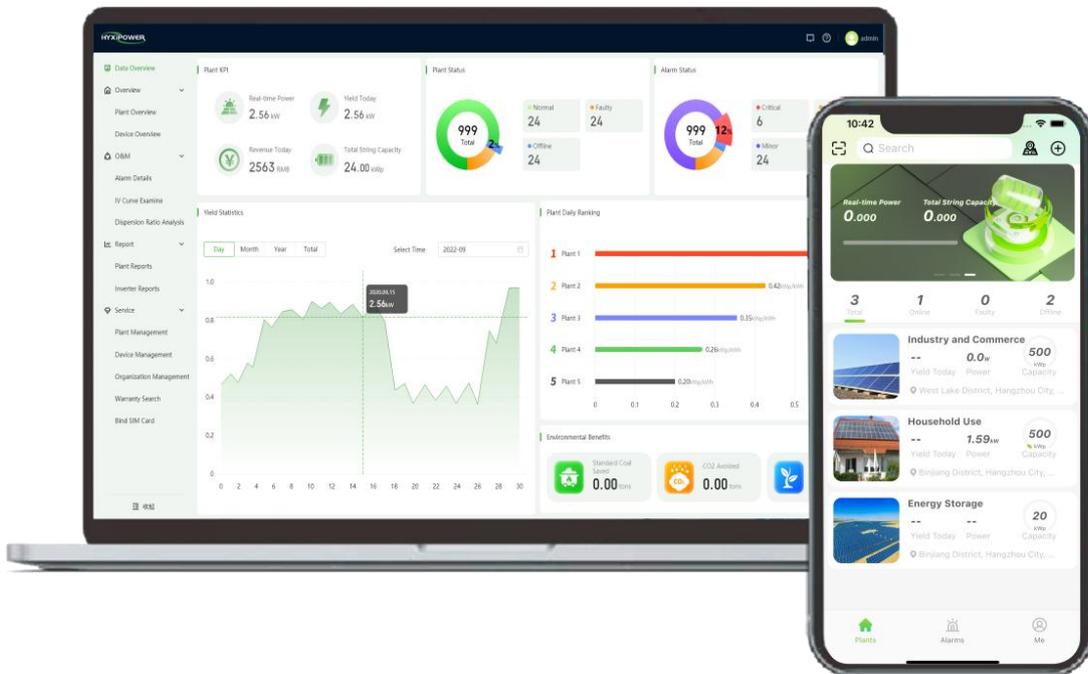




## User Manual

# HYXiPOWER Cloud Platform



Version : UM-01

Product information is subject to change without notice

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## Revision History

Version	Time	Description
UM-01	2024.07.10	First official release

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# 1. About the Manual

## 1.1 Manual Content

This manual introduces the functions and operational procedures of the HYXiPOWER Cloud Platform to facilitate users in operating and managing the HYXiPOWER Cloud Platform, meeting user needs.

## 1.2 Applicable Content

The HYXiPOWER Cloud Platform is applicable to users who have purchased Hyxi GPRS/4G, WIFI, Ethernet version DCS or DMU, inverters, etc. The plant data monitored by the DCS or DMU is uploaded to the HYXiPOWER Cloud Platform for viewing and can be logged in through the Cloud Platform. It is used for monitoring plants, thereby enabling the visualization and management of plant data.

## 1.3 Applicable Requirements

Web page URL: <https://www.hyxicloud.com>

When accessing the web interface, please pay attention to the following points:

The minimum compatible browser version for access is Google Chrome V92.0 or above;

The system resolution is recommended to be 1920\*1080 for optimal effect.

## 1.4 Target Readers

This manual is mainly aimed at professional technicians and users who access, manage, and operate the HYXiPOWER Cloud Platform. It requires a certain level of network knowledge and familiarity with the HYXiPOWER's related products.

## 1.5 Manual Usage

Please read the manual carefully before using the product and keep the manual in an easily accessible place.

The content of the manual will continue to be updated and corrected, but there may be slight discrepancies or errors with the actual product. Users should refer to the actual product purchased and can download the latest version of the user manual through the Service&Support\_Download Center at [hyxipower.com](http://hyxipower.com) or obtain it through sales channels.

## 2 How to Start Using

### 2.1 Overview

The HYXiPOWER Cloud Platform is a new generation of smart cloud platform for new energy developed by Hyxi Technology. This product integrates real-time monitoring, intelligent alarms, remote control, efficient O&M, remote upgrades, and statistical analysis. It can monitor the operating status of inverters, components, and batteries in real-time, automatically calculate revenue based on power generation, and quickly locate plant faults to assist O&M personnel in completing fault handling quickly. The system uses a leading cloud computing platform with secure and reliable data, clear and intuitive interface, and convenient operation.

### 2.2 Select Site

#### Function Introduction

Introduction on how to select the appropriate site.

#### Prerequisite

Open the domain name of the web cloud platform through a browser;

#### Operation Steps

Step 1: Click the site switch button, and select the server site closest to your location or the server site where you have previously registered an account (it is recommended that Chinese users select the Chinese Server, North American users select the North American Server, European users select the European Server, and other users select the international Server).

### Welcome to Login



### 2.3 Account Registration and Cancellation

#### Function Introduction

This section explains how to register and cancel an account.

#### Prerequisite

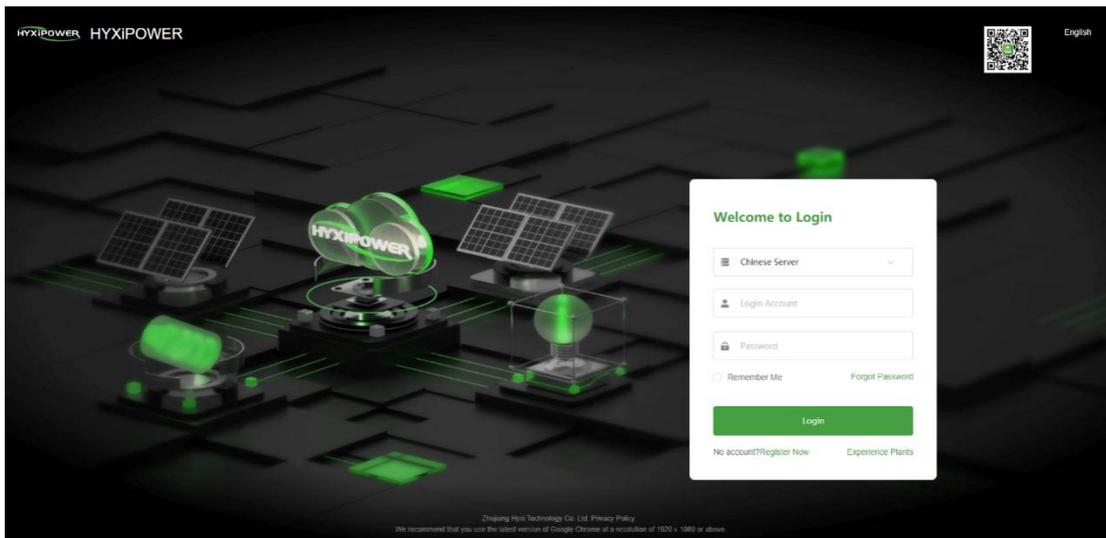
For non-Chinese customers: Prepare the email for registration.

For Chinese customers: Prepare the mobile number or email for registration.

#### Operation Steps

Registration Steps

Step 1: Use a browser to open the website: [www.hyxicloud.com](http://www.hyxicloud.com)



Step 2: Click the 'Register Now' button to enter the registration page, choose either Distributor/Installer or Owner Registration.

Step 3: For Organization Register, select the country, enter the Organization Name, choose the Registration Method (Phone Number Register/Email Register), send the verification code, enter it after receiving, then input the Password and Confirm Password. Check the box for 'I have read Privacy Policy', and finally click the 'Register' button to complete the operation.

Organization Register

---

\* country  ⓘ

\* Organization Name

\* Registration  Method

\* Email   ⓘ

\* Verification Code

\* Password

\* Confirm Password

I have read Privacy Policy

Register

Step 4: For Owner Registration, **select the country**, enter the owner's Nickname, choose the Registration Method (Phone Number Register/Email Register), send the verification code, enter it after receiving, then input the Password and Confirm Password. Check the box for 'I have read Privacy Policy', and finally click the 'Register' button to complete the operation.

Owner Register

---

\* country  ⓘ

\* Registration

Method

\* Email   ⓘ

\* Verification Code

\* Password  ⓘ

\* Confirm Password  ⓘ

Nickname

I have read Privacy Policy

Register

**Cancellation Steps:**

Step 1: Use a browser to open the website: [www.hyxicloud.com](http://www.hyxicloud.com)

Step 2: After logging in to the platform, click on the avatar to display the 'My Profile' button, and click to show the 'My Profile' page.

The screenshot shows the 'My Profile' page with a sidebar menu on the left containing 'Me', 'My Profile', 'Modify Password', and 'Notification settings'. The main content area is titled 'My Profile' and includes an 'Account Info' section with a blue information icon. Below this, the following details are listed: Name (with a copy icon), Phone Number (with a copy icon), Email (with a copy icon), and country: China(server.china). A 'Business Information' section follows, showing User Type: Person in Charge and Organization: 111. At the bottom of the profile section is a red 'Delete Account' button.

Step 3: Click 'Delete Account', a secondary confirmation button will pop up.

The screenshot shows a modal dialog box titled 'Delete Account' with a close button (X) in the top right corner. The text inside the dialog asks, 'Are you sure you want to delete the account?'. At the bottom of the dialog, there are two buttons: a white 'Cancel' button and a green 'Confirm' button.

Step 4: Enter the login password for the account to be deleted for secondary review, and click to complete the cancellation.

Enter password ×

Please Enter

Cancel
Confirm

### Related Operation

Role	Registration Mode
Person in Charge	When registering an organization, the registered account automatically becomes the responsible account of the organization, and there is only one account per organization
Administrator	Created by the Person in Charge or Administrator in the organization management module
O&M Personnel	Created by the Person in Charge or Administrator in the organization management module
Installer	Created by the Person in Charge or Administrator in the organization management module
Sales	Created by the Person in Charge or Administrator in the organization management module
Owner	The owner himself registered the owner account

### Constraints

Role	Constraints on Cancellation
Person in Charge	The associated plant and its device must be deleted first
Administrator	The associated plant and its device must be deleted first
O&M Personnel	The associated plant and its device must be deleted first
Installer	The associated plant and its device must be deleted first
Sales	The associated plant and its device must be deleted first
Owner	The associated plant and its device must be deleted first

## 2.4 Account Login and Logout

### Function Introduction

This section explains how to log in to and log out of an account.

### Prerequisites

The account has been registered.

### Operation Steps

Step 1: On the platform login page, select the site, enter the account and password, and click the login button.

#### Welcome to Login

☰ Chinese Server

👤 Login Account

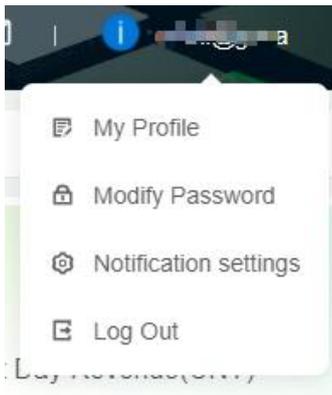
🔒 Password

Remember Me
[Forgot Password](#)

Login

[No account? Register Now](#)
[Experience Plants](#)

Step 2: After logging in to the platform, click on the avatar, and the 'Log Out' button will appear; click to exit the platform.



## 2.5 Password Recovery and Modification

### Function Introduction

This section explains how to recover and modify the account password.

### Prerequisite

Forgotten password or wish to change the old password.

### Operation Steps

Password Recovery Steps

Step 1: On the platform login page, click the 'Forgot Password' button.



Retrieve by Phone No.
Retrieve by Email

86

Please Enter

Send Verification Code

\* Verification Code

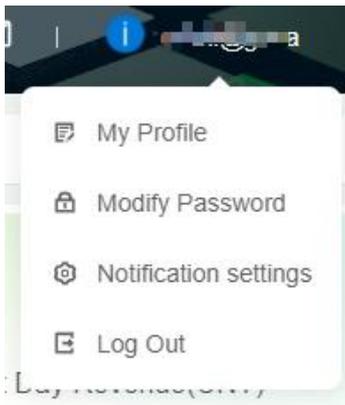
Next

Step 2: In the new pop-up page, enter the phone number or email, click to send the verification code, and after receiving and entering the code, click 'Next'.

Step 3: On the password reset page, enter a new password and confirm the password to complete the process.

**Password Modification Steps**

Step 1: On the platform page, click on the avatar in the upper right corner, and select the 'Modify Password' button in the pop-up box.



Step 2: In the pop-up page, enter the Old Password, New Password, and Confirm Password Again, then click 'Save' to complete the password modification operation.

**2.6 Language Settings**

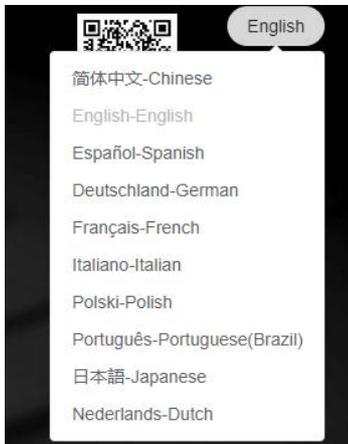
**Function Introduction**

This section introduces how to set the language.

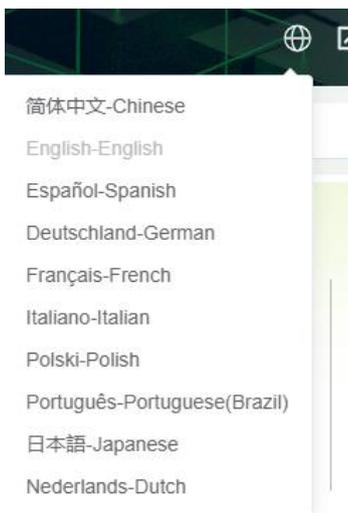
## Operation Steps

Step 1: On the login page, click the language switch button in the upper right corner, and click the corresponding language to complete the language switch.

Other Switching Methods:



On the platform page, click the globe icon in the upper right corner, and complete the language switch in the pop-up box.



## 2.7 Viewing and Modifying Profile

### Function Introduction

This section introduces how to view and modify your profile.

### Prerequisites

When there are changes to mobile number, email, name, or avatar.

### Operation Steps

Step 1: On the platform page, click the avatar in the upper right corner, and select 'My Profile' in the pop-up box.

Step 2: In the pop-up page, click the edit Information button.

Step 3: In the pop-up page, select a new avatar, modify the name, mobile number, email, and then click 'OK' to complete the information modification.

## Related Operations

Mobile number, email modification button: Click to require verification of the verification code to complete the modification.

**Me** My Profile

**My Profile** Account Info

Modify Password

Notification settings

Name: [Redacted] T.la

Phone Number: [Redacted] 89

Email: [Redacted] r.la

country: China(server.china)

**Business Information**

User Type: Person in Charge

Organization: 111

Delete Account

## 2.8 Experience Plants

### Function Introduction

This section introduces how to experience plants through the APP.

### Prerequisites

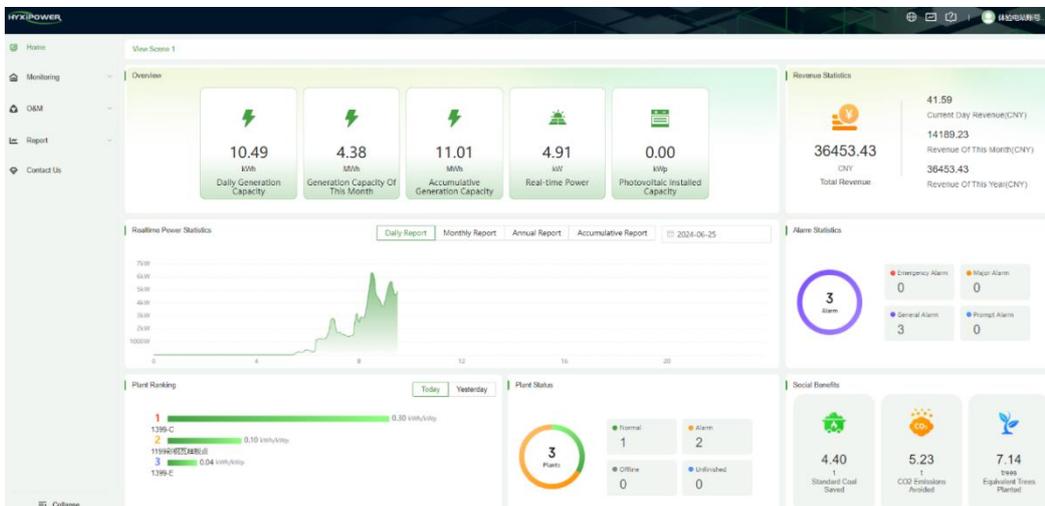
When users do not have an account registered and want to understand the platform's functions and preview them.

### Operation Steps

Step 1: On the platform login page, click the 'Experience Plant' button to enter the platform with a test account.



Step 2: After logging in to the platform, all data within the platform are test data, and the test account can only view and cannot perform any other operations.



## 2.9 Help

### Function Introduction

This section introduces how to seek help when encountering platform usage issues.

### Operation Steps

Step 1: Click the help icon at the top right corner of the platform, and a pop-up window will display the help center.

Step 2: Click on the 'Video Tutorial', 'FAQ', 'User Manuals' for corresponding help instructions, or contact us through the 'Contact Service' button.

# 3 Business Function Description

## 3.1 Home

### 3.1.1 Home

#### Function Introduction

Through the system's home page, you can understand the operational overview of all plants in the management system.

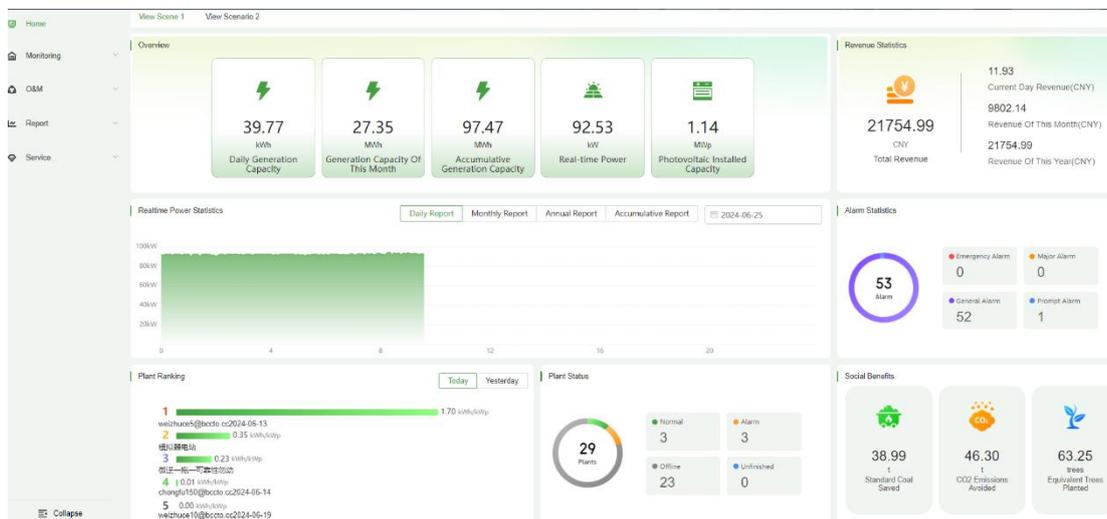
#### Prerequisite

1. The platform has created plant data.
2. DCS or DMU devices have been bound under the plant.

#### Operation Steps

Step 1: Click the 'Home' button in the left menu bar.

Step 2: The interface displays the statistics of all plants for this account: plant KPIs, plant state distribution, plant alarm level distribution, energy statistics, daily plant ranking, and social benefits.



#### Related Operations

Daily Report, Monthly Report, Annual Report, and Accumulative Report: Click to display the corresponding time selection control, and select data within the corresponding time range.

### 3.1.2 Data Dashboard

#### Function Introduction

Monitor all plants under the account in the form of a data dashboard through a global map.

#### Operation Steps

Step 1: Click the 'Data Dashboard' icon in the upper right corner.



Step 2: In the newly opened page, display the distribution of plants on the global map, click the plant icon to display its basic information and power generation, weather, etc.

Step 3: Display O&M statistics, power generation analysis, power generation power analysis, plant status analysis, plant power generation ranking, and social benefits situation through the data on both sides.



Step 4: Click the 'Energy Storage Screen' button in the upper right corner to switch to the Energy Storage Monitoring Center dashboard display interface, and display Benefit Analysis, Comprehensive Ranking of Cumulative Income, Site Overview, Electricity Analysis, Comprehensive Ranking of System Efficiency, and Alarm Analysis through the data on both sides.



Step 5: The Energy Storage Monitoring Center dashboard displays the distribution of plants on the national map, and by clicking on the plant icon, it displays the plant's Safe Operating Days, Installed Capacity, Installed Power, and Total Charging Capacity and Total Discharging Capacity, etc.



Step 6: Click the 'More>>' button to enter the Energy Storage Cockpit dashboard interface, and return to the first-level energy storage dashboard interface through the 'Return to Superior' button below the plant details.



Step 7: The Energy Storage Cockpit displays the online and offline status of the current plant's energy storage device, the Today Revenue, and the Daily Charging Capacity and Daily Discharging Capacity, and the data on both sides display the Basic Info of the energy storage plant, Benefit Analysis, Electricity Efficiency, Real-time Power, Security Monitoring, Alarm Statistics, and Today's Alarm List, etc.

### 3.1.3 Message Center

#### Function Introduction

Users can receive various types of messages.

#### Operation Steps

Step 1: Click the 'Message Center' button in the upper right corner of the homepage, and query various types of messages according to the Message Title, Sending Time, and Status, and you can perform operations such as deletion and marking

as read.

Message Center

Message Title  Sending Time  -  Status

SN	Publisher	Message Title	Sending Time	Status	Action
1	系统	电站测试	2024-06-25 09:16	Unread	<input type="button" value="🗑️"/>
2	系统	电站测试	2024-06-24 18:07	Unread	<input type="button" value="🗑️"/>
3	系统	电站测试	2024-06-24 18:07	Unread	<input type="button" value="🗑️"/>
4	系统	电站测试	2024-06-24 18:04	Unread	<input type="button" value="🗑️"/>
5	系统	电站测试	2024-06-24 17:05	Unread	<input type="button" value="🗑️"/>
6	系统	电站测试	2024-06-24 17:05	Unread	<input type="button" value="🗑️"/>
7	系统	电站测试	2024-06-24 17:03	Unread	<input type="button" value="🗑️"/>
8	系统	电站测试	2024-06-24 15:49	Unread	<input type="button" value="🗑️"/>
9	系统	电站测试	2024-06-24 15:13	Unread	<input type="button" value="🗑️"/>
10	系统	电站测试	2024-06-24 15:10	Unread	<input type="button" value="🗑️"/>

Total 145

### 3.1.4 Send Announcements

#### Function Introduction

A tool for sending announcement messages to users.

#### Operation Steps

Step 1: Click the 'Message Center' button in the upper right corner of the homepage, select the 'Send Announcement' menu, and query various types of messages according to the Message Title, Sending Time, and Status, and you can perform operations such as deleting and adding announcements.

Step 2: Click 'Create' to pop up a window to enter the Message Title and Message Content, including recipients or all receive; you can choose to send immediately or save as a draft.

Message Center

Send Announcement

Message Title  Sending Time  -  Status

SN	Message Title	Status	Sending Time	Action
1	消息推送4	Sent	2024-04-02 14:41	<input type="button" value="🗑️"/>
2	消息推送测试2	Sent	2024-04-02 14:33	<input type="button" value="🗑️"/>
3	123456789012345678901234567890	Sent	2024-03-19 15:33	<input type="button" value="🗑️"/>
4	老白的测试测试	Sent	2024-04-02 14:18	<input type="button" value="🗑️"/>
5	测试后台推送	Sent	2024-04-02 14:29	<input type="button" value="🗑️"/>
6	加密信息001	Sent	2024-03-07 14:34	<input type="button" value="🗑️"/>

Total 6

### 3.2 Monitoring

Monitoring is used to manage the topology of the plant to reflect the networking and operating status of the device. Users can understand and monitor the operating status of the plant and device in real-time through the browsing view.

### 3.2.1 Add Plant

#### Function Introduction

Complete the creation of the plant by Add Device, Bind User, Basic Info, Price Config, etc.

#### Prerequisite

1. The owner has completed registration and obtained the owner's account and authorization.
2. Obtain the SN of the communication device (DCS or DMU).
3. Calculate the local electricity revenue.

#### Operation Steps

Step 1: Click the 'Add Plant' button on the Plants Monitoring list page or the Plant Management list page;

The screenshot shows the 'Plants Monitoring' dashboard. At the top, there are four summary cards: Real-time Generating Capacity (90.42 kW), Daily Generation Capacity (43.45 kWh), Generation Capacity Of This Month (27.35 MWh), and Accumulative Generation Capacity (97.48 MWh). Below these is a table with columns: Plant Name, Plant Status, Owner, Daily Generatio..., Accumulative G..., Full Load Hours, Real-time Power, Energy Storage..., Photovoltaic ins..., Plant Type, Update Time, and Control. The table lists several plants, mostly with a status of 'Offline'.

Step 2: In the pop-up interface, add the SN of the DCS or DMU in the first step. If it is a DMU, you need to go to the Devices Monitoring, find the corresponding device on its control page, click the 'Networking' button, and enter the SN of the Microinverter for networking and addition;

The screenshot shows the 'Create Plant' pop-up interface. It has a progress bar with four steps: Add Device, Bind User, Basic Info, and Price Config. The 'Add Device' step is currently active. Below the progress bar, there is a 'Search' button next to an 'SN' input field. A large dashed box contains a '+ Add Device' button. Below this, there is a 'Devices1' section with a 'Delete' button. At the bottom, there are input fields for 'SN', 'Device Type', and 'Device Name', each with a 'Please Enter' placeholder. At the very bottom right, there are 'Cancel' and 'Next' buttons.

Step 3: In the second step, bind the plant owner information;

## Create Plant

Add Device > 
  Bind User > 
  Basic Info > 
  Price Config

## Plant Owner Binding

Set the owner. Only one owner can be bound to one plant.

Step 4: In the third step, enter the Basic Plant Information of the plant, such as Plant Name, Plant Type, Region, Detailed Address, Time Zone, etc.

## Create Plant

Add Device > 
  Bind User > 
  Basic Info > 
  Price Config

## Basic Plant Information

* Plant Name	<input type="text" value="hyxitemp4@bccto.cc2024-06-25"/>	* Plant Type	<input type="text" value="Household Use"/>
Region	<input type="text" value="Click to get map location"/>	Detailed Address	<input type="text" value="Please Enter"/>
* Time Zone	<input type="text" value="(UTC+08:00) Beijing,Chongqing,Hong Kong"/>	Photovoltaic installed capacity	<input type="text" value="Please Enter"/> kWp
Number of Modules	<input type="text" value="Please Enter"/>	<input type="button" value="More Info"/>	
Contact Person	<input type="text" value="Please Enter"/>	Contribution Method	<input type="text" value="Please Select"/>
Plant Image	<input type="text" value="Please Enter"/>	Remarks	<input type="text" value="Please Enter"/>

Step 5: In the fourth step of Price Config, select the Electricity Price Type, Currency, and Revenue Per kWh, and click 'Finish' to complete the plant creation.

## Create Plant

Add Device > 
  Bind User > 
  Basic Info > 
  Price Config

## Price Config

\* Electricity Price Type

\* Currency

Revenue Per kWh  CNY/kWh

## Related Operations

1. Click 'Next' on the device addition page, and you will have a plant data in creation.
2. Click 'More Info' on the basic information page to display some non-mandatory information about the plant, such as Photovoltaic Installed Capacity, Number of Method, etc.
3. You can skip to the next step without adding any devices on the Add device page.

## Constraints

1. Only one owner account can be bound.
2. A visitor account can bind up to 20 (visitor permissions can only view and cannot operate plant information).

## 3.2.2 Plants Monitoring

### Function Introduction

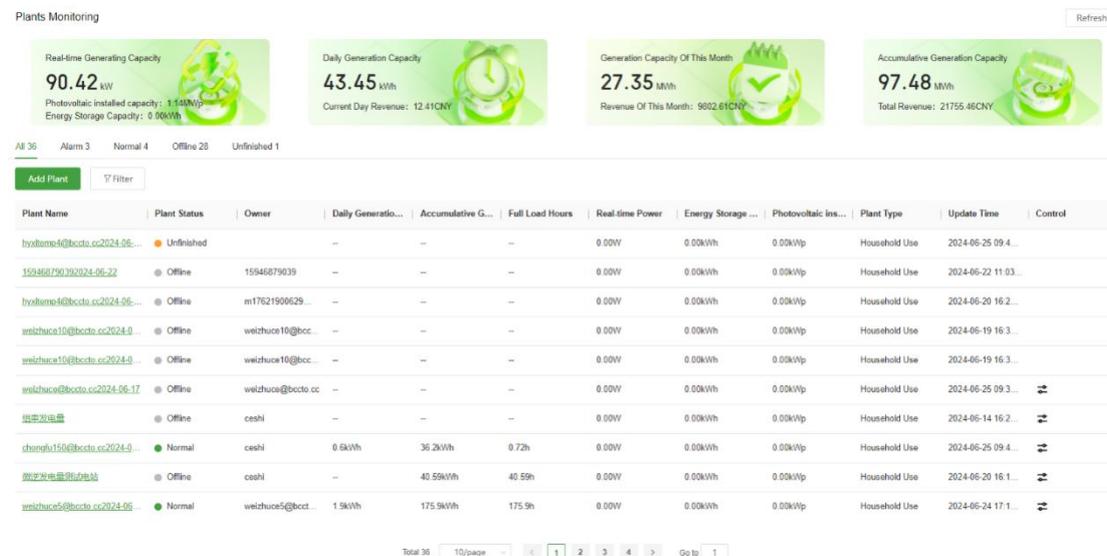
By monitoring the plant overview, views, and device-related information, users can understand the operating status of the plant in real-time.

### Prerequisite

1. Plant creation has been completed (including the addition of device).
2. To view the view, it is a prerequisite to have added Hyxi's Microinverter (and DMU).

### Operation Steps

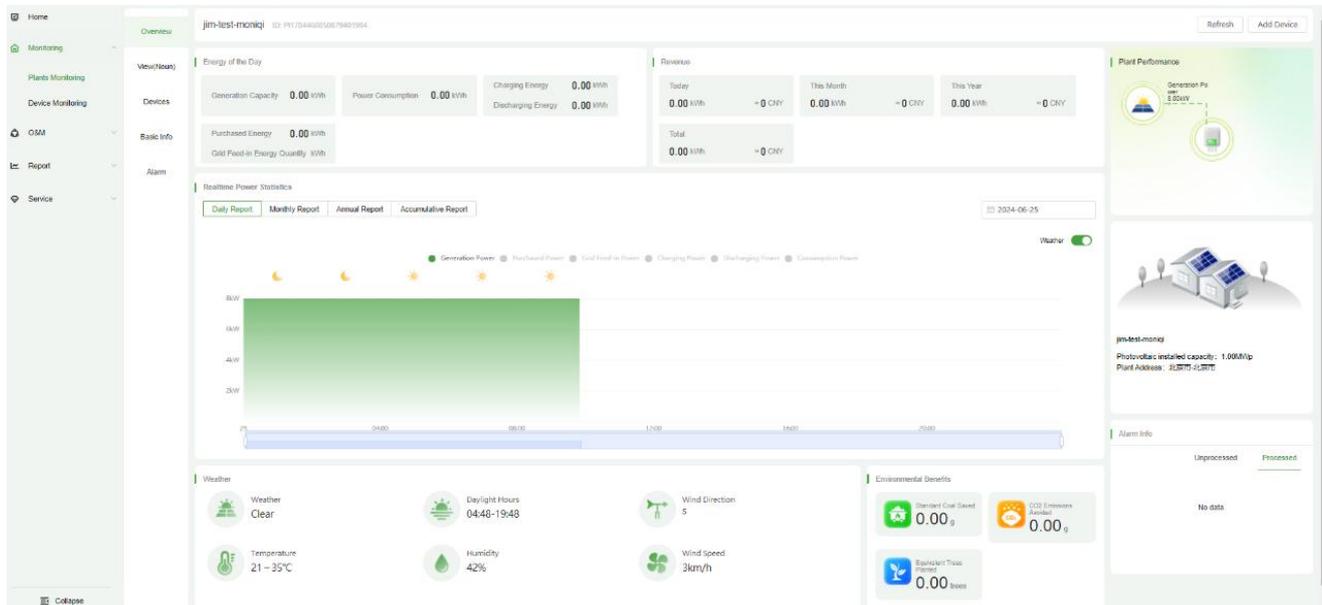
Step 1: Click 'Monitoring' > 'Plants Monitoring' in the menu, query the plant data you need to monitor in the displayed list page and click.



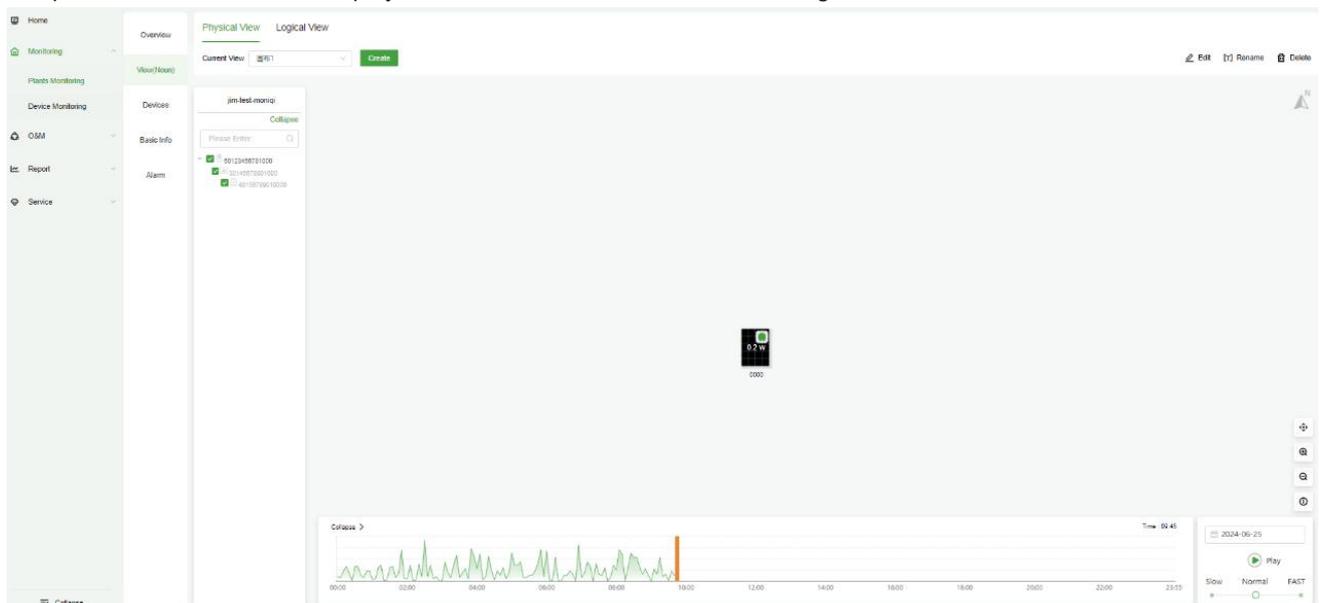
Step 2: In the newly opened monitoring page, you can switch between Overview, View, Devices, Basic Info, and Alarm to view the corresponding information.



Step 3: In the Overview, you can display the plant's Energy of the Day, Revenue, Realtime Power Statistics, Plant Performance, Basic Information of the plant, Alarm Info, Environmental Benefits, and today's Weather.

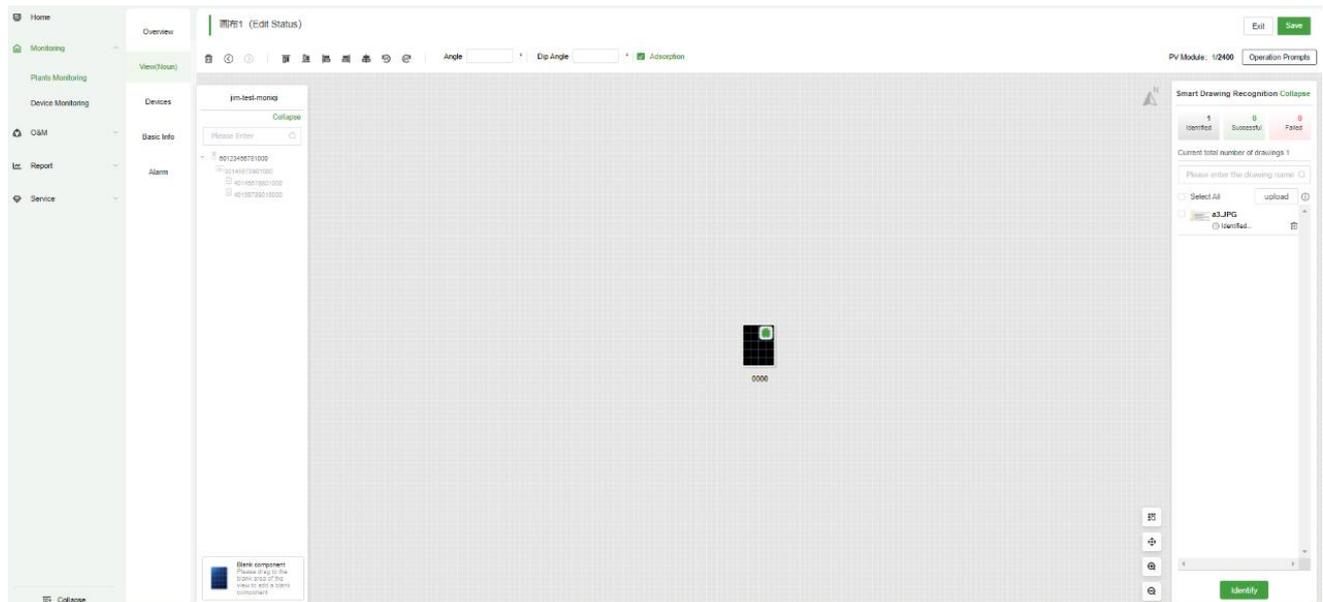


Step 4: In the View, you can display the distribution of the plant's microinverters and their components. Clicking on a component in the canvas will display its real-time status and data in a floating window.

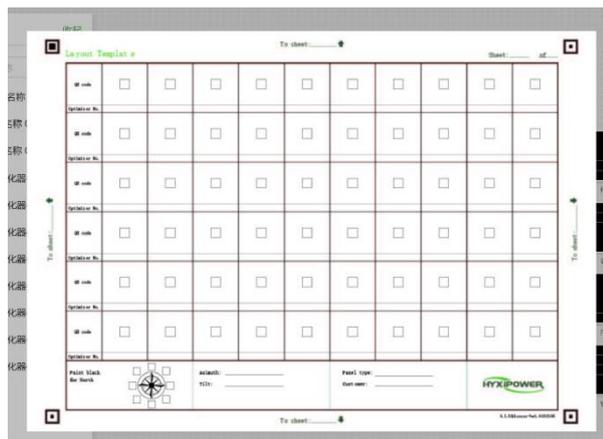


Step 5: The power curve player at the bottom of the Physical View and Logical View can be linked with the components in the canvas. Click the play button, and the player will start playing from the progress bar, and the online optimizers will dynamically display the corresponding power values and green ripples.

Step 6: The Physical View allows you to add, edit, rename, and delete the canvas. Click the 'Create' button, enter the name of the physical view, click 'OK' and then further edit the physical view canvas. Drag devices from the device tree on the left into the canvas, and the layout of the components in the canvas can be adjusted through the editing tools above the canvas. When exiting, you can choose whether to save the current canvas.



Step 7: Another way to edit the canvas is through Smart Drawing Recognition on the right side, replacing manual editing of components; place the QR codes of microinverters or optimizers on the recognition diagram according to the layout, store them on your computer, and click the 'Upload' button to select the diagram you want to recognize.



Step 8: After a successful upload, it will appear in the diagram list with a status of 'Pending'; check the box for the diagrams you want to recognize and click the 'Recognize Now' button.

Smart Drawing Recognition



Drawing recognition, please be patient and wait

Step 9: During the recognition process, if the recognized device is not under the current plant or has already been bound in another view of the plant, a prompt window will appear.

## Smart Drawing Recognition



**ⓘ This identification includes 2 pcs Non current power station equipment cannot be added to the current view**

SN 40101230180030      SN 40101230180031

Cancel

OK

Step 10: After recognition is complete, it will display the successfully recognized devices and the failed ones. The data of the successfully recognized device needs to be checked for the arrangement method, and after clicking 'OK' it will appear on the canvas.

## Smart Drawing Recognition



**✓ Successful identification this time**

image4.JPG

Identify successful device data

Please choose the arrangement method

	Install optimizer components	10	1:1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Components without optimizers	17			

Cancel

OK

Step 11: In the device section, you can display all types of devices in the plant, including Microinverters, String Inverters, Hybrid Inverters, DMUs, DCSs, optimizers, and EMSs; by clicking on each device list item, you can enter the device details page, for specific content, see the device monitoring below.



1. Add Device in the upper right corner of the overview: You can add DCS or DMU devices.
2. Energy analysis in the overview: The Daily Report statistics are for real-time power; the Monthly Report, Annual Report, and Accumulative Report are for cumulative electricity.
3. Add Device in the view: If the view function is required, you must add an optimizer device or DMU device, and add microinverter for networking operations.
4. Hide/Show device tree in the view: Check a device to display its component distribution.
5. Click on the plant in creation to continue the creation operation.

### Constraints

Plant View function: Must add DMU devices and add microinverter devices for networking to have the view function.

Smart Drawing Recognition function: Devices not bound to the current plant cannot be added to the current view; devices already added to other views of the current plant can choose whether to add to the current view.

## 3.2.3 Plant Control

### Function Introduction

By monitoring the plant Overview, Views, and Device information, users can understand the operating status of the plant in real-time.

### Prerequisite

Plant creation has been completed (including the addition of communication devices with 14 bits SN, including DCSs or DMUs);

### Operation Steps

Step 1: Click the 'Monitoring' > 'Plants Monitoring' menu. On the displayed list page, query the plant data to be monitored and click the 'Control' icon.

Device Name

Device SN

Select Time

Start Date

↔

End date

Search

Reset

	Alarm Code	Alarm Name	Device Name	Device SN	Device Type ▾	Alarm Status ▾	Alarm Level ▾	Start Time	Last trigger time
View(Noun)	3113	AC Overvoltage	31801113800002	31801113800002	Micro Inverter	Restored	General alarm	2024-06-25 08:24:57	2024-06-25 09:55:00
Devices	3110	PV2 Undervoltage123	30301240200022	30301240200022	Micro Inverter	Restored	General alarm	2024-06-25 05:27:55	2024-06-25 05:31:25
Basic Info	3109	PV1 Undervoltage	30301240200022	30301240200022	Micro Inverter	Restored	General alarm	2024-06-25 05:27:55	2024-06-25 05:31:25
Alarm	3113	AC Overvoltage	31801113800002	31801113800002	Micro Inverter	Restored	General alarm	2024-06-24 18:14:59	2024-06-25 07:45:00
	3113	AC Overvoltage	31801113800002	31801113800002	Micro Inverter	Restored	General alarm	2024-06-24 13:45:03	2024-06-24 17:35:02
	3082	Island protection	31901241000049	31901241000049	Micro Inverter	Unprocessed	General alarm	2024-06-24 09:41:29	2024-06-24 09:41:29
	3114	AC undervoltage	31901241000049	31901241000049	Micro Inverter	Restored	General alarm	2024-06-24 09:41:29	2024-06-24 09:41:30
	3110	PV2 Undervoltage123	30301240200022	30301240200022	Micro Inverter	Restored	General alarm	2024-06-24 05:10:47	2024-06-24 18:58:13
	3109	PV1 Undervoltage	30301240200022	30301240200022	Micro Inverter	Restored	General alarm	2024-06-24 05:10:47	2024-06-24 18:58:13
	3110	PV2 Undervoltage123	30301240200022	30301240200022	Micro Inverter	Restored	General alarm	2024-06-23 05:21:48	2024-06-23 19:03:19

Total 1190

10/page

<

1

2

3

4

5

6

...

119

>

Go to

1

Step 2: The Batch Networking Formation button is displayed on the control page.

### Batch Network Formation

Clicking here, all micro inverter will resend SN to DMU to do re-networking.

Batch Network Formation

### Related Operations

Batch Networking Formation: Click this operation to re-issue all microinverters under the DMU of the plant and perform secondary networking

### Constraints

Batch Networking Formation: Must be added with DMU and Microinverters to take effect.

## 3.2.4 Device Monitoring

### Function Introduction

Monitor devices in real-time to help users understand the operating conditions of the devices, deal with exceptions, and ensure device safety.

### Prerequisite

1. Plant creation has been completed;
2. DCS or DMU devices have been added.

### Operation Steps

Step 1: Click 'Monitoring' > 'Devices Monitoring' in the menu, and query the device data items you need to monitor in the displayed list page and click.

Device Monitoring

Microinverter | String Inverter | Energy Storage Inverter | Optimizer | DMU | Data communication dongle

41 All | 10 Normal | 31 Offline | 0 Alarm

|  | Search | Reset

	Device Name	Device SN	Status	Application Version	Hardware Ver.	Plant Name	On-grid Protection ...	On-grid Protection ...	Control
1	<a href="#">30101232600019</a>	30101232600019	Offline	V00.00.00.00	V00.00.00.00	微逆一拖一可靠性勿动	0	V0.00.00	⚙️
2	<a href="#">30101234800001</a>	30101234800001	Offline	V00.00.00.00	V00.00.00.00	微逆一拖一可靠性勿动	0	V0.00.00	⚙️
3	<a href="#">30101235200417</a>	30101235200417	Normal	V00.00.00.00	V00.00.00.02	微逆一拖一可靠性勿动	Germany Low Voltag...	V1.00.02	⚙️
4	<a href="#">30101235200469</a>	30101235200469	Offline	V00.00.00.00	V00.00.00.00	微逆一拖一可靠性勿动	0	V0.00.00	⚙️
5	<a href="#">30201232600012</a>	30201232600012	Offline	V00.00.00.00	V00.00.00.00	微逆一拖一可靠性勿动	0	V0.00.00	⚙️
6	<a href="#">30201232600014</a>	30201232600014	Normal	V00.00.00.00	V00.00.00.02	微逆一拖一可靠性勿动	Germany Low Voltag...	V1.00.02	⚙️
7	<a href="#">30202348800111</a>	30202348800111	Normal	V01.00.00.01	V01.00.00.01	模拟器电站	0	V0.00.00	⚙️
8	<a href="#">30202348800112</a>	30202348800112	Normal	V01.00.00.01	V01.00.00.01	模拟器电站	0	V0.00.00	⚙️

Total 41 | 10/page | 1 | 2 | 3 | 4 | 5 | Go to

Step 2: In the newly opened monitoring details page, you can switch between Basic Info, Real-time Inf, and Historical Curves (query by day).

30101235200417 #

Go to Control Refresh

Basic Info Real-time Info Historical Curve

2024-06-25 10:14:30

Basic Info

Device Name	30101235200417	Device SN	30101235200417	Plant Name	微逆一拖一可靠性勿动
Plant ID	PI1765215997456945152	Plant Address	中国浙江省杭州市西湖区杭州市西湖区320奥建与泰山路交叉口西奥建-佳兆业玖琅山麓健康	Device Status	● Normal
Last Update Time	2024-06-25 10:14:30	Time Zone	UTC+08:00	Device model	HYX-M500-S
Communication Device SN	60101241300070	Number of PV Strings	1	Rated Power W	500
Rated Voltage V	208	On-grid Protection File Code	Germany Low Voltage Grid	On-grid Protection File Version	V1.00.02
Sub-1G Software Ver.	V01.01.01.10	Control software version	V00.00.00.00	Hardware Version	V00.00.00.02

Step 3: In the Basic Info page of the Hybrid Inverter or String Inverter, click the Optimizer Search button to search for the optimizers under the current inverter device. If successful, the optimizer list will be displayed.

Optimizer is searching

✕



Optimizer is searching, please wait...

### Related Operations

DCS or DMU details page: Basic Information will display the sub-device list of it.

Hybrid Inverter or String Inverter details page: Basic Information will display the list of optimizer devices.

Go to Control: Adjust to the device control page.

Refresh: Get the latest device data.

### 3.2.5 Device Control

#### Function Introduction

By monitoring the plant overview, views, and device information, users can understand the operating status of the plant in real-time.

#### Prerequisite

Plant creation has been completed (including the addition of communication devices with 14 bits SN, including DCSs or DMUs);

#### Operation Steps

Step 1: Click 'Monitoring' > 'Devices Monitoring' in the menu, and query the device data you need to control in the displayed list page and click the 'Control' icon.

## Device Monitoring

 Microinverter **String Inverter** Energy Storage Inverter Optimizer DIMU Data communication dongle

 SN  Plant   

Device Name	Device SN	Status	Main Software Version	Hardware Ver.	Plant Name	Number of PV Strings	Control
1 <a href="#">20100000000105</a>	20100000000105	Normal	V01.00.00.01	V01.00.00.01	chongfu150@bccto.cc20...	100	
2 <a href="#">20100000000234</a>	20100000000234	Normal	V01.00.00.01	V01.00.00.01	电站在离线验证	4	
3 <a href="#">20100000000301</a>	20100000000301	Offline	V00.00.00.00	V00.00.00.00	ceshi@grr.la2024-03-20	2	
4 <a href="#">20100054612121</a>	20100054612121	Normal	V01.00.00.01	V01.00.00.01	模拟器电站	1	
5 <a href="#">20101231500002</a>	20101231500002	Offline	V01.47.07.E8	V00.01.00.00	ceshi@grr.la2024-03-20	2	
6 <a href="#">20101233700018</a>	20101233700018	Offline	V01.01.01.02	V00.00.00.00	可靠性测试电站	2	
7 <a href="#">20102302310231</a>	20102302310231	Offline	V01.00.00.01	V01.00.00.01	组串发电量	1	
8 <a href="#">20301241500024</a>	20301241500024	Offline	V01.02.00.05	V80.24.63.65	可靠性测试电站	20	

 Total 10   

Step 2: In the newly opened control page, buttons such as Restart, Turn On/Off, Restore Factory Settings, Clear Device Alarms, Clear Historical Data, Clear Grounding Faults, etc., are displayed (details are as follows).

&lt; 20100000000105

**Turn On**  
Clicking here to turn on device.

**Clear Device Alarms**  
Clicking here to clear all real-time alarms.

**Turn Off**  
Clicking here to turn off device.

**Restart**  
Clicking here to turn off and restart device.

**Clear Ground Faults**  
Clicking here to clear the ground fault alarm status of the inverter.

**Clear Historical Data**  
Clicking here to clear all historical data.

**Firmware Upgrade**  
Clicking here to upgrade this device.

**Related Operations**

- Restart: Clicking here to turn off and restart device.
- Restore Factory Settings: Clicking here to restore all settings to the original factory state.
- Clear Device Alarms: Clicking here to clear all real-time alarms.
- Clear Historical Data: Clicking here to clear all historical data.
- Upload Real-time Data Once: Clicking here to re-upload all real-time data (including inverter) in the device, and users can view the data through the device details.
- Collect Inverter Information: Clicking here to collect inverter basic information data once, and the user can view the

data through the device details.

7. Network Formation: Clicking here, the DMU will be networked with the desired associated microinverter, and the microinverter will upload data through this DMU after successful networking.
8. Turn On: Clicking here to turn on device.
9. Turn Off: Clicking here to turn off device
10. Clear Ground Faults: Clicking here to clear the ground fault alarm status of the inverter
11. Export Controller: Clicking here, if anti-reflux turned on, PV energy will not feed in grid but only supply loads or battery.
12. On-Grid Work Mode: Clicking here to go into grid working mode settings.
13. Off-Grid Work Mode: Clicking here to go into offline working mode settings.
14. Battery Low SOC Dead Protection: Clicking here to go into battery low SOC dead protection.
15. Firmware Upgrade: Clicking here to upgrade this device.
16. Microinverter Power Limitation: After the setting is successful, the device generates electricity with the power you set as the maximum power.
17. Phase Separation: When the battery-free mode is selected, the Hybrid Inverter will be allowed to work without battery, which is equivalent to the String Inverter.
18. Heat Pump Control: Only SG ready heat pumps are supported
19. Constraints
20. The results of the control operations are not displayed on the current page and need to be checked on the relevant details page.
21. Networking Formation operations are for DMU devices; Turn On/Off operations are for inverter devices.
22. Electricity meter: Cannot perform control operations.
23. Microinverter Power Limitation: Only effective for Microinverter devices.
24. On-Grid Work Mode, Off-Grid Work Mode, Battery Low SOC Dead Protection, Heat Pump Control: Only effective for Hybrid Inverter devices.
25. Export Controller: Only effective for DMU, DCS.
26. Phase Separation: Only effective for DMU.

### 3.3 Operations and Maintenance

Users can understand the real-time fault status and alarm information of the plant through O&M, and quickly track, locate, and handle plant faults.

#### 3.3.1 Alarm Info

##### Function Introduction

This section explains how to view and manage device and system alarm information, including current unprocessed alarms and historical processed alarms. Device alarms track real-time active alarms and historical alarms of the device, while system alarms track alarms during the system's active process.

##### Prerequisite

1. Plant creation has been completed (including the addition of communication devices with 14 bits SN, including DCSs or DMUs);
2. Device on site has experienced a fault or alarm.

## Operation Steps

Step 1: Click on the 'O&M' -> 'Alarm Info' menu, and query all device alarm information in the displayed list page.

The screenshot shows the 'Alarm Info' page with a search bar and a table of alarm records. The table has the following columns: Alarm Code, Alarm Name, Device Name, Device SN, Device Type, Alarm Status, Alarm Level, Plant Name, Start Time, and Last trigger time.

Alarm Code	Alarm Name	Device Name	Device SN	Device Type	Alarm Status	Alarm Level	Plant Name	Start Time	Last trigger time
1301001	AC side hardware s...	富阳自研-01000	50402241600001	EMS energy storag...	Unprocessed	General alarm	富阳-自研-010001	2024-06-05 09:51:12	2024-06-05 09:52:30
1301001	DC side hardware s...	富阳自研-01000	50402241600001	EMS energy storag...	Processed	Emergency alarm	富阳-自研-010001	2024-06-05 09:50:12	2024-06-05 09:52:36
1301000	phase lock alarm	富阳自研-01000	50402241600001	EMS energy storag...	Processed	Important alarm	富阳-自研-010001	2024-06-04 09:50:12	2024-06-04 13:52:36

Step 2: Click on the unprocessed alarm data, and the alarm detail page will pop up showing the basic information of the alarm, with the option to perform ignore operations.

Step 3: Click on the processed alarm data, and the alarm detail page will pop up showing the basic information of the alarm and historical processing information.

### 3.3.2 Dispersion Rate Analysis

#### Function Introduction

This analyzes the current data of photovoltaic modules to discover abnormal photovoltaic power generation modules for the use of O&M personnel. This function enables the viewing of real-time, up-to-date disparity rate data of different inverters at the same moment.

#### Prerequisite

1. Plant creation has been completed (including the addition of communication devices with 14 bits SN, including DCSs or DMUs);
2. Data is viewed during the daytime photovoltaic power generation period.

#### Operation Steps

Step 1: Click on the 'O&M' -> 'Dispersion Rate Analysis' menu, and query all device disparity rate information in the displayed list page.

The screenshot shows the 'Dispersion Rate Analysis' page with a search bar and a table of device disparity rate data. The table has the following columns: Alarm Code, Alarm Name, Device Name, Device SN, Device Type, Alarm Status, Alarm Level, Plant Name, Start Time, and Last trigger time.

Alarm Code	Alarm Name	Device Name	Device SN	Device Type	Alarm Status	Alarm Level	Plant Name	Start Time	Last trigger time
1301001	AC side hardware s...	富阳自研-01000	50402241600001	EMS energy storag...	Unprocessed	General alarm	富阳-自研-010001	2024-06-05 09:51:12	2024-06-05 09:52:30
1301001	DC side hardware s...	富阳自研-01000	50402241600001	EMS energy storag...	Processed	Emergency alarm	富阳-自研-010001	2024-06-05 09:50:12	2024-06-05 09:52:36
1301000	phase lock alarm	富阳自研-01000	50402241600001	EMS energy storag...	Processed	Important alarm	富阳-自研-010001	2024-06-04 09:50:12	2024-06-04 13:52:36

Step 2: Click on the unprocessed alarm data, and the alarm detail page will pop up showing the basic information of the alarm, with the option to perform ignore operations.

Step 3: Click on the processed alarm data, and the alarm detail page will pop up showing the basic information of the alarm and historical processing information.

### 3.3.2 Dispersion Rate Analysis

#### Function Introduction

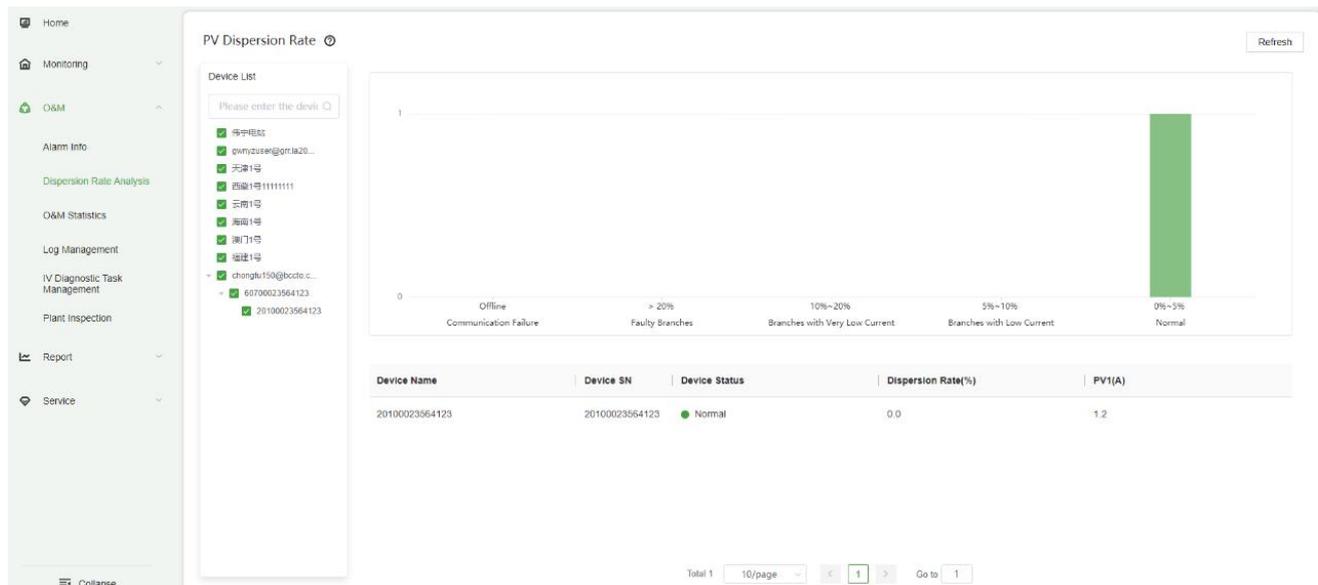
This analyzes the current data of photovoltaic modules to discover abnormal photovoltaic power generation modules for the use of O&M personnel. This function enables the viewing of real-time, up-to-date disparity rate data of different inverters at the same moment.

#### Prerequisite

1. Plant creation has been completed (including the addition of communication devices with 14 bits SN, including DCSs or DMUs);
2. Data is viewed during the daytime photovoltaic power generation period.

#### Operation Steps

Step 1: Click on the 'O&M' -> 'Dispersion Rate Analysis' menu, and query all device disparity rate information in the displayed list page.



#### Related Operations

1. The device conditions corresponding to the dispersion rate are listed as follows:
2. Offline: The storage communication is faulty. More than 20%: some branches are faulty; 10-20%: individual branch is obviously lower; 5-10%: individual branches are low; 0-5%: normal;
3. Device tree: Check a device to show the dispersion of the device;

#### Constraints

1. The number of strings must be greater than or equal to 6 before calculation. If the discretization rate cannot be calculated or the inverter is offline, '-' is displayed.
2. Discrete rate analysis is not done for Microinverters, only for String Inverters and Hybrid Inverters.

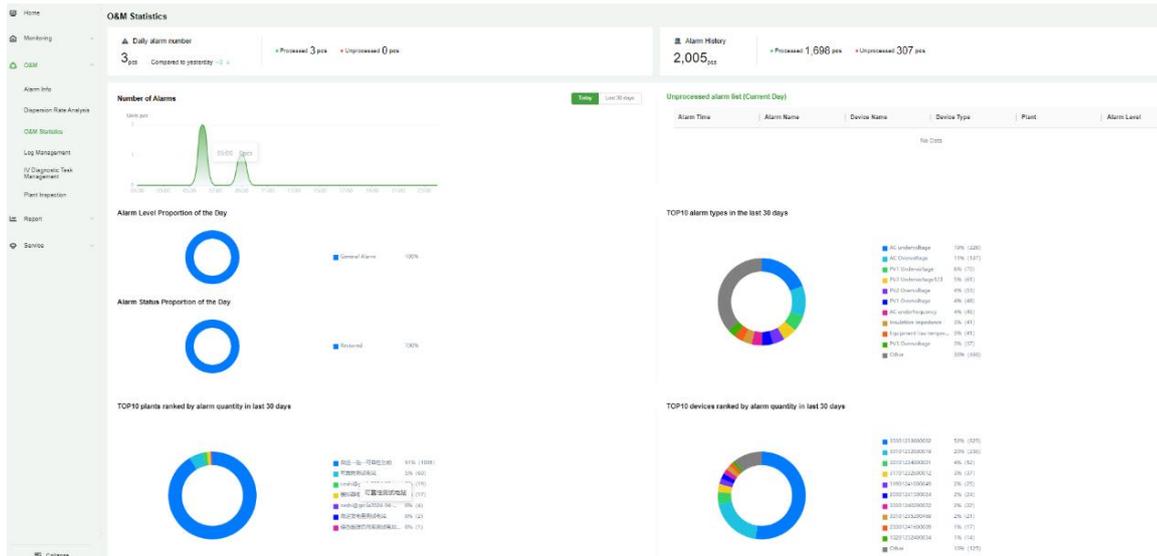
### 3.3.3 O&M Statistics

#### Function Introduction

This displays the operation and maintenance statistical analysis data of all plants for the user.

#### Operation Steps

Step 1: Click on Operation and 'O&M' -> 'O&M Statistics' to display the alarm quantity change curve, current day alarm level ratio, current day alarm status ratio, unprocessed alarm list, top 10 alarm types in the last 30 days, top 10 plant rankings in the last 30 days, and top 10 device rankings in the last 30 days.



### 3.3.4 Log Management

#### Function Introduction

Detailed records of Plant Operation Record, Batch Plants Networking, Equipment Control Record, Sent on-grid file, etc., achieve operation transparency, traceability, enhance system security and stability, and provide a solid basis for fault diagnosis and audit.

#### Operation Steps

Step 1: Click on 'O&M -> Log Management' to query the relevant log information.

Log Management						
Plant Operation Record		Batch Plants Networking	Device Network Formation	Device Binding & Unbinding	Equipment Control Record	Sent on-grid file
Plant Name	<input type="text" value="Please Enter"/>	Select Time	<input type="text" value="Start Date"/>	<input type="text" value="End date"/>	<input type="button" value="Search"/>	<input type="button" value="Reset"/>
Plant Name	Plant Type	ActionTime	Channel	Operator	Action	
hyxtemp4@bccto.cc2024-06-25	Household Use	2024-06-25 09:46:59	web	ceshi@grr.la	Plant Add	
hyxtemp4@bccto.cc2024-06-25	Household Use	2024-06-25 09:46:31	web	ceshi@grr.la	Power Station Binding Relationship	
159468790392024-06-22	Household Use	2024-06-22 11:03:44	Android	ceshi@grr.la	Set Electricity Price	
159468790392024-06-22	Household Use	2024-06-22 10:58:59	Android	ceshi@grr.la	Plant Add	
159468790392024-06-22	Household Use	2024-06-22 10:58:53	Android	ceshi@grr.la	Power Station Binding Relationship	
组串发电量	Household Use	2024-06-21 16:37:39	web	ceshi@grr.la	Modify Plant Binding Relationship	
hyxtemp4@bccto.cc2024-06-20	Household Use	2024-06-21 16:37:28	web	ceshi@grr.la	Modify Plant Binding Relationship	
hyxtemp4@bccto.cc2024-06-20	Household Use	2024-06-20 16:24:49	web	ceshi@grr.la	Modify Plant Binding Relationship	
hyxtemp4@bccto.cc2024-06-20	Household Use	2024-06-20 16:23:00	web	ceshi@grr.la	Set Electricity Price	
hyxtemp4@bccto.cc2024-06-20	Household Use	2024-06-20 16:22:56	web	ceshi@grr.la	Plant Add	

Total 238 | 10/page | 1 2 3 4 5 6 ... 24 | Go to 1

### 3.3.5 IV Diagnostic Task Management

#### Function Introduction

This is for intelligent monitoring and maintenance of the plant, allowing users and O&M personnel to quickly and accurately locate the problem.

#### Operation Steps

Step 1: Click on 'O&M' ->'IV Diagnostic Task Management', and query messages according to the Diagnosis Date Period, Plant Name, and Device Name, with the option to add or delete diagnostic tasks.

Step 2: Click the 'Create' button, Select Plant, Execution Mode, Select Device, check the user authorization obtained, and click the button to add a diagnostic task.

Step 3: Click on the IV diagnostic task management list to view the details of the diagnostic task, which includes Basic Info and Diagnostic Results.

- Home
- Monitoring
- O&M
  - Alarm Info
  - Dispersion Rate Analysis
  - O&M Statistics
  - Log Management
  - IV Diagnostic Task Management
  - Plant Inspection
- Report
- Service

#### IV Diagnostic Task Management

Diagnosis Date Period

~

Plant Name

Device Name

Task Start Time	Plant Name	Current Status	Created By	Creation Time	Action
2024-06-03 18:46:58	模拟器电站	Finished	ceshi@ggr.la	2024-06-03 18:46:58	<input type="button" value="🗑"/>
2024-06-04 14:48:58	可靠性测试电站	Finished	ceshi@ggr.la	2024-06-03 14:48:58	<input type="button" value="🗑"/>

< Add New Diagnostic Task

\* Select plant

\* Execution Mode

\* Select Device

2.

The operation of the device may be interrupted during the diagnostic process. Please make sure you have obtained user authorization.

< Diagnosis Task Details

Basic Info Diagnostic Results

Select plant 模拟电站

Execution Mode Execute it now

Task Start Time 2024-06-03 18:46:58

Device Range

Current Status Finished

Created By ceshi@grr.la

Creation Time 2024-06-03 18:46:58

The number of strings in this scan: 12

Serial Number	Device Name	Diagnostic Results	Action
1	20101232600012	Weak light or mismatch	<a href="#">View/Verify</a>
2	20101232600012	Serial port not connected	<a href="#">View/Verify</a>
1	20101232600012	Normal	<a href="#">View/Verify</a>
2	20101232600012	Serial port not connected	<a href="#">View/Verify</a>
3	20101232600012	Shadow occlusion	<a href="#">View/Verify</a>
4	20101232600012	Serial port not connected	<a href="#">View/Verify</a>
5	20101232600012	Hot spot	<a href="#">View/Verify</a>
6	20101232600012	Serial port not connected	<a href="#">View/Verify</a>
7	20101232600012	Test Type	<a href="#">View/Verify</a>
8	20101232600012	Serial port not connected	<a href="#">View/Verify</a>

Total 12 10/page 1 2 Go to 1

### 3.3.6 Plant Inspection

#### Function Introduction

Automatically score from dimensions such as Info Adequacy, Meter Situation, Offline Device, Alarm Situation, Generator Anomaly, and Layout Situation to intuitively display the comprehensive health index of the plant, helping to quickly identify and resolve potential issues, ensuring efficient and stable operation of the plant.

#### Operation Steps

Step 1: Click on 'O&M' ->'Plant Inspection', and query related plant inspection information according to the Inspection Period and Plant Name, with the option to add or delete inspection tasks.

Home Monitoring O&M Alarm Info Dispersion Rate Analysis O&M Statistics Log Management IV Diagnostic Task Management Plant Inspection Report Service

Plant Inspection

Inspection Period  -  Plant Name  [Search](#) [Reset](#)

[Create](#)

Plant Inspection Time	Plant Name	Health Degree	Current State	Founder	Action
2024-06-12 10:50:12	微逆一拖一可靠性测试	48	Completed	ceshi@grr.la	<a href="#">🗑️</a>
2024-05-23 10:50:41	ceshi@grr.la2024-03-29	43	Completed	运维人员1号	<a href="#">🗑️</a>
2024-05-09 16:22:31	jim-test-moniqi	60	Completed	ceshi@grr.la	<a href="#">🗑️</a>
2024-04-26 14:25:38	工商业光伏电站	5	Completed	ceshi@grr.la	<a href="#">🗑️</a>
2024-04-19 15:34:25	testyezhu4@bcclo.cc2024-04-17	38	Completed	ceshi@grr.la	<a href="#">🗑️</a>
2024-04-16 19:10:26	simulator002@grr.la2024-04-16	10	Completed	ceshi@grr.la	<a href="#">🗑️</a>
2024-04-16 11:39:48	工商业光伏电站	5	Completed	ceshi@grr.la	<a href="#">🗑️</a>
2024-04-16 11:39:39	微逆一拖一可靠性测试	58	Completed	ceshi@grr.la	<a href="#">🗑️</a>
2024-04-16 11:39:35	模拟电站	53	Completed	ceshi@grr.la	<a href="#">🗑️</a>
2024-04-16 11:39:31	可靠性测试电站	62	Completed	ceshi@grr.la	<a href="#">🗑️</a>

Total 10 10/page 1 2 Go to 1

Step 2: Click on the plant inspection list to view the details of the corresponding plant inspection.

< Inspection Details



**48**  
Plant Health

Plant Name: 微逆—拖—可靠性勿动  
 Founder: ceshi@gri.la (Person in Charge)  
 Plant Inspection Time: 2024-06-12 10:50:24

**Info Adequacy** Score for this item: 20 / 20  
 No abnormalities

**Meter Situation** Score for this item: 1 / 20  
 Number of non meter devices: 22

**Device Offline** Score for this item: 9 / 20  
 Number of devices offline for more than 24 hours: 14

Device SN	Device Name	Offline Duration (h)	Last Online Time
31801233100586	31801233100586	1903	2024-03-25 03:21:06
31901233500031	31901233500031	1903	2024-03-25 03:03:41
31701233800001	31701233800001	529	2024-05-21 09:29:55

**Alarm Situation** Score for this item: 0 / 20

### 3.4 Report

The system presents complete statistical report data for plants.

#### 3.4.1 Generation Report

##### Function Introduction

The system generates Daily, Monthly, and Annual power generation statistical reports for each plant and supports downloading and exporting.

##### Operation Steps

Step 1: Click on the 'Report ->Generation Report' menu to query the report information for all plants in the displayed list page.

Statistical Range	Plant Name	Full Load Hours (h)	Generation Capacity (kWh)	Total Generation Capacity(kWh)
2024-06-25	可靠性测试电站	0	0	48904.1
2024-06-25	储能电站	1.12	50.8	35867.4
2024-06-25	微逆—拖—可靠性勿动	0.08	2.7	13824.7
2024-06-25	weizhuce5@bccto cc2024-06-13	2.4	2.4	176.4
2024-06-25	ceshi@gri.la2024-03-20	0	0	45.8
2024-06-25	微逆发电测试电站	0	0	40.6
2024-06-25	chongfu150@bccto cc2024-06-14	0.01	0.7	36.3
2024-06-25	ceshi@gri.la2024-03-25	0	0	19.9
2024-06-25	6133	0	0	0.1
2024-06-25	绿色能源自用率测试电站	0	0	0.1

Step 2: First, select the target plant you want to query, choose the Daily/Monthly/Annual report and the Specific Time Selection, and the corresponding data report will be automatically displayed, with support for downloading and exporting.

#### 3.4.2 Energy Storage Report

##### Function Introduction

The system generates Daily, Monthly, and Annual energy storage statistical reports for each plant and supports

downloading and exporting.

## Operation Steps

Step 1: Click on the 'Report' ->'Energy Storage Report' menu to query the report information for all plants in the displayed list page.

Statistical Range	Plant Name	Charging Energy(kWh)	Discharging Energy(kWh)	Total Charging Energy(kWh)	Total Discharging Energy(kWh)
2024-06-25	微逆一拖一可靠性测试	0	0	4.1	22
2024-06-25	ceshi@gri1a2024-03-25	0	0	3.8	3.6
2024-06-25	绿色能源自用率测试电站	0	0	2.3	0
2024-06-25	可靠性测试电站	0	0	0.7	0.3
2024-06-25	ceshi@gri1a2024-03-20	0	0	0.3	0
2024-06-25	模拟器电站	0	0	0	1.1
2024-06-25	ceshi@gri1a2024-03-29	0	0	0	0
2024-06-25	ceshi@gri1a2024-04-02	0	0	0	0
2024-06-25	ceshi@gri1a2024-04-03	0	0	0	0
2024-06-25	工商业光伏电站	0	0	0	0

Step 2: First, enter the target plant you want to query, choose the Daily/Monthly/Annual Report and the Specific Time Selection, and the corresponding data report will be automatically displayed, with support for downloading and exporting.

### 3.4.3 Inverter Report

#### Function Introduction

The system generates Daily, Monthly, and Annual statistical reports for inverter device at each plant and supports downloading and exporting.

#### Operation Steps

Step 1: Click on the 'Report' ->'Inverter Report' menu to query the report information for all plants in the displayed list page.

Statistical Range	Device Name	Device SN	Device Type	Plant	Generation Capacity (kWh)	Total Generation Capacity(kWh)
2024-06-25	20301241500024	20301241500024	String Inverter	可靠性测试电站	0	43510.9
2024-06-25	10200054612122	10200054612122	Energy Storage Inverter	模拟器电站	51.2	16437.2
2024-06-25	30301233800002	30301233800002	Micromverter	微逆一拖一可靠性测试	0	10103.1
2024-06-25	10201232400034	10201232400034	Energy Storage Inverter	模拟器电站	0	3247.2
2024-06-25	31801113800002	31801113800002	Microinverter	微逆一拖一可靠性测试	0.85	578.7
2024-06-25	31801240900012	31801240900012	Micromverter	微逆一拖一可靠性测试	0.56	459.1
2024-06-25	30202348800112	30202348800112	Micromverter	模拟器电站	0.19	436.5
2024-06-25	31801240200416	31801240200416	Microinverter	微逆一拖一可靠性测试	0	370.6
2024-06-25	31901233400017	31901233400017	Micromverter	可靠性测试电站	0	329.8
2024-06-25	31901241000049	31901241000049	Microinverter	微逆一拖一可靠性测试	0	327.7

Step 2: Enter the Device SN, Device Type, Plant Name you want to query, choose the Daily/Monthly/Annual Report and the Specific Time Selection, and the corresponding data report will be automatically displayed, with support for downloading and exporting.

### 3.4.4 Data Comparison

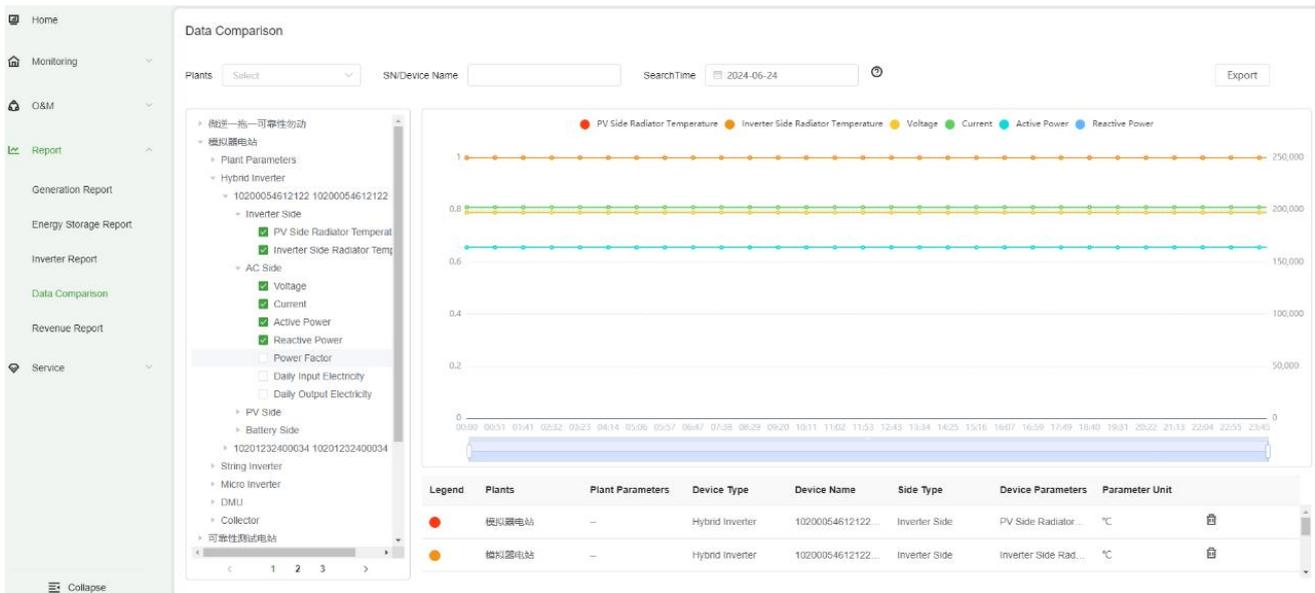
#### Function Introduction

By selecting key operating parameters of different plants or specific device, intuitive curve charts are generated for comparative analysis, which quickly identifies performance differences, assesses efficiency changes, and provides data support for optimizing operational decisions.

#### Operation Steps

Step 1: Click on the 'Report' -> 'Data Comparison', adjust the left parameter options according to the plant, SN/Device Name, and by checking the parameters, the corresponding parameter curves will be displayed on the right.

Step 2: Click the 'Export' button in the upper right corner to export the current selected parameter information.



### 3.4.5 Revenue Report

#### Function Introduction

Display the revenue information of plants with revenue on the current day.

#### Operation Steps

Step 1: Click on the 'Report' -> 'Revenue Report', and you can query the revenue information of the relevant plants according to the Plant Name, Report Type, and Specific Time Selection.

Step 2: Click the 'Export' button in the upper left corner to export all the revenue information of the plants under the current query conditions.

Plant Name	Revenue	Currency	Contribution Method	Plant Address
模拟电站	13.17	CNY	Full Payment by Owner	中国浙江省杭州市西湖区浙江杭州市西湖区
微逆一拖一可靠性启动	2.73	CNY	Full Payment by Owner	中国浙江省杭州市西湖区杭州市西湖区320
chongfu150@bccto.cc2024-06-14	0.70	CNY	Full Payment by Owner	

### 3.4.5 Revenue Report

#### Function Introduction

Display the revenue information of plants with revenue on the current day.

#### Operation Steps

Step 1: Click on the 'Report' -> 'Revenue Report', and you can query the revenue information of the relevant plants according to the Plant Name, Report Type, and Specific Time Selection.

Step 2: Click the 'Export' button in the upper left corner to export all the revenue information of the plants under the current query conditions.

Plant Name	Revenue	Currency	Contribution Method	Plant Address
模拟电站	13.17	CNY	Full Payment by Owner	中国浙江省杭州市西湖区浙江杭州市西湖区
微逆一拖一可靠性启动	2.73	CNY	Full Payment by Owner	中国浙江省杭州市西湖区杭州市西湖区320
chongfu150@bccto.cc2024-06-14	0.70	CNY	Full Payment by Owner	

### 3.5 Service

Provides users with various service functions or tools, such as Upgrade Task Management, Plant Management, Device Management, etc.

### 3.5.1 Upgrade Task Management

#### Function Introduction

After users receive software package update notifications, they can create upgrade tasks through the device upgrade function to perform remote upgrade operations on device.

#### Prerequisite

1. Plant creation has been completed (including the addition of communication devices with 14 bits SN, including DCSs or DMUs);
2. The device firmware package has been uploaded in the firmware management.

#### Operation Steps

Step 1: Click on the 'Service' ->'Upgrade Task Management' menu, and you can query all upgrade tasks in the displayed list page.

Update time	Device Type	Upgrade Firmware	Firmware Package N...	Firmware Package Size	Task Status	Upgraded By	Update Time	Action
2024-06-25 09:34:19	Hybrid Inverter	V02.03.06.26	QYNTEST_SYS_NOR...	458.35K	Failed	ceshi@gr.la	2024-06-25 09:34:19	
2024-06-25 09:32:16	Data Communication ...	V01.03.01.69	DCS_V0-H-V01.03.01...	176.72K	Failed	ceshi@gr.la	2024-06-25 09:50:00	
2024-06-24 17:37:01	Hybrid Inverter	V02.03.06.26	QYNTEST_SYS_NOR...	458.35K	Failed	ceshi@gr.la	2024-06-24 17:37:01	
2024-06-24 16:30:05	Hybrid Inverter	V02.03.06.26	QYNTEST_SYS_NOR...	458.35K	Failed	ceshi@gr.la	2024-06-24 16:30:05	
2024-06-24 14:19:44	Hybrid Inverter	V02.03.06.26	QYNTEST_SYS_NOR...	458.35K	Failed	ceshi@gr.la	2024-06-24 14:19:44	
2024-06-24 14:14:20	Hybrid Inverter	V02.03.06.26	QYNTEST_SYS_NOR...	458.35K	Failed	ceshi@gr.la	2024-06-24 14:14:20	
2024-06-21 17:29:38	Micro Inverter	V01.02.09.0D	MI_1to2_1000W_4105...	95.91K	Success	ceshi@gr.la	2024-06-21 17:47:32	
2024-06-21 17:07:14	Micro Inverter	V02.FF.09.06	MI_1to4_2000W_1.45t...	100.16K	Success	ceshi@gr.la	2024-06-21 17:14:46	
2024-06-21 10:26:22	Data Communication ...	V01.04.01.70	DCS_V0-H2-V01.04.0...	181.33K	Success	ceshi@gr.la	2024-06-21 10:30:23	
2024-06-21 10:06:42	Data Communication ...	V01.04.01.70	DCS_V0-H2-V01.04.0...	181.33K	Created	ceshi@gr.la	2024-06-21 10:06:43	

Step 2: Click the add button to add a new upgrade task, select the Device Type, Upgrade Range, Upgrade Firmware, Upgrade Mode (Upgrade Now, Timed Upgrade), and click 'Finish'.

< Add Upgrade Task

\* Device Type

\* Upgrade Range

\* Upgrade Firmware

Firmware Package Size --

Firmware Fixing Content --

\* Upgrade Mode

The upgrade process may interrupt the operation of the device. Please make sure you have obtained user authorization.

Step 3: Click on the upgrade task details page to view the Task Details, Task Status, and Upgrade Log information of the upgrade task.

< Upgrade Task Details

Task Details Task Status Upgrade Log

Number of Successful Devices --PCS    Number of Failed Devices --PCS    Number of Upgrading Devices --PCS

Device Type: Hybrid Inverter

Upgrade Range: 1020000000026

Upgrade Firmware: V02.03.06.26

Firmware Package Name: QYNTTEST\_SYS\_NORMA\_V02MCU-V02.03.06.26-2024.05.20\_

Firmware Package Size: 458.35K

Firmware Fixing Content: Self-test different hardware platforms combined package a

Upgrade Mode: Upgrade Now

Update time: 2024-06-25 09:34:19

Upgraded By: ceshi@grr.la

Task Status: Failed

### Constraints

Delete, Batch Delete: Tasks that are in the running or completed state cannot be deleted.

Edit: You can only edit tasks that have been created.

## 3.5.2 Plant Management

### Function Introduction

Users can centrally manage multiple plants and can perform add, delete, modify, and query operations on plants.

### Prerequisite

Plant creation has been completed.

### Operation Steps

Step 1: Click on the 'Service' ->'Plant Management' menu, and you can query all plant data in the displayed list page.

Plant Management

Plant Name:     Plants:        

Plant Name	Plant Status	Owner	Organization	Photovoltaic installa...	Energy Storage Cap...	Update Time	Creation Time	Action
hyxtemp4@bccto.cc2024-06-...	Unfinished		111	0.00kWp	0.00kWh	2024-06-25 09:46:59	2024-06-25 09:46:31	
159466790392024-06-22	Offline	15946679039	111	0.00kWp	0.00kWh	2024-06-22 11:03:43	2024-06-22 10:58:53	
hyxtemp4@bccto.cc2024-06-...	Offline	m17621900629@163...	111	0.00kWp	0.00kWh	2024-06-20 16:23:00	2024-06-20 16:22:53	
weizhuce10@bccto.cc2024-0...	Offline	weizhuce10@bccto.cc	111	0.00kWp	0.00kWh	2024-06-19 16:39:31	2024-06-19 16:38:53	
weizhuce10@bccto.cc2024-0...	Offline	weizhuce10@bccto.cc	111	0.00kWp	0.00kWh	2024-06-19 16:36:48	2024-06-19 16:35:57	
weizhuce@bccto.cc2024-06-17	Offline	weizhuce@bccto.cc	111	0.00kWp	0.00kWh	2024-06-25 09:35:03	2024-06-17 11:03:13	
组串发电量	Offline	ceshi	111	0.00kWp	0.00kWh	2024-06-14 16:27:36	2024-06-14 16:18:53	
chongfutu150@bccto.cc2024-0...	Normal	ceshi	111	0.00kWp	0.00kWh	2024-06-25 10:35:04	2024-06-14 15:38:54	
微逆发电量测试电站	Offline	ceshi	111	0.00kWp	0.00kWh	2024-06-20 16:18:04	2024-06-14 11:51:30	
weizhuce5@bccto.cc2024-06...	Normal	weizhuce5@bccto.cc	111	0.00kWp	0.00kWh	2024-06-24 17:13:49	2024-06-13 15:09:34	

Total 36    10/page            Go to

Step 2: Click the 'Create Plant' button, and the pop-up create plant page will appear, which is the same as creating a plant in 3.2.1.

### Constraints

Delete, Batch Delete: Before deleting the plant, unbind all devices;

Edit: The function page is the same as the creation of the plant, except for the owner information, can be edited;

## 3.5.3 Device Management

### Function Introduction

View the communication status and basic information of all communication devices in the plant. Users can Add Device, Unbind Device, and perform On-grid Configuration operations as needed.

### Prerequisite

Plant creation has been completed and communication devices, including DCSs or DMUs, have been added.

### Operation Steps

Step 1: Click on the 'Service' ->'Device Management' menu, and you can query all communication device data in the displayed list page.

Step 2: Click the 'Delete' button to unbind the communication device from the current plant.

Step 3: Click the 'Add Device' button, and you can bind the communication device with the plant by entering the SN number, device type, binding plant, and device name.

Step 4: Check the device and click the 'On-grid Configuration' button to perform on-grid configuration operations on the selected device.

The screenshot displays the 'Device Management' page. On the left is a navigation sidebar with 'Service' selected. The main content area has a search bar for 'Device SN' and two buttons: 'Add Device' and 'On-grid Configuration'. Below is a table listing 12 devices.

Device Name	Device SN	Status	Type	Plant Name	Owner	Creation Time	Action
60100000000050	60100000000050	Offline	Wi-Fi	simulator002@gri.la2024-...	模拟器业主	2024-04-25 10:54:56	[Delete]
60101232500008	60101232500008	Offline	Wi-Fi	微进一拖一可靠性勿动	ceshi	2024-04-27 15:49:17	[Delete]
60101234700053	60101234700053	Offline	Wi-Fi	微进一拖一可靠性勿动	ceshi	2024-05-09 16:18:25	[Delete]
60101241300070模拟挂机	60101241300070	Normal	Wi-Fi	微进一拖一可靠性勿动	ceshi	2024-06-14 15:03:03	[Delete]
60123456781000	60123456781000	Normal	Wi-Fi	jim-test-moniqi	jim	2024-04-28 13:53:15	[Delete]
模拟器	602000000000388	Normal	Wi-Fi	模拟器电站	模拟器业主	2024-03-08 13:48:45	[Delete]
602000000000800	602000000000800	Offline	4G	ceshi@gri.la2024-04-03	模拟器业主	2024-04-25 16:36:36	[Delete]
602000000000888	602000000000888	Offline	4G	ceshi@gri.la2024-03-20	13709270563	2024-06-18 13:45:33	[Delete]
607000000000010	607000000000010	Normal	Wi-Fi	weizhuce@bccto.cc2024-...	weizhuce@bccto.cc	2024-06-22 15:26:32	[Delete]
607000000000026	607000000000026	Normal	Wi-Fi	可靠性测试电站	13097473163	2024-06-17 15:55:00	[Delete]

At the bottom, there is a pagination control showing 'Total 57', '10/page', and page numbers 1 through 6.

### 3.5.4 Organization Management

#### Function Introduction

Organization Person in Charge and Administrators can manage organizations and members according to business needs, maintain organization information, view role introductions, and view the organization's default electricity prices, etc.

#### Prerequisite

The user has registered an organization account.

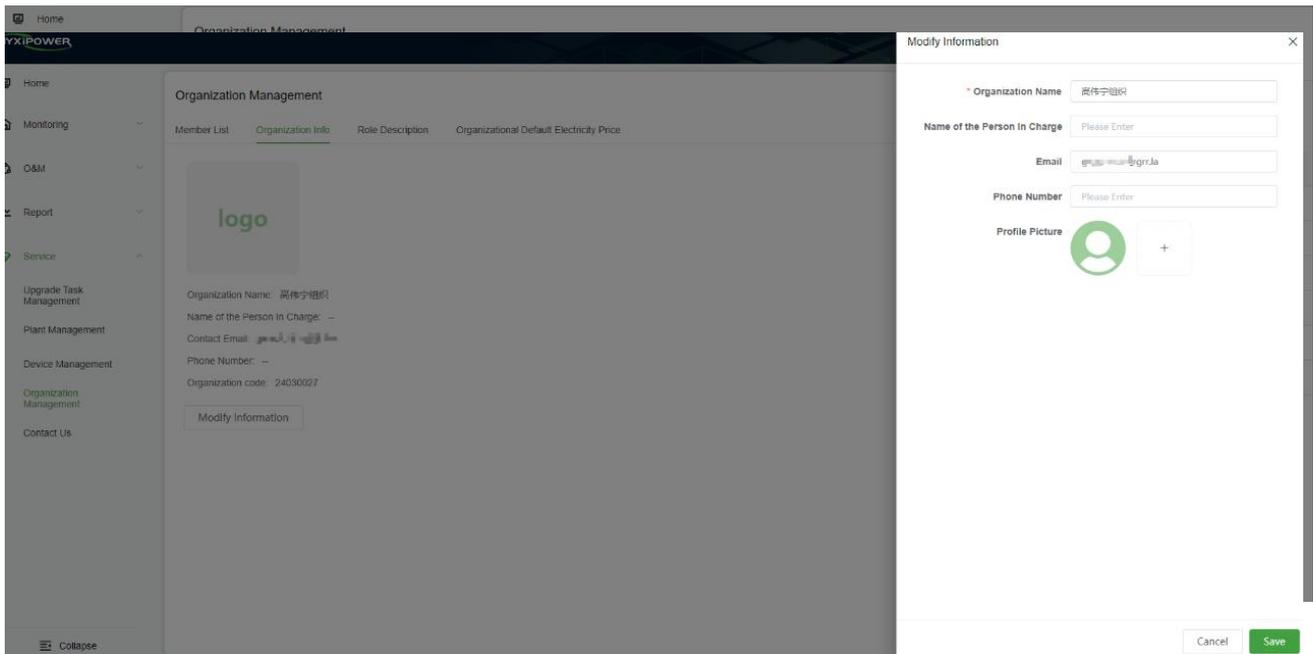
#### Operation Steps

Step 1: Click on the 'Service' ->'Organization Management' menu, and you can query all member data under the organization in the displayed list page.

Name	Contact Number	Email	Role	Action
552		yunweihiyi@bccto.cc	O&M Personnel	
sfs		chongfu5445@bccto.cc	Administrator	
qyn		qyntest34@bccto.cc	Sales	
15957133185	15957133185	hyx0529@bccto.cc	Administrator	
运维人员1号		maintenance001@grr.la	O&M Personnel	
管理员01		manager01@grr.la	Administrator	
ceshi@grr.la	19357366189	ceshi@grr.la	Person in Charge	

Total 7    10/page    < 1 >    Go to 1

Step 2: Click the 'Add Member' button, enter the member's Name, Role, Phone Number/Email, Linked Plants in the pop-up page, check Send an SMS or email to notify the member, click 'Create Account', and the system will send an SMS/email with an initial password.



Step 3: Click on the organization information to display the organization's Logo, Organization Name, Name of the Person in Charge, Contact Email, Phone Number, Organization Code (unchangeable), and click the 'Modify Information' button to modify the relevant information.

Step 4: Click on the role introduction to help Person in Charge or Administrators understand the definition and authority range of organization member roles.

Organization Management

Member List   Organization Info   Role Description   Organizational Default Electricity Price

---

**Person In Charge**

The person in charge has the maximum permission of the organization and there is only one person in charge of the organization.

---

**Administrator**

Organization daily manager added by the person in charge of the organization with the permissions of monitoring, o&M, report, service and other management functions.

---

**O&M Personnel**

O&M personnel can perform O&M, upgrades and other related operations on the linked plants and devices in the organization.

---

**Installer**

Installer can create, debug, bind, and perform other related operations on the linked plants and devices in the organization.

---

**Sales**

Sales can only view the plants and devices within the organization.

## Constraints

Editing: cannot edit themselves, cannot edit the Person in Charge;

Delete: cannot delete themselves, cannot delete the Person in Charge;

### 3.5.5 Contact Us

#### Function Introduction

Provides users with contact channels to reach Hyxi Technology.

#### Operation Steps

Step 1: Click on the 'Service' ->'Contact Us' menu, and you will be directed to the contact us section of Hyxi Technology's official website, where you can view the relevant contact information.



 <b>HQ Tel.</b> 0571-87522520	 <b>Sales Inquiry</b> global.sales@hyxipower.com	 <b>E-mail</b> support1@hyxipower.com	 <b>Official WeChat</b> Get the Latest News
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**Message consultation**

If you have any questions, you can fill in the form below and leave us a message. We will reply to you within 3 working days.

<p>* Full name</p> <input type="text" value="Please enter your name"/>	<p>* Telephone</p> <input type="text" value="Please enter a phone number"/>	<p>* Mailbox</p> <input type="text" value="Please enter email"/>
<p>* Message content</p> <input style="height: 30px;" type="text" value="Please enter what you want to say"/>		