User Manual

Electricity Management Platform

(Dealer Version)

To prevent damage to the product caused by improper use, please carefully read this manual before operation.

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Contents

1 Product Overview

The Electricity Management Platform is a management system designed for distributors, supporting device management, user management, order management, and energy control functions.

With this platform, you can:

- Monitor charger status in real time
- Manage user-device relationships
- View and export charging order data
- Configure charging strategies (e.g., load balancing, PV linkage)

This platform helps improve operational efficiency and enables refined energy management.

2 Getting Started

2.1 Login

- Please email ev@fox-ess.com to request a valid username and password for login.
- Enter your username and password
- Click “**Login**”

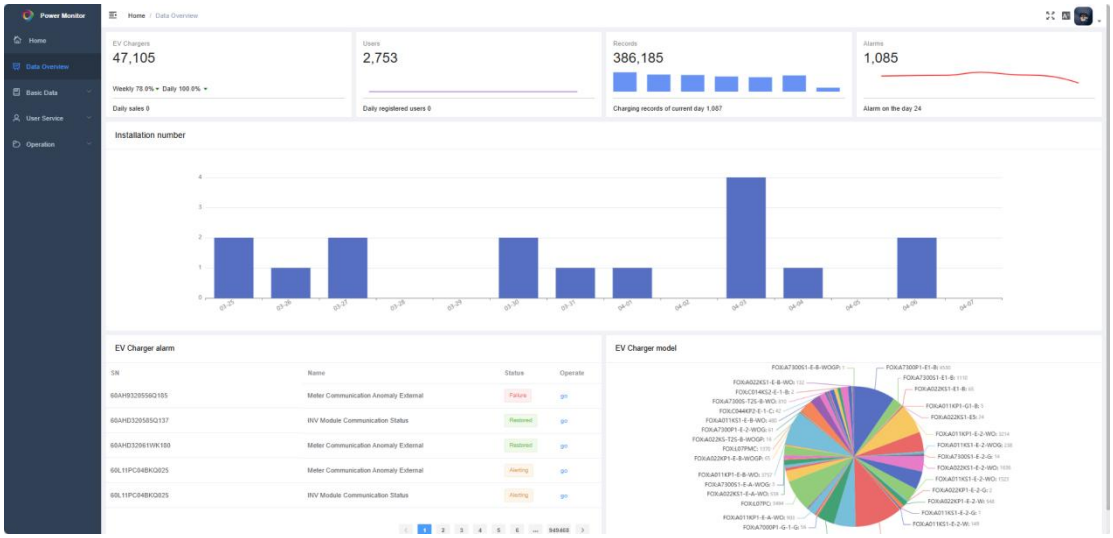
After successful login, you will be directed to the **Dashboard**.

3 Dashboard

The dashboard provides an overview of platform operations.

Key Information Includes:

- **Total Chargers:** Number of devices and growth trend
- **Users:** Total users and daily increase
- **Orders:** Total and daily charging orders
- **Alarms:** Active and newly generated alarms
- **Installation Data:** Installation statistics over the past two weeks
- **Model Distribution:** Charger model breakdown
- **Alarm List:** Current device alerts



4 Device Management

4.1 Charger Management

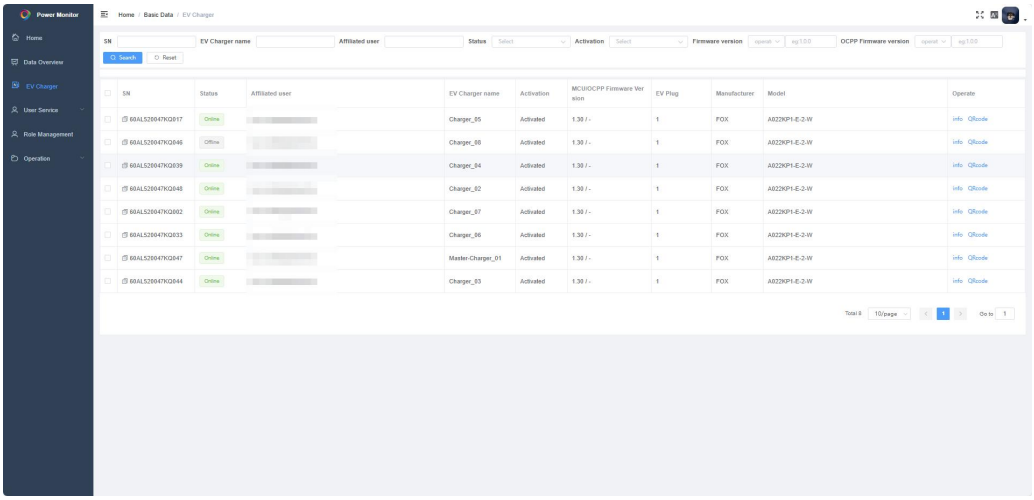
This page allows you to view and manage all chargers connected to the platform.

- Search Filters
- Charger SN
- Charger Name
- User Email
- Status (Online / Offline)
- Activation Status

Field Description

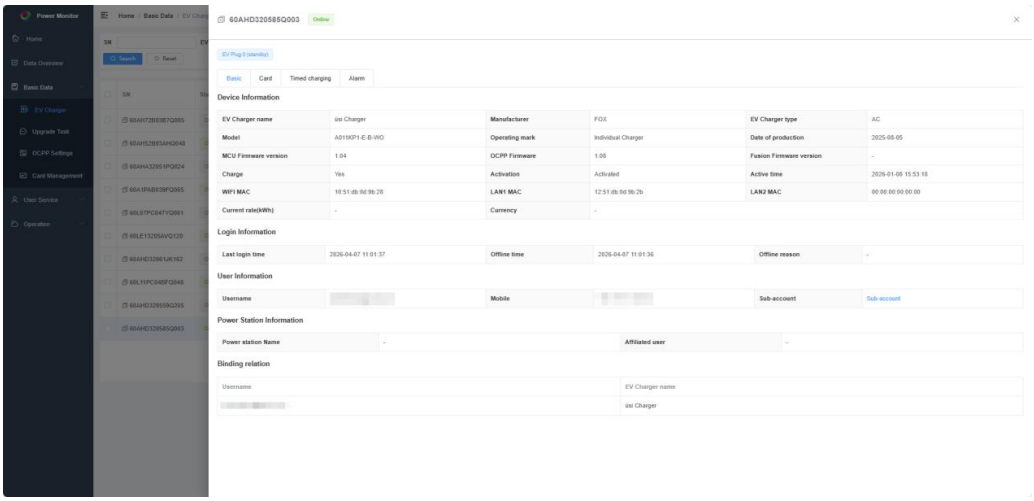
Field	Description
SN	Unique device identifier (copy supported)
Status	Online / Offline
User	Bound user email
Name	User-defined name
Activation	Whether the device is activated
Firmware Version	Current firmware version
Manufacturer	Device manufacturer
Model	Charger model
Actions	Details / QR Code

Note: The dealer's charging pile list is initially empty. A pile is added to the list only after the installer scans its SN via the FoxSwitch (or EliteCharger) app to bind it to the dealer.



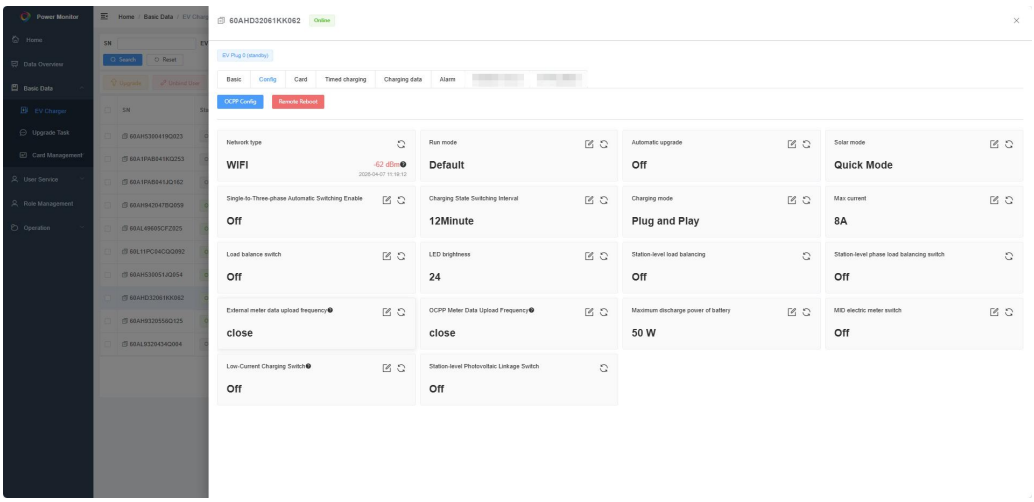
4.2 Device Details

Click "**Details**" to view detailed charger information.

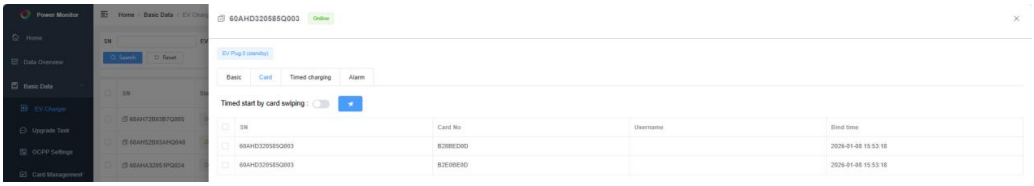


Modules:

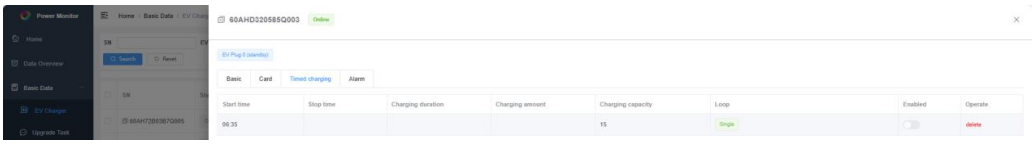
- Configuration



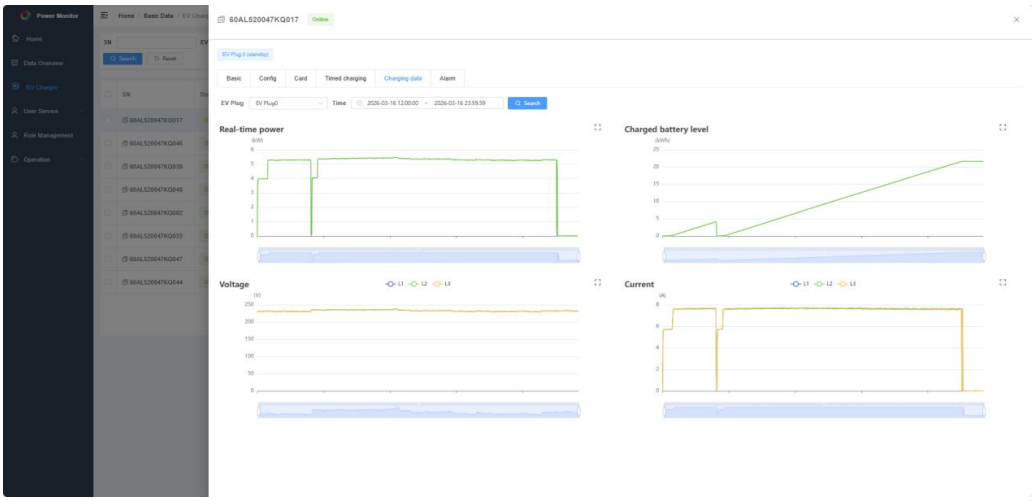
- Card Information



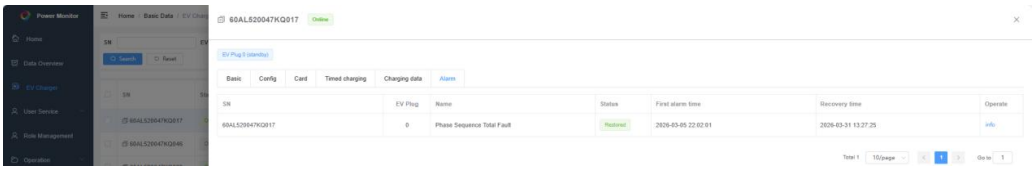
- Scheduled Charging



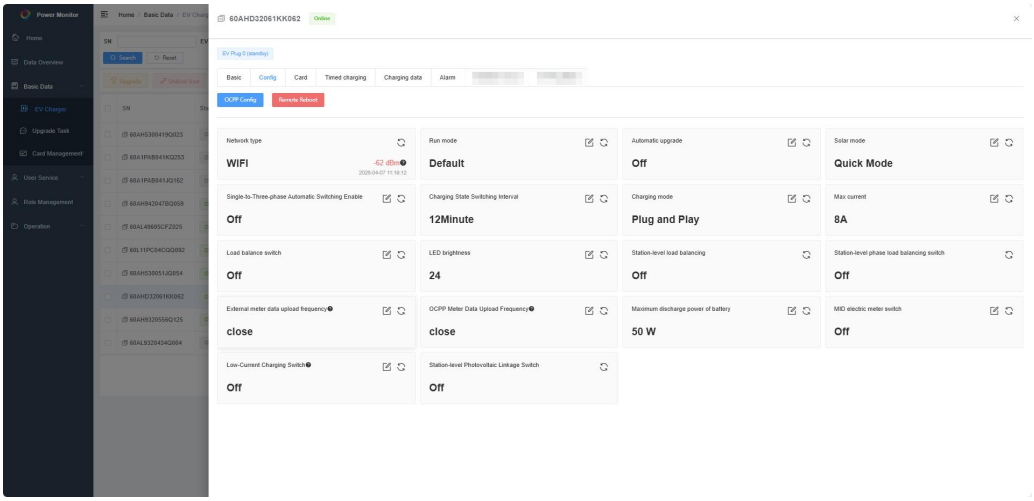
- Charging Data



- Alarm Information



5 Device Configuration



5.1 Operating Modes

Function / Interface	Default Mode	OCPP Mode	Modbus TCP Mode	Modbus RTU Mode
Bluetooth Access	Full access	Limited access*	Limited access**	Limited access**
Modbus TCP	Read-only	Read-only	Full access***	Read-only
Modbus RTU	Read-only	Read-only	Read-only	Full access***
OCPP Connection	Disabled	Enabled	Disabled	Disabled

Note:

- Limited access (OCPP Mode): Supports information query, firmware upgrade, remote trigger, OCPP parameter configuration, and network settings modification.
- **Limited access (Modbus Modes): Supports information query, firmware upgrade, remote trigger, and network settings modification.**
- **Full access: Includes read/write operations and device control.**
- Read-only: Only data monitoring is allowed, no control operations.
- Disabled: Connection is not allowed.

5.2 Basic Settings

Auto Upgrade

Automatically updates firmware when the EV charger is idle.

Charging Mode

Mode	Description
Controlled Mode	App / platform / RFID control
Plug & Charge	Charging starts upon plug-in
Locked Mode	Charging disabled

5.3 Current & Power Control

- Max Current: 6–32A
- Load Balancing Current: Requires external meter

5.4 Load Balancing

Dynamically adjusts charging current to prevent overload.

- Supports single charger balancing
- Supports station-level balancing

⚠ Requires external energy meter

5.5 PV Linkage

Enables integration with photovoltaic systems to prioritize solar energy.

Modes:

- Fast Mode
- Economic Mode
- Green Mode

Default:Fast Mode (No external device required)

⚠ Requires compatible meter or inverter

5.6 Station-Level Features

Station Load Balancing

Distributes power among multiple EV chargers

Phase Load Balancing

Balances three-phase current automatically

⚠ Requires phase switching device

5.7 Additional Features

Remote Reboot

Allows remote restart of the charger.

- Available only if supported by the firmware
- Button is enabled when the charger is **online**
- Click to initiate reboot
- If charging is in progress, reboot will be executed after the session ends

LED Brightness

Adjusts the brightness of the charger's LED indicator.

- Adjustable range: **0–100** (integer)
- **0** = LED completely off

Ripple Control (Load Reduction)

Enables compliance with grid load control requirements (e.g., German EnWG §14a).

- Default: **OFF**
- Receives load reduction signals via:
  - Ripple Control Box (RCB), or
  - Dry contact input
- When activated, charger output power is limited to **4.2 kW**

Electronic Lock (Socket Version Only)

Controls the locking mechanism of the charging socket.

- Default: **OFF** (charging plug unlocked after charging)
- When enabled:
  - The charging plug remains **locked** after charging stops
  - Prevents unauthorized removal or theft

OCPP Meter Data Upload Interval

Defines the frequency of meter data reporting to the OCPP platform (used for load balancing).

- Default: **OFF**
- Configurable range: **0–255 seconds**
- **< 5 seconds (including 0)**: Upload disabled
- **≥ 5 seconds**: Data uploaded at the configured interval

Battery Max Discharge Power

Limits the power drawn from the battery when the charger communicates directly with a FOX inverter.

- Applicable only in inverter-connected scenarios
- Adjustable range: **50–22,000 W**
- Default value: **50 W**

5.8 MID Meter

When enabled, billing is based on the external MID meter.

⚠ Requirement:

- Meter address must be set to 023

6 User & Permission Management

6.1 User Management

Create and manage platform accounts.

- **Core Concepts:**
- **User:** Login account
- **Role:** Permission set
- **Data Access:** Charger visibility scope

Creation Steps

Step 1 Click the ”**Add**” button on the User Management screen.

Step 2 Enter the platform account and password to be created.

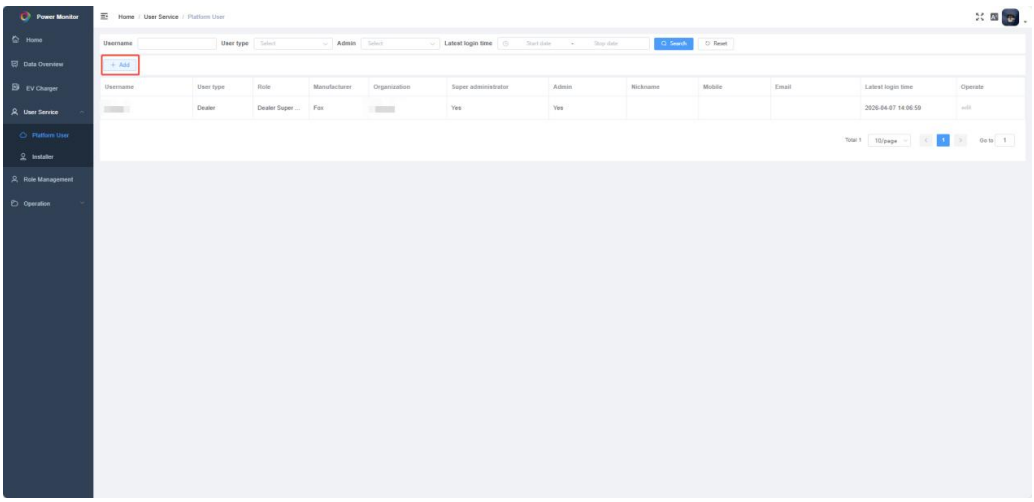
Step 3 Select a user role (if no role exists, add one in **Role Management** first).

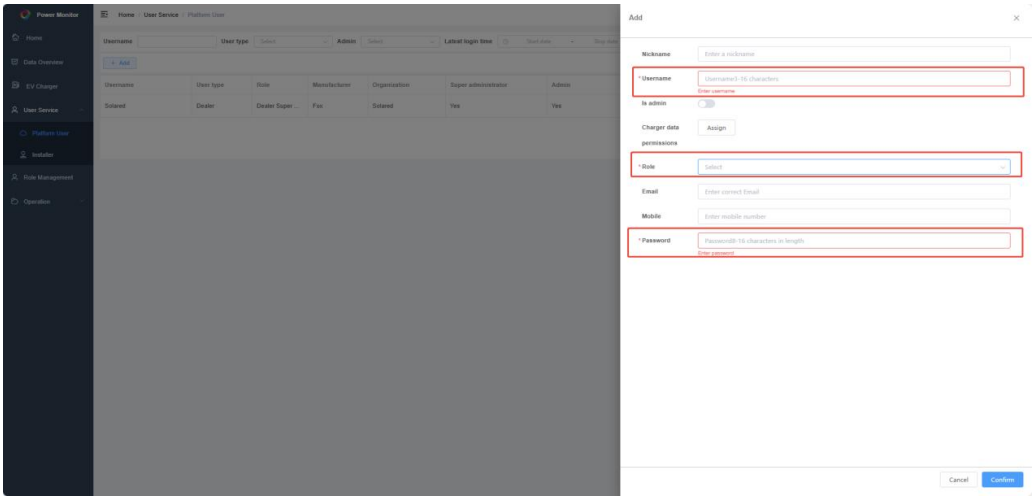
Step 4 Click the ”**Assign**” button to assign charger SN(s) to this account.

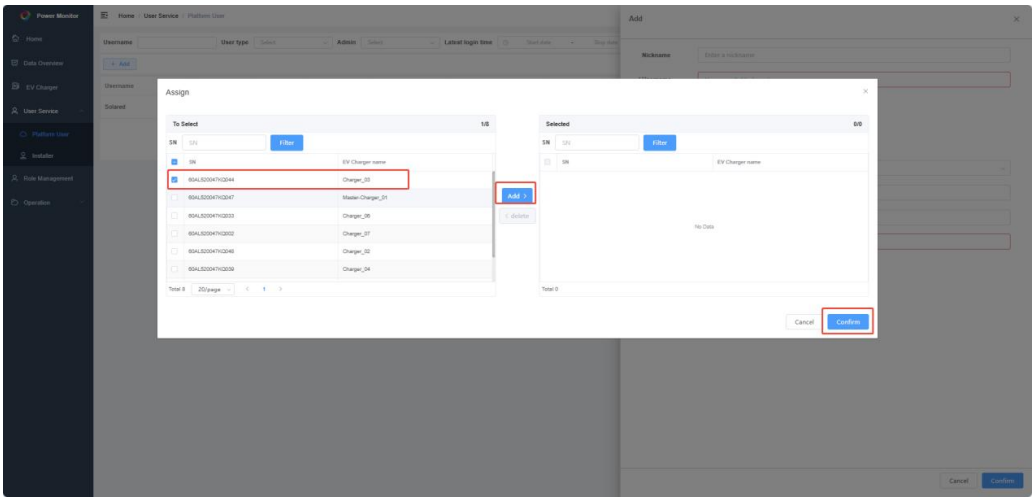
Step 5 Click ”**Confirm**” to complete account creation.

Note:

Do not enable the "Admin flag". Enabling it grants this user access to all chargers under your ownership.







6.2 Installer Management

Manage installer accounts:

- Create installers
- Enable/disable accounts
- Track installation activity

Creation Steps:

Step 1 Click the ”Add” button on the Installer Management screen.

Step 2 On the "Create Installer Role" page, select the target app:

- ➢ Select EliteCharger to create an installer role for EliteCharger.
- ➢ Select FoxSwitch to create an installer role for FoxSwitch.

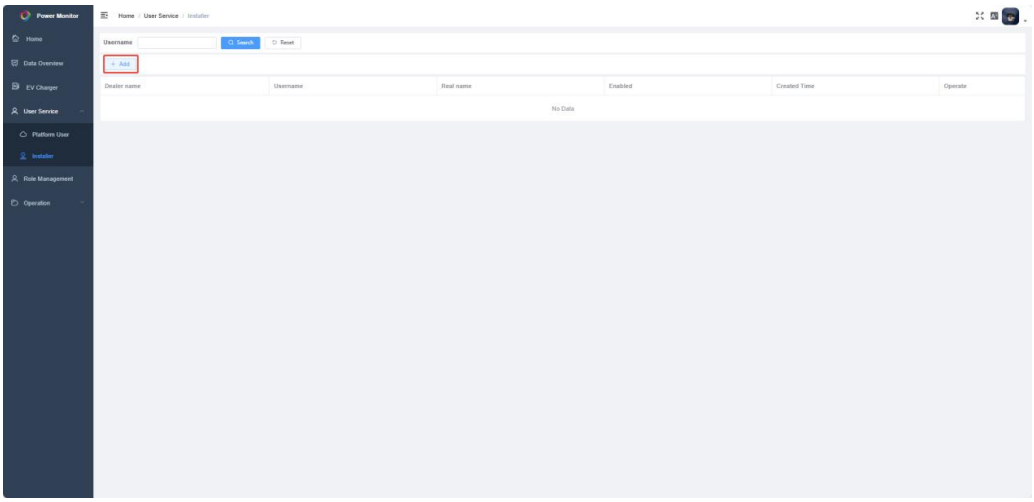
Step 3 Enter the installer's email and password.

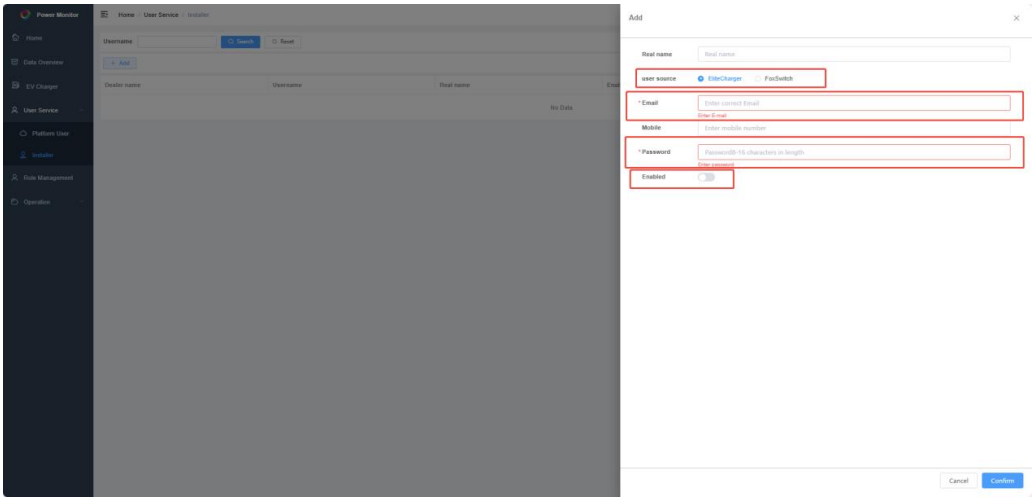
Step 4 Click the Enable button to complete account creation.

Note

1. Installer accounts can only log in to the Fox Switch(or EliteCharger) App if the Enable button was enabled during account creation. After login, installers can use all App features to install and commission EV Chargers, just like regular users.

2. The dealer will see an EV charger on the platform only after the installer scans its code and binds it in the Fox Switch(or EliteCharger) App. Only installers belonging to the same dealer can bind a given EV charger. Installer binding does not interfere with normal user binding, and the installer−charger binding is automatically cancelled 6 hours after it is created.





6.3 Role Management

Define access permissions.

Configurable Items:

- Page access
- Function permissions

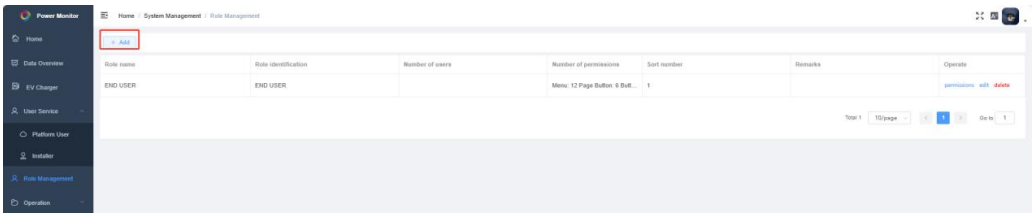
Creation Steps:

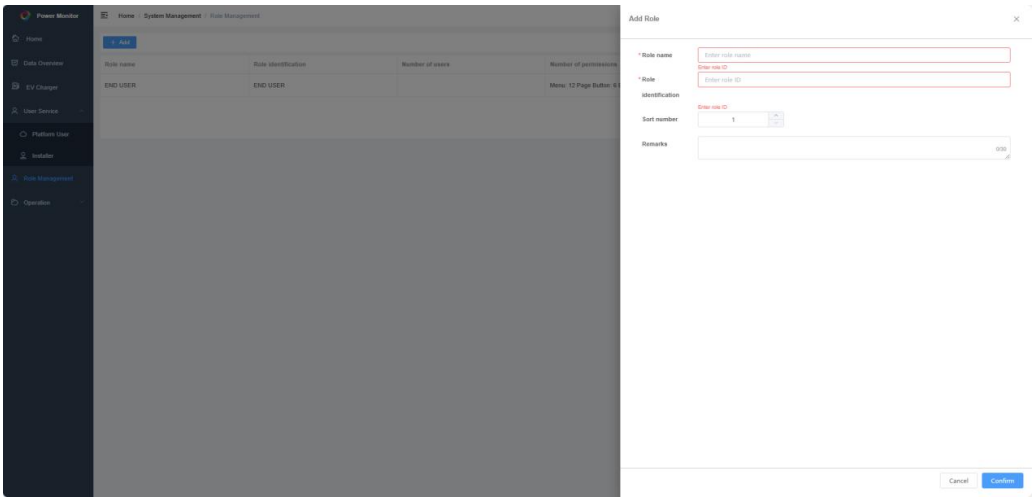
Step 1 On the Role Management interface, click the "**Add**" button.

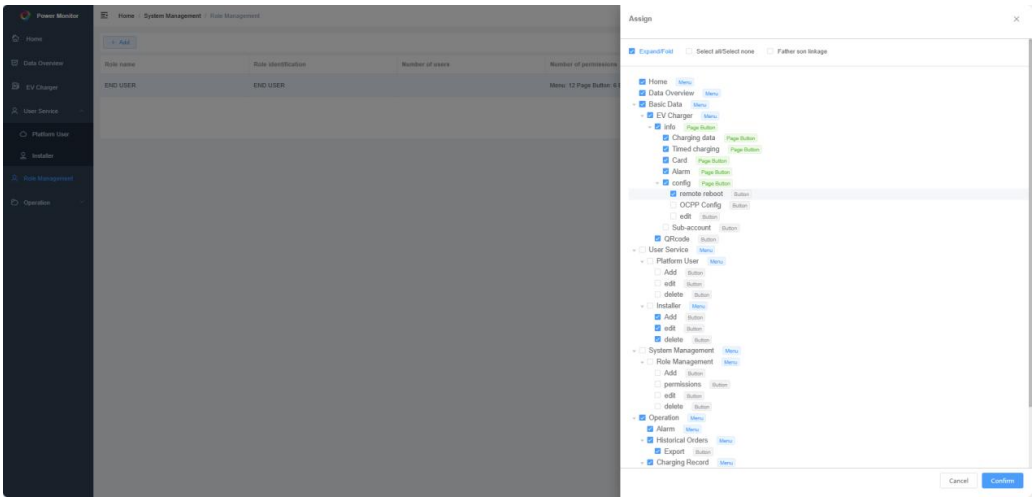
Step 2 Enter the role name and identifier, and confirm.

Step 3 Click the "**Permissions**" button in the action column of the role list. In the permission popup that appears, select the pages and function buttons that the role needs to use.

Step 4 Click the "**Confirm**" button to complete the role creation.







7 Operation Services

7.1 Order Management

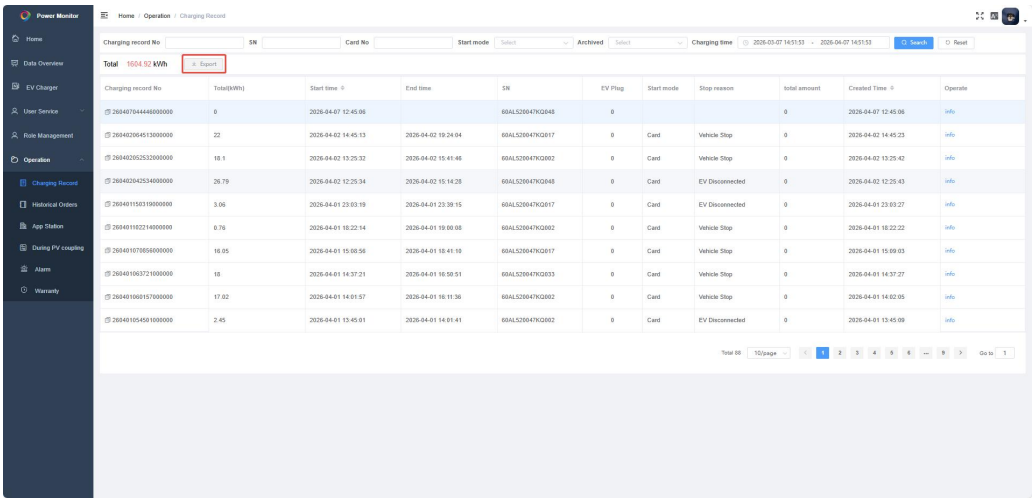
View and export charging orders.

Functions:

- Search orders
- View details
- Export Excel

Data Range:

- **Available Data Range:** Charging orders from the most recent 3 months are available on this page
- **Maximum Query Range:** Each query can cover a maximum time span of 1 month



7.2 Historical Orders

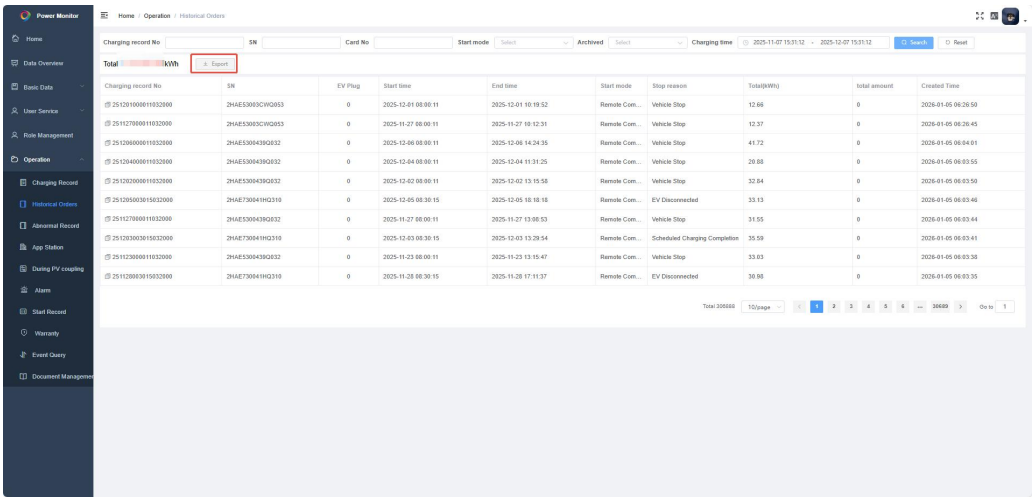
Access orders older than 3 months.

Functions:

- Search orders
- View details
- Export Excel

Data Range:

- **Available Data Range:** Charging orders older than 3 months are viewable on this page.
- **Maximum Query Range:** Each query can cover a maximum time span of 1 month



7.3 Station-Level Load Balancing (APP Station)

Function Overview

The station-level load balancing function enables dynamic power distribution among multiple chargers within a station, ensuring safe and efficient utilization of available electrical capacity.

The system automatically adjusts the charging current of each charger based on the total available power and real-time load conditions.

Setup Instructions

To configure multi-charger load balancing, use the “**APP Station**” function:

Step 1 Create a Station

Click “**Add**” to create a new charging station and configure the following parameters:

- **Station Name:** Custom name for the station
- **Max Current:** Rated current of the upstream circuit breaker
- **Station-level load balancing button:** Enable the station - level load balancing function
- **Station-level phase load balancing switch：** Dynamically adjust the three - phase current balance.(Requires phase switching device)

- **Meter Ratio:** CT (Current Transformer) ratio of the connected energy meter （This parameter does not need to be set and the default value is 1.）

Step 2 Add Chargers

Click “**Charger List**”, then:

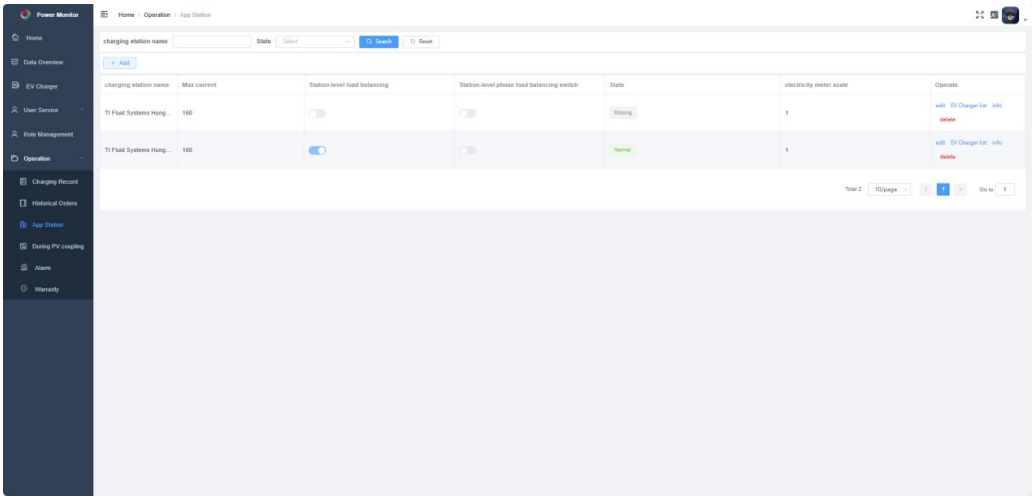
1. Select chargers that support load balancing
2. Add them to the right-side list
3. Click “**Confirm**” to complete grouping

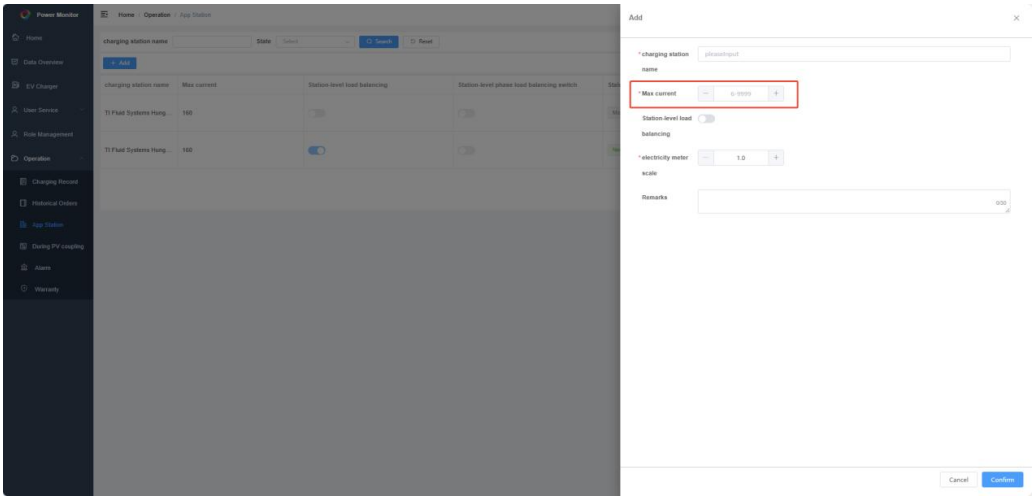
Step 3 Manage the Station

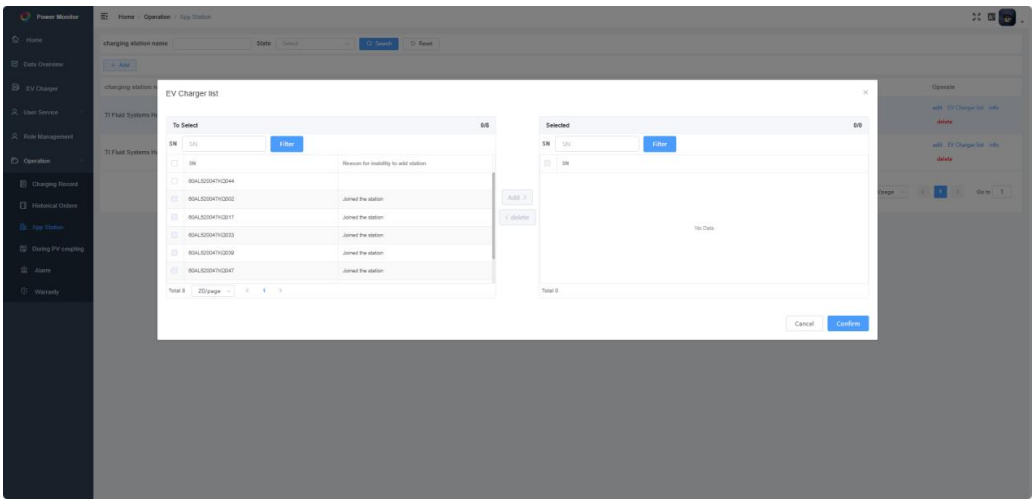
- Click “**Details**” to view station configuration and status
- Click “**Delete**” to remove the station

Operating Logic

The system dynamically distributes available current across all chargers in the station.







Example:

- Rated Circuit Breaker Current: **200A**
- Number of Chargers: 6

Scenario	Calculation	Result
Other load = 50A	(200 − 50) / 6	25A per charger
Other load = 170A	Available current < 6A	Charging paused

Abnormal Conditions

- **Charger Offline**
  If a charger goes offline, it will default to the minimum charging current of **6A**
- **Meter Communication Failure (RS485 offline)**
  All chargers in the station will default to **6A charging**

Important Notes

⚠ The minimum charging current for EV chargers is **6A** (industry standard)

⚠ Ensure proper connection of the RS485 communication between the charger and the energy meter

⚠ Load balancing requires a correctly installed and configured external energy meter

7.4 Station-Level PV Linkage (PV Linkage)

Function Overview:

The station-level PV linkage function enables coordinated operation between multiple chargers and a photovoltaic (PV) system.
It optimizes energy usage by prioritizing solar power for EV charger, thereby improving energy efficiency and reducing grid dependency.

Setup Instructions

To configure multi-charger PV linkage, navigate to "**Operation Services**" via the left-hand menu and select "**PV Linkage**".

Step 1 Create a PV Linkage Group

- Click "**Add**" to create a new group and configure the following:
- **Group Name**: Custom name for the PV linkage group
- **PV Linkage Switch**: Enable PV linkage
- **PV Mode**: Select the operating mode based on application needs:
  - **Economic Mode**: Balanced use of grid and PV energy
  - **Green Mode**: Maximizes PV energy utilization

Step 2 Add Chargers

Click "**Charger List**", then:

1. Select chargers that support PV linkage
2. Add them to the right-side list
3. Click "**Confirm**" to complete grouping

Step 3 Verify Connection Status

After configuration:

- The charger list displays all devices within the group
- A **green meter indicator** confirms successful connection to an external energy meter

Step 4 View and Manage the Group

- Click "**Info**" to view the **energy flow diagram** of the system
- Click "**Delete**" to remove the group

Important Notes

⚠ PV linkage requires compatible external meters or inverters to be properly connected

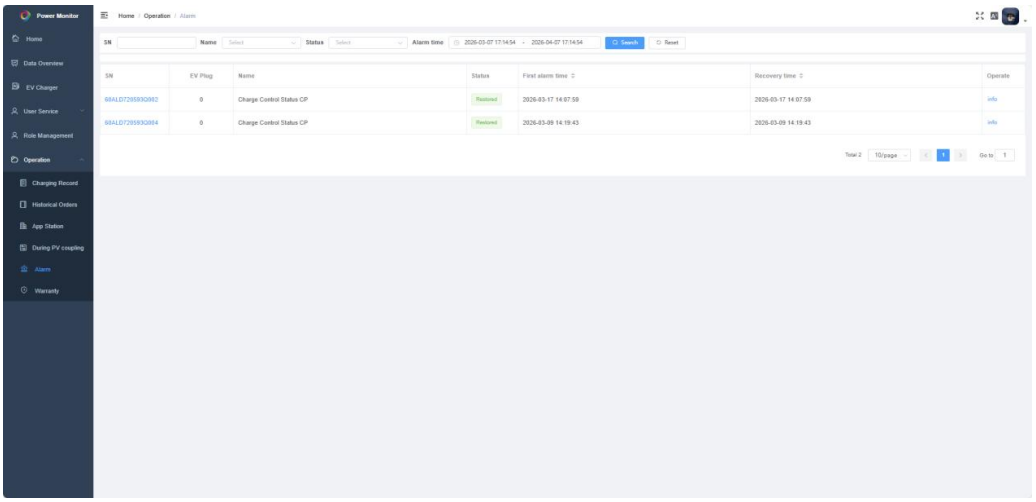
⚠ Ensure stable communication between chargers and the energy system

⚠ Only chargers that support PV linkage can be added to the group

7.5 Alarm Management

View all device alarms:

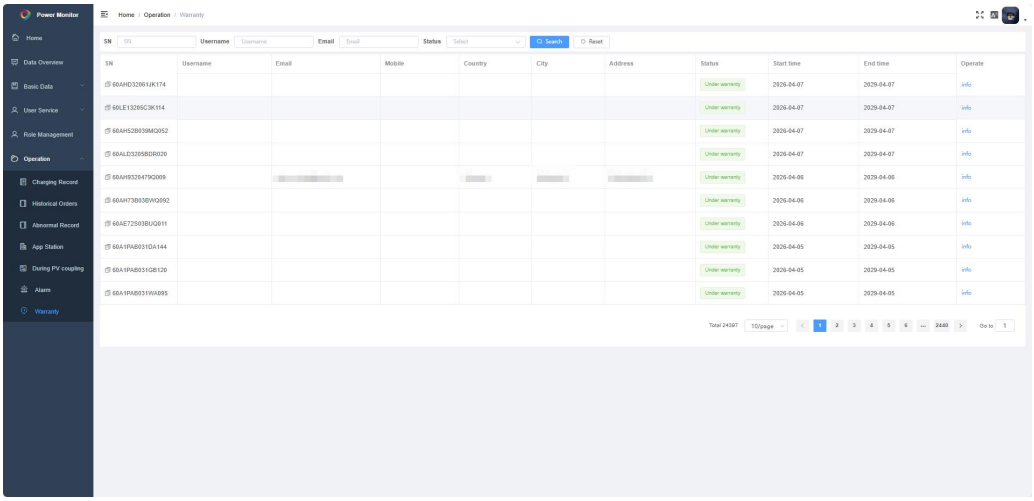
- Alarm name
- Status
- Occurrence time
- Recovery time



7.6 Warranty Management

Used to view the equipment warranty information:

- Serial Number (SN)
- User information
- Address
- Warranty period



8 Precautions (Important)

Please confirm before use:

- Load balancing function requires an external meter.
- Phase-to-phase load balancing requires installation of a phase sequence switch box.
- PV linkage function requires connection to specified equipment (meter or inverter).
- MID meter address must be 023.
- Some functions depend on firmware version.

9 Appendix

9.1 Quality Guarantee

FOXESS CO., Ltd. (hereinafter referred to as "the Company") will, for products found to be faulty during the warranty period, repair the product free of charge or replace it with a new one.

Supporting Documentation Required

When requesting warranty service, the customer must present the original purchase invoice indicating the date of purchase. Furthermore, the product's trademark must be clearly visible. The Company reserves the right to decline warranty coverage if these conditions are not met.

Relevant Conditions

- Non-conforming products replaced under warranty shall be disposed of by the Company.
- The customer must allow the Company a reasonable period of time to complete repairs on faulty equipment.

Warranty Exclusions

The Company reserves the right to decline warranty coverage under the following circumstances:

- The entire machine or specific components have exceeded the free warranty period.
- Damage incurred during transportation.
- Faults resulting from incorrect installation, modification, or use.
- Operation in environments that exceed the limits specified as harsh in this manual.
- Malfunctions or damage caused by installation, repair, alteration, or disassembly performed by service organizations or personnel not authorized by the Company.
- Use or installation outside the scope defined in the relevant international standards.
- Damage caused by abnormal natural disasters.
- Damage resulting from storage conditions that do not meet the requirements stated in the product documentation.
- Any losses arising from failure to adhere to the safety precautions outlined in this manual.

If a product failure is caused by any of the above circumstances and the customer still requests repair services, the Company's authorized service organization may, upon assessment, provide repair services subject to a charge.

Other Provisions

The Company reserves the right to change product dimensions and parameters based on its latest documentation without prior notice.

9.2 Contact Us

If you have any questions about the product, please contact us:

- Fox ESS Headquarters: No.939, Jinhai Third Road, New Airport Industry Area, Longwan District, Wenzhou, Zhejiang, China.
- Wuxi R&D Center: No. 37 Huaqing Avenue, Wuxi Economic Development Zone (Intersection of Huaqing Avenue and Huayun Road)
- Wuhan R&D Center: 6th Floor, Block A, Tower T4, CHINA PROCUREMENT CENTER, No.789 Gaoxin Avenue, East Lake New Technology Development Zone, Wuhan City, Hubei Province, P.R. China
- Shanghai R&D Center: No.1255, Jinhai Road, Pudong New Area, Shanghai, China
- After-Sales Service Hotline: 400 1888 900
- Contact Telephone (Wenzhou): 0577-88159999
- Contact Telephone (Wuxi): 0510-68092998
- Contact Us: info@fox-esscom
- Contact Us (EV Charger): ev@fox-esscom
- After-Sales Service: service@fox-esscom