

SEC3000C 06Version SOP

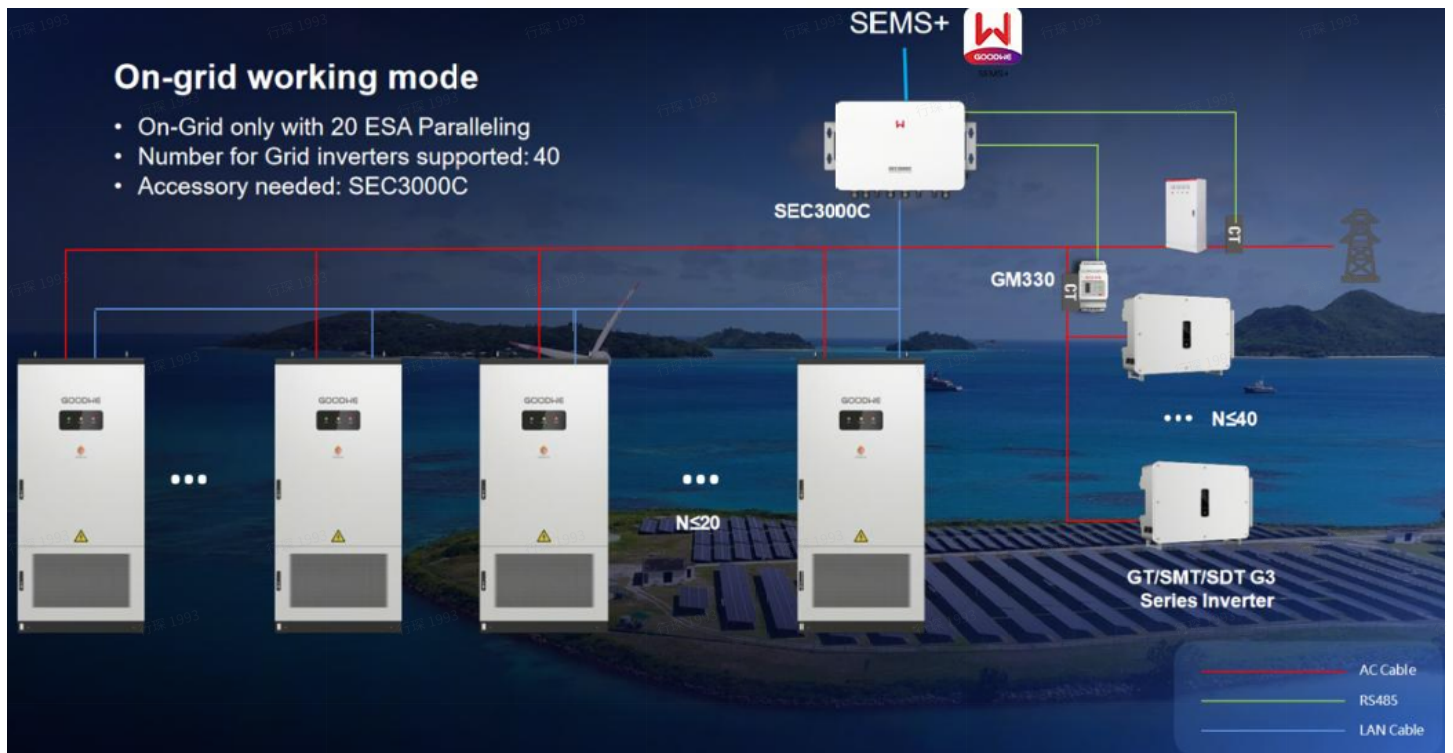
1. Product Introduction

SEC3000C is an integrated energy management system that incorporates photovoltaic and energy storage, capable of achieving unified monitoring and intelligent management of multiple energy devices. The system has multiple core functions such as intelligent scheduling, real-time monitoring, centralized operation and maintenance, and grid interaction, providing users with a simple embedded Web interface for operation. The system supports connection to the Cloud Computing Platform, facilitating users' remote monitoring and efficient management, and contributing to the safe, economical, and reliable operation of the energy system.

2. System Networking

2.1 ESA261 Energy Storage Cabinet & On-grid inverters Scenario

Technical Specifications of ESA261 Energy Storage Cabinet & on-grid Solution:

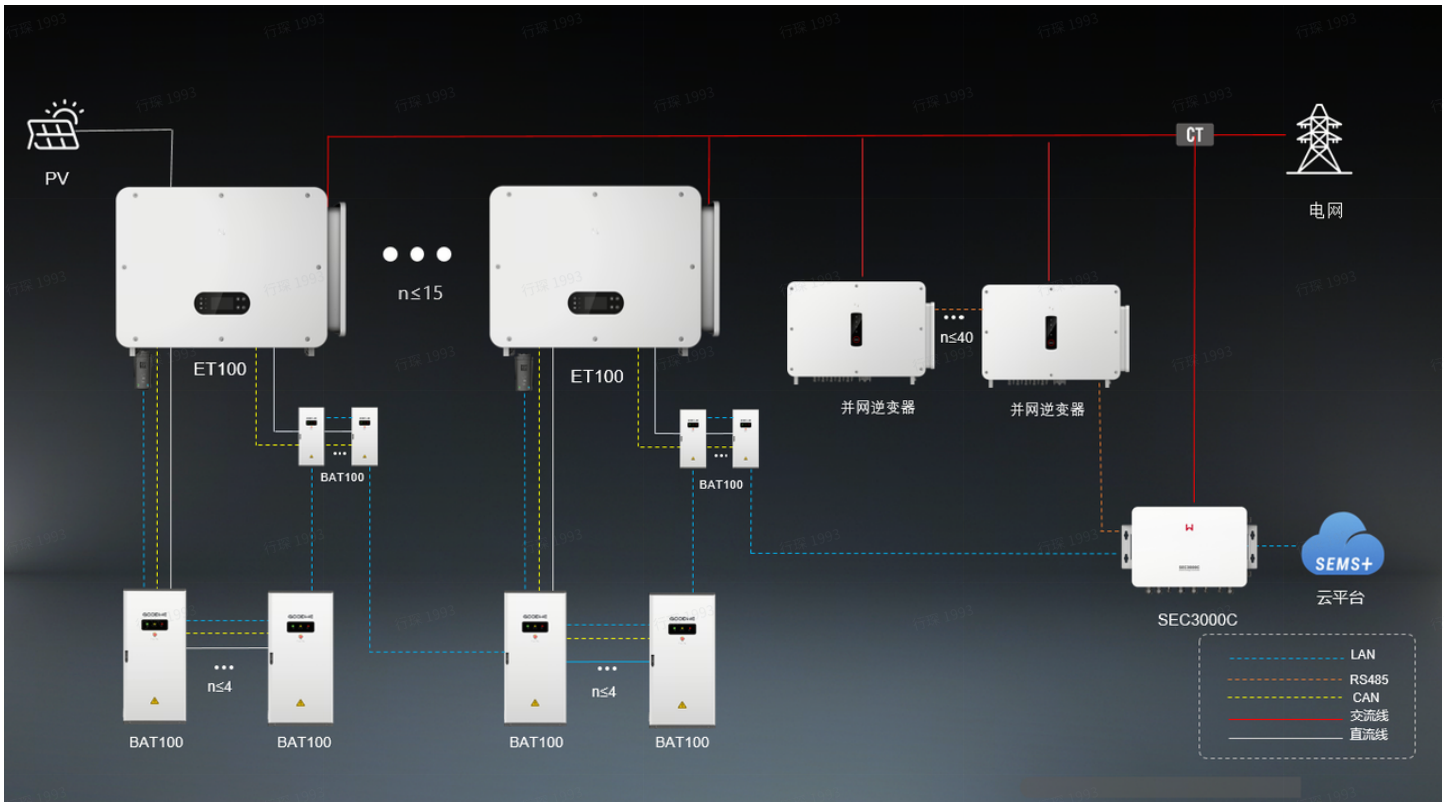


Function	Technical Specifications	Description
Multi-machine Parallel Connection	ESA261 Energy Storage Cabinet: ≤ 20	

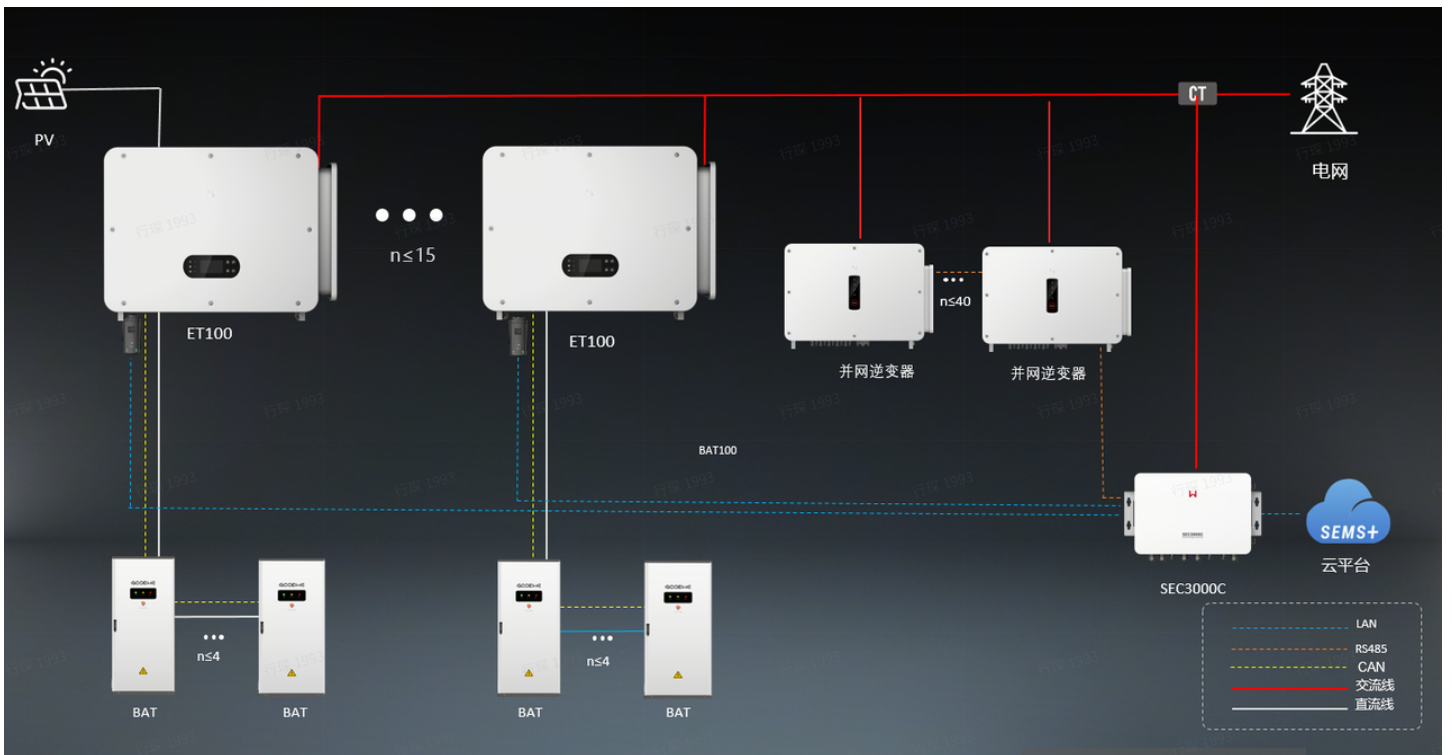
	on-grid inverter: ≤ 40	Each 485 port of SEC3000C can connect up to 20 on-grid inverters at most
Communication Method	ESA261 Energy Storage Cabinet: LAN	
	on-grid Inverter: RS485	
Grid connection control function	Export limited	Support function overlay: Self-use (or TOU) + Demand Control + Capacity Control + Sub-demand Control + Export limited
	Self-use	
	TOU	
	TOU Fixed Power	
	Demand Control	
	Capacity Control	
	Sub-demand control	
	Remote Scheduling Mode	Scenario of third-party platform or controller scheduling
	DRED Control	
RCR Control		

2.2 ET100 Energy Storage System & on-grid inverters Scenario

1. Scenario of ET100 with BAT100 Battery



2. ET100 supporting other BAT battery scenarios (such as BAT56)



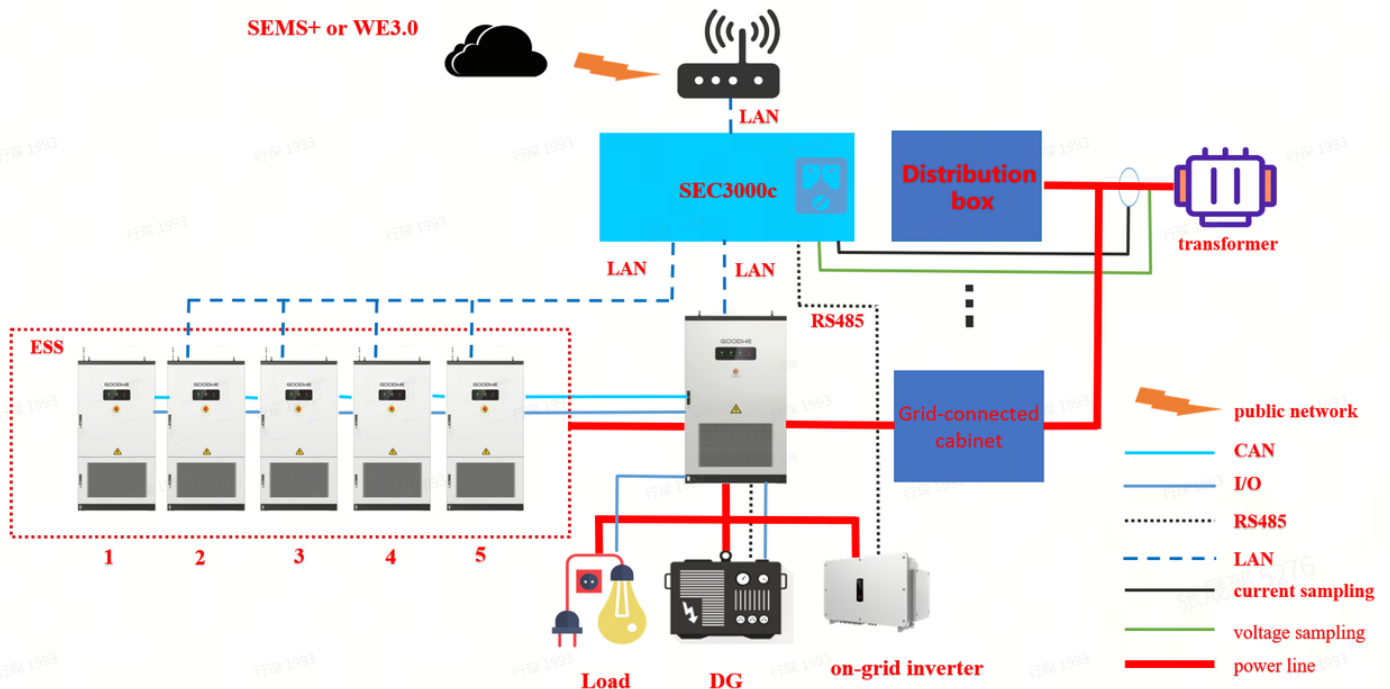
Technical Specifications for ET100 Energy Storage System & on-grid Inverters Solution:

Function	Technical Specifications	Description
Parallel Connection	ET100 Hybrid Inverter: ≤ 15	Each 485 port of SEC3000C can connect up to 20 on-grid inverters at most
	on-grid inverter: ≤ 40	

Communication Method	ET100 Hybrid Inverter: LAN	
	on-grid Inverter: RS485	
Grid connection control function	Export limited	Support function overlay: Self-use (or TOU) + Demand Control + Capacity Control + Sub-demand Control + Anti-backflow
	Self-use	
	TOU	
	Demand Control	
	Capacity Control	
	Sub-demand control	
	Remote Scheduling Mode	Scenario of third-party platform or controller scheduling
DRED Control		
RCR Control		

2.3 ESA261 Energy Storage Cabinet Micro-grid Scenario

Technical Specifications of ESA261 Energy Storage Cabinet Microgrid Solution:



Function	Technical Specifications	Description
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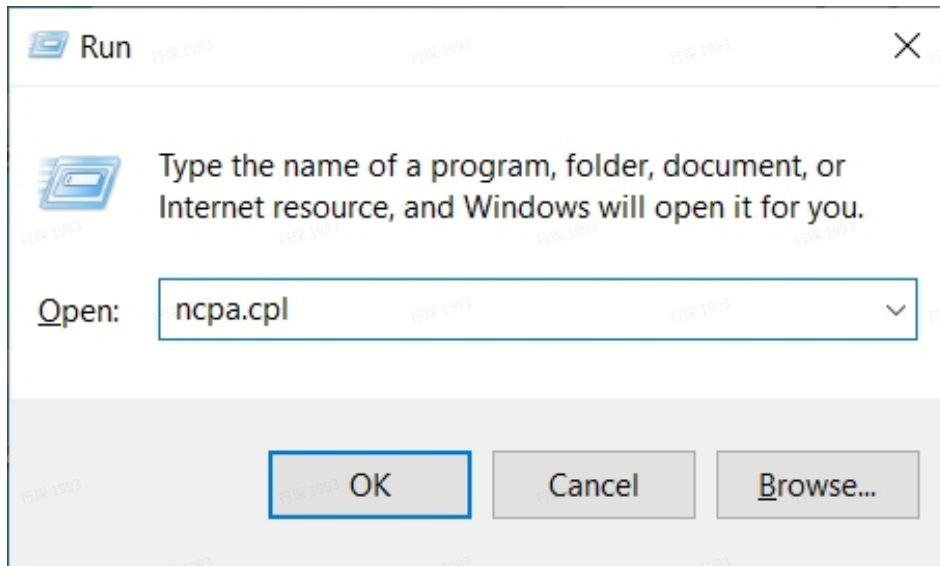
Multi-machine Parallel Connection	ESA261 Energy Storage Cabinet: ≤ 5	
Communication Method	SEC3000C and ESA261 Energy Storage System: LAN	
	Between ESA261 Energy Storage Cabinets: CAN	ESA261 units are connected in master-slave mode via CAN
Photovoltaic-storage ratio	$< 2: 1$	
Microgrid control function	On/Off-grid switching	Seamless automatic switching between on/off-grid within 20ms
	Back-up control	
	Load Control	
	Off-grid control	
	DG Control	
	Black Start	
Load carrying capacity	General Load (kVA) Single-phase: $(0.8 \cdot S_n)/3$ Three-phase: $0.8 \cdot S_n$	The sudden change in load unbalance shall not exceed $0.8S_n$ The off-grid load-carrying capacity of the microgrid system is as follows:
	Capacitive Load (kVA) Single-phase: $pf=0.8, (0.2 \cdot S_n)/3$ Three-phase: $pf=0.8, 0.2 \cdot S_n$	When including motor/transformer loads: $A \cdot 10 + B \cdot 1.5 \leq S_n$ Without motor/transformer load: $B \leq 0.8S_n$ S_n : Energy Storage System Capacity
	Half-wave load (kVA) Single-phase: $pf = 0.8, (0.2 \cdot S_n)/3$ Three-phase: $pf=0.8, 0.2 \cdot S_n$	A: Load capacity of direct advertising motors/transformers B: Other general load capacity

3. Log in to use

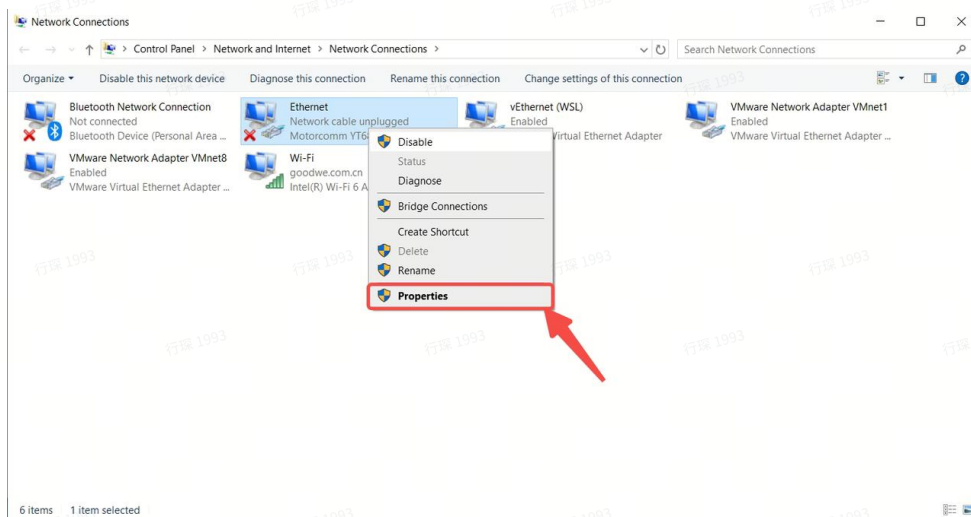
3.1 Log in to the embedded WEB

3.1.1 Computer Local Environment Settings

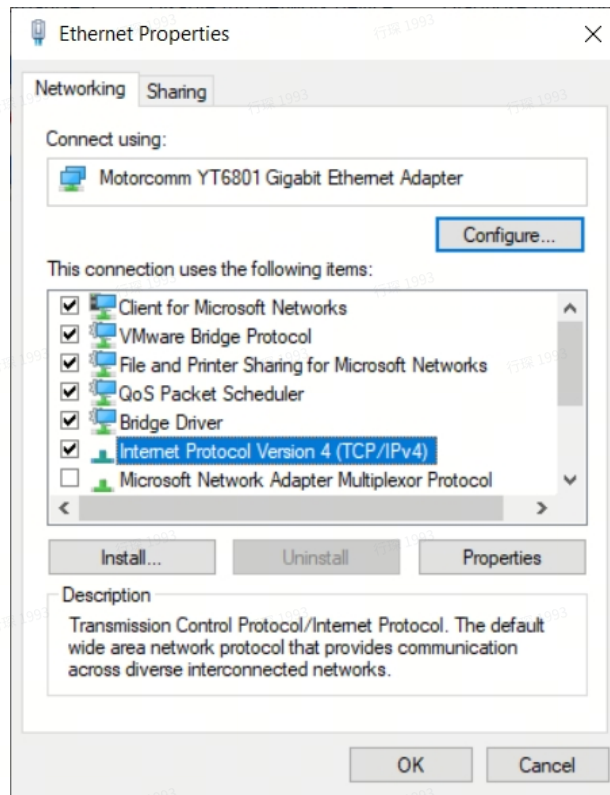
1. Prepare an Ethernet cable, connect one end to the computer, and connect the other end to the Ethernet switch in the SEC3000C.
2. On your computer, simultaneously press the Windows + R keys to open the "Run" dialog box, then enter the following command: ncpa.cpl. Click the "OK" option, and then the Network Connections Control Panel will open.



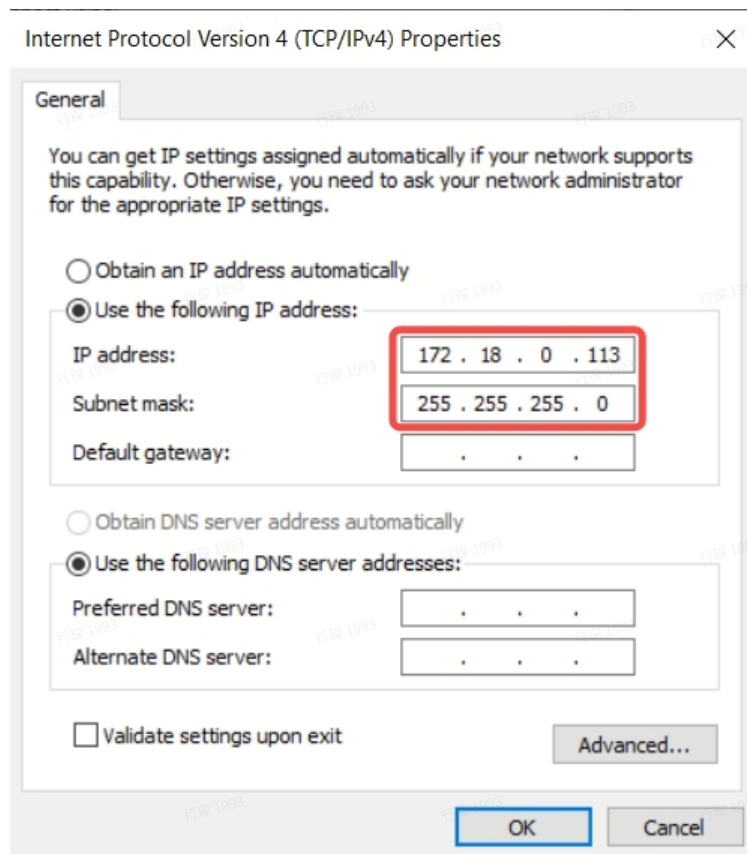
3. Right-click on the identified Ethernet connection, then select "Properties".



4. Select TCP/IPv4



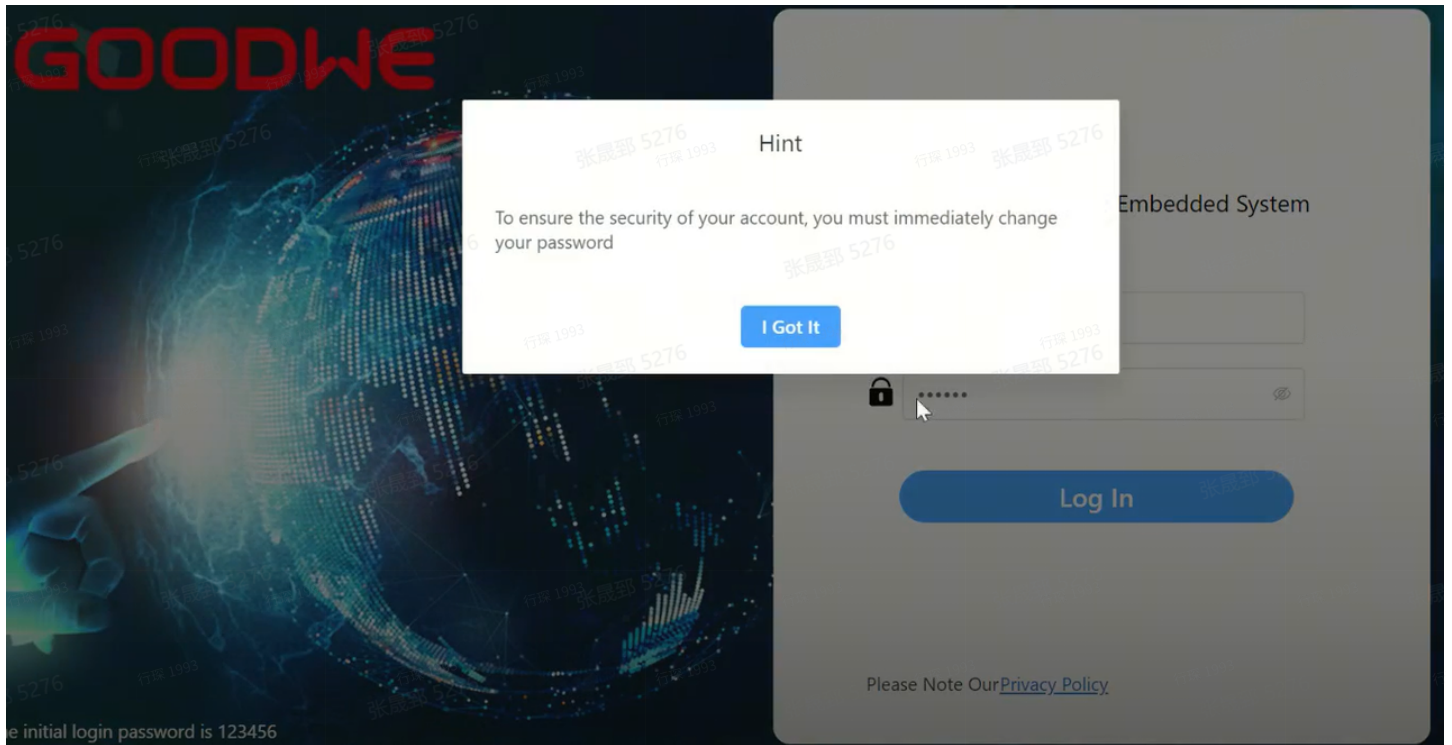
5. Please make the configuration changes as follows: change the IP address to 172.18.0.xxx (instead of 12), then click "OK".



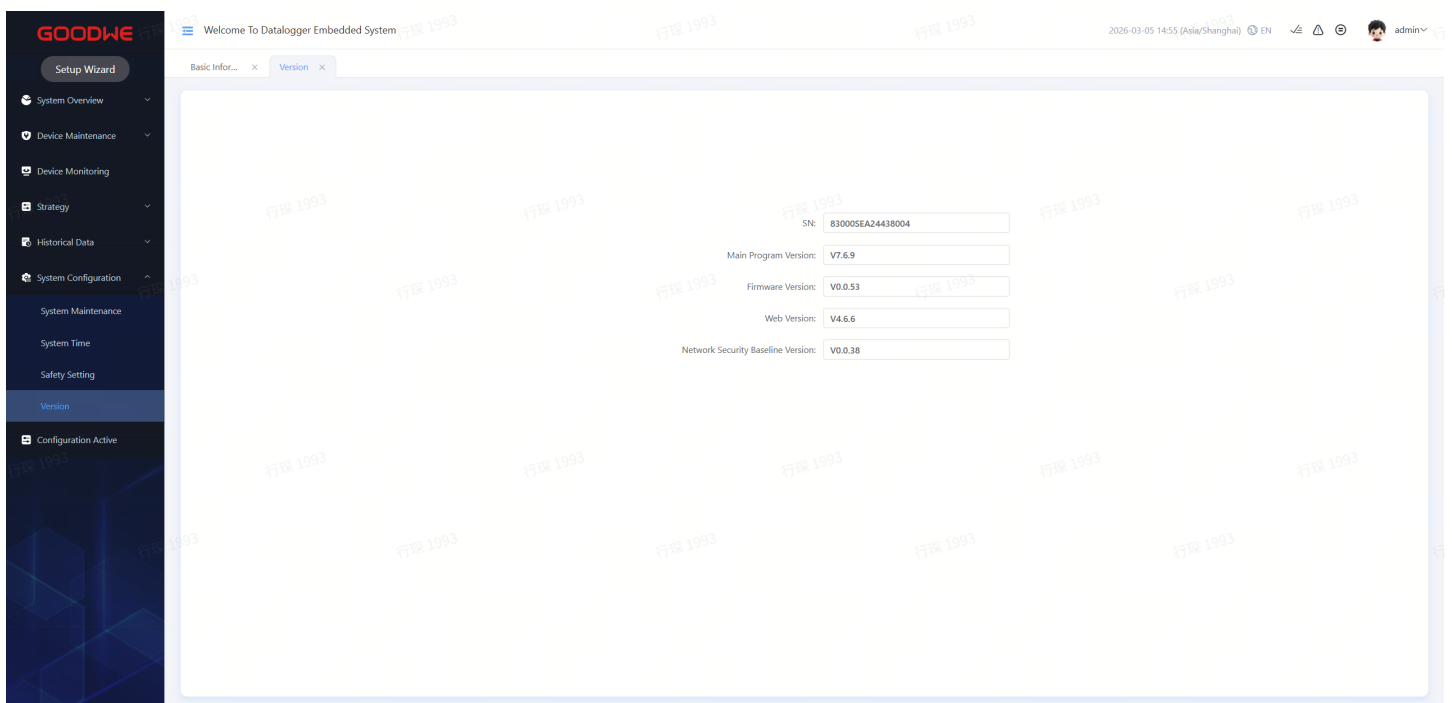
3.2 Check software version

3.2.1 SEC3000C Software Version Check

1. Open the browser, enter the URL `https://172.18.0.12` in the address bar. After entering the web interface, enter the initial password 123456 to log in.
2. Log in and you will need to reset your password, follow the prompts to set your password.



3. After logging in, enter the version information to view the "main program version" of SEC3000C

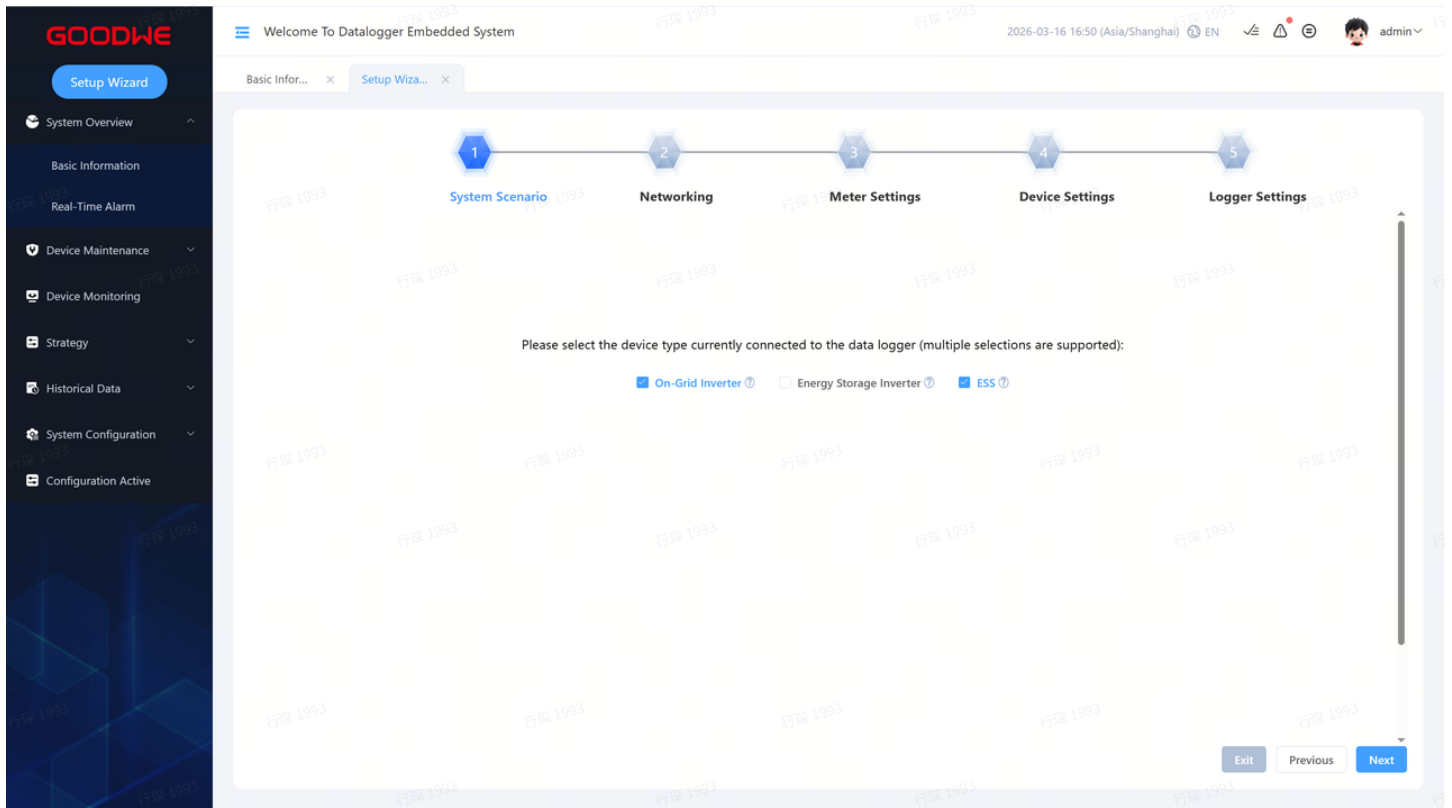


If the version is `V7.5.32` or higher, no upgrade is required.

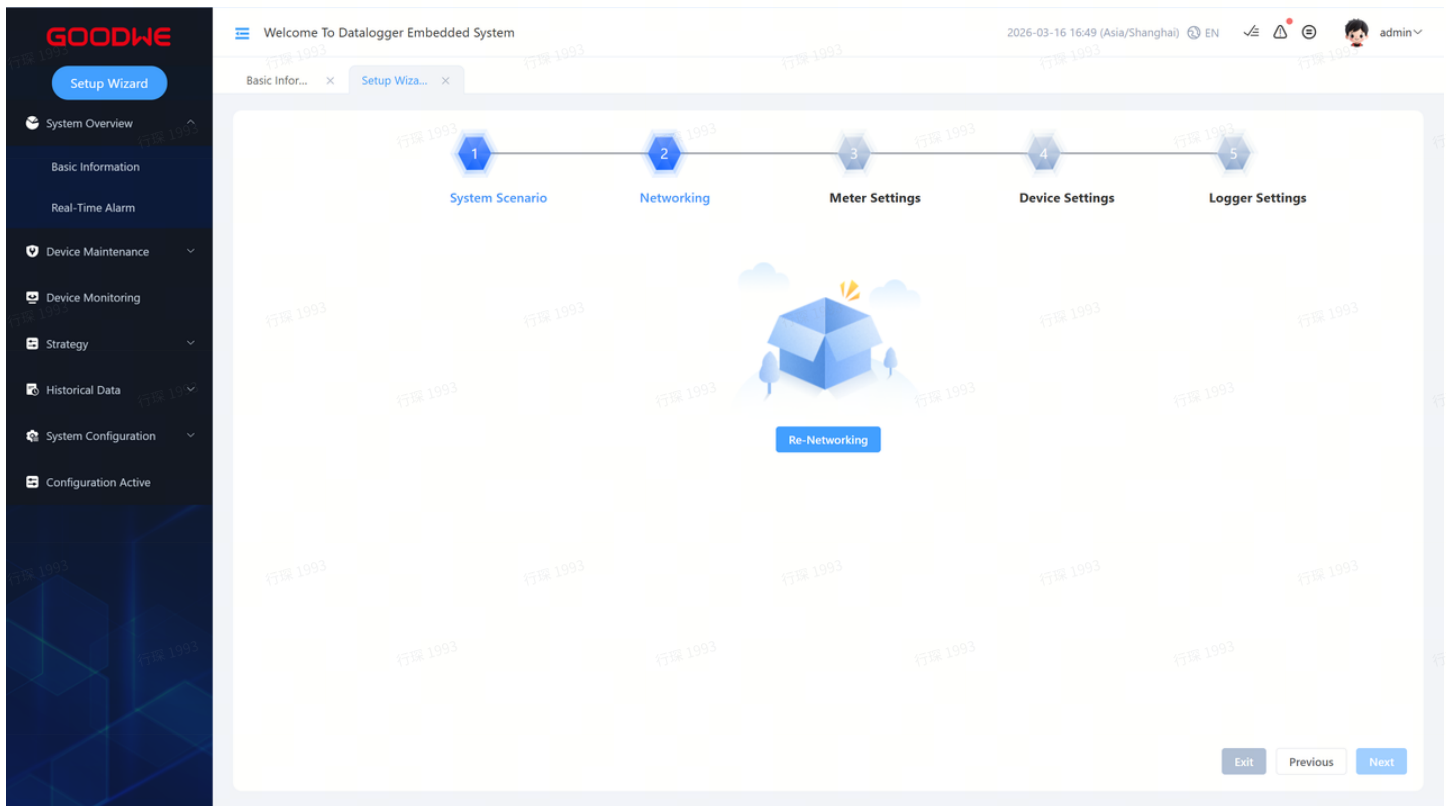
If the version is earlier than `V7.5.32`, then the SEC3000C needs to be upgraded.

3.2.2 SEC3000C Software Upgrade

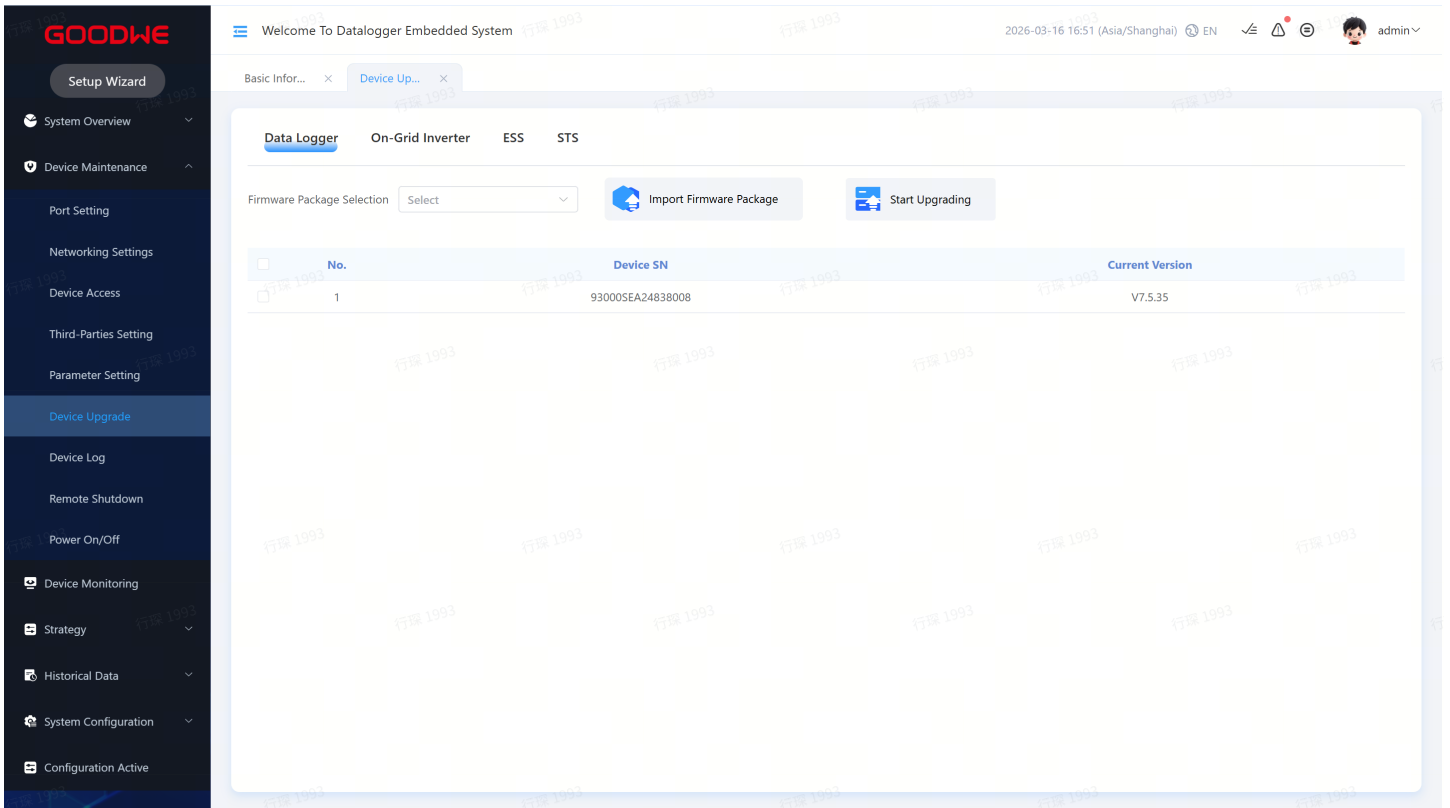
1. After entering the Setup Wizard, check Device Type , then click Next



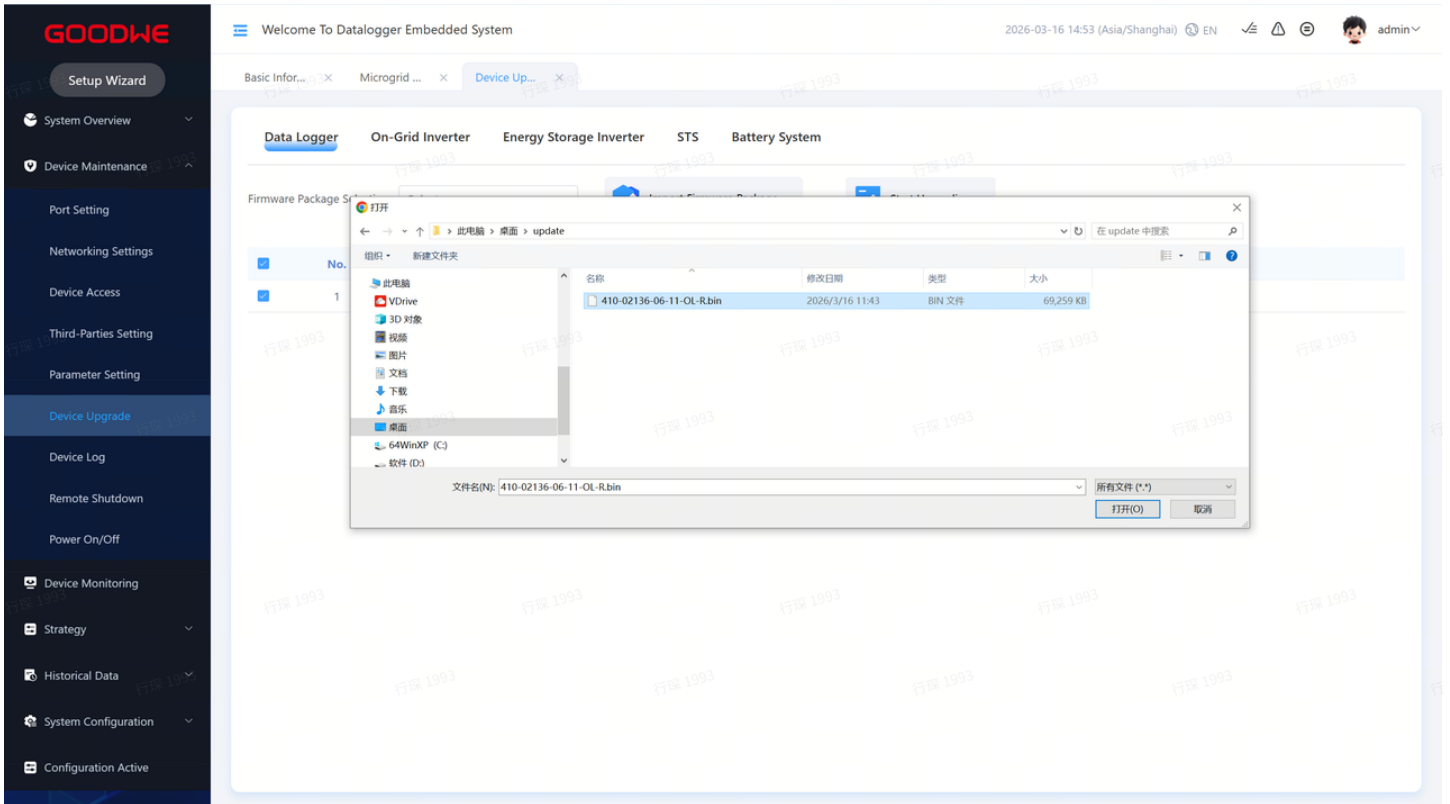
2. After entering the page, click Exit



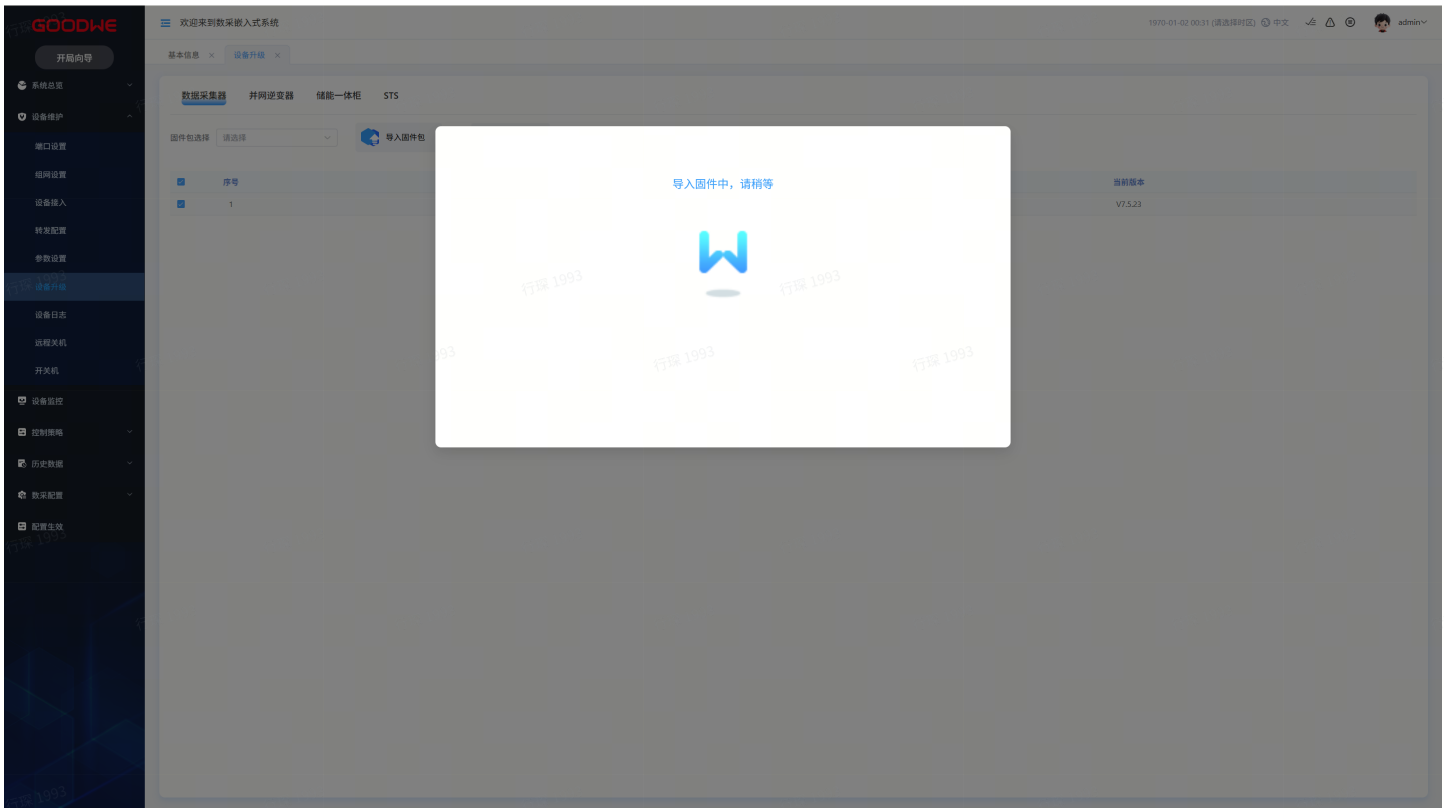
3. Select Device Maintenance -> Device Upgrade -> Data Acquisition Unit



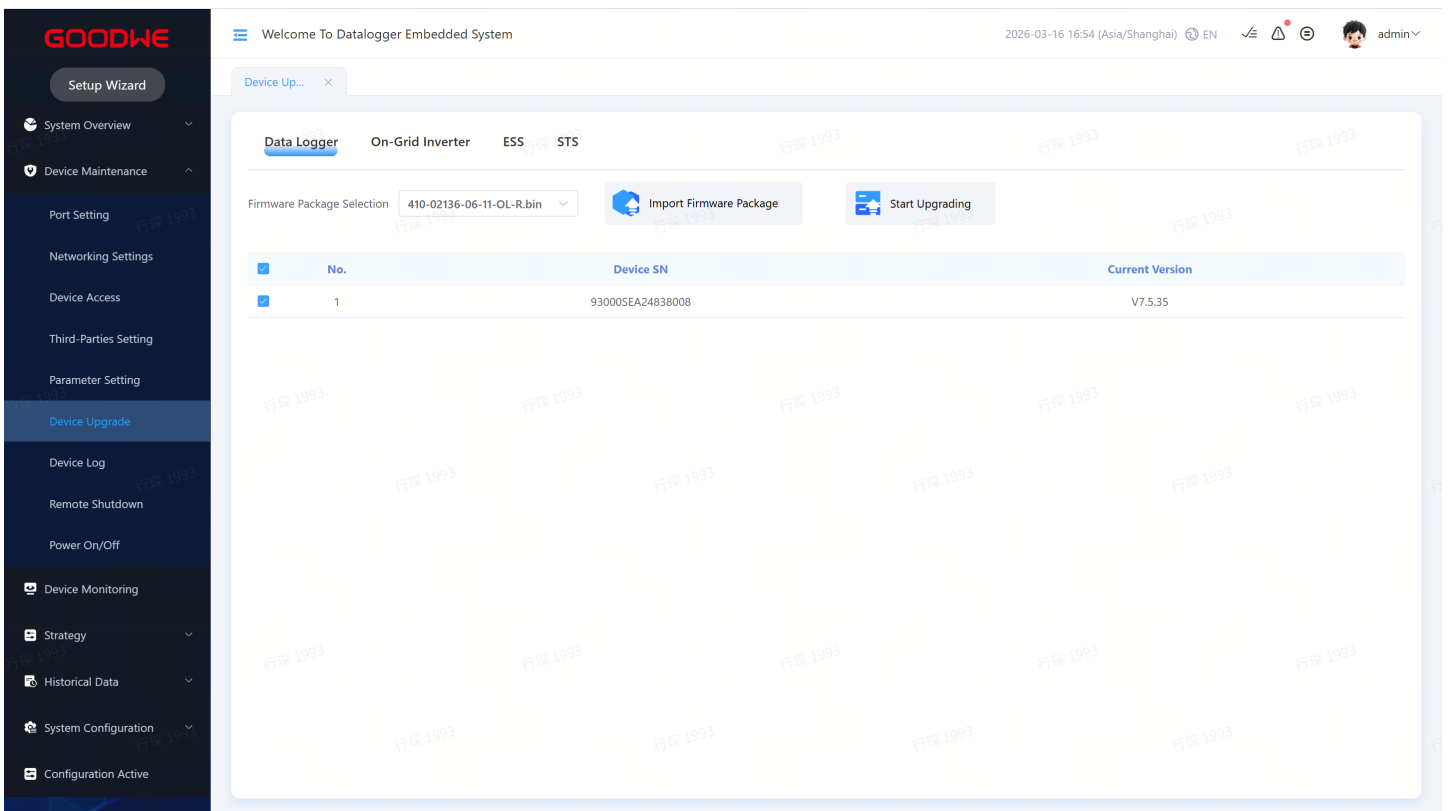
4. Click to select the firmware package, a directory will pop up to select the local firmware, then click Open



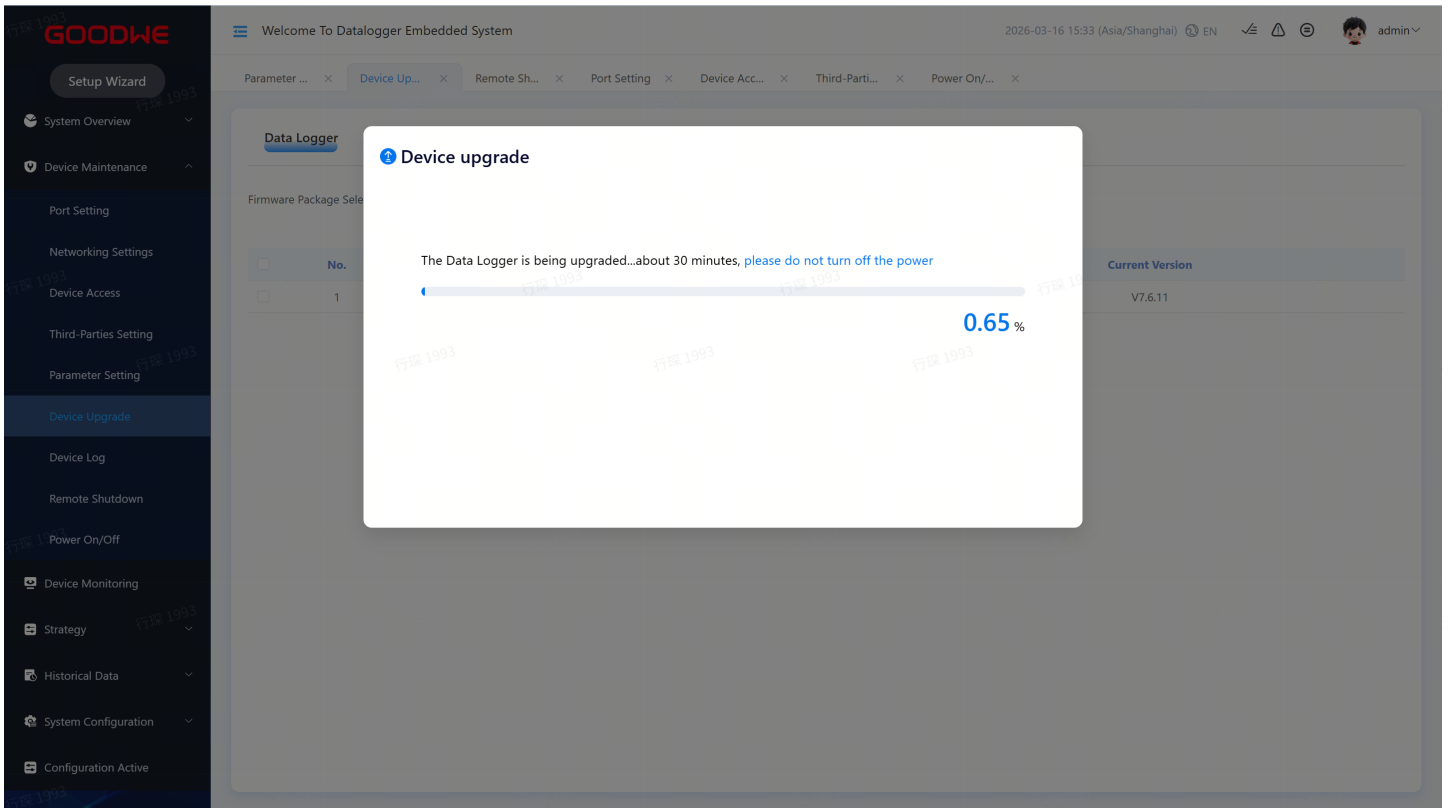
5. Firmware Importing, Waiting for Completion



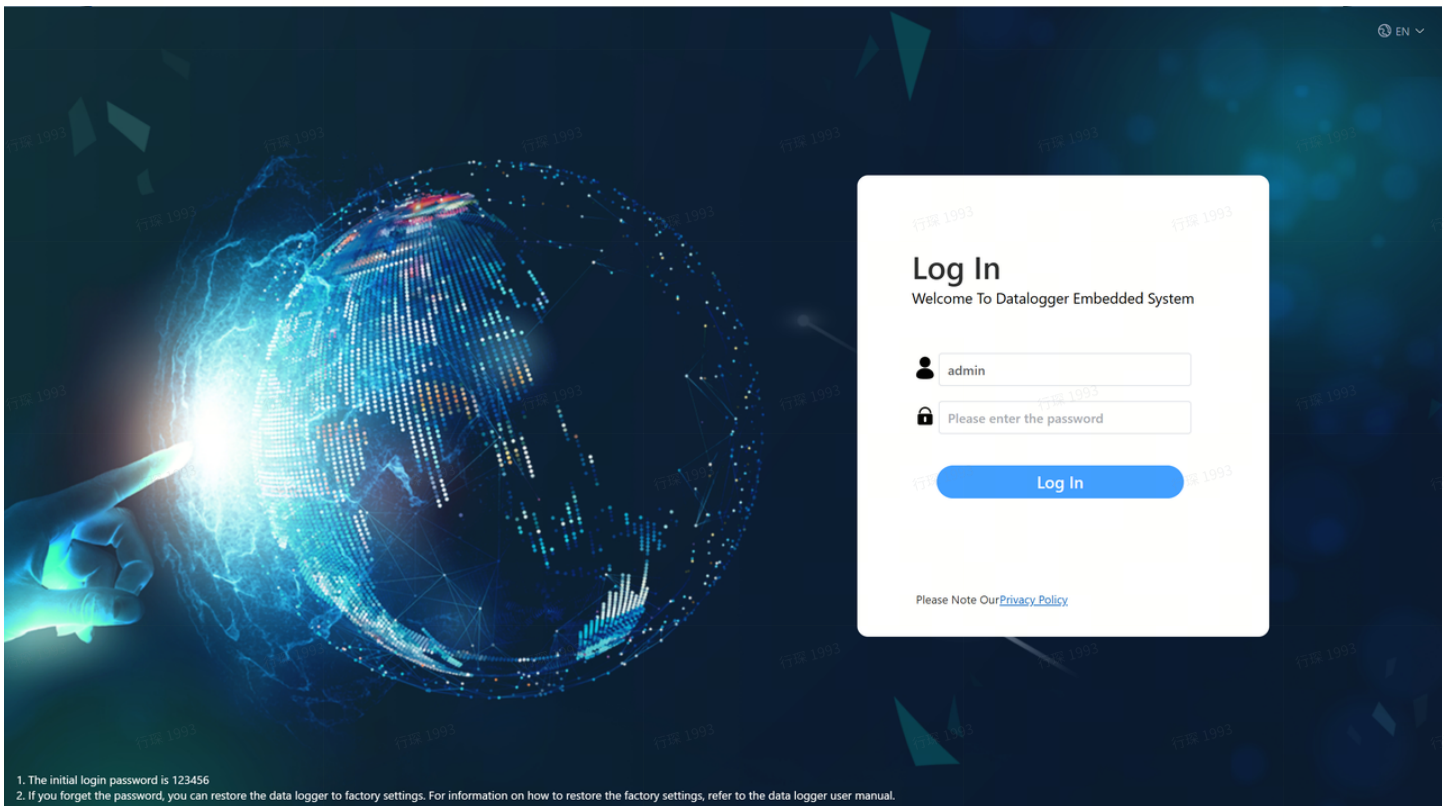
6. Click Start Upgrade , the upgrade process takes approximately 20 - 30 minutes



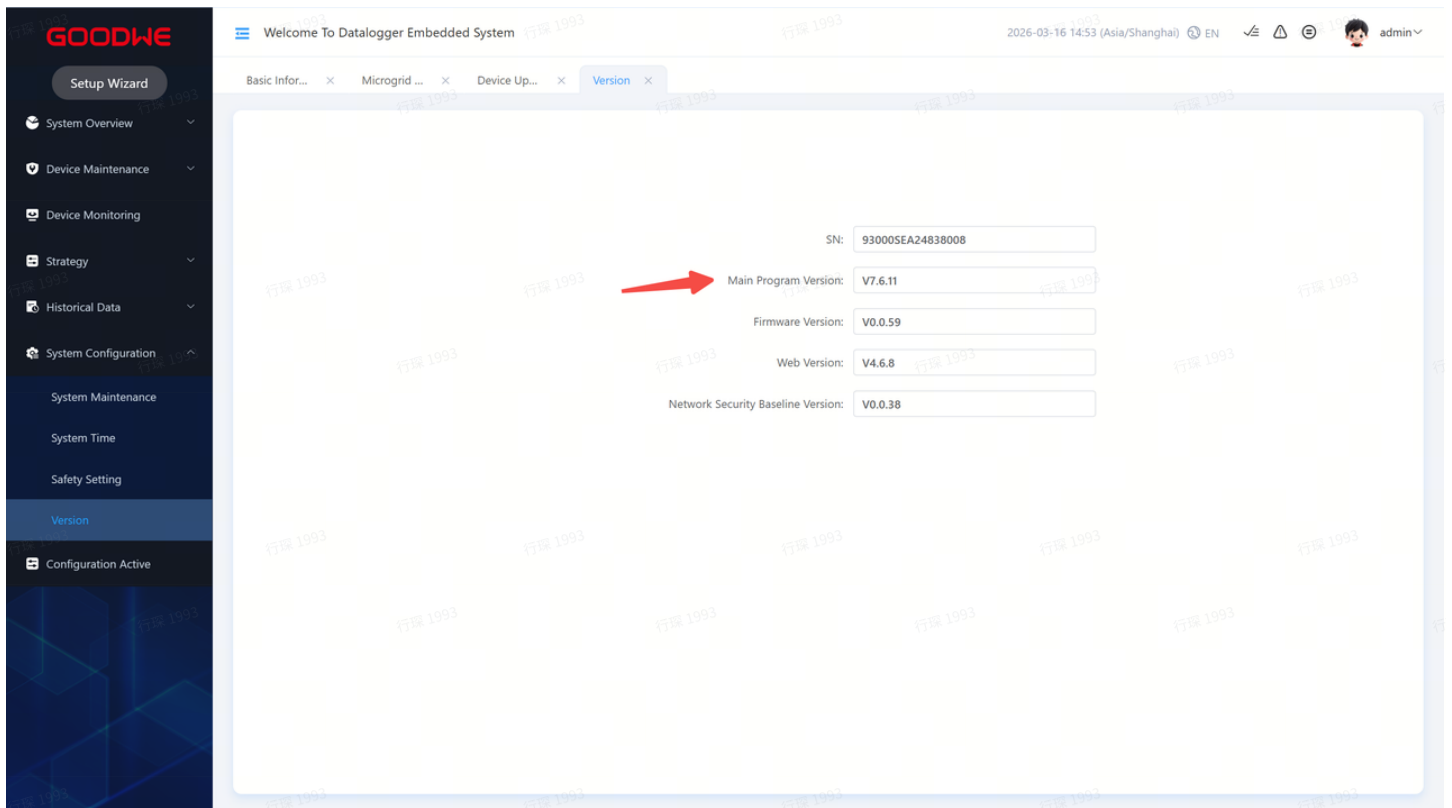
7. Software Upgrade in progress , estimated to take 20-30 minutes . After the upgrade is complete , it will return to the login screen



8. After the upgrade is completed, return to the login interface and re-login



9. Enter the version information, check the main program version, and see if it has been upgraded to a new version



Note:Upgrade Compatibility

1. If the version is 7.0.xx, you need to first import the firmware package of version 7.0.114, then upgrade to version 7.0.114; after confirming successful upgrade to version 7.0.114, then import the latest firmware package and upgrade to the latest version.
2. Versions 7.1.xx and above can import the latest firmware package and upgrade to the latest version.
3. For versions below 7.0.104, please contact the R&D team for technical support.

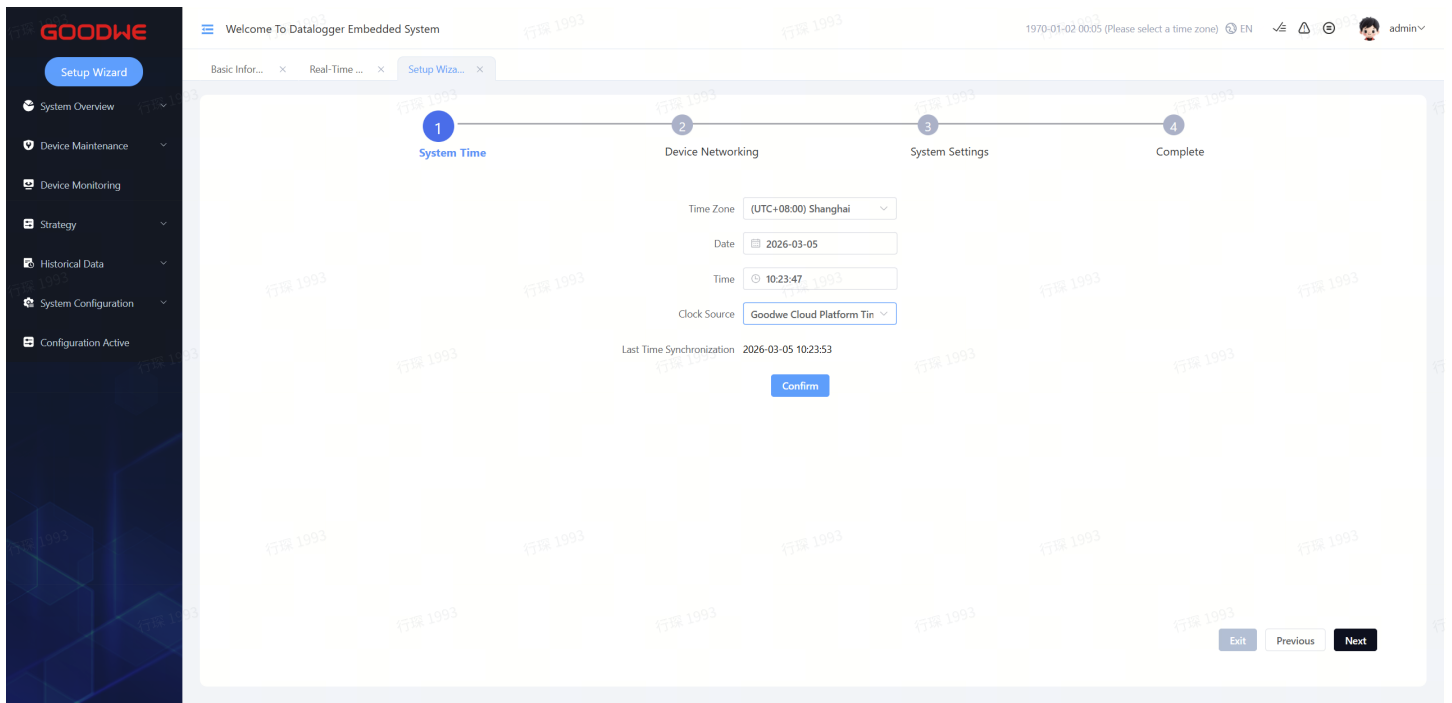
4. On-Grid Control

For on-grid scenario configuration, first perform the initial setup wizard.

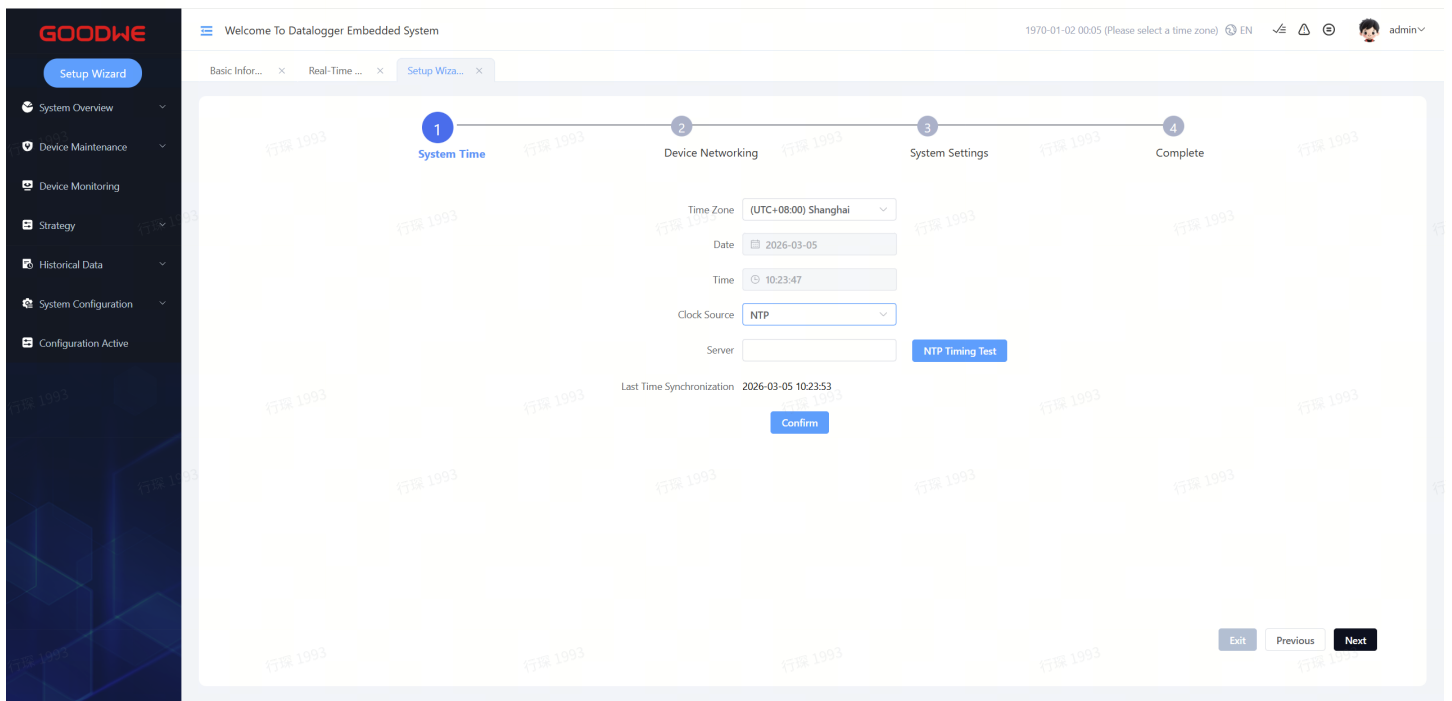
4.1 Setup Wizard - System Time

Set the system time, ensuring the accuracy of system operation statistics and historical data time

1. On-site is SEMS + platform connection selects GoodWe Cloud Computing Platform for time synchronization , sets the current time zone, date, and time, selects GoodWe Cloud Computing Platform as the clock source for time synchronization, clicks "Confirm", and then proceeds to the next step

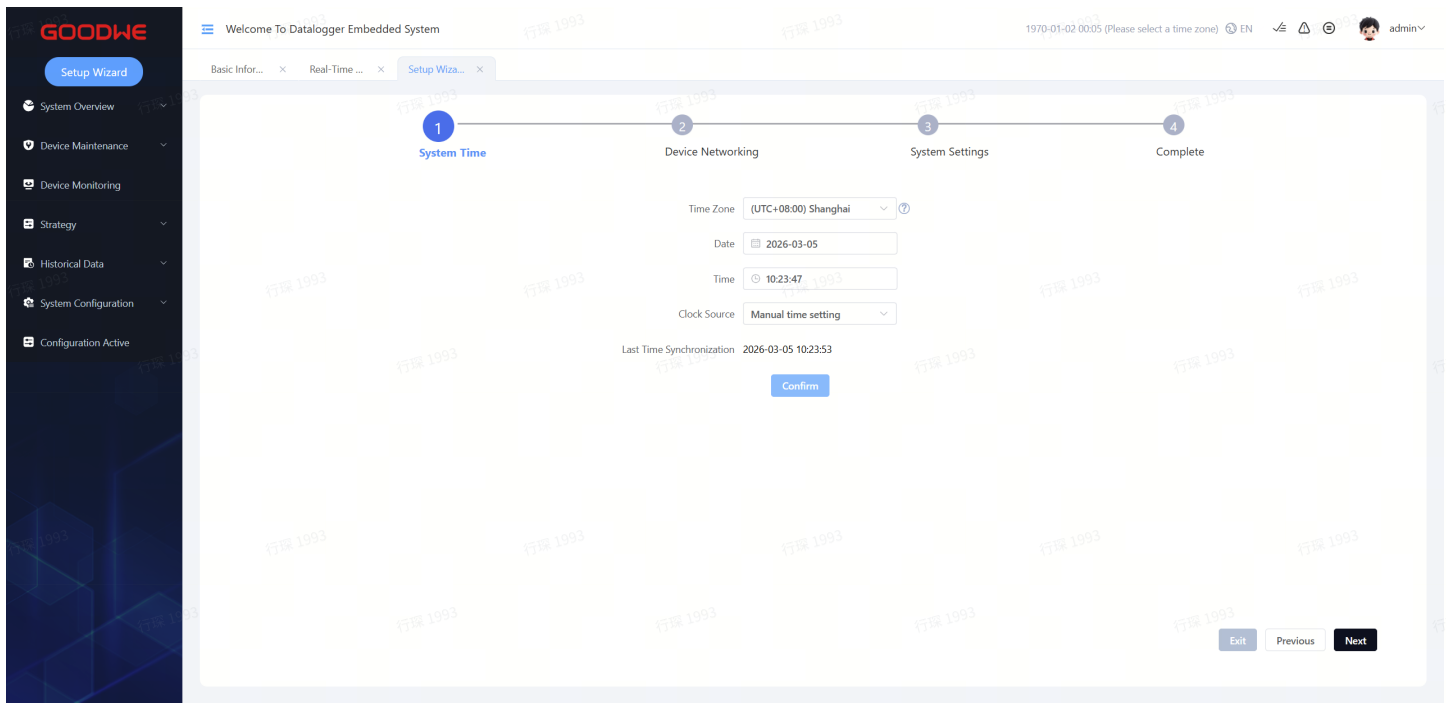


2. On-site, when connecting to the WE platform, select NTP time synchronization, choose the time zone, select NTP as the clock source, fill in the server IP, conduct NTP time synchronization test, click "Confirm", and then proceed to the next step.



NTP Time Synchronization Server: ntp.aliyun.com

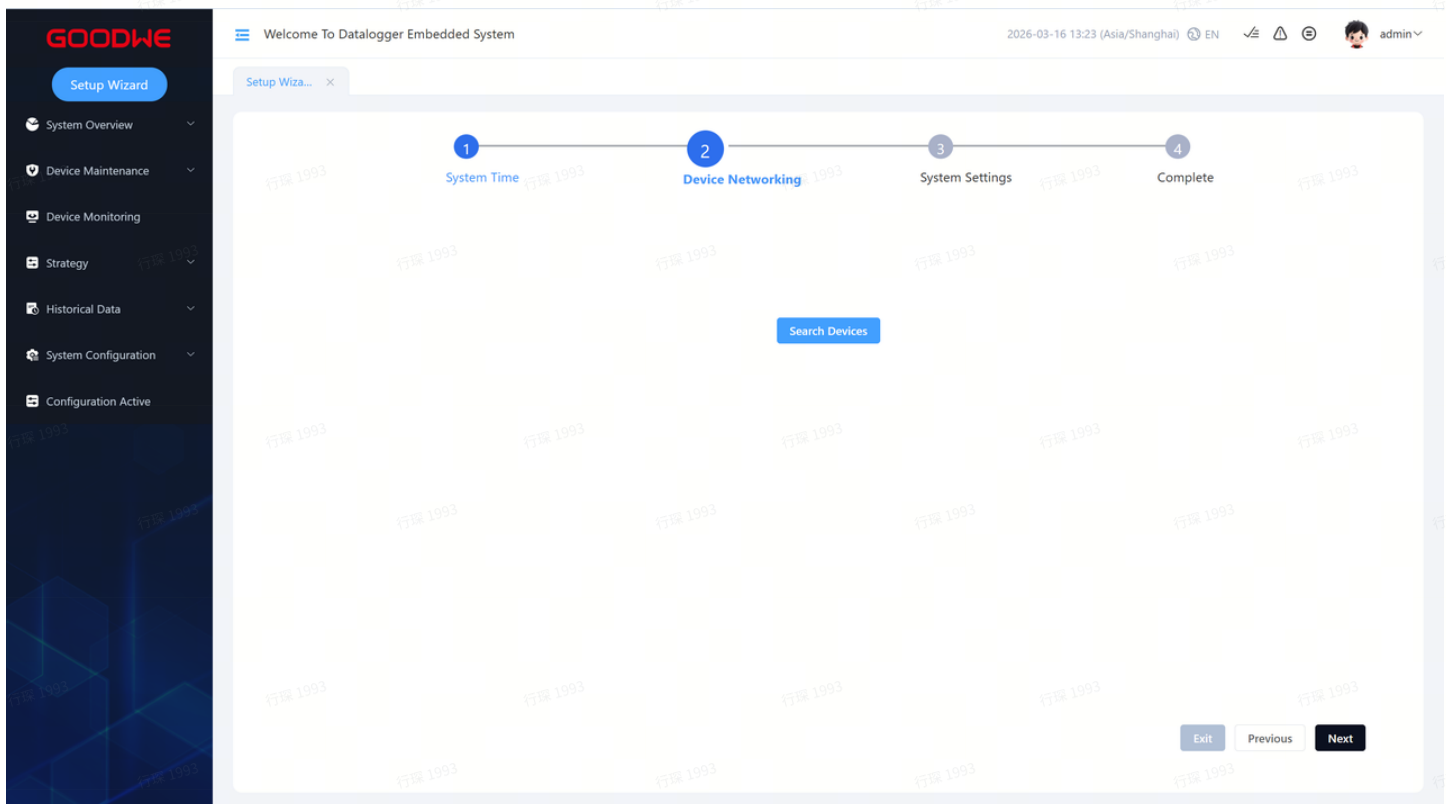
If the interface time differs too much from the current time and the interface time calibration fails, you need to manually calibrate the time first, and then use the GoodWe Cloud Computing Platform or NTP to calibrate the time.



3. Manual Time Calibration: Set the current time zone, date, and time, select manual time calibration as the clock source, click "Set", and then proceed to the next step.

4.2 Setup Wizard - Device Networking

1. Click on Device Search to perform automatic device search and connection, including GoodWe products such as meters, energy storage cabinets, hybrid inverters, on-grid inverters, etc.



2. After the devices are searched for and retrieved, confirm whether the number of devices is correct. After confirming that it is correct, click Networking Settings perform device networking.

Welcome To Datalogger Embedded System

2026-03-16 13:26 (Asia/Shanghai) EN admin

Setup Wizard

System Overview

Basic Information

Real-Time Alarm

Device Maintenance

Device Monitoring

Strategy

Historical Data

System Configuration

Configuration Active

1 System Time

2 Device Networking

3 System Settings

4 Complete

Continuous Searching

Number of Device : 7

No.	SN	Device Type	Device Model	Port	Protocol	Terminal Address	IP Address
1	50G2B11CLC24001147	Battery System	GW102.4/112.6-BAT-I-G10	ETH2	Modbus-TCP	41 [1,99]	171.156.44.25
2	50G2B11CLC25800796	Battery System	GW102.4/112.6-BAT-I-G10	ETH2	Modbus-TCP	42 [1,99]	171.156.44.21
3	9100KNBC257L8005	Energy Storage Inverter	ET 50L/75/80/99/99/100K	ETH2	Modbus-TCP	43 [1,99]	171.156.44.20
4	9100KNBC259L0024	Energy Storage Inverter	ET 50L/75/80/99/99/100K	ETH2	Modbus-TCP	44 [1,99]	171.156.44.30
5	43300GMA44828007	Meter	GOODWE Meter	RS485-3	Modbus-RTU	120 [120,247]	--
6	4050KNAD25509254	On-Grid Inverter	SDF-G3/G4	RS485-1	Modbus-RTU	1 [1,99]	--
7	9700KGAC25CR8003	On-Grid Inverter	undefined	RS485-4	Modbus-RTU	2 [1,99]	--

1.If the device search is incomplete: ① You can [Continue Searching] ② Check the device wiring and try again
2.If the device search is complete, you can [Network Settings]

Networking Settings

Exit Previous Next

3. Network setup generally takes 1 -2 minutes ; wait for the device to complete network setup

Welcome To Datalogger Embedded System

2026-03-16 13:26 (Asia/Shanghai) EN admin

Setup Wizard

System Overview

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1	50G2B11CLC24001147	Battery System	GW102.4/112.6-BAT-I-G10	ETH2	Modbus-TCP	[1,99]	171.156.44.25
2	50G2B11CLC25800796	Battery System	GW102.4/112.6-BAT-I-G10	ETH2	Modbus-TCP	[1,99]	171.156.44.21
3	9100KNBC257L8005	Energy Storage Inverter	ET 50L/75/80/99/99/100K	ETH2	Modbus-TCP	[1,99]	171.156.44.20
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5	43300GMA44828007	Meter	GOODWE Meter	RS485-3	Modbus-RTU	[120,247]	--
6	4050KNAD25509254	On-Grid Inverter	SDF-G3/G4	RS485-1	Modbus-RTU	[1,99]	--
7	9700KGAC25CR8003	On-Grid Inverter	undefined	RS485-4	Modbus-RTU	[1,99]	--

1.If the device search is incomplete: ① You can [Continue Searching] ② Check the device wiring and try again
2.If the device search is complete, you can [Network Settings]

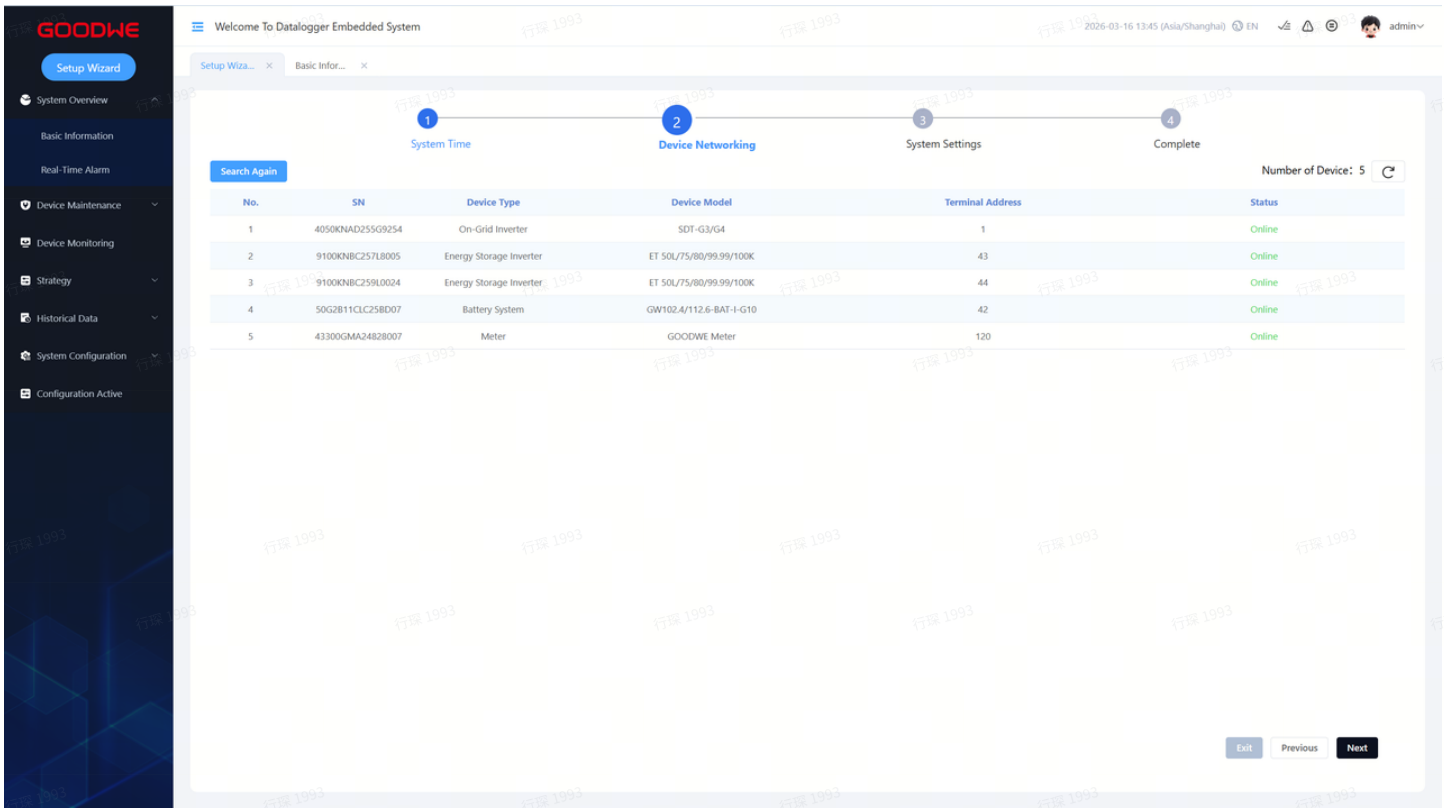
Networking Settings

Exit Previous Next

Networking in progress, please do not exit the current screen!



4. After the device networking is successful , you can check whether the communication status of the device is correct. You can click the refresh button in the upper right corner to refresh the device status. After confirming, click Next

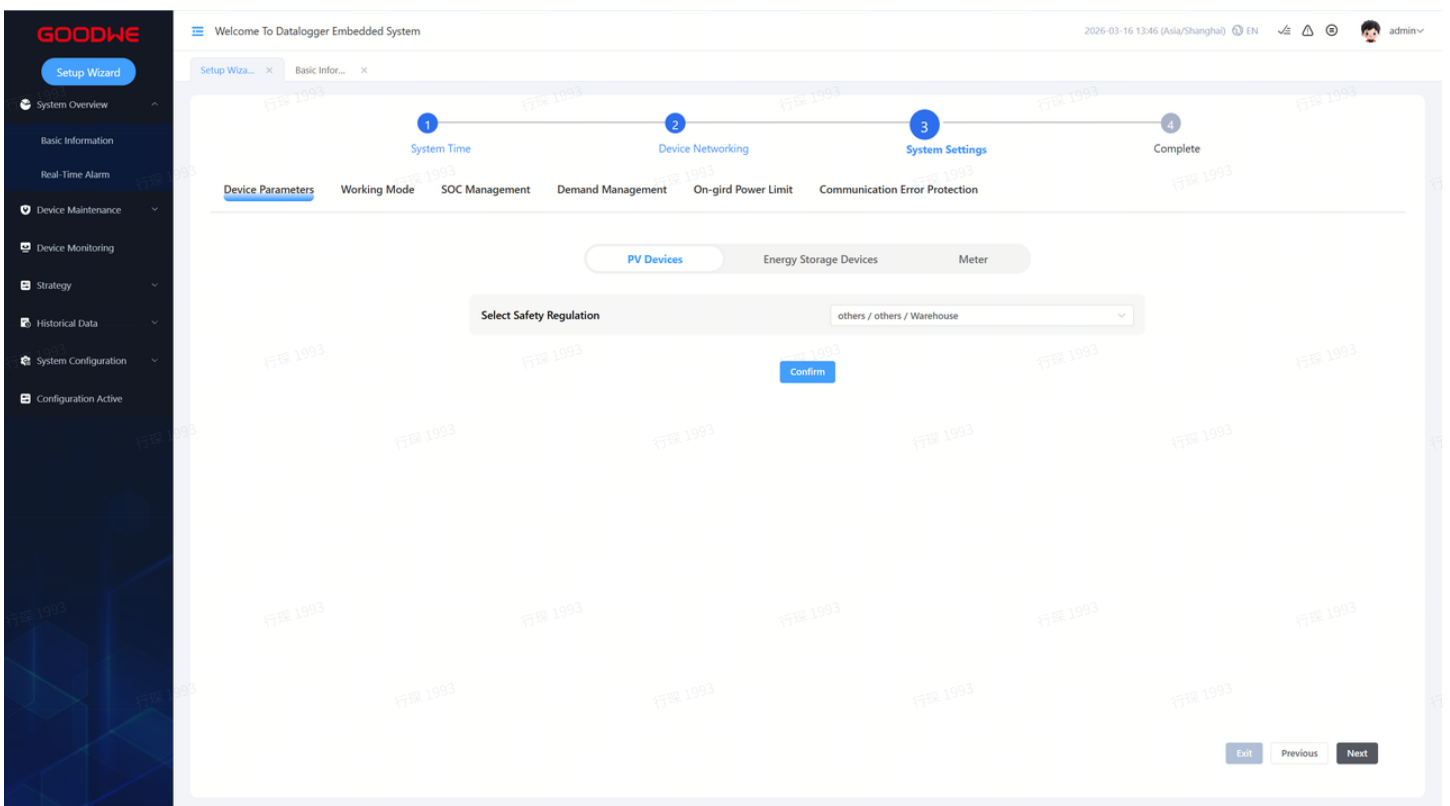


4.3 Setup Wizard - System Settings

Mainly sets the system operating parameters.

4.3.1 Device Parameters

1. Enter Device Parameters -> PV Devices, select the safety regulations that meet the requirements according to local grid regulations, and click Confirm



2. Enter Device Parameters -> Energy Storage Device, select the safety regulations that meet the requirements according to local grid regulations, click Confirm

The screenshot shows the 'Setup Wizard' interface for the 'Energy Storage Devices' section. The progress bar indicates that step 3, 'System Settings', is the current step. The 'Device Parameters' tab is active, and the 'Energy Storage Devices' sub-tab is selected. A dropdown menu for 'Select Safety Regulation' is open, showing 'Others / Default / Warehouse' as the selected option. A 'Confirm' button is visible below the dropdown. The interface also includes a sidebar with navigation options and a top header with system information.

3. Enter Device Parameters -> Meter, and set the grid connection point meter parameters CT, PT, and wiring method according to the actual situation. The wiring method can be selected from: Three-phase Three-wire Mode or Three-phase Four-wire Mode

The screenshot shows the 'Setup Wizard' interface for the 'Meter' section. The progress bar indicates that step 3, 'System Settings', is the current step. The 'Device Parameters' tab is active, and the 'Meter' sub-tab is selected. A dropdown menu for 'Select Meter' is open, showing 'meter-120(120)' as the selected option. Below the dropdown, a table displays the meter parameters:

No.	Parameter Name	Modified Value	Status
1	CT Ratio	50	Read Successfully
2	PT Ratio	1	Read Successfully
3	Wiring Method	Means 3L/N/PE I	Read Successfully

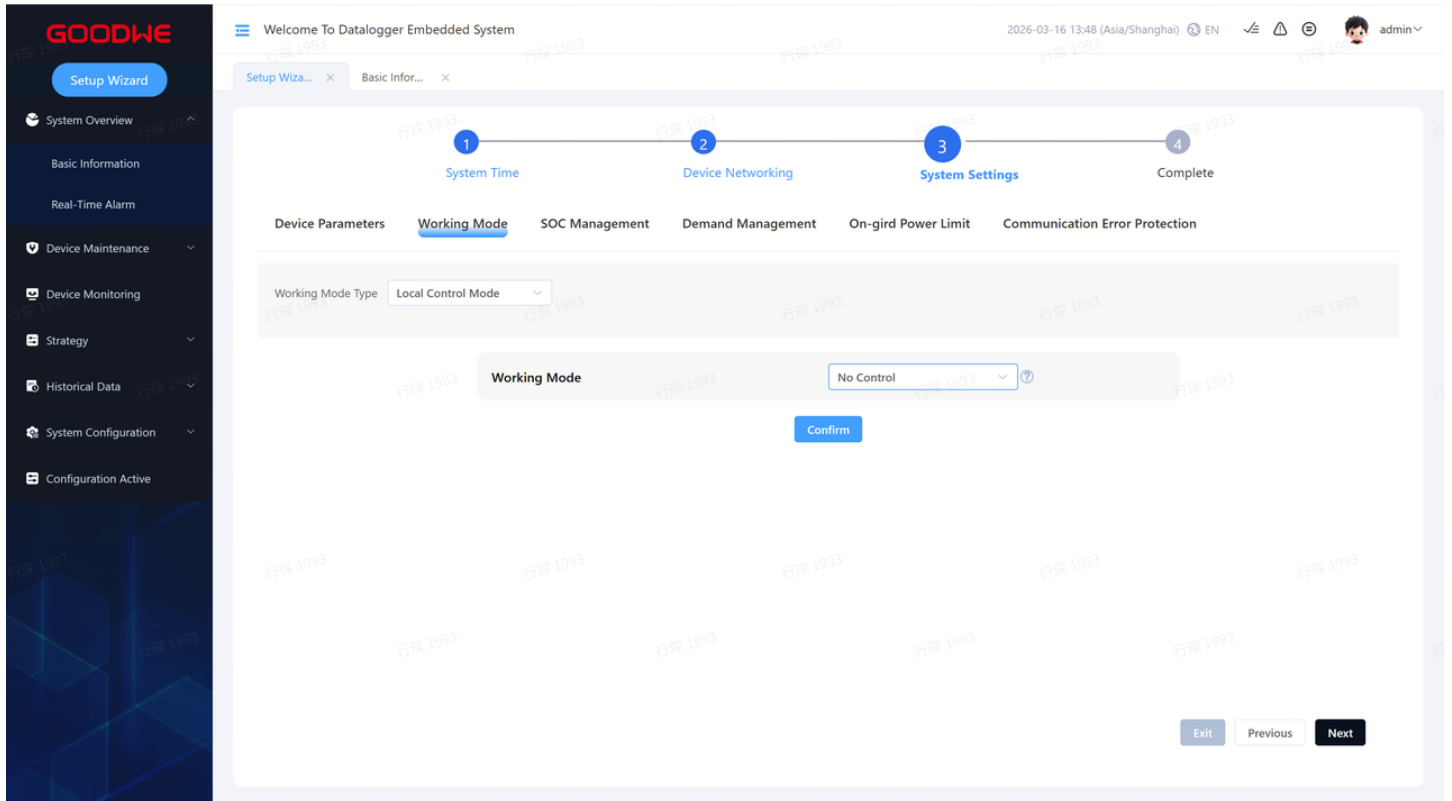
A 'Confirm' button is visible below the table. The interface also includes a sidebar with navigation options and a top header with system information.

The Initial Setup Wizard only sets the grid connection point meter parameters. In the case of multiple meters, after the Initial Setup Wizard is completed, enter the device access settings to configure other meter parameters.

4.3.2 Working Mode

4.3.2.1 Uncontrolled

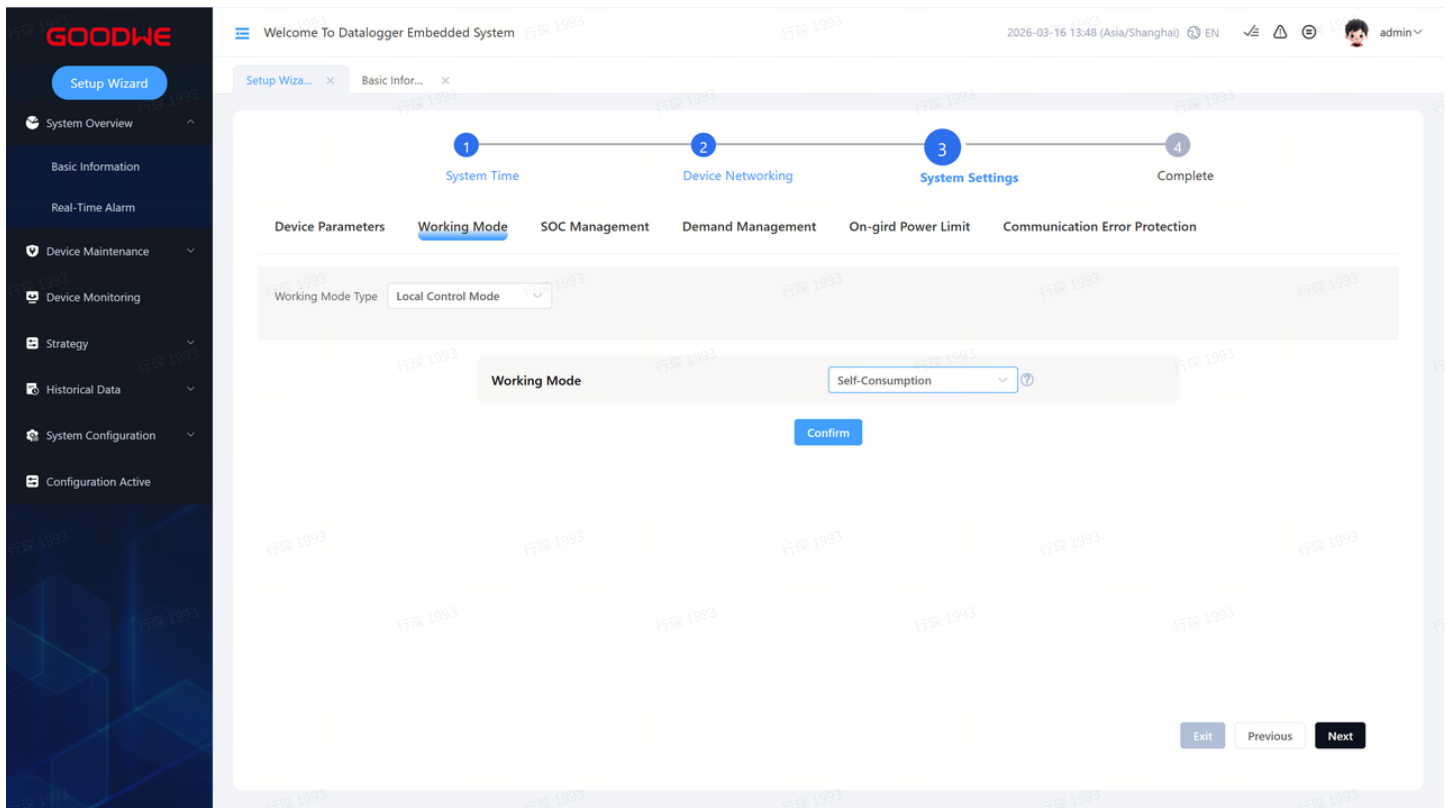
Enter the working mode configuration, the system defaults to no control, No control means not controlling the energy storage device



4.3.2.2 Self-consumption

Set the working mode to self-consumption

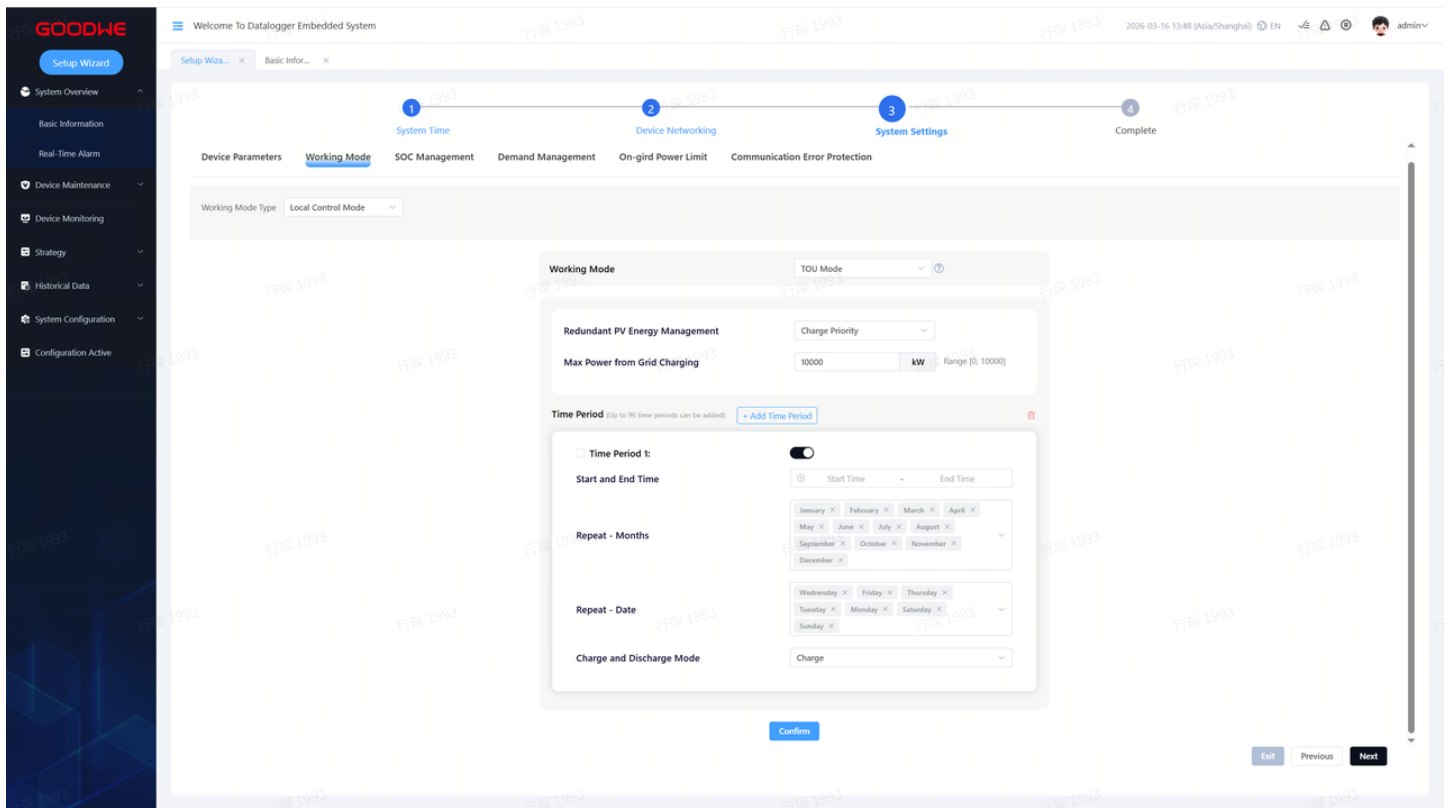
Self-use usage scenario: Self-consumption is applicable to photovoltaic energy storage systems, generally used in scenarios where the photovoltaic ratio is high, photovoltaic power generation is sufficient for load use, and the excess power generation is used to charge the energy storage, thereby increasing the self-use rate of the system and saving electricity costs.



4.3.2.3 TOU Mode

Set the working mode to TOU mode

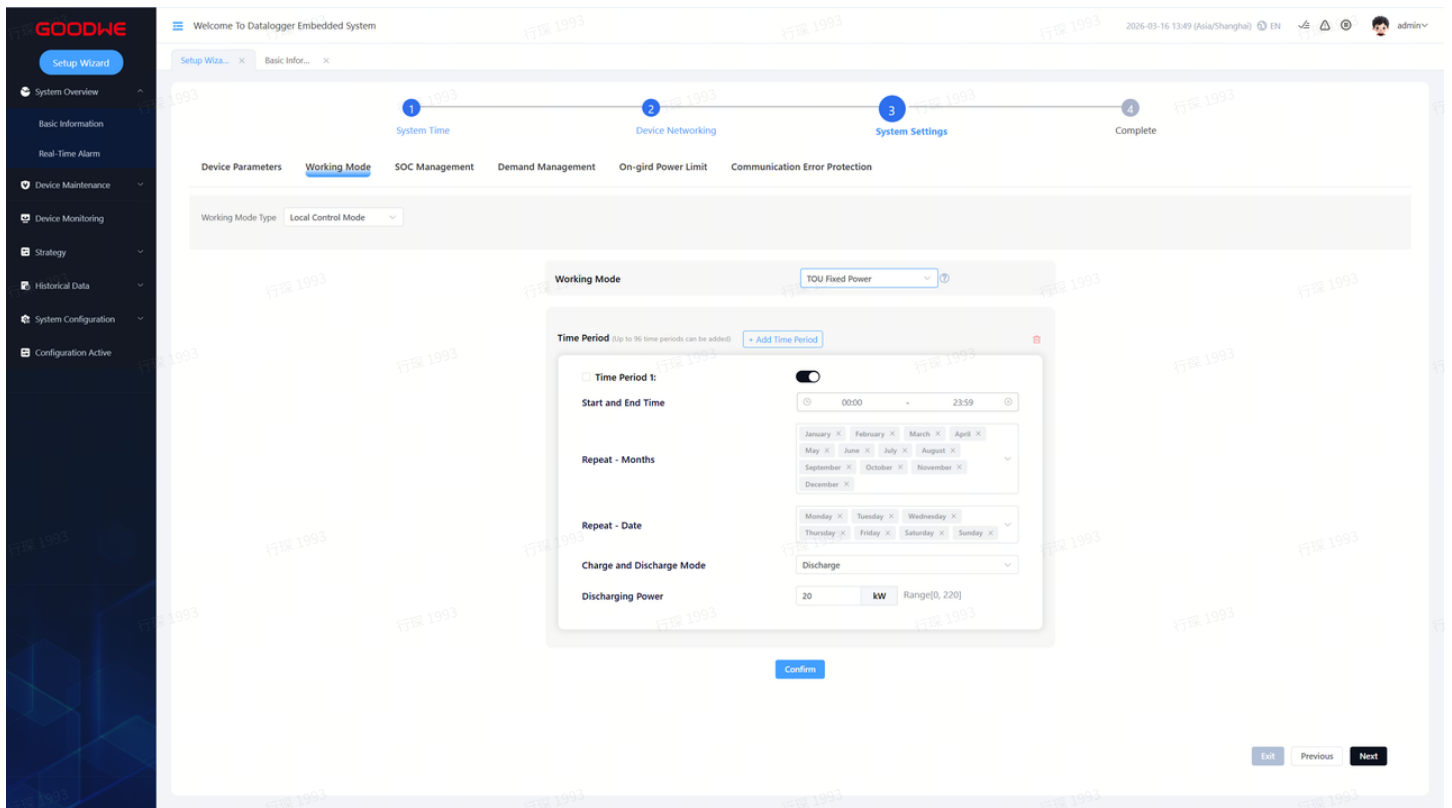
TOU Mode Usage Scenarios: The TOU mode is applicable to photovoltaic energy storage systems or pure energy storage systems, and there is a peak-valley electricity price difference. By setting the charging and discharging time periods, electricity costs can be saved. For example, during the low electricity price period at night, the system charges the energy storage at its maximum charging power during this period, and the high electricity price period is set as the discharging period. The energy storage discharges according to the actual load power, and the battery can only discharge during the discharging time period, thus saving electricity costs. During the charging time period, the power grid is allowed to charge the energy storage, and during the discharging time period, the energy storage can supply power to the load. Energy storage does not discharge during other unset time periods, with photovoltaic power generation and the power grid supplying power to the load, and photovoltaic power generation can charge the energy storage.



1. Excess PV energy management sets charging optimization or grid connection priority: Charging priority means that when PV power generation exceeds the load, the excess PV energy is used to charge the energy storage. After the charging power reaches its maximum or the energy storage is fully charged, the excess PV energy can be fed into the grid. Grid connection priority means that when the PV power generation is greater than the load, the excess PV energy is preferentially fed into the grid. After the grid connection power reaches its maximum, the excess energy is used to charge the energy storage, generally applicable to scenarios where the subsidized electricity price is higher than the electricity consumption price. The default setting is charging priority.
2. Maximum grid charging power: Set the maximum charging power of the grid to the energy storage device, with a default maximum value of 10000.
3. Add time periods, and configure and fill in the corresponding charging and discharging time periods.

4.3.2.4 TOU Fixed

Set the working mode to TOU Fixed



Add a time period, configure and fill in the corresponding charging and discharging time periods, and set the charging and discharging power levels.

TOU Fixed Usage Scenario: TOU fixed power setting is applicable to pure energy storage systems, which configures energy storage charging and discharging through peak-valley electricity prices, and is used in scenarios where the size of energy storage charging and discharging needs to be fixedly defined to achieve peak-valley arbitrage.

Charge within a fixed TOU period; charge according to the set charging power

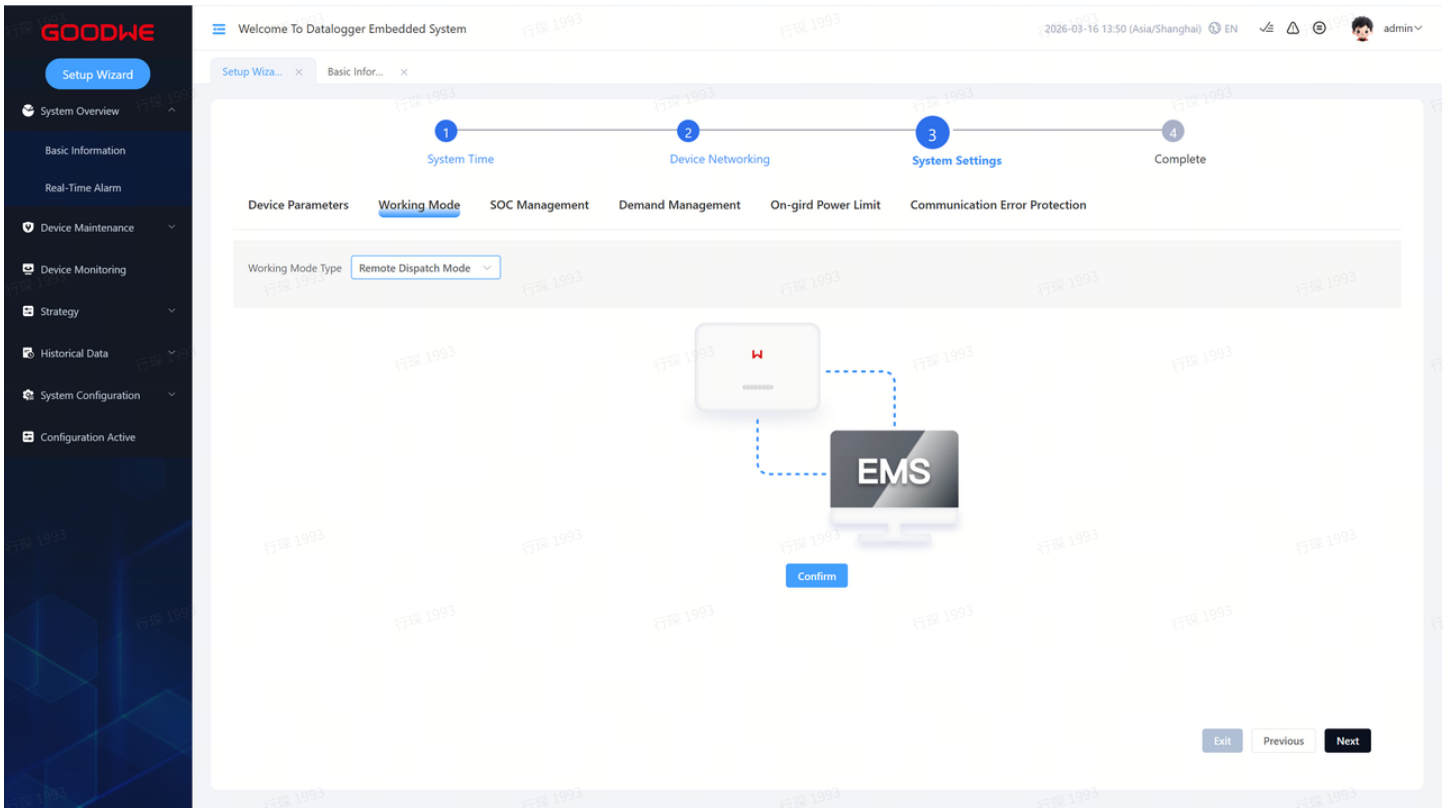
TOU discharges within a fixed time period; discharges according to the set discharge power

Outside the fixed TOU period: Excess PV power charges the battery

4.3.2.5 Remote Scheduling Mode

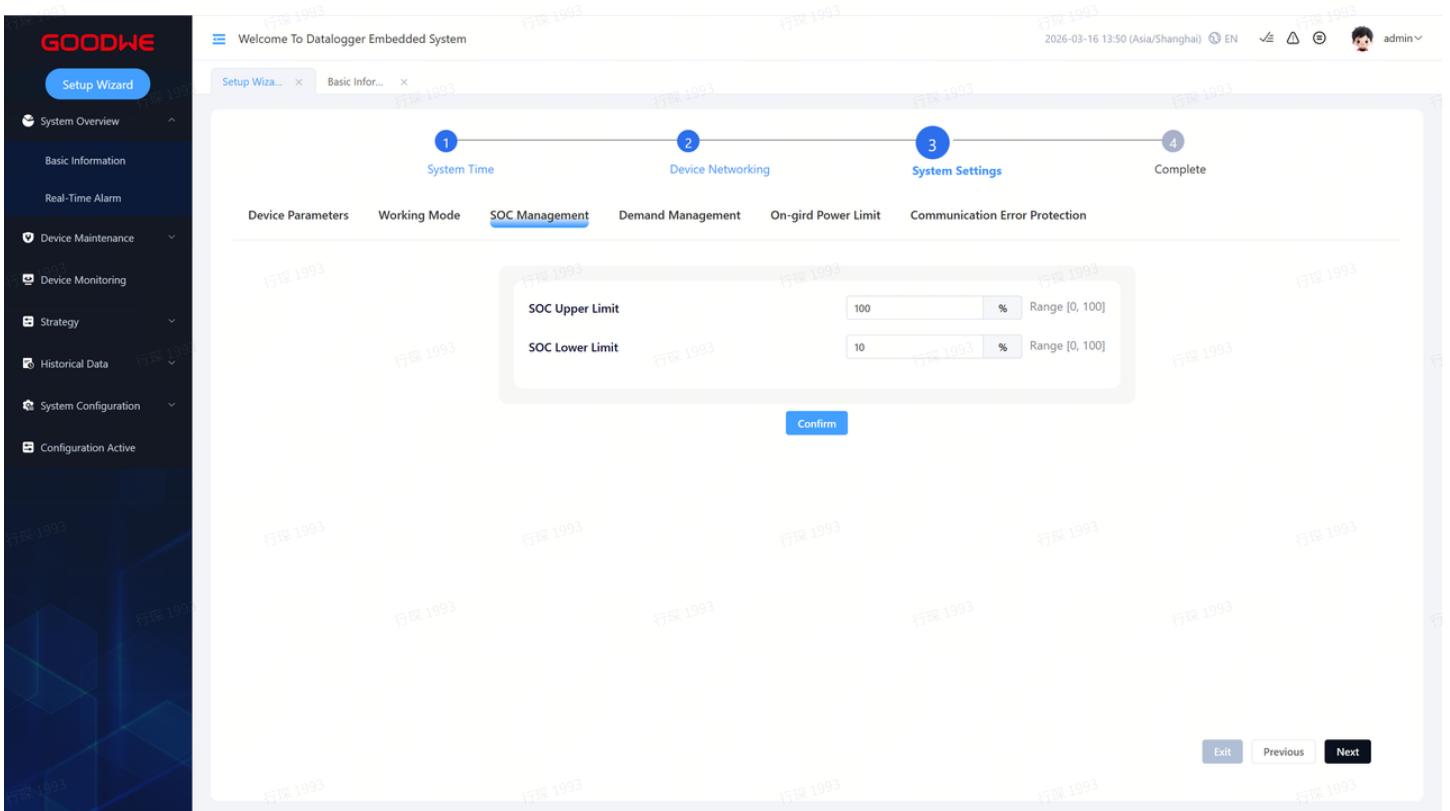
Select Remote Scheduling Mode for the working mode

Usage scenario of remote dispatch mode: When a third-party platform or controller dispatches, select the remote dispatch mode to receive power dispatch instructions and control the power of the photovoltaic energy storage system.



4.3.3 SOC Management

Enter SOC management, set the upper and lower limits of energy storage SOC, and the default SOC upper limit is 100% , and the SOC lower limit is 10%



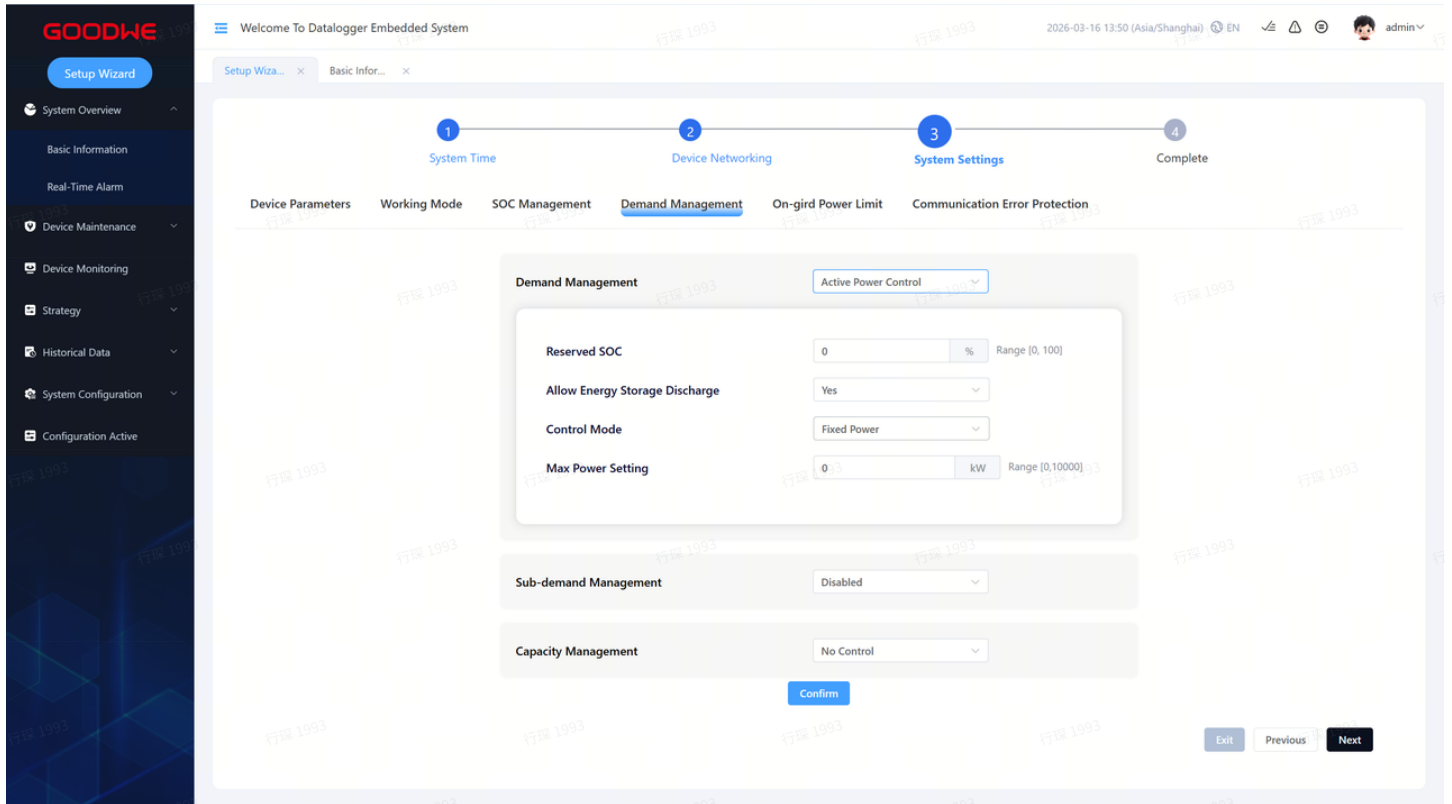
4.3.4 Demand Management

Demand management use case: Used in scenarios with peak power billing, demand control reduces electricity costs by lowering the maximum peak power of grid electricity purchases

during peak periods

Sub-demand management use case: Multi-transformer scenario, controlling the purchased power of sub-transformers not to exceed the limit value

Capacity Management: In scenarios where transformer capacity is limited, the control system's power purchase and sales must not exceed the transformer capacity limit value



Demand Management : Selectable Active Power Control, Apparent Power Control, or No Control

Reserved SOC for demand management: Reserved SOC for capacity and demand control of energy storage, default 30%

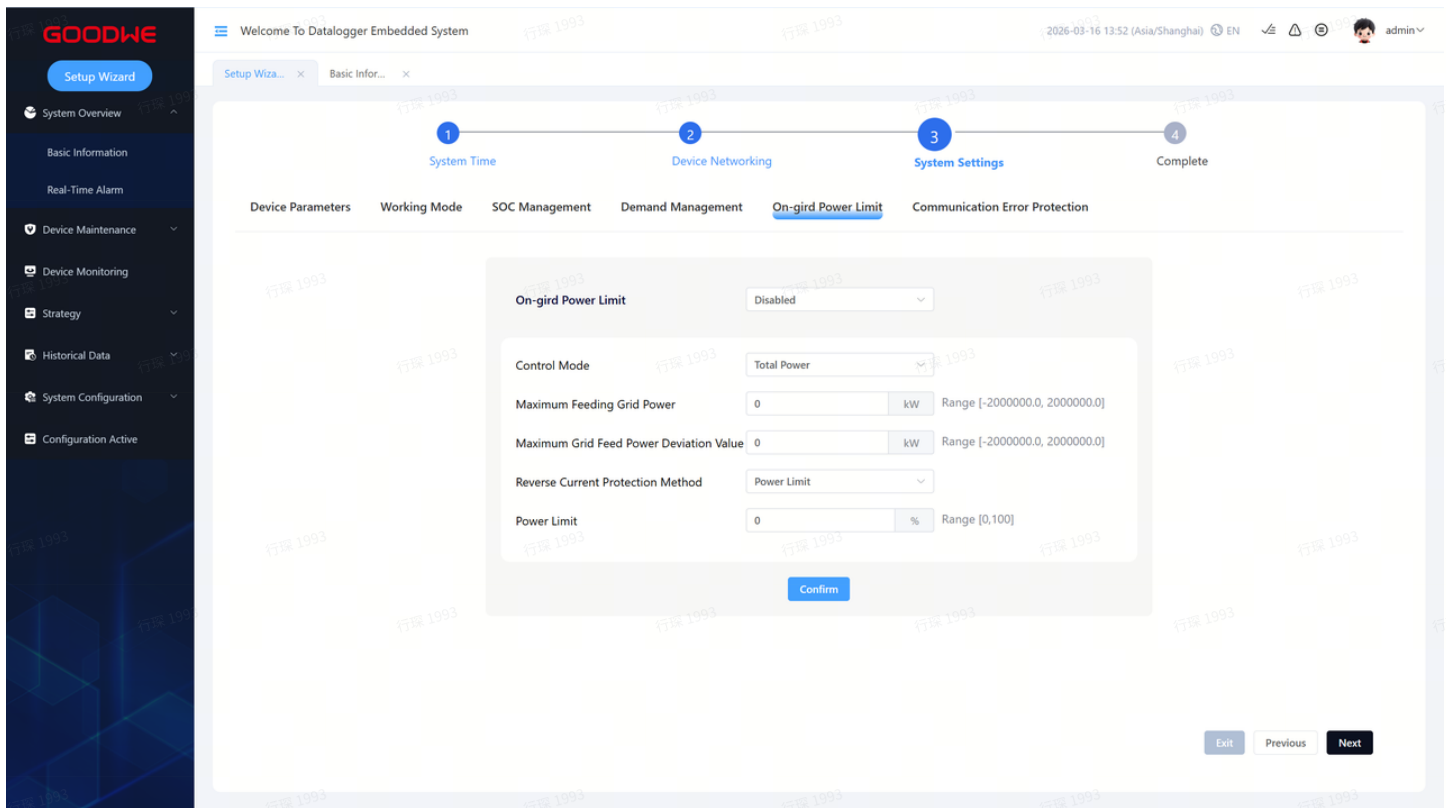
Energy storage discharge management: Whether the energy storage device discharges to control electricity consumption not exceeding the demand, default is yes, discharge

Control Mode: Fixed Power or Specified Time. Specified Time can set different demand values according to different time periods, with Fixed Power selected by default

Maximum Power Setting: Set according to actual needs Maximum Demand Power Value

4.3.5 On-grid power limit

On-grid power limit usage scenarios: Scenarios requiring anti-islanding protection



1. On-grid power limit: Enable it for anti-backflow scenarios

2. Control Mode: You can choose total power or phase power, with total power selected by default

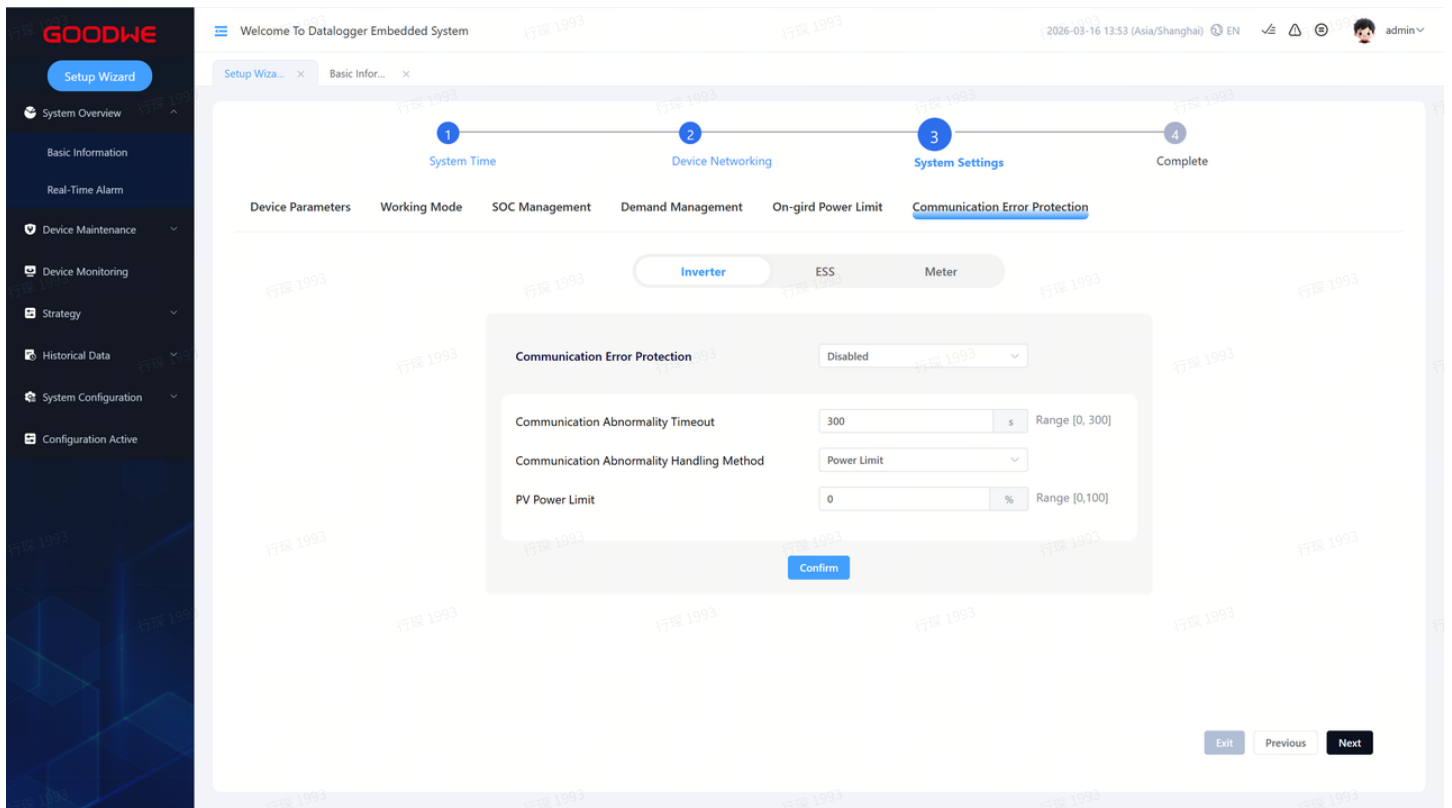
3. Maximum power fed into the grid: Set the maximum power delivered to the grid, default is 0

4. Maximum power offset value for grid feeding: Set the maximum power offset value for feeding into the grid, default setting is 0

5. Reverse power protection method: Select power limitation or device disconnection. If the reverse power protection is triggered for more than 5 seconds, the device will limit its output or disconnect from the grid. The default setting is power limitation, with the power limitation output set to 0.

4.3.6 Communication Abnormal Configuration

Enter Communication Exception Configuration -> Inverter

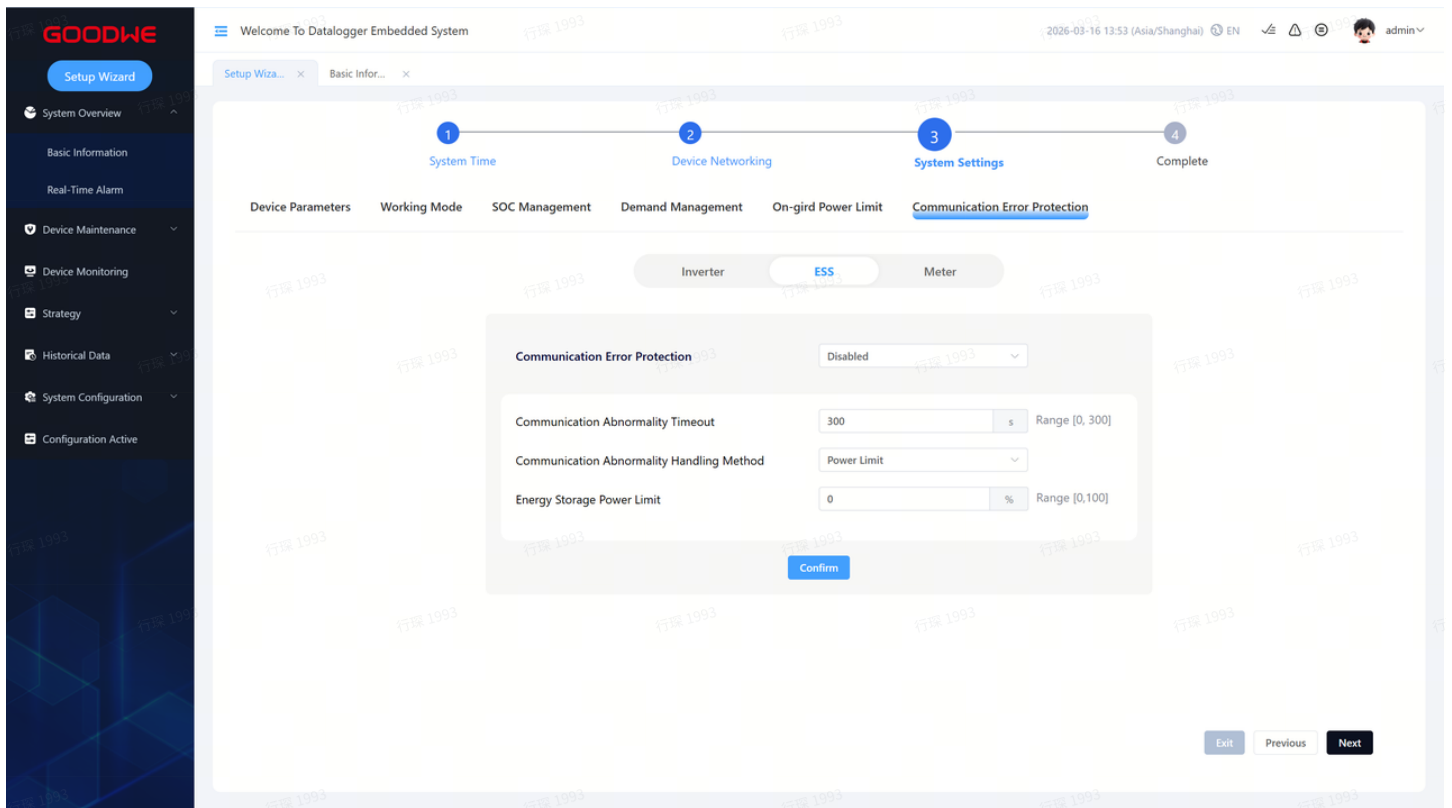


1. Communication Abnormality Protection: Set Enable

2. Communication abnormal timeout: Set the communication abnormal timeout time, with a default value of 300s

3. Communication anomaly handling method: Select device disconnection or power limitation. When the communication between the inverter and SEC3000C is disconnected for more than the protection time, the inverter performs device disconnection or limits power, with power limitation set as the default.

Enter Communication Abnormality Configuration -> ESS

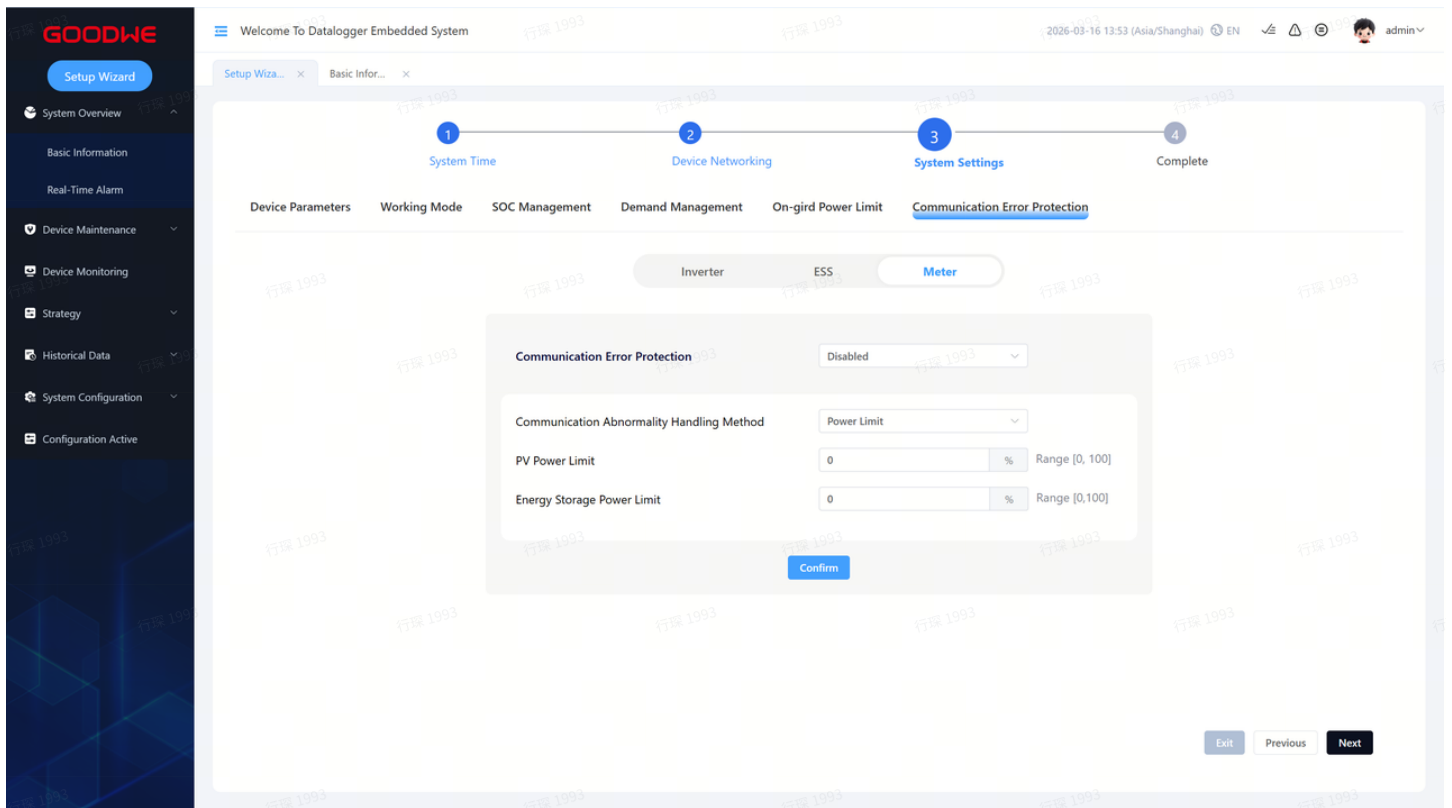


Communication anomaly protection: Set enable

Communication abnormal timeout: Set the communication abnormal timeout time, with a default value of 300 seconds.

Communication anomaly handling method: Select device disconnection or power limitation. When the communication link between the ESS and SEC3000C is broken for longer than the protection time, the ESS will execute device disconnection or limit power, with power limitation set as the default.

Enter Communication Abnormality Configuration -> Electric Meter



Communication anomaly protection: Set enable

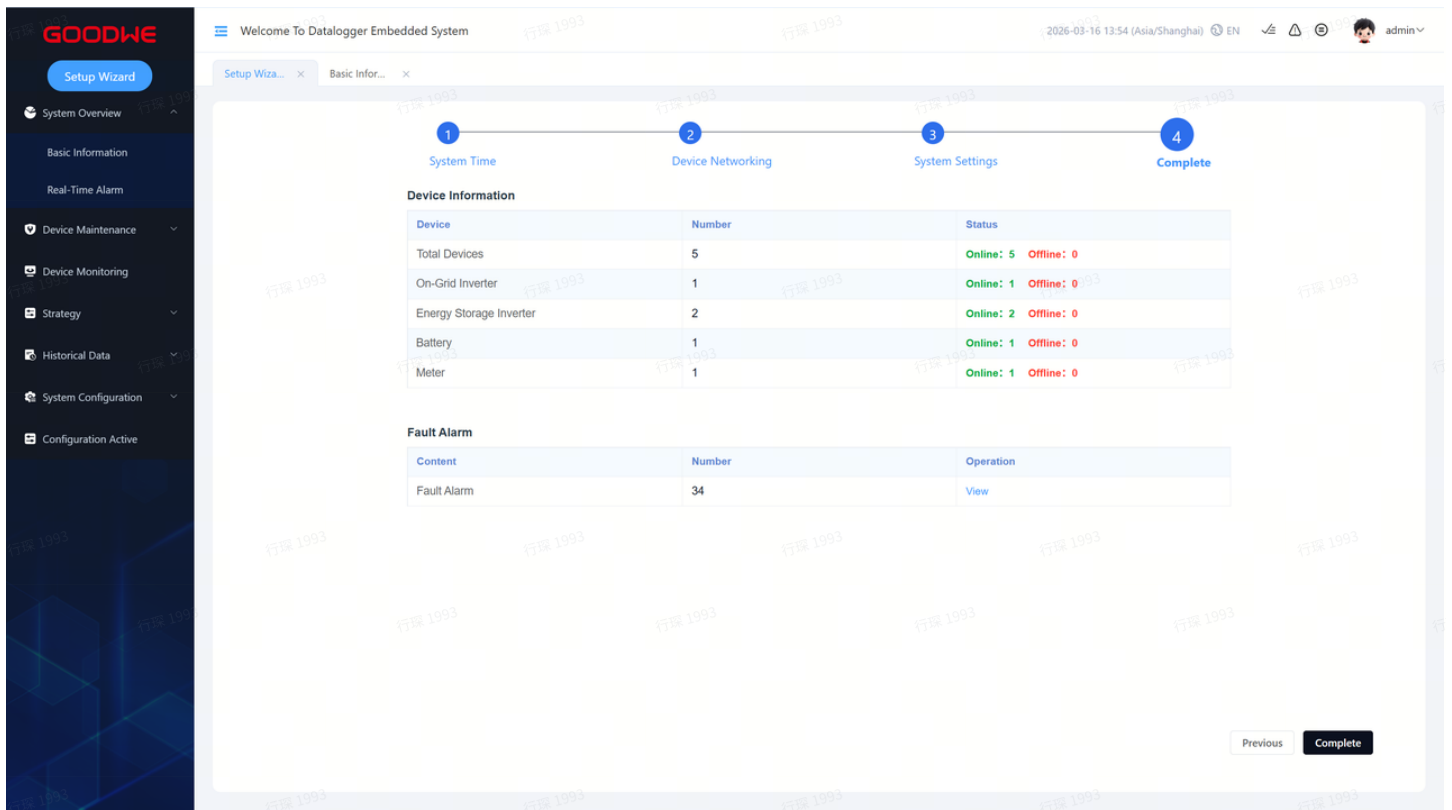
Communication anomaly handling method: Select device disconnection from the network or power limitation. When the communication link between the meter and SEC3000C is disconnected, execute device disconnection from the network or limit power, with power limitation set as the default.

Photovoltaic - Power Limit: If the meter communication chain breakage limits the inverter device's power output, the default power limit is set to 0

Energy Storage - Power Limit: If the meter communication disconnection limits the power output of the energy storage device, the default power limit is set to 0

4.4 Setup Wizard - Completed

Check the number of devices connected to the system, device communication status statistics, and fault alarm information. After confirming that everything is correct, you can click the Finish button to end the Initial Setup Wizard process.

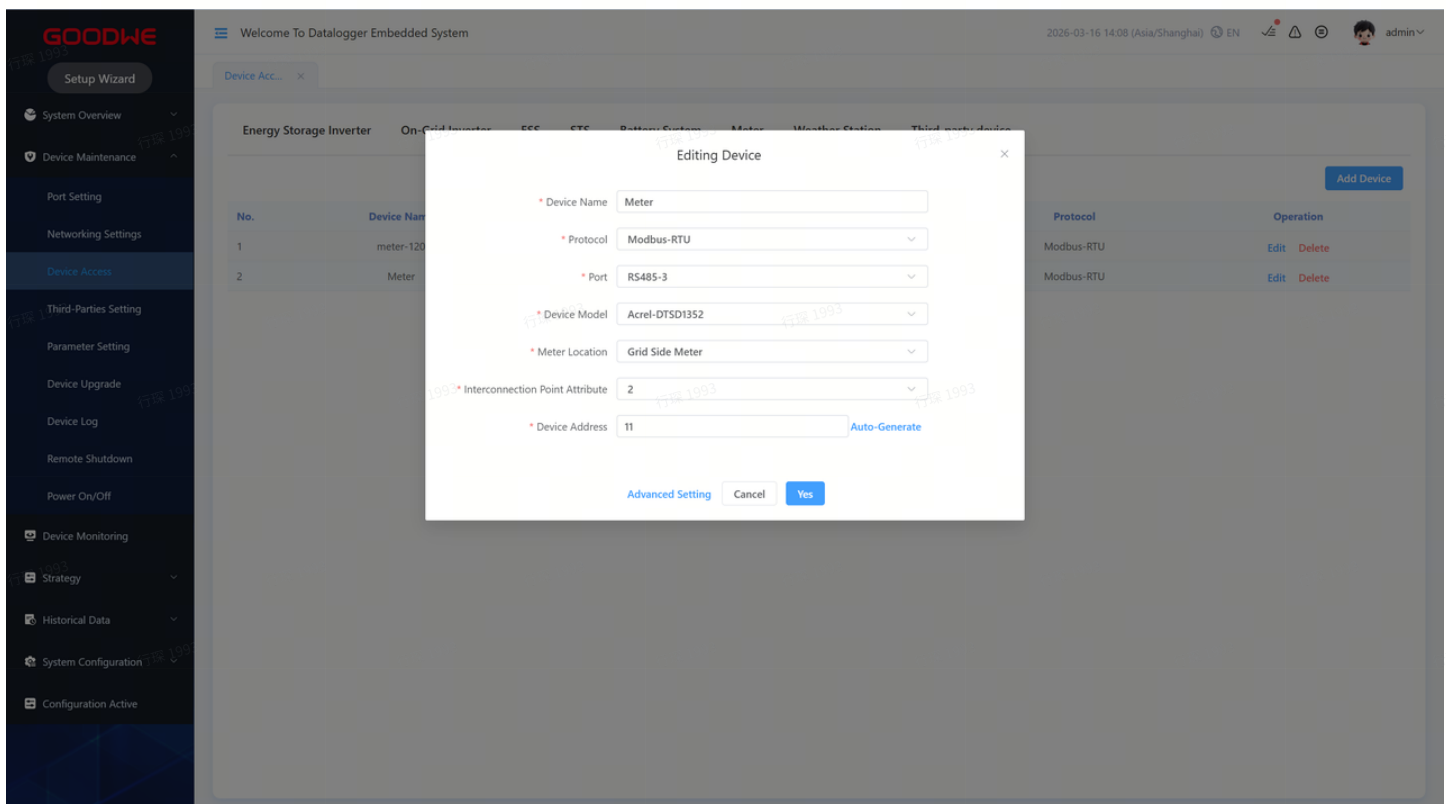


After the setup is completed, if other functions need to be integrated into the grid, the following function configurations can be made as needed

4.5 Sub-demand control

1. Grid Connection Number Setting

Device Access-->Electric Meter-->Electric Meter Usage (Grid-side Electric Meter)-->Edit-->Point of Interconnection Number-->Settings-->Configuration Activation



Welcome To Datalogger Embedded System

2026-03-16 14:09 (Asia/Shanghai) EN

admin

Device Access

Energy Storage Inverter On-Grid Inverter ESS STS Battery System **Meter** Weather Station Third-party device

Add Device

No.	Device Name	Device Model	Port	Protocol	Operation
1	meter-120	GOODWE Meter	RS485-3	Modbus-RTU	Edit Delete
2	Meter	Acrel-DTSD1352	RS485-3	Modbus-RTU	Edit Delete

Confirm

Welcome To Datalogger Embedded System

2026-03-16 13:57 (Asia/Shanghai) EN

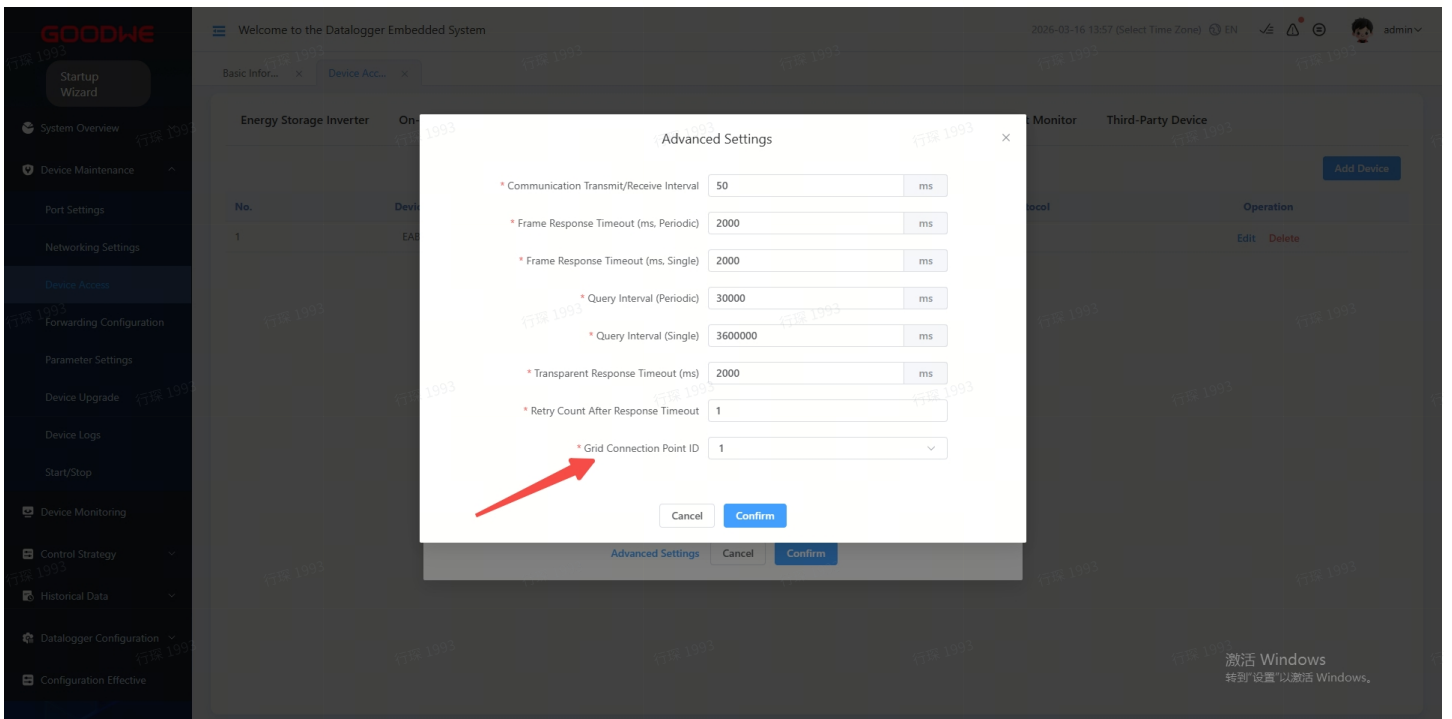
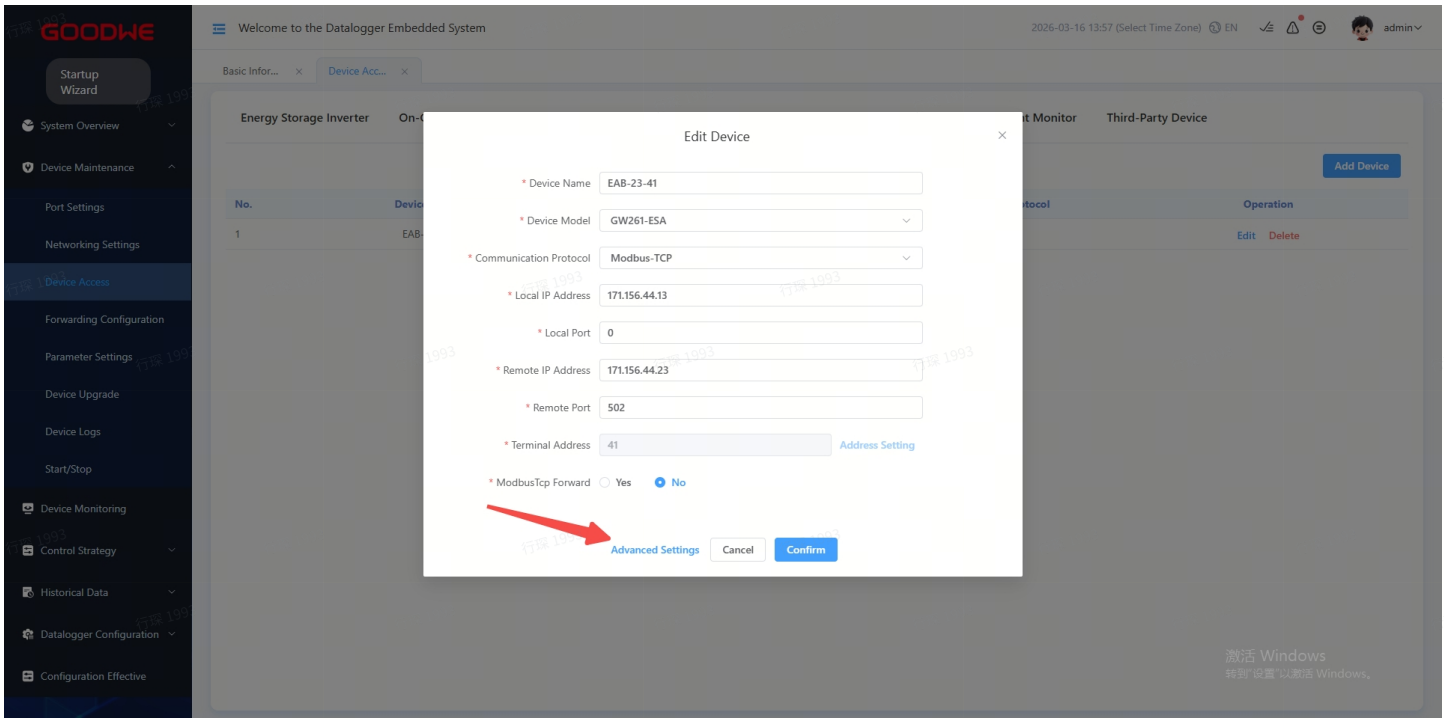
admin

Setup Wiza... Basic Infor... Device Acc... **Configurati...**

Configuration Take Effect

Take Effect

2. Device Access --> Energy Storage Integrated Cabinet --> Edit --> Advanced Settings --> Grid Connection Point Number --> Settings --> Configuration Activation



Welcome to the Datalogger Embedded System

2026-03-16 13:58 (Select Time Zone) EN

admin

Basic Inform... x Device Acc... x

Energy Storage Inverter On-Grid Inverter **Energy Storage Integrated Cabinet** STS Battery System Meter Environment Monitor Third-Party Device

Add Device

No.	Device Name	Device Model	Communication Protocol	Operation
1	EAB-23-41	GW261-ESA	Modbus-TCP	Edit Delete

Setting

激活 Windows
转到“设置”以激活 Windows。

Welcome to the Datalogger Embedded System

2026-03-16 13:58 (Select Time Zone) EN

admin

Basic Inform... x Device Acc... x Configurati... x

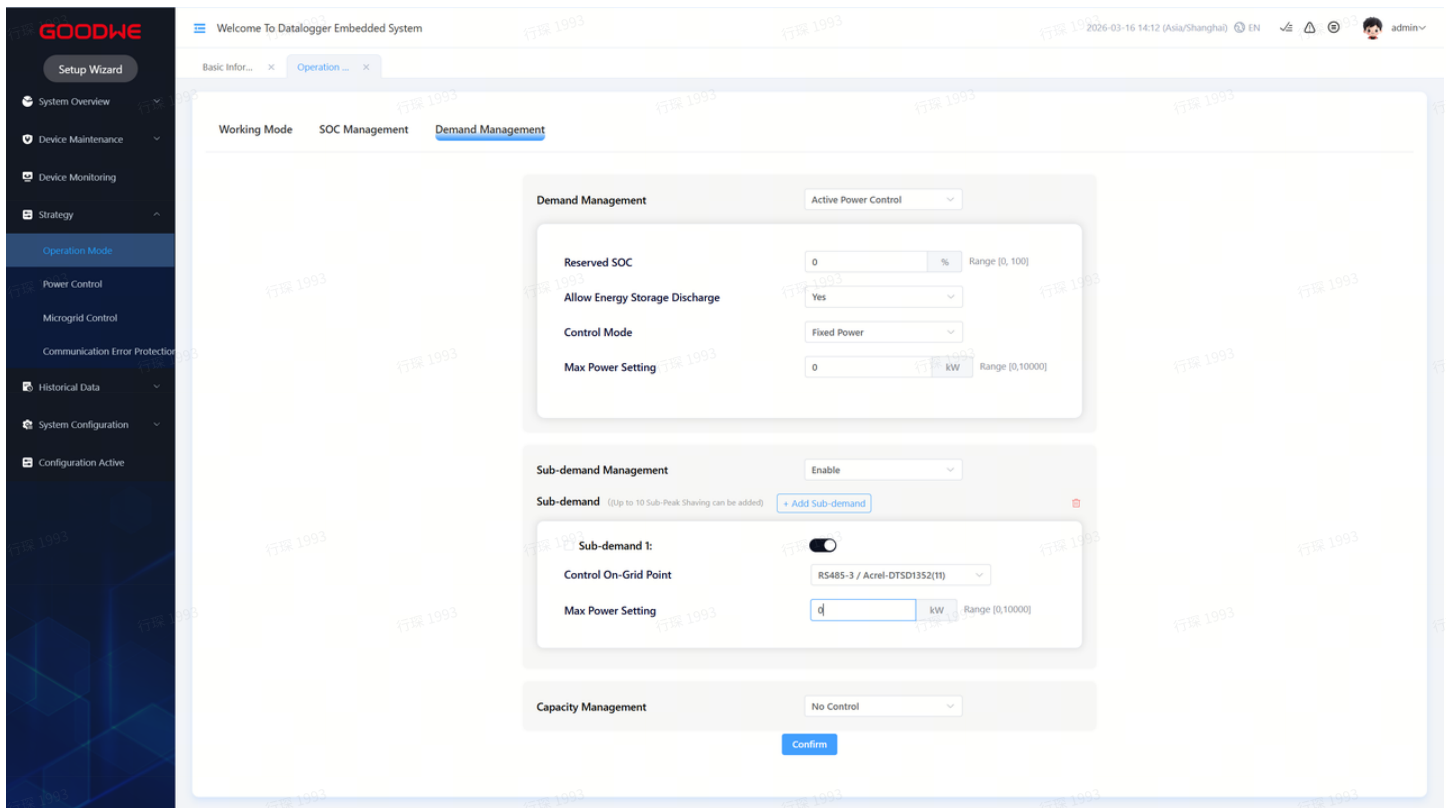
Configuration Effective

Effective

激活 Windows
转到“设置”以激活 Windows。

If the entire energy storage system not only needs to protect the main transformer but also the transformers installed below the main transformer, then a sub-demand solution needs to be adopted.

Sub-demand setting enable --> Add sub-demand (up to 10 sub-demands) --> Sub-demand open --> Control point of common coupling selection corresponds to the point of common coupling number set in the sub-demand transformer setting -- Maximum power setting (can refer to 80% or 85% of the transformer)



Sub-demand management: Set enable

Control the point of connection: Select the hierarchical relationship between this demand and the meter

Maximum power setting: Current transformer setting for maximum demand

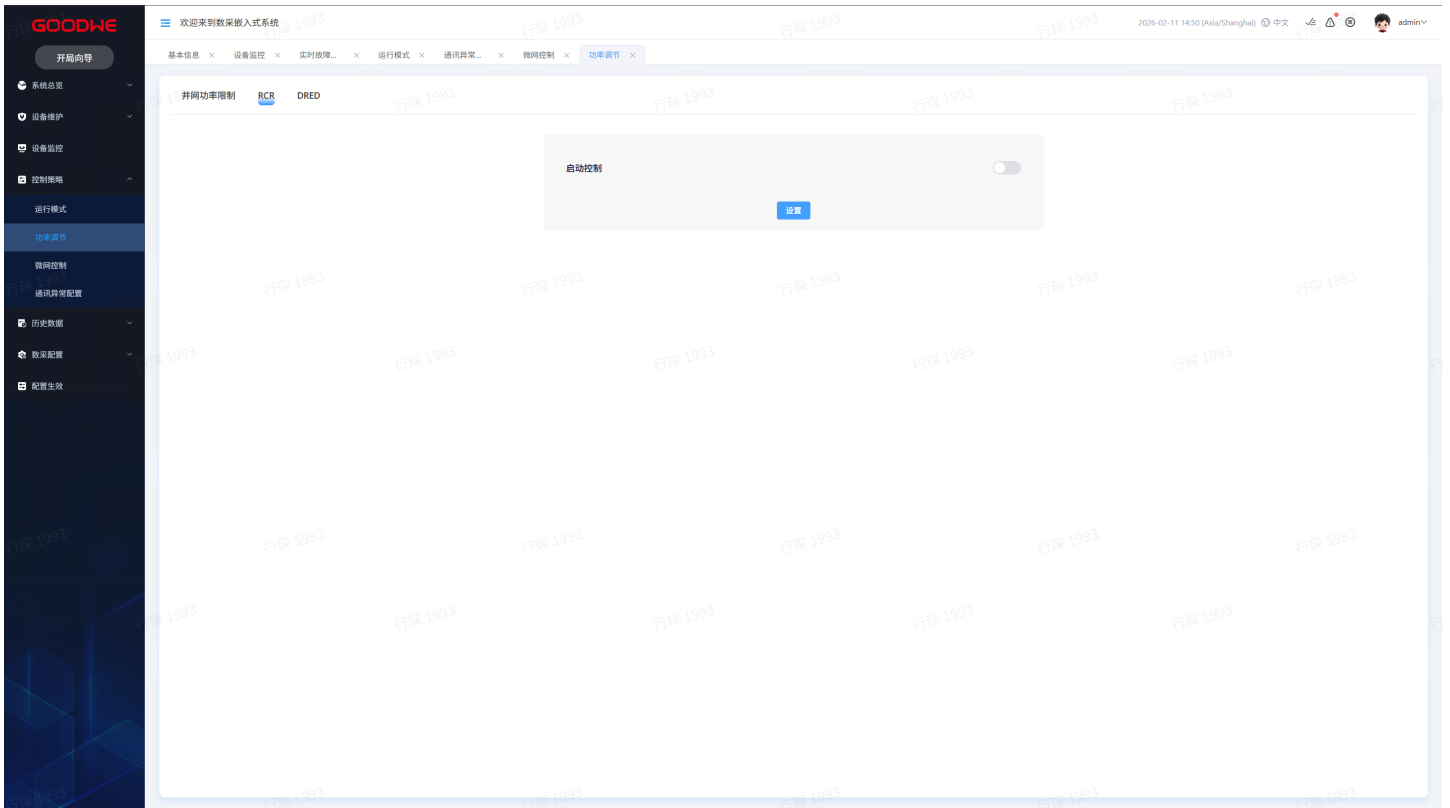
4.6 RCR Control

RCR control regulates the active power and power factor of the equipment based on different signals from the RCR device

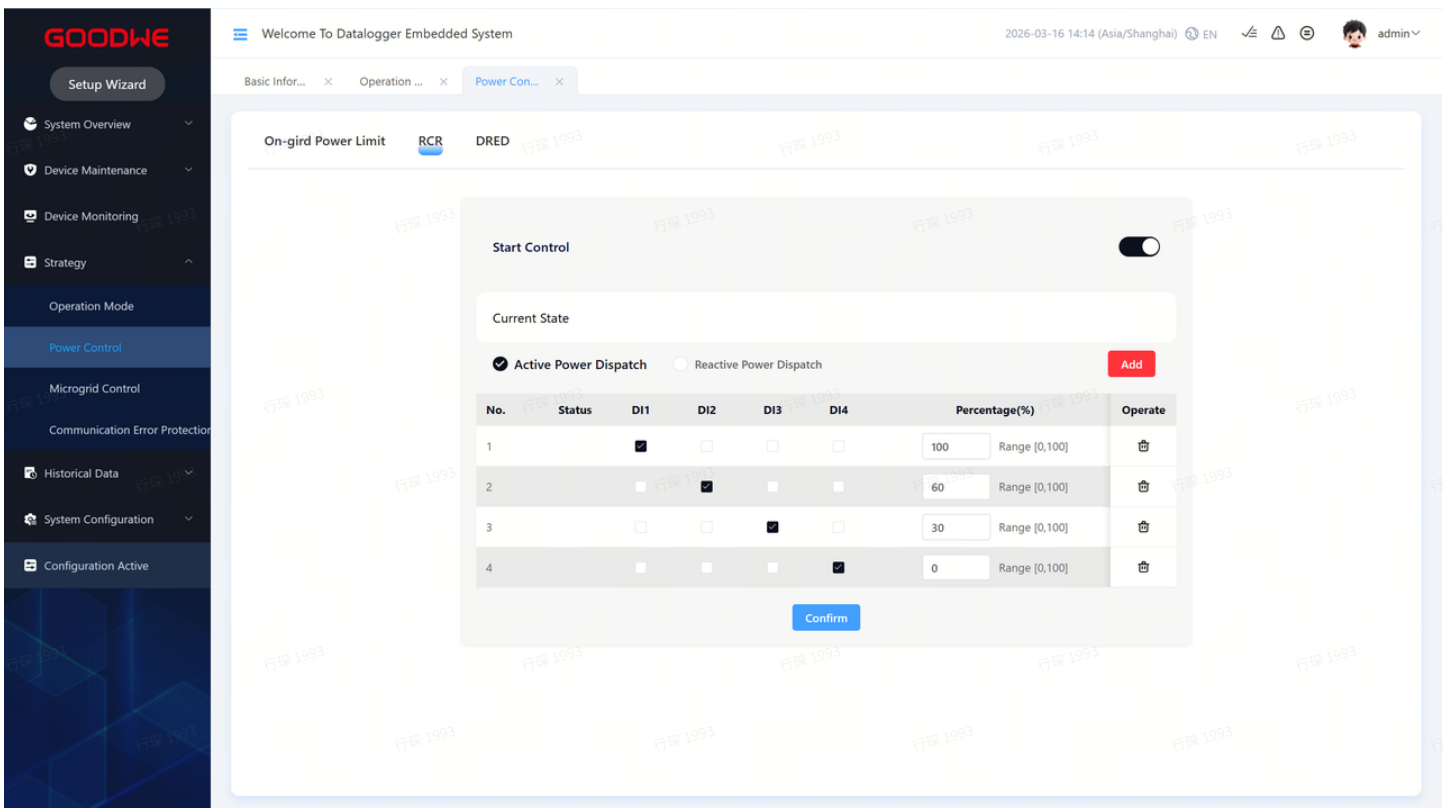
Active Power: Percentage of active power output by the control device

Reactive power dispatch: Set the power factor of energy storage and grid connection

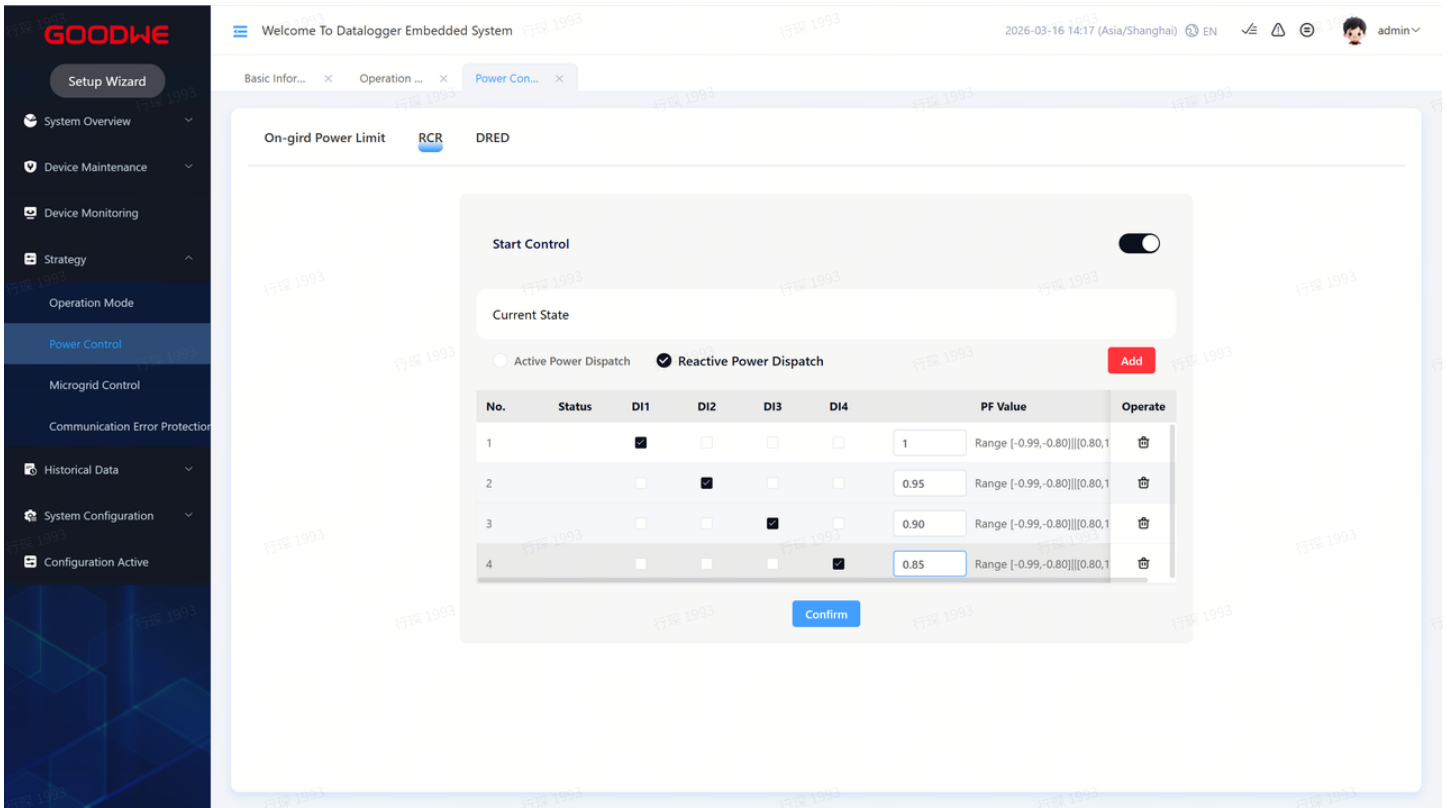
1. Enter Control Strategy -> Power Regulation -> RCR, turn on Start Control, and click Settings



2. Select active power dispatching, and set RCR control parameters

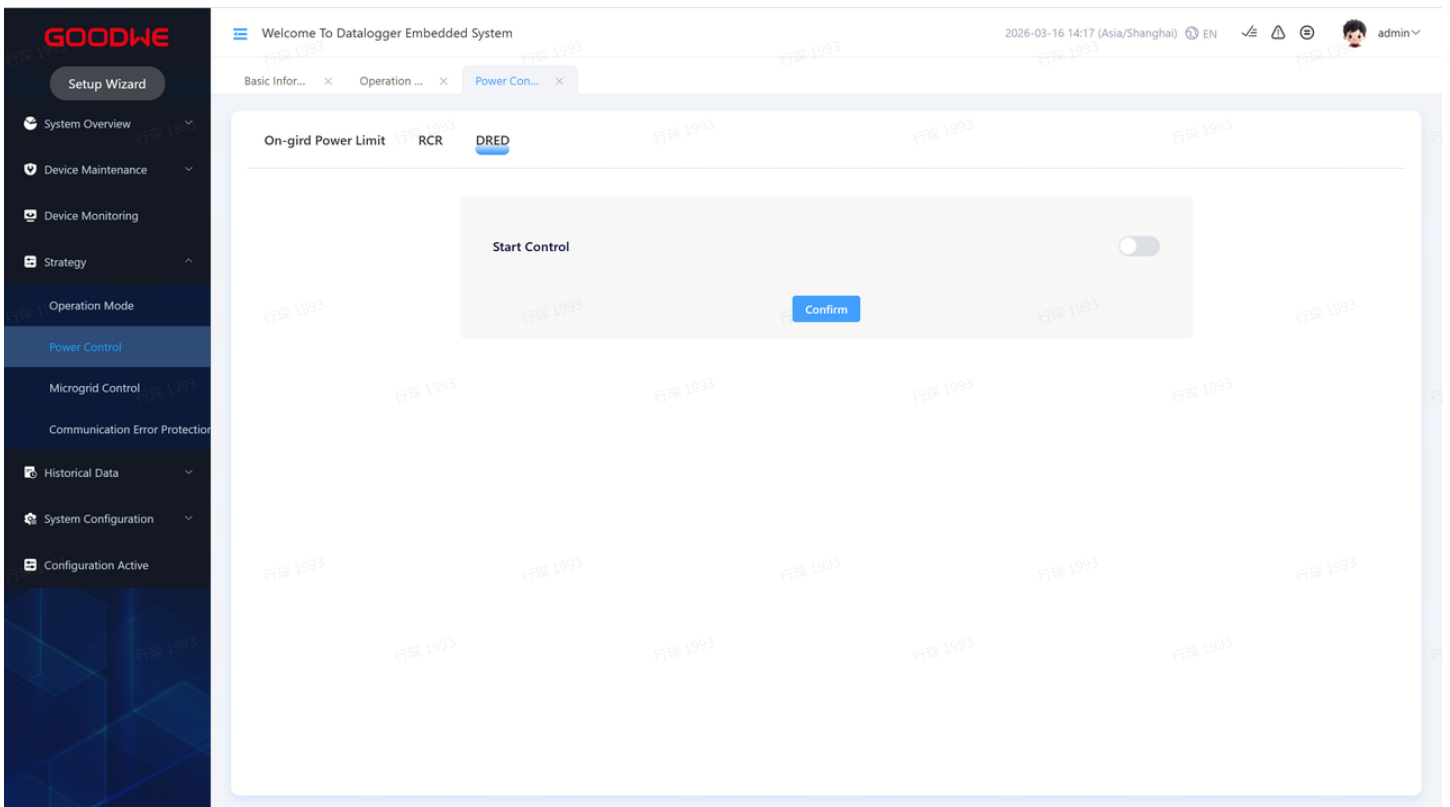


2. Select reactive power dispatch and set RCR control parameters



4.7 DRED Control

Enter Control Strategy -> Power Regulation -> DRED, Open Start Control, Click Settings



DRED: Perform different processing based on DRED device signals

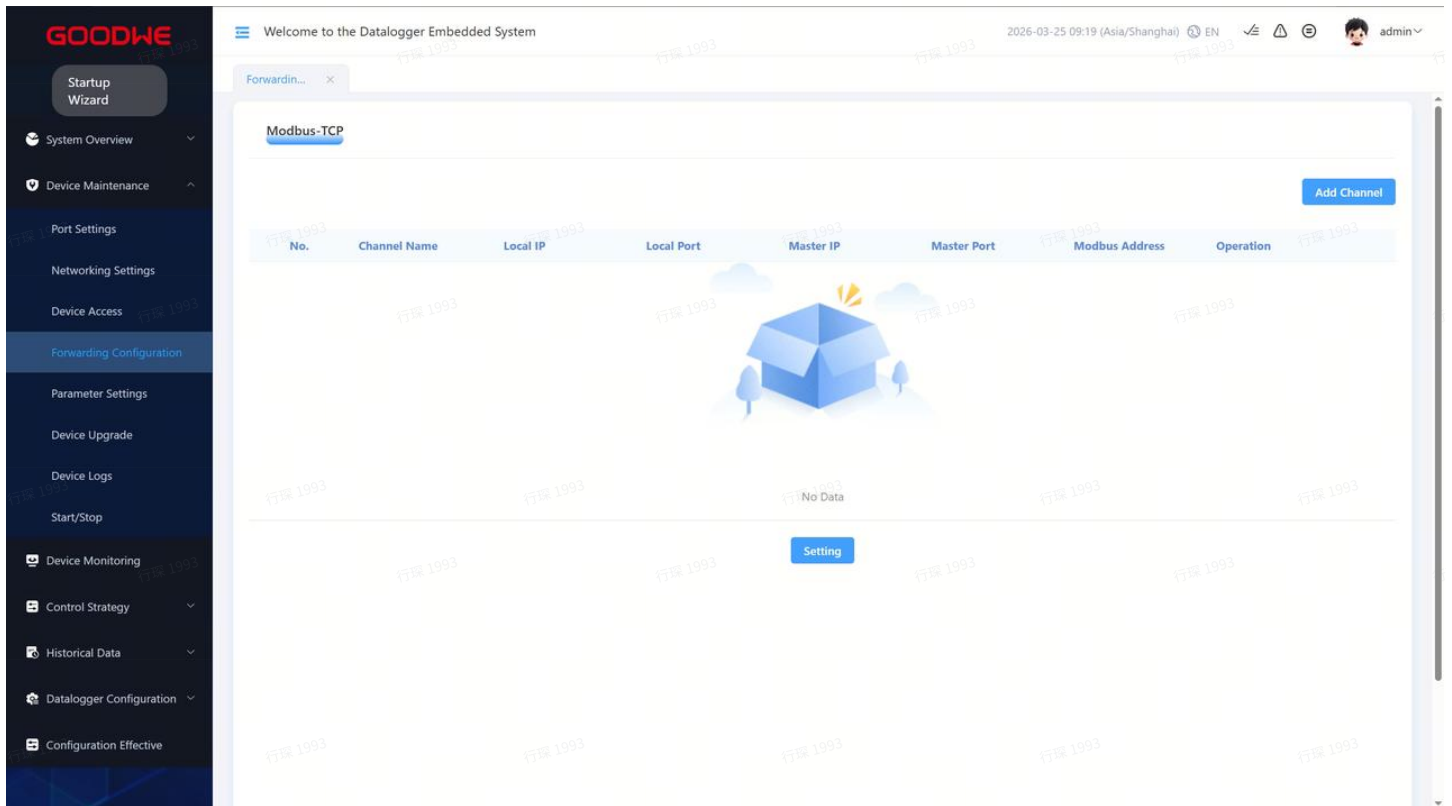
DRM0: All devices are powered off

DRM1~4: Control the battery charging power at 0%Pn, 30%Pn, 75%Pn, and 100%Pn, where Pn is the rated capacity of the energy storage;

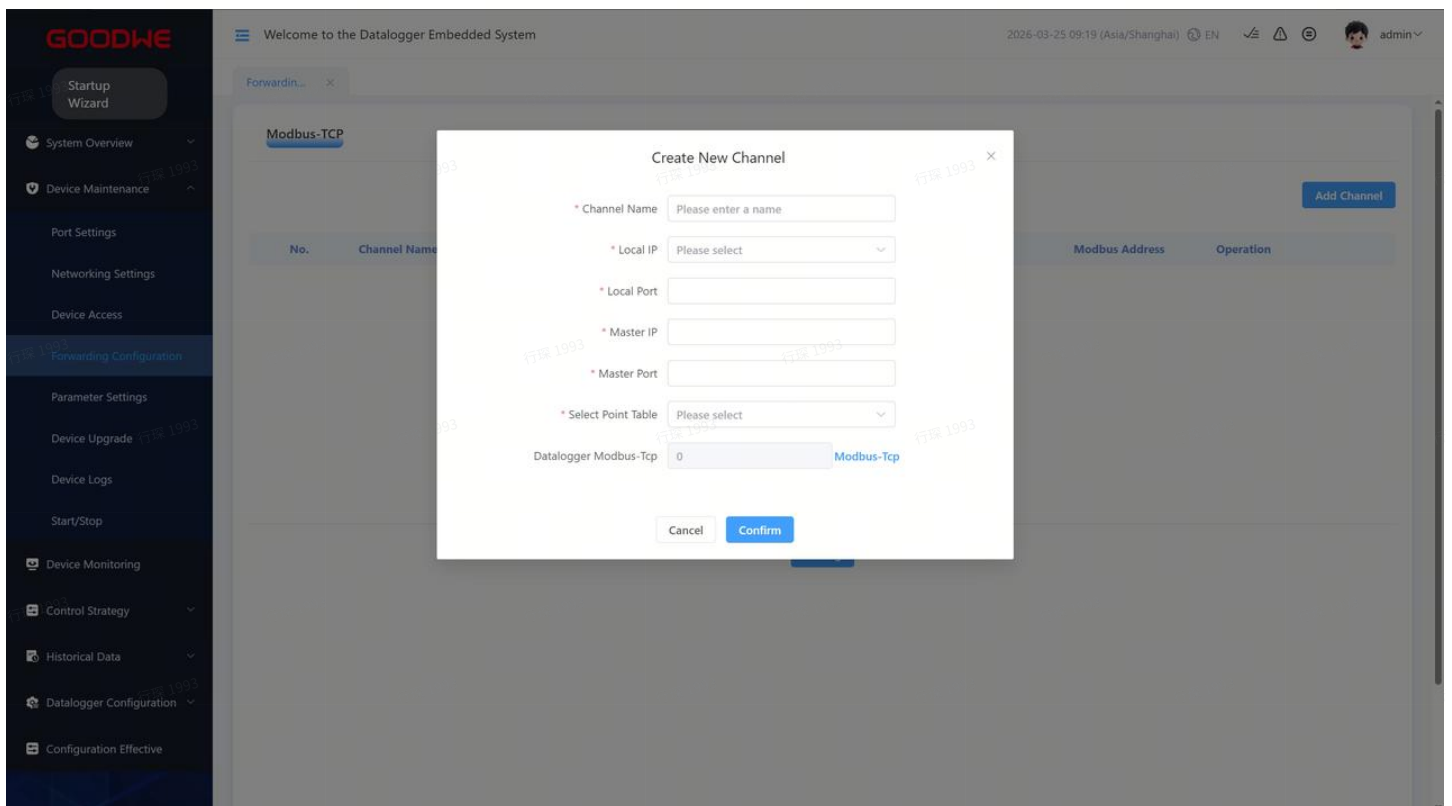
DRM5~8: Control the inverter power output of grid-connected units or energy storage units at 0%, 50%, 75%, and 100%

4.8 Forwarding Settings

1. Enter Device Maintenance -> Forwarding Configuration -> Add Channel



2. Fill in the channel parameters



Channel Name: Command Forwarding Channel Name

Local IP: Select the network port IP 171.156.44.1 under 3000C

Local Port3: Port 502 or 503 (modbusTcp)

Master Station IP: Northbound Master Station IP

Master Station Port: Port 502 or 503 (modbusTcp)

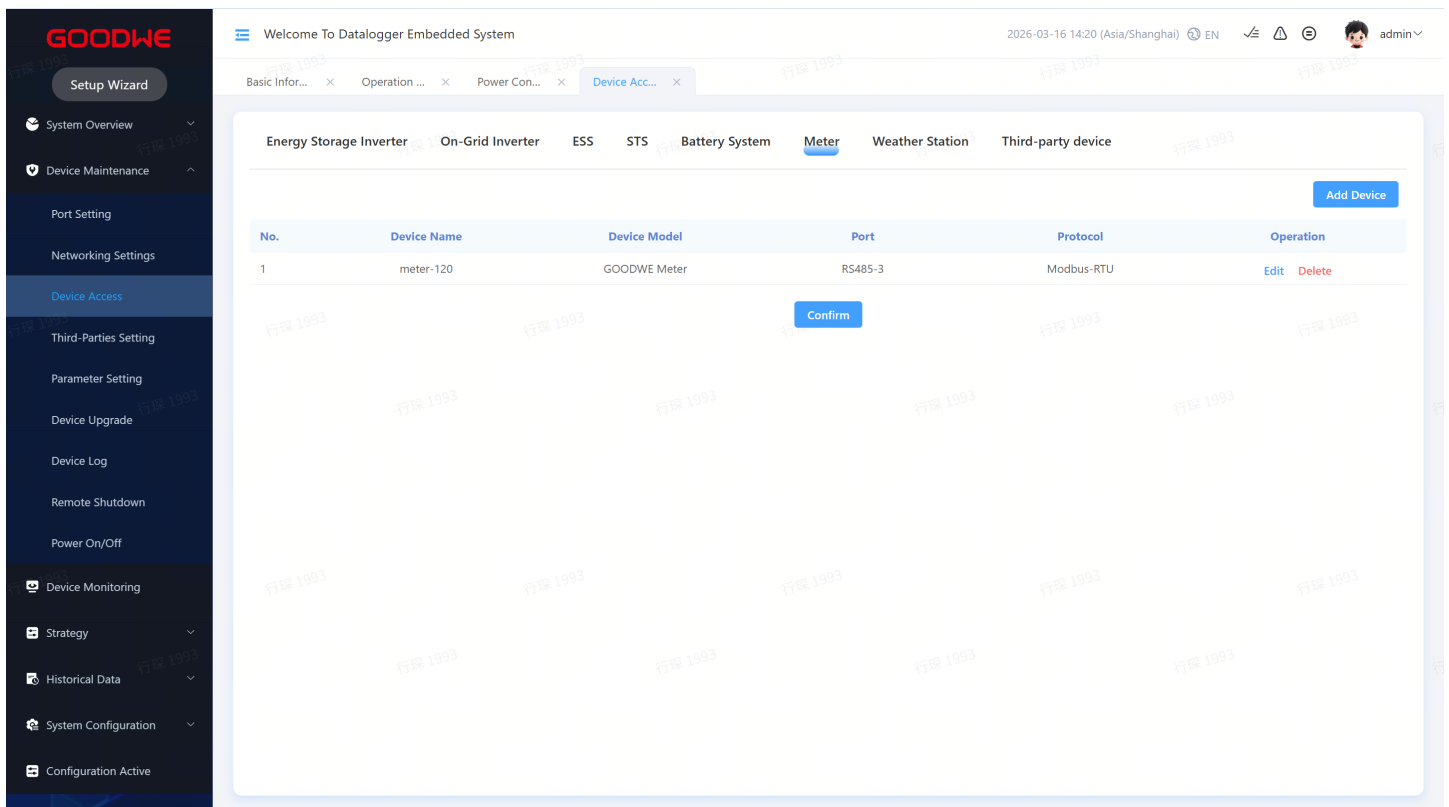
Point Table Selection: Northbound Forwarding Point Table Selection allows multiple selections

Data Acquisition TCP Address: Address 0 of the modbus---id for Northbound Data Acquisition

Note: The main station IP and the data collection northbound forwarding IP need to be in the same network segment and have the same port.

4.9 Three-phase meter connection

1. Enter Device Maintenance > Device Access > Electric Meter > Add Device

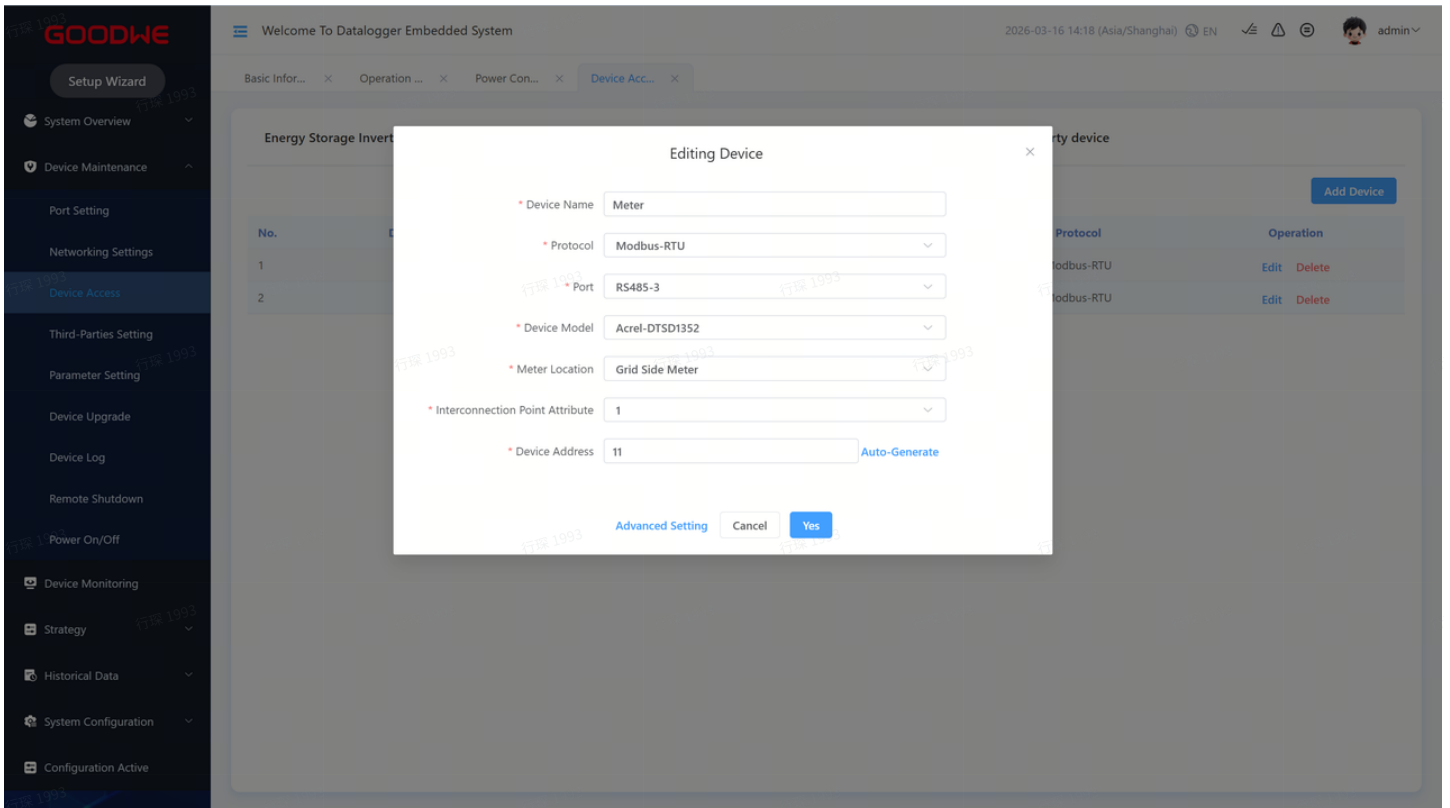


The screenshot displays the GOODWE Datalogger Embedded System interface. The left sidebar shows the navigation menu with 'Device Access' selected. The main content area is titled 'Welcome To Datalogger Embedded System' and shows a breadcrumb trail: 'Basic Infor...' > 'Operation ...' > 'Power Con...' > 'Device Acc...'. The 'Device Access' section is active, showing a table of devices. The table has columns for 'No.', 'Device Name', 'Device Model', 'Port', 'Protocol', and 'Operation'. A single device is listed with 'meter-120' as the name and 'GOODWE Meter' as the model. Below the table, there is a 'Confirm' button. The top right corner shows the date and time: '2026-03-16 14:20 (Asia/Shanghai)' and the user 'admin'.

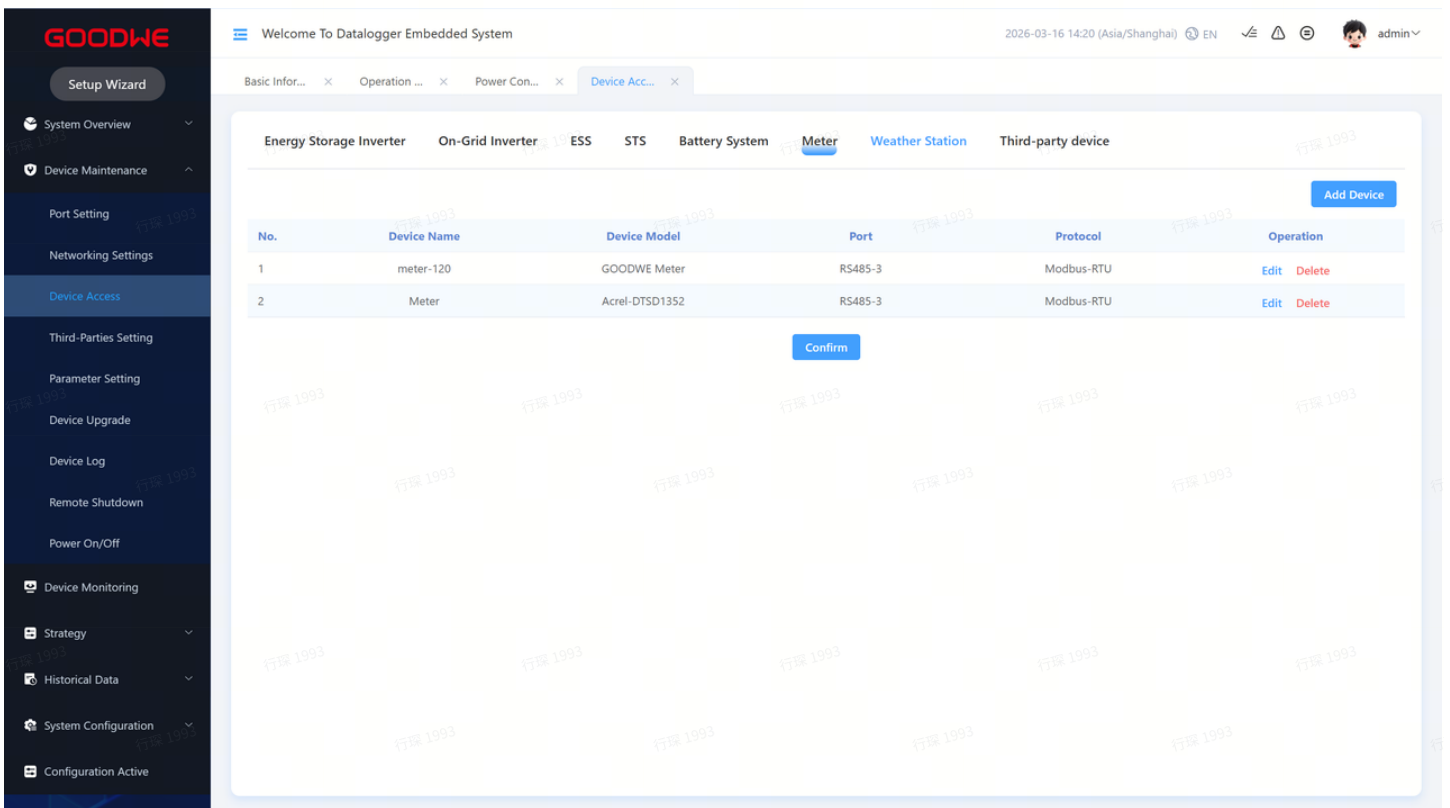
No.	Device Name	Device Model	Port	Protocol	Operation
1	meter-120	GOODWE Meter	RS485-3	Modbus-RTU	Edit Delete

Enter the information of the third-party electricity meter in the following dialog box: (Enter device name > Select protocol > Select connection port > Select specific device model > Select meter usage > Set grid connection point number > Set device address and peer device address > Confirm)

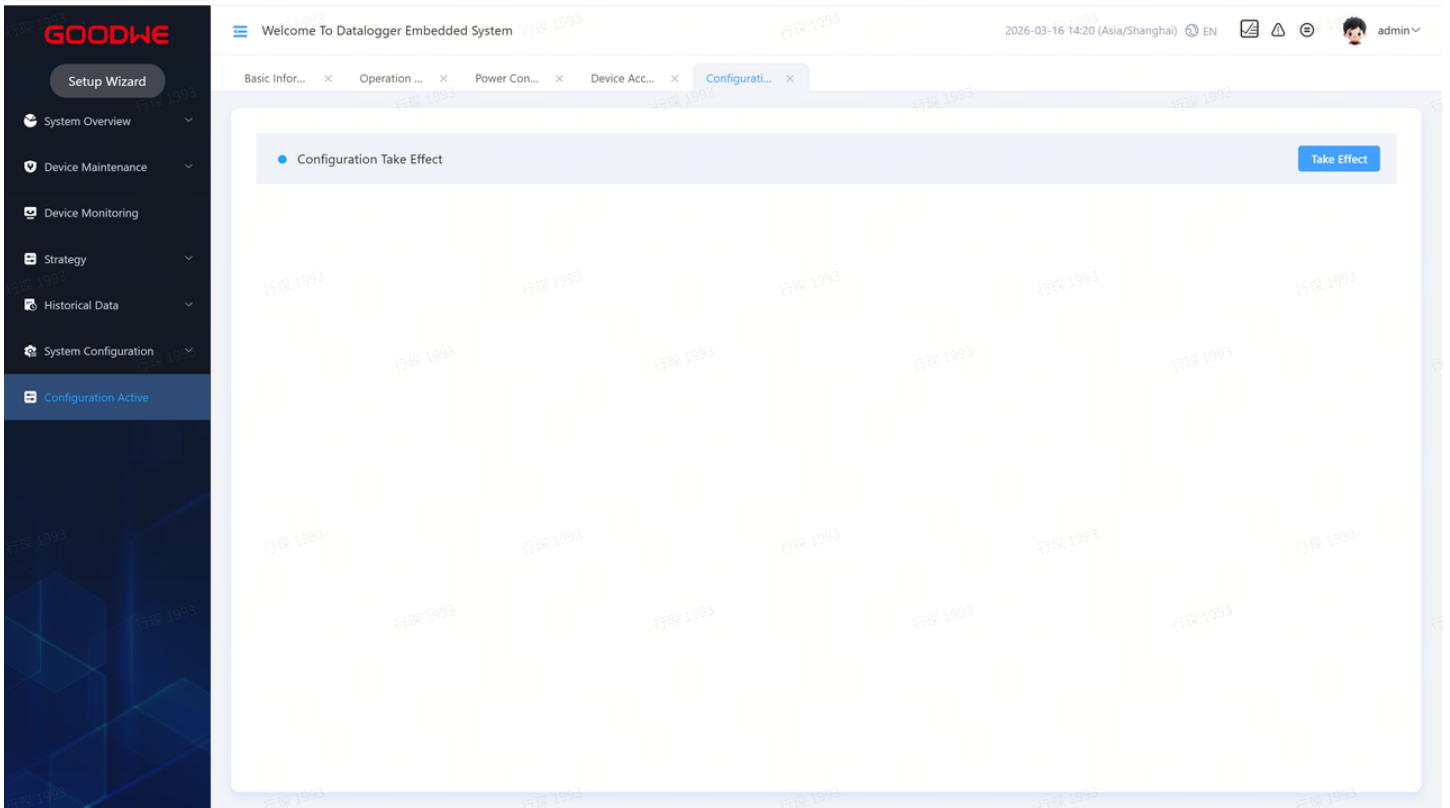
Note: The grid connection point number defaults to electric meter Grid connection point number setting 1. For other electric meters with sub-demand nodes, the grid connection point node number should be set to a number other than grid connection point number 1, and the grid connection point number on the grid side must be ensured to be 1.



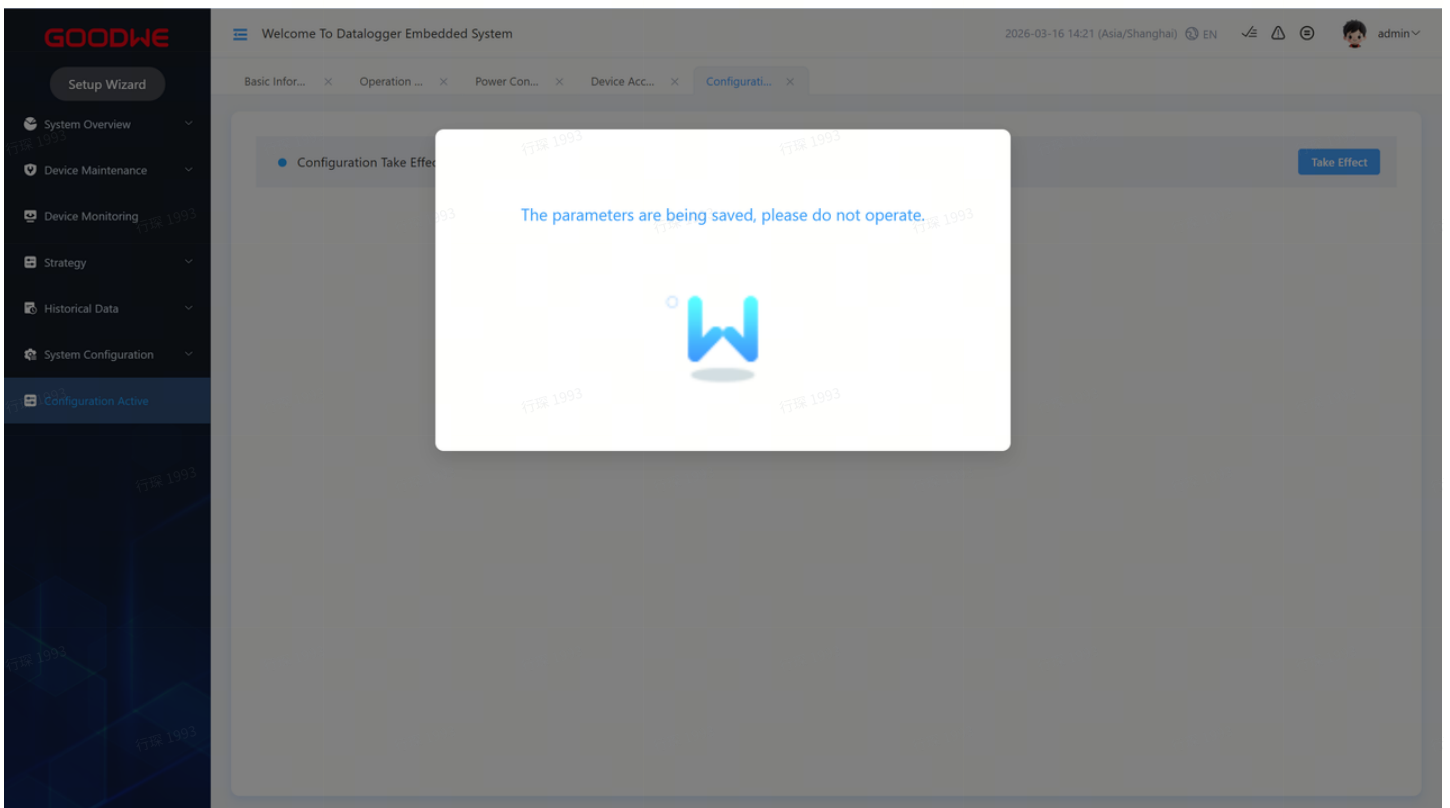
2. Click Confirm



3. Click to make the configuration effective



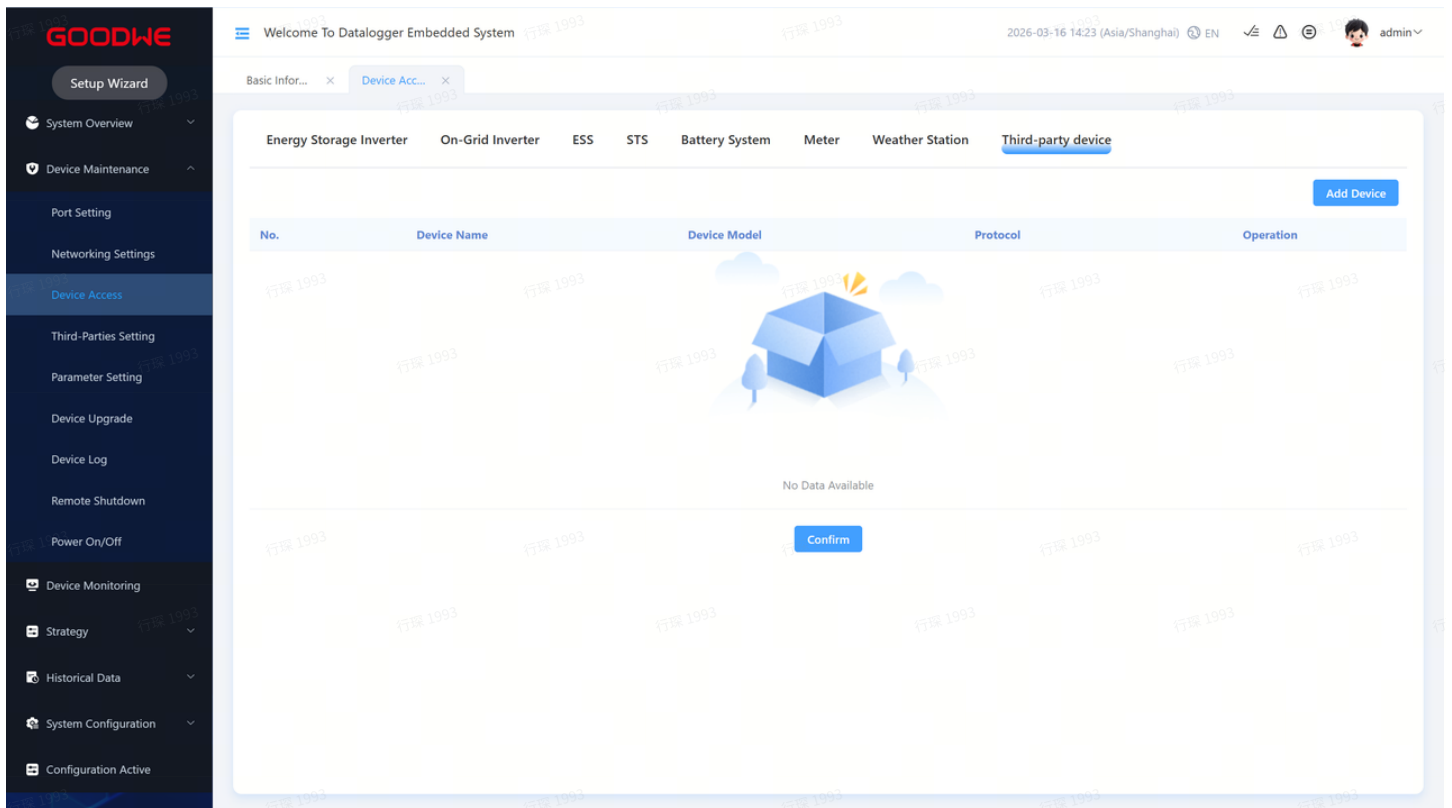
4. After the settings are completed, the system will redirect to the login page. Please log in again.



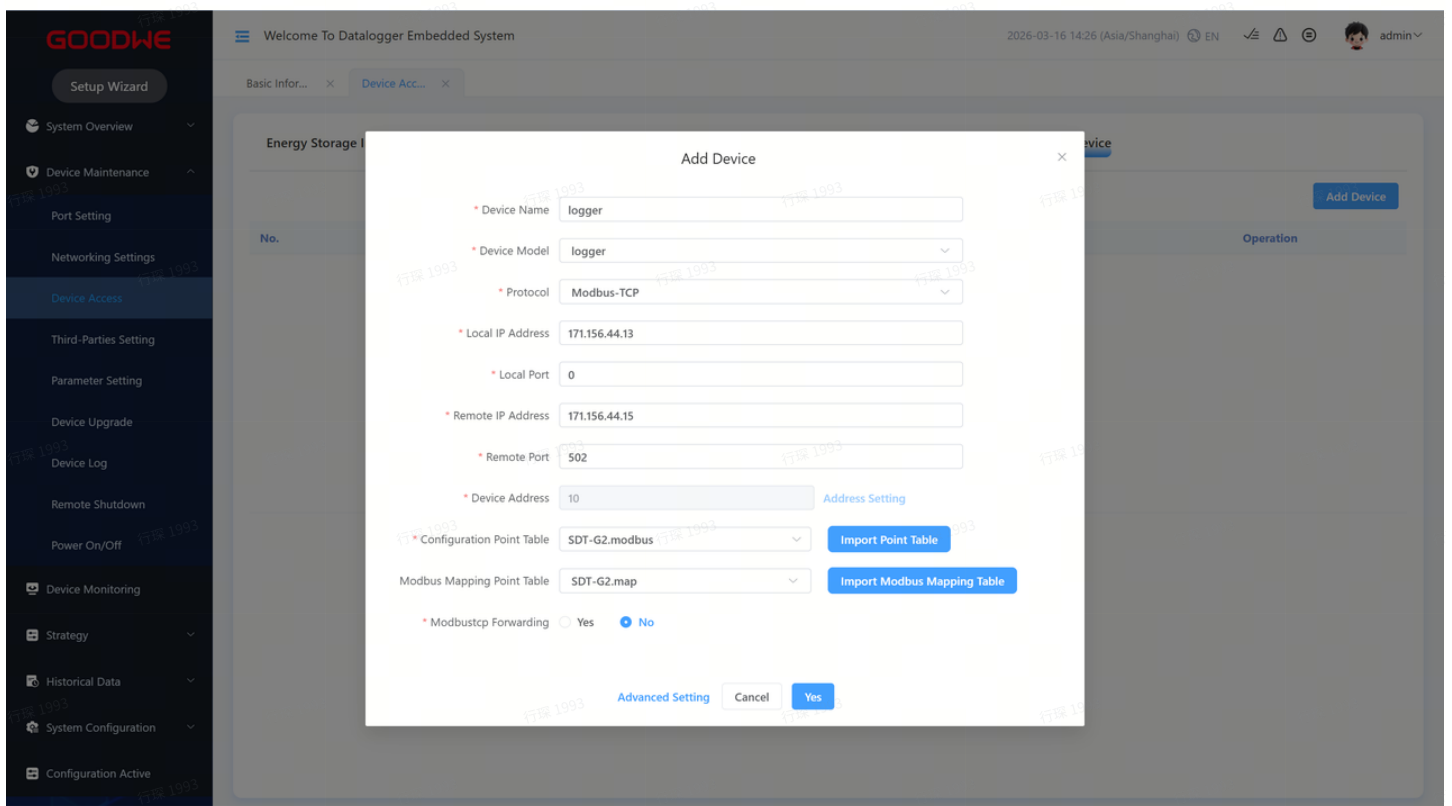
4.10 Third-party data collection access

4.10.1 Device Access

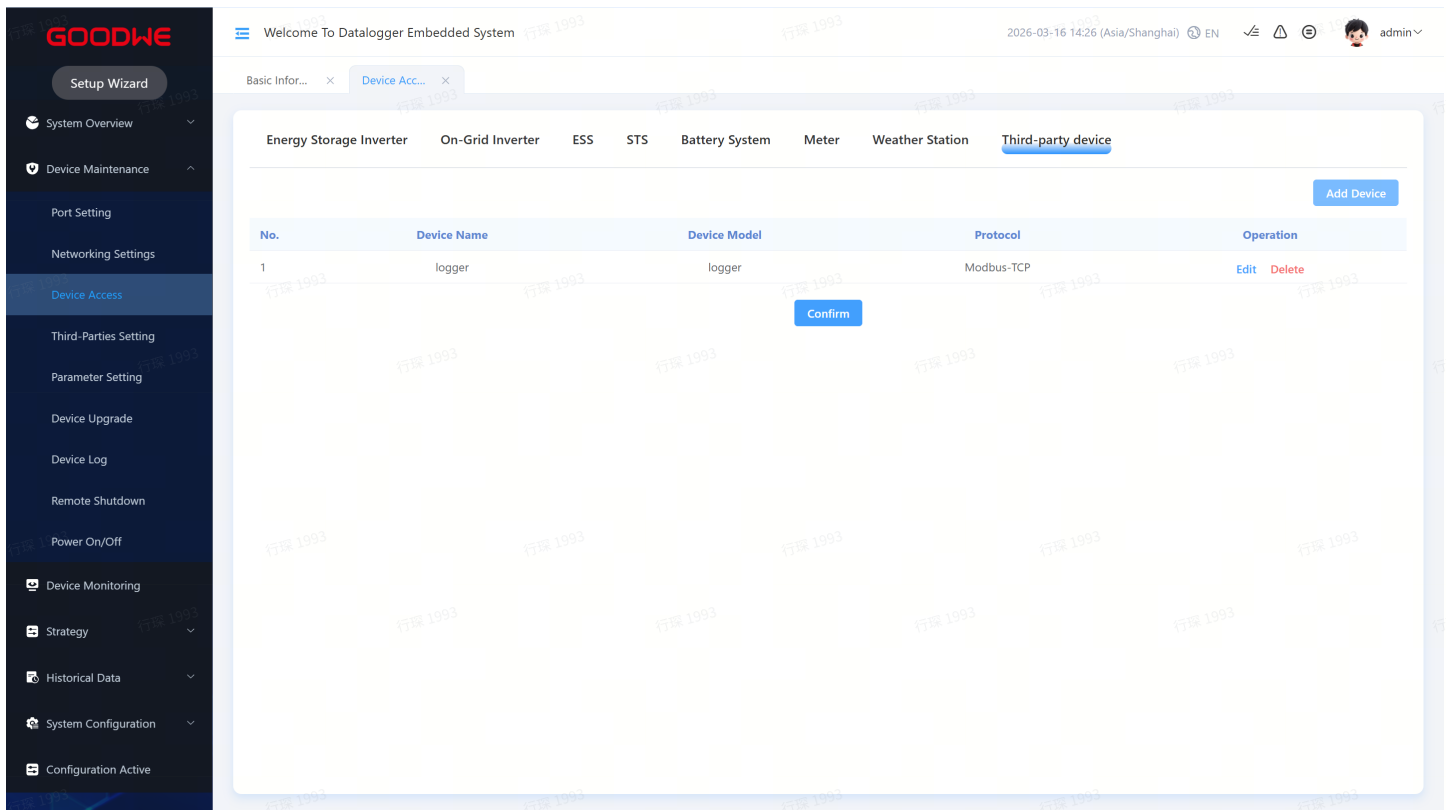
1. Device Maintenance -> Device Access -> Third-party Device, click Add Device



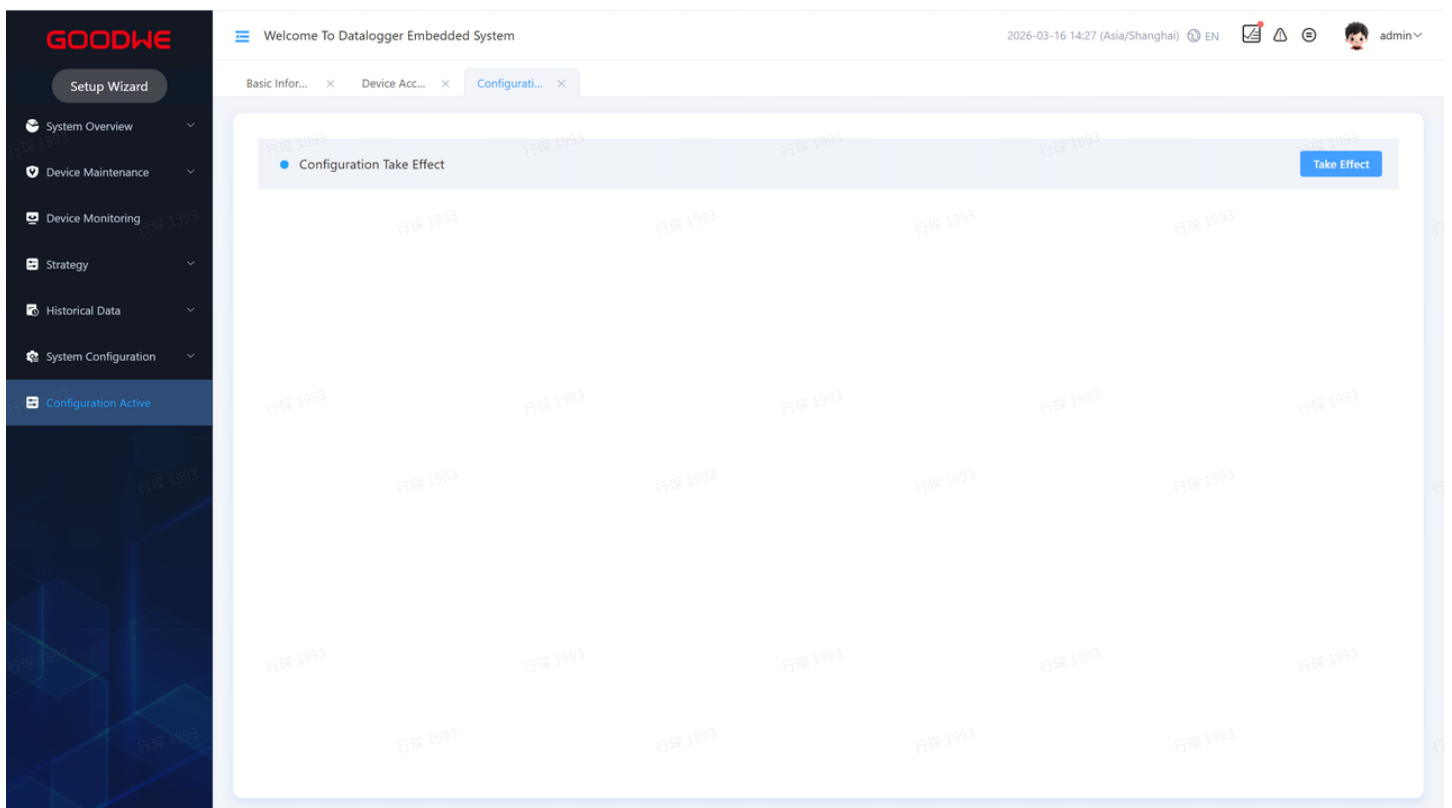
2. Fill in the name --> Select the device model (logger) --> Communication protocol (ModbusTcp) --> Select the local IP Address (Data Acquisition 171.156.44.13) --> Port (0) --> Remote IP Address (Third-party Data Acquisition) --> Remote port (Third-party Port) --> Import the point table and select the imported point table --> Import the Modbus mapping point table and select --> ModbusTcp forwarding (No) --> Yes



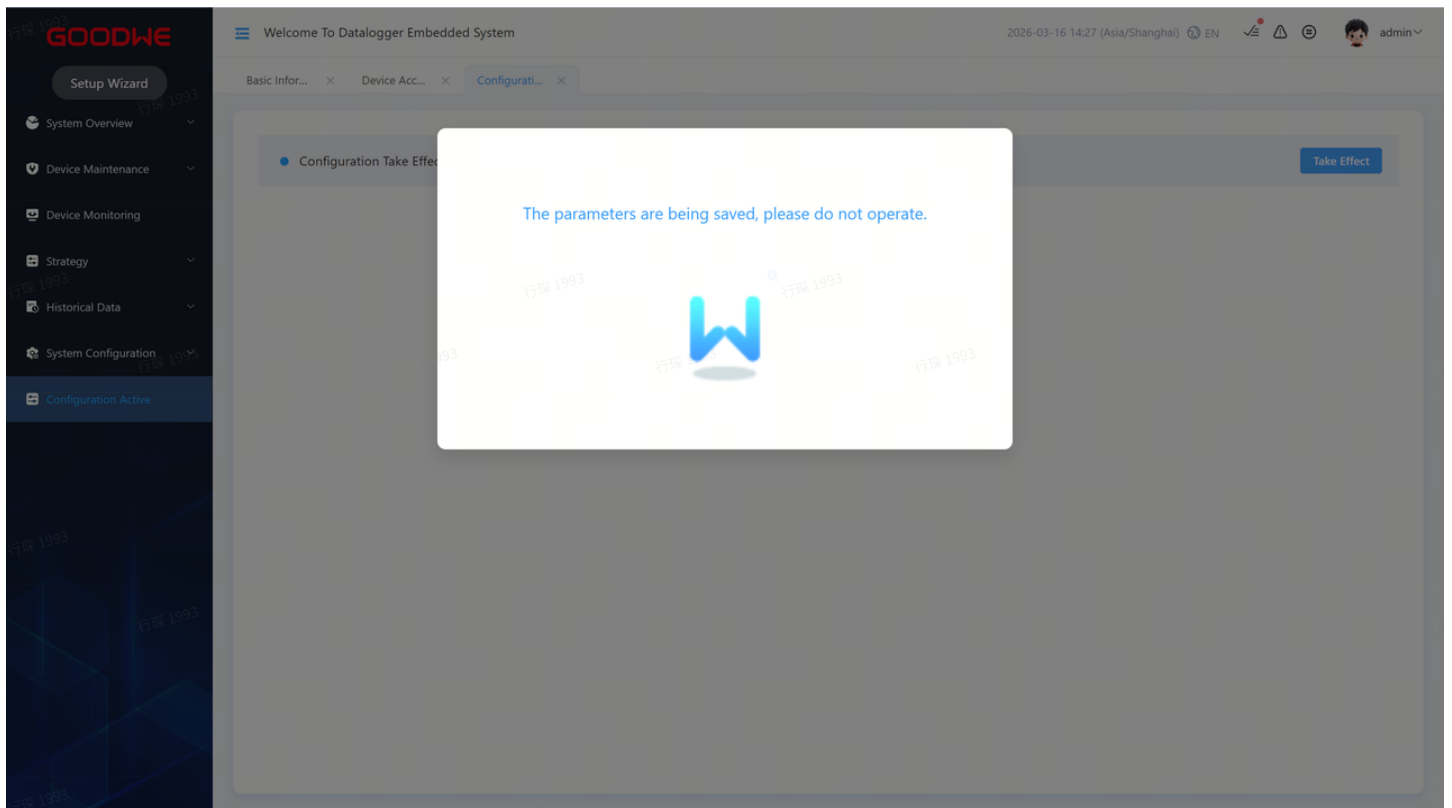
3. After configuration is completed click Confirm



4. Click the top right corner to apply the configuration



5. Configuration is taking effect. After completion, you will be redirected to the login page. Please log in again.



4.10.2 Point Table Configuration

The customer shall provide the modbusTcp point table for third-party data collection. From this, registers such as real-time active power, rated power, active power target value, and on/off register shall be selected to create the "*.modbus" collection table and the "*.map" forwarding table.

Note: This section configuration is relatively complex, it is recommended to contact SEC3000C R&D personnel to complete .

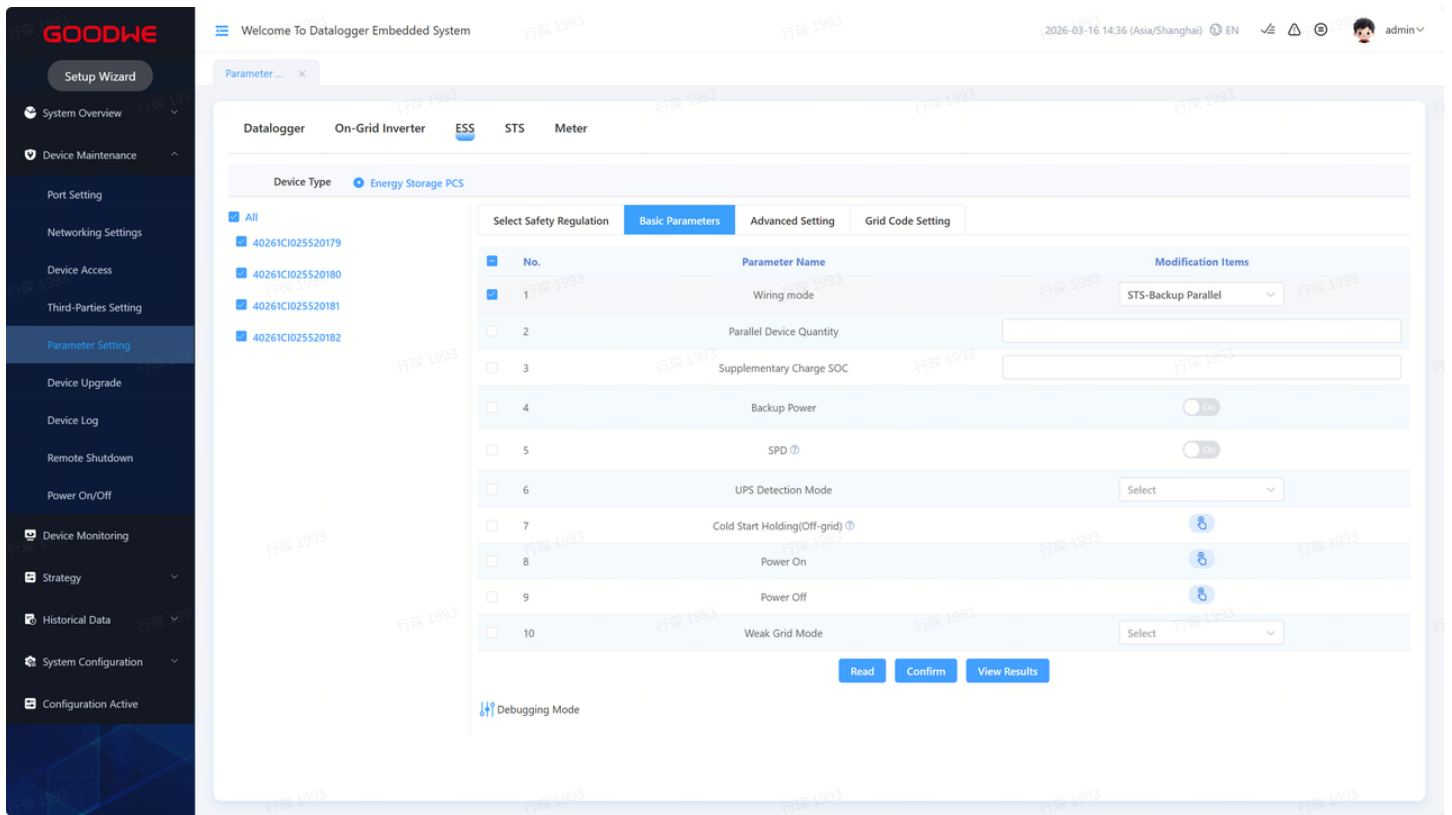
5. Microgrid Control

After completing the use of the setup wizard in the microgrid scenario, proceed with the microgrid function settings.

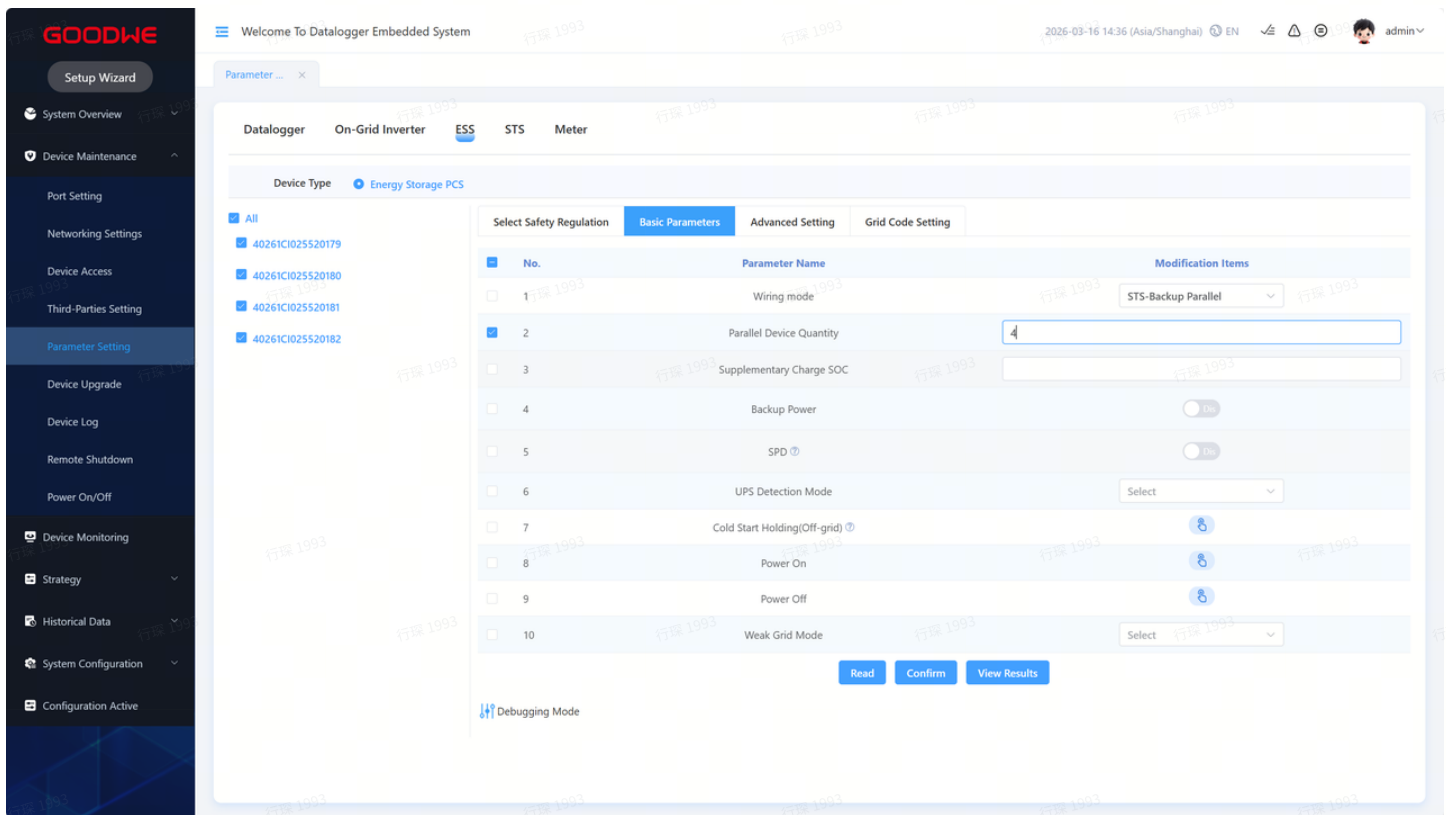
5.1 ESA261 Energy Storage Cabinet Micro-grid Control

5.1.1 ESA261 Device Parameter Settings

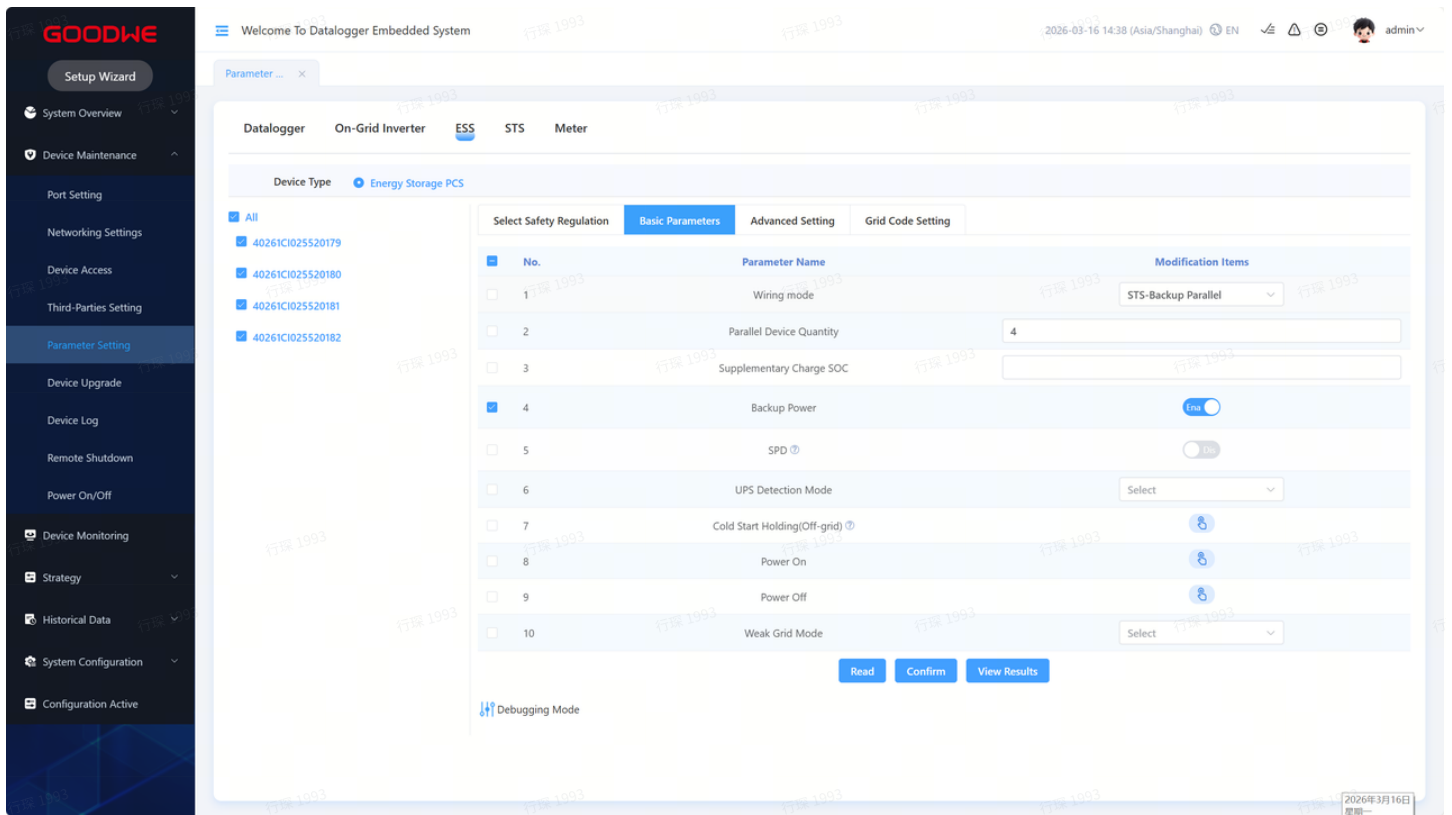
1. Enter Device Maintenance -> Parameter Settings -> ESS -> Basic Parameters, check all energy storage integrated cabinets, select the wiring mode, set STS-Backup parallel



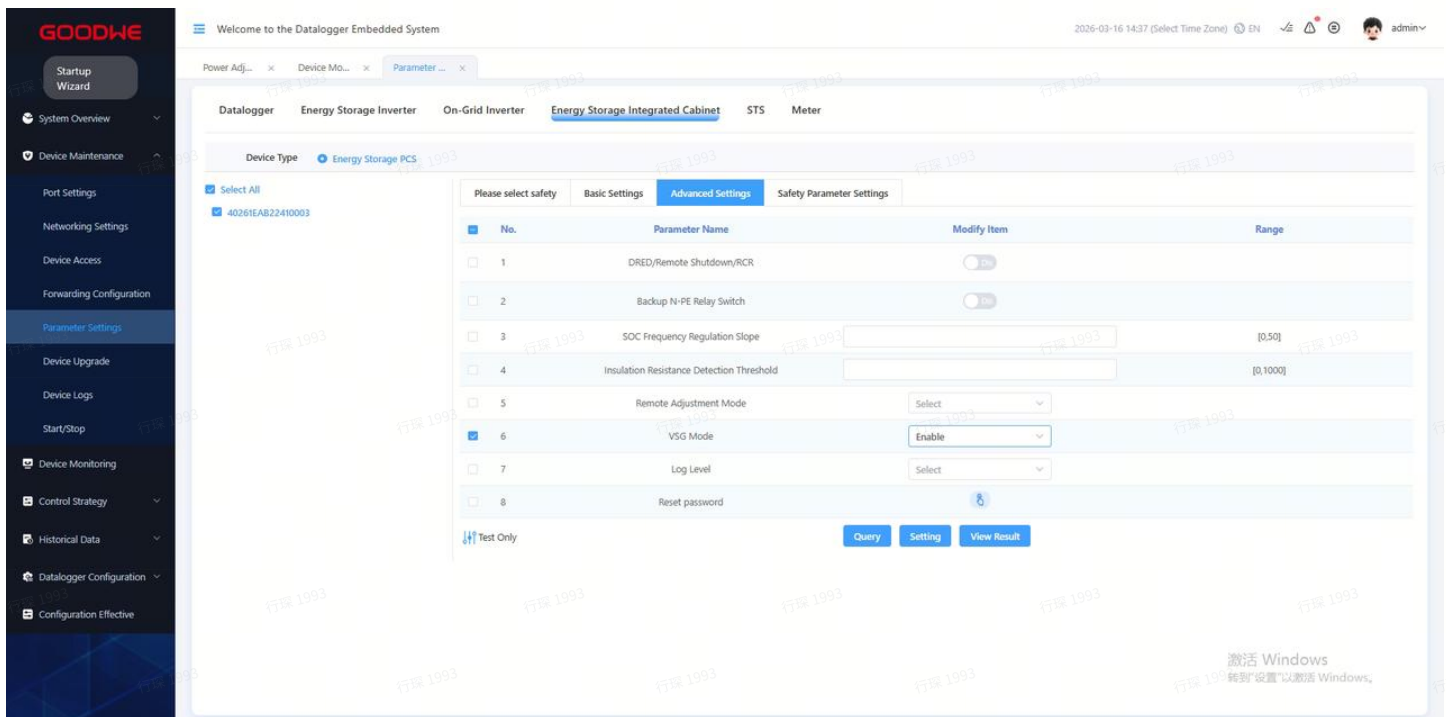
2. Enter Device Maintenance -> Parameter Settings -> ESS -> Basic Parameters, check all energy storage integrated cabinets, select the number of parallel units, and set it to the actual number of parallel energy storage cabinets



3. Enter Device Maintenance -> Parameter Settings -> Energy Storage Integrated Cabinet -> Basic Parameters, check all energy storage integrated cabinets, select the backup power supply, and set it to enabled

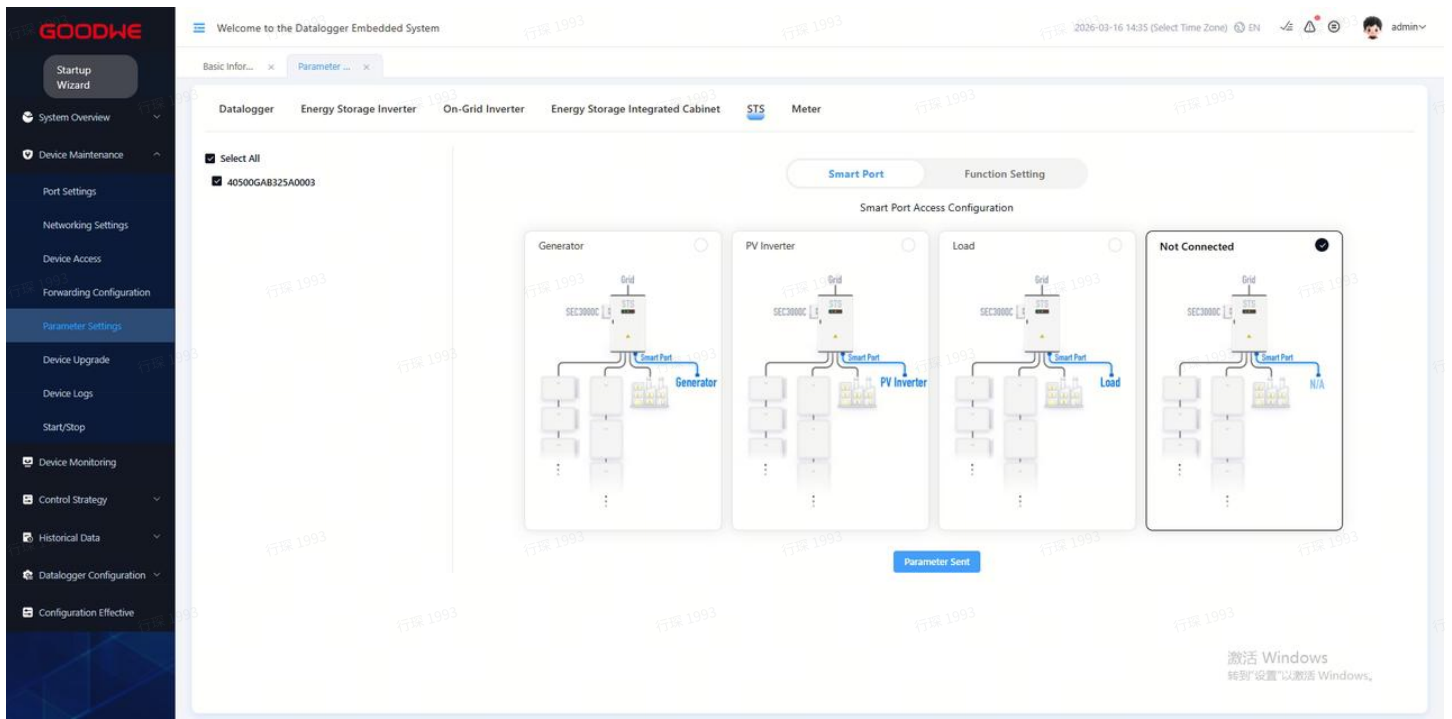


4. Enter Device Maintenance -> Parameter Settings -> Energy Storage Integrated Cabinet -> Basic Parameters, check all energy storage integrated cabinets, select VSG mode, and set it to enabled

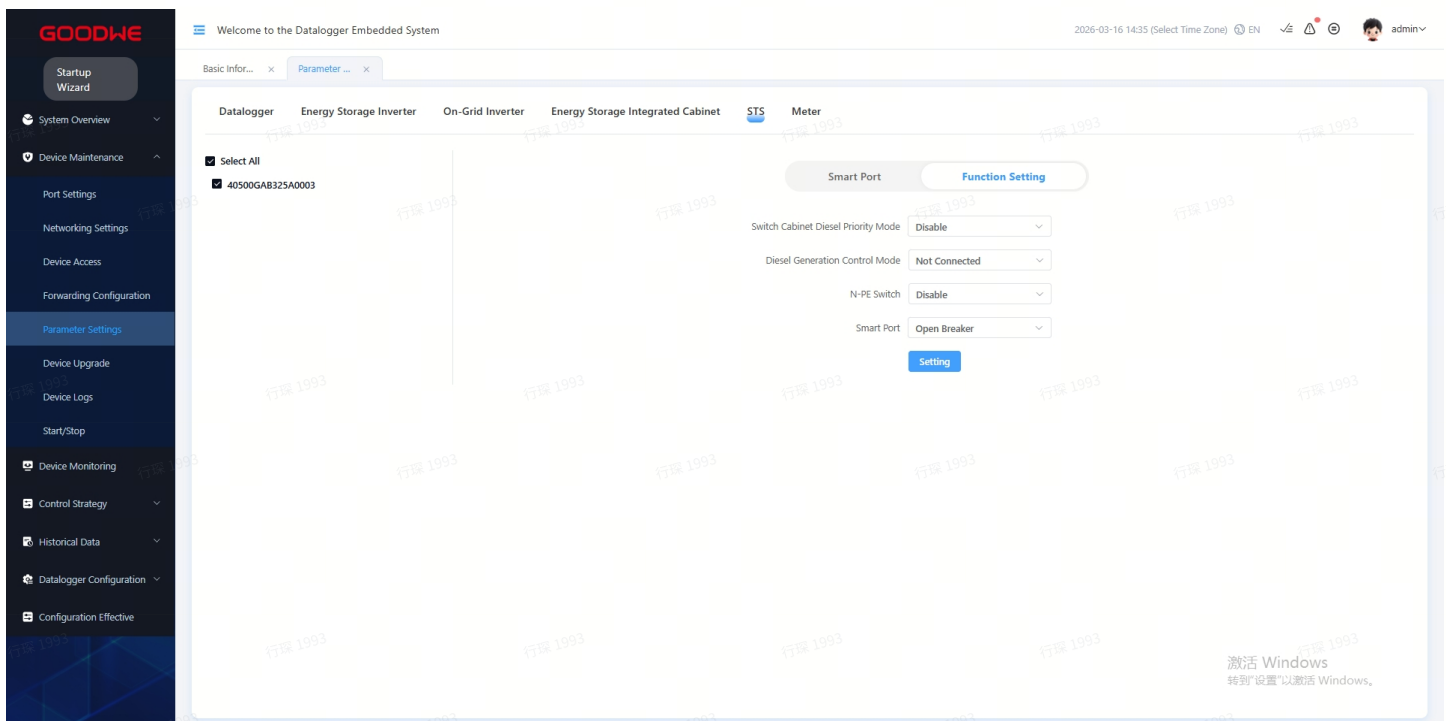


5.1.2 STS Device Parameter Settings

1. Enter Parameter Settings -> STS -> Smart Port, check the STS connected device, configure the STS switchgear smart port access according to the actual situation, and the STS smart port can be connected to a generator, PV inverter, load, or no connection



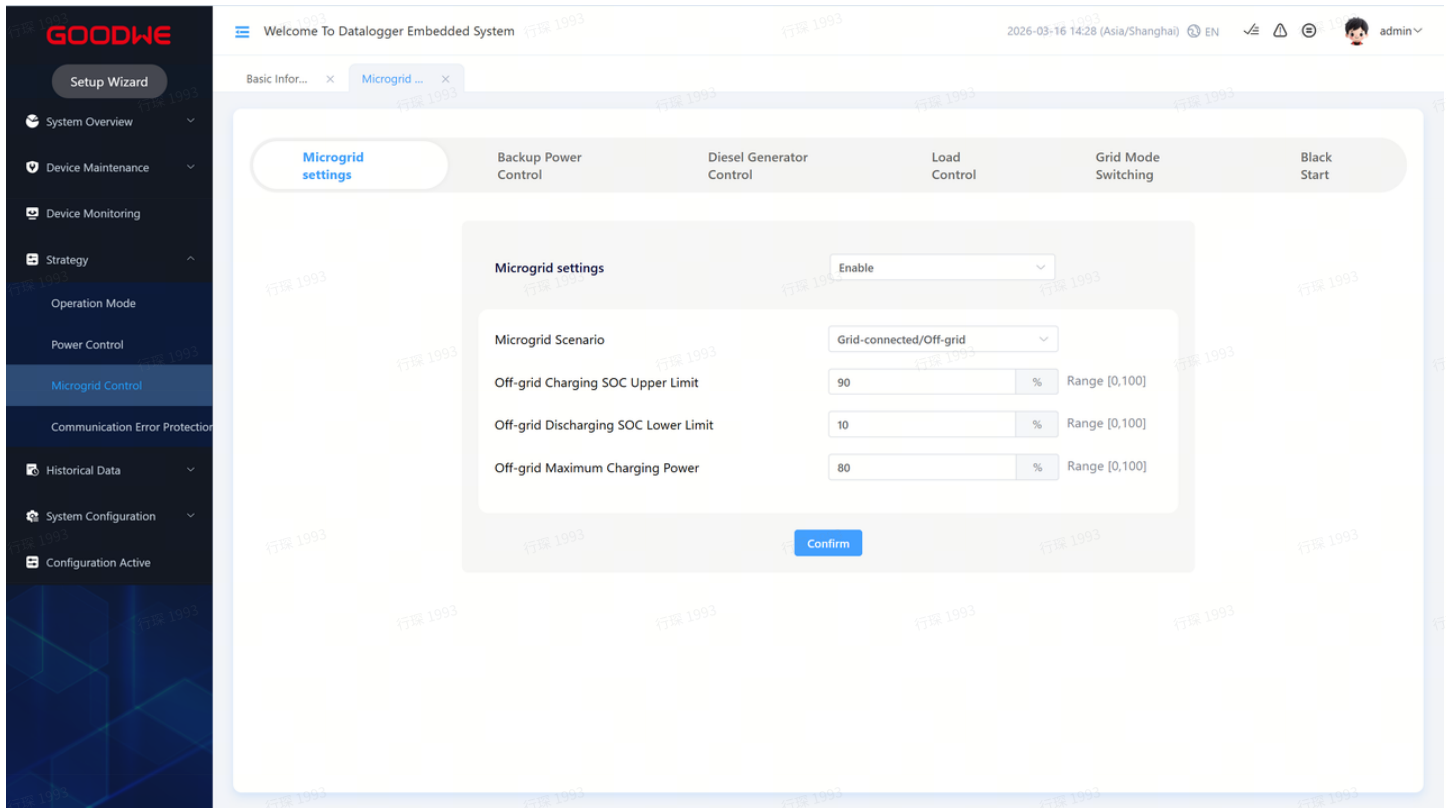
2. Enter Parameter Settings -> STS -> Function Settings. If the smart port is configured as a PV inverter, the smart port closing needs to be set; if it is configured as not connected, the smart port opening needs to be set.



Smart Port: If configured as a PV inverter, manual closing is required; if configured as not connected, ensure opening.

5.1.3 Microgrid Settings

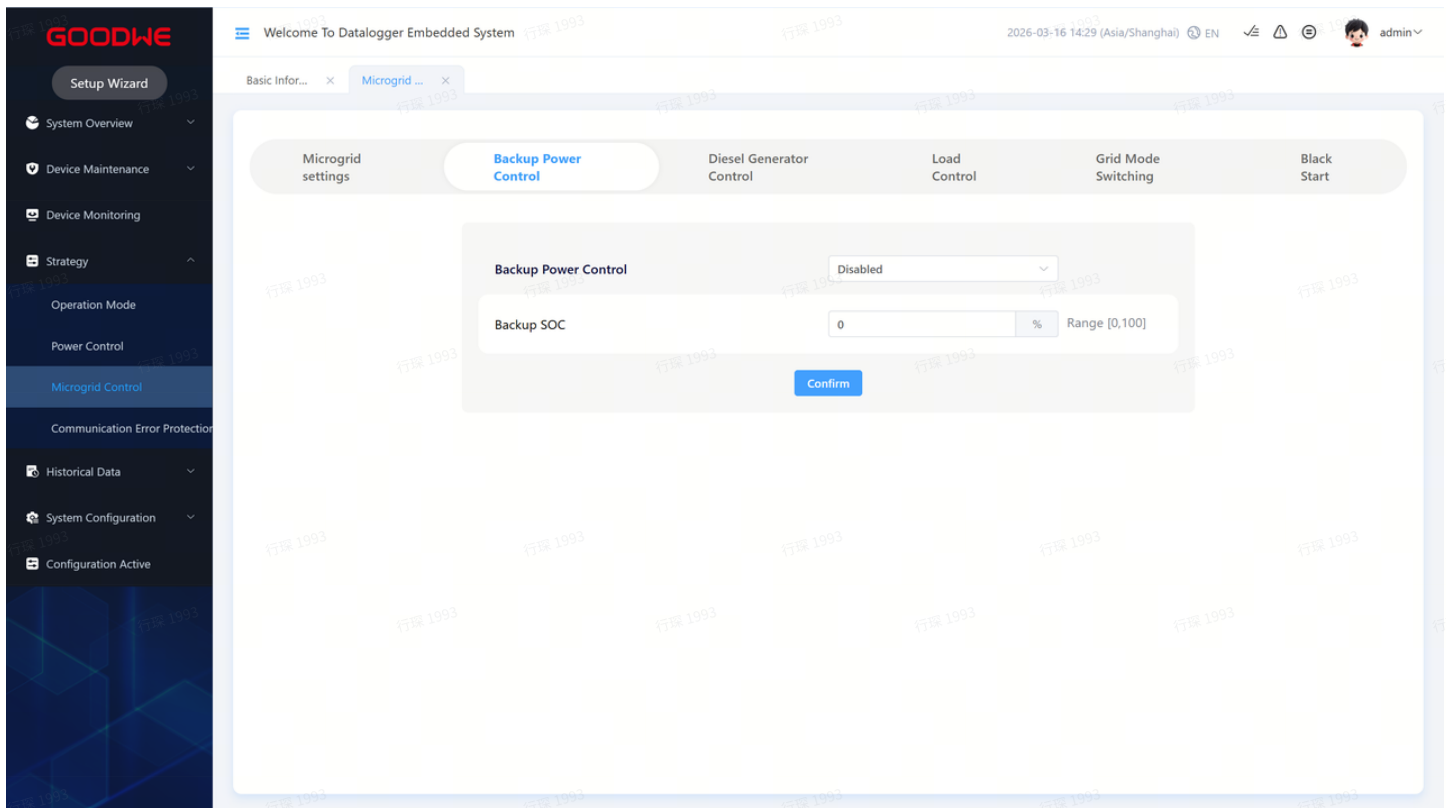
Enter Control Strategy -> Microgrid Control -> Microgrid Control



1. Microgrid Control: Set Enable, after enabling, the microgrid control strategy takes effect
2. Microgrid Scenarios: Divided into grid-connected and off-grid scenarios, off-grid scenarios, and off-grid charging scenarios, ESA261+STS microgrid scenario settings are set to grid-connected and off-grid scenarios.
3. Off-grid charging SOC upper limit: Set the upper limit of energy storage charging under off-grid operation , default 90%
4. Off-grid Discharge SOC Lower Limit: Set the upper limit of energy storage discharge during off-grid operation, default 100%
5. Off-grid maximum charging power: Set the maximum charging power of energy storage during off-grid operation, default 80%

5.1.4 Standby power control

Enter Control Strategy -> Microgrid Control -> Backup Power Control

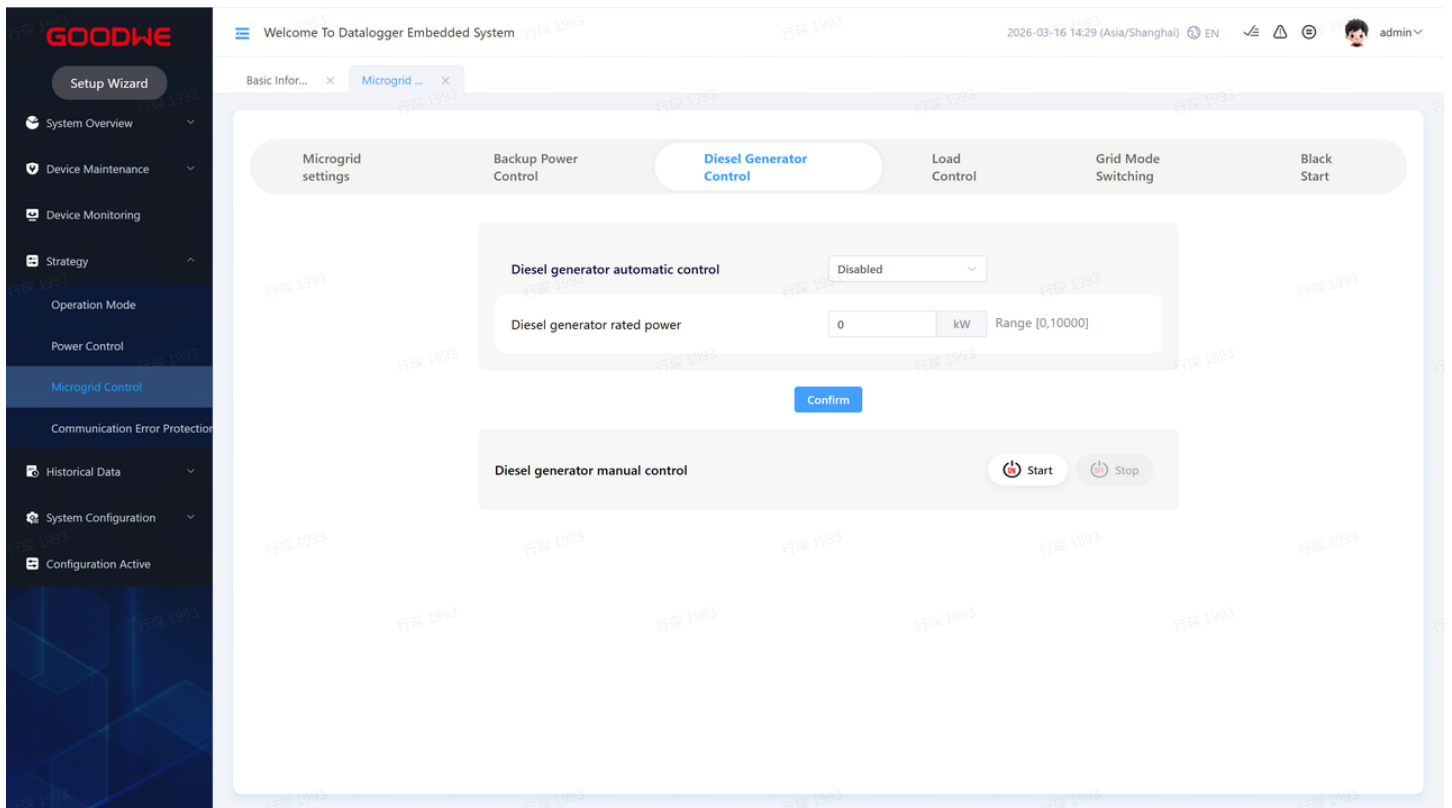


1. Backup Power Control: Set Enable

2. Backup Battery SOC: If the real-time SOC is lower than the backup battery SOC, the backup battery mechanism will be triggered to replenish the SOC to the target value of the backup battery SOC, which is used for the system to have reserved power to operate when entering the off-grid state, with a default setting of 30%.

5.1.5 Diesel Generator Control

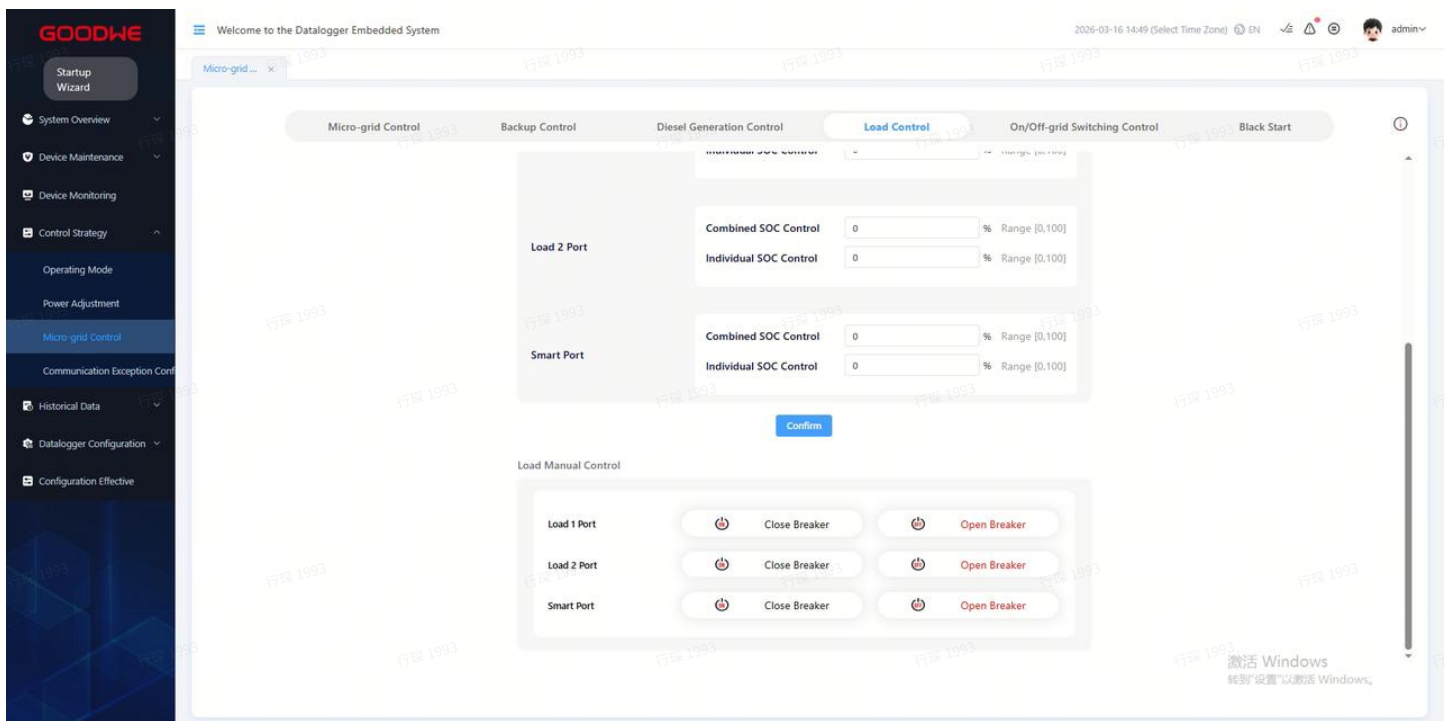
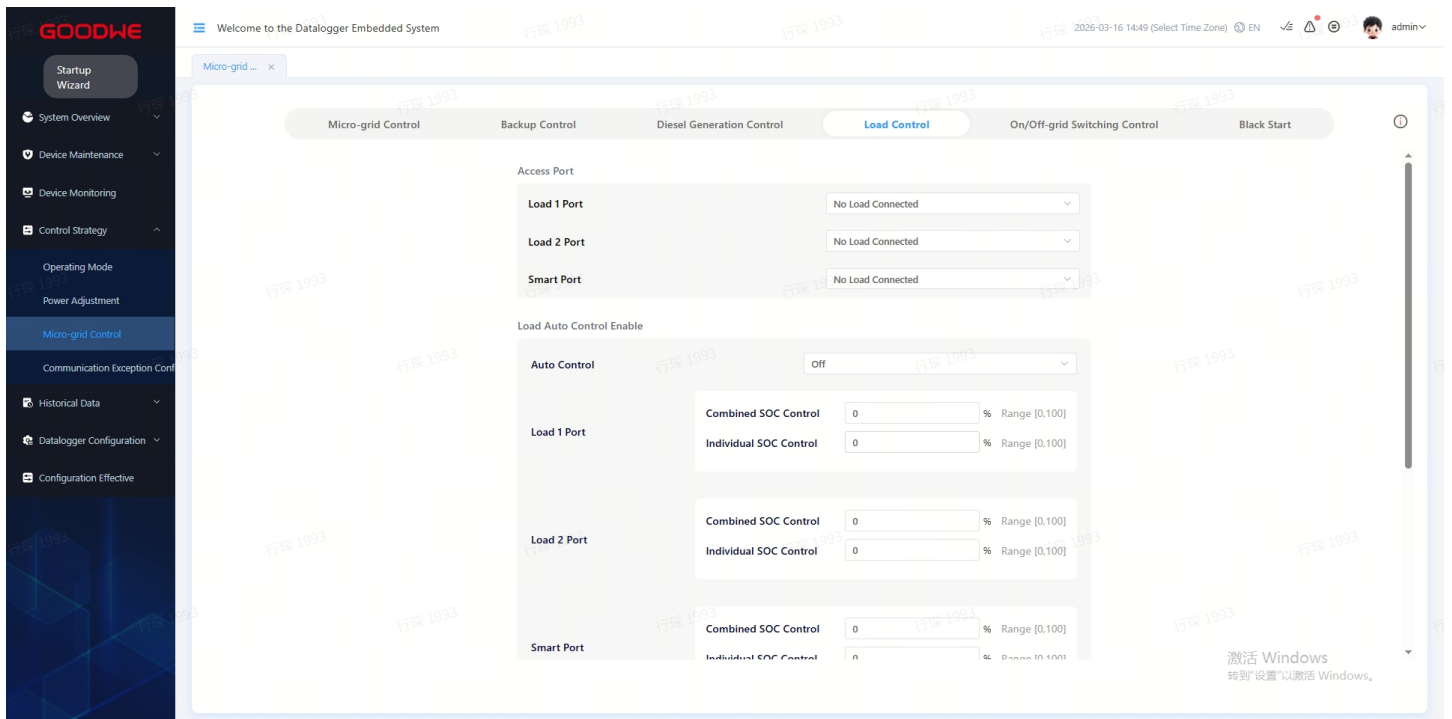
Enter Control Strategy -> Microgrid Control -> Diesel Generator Control



1. Automatic control of diesel generator: access to diesel generator needs to control diesel generator set to enable, the system starts diesel generator power supply when the energy storage power is insufficient, energy storage power is sufficient to close diesel generator
2. Diesel generator rated power: According to the actual configuration of the diesel generator rated power, the off-grid diesel generator operates with the photovoltaic and energy storage system, maintaining the diesel generator output power at no less than 30% of its own rated power to ensure the economic operating range of the diesel generator.
3. Manual control: in the case of generator access, you can manually control generator power on or off

5.1.6 Load Control

Control Strategy --> Microgrid Control --> Load Control



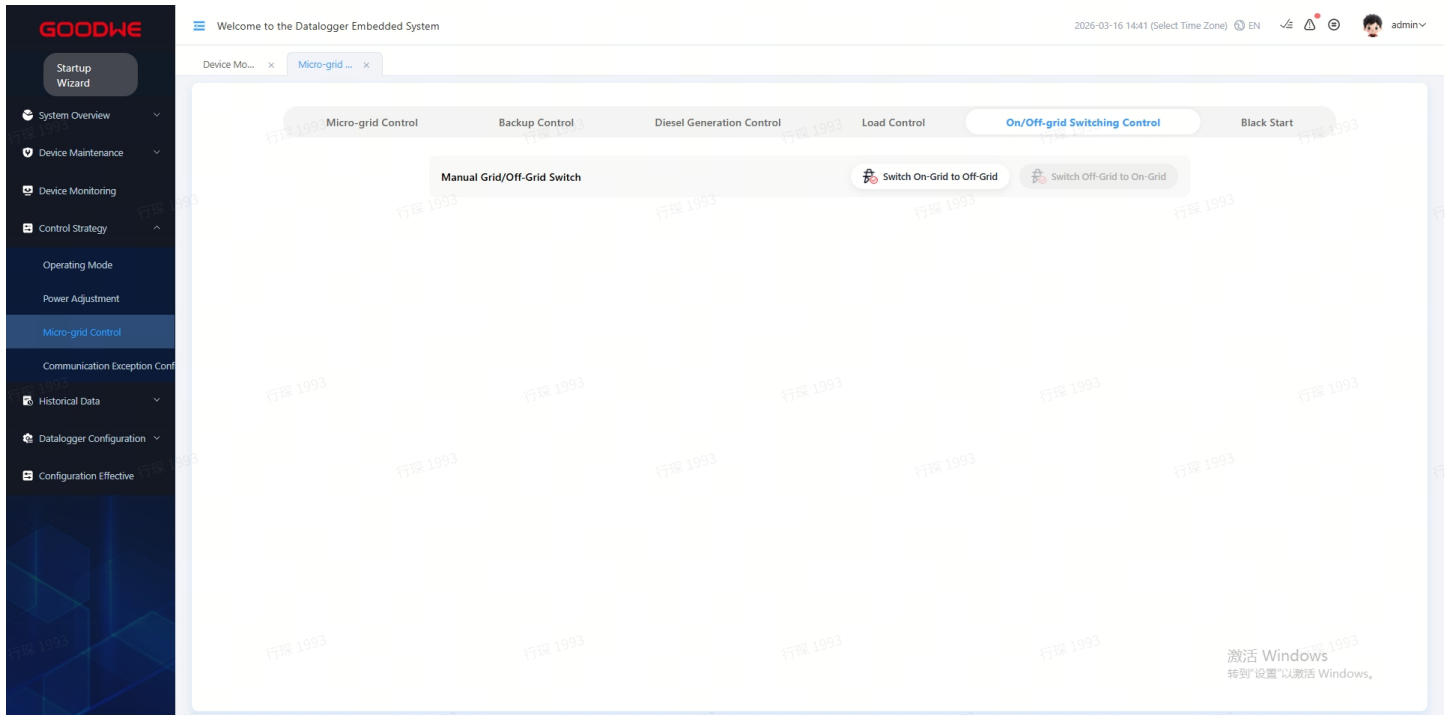
- Configure load access status: Configure the access status of Load1 port, Load2 port, and intelligent port.
- Configure the automatic load control strategy: automatic control enable switch, Load1 port, Load2 port, control closing and opening of intelligent portsSOCtrigger value.
- Manual load control: Directly control the configured load ports, recommended for use when automatic control is turned off.

5.1.7 On-grid and off-grid switching

In the microgrid scenario, automatic grid connection and disconnection switching is used. If manual grid connection and disconnection switching is required, it can be achieved through

manual grid connection and disconnection switching operations.

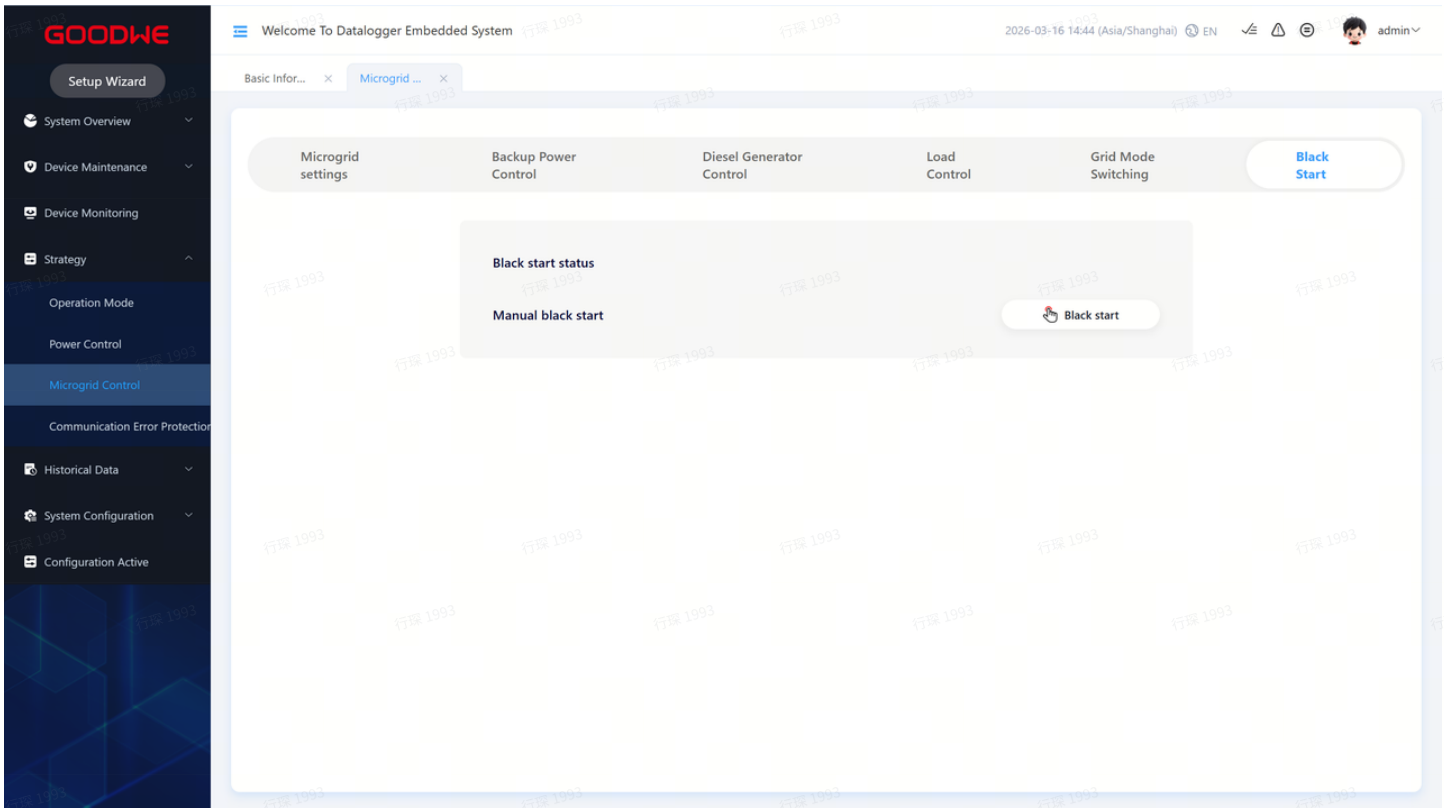
Enter Control Strategy -> Microgrid Control -> On-grid and Islanded Switching



1. On-grid and off-grid: manually switch the system to off-grid operation, and switch the system from on-grid operation to off-grid operation
2. Off-grid cut and grid: manually switch the system to grid operation , if the grid status is normal, the automatic grid operation ; if the grid status is abnormal, wait for the system to automatically grid after the grid recovery.

5.1.8 Black Start

Enter Control Strategy ->Microgrid Control ->Black Start, Click on Black Start, Check the Black Start Status Result after Black Start



6. Device Software Version Check and Upgrade

Check the device software version and upgrade the device software according to the version instructions.

6.1 List of Compatible Software/Devices

6.1.1 On-grid inverter + Energy storage inverter (ET 100)

ET100 On-grid Parallel		
Device Type	Model	Version Information
Inverters	Hybrid Inverter: ET100 GW100K-ET-G10 GW80K-ET-G10 GW99.99K-ET-G10 GW75K-ET-G10	ET100 Version Information: 1. DSP software version: 410-04086-01 (main), 410-0408 order has been submitted to import the software into n February. 2. ARM Software Version: 410-02189-01. Currently, a ten the software into mass production, and ECN will be con
	并网逆变器: GT G1 GW100K-GT GW110K-GT GW125K-GT	
	HT1100V GW100K-HT GW110K-HT GW120K-HT	
	SMT 75/80 GW75K-SMT	

	GW75K-SMT GW80K-SMT SDT G3 50K GW50K-SDT-C30 SMT G2 60K GW60K-SMT-G20 SMT G1 50/60 GW50KS-MT GW60KS	SMT G3 50K: ARM 410-02101-01, DSP 410-03113-00 version SMT G2 60K: ARM Version 00, DSP Version 00 SMT G1 50/60: ARM 410-02038-21 version support; DSP Detail information please refer to below: ☑ 逆变器与物联网设备兼容列表
BESS	BAT50 GW51.2-BAT-I-G10 GW56.3-BAT-I-G10 BAT100 GW92.1-BAT-AC-G10 GW102.4-BAT-AC-G10 GW112.6-BAT-AC-G10	Bat100电池: 410-02162-03 已发布 Bat100电池内置云版: 410-02204-01, 预计2月初完成发布 Bat50电池: 410-02140-02 已发布
Smart Meter	GM330	/
Communication M	WiFi/LAN Kit-20	410-02118-0 and above Released
	SEC3000C	Logger version: 410-02136-06 Firmware version 1/19 has been published. After public new version of the program. ECN is expected to complete mass production will use the new software through a te
Monitoring Platfor	IOT	V25.18.01.05 Released
	SEMS+ WEB	V1.2 version 20251230 Released
	SEMS+ APP	Android 2.1.3/IOS 2.1.3 Released
Document	QI & Manual	1. The manual and Quick Installation 1/16 have been on website. 2. Paper quick-assembly 2/6 has completed ECN import version inventory is depleted.

6.1.2 On-grid inverter + Energy Storage Integrated Cabinet (ESA261)

ESA261		
Device Type	Model	Version Information
	Energy Storage all-in-one Cabinet: ESA261 On-grid inverters: GT G1 GW100K-GT GW110K-GT GW125K-GT HT1100V GW100K-HT GW110K-HT	ET100 Version Information: 1. DSP software version: 410-04086-01 (main), 410-0408 order has been submitted to import the software into m February. 2. ARM Software Version: 410-02189-01. Currently, a ten the software into mass production, and ECN will be con

GOODWE

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admin

Basic Inform... x Device Up... x

Data Logger On-Grid Inverter **ESS** STS

Device Type: ESS_261 Firmware Type: EzLink3000 Firmware Package Selection: Please choose

Import Firmware Package Start Upgrading

No.	Device Model	Device SN	Current EzLink3000 Version	Current EzLink3000 Transmission Progress	Status
1	ESS_261	40261CI025620224	V1.3.2	0%	
2	ESS_261	40261CI025620225	V1.3.2	0%	

6.2.2 ESA261 ARM Software Version Check

GOODWE

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2026-03-16 15:07 (Asia/Shanghai) EN

admin

Basic Inform... x Device Up... x

Data Logger On-Grid Inverter **ESS** STS

Device Type: ESS_261 Firmware Type: ARM Firmware Package Selection: Please choose

Import Firmware Package Start Upgrading

No.	Device Model	Device SN	Current ARM Version	Current ARM Transmission Progress	Status
1	ESS_261	40261CI025620224	259.63	0%	
2	ESS_261	40261CI025620225	259.63	0%	

6.2.3 ESA261 DSP Software Version Check

Welcome To Datalogger Embedded System 2026-03-16 15:07 (Asia/Shanghai) EN admin

Basic Inform... x Device Up... x

Data Logger On-Grid Inverter **ESS** STS

Device Type: ESS_261 Firmware Type: DSP Firmware Package Selection: Please choose

Import Firmware Package Start Upgrading

No.	Device Model	Device SN	Current Master DSP Version	Current Slave DSP Version	Current DSP Transmission Progress	Status
1	ESS_261	40261CI025620224	02.33	1.6	0%	
2	ESS_261	40261CI025620225	02.33	1.6	0%	

6.3 ESA261 Software Upgrade

6.3.1 ESA261 Cloud Board Software Upgrade

Select "Equipment Maintenance" -> "Equipment Upgrade" -> Energy Storage Integrated Cabinet

Welcome To Datalogger Embedded System 2026-03-25 09:25 (Asia/Shanghai) EN admin

Device Up... x

Data Logger On-Grid Inverter **ESS** STS

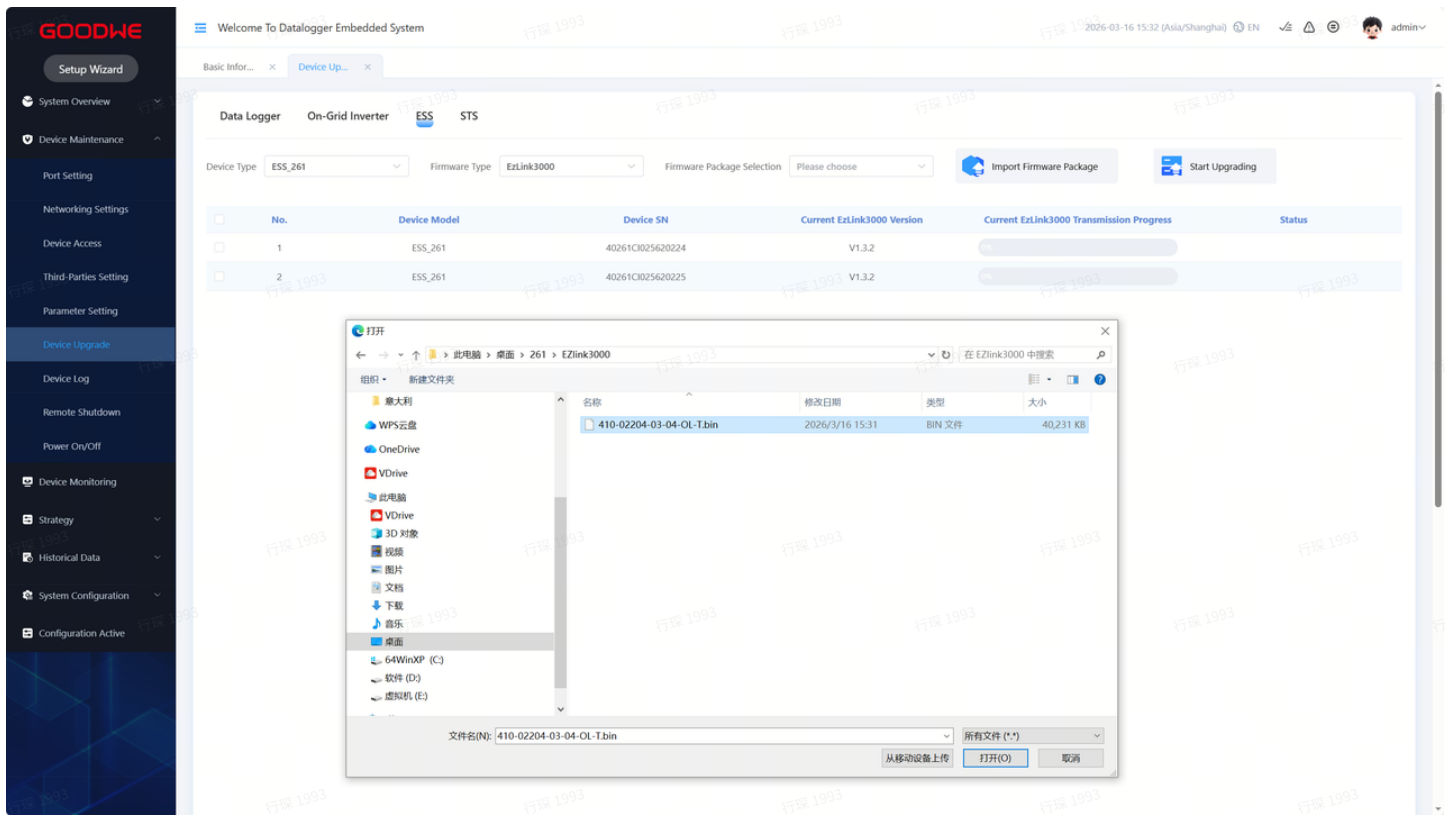
Device Type: GW261-ESA Firmware Type: EzLink3000 Firmware Package Selection: Please choose

Import Firmware Package Start Upgrading

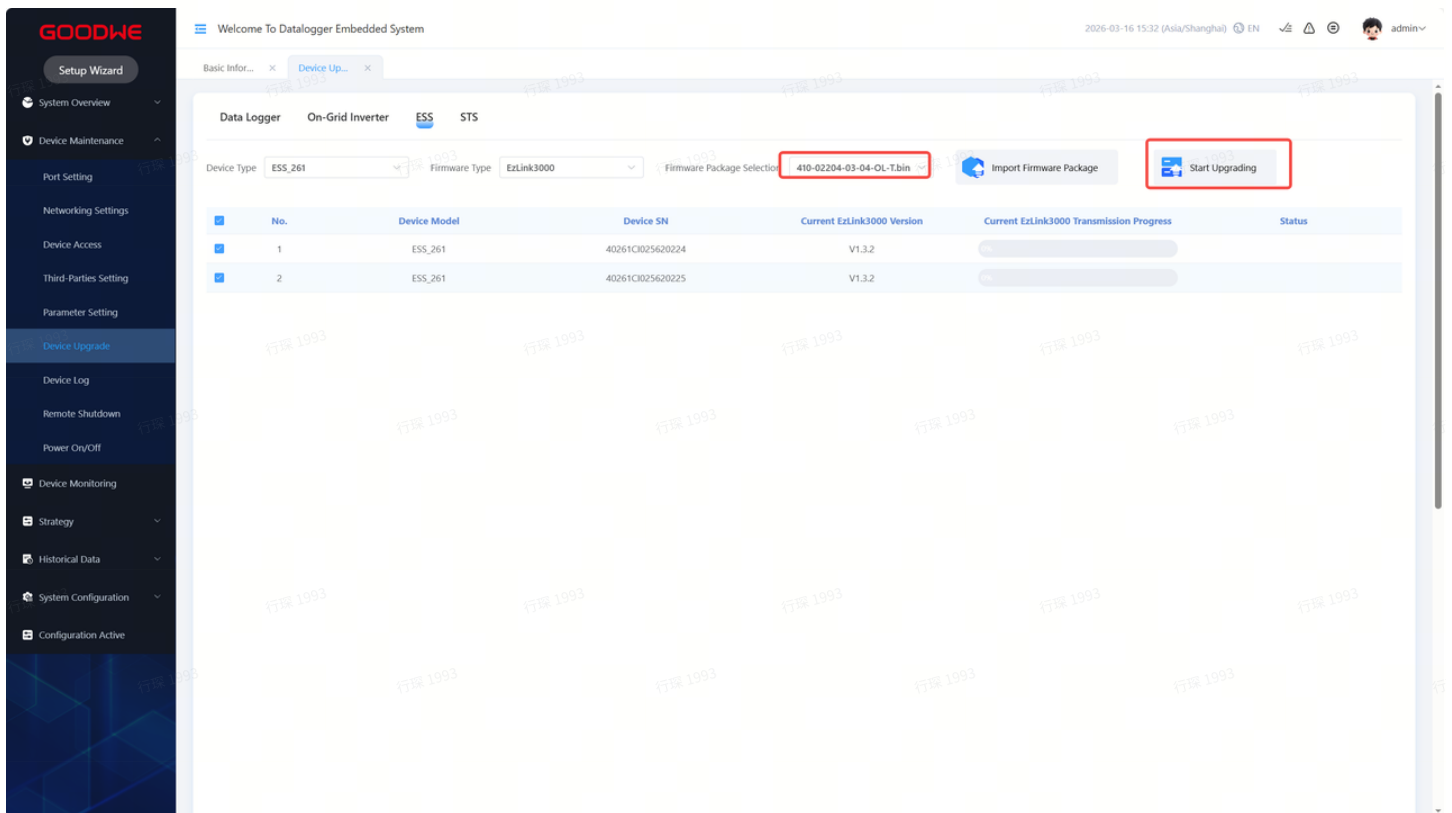
No.	Device Model	Device SN	Current EzLink3000 Version	Current EzLink3000 Transmission Progress	Status
1	GW261-ESA	40261CI025320071	V1.3.3	0%	
2	GW261-ESA	40261CI025320072	V1.3.3	0%	
3	GW261-ESA	40261CI025320073	V1.3.3	0%	
4	GW261-ESA	40261CI025320113	V1.3.3	0%	
5	GW261-ESA	40261EAB26120363	V1.3.3	0%	

激活 Windows
转到“设置”以激活 Windows。

Select "ESS_261" > Select "Firmware Type": "Cloud Board" > Import the firmware package locally

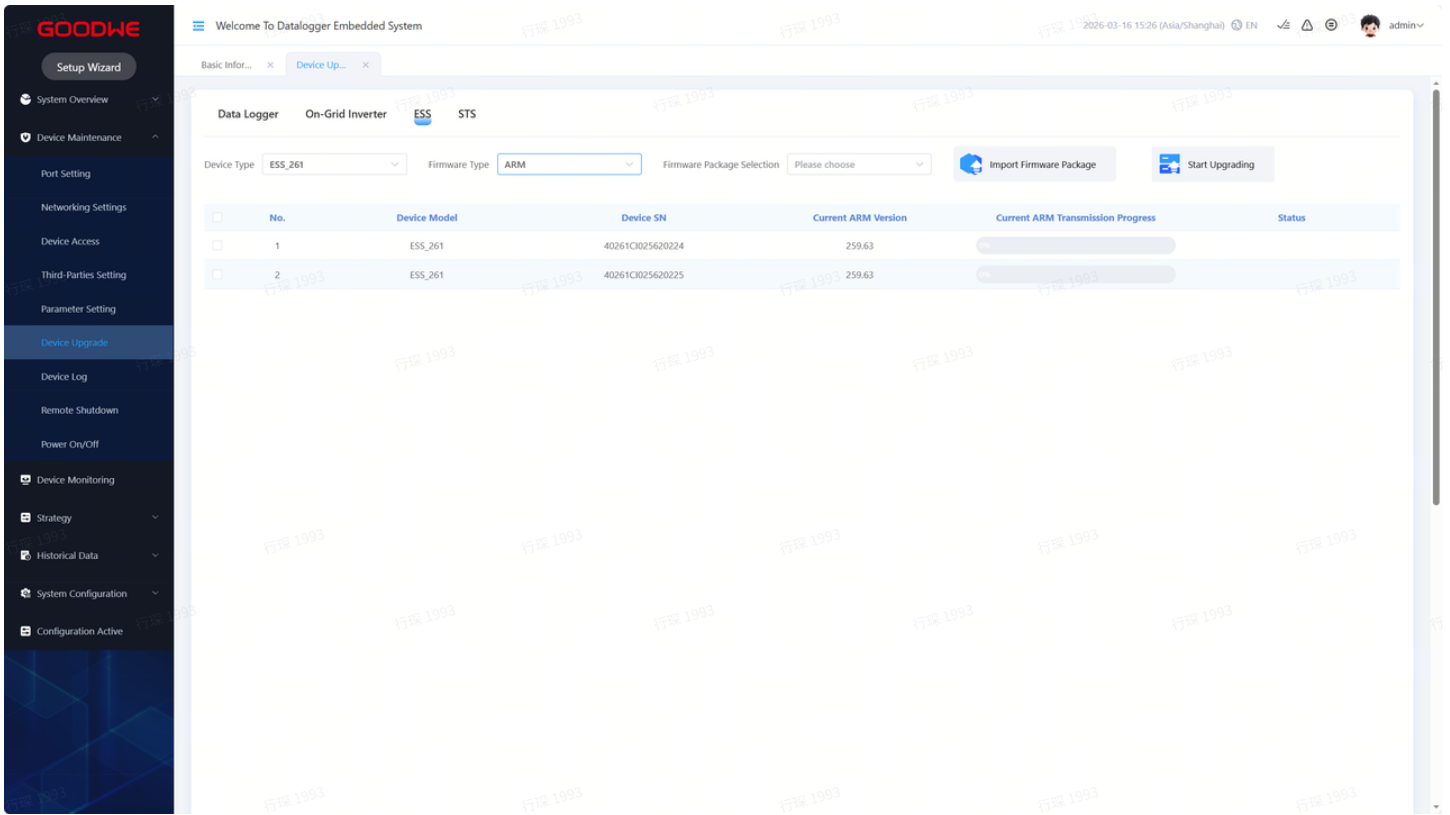


Click the "Number of Devices Being Upgraded" option > Select "Firmware Package" > Start Upgrade

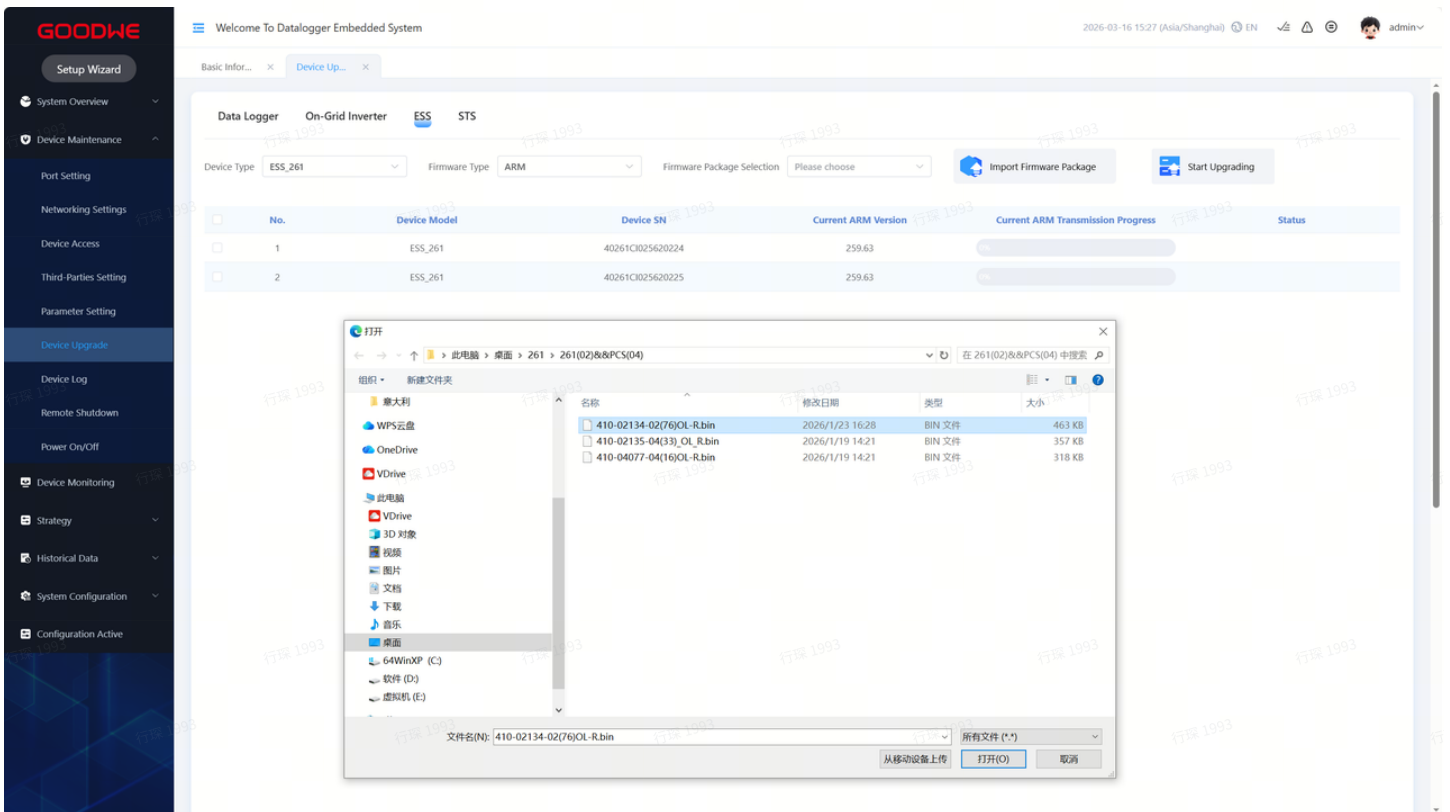


6.3.2 ESA261 ARM Software Upgrade

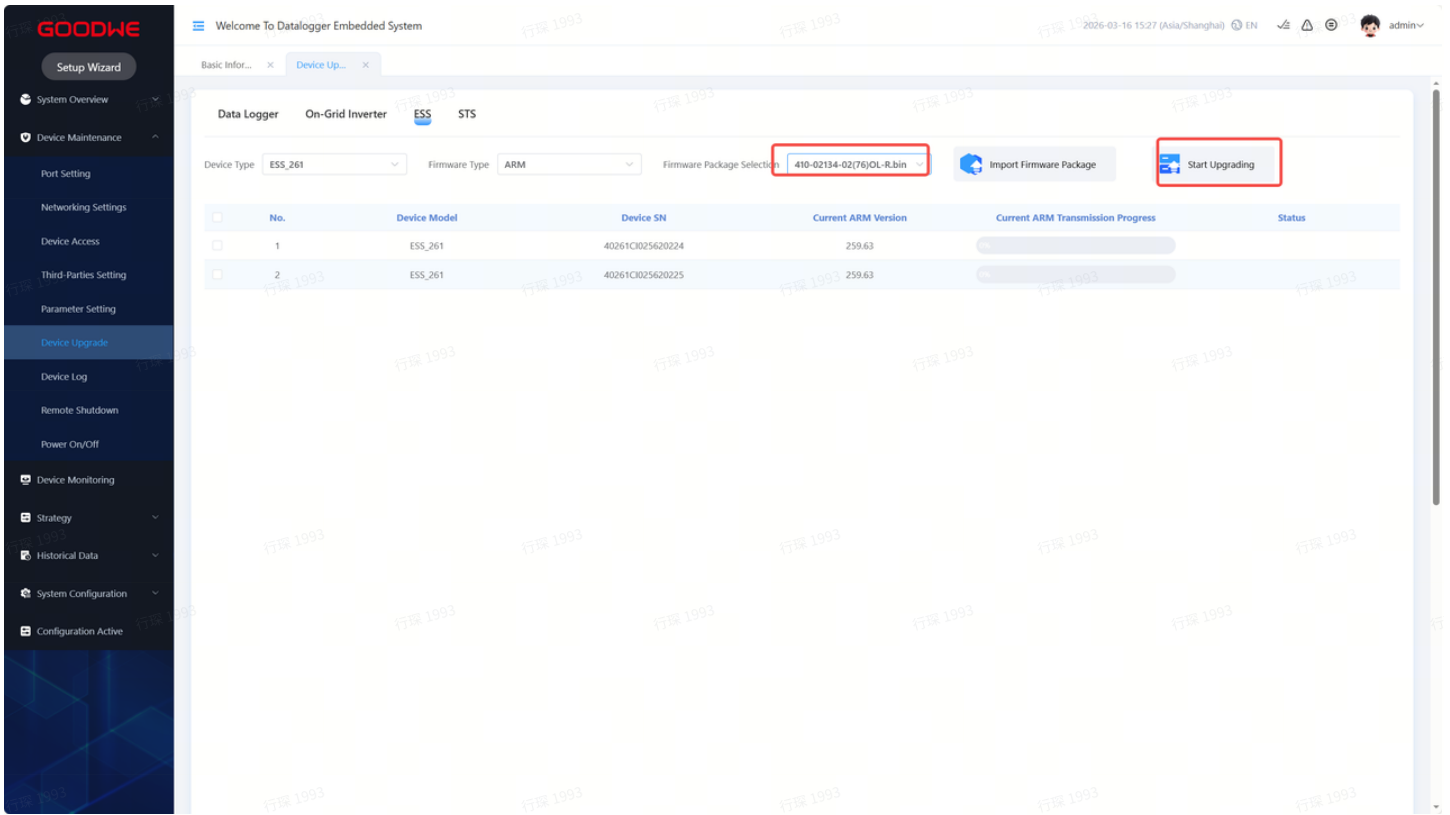
Select "Equipment Maintenance" -> "Equipment Upgrade" -> "Energy Storage Cabinet"



Select "ESS_261" > Select "Firmware Type": "ARM" > Import the firmware package locally

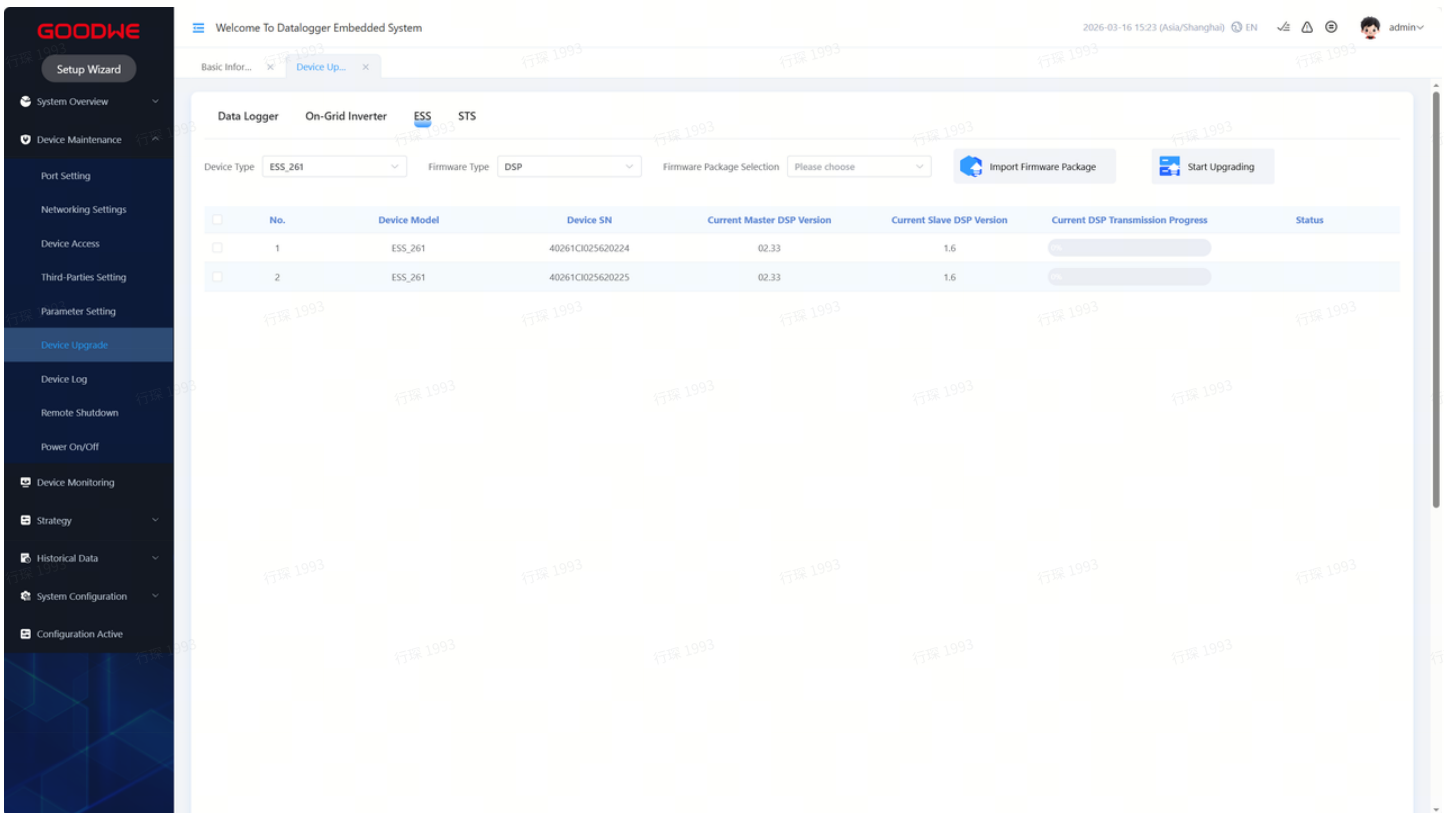


Click the "Number of Devices Being Upgraded" option > Select "Firmware Package" > Start Upgrade

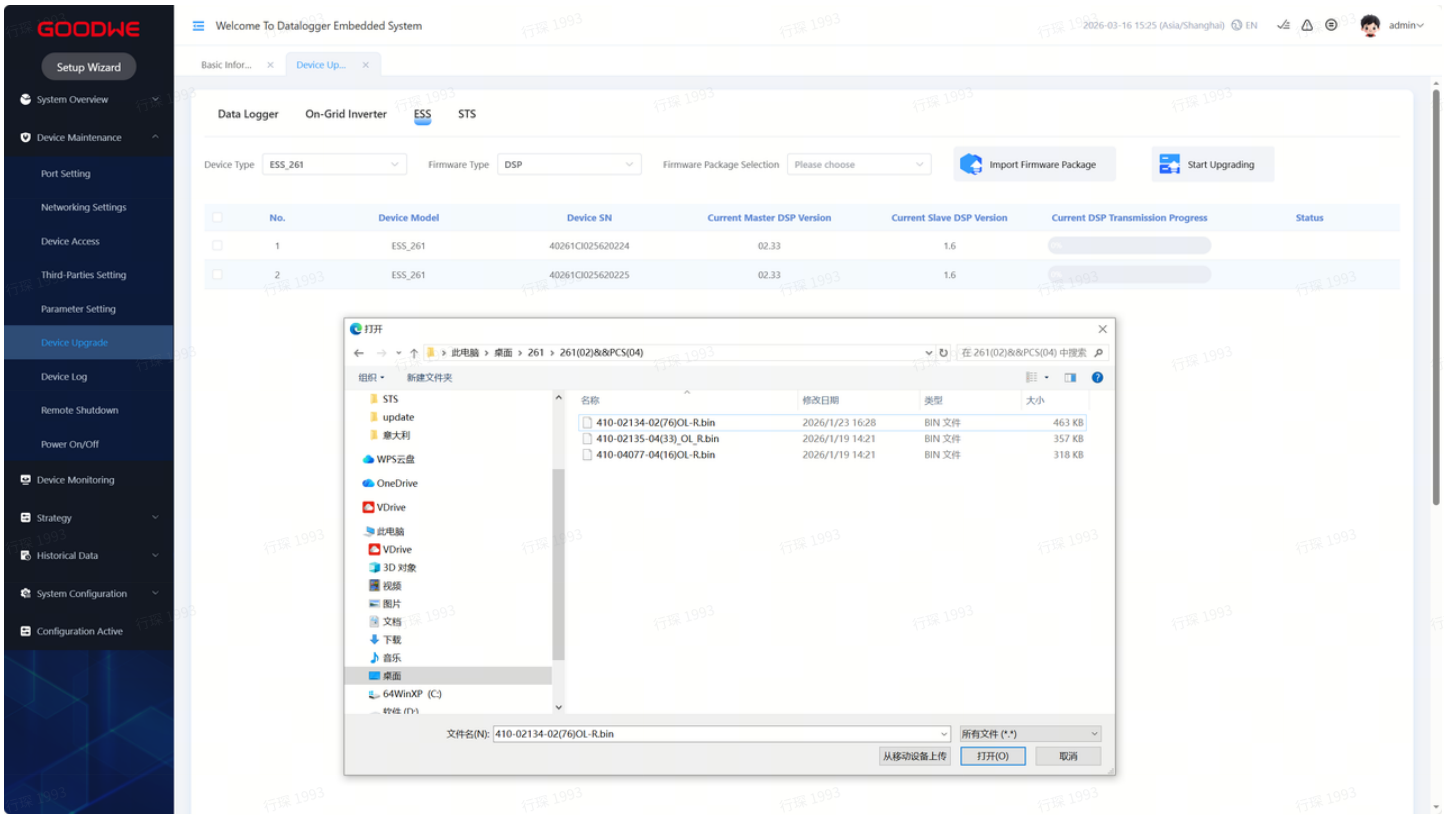


6.3.3 ESA261 DSP Software Upgrade

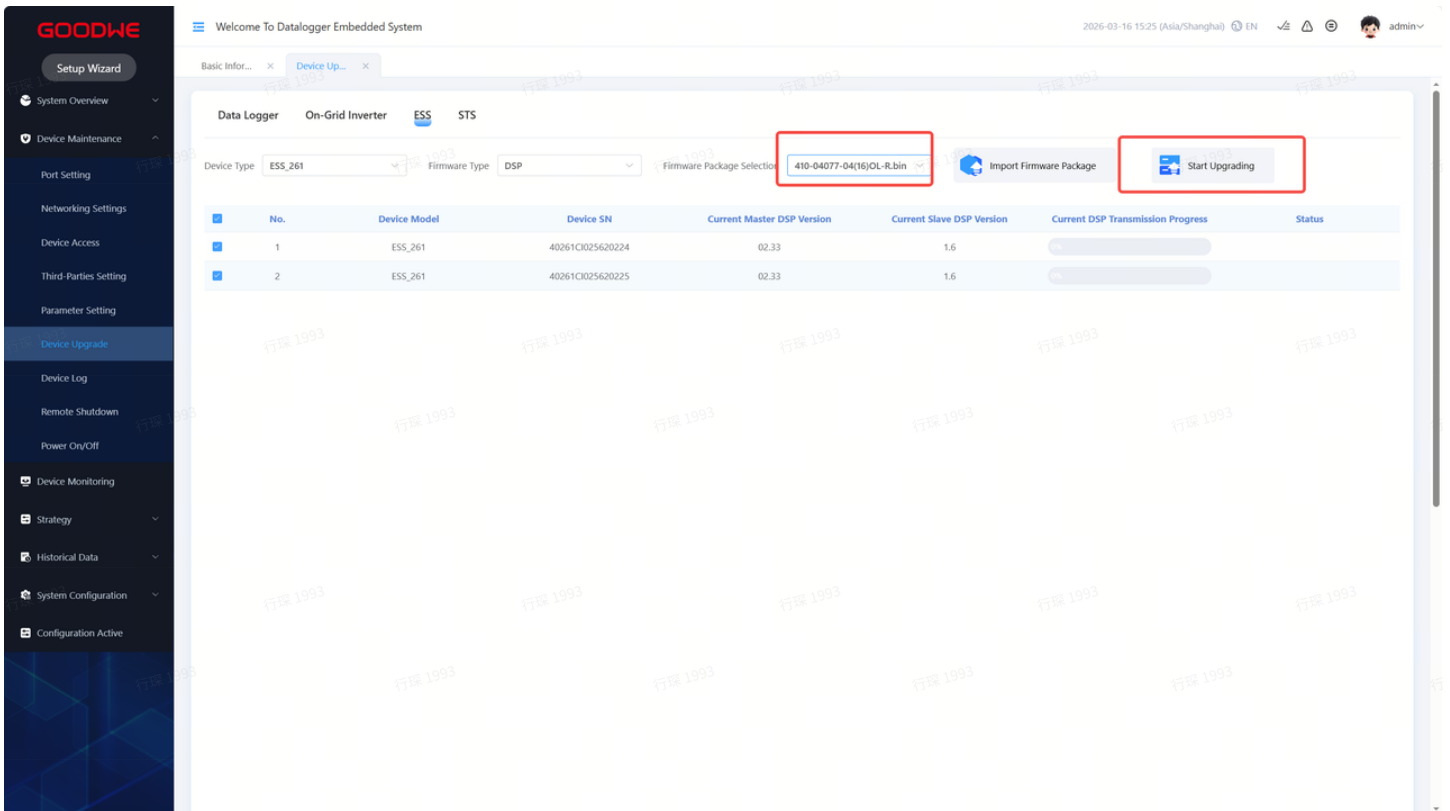
Select "Equipment Maintenance" -> "Equipment Upgrade" -> "Energy Storage Cabinet"



Select "ESS_261" > Select "Firmware Type": "DSP" > Import the firmware package locally



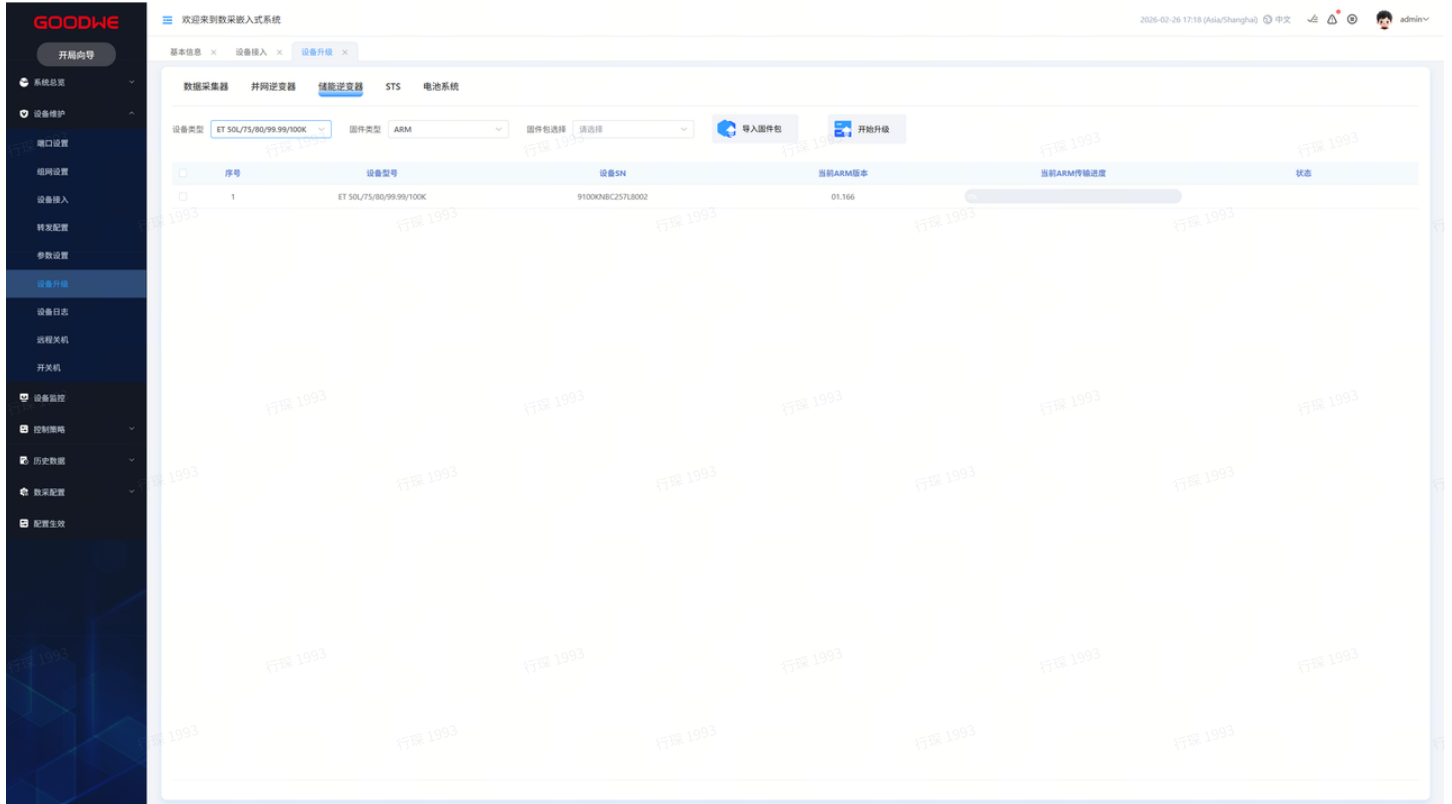
Click the "Number of Devices Being Upgraded" option > Select "Firmware Package" > Start Upgrade



6.4 ET100 Software Version Check

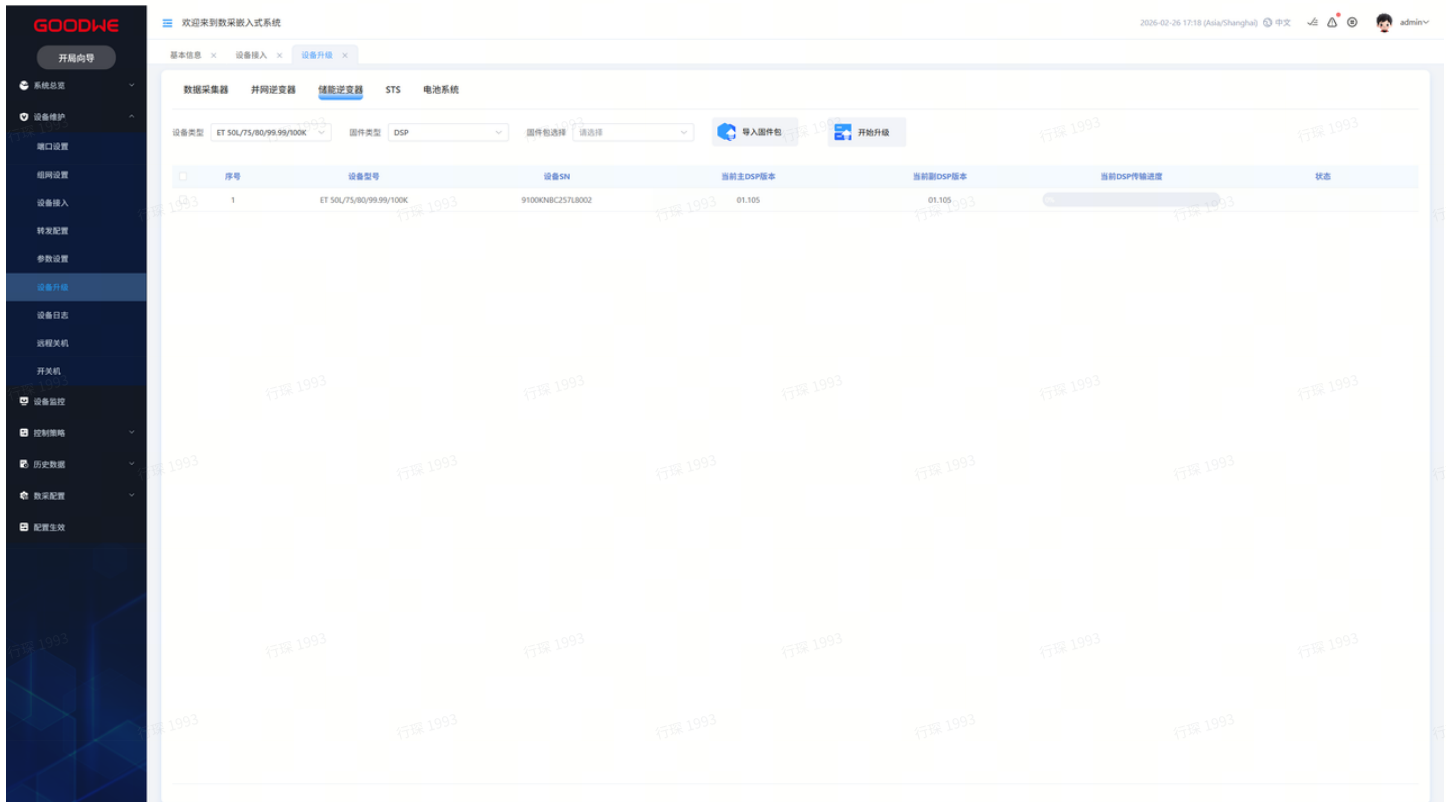
6.4.1 ET100 ARM Software Version Check

Device Maintenance --> Device Upgrade --> Device Type (ET50/80/75/100) --> Firmware Type (ARM)



6.4.2 ET100 DSP Software Version Check

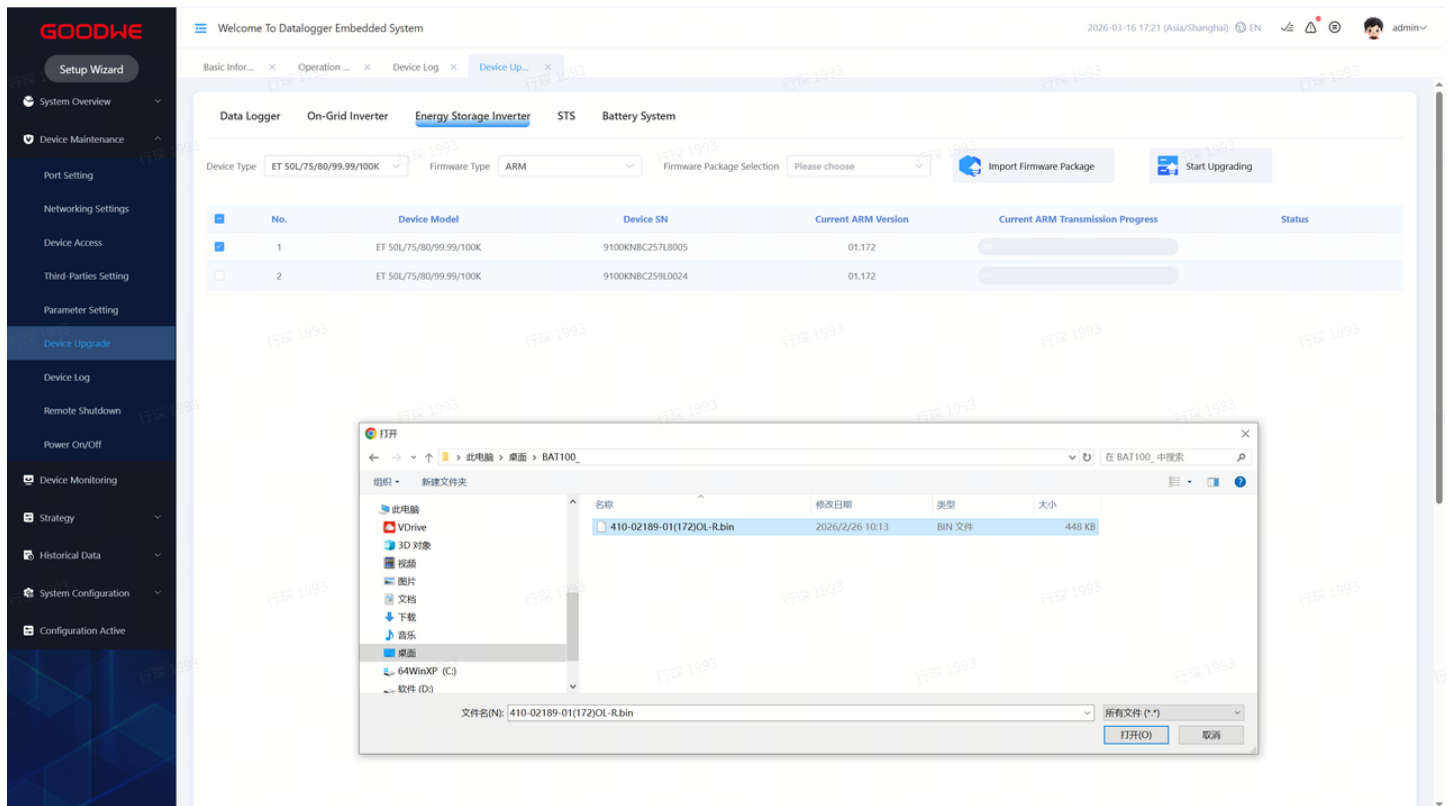
Equipment Maintenance --> Equipment Upgrade --> Equipment Type (ET50/80/75/100) --> Firmware Type (DSP)



6.5 ET100 Software Upgrade

6.5.1 ET100 ARM Software Upgrade

Select device type (Energy Storage Inverter) > Select firmware type (ARM) > Import firmware package locally >



GOODWE

Welcome To Datalogger Embedded System

2026-03-16 17:21 (Asia/Shanghai) EN

admin

Setup Wizard

System Overview

Device Maintenance

Port Setting

Networking Settings

Device Access

Third-Parties Setting

Parameter Setting

Device Upgrade

Device Log

Remote Shutdown

Power On/Off

Device Monitoring

Strategy

Historical Data

System Configuration

Configuration Active

Data Logger On-Grid Inverter **Energy Storage Inverter** STS Battery System

Device Type: ET 50L/75/80/99/99/100K Firmware Type: ARM Firmware Package Selection: Please choose Import Firmware Package Start Upgrading

No.	Device Model	Device SN	Current ARM Version	Current ARM Transmission Progress	Status
1	ET 50L/75/80/99/99/100K	9100KNBC257L8005	01.172		
2	ET 50L/75/80/99/99/100K	9100KNBC259L0024	01.172		

打开

此电脑 > 桌面 > BAT100

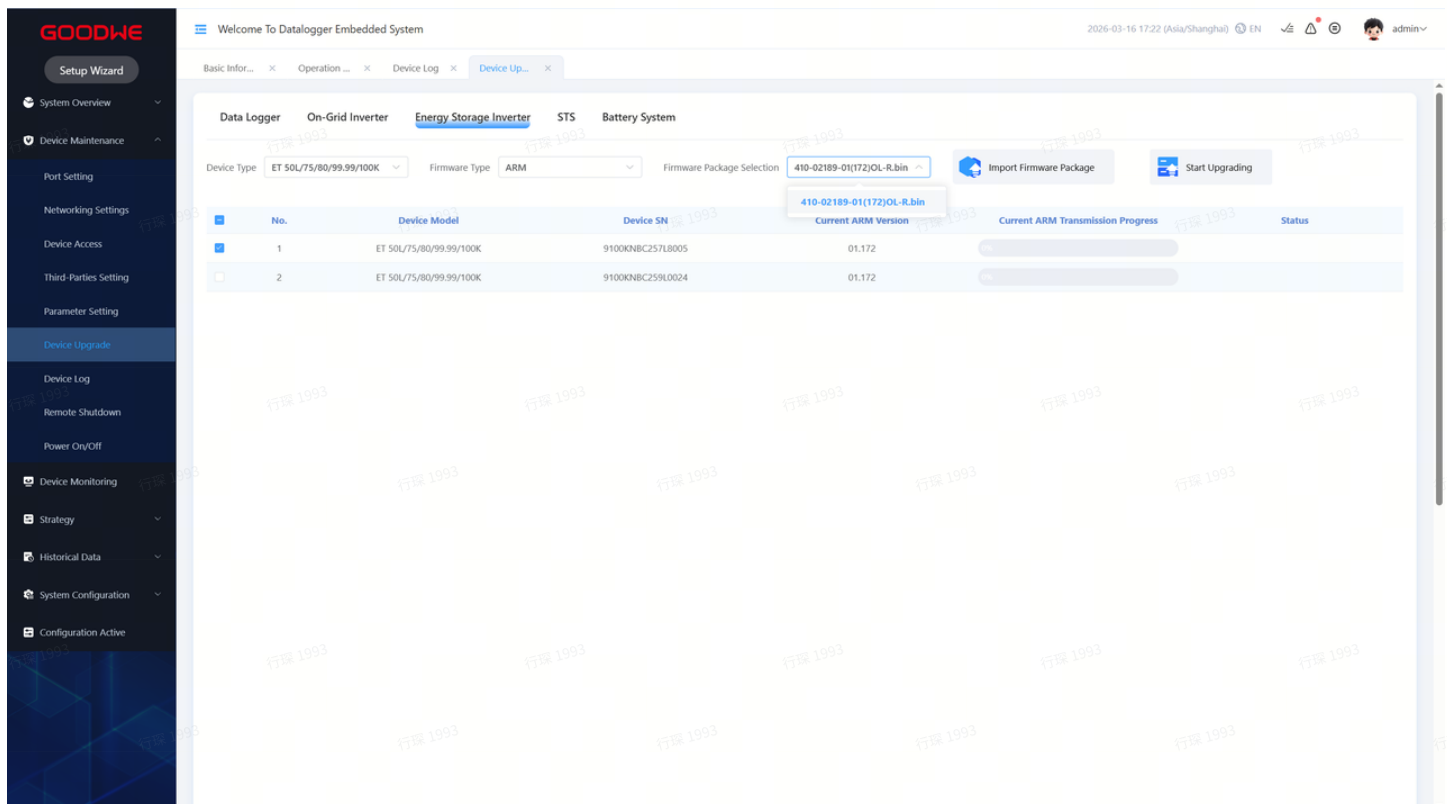
在 BAT100 中搜索

名称	修改日期	类型	大小
410-02189-01(172)OL-R.bin	2026/2/26 10:13	BIN 文件	448 KB

文件名(N): 410-02189-01(172)OL-R.bin 所有文件 (*.*)

打开(O) 取消

Click the "Number of Devices Being Upgraded" option > Select "Firmware Package" > Start Upgrade



GOODWE

Welcome To Datalogger Embedded System

2026-03-16 17:22 (Asia/Shanghai) EN

admin

Setup Wizard

System Overview

Device Maintenance

Port Setting

Networking Settings

Device Access

Third-Parties Setting

Parameter Setting

Device Upgrade

Device Log

Remote Shutdown

Power On/Off

Device Monitoring

Strategy

Historical Data

System Configuration

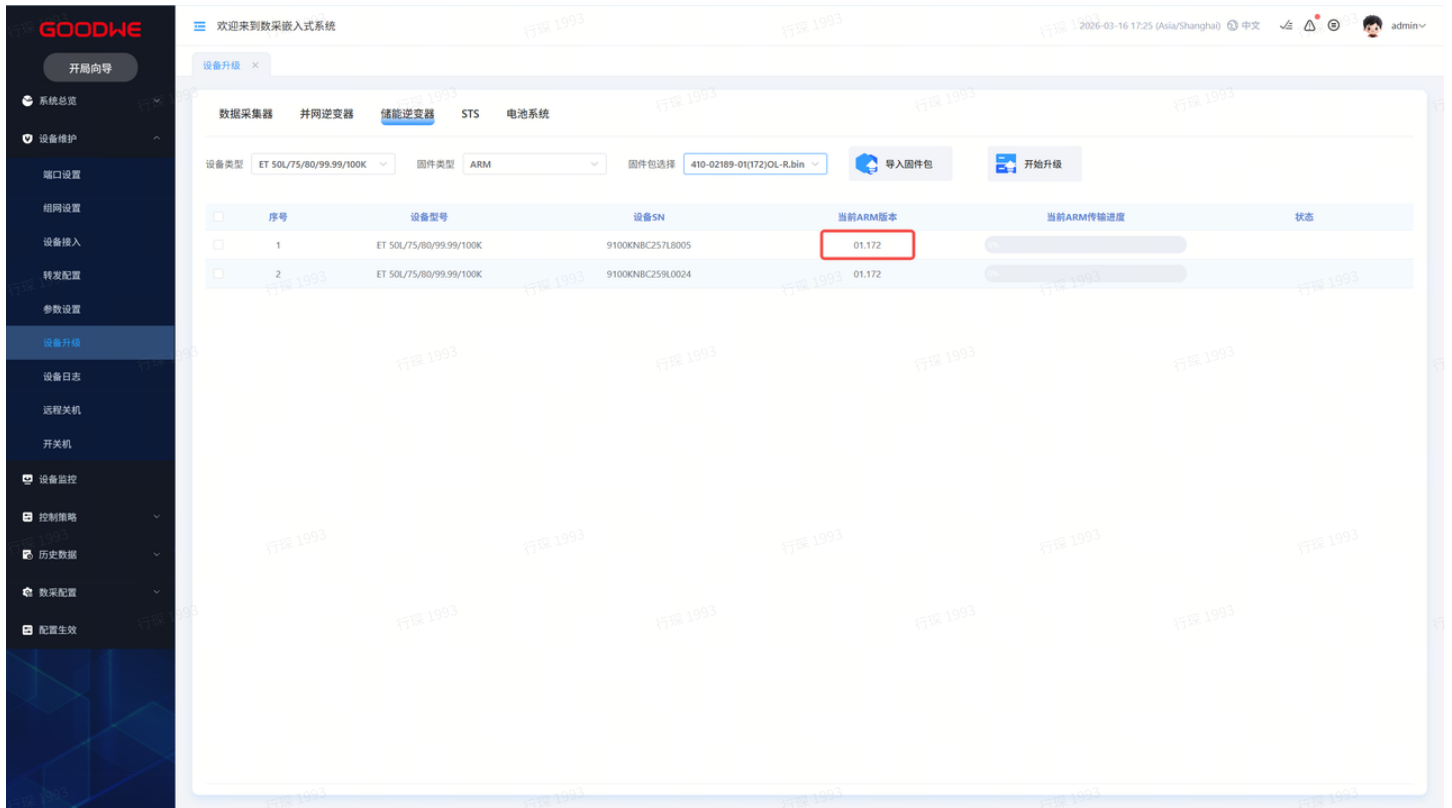
Configuration Active

Data Logger On-Grid Inverter **Energy Storage Inverter** STS Battery System

Device Type: ET 50L/75/80/99/99/100K Firmware Type: ARM Firmware Package Selection: 410-02189-01(172)OL-R.bin Import Firmware Package Start Upgrading

No.	Device Model	Device SN	Current ARM Version	Current ARM Transmission Progress	Status
1	ET 50L/75/80/99/99/100K	9100KNBC257L8005	01.172		
2	ET 50L/75/80/99/99/100K	9100KNBC259L0024	01.172		

After waiting for some time, the version will change.



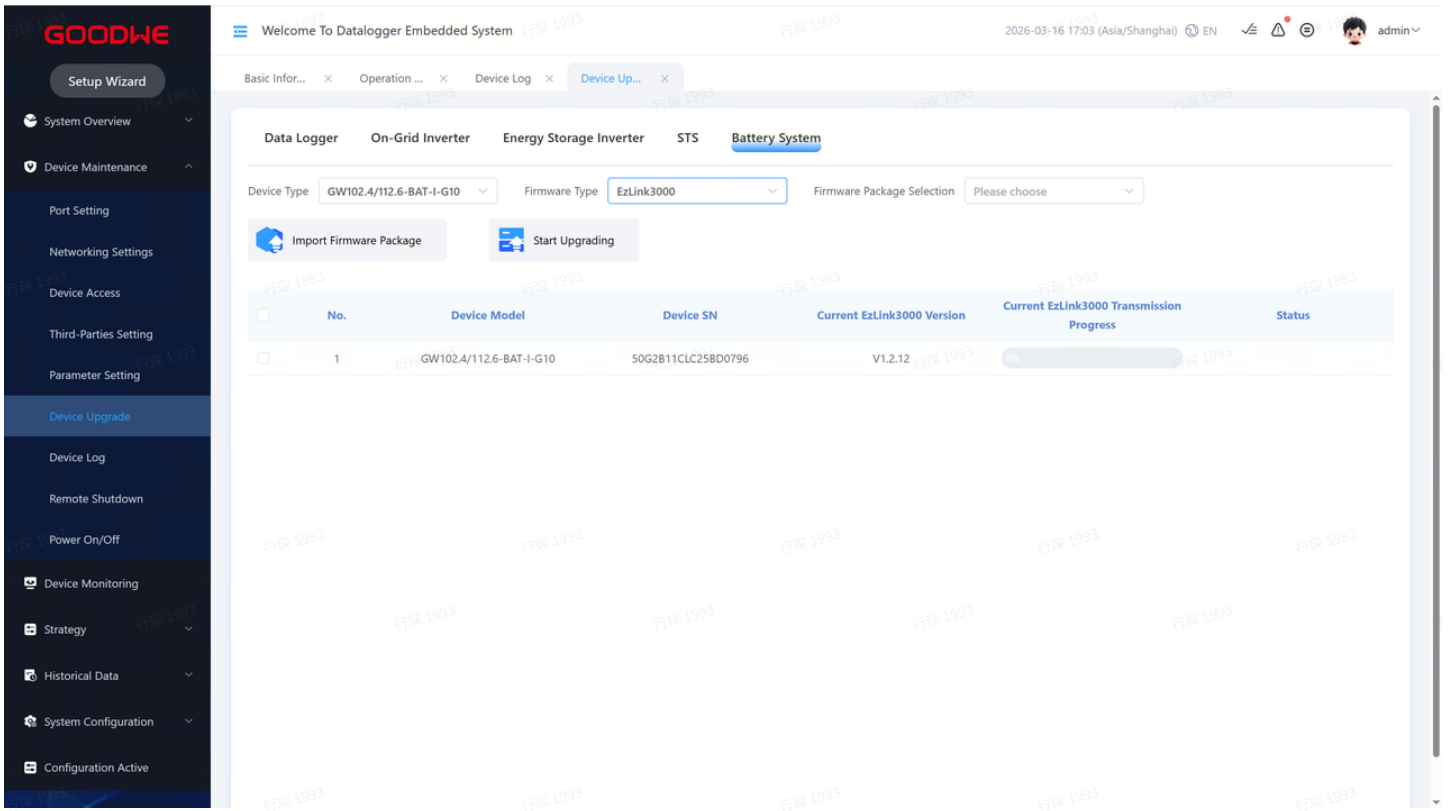
6.5.2 ET100 DSP Software Upgrade

Please refer to ET100 ARM Upgrade Process

6.6 View BAT100 Software Version

6.6.1 BAT100 Cloud Board Software Version Check

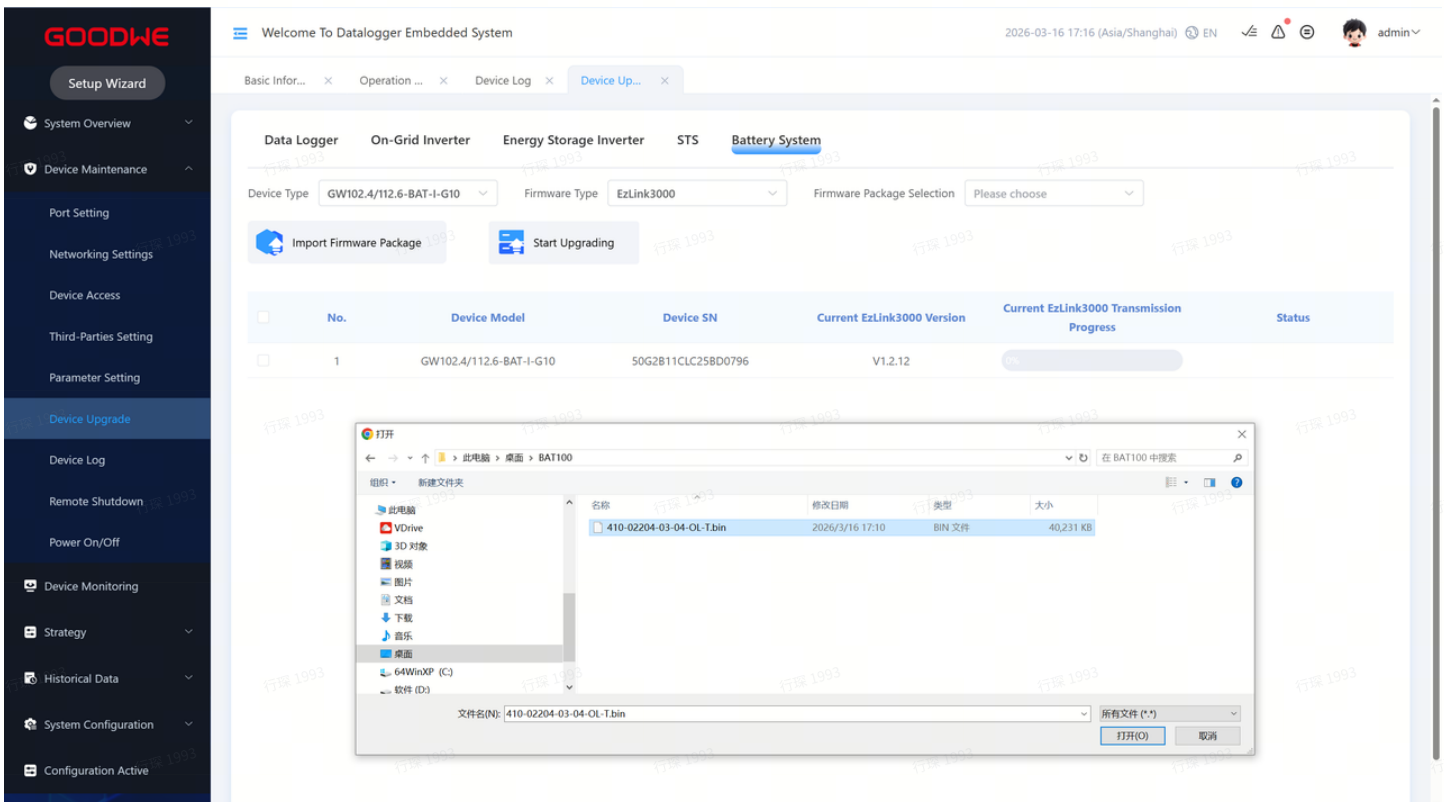
Equipment Maintenance -> Equipment Upgrade -> Battery System -> Equipment Type BAT100 -> Firmware Type EZlink3000

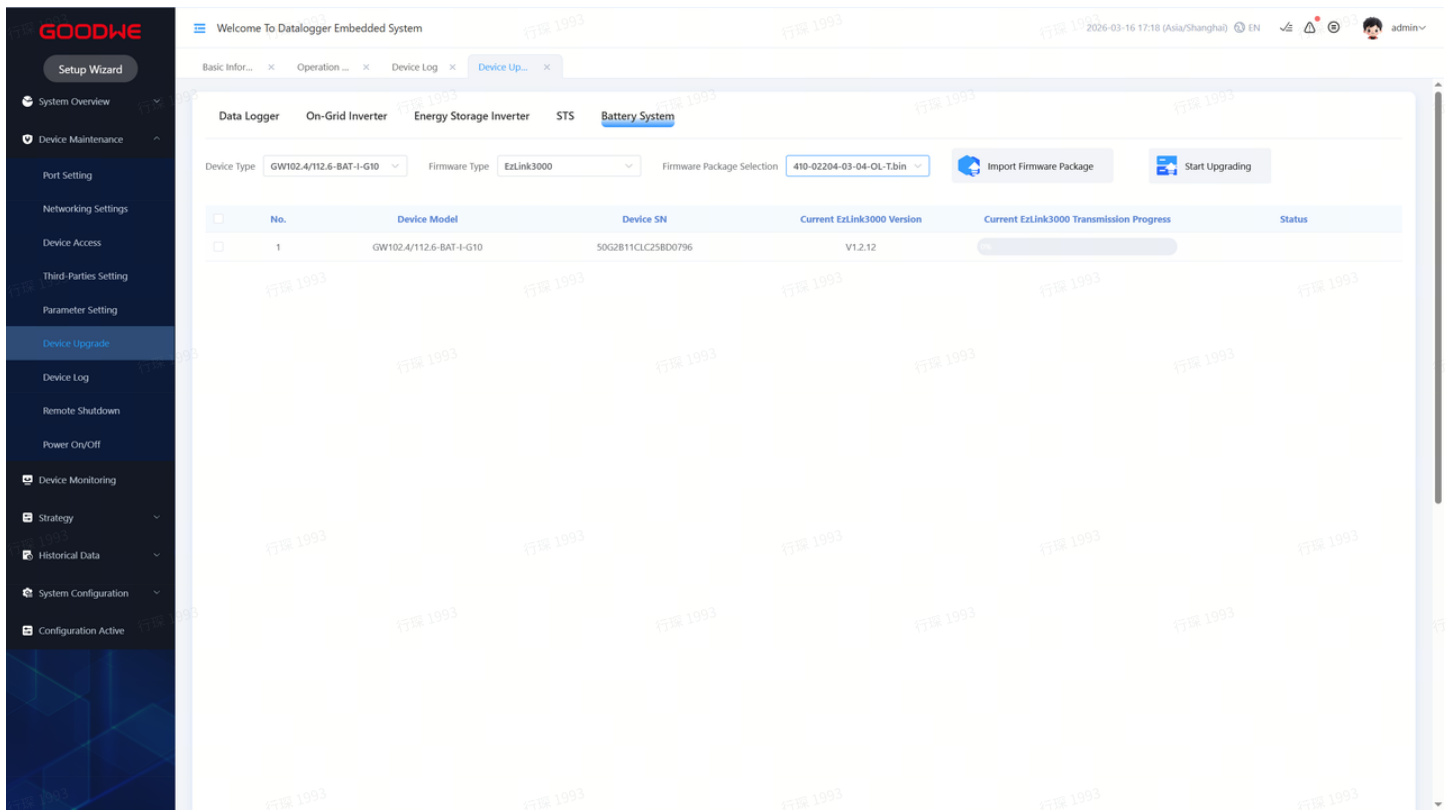


6.7 BAT100 Software Upgrade

6.7.1 BAT100 Cloud Board Software Upgrade

Device Maintenance -> Device Upgrade -> Battery System -> Device Type BAT100 -> Import Firmware Package -> Firmware Package Selection -> Start Upgrade





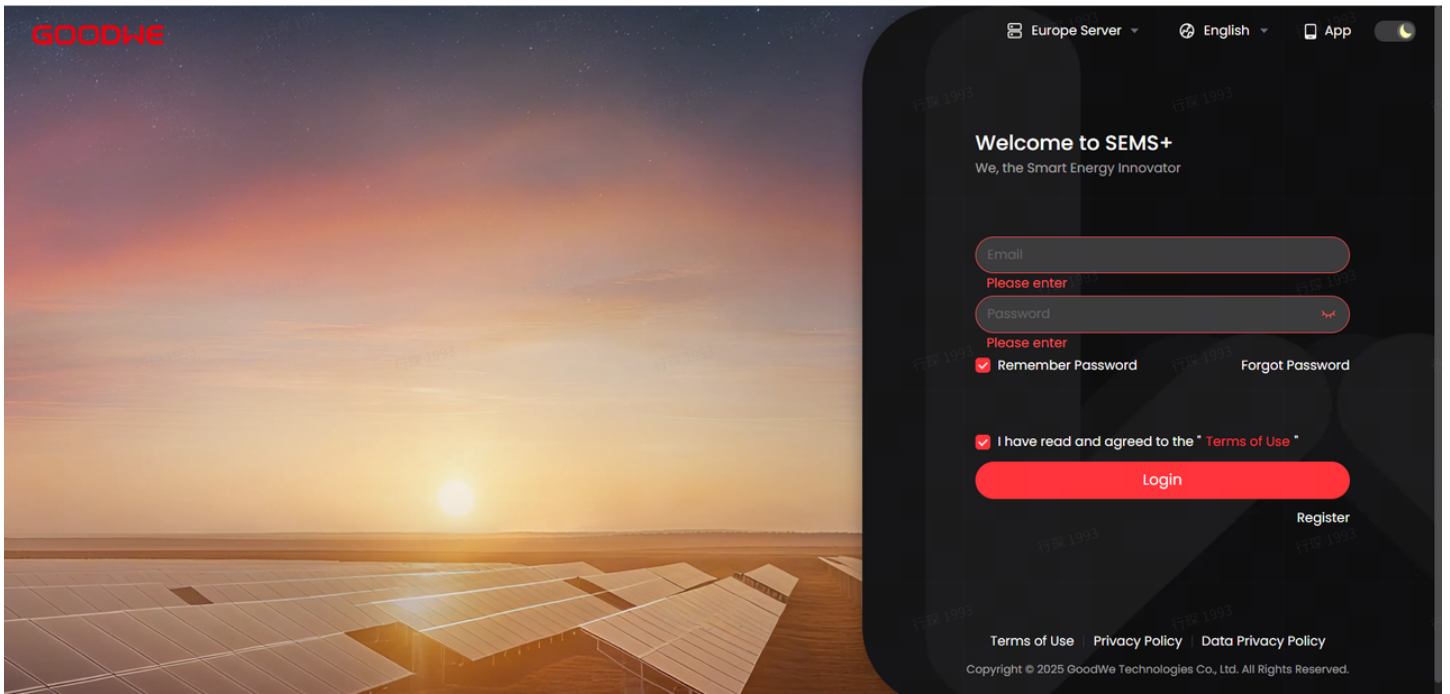
7. Xiaogu Cloud Window + Create Power Station

We can create power station projects for the system scenarios of "on-grid inverter + energy storage inverter (ET100 series)" and "on-grid inverter + integrated energy storage cabinet (ESA 261)" through Xiaogu Cloud Window + web terminal or APP.

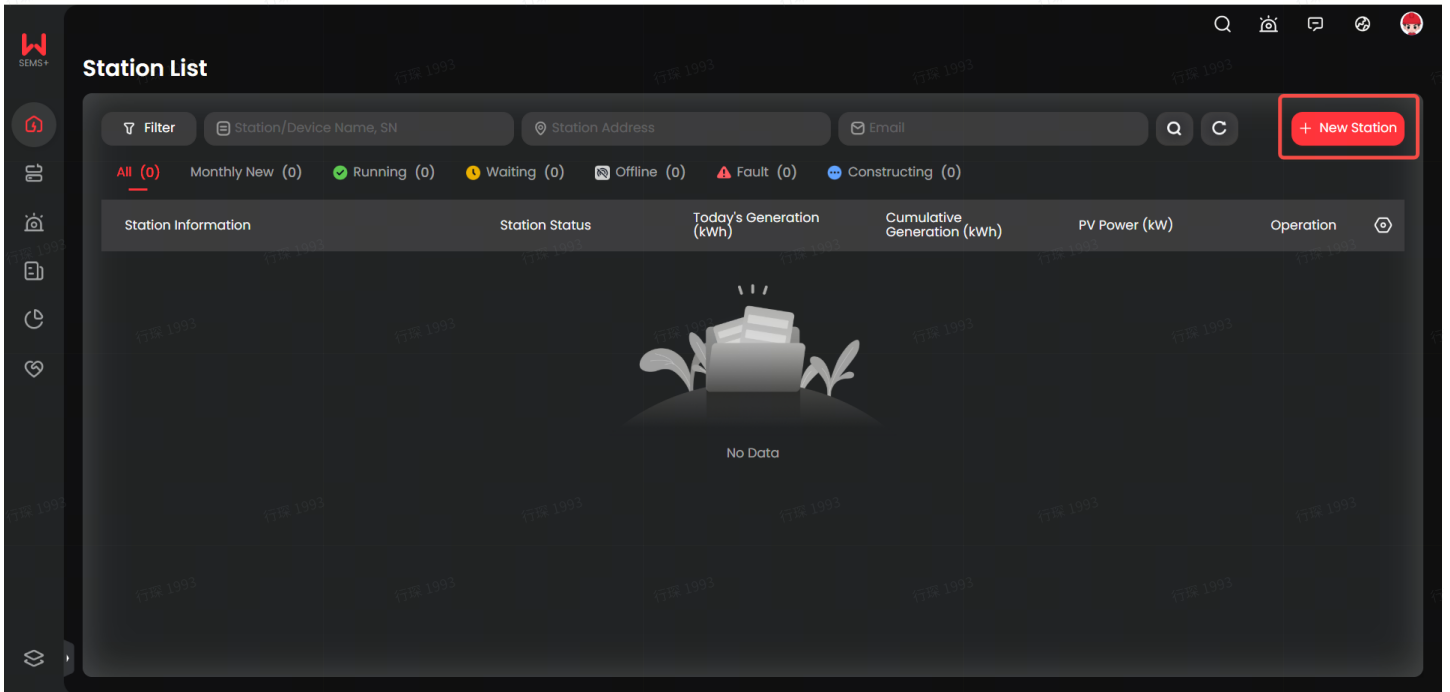
7.1 Xiaogu Cloud Window + WEB Web Terminal Create Power Station

Website (China Server): <https://cn-semplus.goodwe.com/>

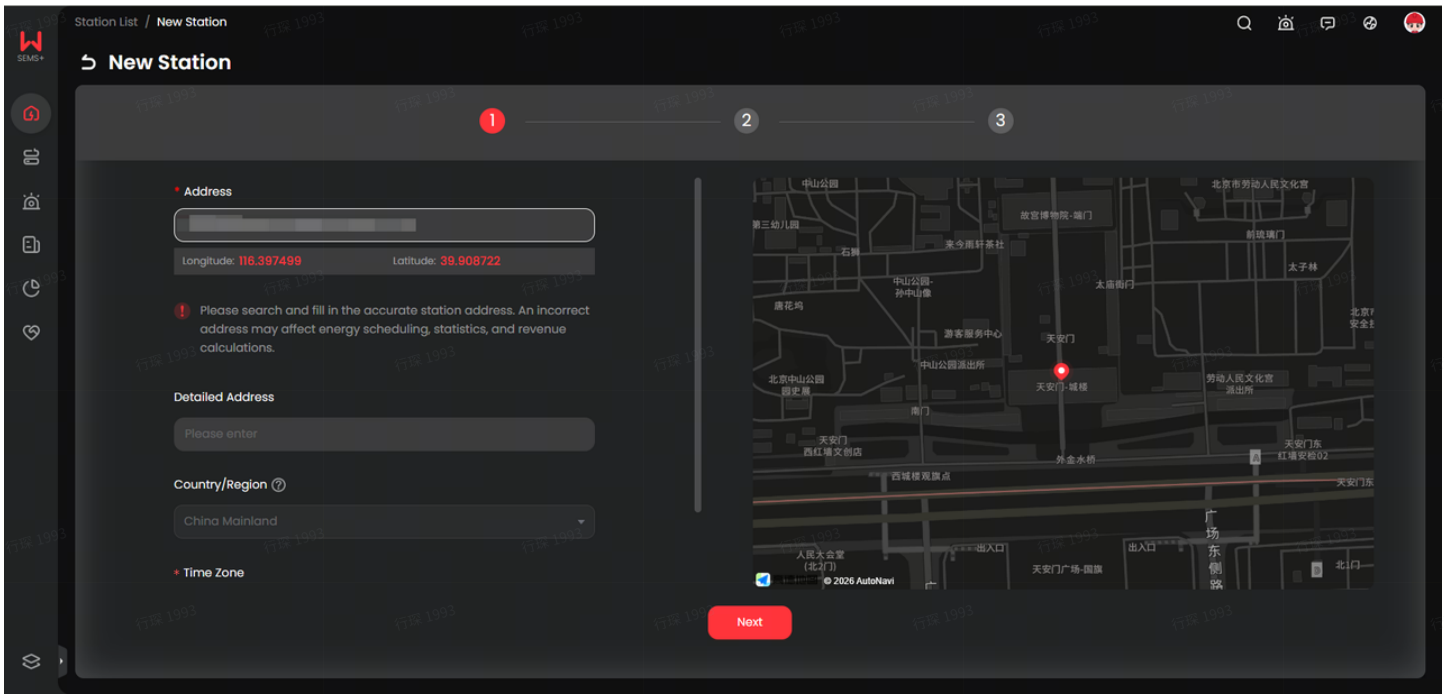
Please enter your account and password to complete the login.



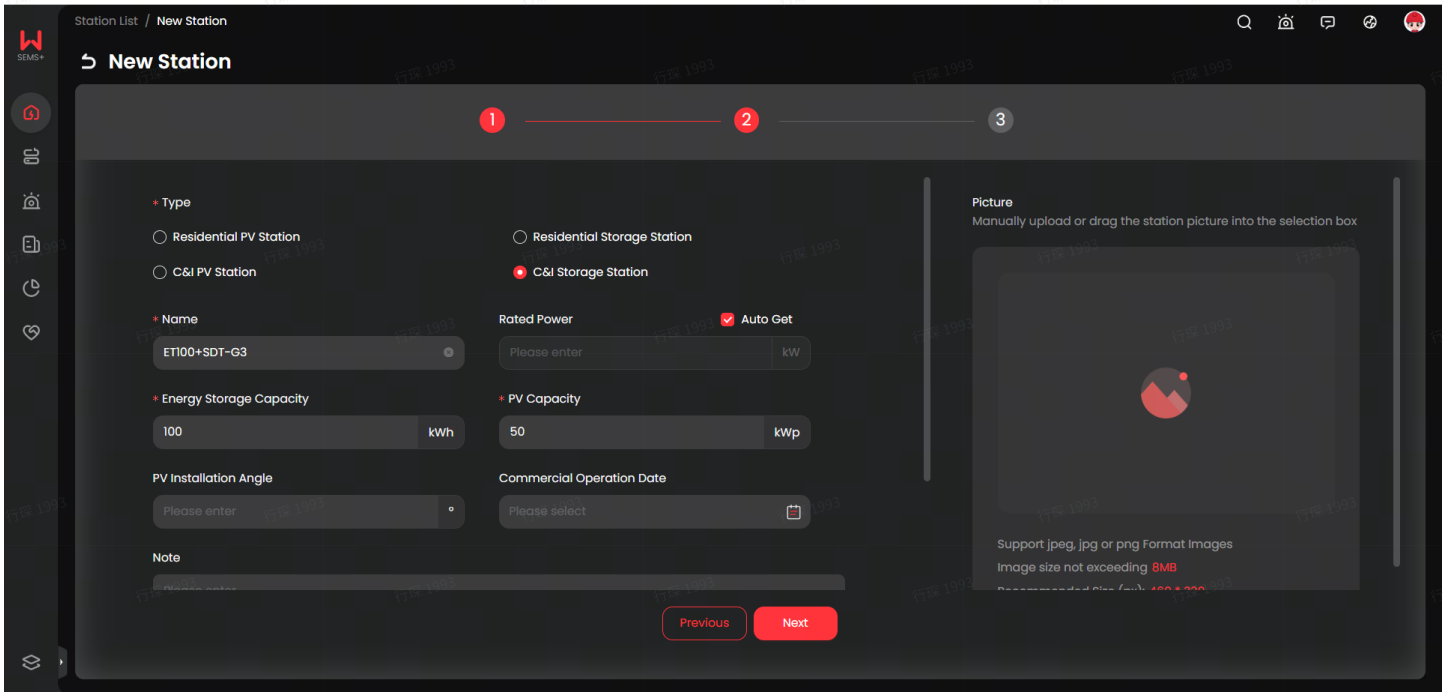
New Power Station



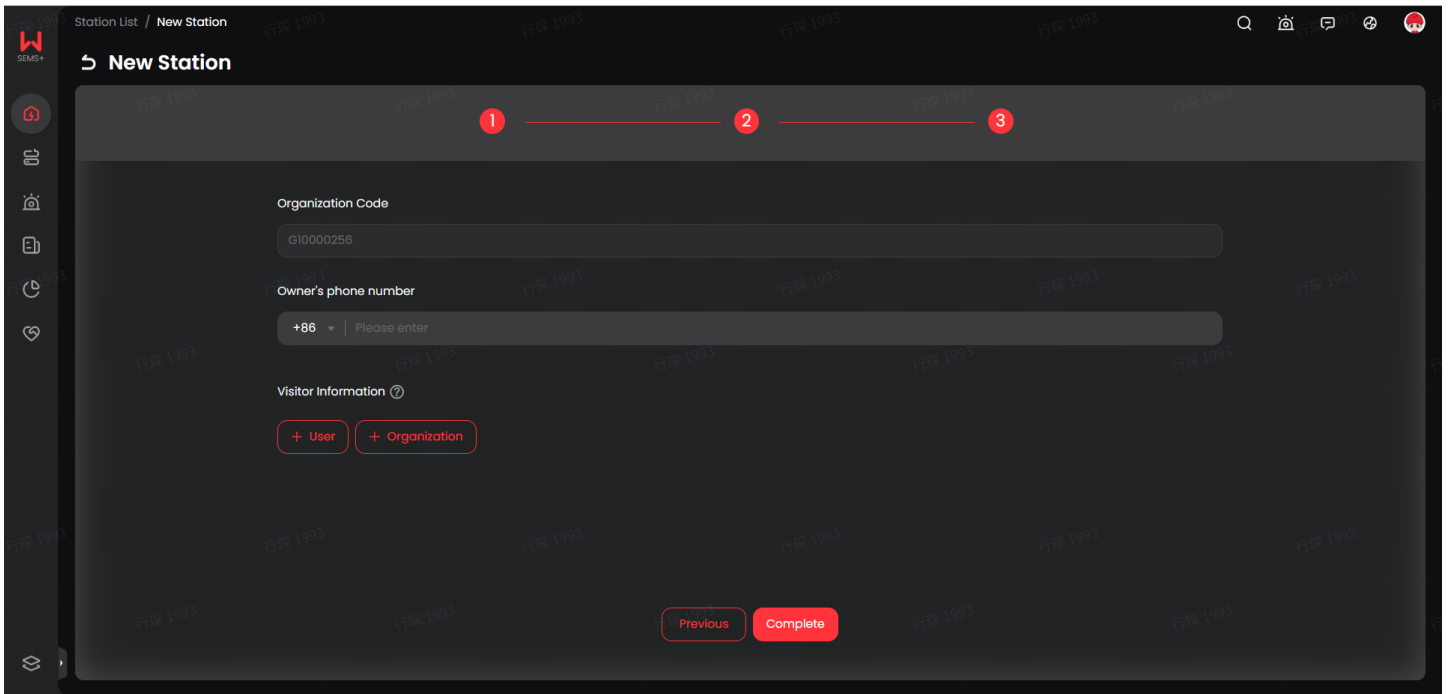
Enter the address and time zone, then click Next



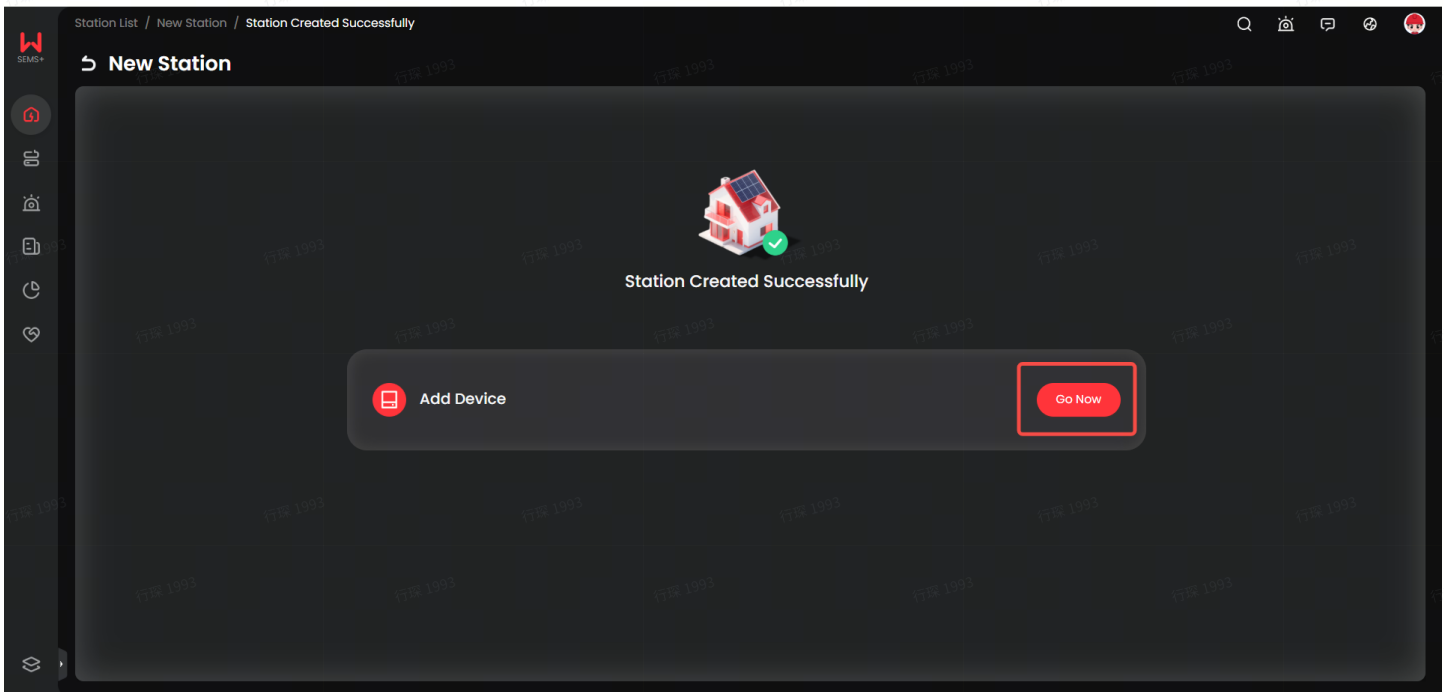
Enter power station information and click Next



Click to complete

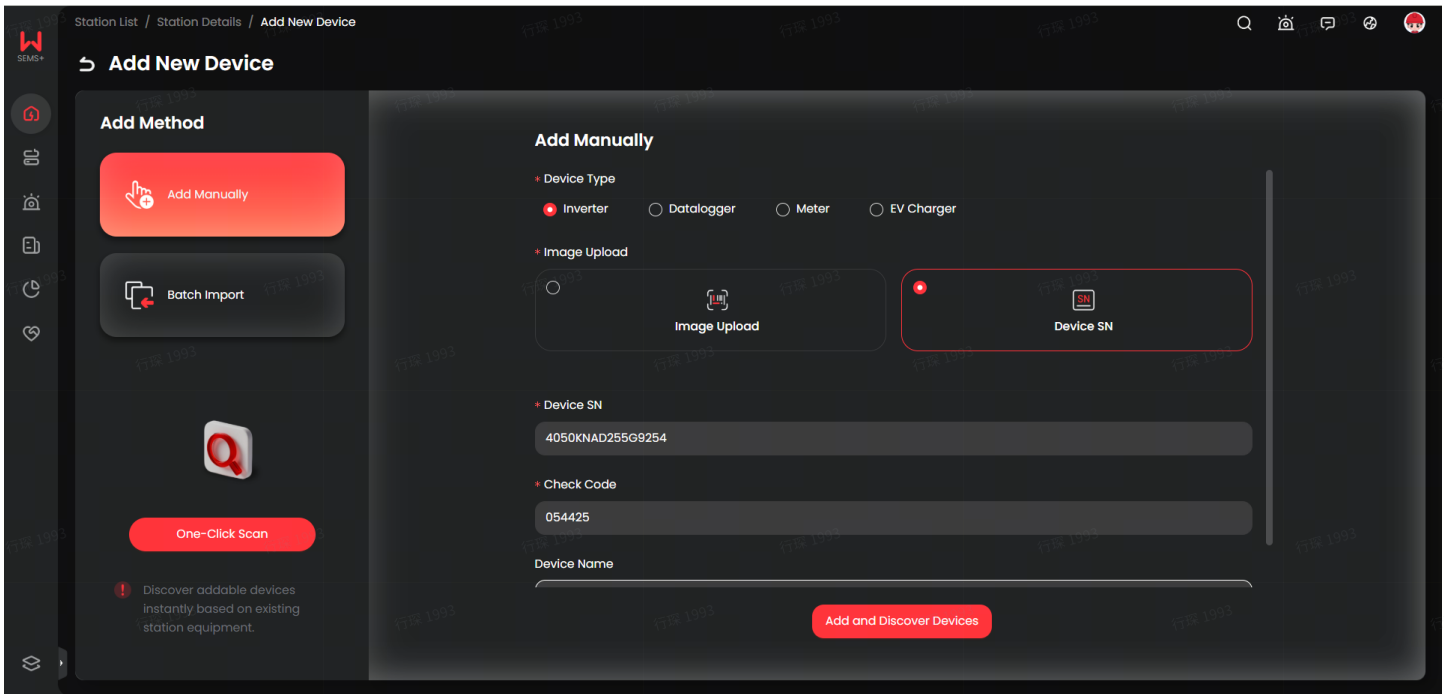


Add Device

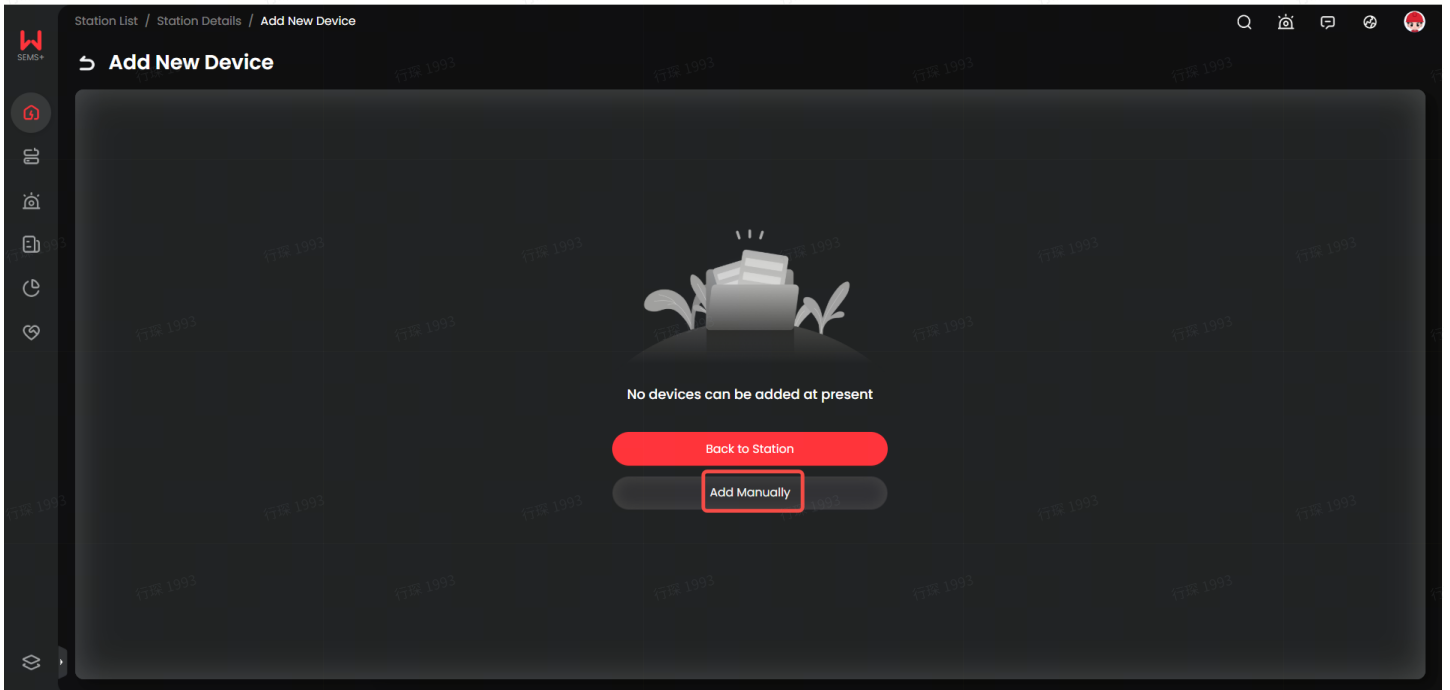


7.1.1 Add Inverter

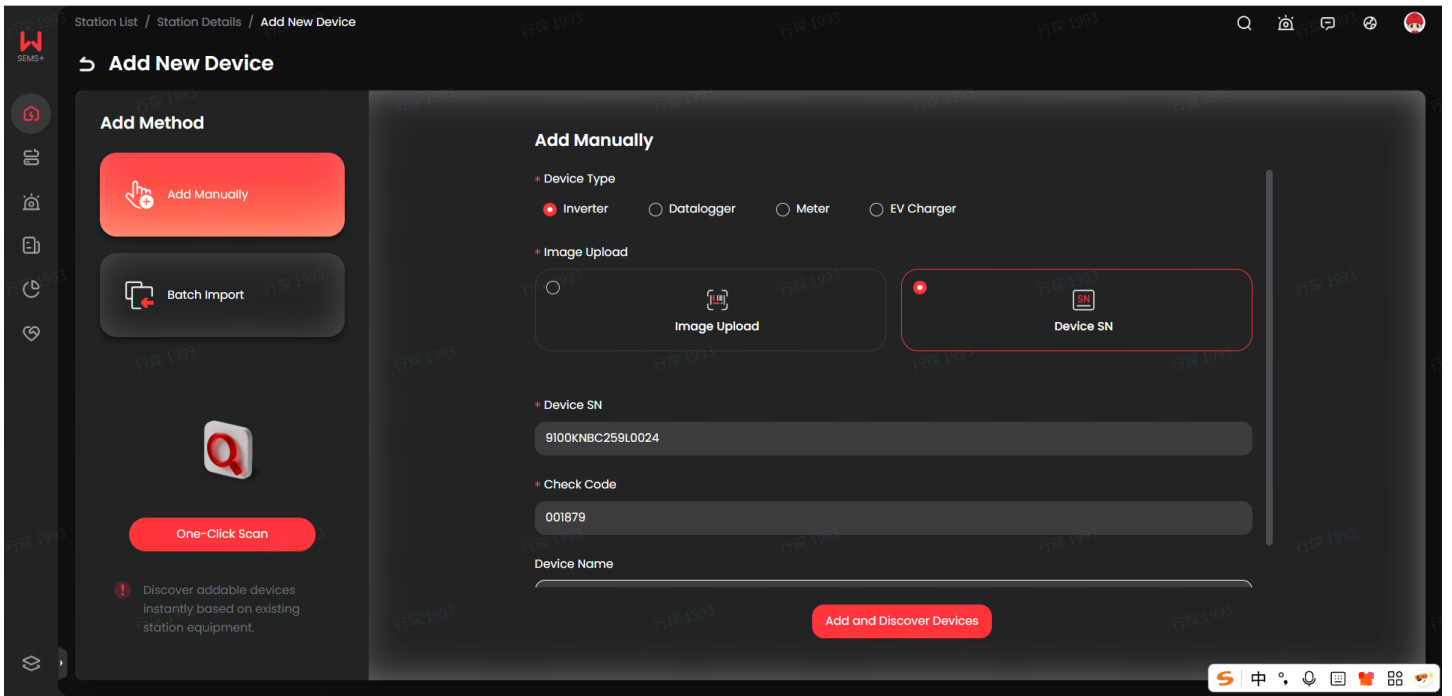
Select inverter as the device type, add ET100, fill in the device information, then click Discover and Add



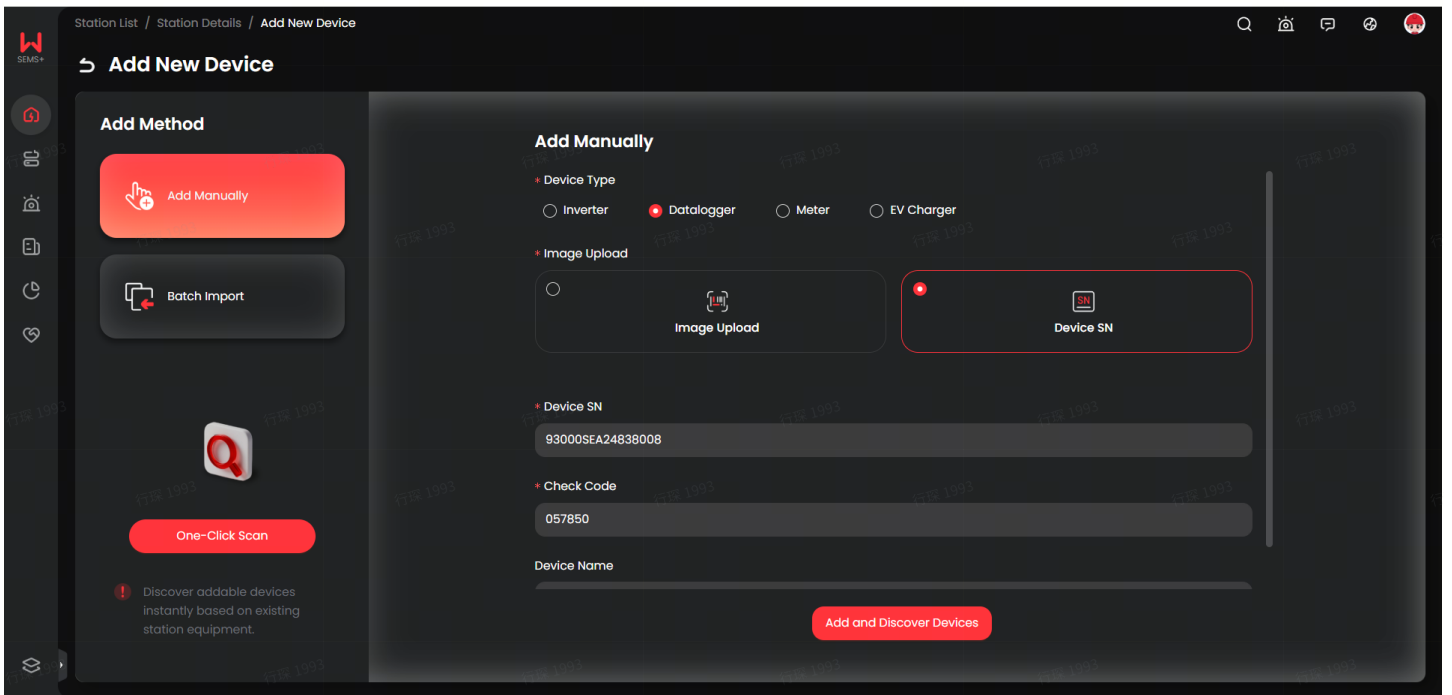
Click "Add Manually" to continue adding devices



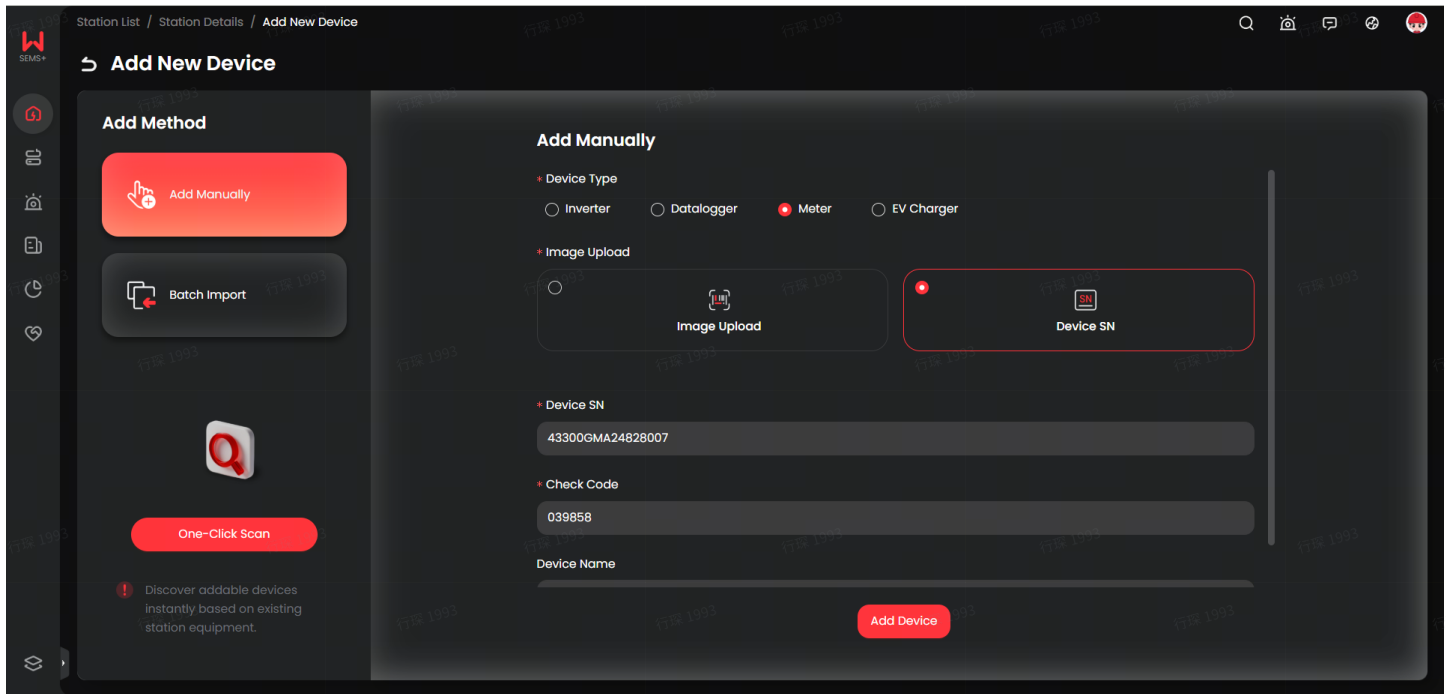
Select inverter as the device type, add grid-connected unit SDT-G3, fill in the device information, and then click Discover and Add



7.1.2 Add Data Acquisition

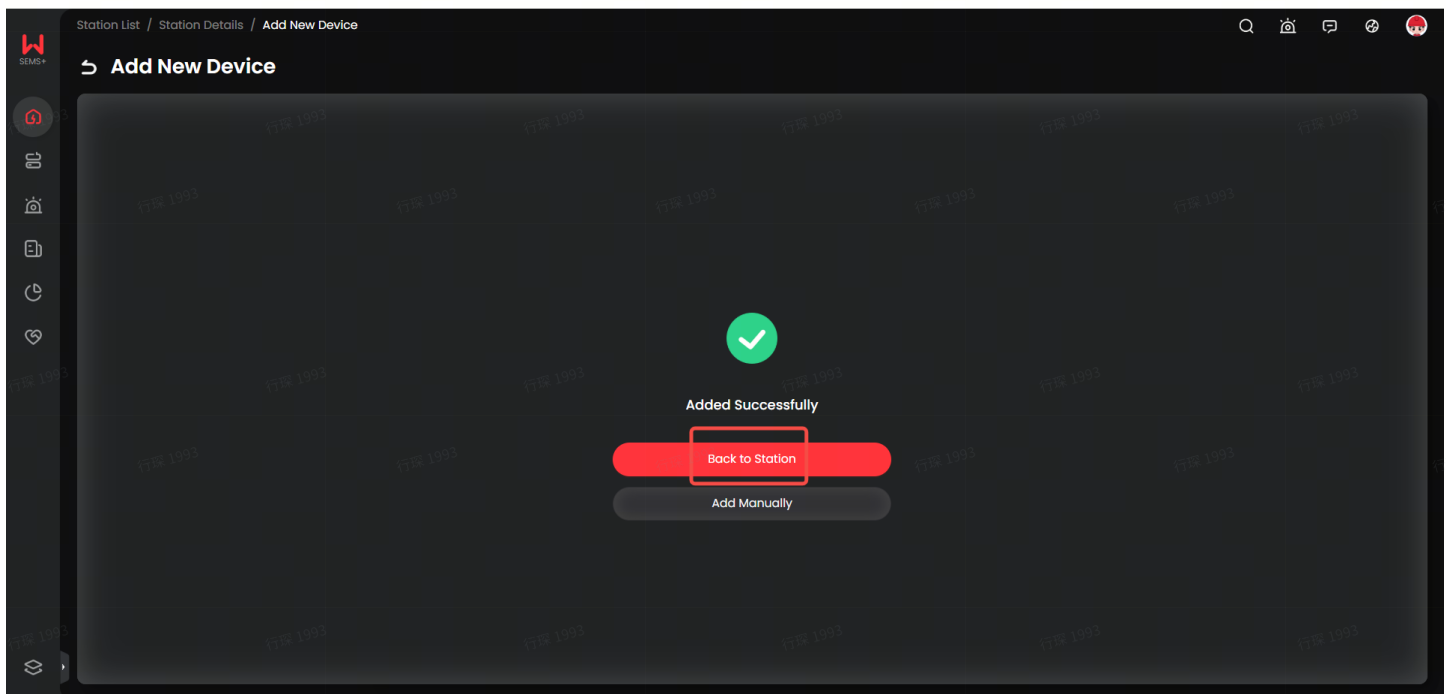


7.1.3 Add Meter

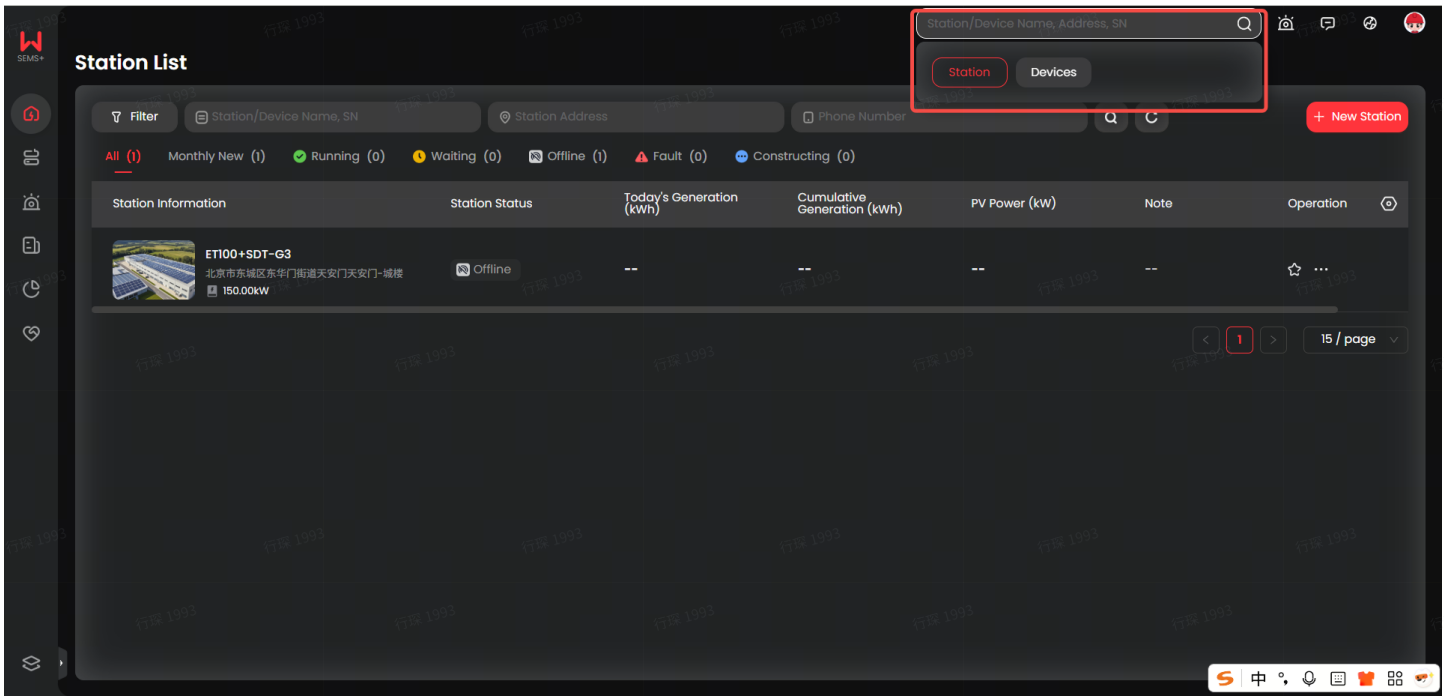


7.1.4 Power Station Query

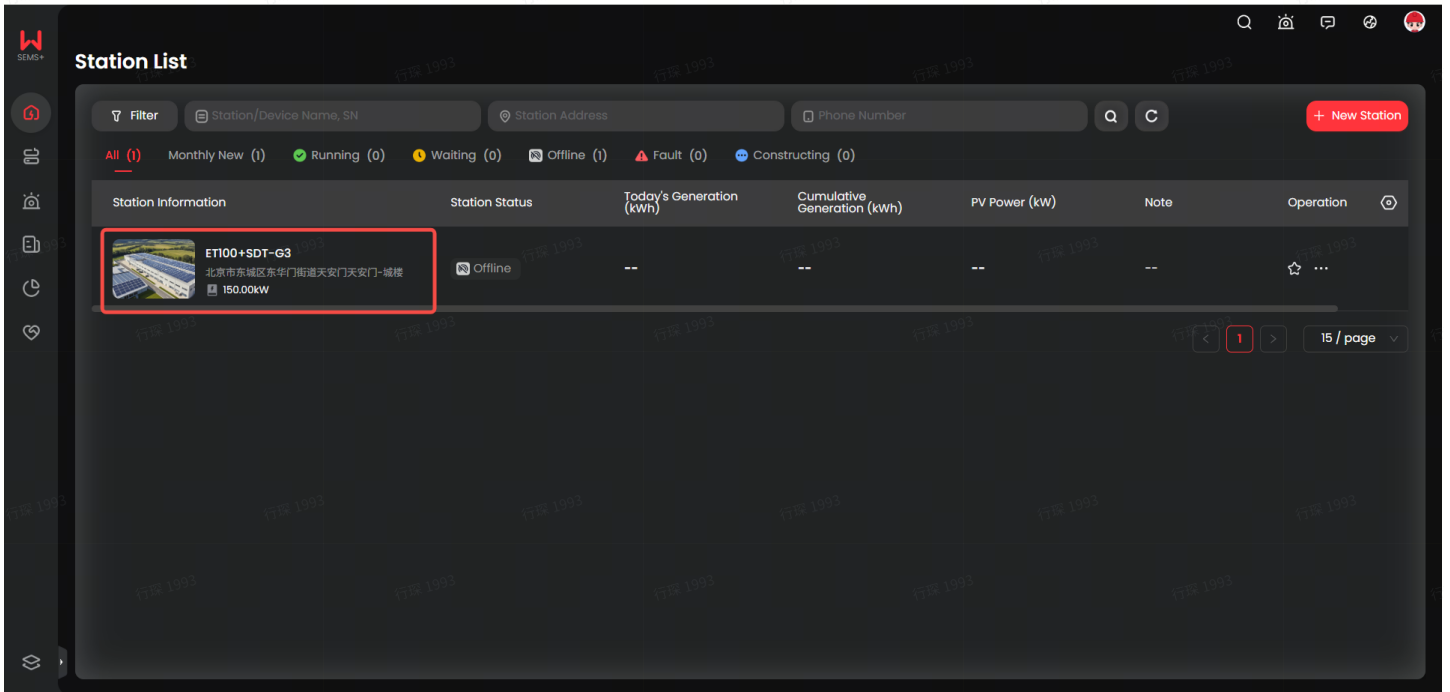
If there are other devices on-site, continue to click "Manual Add"; if all devices have been added, click "Back to Power Station".

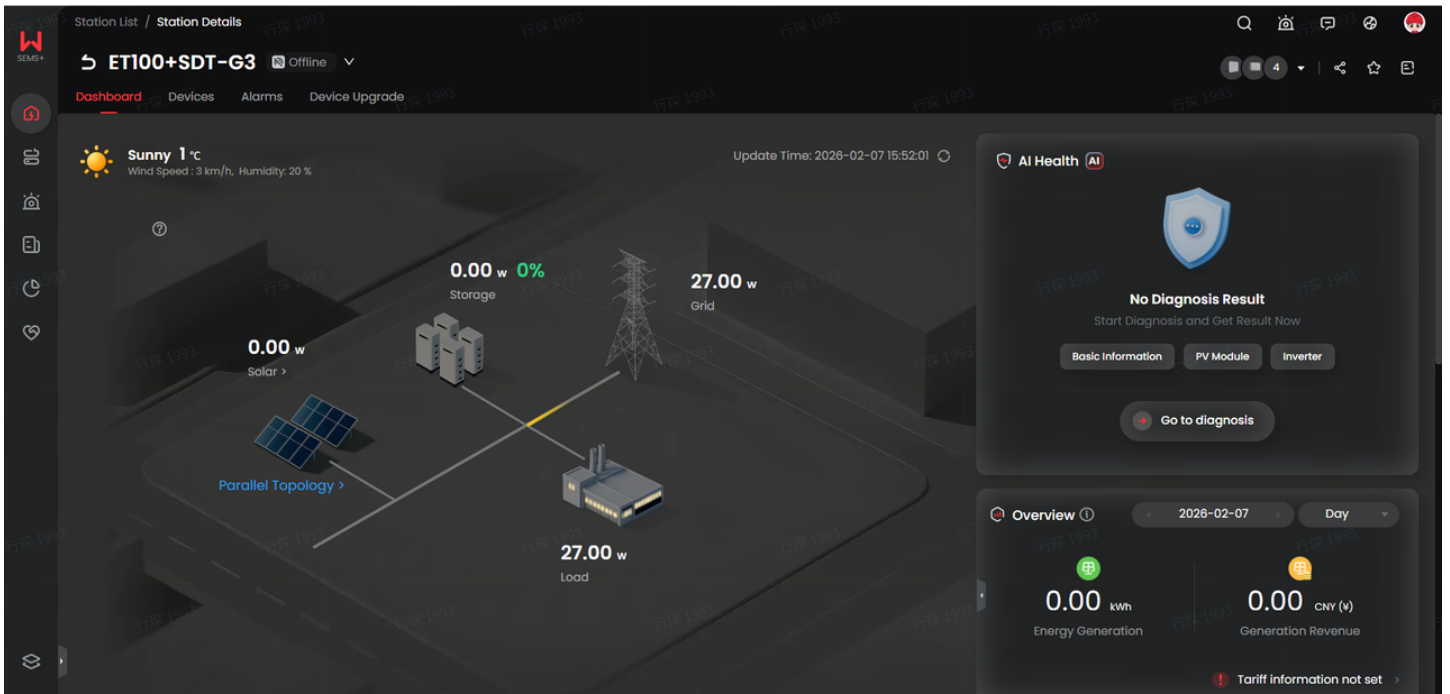


Enter the power station list, and enter power station information (equipment SN, power station name, address) in the search box to find the corresponding power station



Click on the power station to view its information





Enter the device page, click on the device name to query device information

Station List / Station Details

ET100+SDT-G3 Offline

Dashboard **Devices** Alarms Device Upgrade

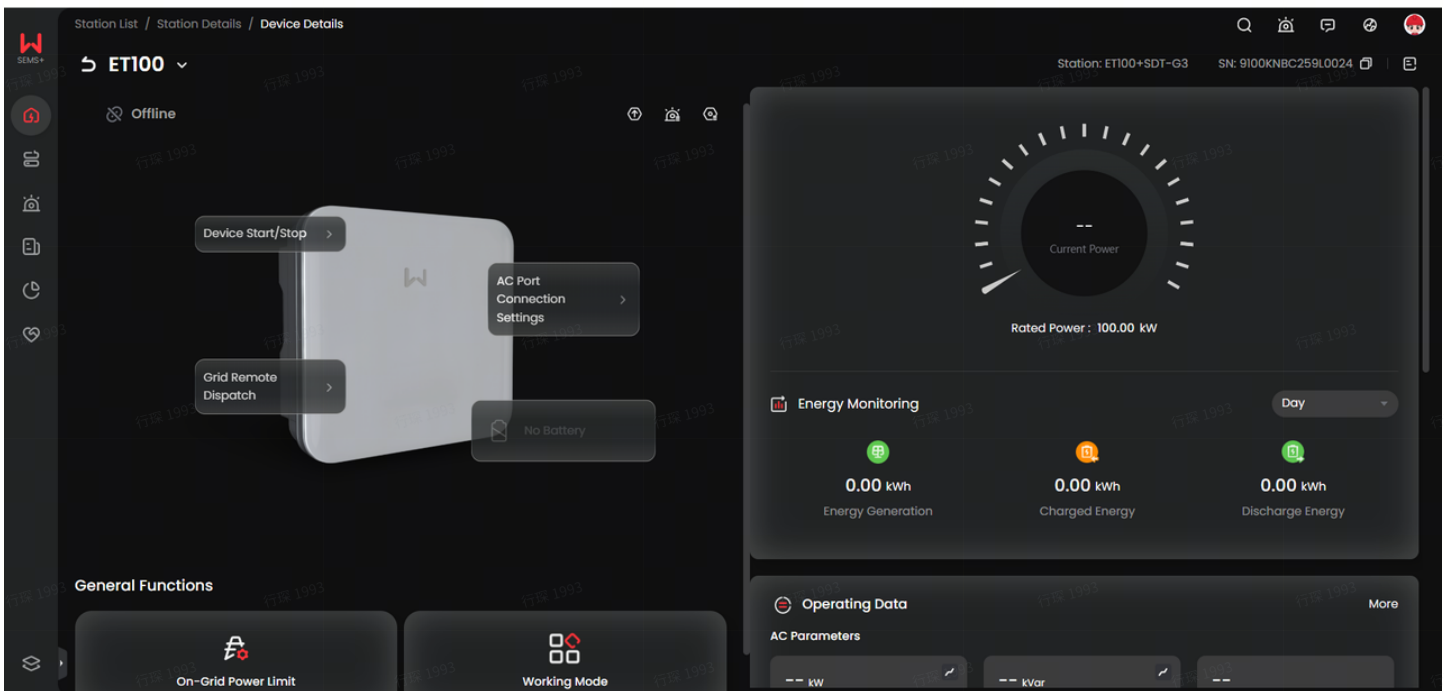
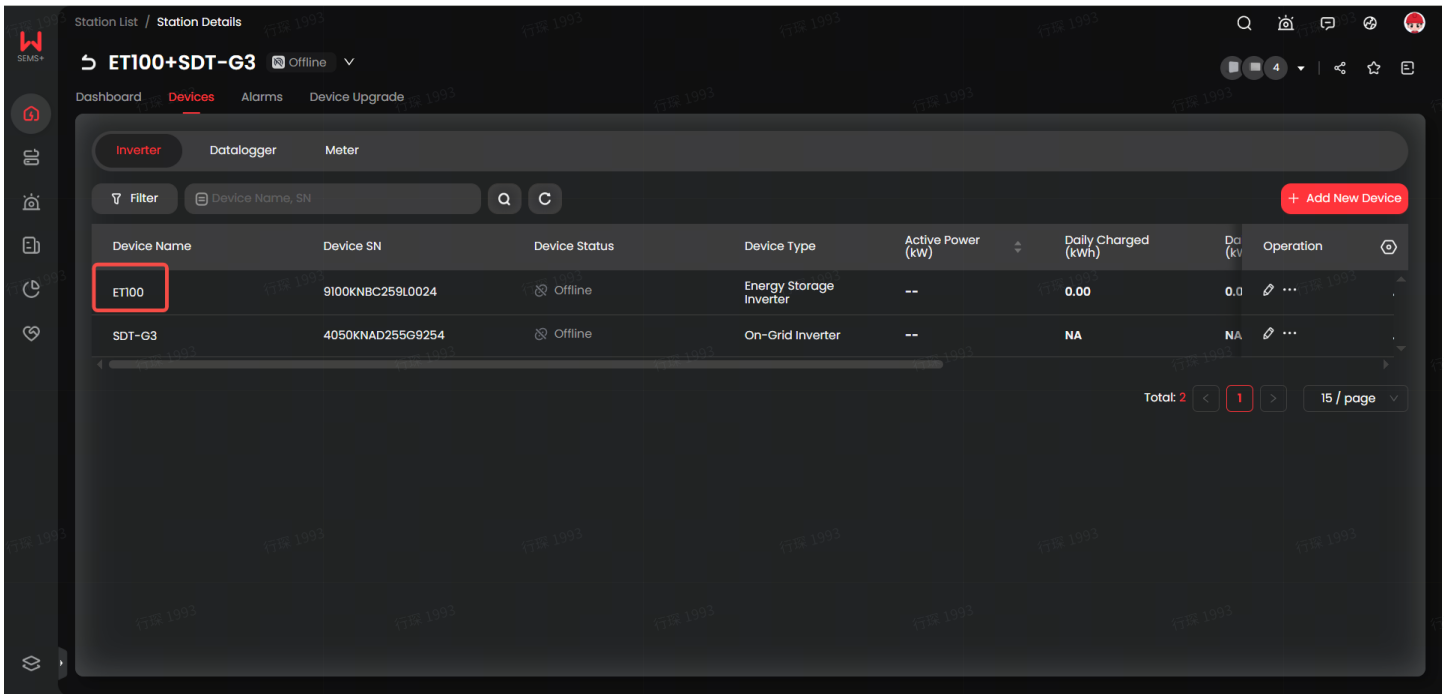
Inverter Datalogger Meter

Filter Device Name, SN

+ Add New Device

Device Name	Device SN	Device Status	Device Type	Active Power (kW)	Daily Charged (kWh)	Dis (kV)	Operation
ET100	9100KNBC259L0024	Offline	Energy Storage Inverter	--	0.00	0.0	...
SDT-G3	4050KNAD255G9254	Offline	On-Grid Inverter	--	NA	NA	...

Total: 2 1 15 / page



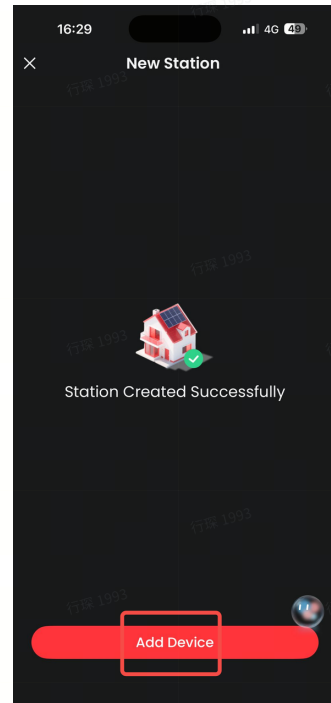
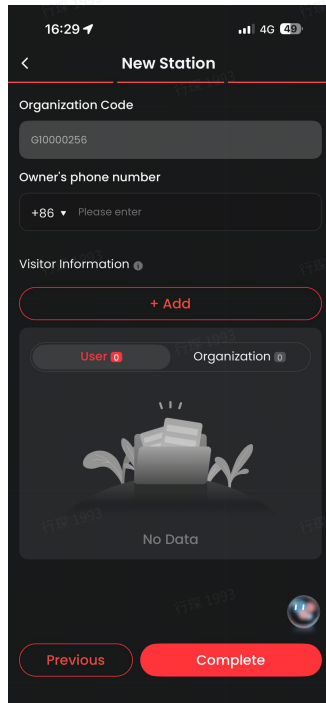
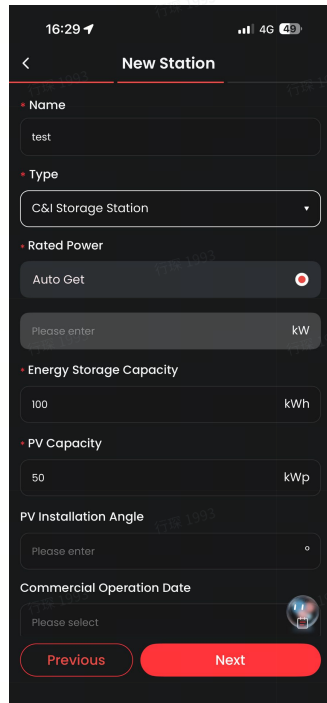
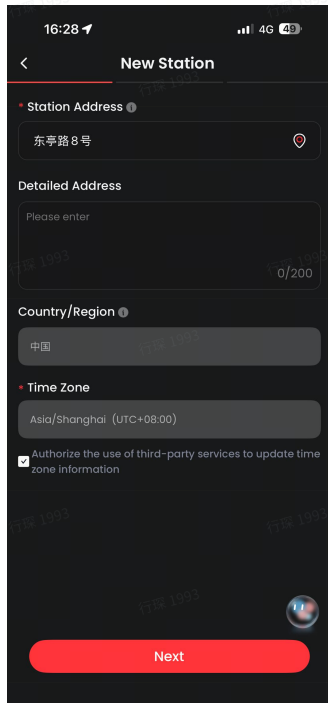
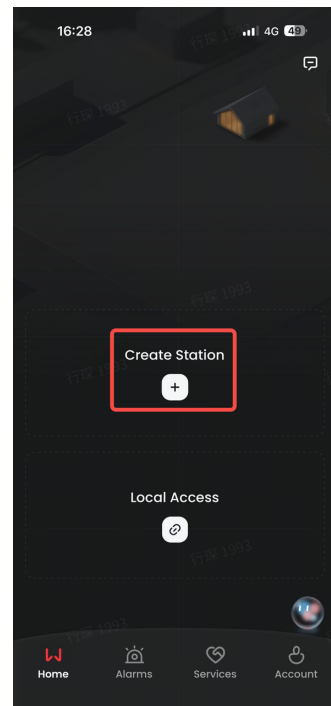
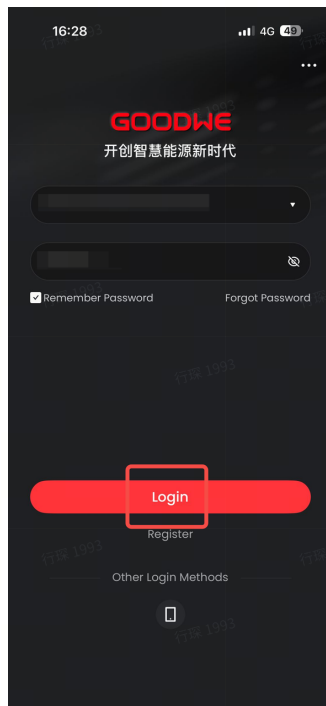
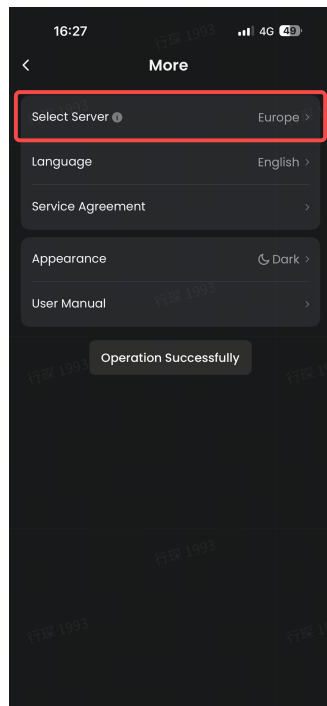
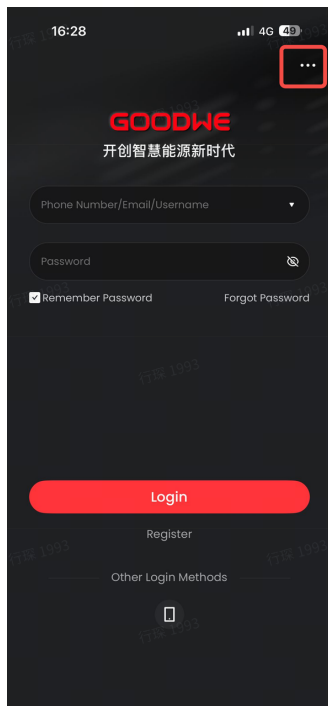
7.1.5 On-grid inverter + energy storage integrated cabinet scenario (ESA 261)

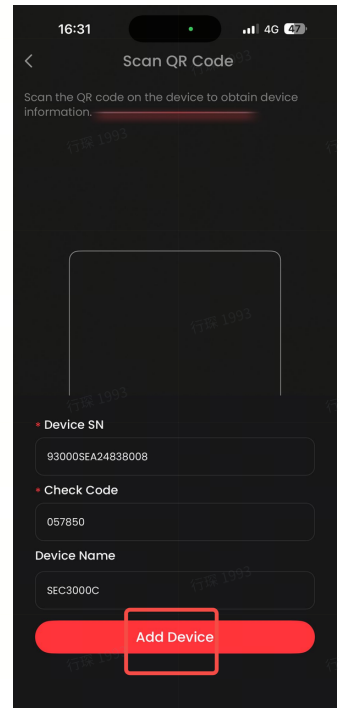
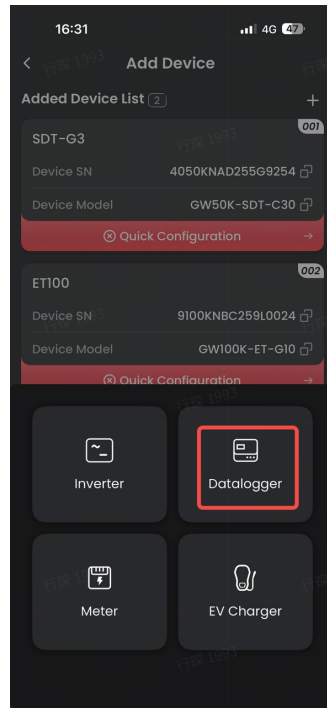
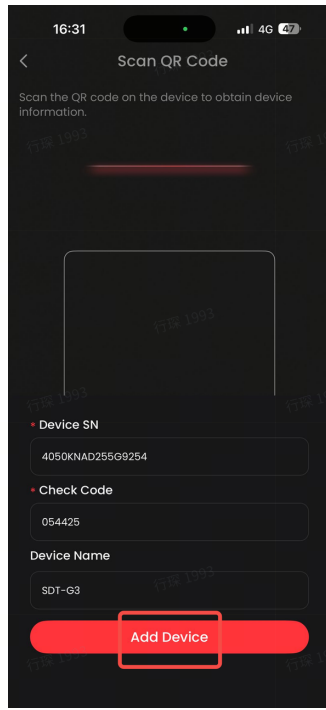
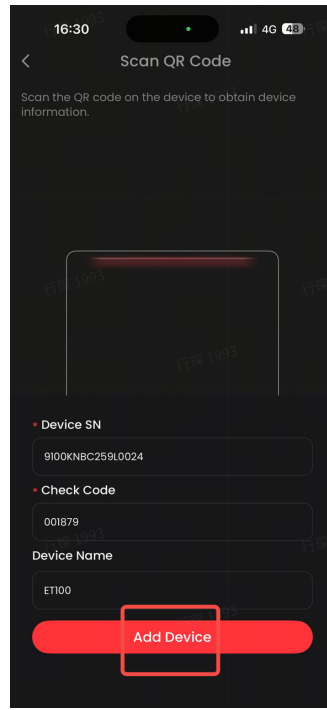
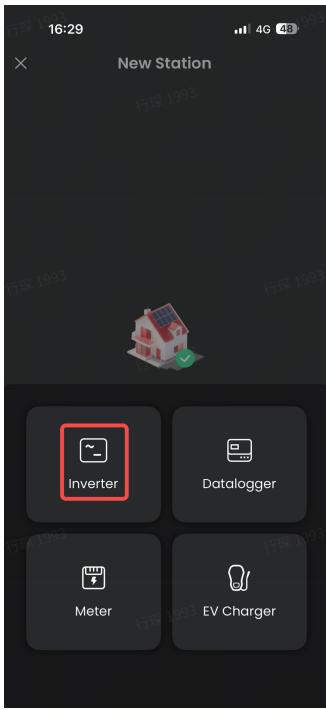
The operating procedure refers to that of the ET100 model

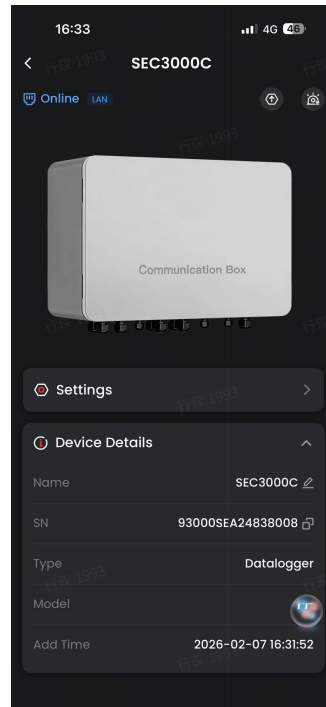
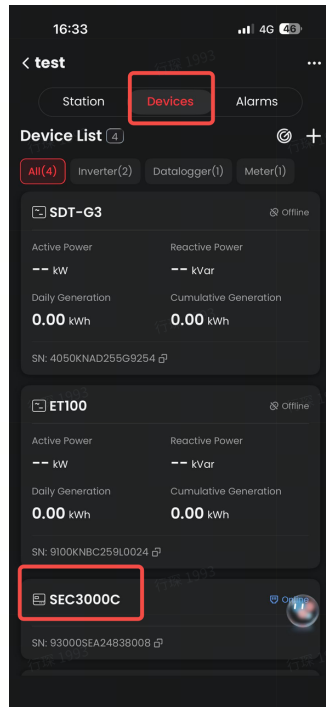
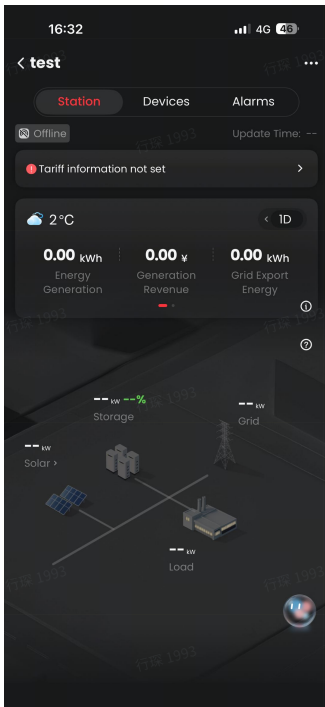
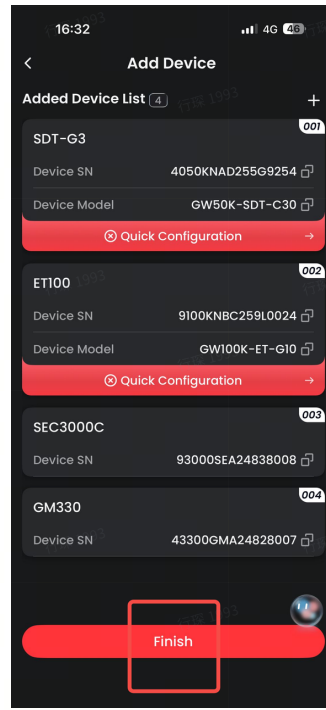
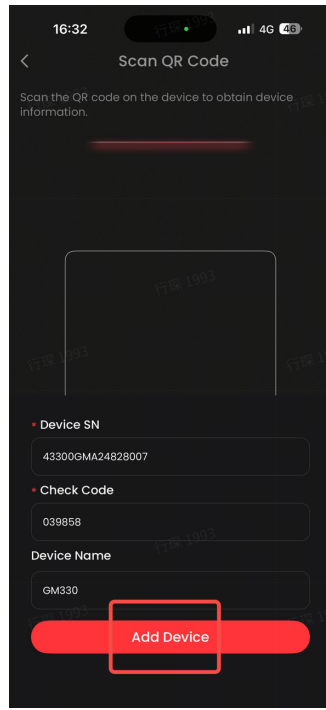
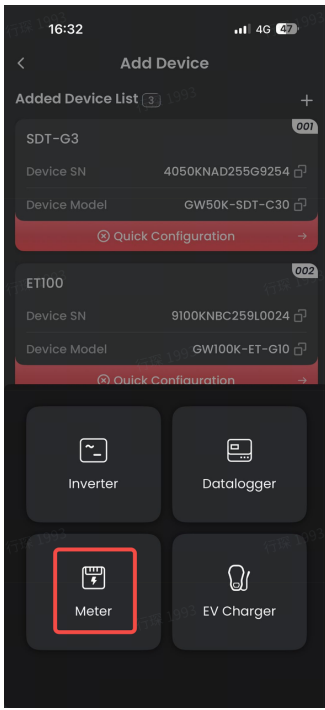
7.2 Xiaogu Cloud Window+ APP Creates Power Station

Download the APP from the app store, log in by entering your username and password to perform website building operations, and after completing the website building, you can view power station information and real-time monitoring.

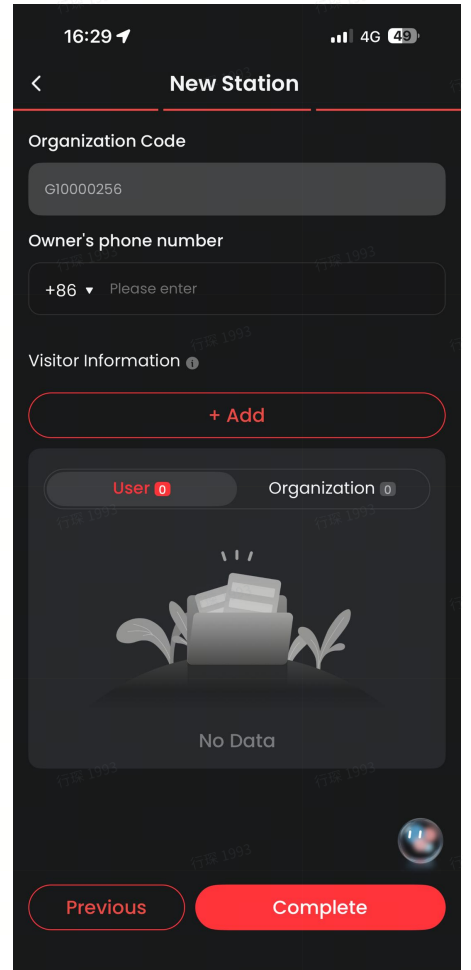
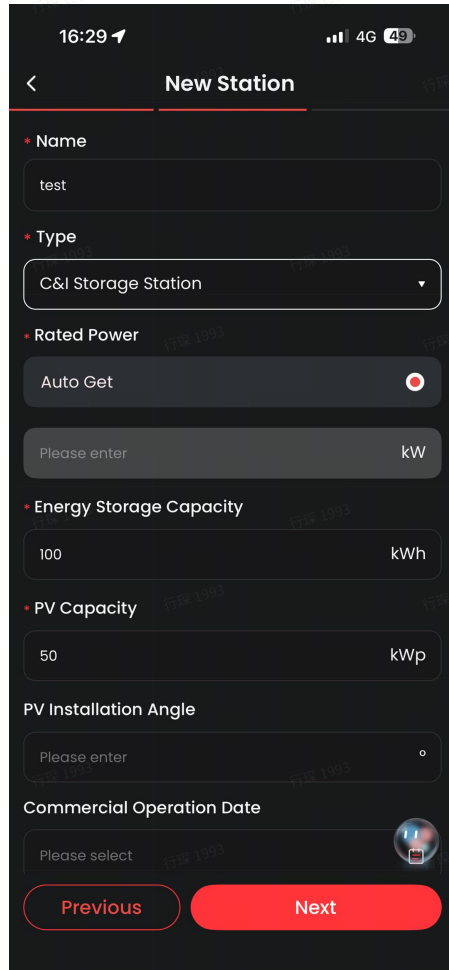
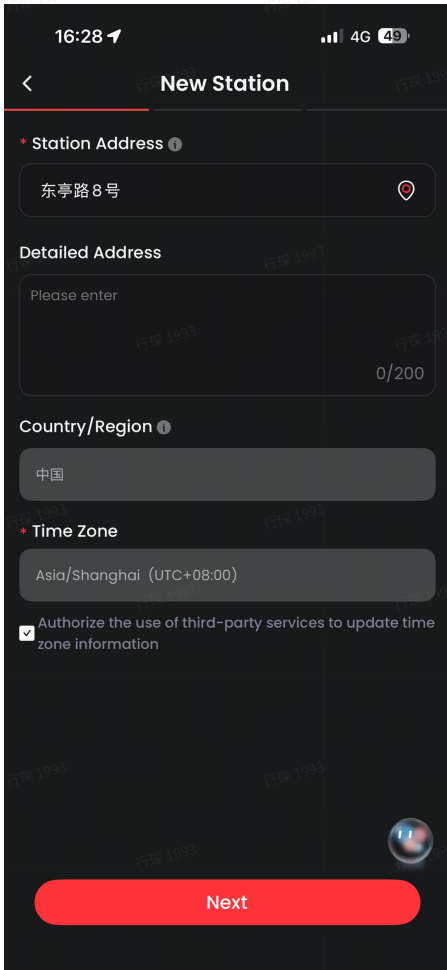
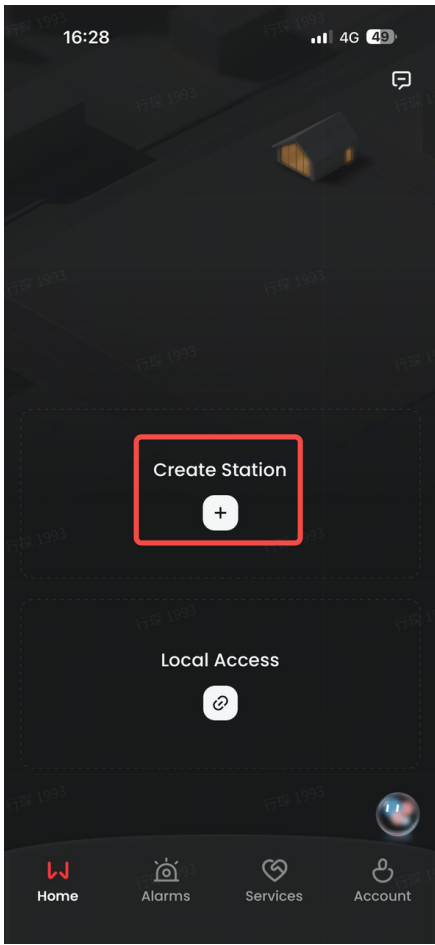
7.2.1 Select the corresponding server and log in to your account





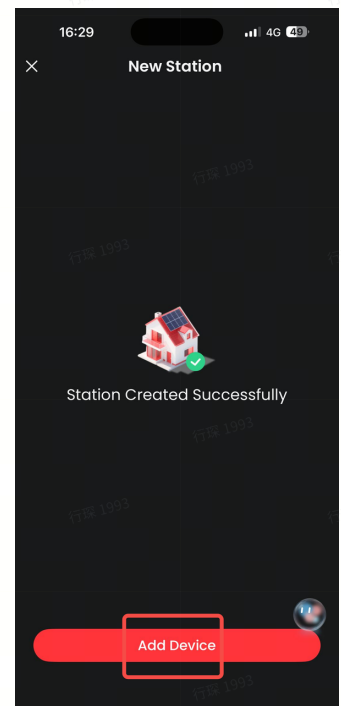
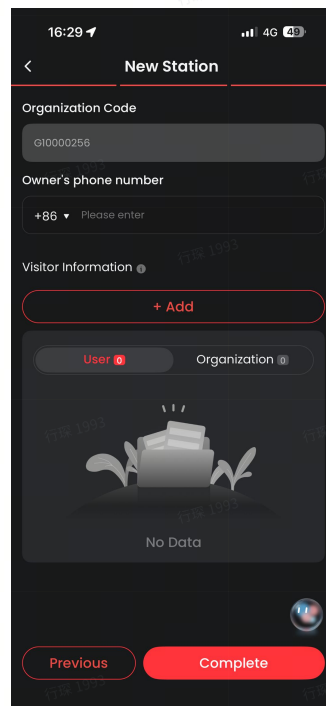
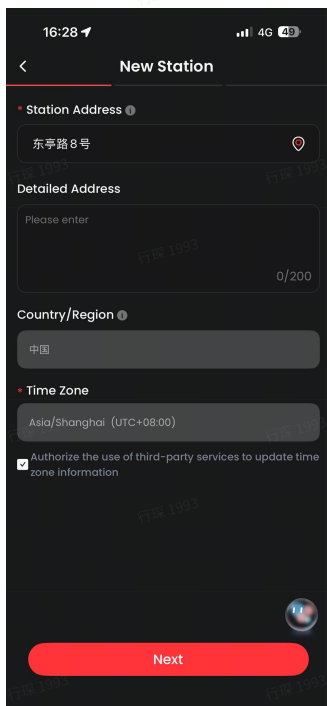
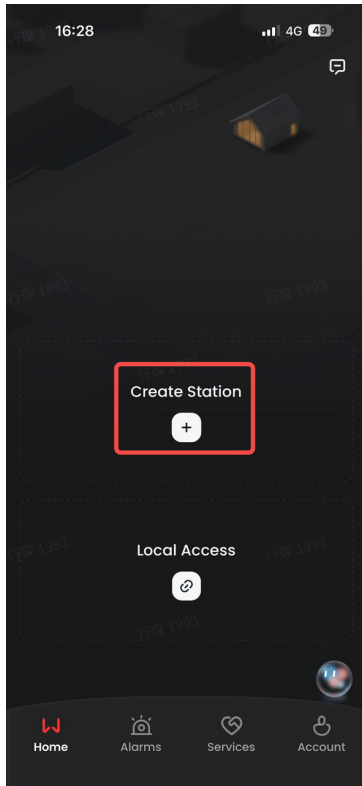


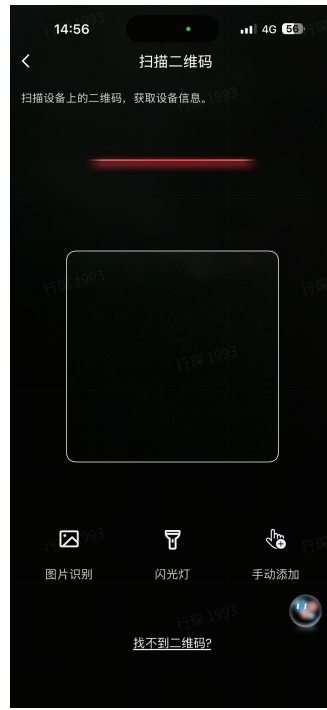
7.2.2 Create a power station and improve its information



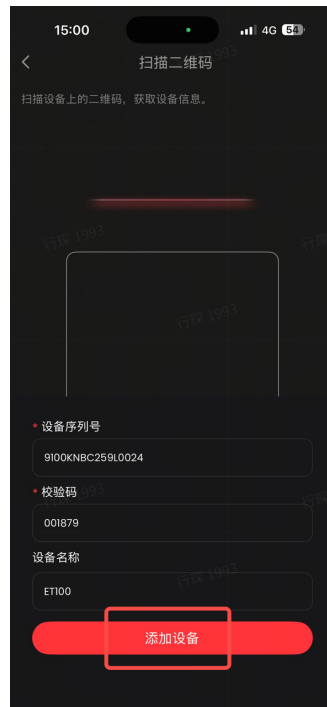
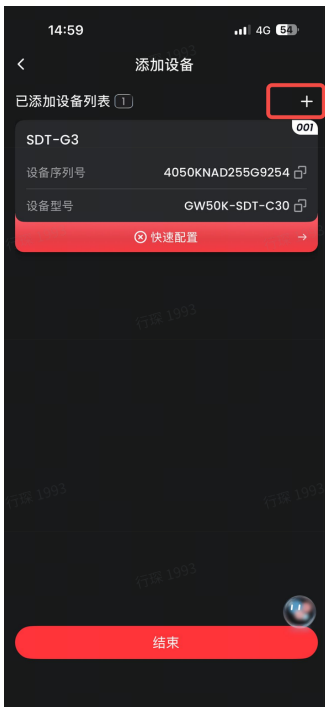
7.2.3 Add Device

Add inverter, grid-connected unit SDT-G3

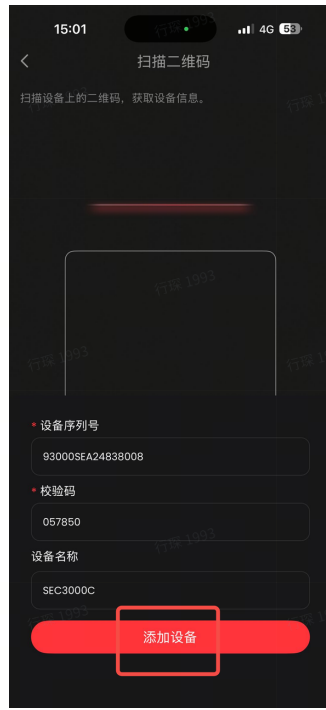




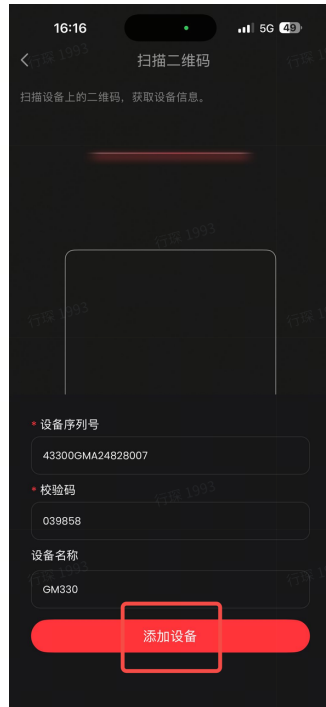
Add inverter, ET100



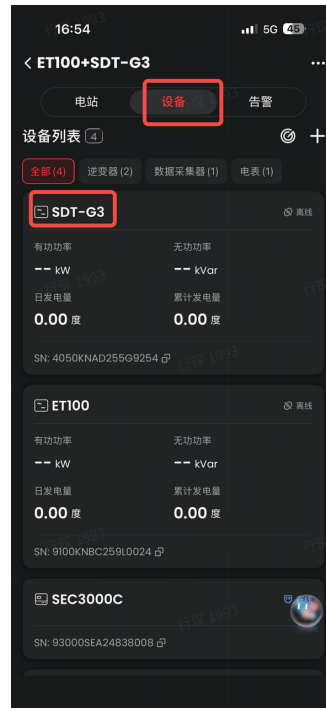
Add Data Acquisition



Add meters, and click "End" after all devices have been added



Power Station Query



7.2.4 On-grid inverter + energy storage integrated cabinet scenario (ESA 261)

The operating procedure refers to that of the ET100 model