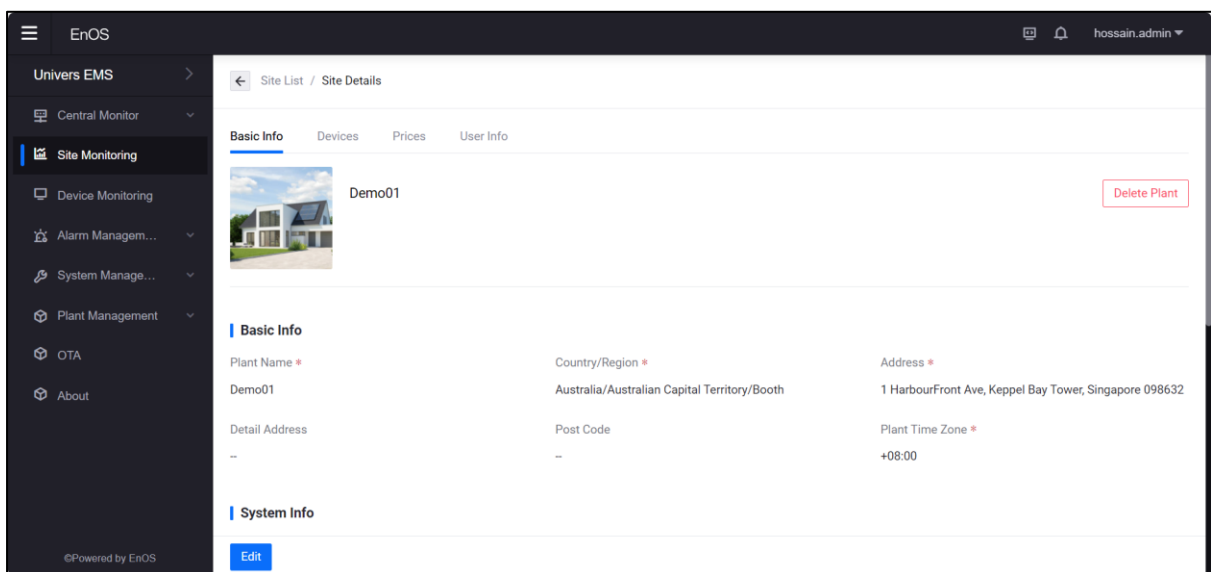
- Environmental benefits such as standard coal saved, CO2 Emission Avoidance and equivalent tree planted are displayed.



5.4.4 Site Details

On the site list page, click the **[Detail]** on the right of the site to go to the site details page, click different tab to see different information of the site:

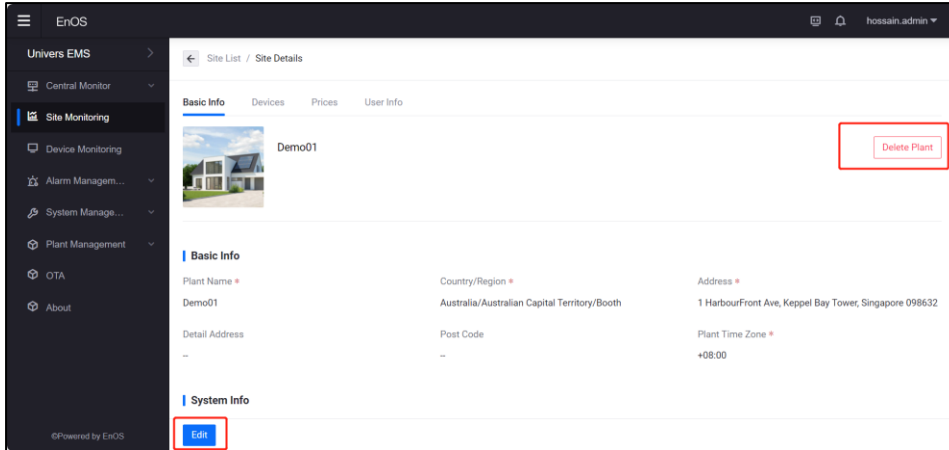
- Basic info: including basic information, system information, installer information and grid information of the site.
- Devices under this site.
- Prices: Purchase price and Feed-in Tariff.
- User information: installer and end user information of the site.



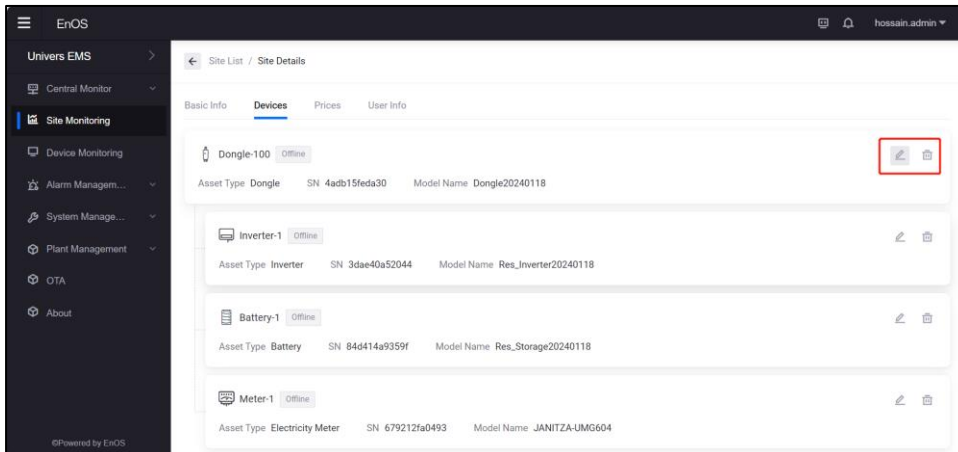
5.4.5 Site Management

On the site details page, you can manage the site:

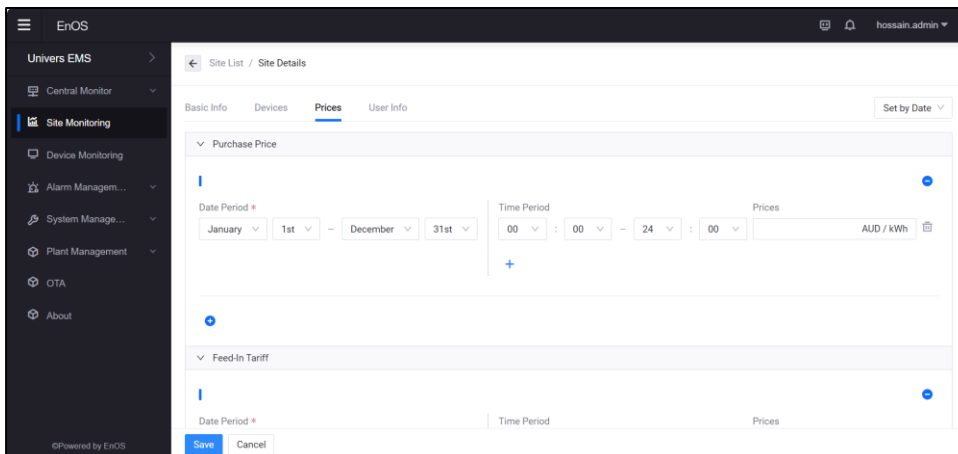
1. Under “Basic Info” tab, click **[Edit]** on the bottom to edit the basic information of the site.
2. Under “Basic Info” tab, click **[Delete Plant]** on the right to delete the site.



3. Under “Devices” tab, click the **icon** besides the device to edit the device name or delete the device under the site.



4. Under “Prices” tab, click the **[Edit]** at the bottom to edit the price.



5.5 Device Monitoring

5.5.1 Device Monitoring List

The device list page provides the KPI of all devices connected to different types of devices under the same plant, including device SN, active power, operating status, etc.

The user can filter the devices according to the management node or plant and filtering according to the operating status of the device or the type of device.

Basic information such as device name, SN, state, active power and production statistics are provided.

Device Name	SN	Belonged Site	Inverter State	Ac	Action
Inverter-10	c0a8de80d1a6	Demo site02	Operating	0.	Details
Inverter-1	89cf01c9e1dc	Demo Site	Operating	2.	Details

5.5.2 Device Details

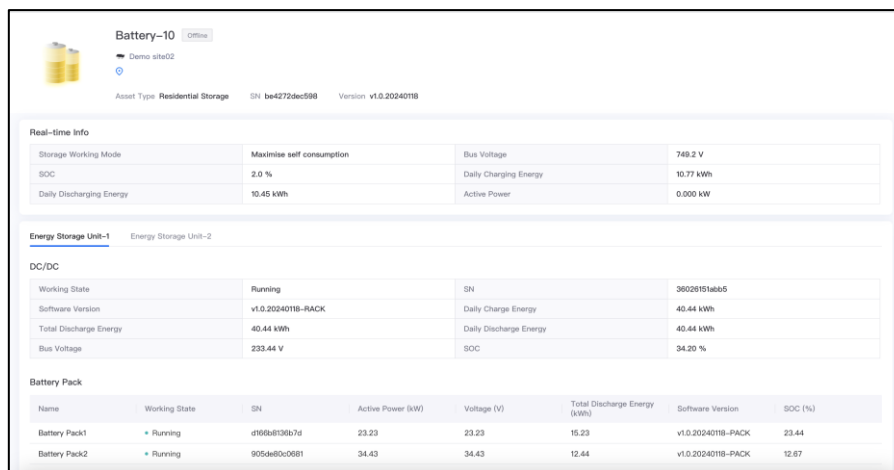
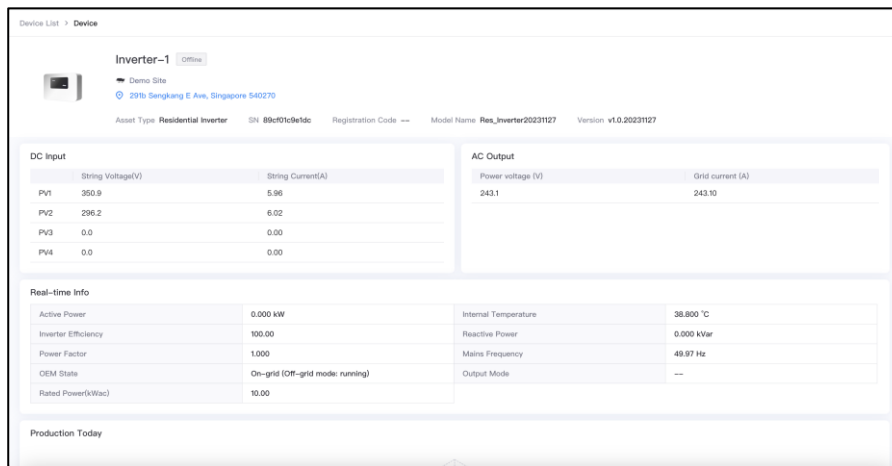
On the Device List, click **device name** or **[Details]** of a device to go to the monitoring details page of the device. Device details page displays the basic information, real-time data, and historical data of the device.

1) Real-time data:

Inverter: DC output, AC output, real-time data such as active power, internal temperature, efficiency, reactive power, power factor, and production today.

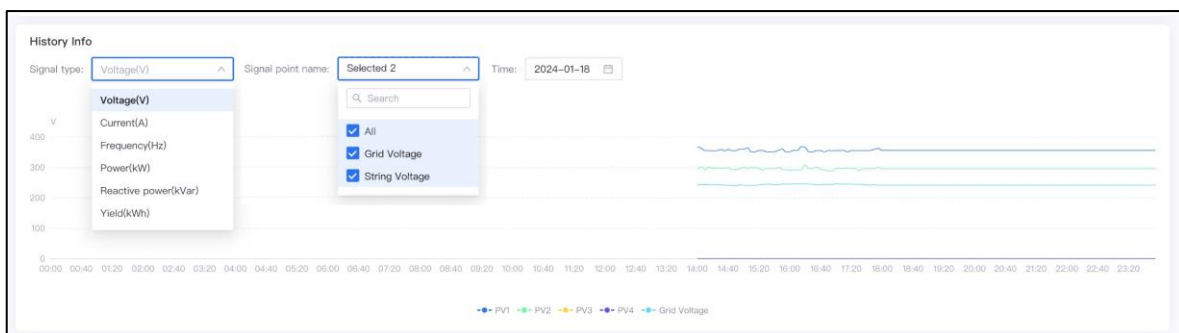
Battery: charge and discharge energy, SOC, active power, bus voltage, working mode, working state, SN etc.

Meter: active power, on and off grid data, etc.



2) Historical data:

On the page, navigate to the **[Historical data]** module to view the historical curve of all the data collected by the device. You can select the signal type, signal point name and time to view the data curve.



5.6 Device Management

5.6.1 Device Management List

The device management list page provides key information about all devices of diverse types within the scope of user's authority, including device SN, model, operating status, software version number, etc.

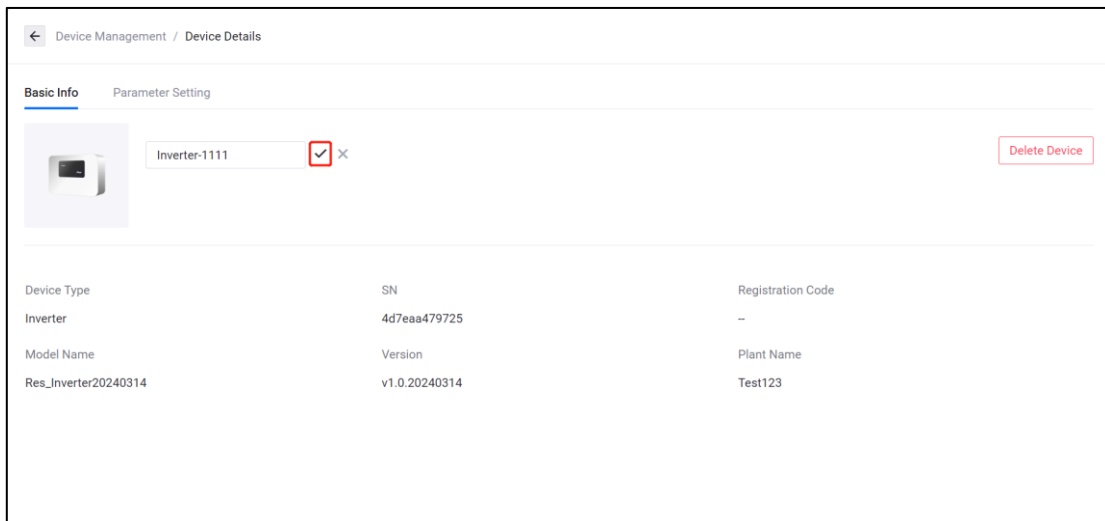
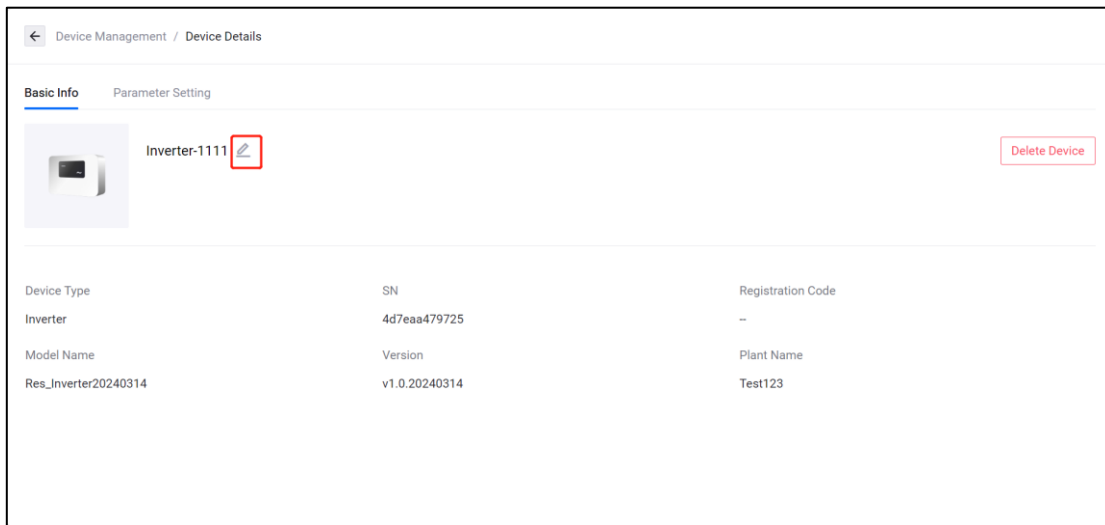
The user can filter the devices according to the management node or plant and filtering according to the operating status of the device or the type of device.

Device Name	SN	Model Name	Invt	Action
Inverter-1111	4d7eaa479725	Res_Inverter20240314	Offl	Parameter Setting
Inverter-1	3dae40a52044	Res_Inverter20240118	Offl	Parameter Setting
Inverter-10	c0a8de80d1a6	Res_Inverter20240118	Opr	Parameter Setting
Inverter-1	89cf01c9e1dc	Res_Inverter20231127	Opr	Parameter Setting
Inverter-1	d1abad4283a8	Res_Inverter20240830	Offl	Parameter Setting
Inverter-1-yjh1	c8199e425ef4	Res_Inverter20240830	Offl	Parameter Setting

5.6.2 Device Name Editing

In the device management list, locate the device to be managed, click **[Parameter Setting]**, it will open the device details page where you can edit the device name.

Click on the **[Edit]** icon besides the device name, enter the updated name and then click the **[√]** icon to save the name.



5.6.3 Device Parameter Setting

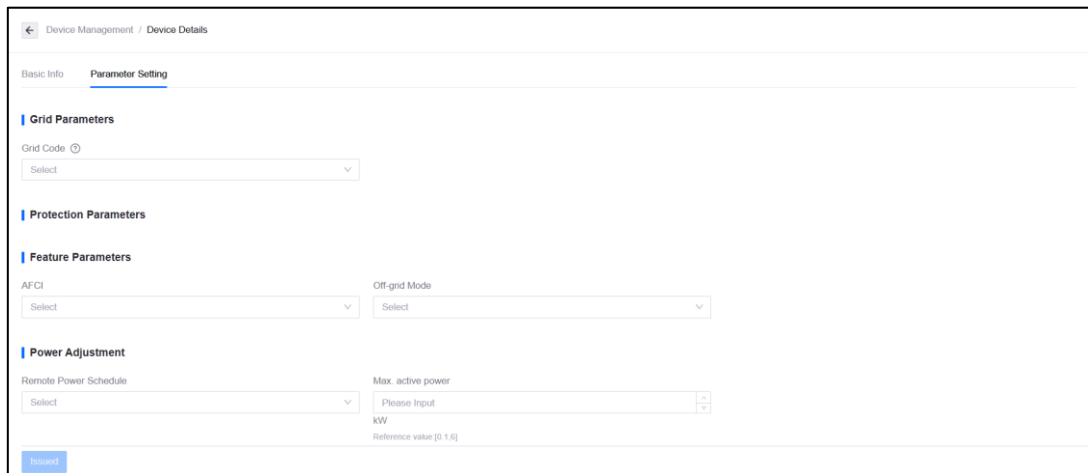
On the device details page, click [**Parameter Setting**] tab, it will open the device parameter page, and you can send remote parameter control to the device.

For **dongle**, you can modify the operation mode and working mode.

For **inverter**, you can modify the power parameters, operation mode, characteristic parameters, and other parameter settings.

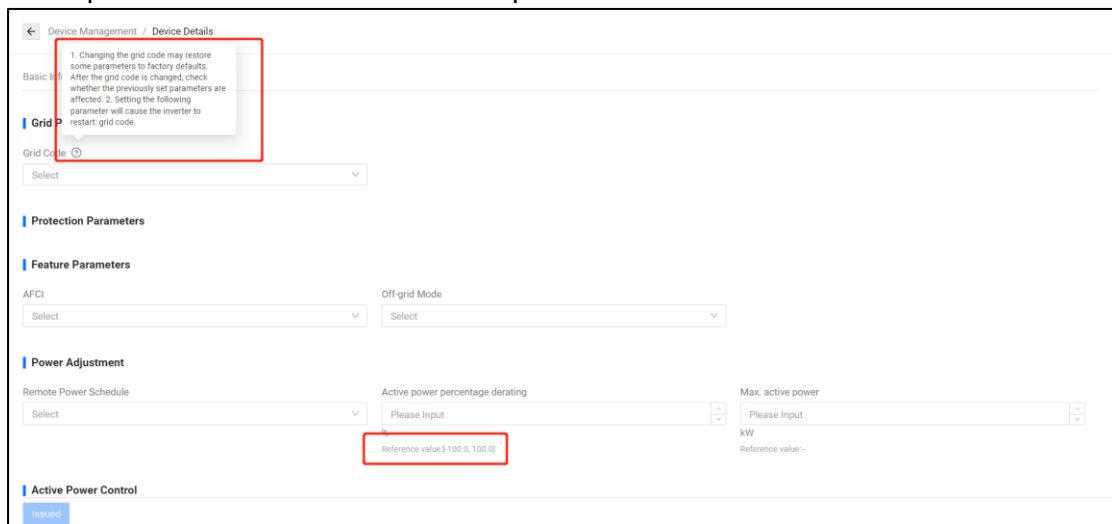
For **battery**, you can modify the charge and discharge mode, charge and discharge power and other parameter settings.

For **meter**, you can modify the meter direction.

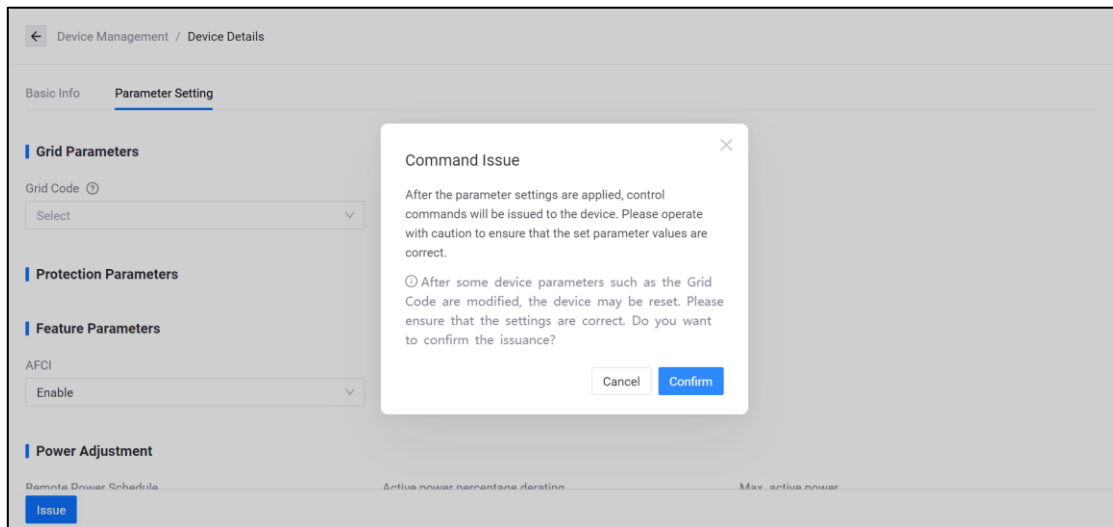


To set the device parameter:

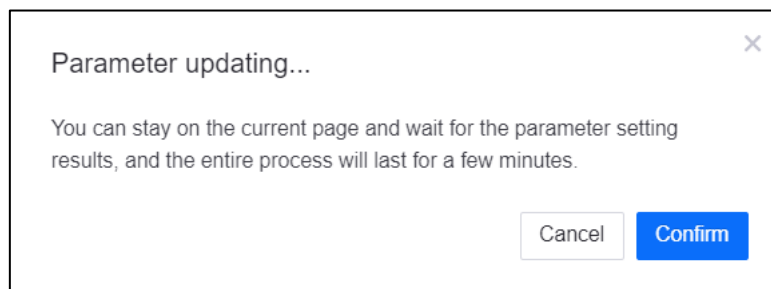
1. Please set the parameter value according to the threshold range and prompt description of the parameter as shown in the example below.



2. Update the preferred parameters and press **[Issue]**.
3. Double confirm the update by pressing the Confirm button.



4. When the parameter is updating, the user can choose to:
 - a. wait on the current page or
 - b. click **[Confirm]** to leave temporarily and come back later to check the parameter.



5. If the user chooses to wait on the current page, the update will take a few minutes. After the parameter is updated, the pop-up window will show the result: **Command issue successful/failed**.
6. If the user chooses to leave temporarily, the user can come back to the parameter setting page later after 5mins, if parameter was set successfully, the parameter value will be updated.

5.7 Operation & Management

Pre-requisite: You are using a System Admin/Installer Admin/Installer account.

5.7.1 Active Alarm

On the Active Alarm page, all alarm information under the power plant is displayed in real time, including alarm generation time, alarm power plant, device, alarm level, alarm category, and alarm description.

On the top of the page, it displays the total number of active alarms (including number of active alarms by severity), total number of active alarms from today, total number of active alarms cleared today.

Users can manage the alarm based on the company node / power plant and support flexible filtering according to the alarm level and alarm category. Users can also search the alarms by alarm description or alarm code.

For the alarm record information that is invalid but not automatically recovered by the device, the manual clearing mechanism is supported. If the user clears the alarm, the alarm will enter the historical alarm record and no longer display and prompt the alarm that has not been restored.

Device Name	Site Name	Device Type	Alarm Severity	Alarm Type	Alarm ID
Inverter-1-yjh1	Yjh	--	Fault	(200) Power Alarm	High St...
Inverter-1-yjh1	Yjh	--	Fault	(200) Power Alarm	Grid Lo...
Inverter-1-yjh1	Yjh	--	Fault	(200) Power Alarm	DC Arc cleared
Inverter-10	Demo site02	--	Fault	(200) Power Alarm	High St...
Inverter-10	Demo site02	--	Fault	(200) Power Alarm	Grid Lo...

5.7.2 Historical Alarm

On the Historical Alarm page, all the restored historical alarm records under the current power plant are summarized and displayed, including alarm generation time, recovery time, alarm power plant, device, alarm level, alarm category, alarm description, duration, and so on. Users can manage the alarm based on the company node / power plant and support flexible filtering according to the alarm Severity and alarm type. Users can also search the alarms by alarm description or alarm code.

Device Name	Site Name	Device Type	Alarm Severity	Alarm Type	Alarm Description
Inverter-Demo1	Plant03 Hyde Park North,100cE Doeydai Serity asd	Inverter	▲ Fault	(200) Power Alarm	High String Input Volta
Inverter-Demo1	Plant03 Hyde Park North,100cE Doeydai Serity asd	Inverter	▲ Fault	(200) Power Alarm	(8704) Internal fan 4 abnormal
Inverter-Demo2	Plant02 Hyde Park North,100 Month One 01 Wart Keels Ko Hyde Park	Inverter	▲ Info	(201) Monitor Alarm	(1314) Abnormal string function of PV14
inverter-solargain-mocked	For-Greensync-to-Verify	Inverter	▲ Fault	(200) Power Alarm	(10402) MPPT1 DC terminator temperatur abnormal
inverter-2	WA-Integration-UAT Plant	Inverter	▲ Fault	(200) Power Alarm	(10402) MPPT1 DC terminator temperatur abnormal
Inverter-Demo3	Plant01	Inverter	▲ Fault	(200) Power Alarm	(315) DC arc fault of P

5.7.3 Device Firmware Upgrade

When there is an upgrade / update of the device software version, the system supports remote firmware upgrade of the device. Under the OTA Upgrade module, users can uniformly manage and maintain firmware and upgrade tasks.

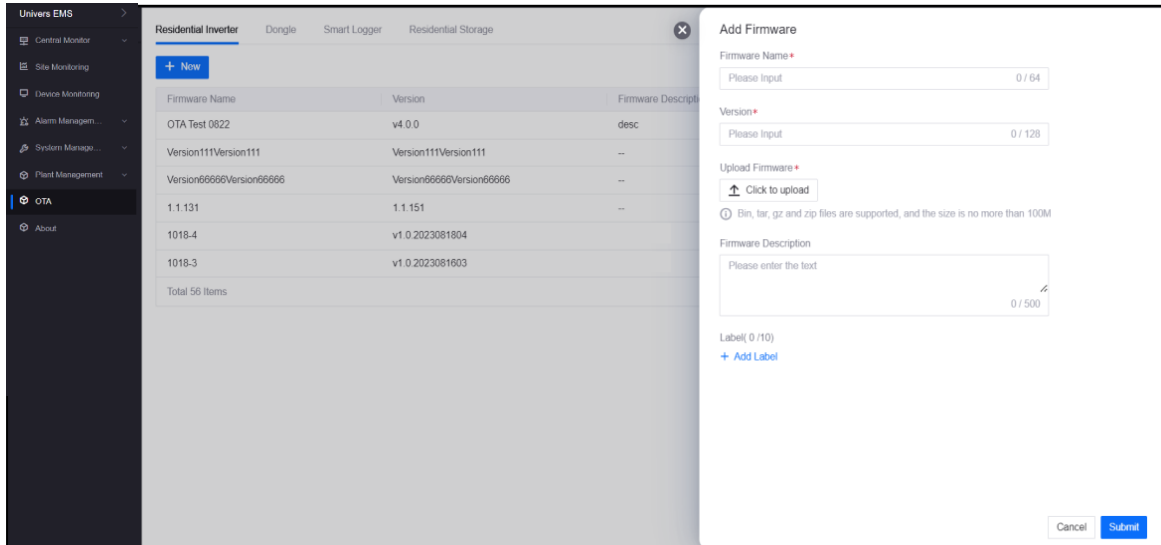
5.7.3.1 Create Firmware

1. Users can create new firmware by clicking the **[New]** button under each type of devices.

Firmware Name	Version	Firmware Description	Create On	Firmware File
OTA Test 0622	v4.0.0	desc	2023-08-22 10:44:09	Download
Version111Version111	Version111Version111	--	2023-08-21 18:39:28	Download
Version6666Version6666	Version6666Version6666	--	2023-08-21 17:53:54	Download
1.1.131	1.1.151	--	2023-08-21 14:14:15	Download
1018-4	v1.0.2023081804	创建job测试	2023-08-16 15:52:08	Download
1018-3	v1.0.2023081603	创建job测试	2023-08-16 15:14:35	Download
Total 50 items				

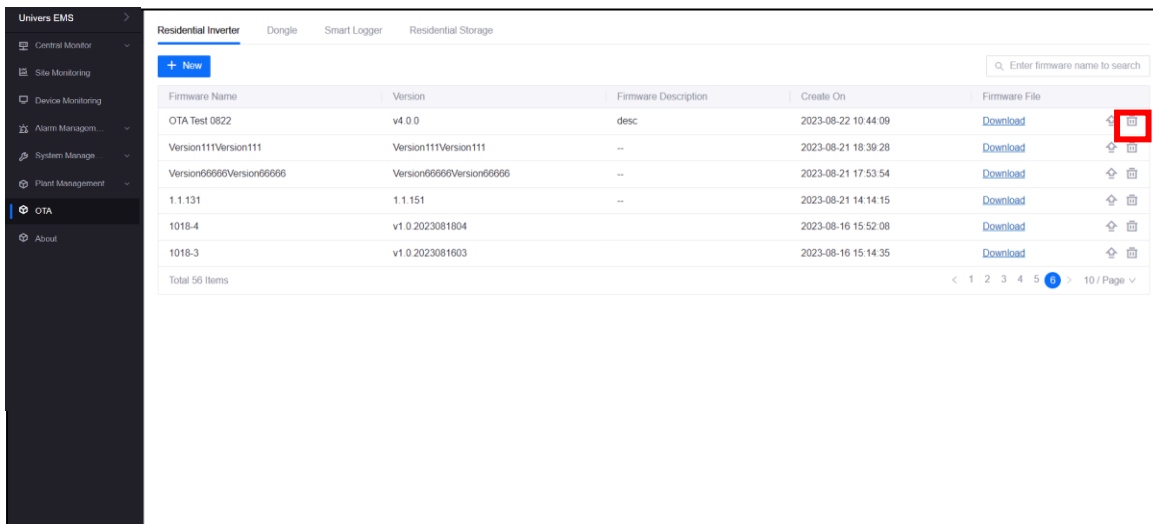
2. Fill in the firmware name and version. Upload the firmware package by clicking the button **[Click to upload]**. You can choose to add the description and label for this new firmware.

3. Click **[Submit]**.



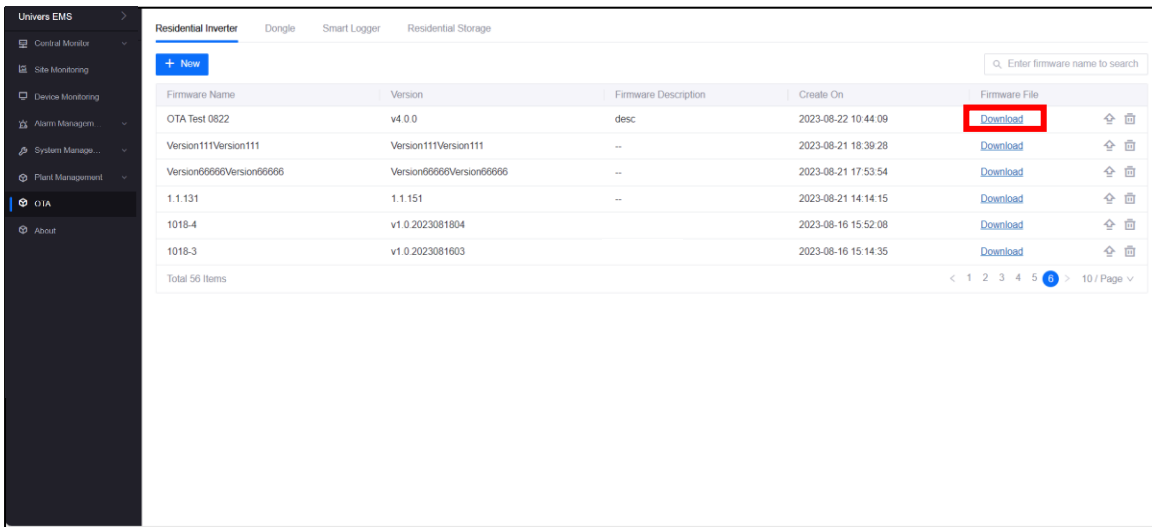
5.7.3.2 Delete Firmware

Users can delete an unwanted firmware package through **[Delete]** icon on the right hand column of the page.



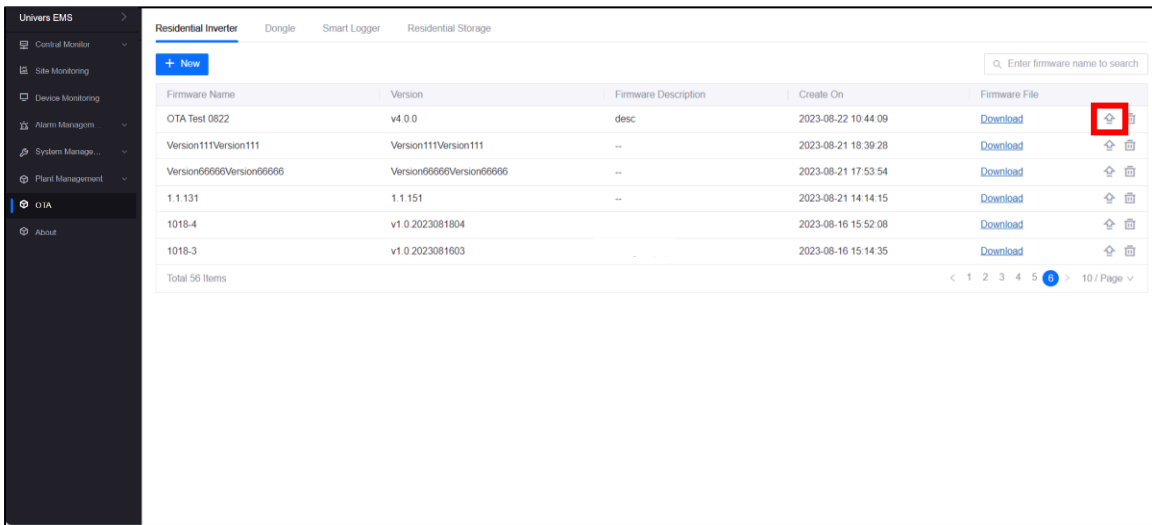
5.7.3.3 Download Firmware Packages

Users can download firmware packages through **[Download]** button in the Firmware File column.

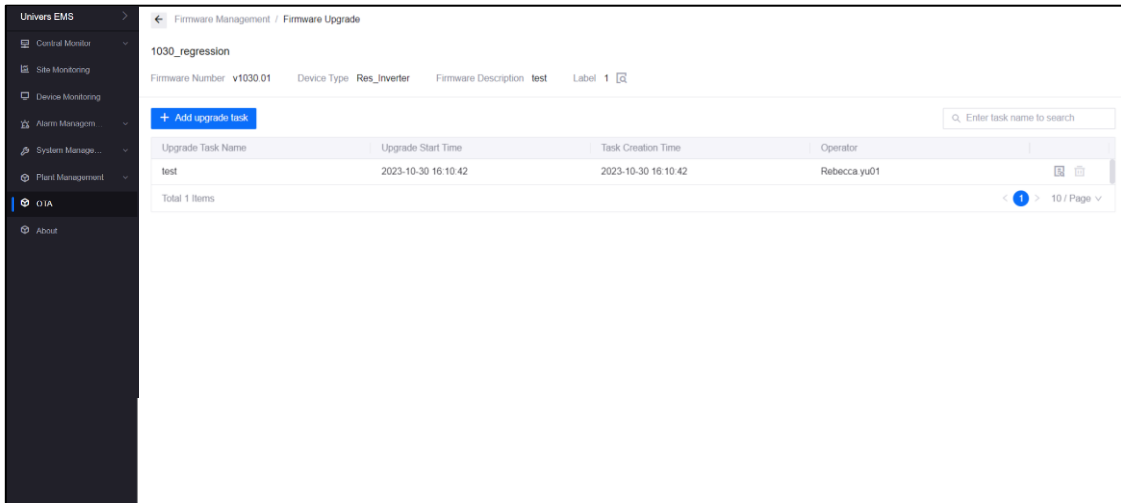


5.7.3.4 Upload Firmware Packages

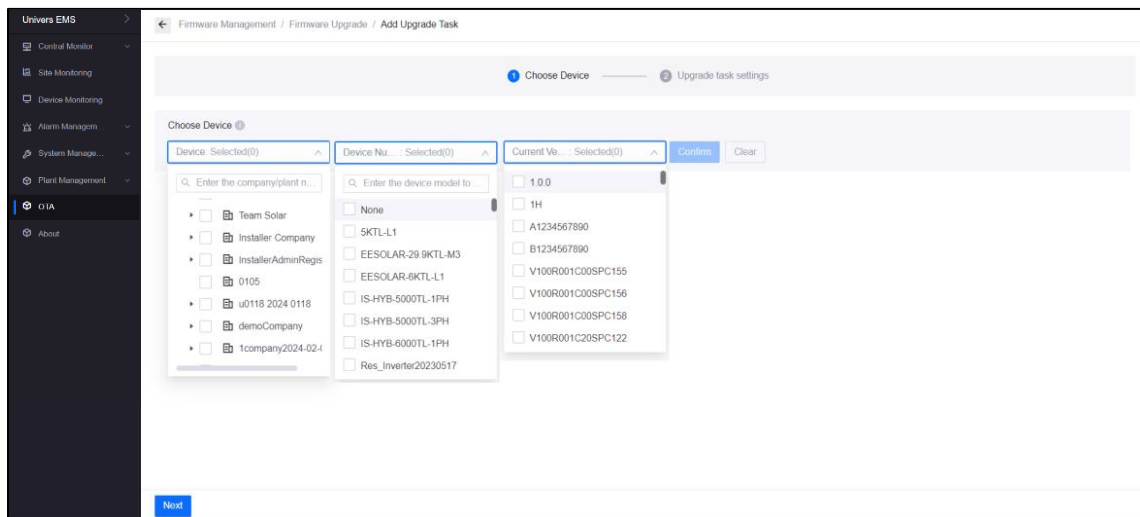
1. Users can upload firmware packages through **[Upload]** icon on the right hand column of the page.



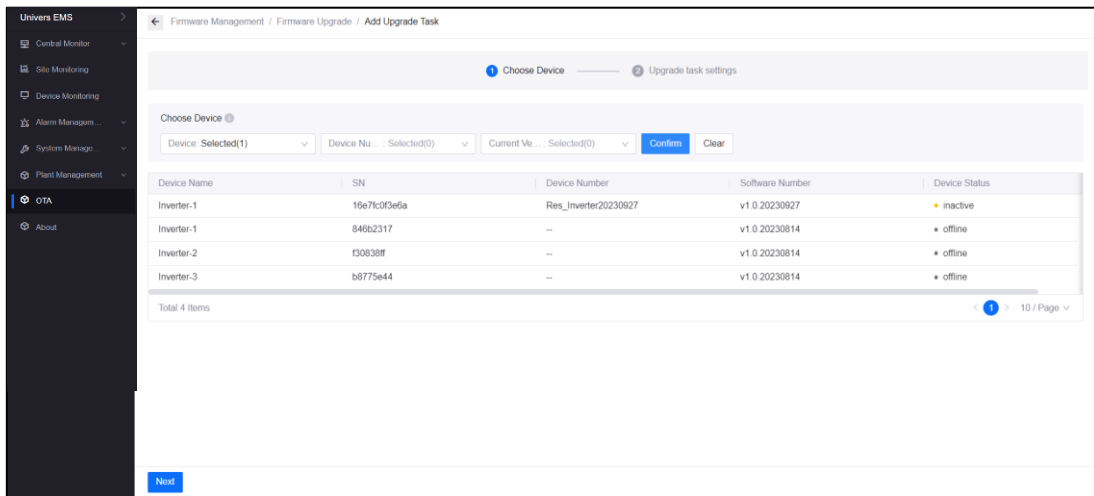
2. User will be able to track the upgrade task history on this page.
3. Click **[Add Upgrade Task]** to upload the firmware package.



4. Select the device/device(s) based on the device, device model or the version of the devices. The user can choose multiple devices.
5. Click [**Confirm**].

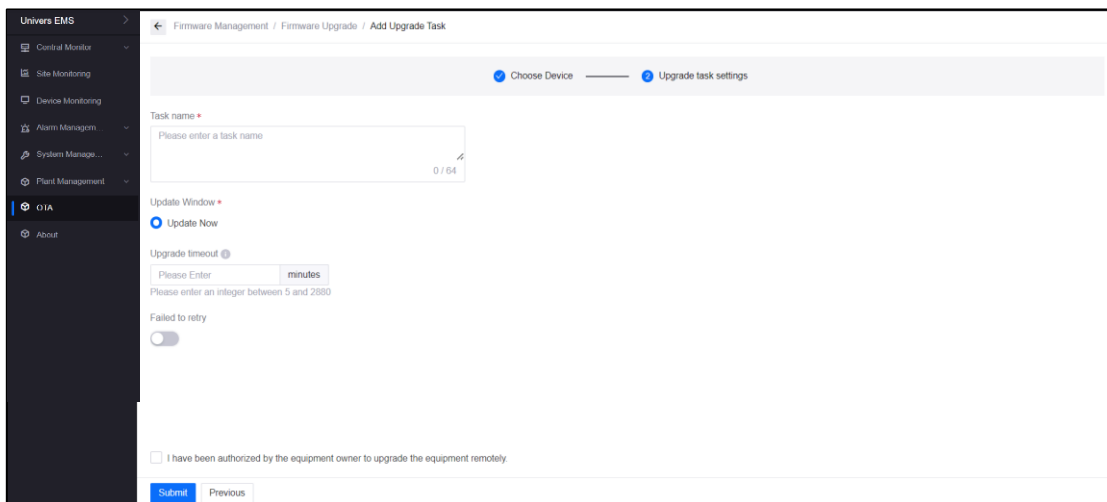


6. A list of devices to be upgraded will be displayed.

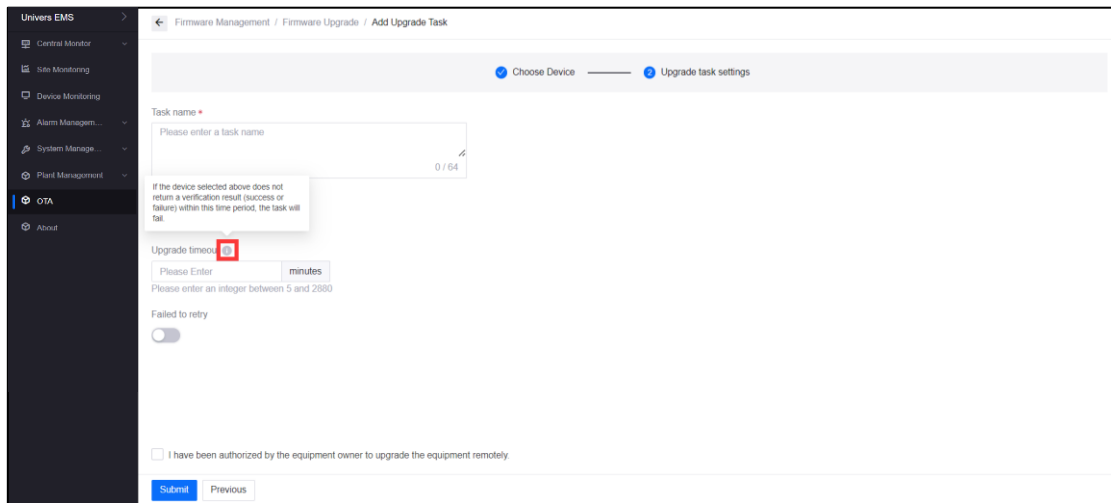


7. Click **[Next]**.

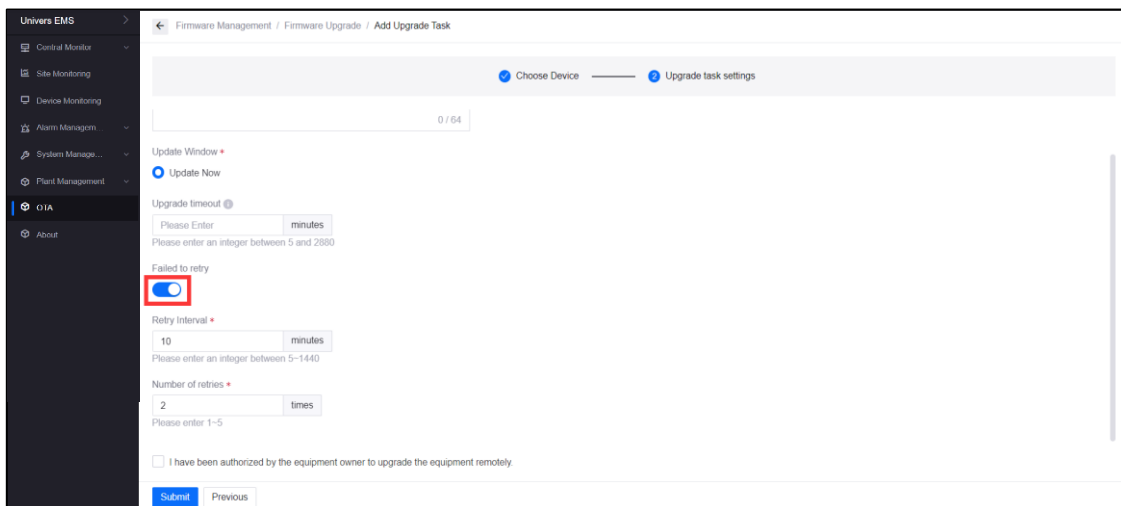
8. Fill in the upgrade task settings, such as task name, upgrade window.



9. The user can choose to enter an upgrade timeout minutes. Hover on the information icon to view the description of the Upgrade Timeout: If the device selected above does not return a verification result (success or failure) within this time period, the task will fail.



10. Toggle the switch to enable Failed to retry option. Enter retry interval minutes and number of retries. This option is for the system to retry upgrading if the first try has failed.



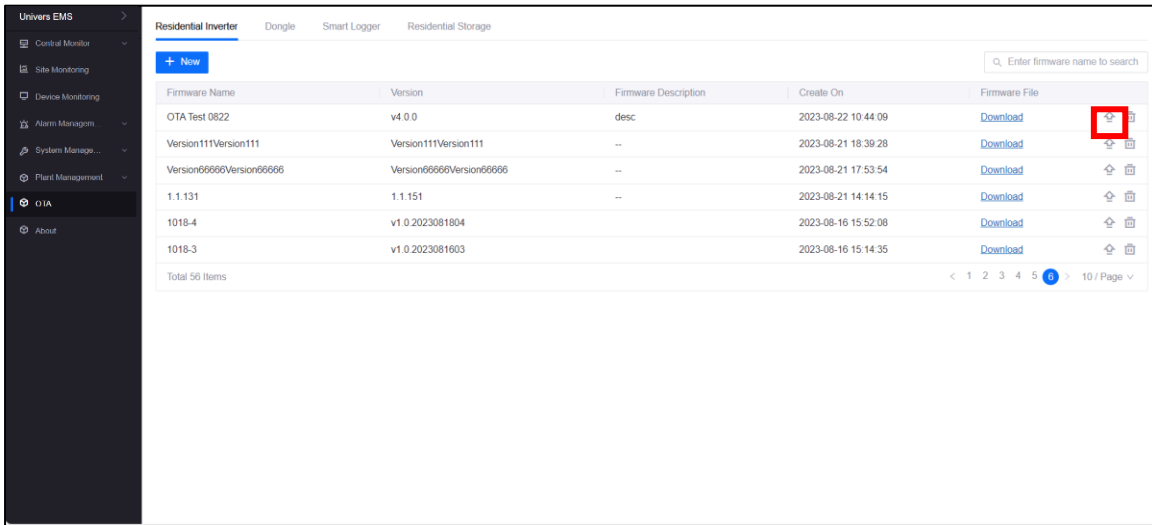
11. Tick the consent box and click **[Submit]** to initialize the upgrade task.

12. The system will issue the firmware and remotely upgrade the device according to the definition of the upgrade task.

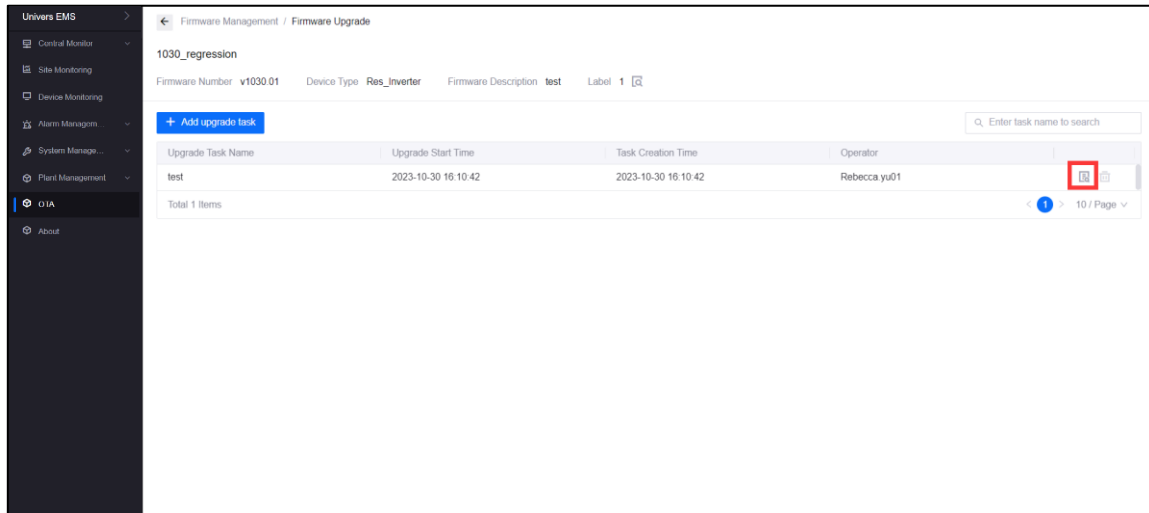
5.7.3.5 Track Upgrade Tasks

When the upgrade task starts, users can track the upgrade progress, and the page will display the upgrade progress. When the upgrade task is completed, the upgrade result will be displayed. If the upgrade fails, the reason for the failure will be reported. Users can retry the operation.

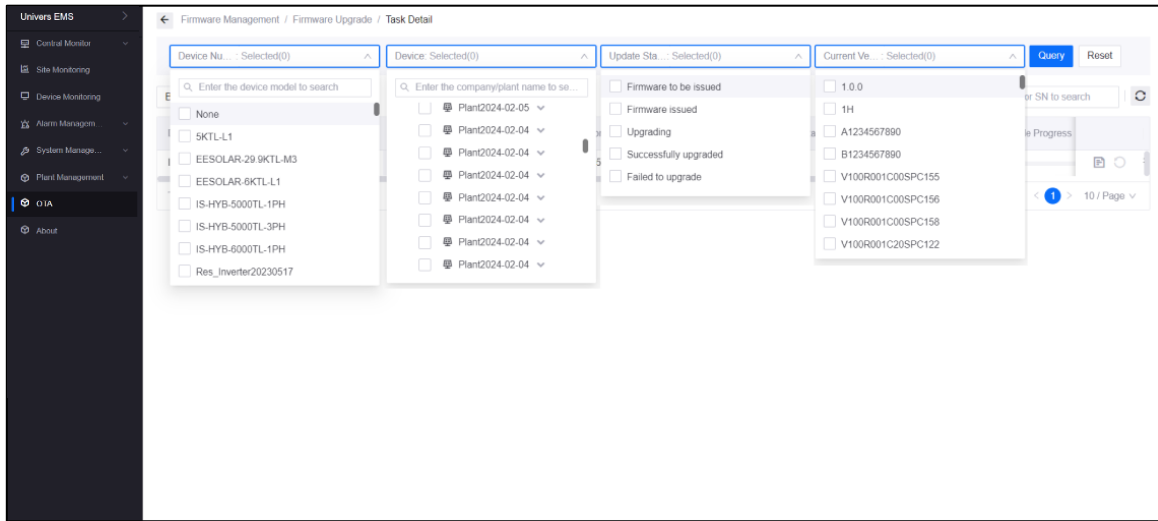
1. Select a firmware and click **[Upload]** icon on the right hand column of the page.



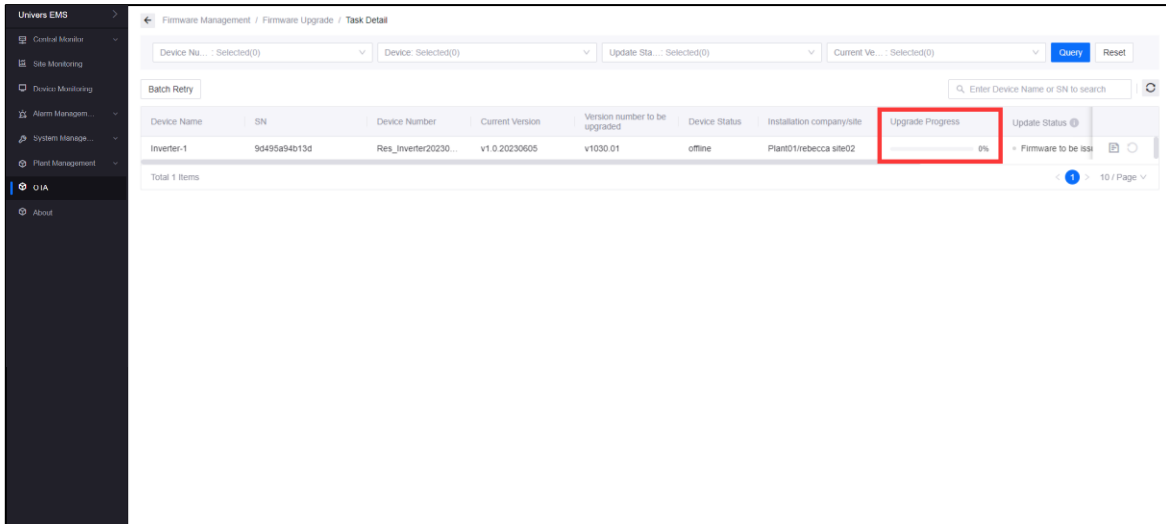
2. Click the **[details]** icon of the upgrade task that the user wants to track.



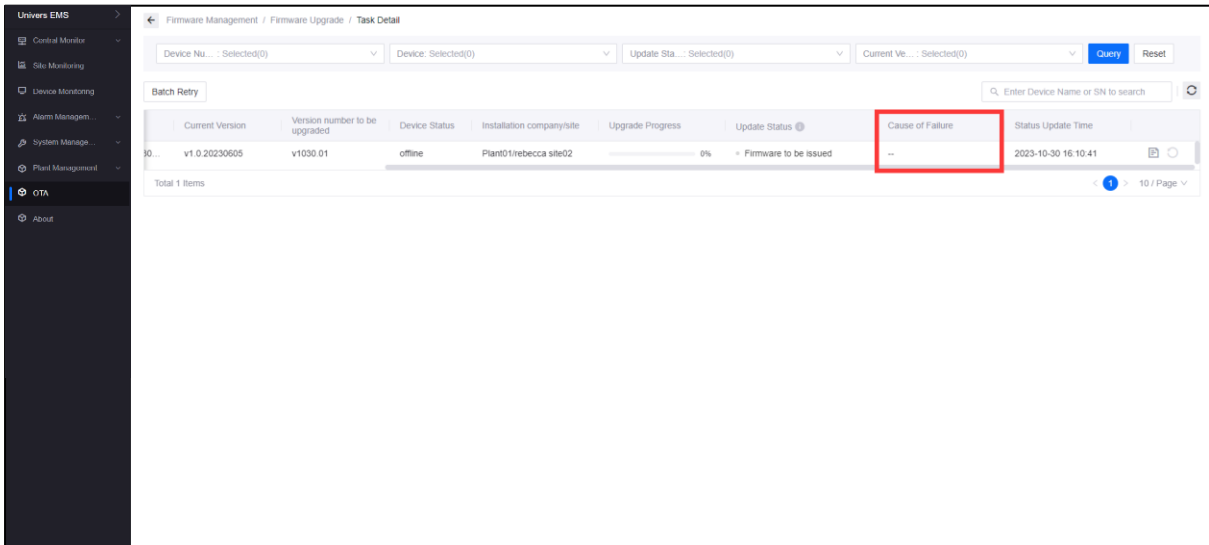
3. On the Task Detail page, the user can filter the tasks according to the device model, device, upgrade status and firmware version.



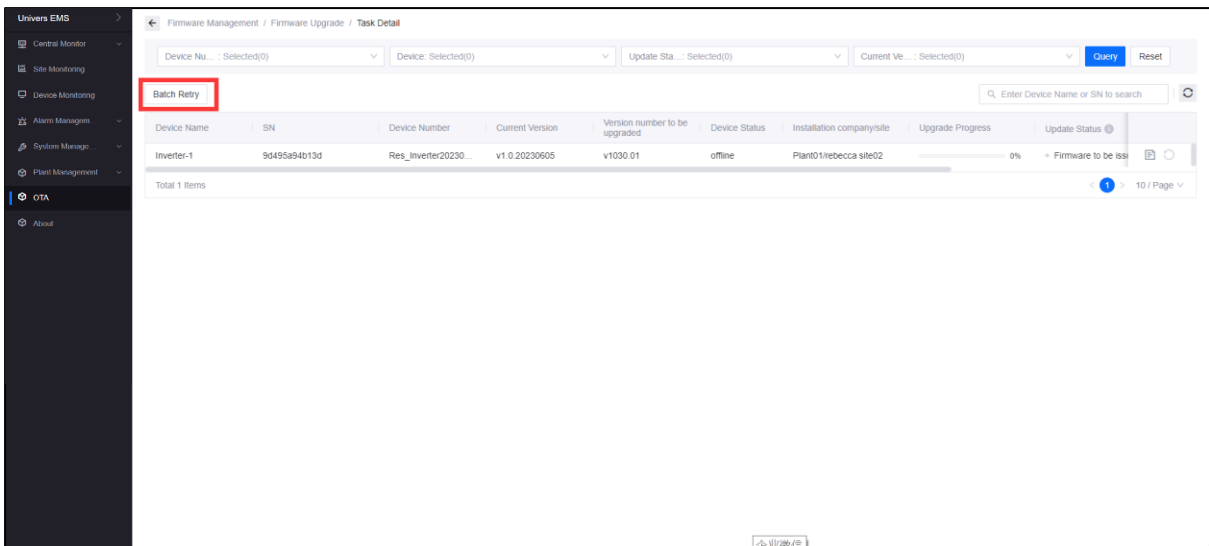
4. The user can track the upgrade progress and status of each task.



5. If the task has failed, the cause of failure will be displayed as well.



6. The user can click **[Batch Retry]** to batch retry upgrading.



5.8 Northbound Management

Pre-requisite: You are using a System Admin/Installer Admin account.

Northbound Management module is used to create northbound user and assign plant permissions to the northbound user.

The northbound user list includes User name, Identifier, Secret key and Description. Secret key is used if the user uses access token to invoke open API.

User name	Identifier	Secret key	Description
smokeTest2024-02-04	ca4af29f-e907-4c8e-8f5d-77b0f3b5b8f5	2b144*****c1d	smokeTest
1111	40e76a9e-bdfb-406c-aaf3-d1fe7c063c5	b6f5b*****404	1111
rebeccaOpenAPI01	2b470702-b291-4f99-882e-4af245878fef	14d9e*****aaf	rebeccaOpenAPI01
rebeccaOpenAPI	a3834e79-0cf3-4449-83f5-979547a66130	98114*****eaa	Open API SA
test 011010	5cae3805-e472-417d-b0c0-717dea65b16f	b7354*****594	test00001
test1113_04	64602a8b-50ff-4eb4-b499-15062c14baec	c3d99*****d22	test1113_04
test1113_03	f6d193ca-e748-4b41-a472-0d2520b7b128	75f05*****469	test1113_03
test1113_02	ca27d4ab-c6ac-4c7c-8cf2-9b6ae82fb2f3	25be7*****ebf	test1113_02
test1113_01	cb1c9e0a-fe1f-46b5-9008-a3584deda3be	43649*****c16	test1113_01
test1113	8caa54a4-6119-49f6-bdff-d4c8acd57ee	c557a*****fb4	test1113

Total: 29

5.8.1 Add Northbound User

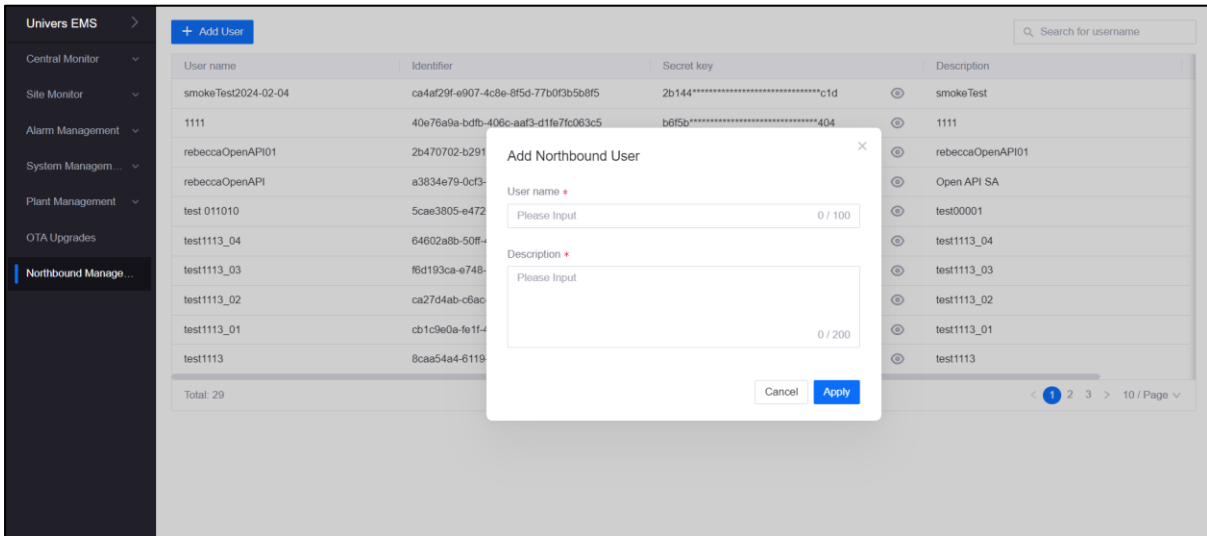
1. To add a northbound user, please click the button **[Add User]**.

User name	Identifier	Secret key	Description
smokeTest2024-02-04	ca4af29f-e907-4c8e-8f5d-77b0f3b5b8f5	2b144*****c1d	smokeTest
1111	40e76a9e-bdfb-406c-aaf3-d1fe7c063c5	b6f5b*****404	1111
rebeccaOpenAPI01	2b470702-b291-4f99-882e-4af245878fef	14d9e*****aaf	rebeccaOpenAPI01
rebeccaOpenAPI	a3834e79-0cf3-4449-83f5-979547a66130	98114*****eaa	Open API SA
test 011010	5cae3805-e472-417d-b0c0-717dea65b16f	b7354*****594	test00001
test1113_04	64602a8b-50ff-4eb4-b499-15062c14baec	c3d99*****d22	test1113_04
test1113_03	f6d193ca-e748-4b41-a472-0d2520b7b128	75f05*****469	test1113_03
test1113_02	ca27d4ab-c6ac-4c7c-8cf2-9b6ae82fb2f3	25be7*****ebf	test1113_02
test1113_01	cb1c9e0a-fe1f-46b5-9008-a3584deda3be	43649*****c16	test1113_01
test1113	8caa54a4-6119-49f6-bdff-d4c8acd57ee	c557a*****fb4	test1113

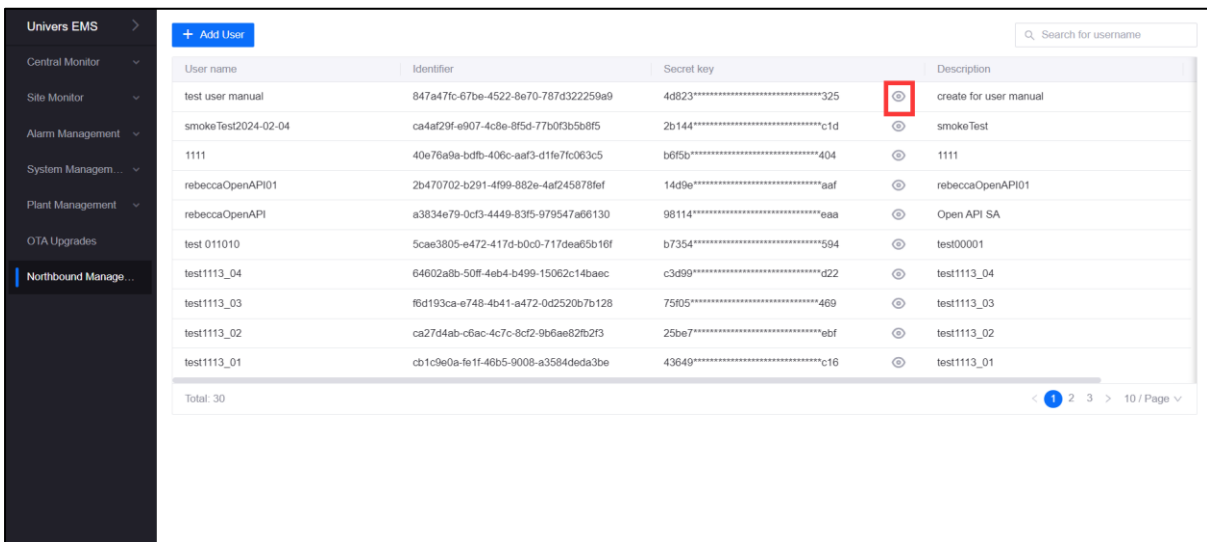
Total: 29

2. Input the User name and the description.

3. Click **[Apply]** and the northbound user will be created.

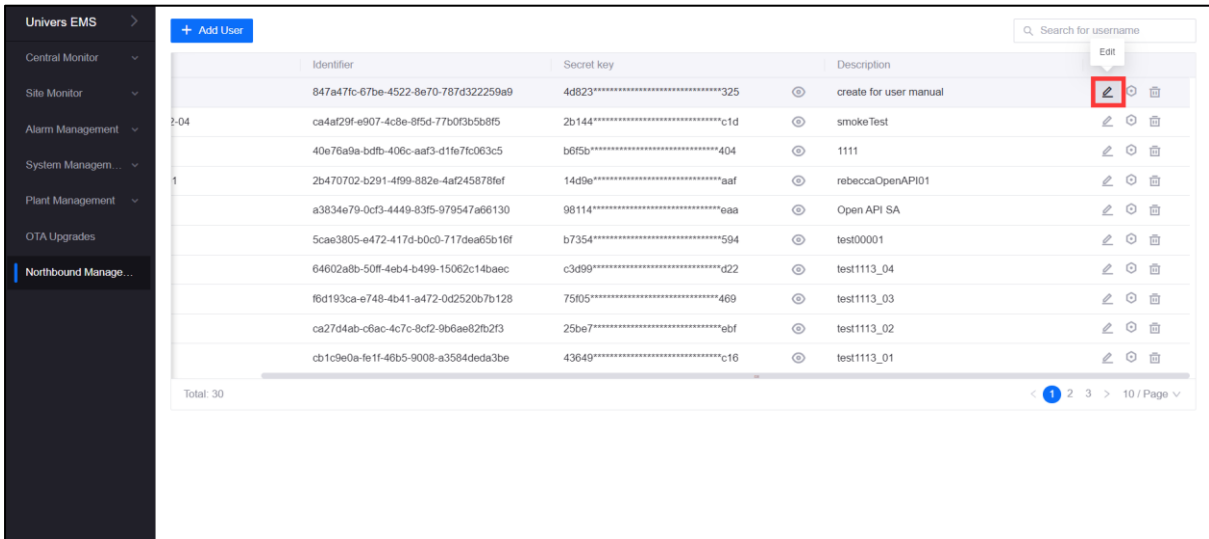


4. Click the **[View]** icon beside the Secret Key, you will be able to view the full secret key.

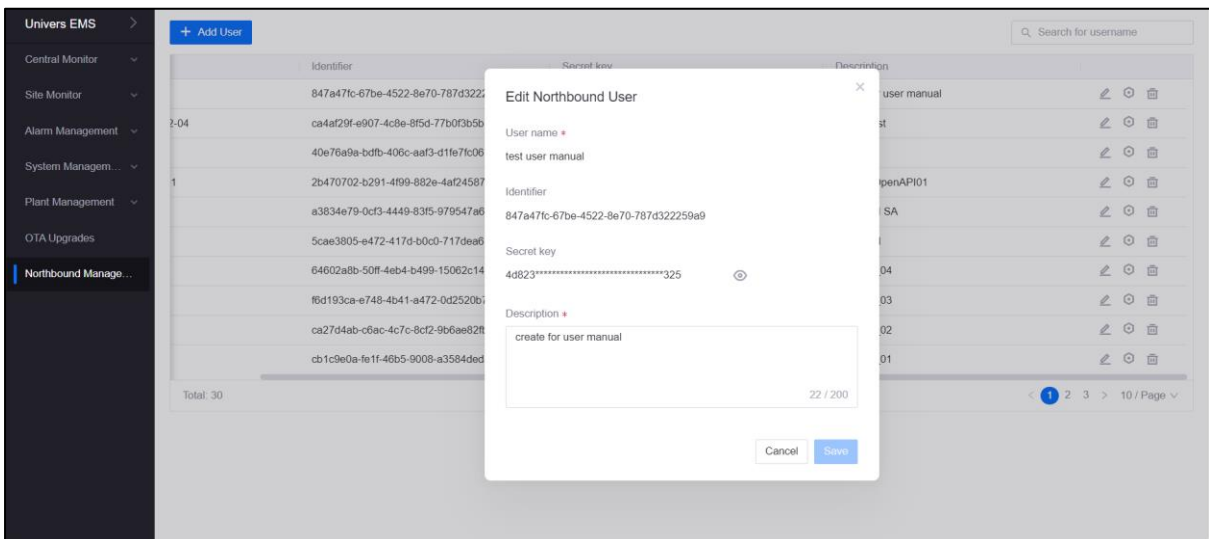


5.8.2 Edit Northbound User

1. Scroll the window to the right and click the **[Edit]** icon.



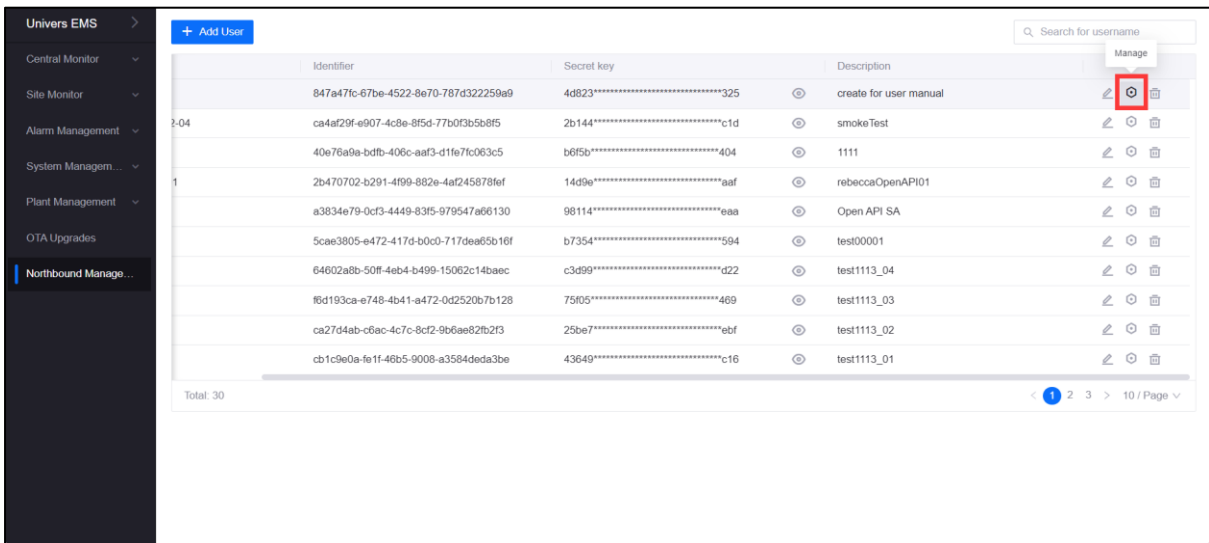
2. You can edit the description for the northbound user.



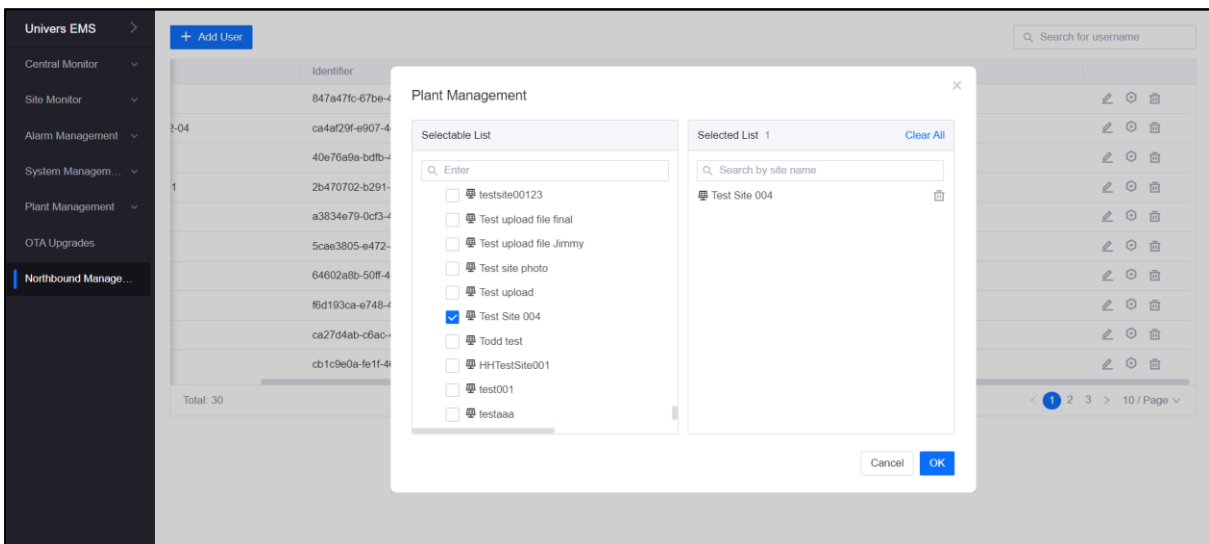
3. Click **[Save]** to save the changes.

5.8.3 Manage Northbound User

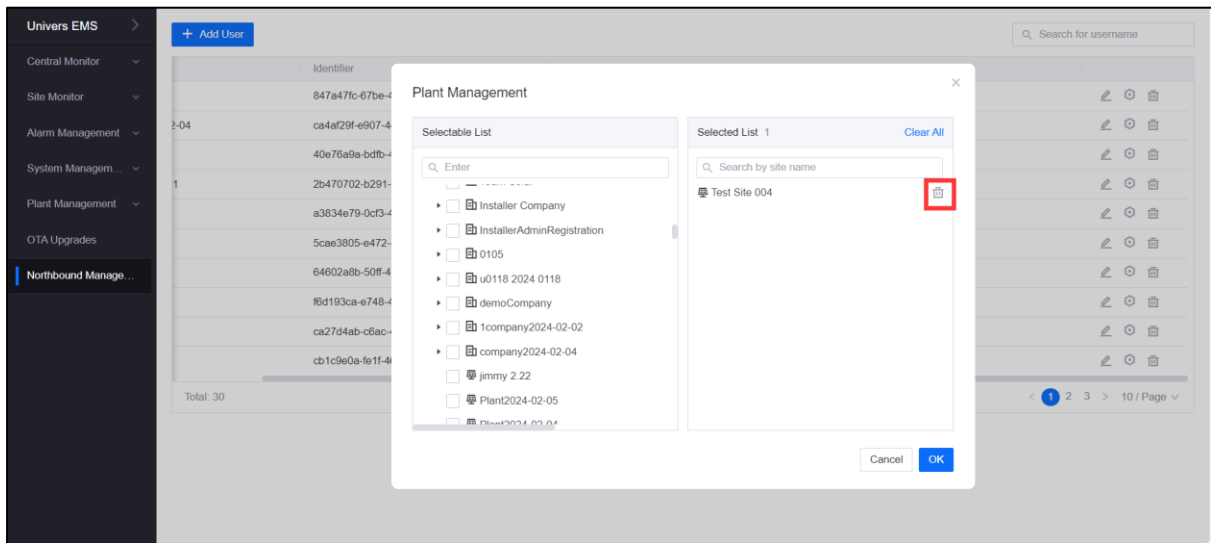
1. Scroll the window to the right and click the **[Manage]** icon.



2. Tick the box of the plants that you want to assign to the northbound user. The selected plants will appear on the Selected List on the right. You can select multiple sites.



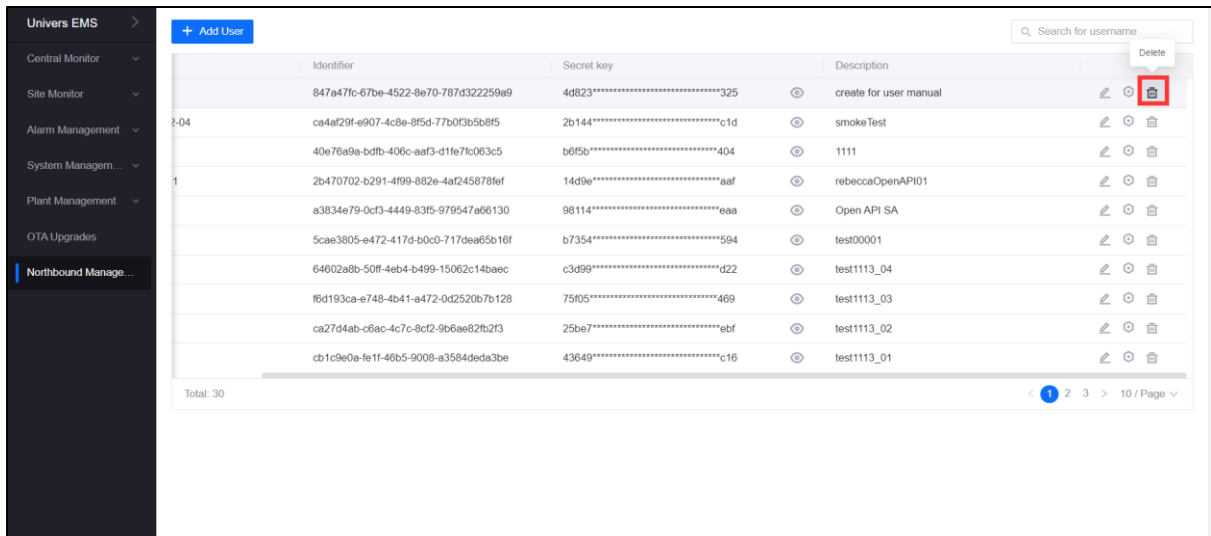
3. Click the **[Delete]** icon on the right if you do not wish to grant the permission of the selected site to the northbound user.



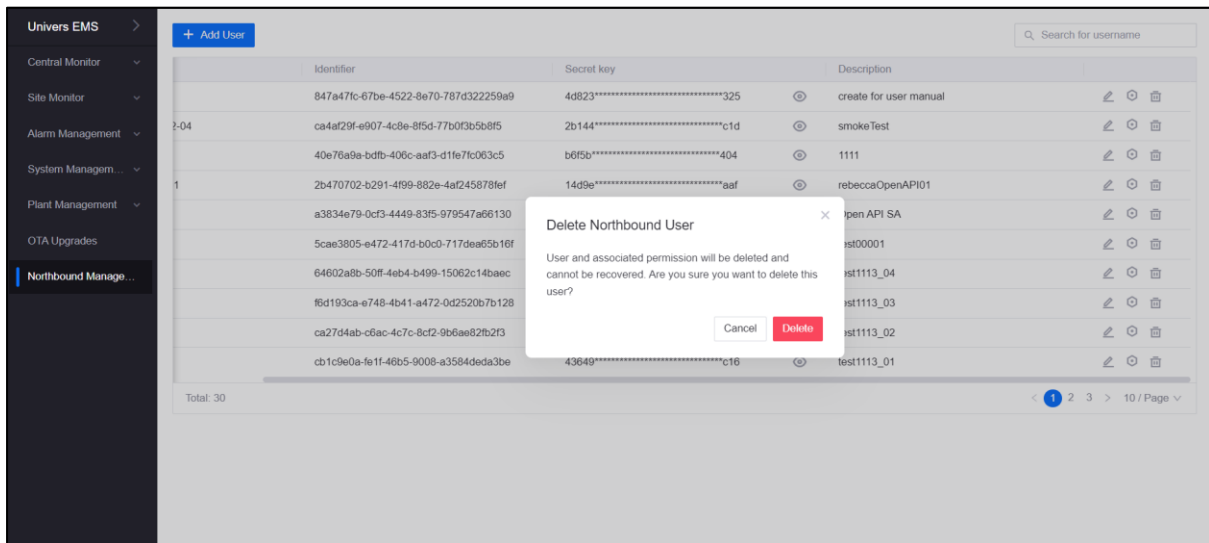
4. Click **[OK]** to assign the plants permission to the northbound user.

5.8.4 Delete Northbound User

1. Scroll the window to the right and click the **[Delete]** icon to delete the northbound user.



2. Click the **[Delete]** button on the pop-up window to double confirm the deletion.



3. The northbound user is then deleted.

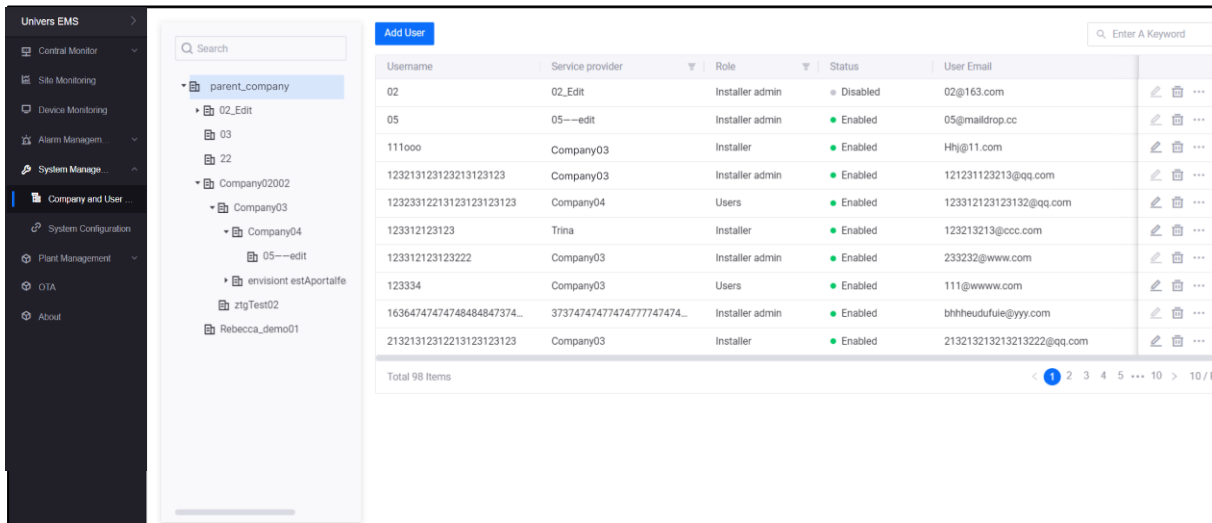
5.9 Company & User Management

5.9.1 Company Management

Pre-requisite: You are using a System Admin/Installer Admin/Installer account.

The application provides the module of multi-level company management, which can be flexibly supported by the multi-level distributor and installer model of overseas household savings. Company Management module is for System Admin and Installer Admin to manage the sub-companies. The user can create, edit, or delete a sub-company. The user is allowed to create up to four levels of sub-companies under the root node.

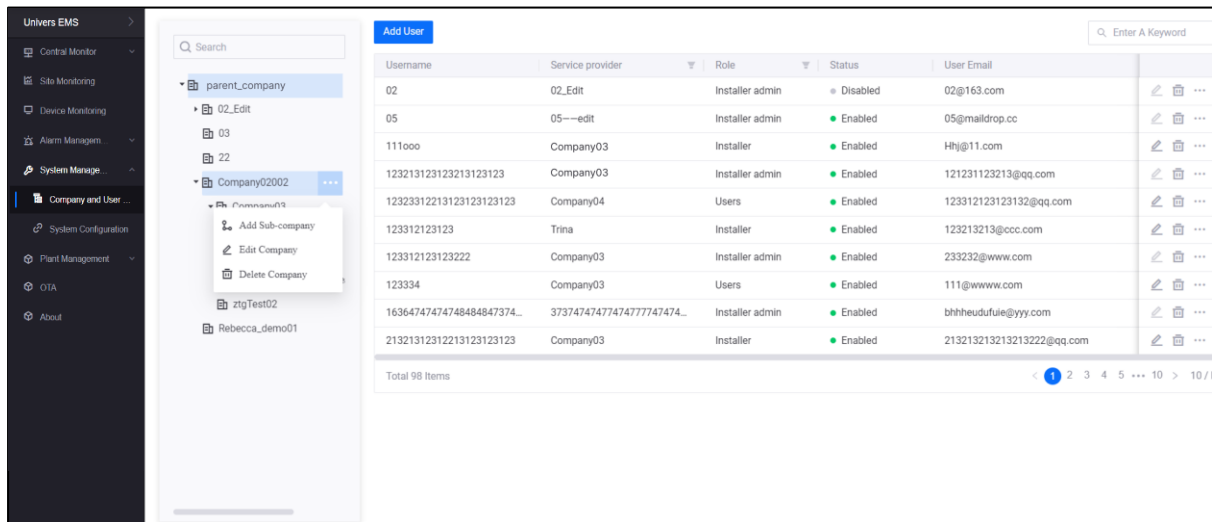
You can access the page by go to **[System Management]** and then **[Company and User Management]**. The page will show a list of sub-companies that you have permission, together with the user list under the selected company.



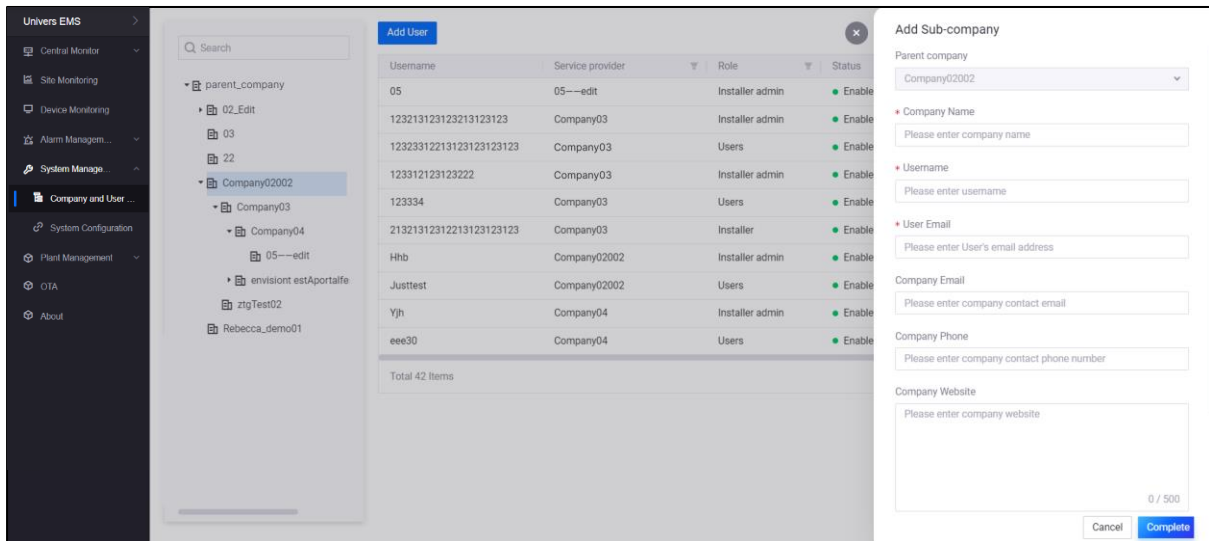
5.9.1.1 Create Sub-Company

You can create more sub-company if needed.

1. Hover your mouse over a parent company that you want to add the sub-company to and hover over the [...] button on the right of the company.
2. Click on **[Add Sub-company]** button.



3. Enter the **Company name**, **Username** and **User email**. This user account will automatically be installer admin for this company.



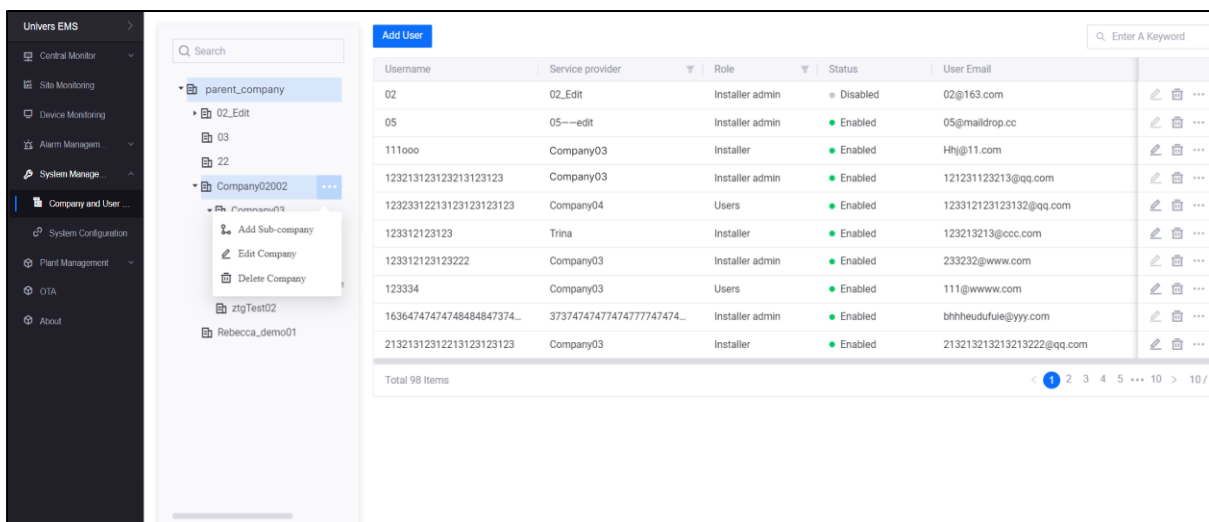
4. Press the **[Complete]** button to create the sub-company.

Note: Maximum four levels of company are allowed.

5.9.1.2 Delete Sub-Company

Pre-requisite: You only can delete a sub-company if there is no sub-companies, no users and no plants under this sub-company.

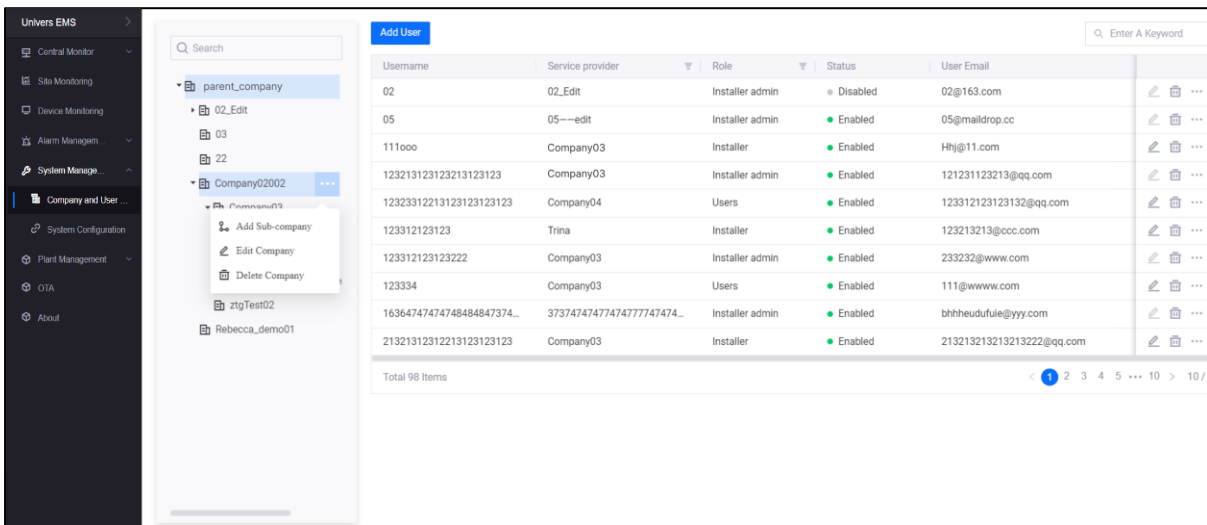
1. Hover your mouse over a company that you want to delete and hover over the **[...]** button on the right of the company.
2. Click on **[Delete Company]** button.



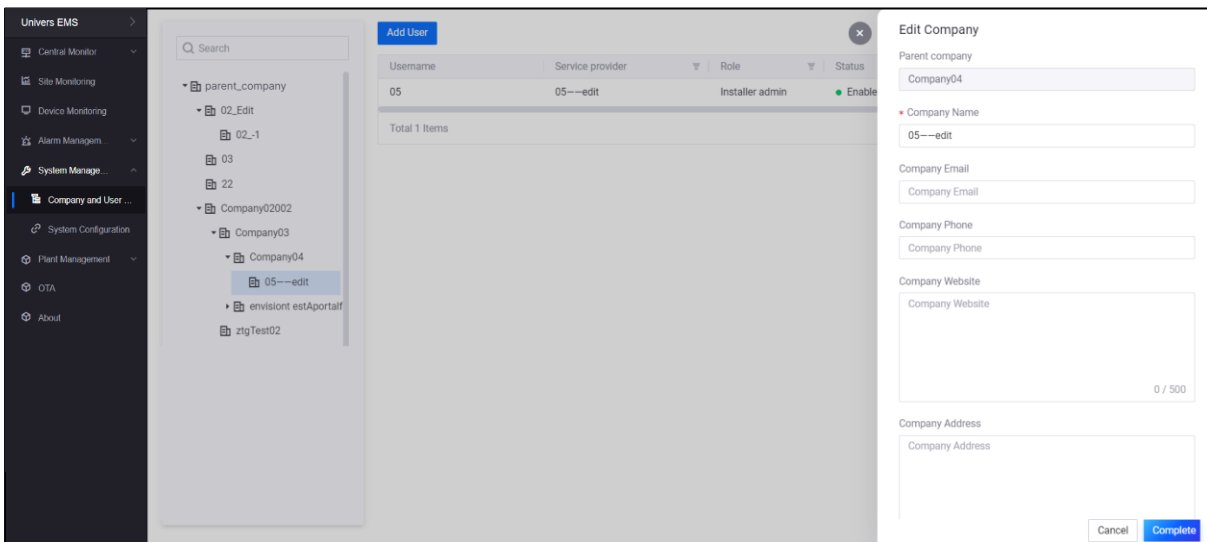
3. Press **[Delete]** on the pop-up window to confirm the deletion.

5.9.1.3 Edit Sub-Company

1. Hover your mouse over a company that you want to edit and hover over the **[...]** button on the right of the company.
2. Click on **[Edit Company]** button.



3. You can edit the company information such as the company name, email, phone, website, address and invitation code. Parent company is not editable.



4. Press **[Complete]** to save the changes.

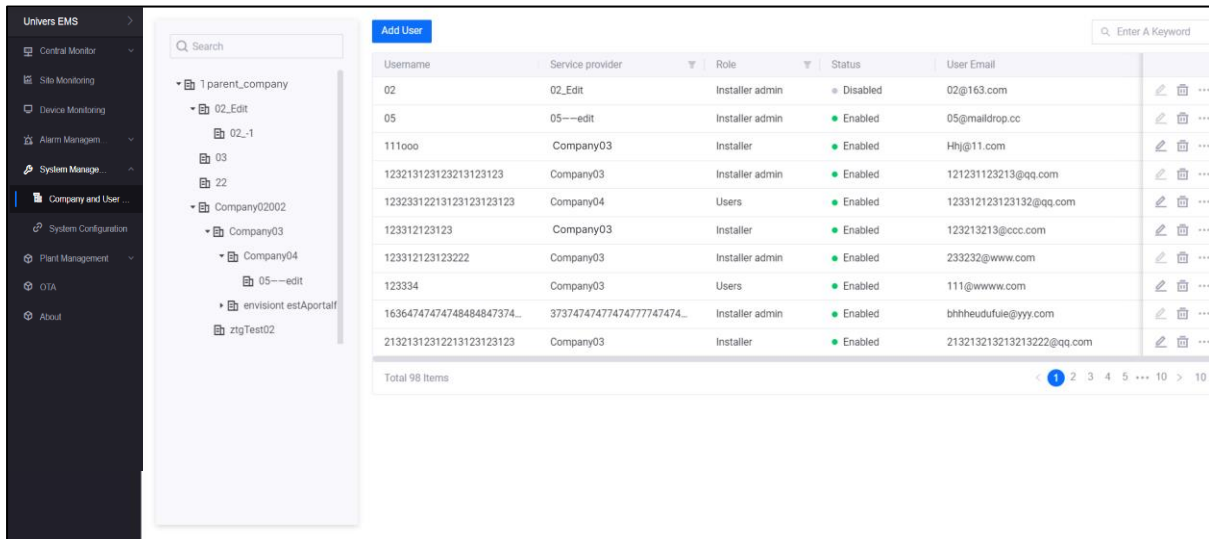
5.9.2 User Management

Pre-requisite: You are using a System Admin/Installer Admin/Installer account.

User Management page is designed for Admin, Installer Admin and Installer to manage the user accounts under his/her authority. This involves creating, deleting, and disabling a user account or reset password for a user account. Distinct roles have different management permissions:

- System Admin: can manage Installer Admin, Installer and End User accounts.
- Installer Admin: can manage Installer and End User accounts.
- Installer: Installer could manage End User accounts.

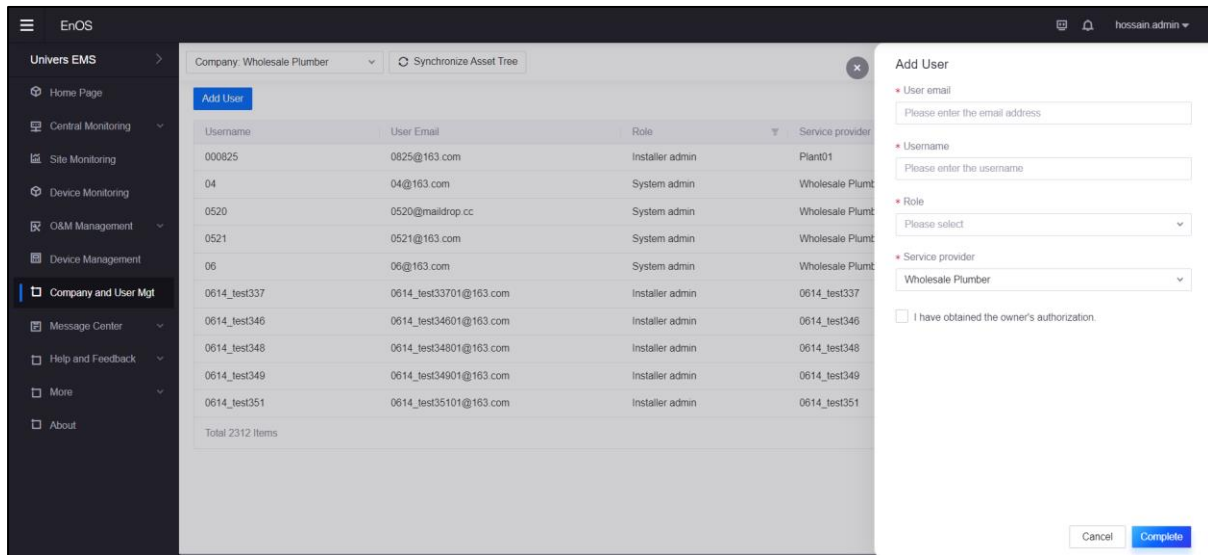
You can access the page by go to **[System Management]** and then **[Company and User Management]**. The page will show a list of sub-companies that you have permission, together with the user list under the selected company.



5.9.2.1 User Account Creation through Management Page

For accounts already added in the App Portal Console, our system will automatically integrated their accounts in our application.

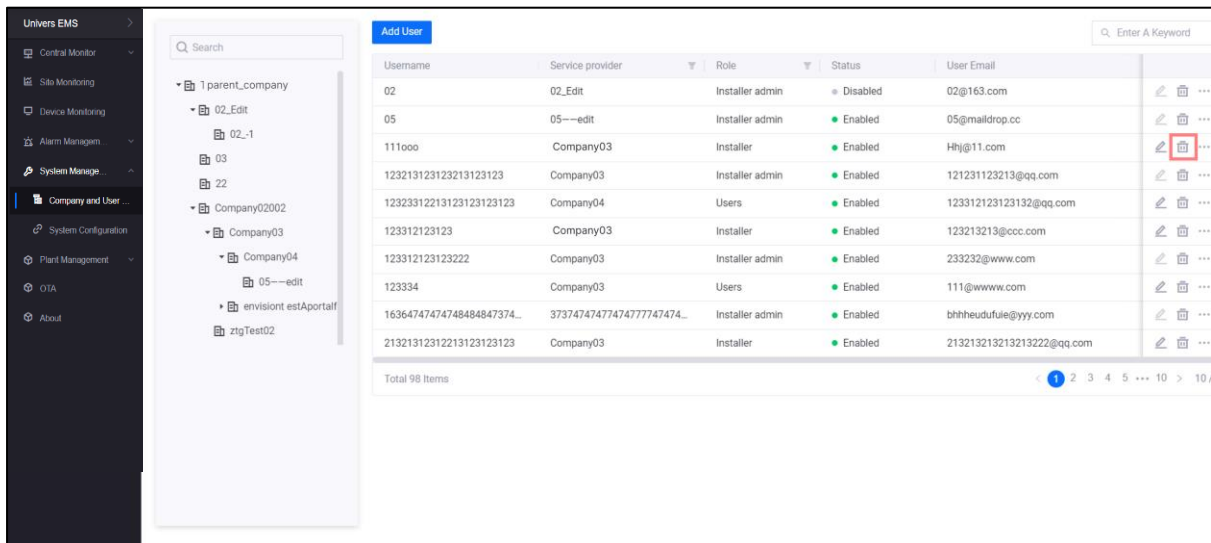
1. Click **[Add User]** button on the top of the user list.



2. User email: enter the user's **email** address. If the user's email has been already registered in App Portal Console, it will auto populate the username corresponding to the email address and the username is uneditable. If the user's email has not been registered, the account will be created here, no need to add the account again in App Portal Console.
3. Username: enter the **Username** for the user.
4. Role: select **[Installer Admin]/[Installer]/[End User]**.
5. Service provider: select company this user belongs to
6. Check the **[box]** to consent that you have obtained the owner's authorization.
7. Press the **[Complete]** button to create the account.

5.9.2.2 User Account Deletion

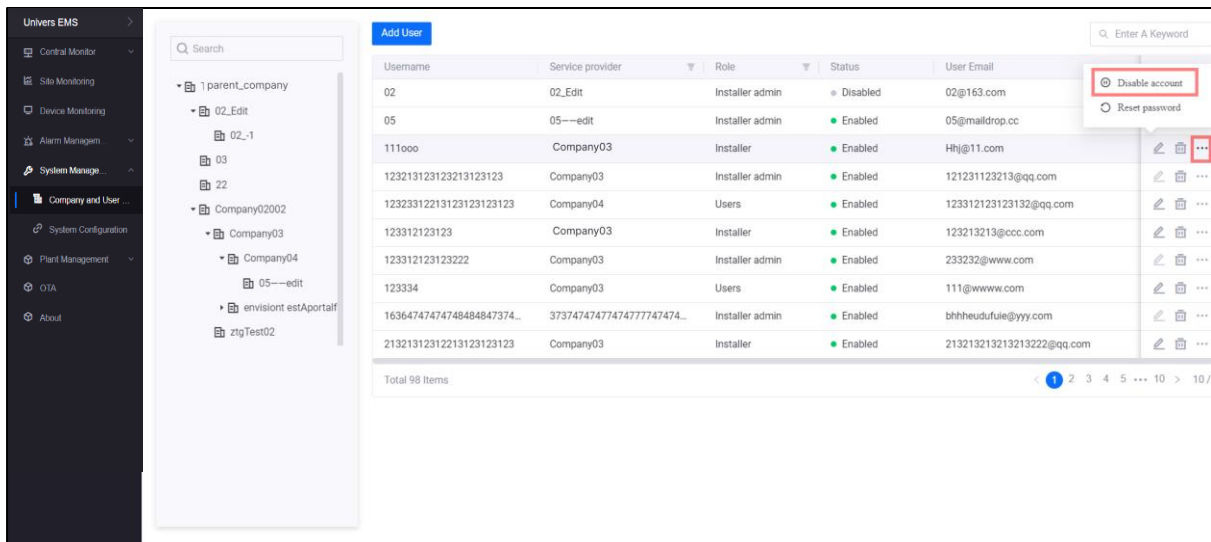
1. Choose a user account that you wish to delete and click on the **[Delete]** button on the right hand side of the account.



2. Press **[Delete]** on the pop-up window to confirm the deletion.

5.9.2.3 User Account Disabling

1. Choose a user account that you wish to disable, hover onto the [...] button on the right hand side of the account and click **[Disable account]**.

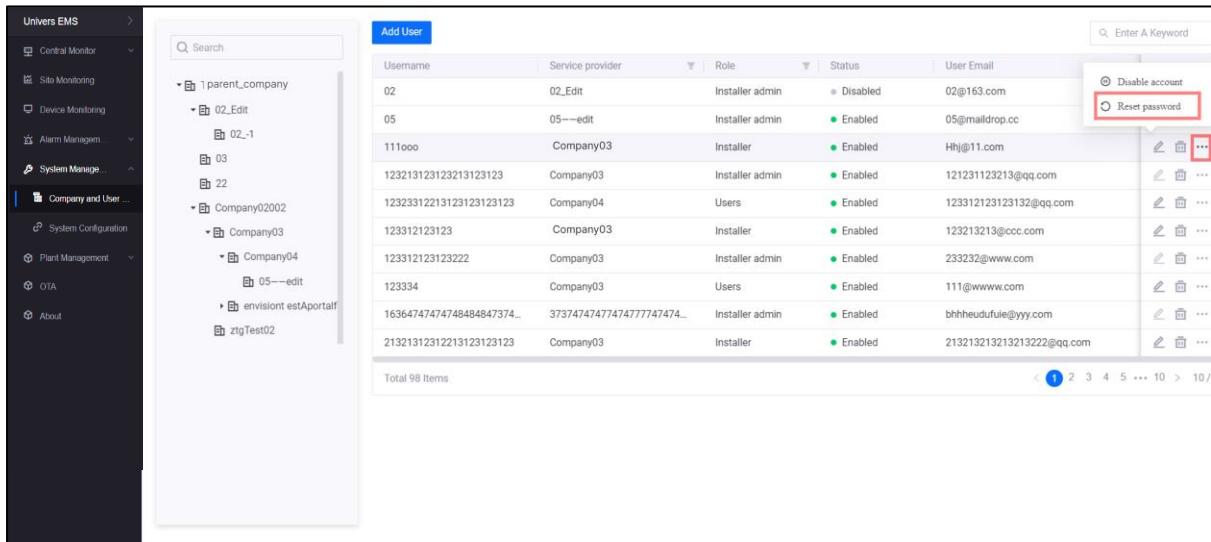


2. You will see the status of the account became 'Disabled'.

3. To enable the account, perform the same steps.

5.9.2.4 Password Resetting

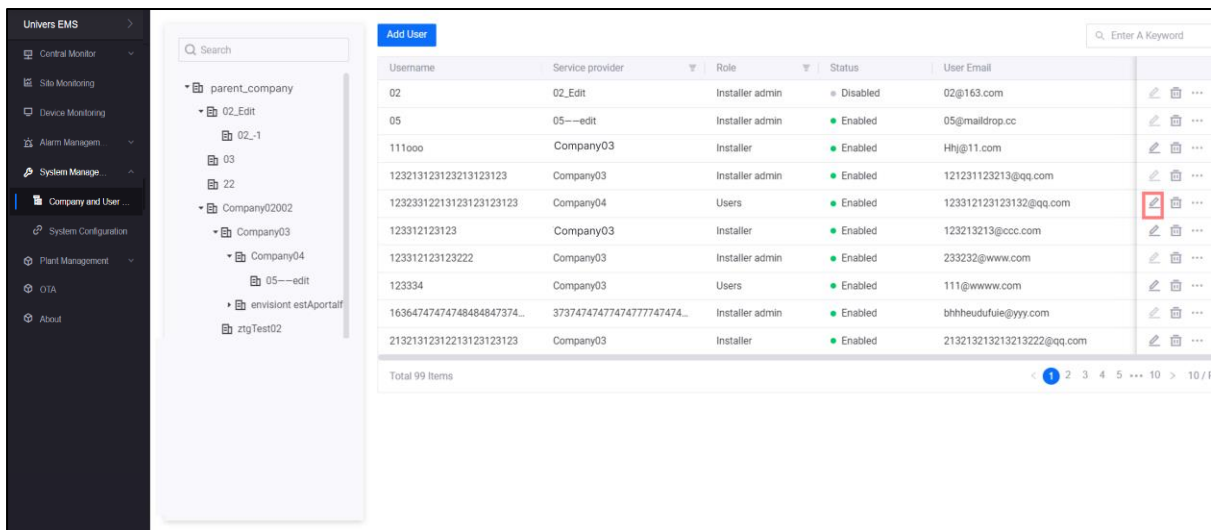
1. Choose a user account that you wish to reset the password, hover onto the [...] button on the right-hand side of the account and click **[Reset password]**.



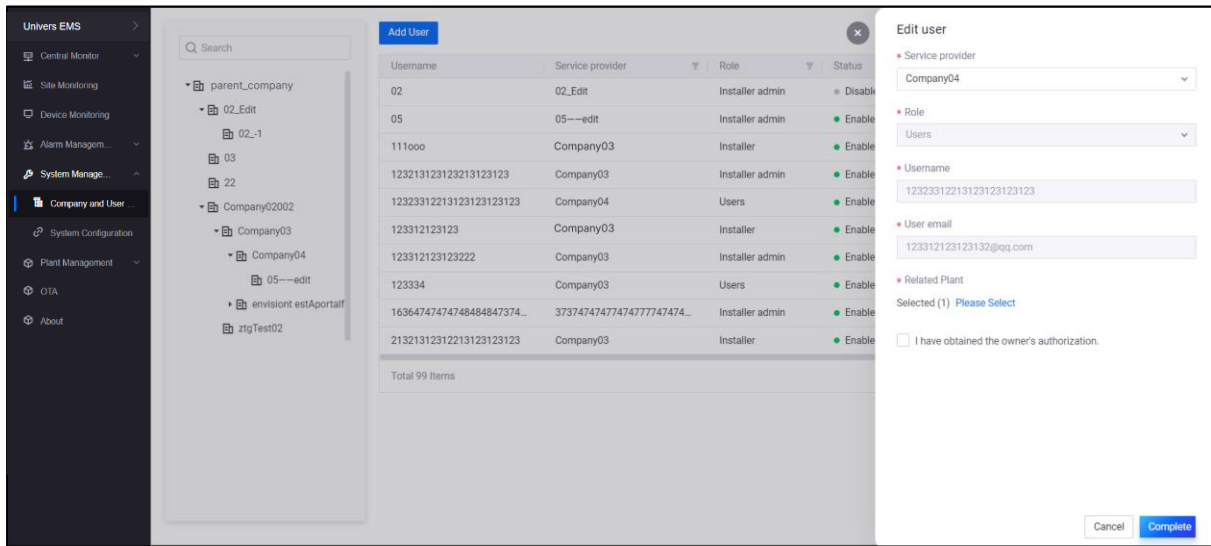
2. A password reset email will be sent to this user's email.

5.9.2.5 User Account Editing

1. Choose a user account that you wish to edit and click on the **[Edit]** button on the right-hand side of the account.



2. You could edit the company and the plant for the user.

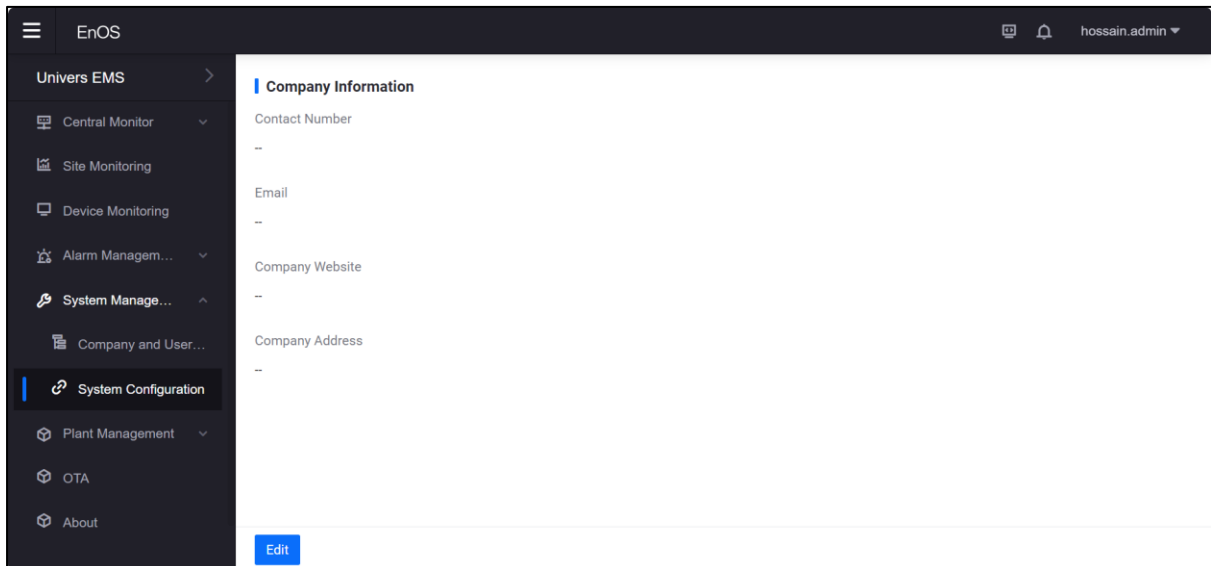


3. Tick the box after you have obtained the owner’s authorization and press **[Complete]** to save the changes.

5.9.3 System Configuration

Pre-requisite: You are using a system admin account.

Go to **[System Management] – [System Configuration]**, you can edit your company’s basic information here.

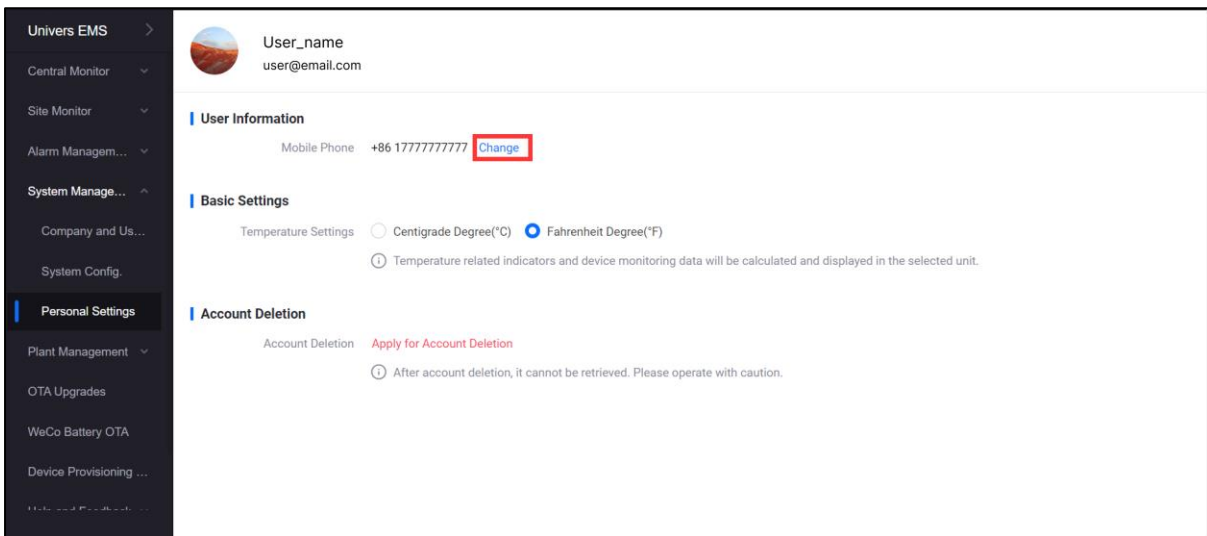


5.10 System Management

5.10.1 Edit User Information

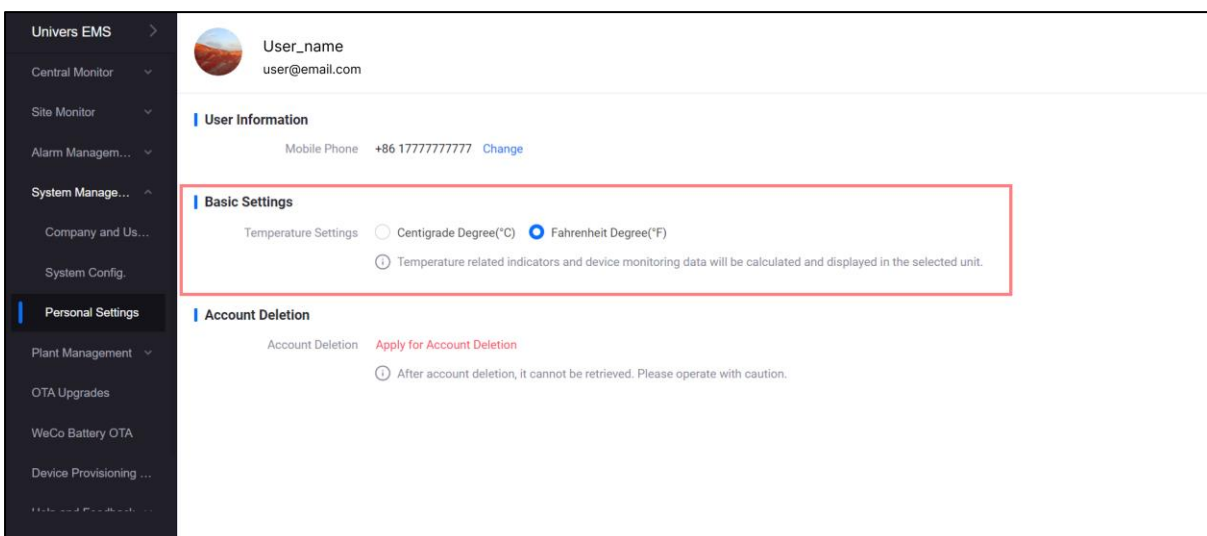
In personal settings, you could edit your own phone number information.

1. Click on the **[Change]** button besides the mobile number.
2. Choose your country code and enter your phone number.
3. Click **[OK]** to save.



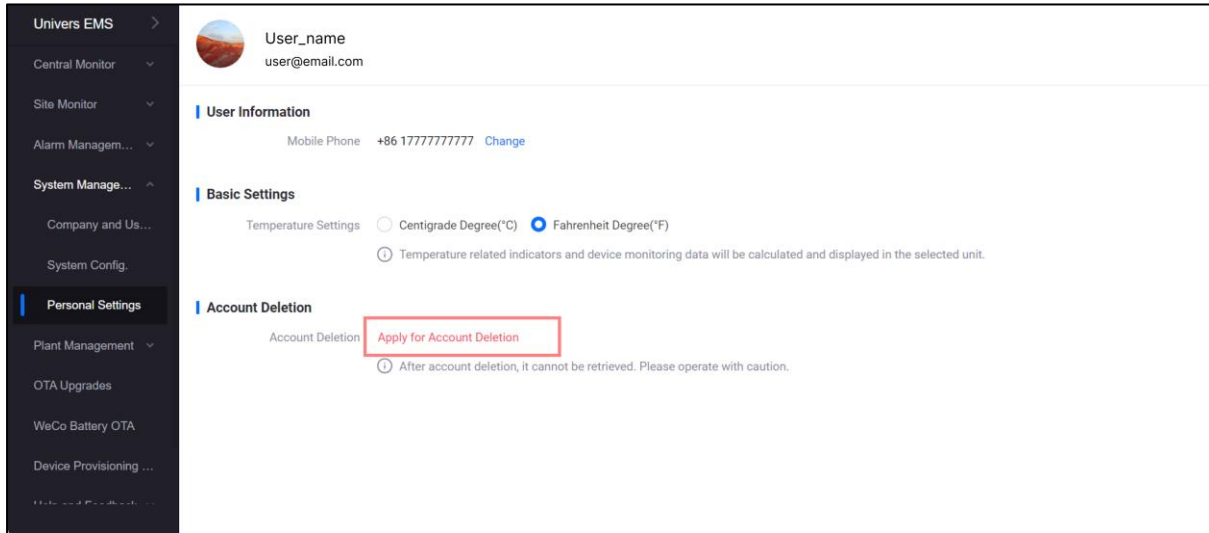
5.10.2 Temperature Setting

You could configure the temperature unit by choosing Centigrade degree or Fahrenheit degree to calculate and display the temperature related indicators and device monitoring data in the selected unit.



5.10.3 Account Deletion

You could delete your own user account by clicking the **[Apply for Account Deletion]** button.



Read the account deletion notice carefully, after you have deleted your account, you are not able to use this account anymore and all the related data will be deleted.

Click on the box to agree with the account deletion notice and click **[Apply for deletion]**.

