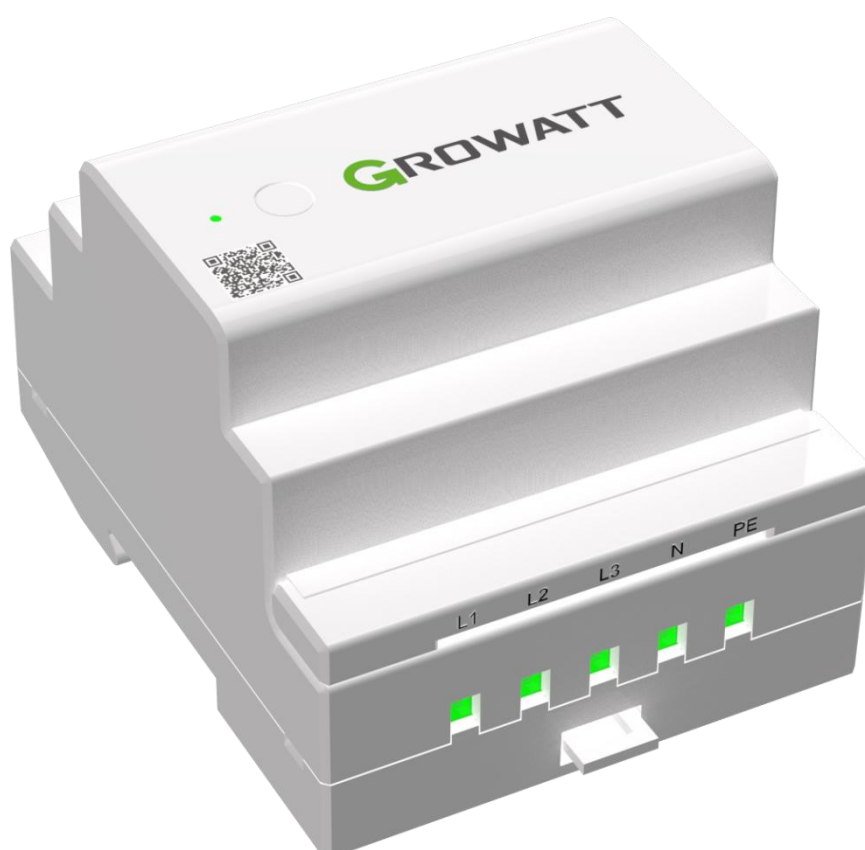




GroHomeManager-X

Configuration Guide

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1 APP Operation Guide

1.1 Initial power-on, check connection status

- 1. Turn on the inverter & turn on the air switch in front of GroHomeManager-X, check the connection status between GroHomeManager-X and ShineRFStick-X2 (only need to watch when ShineRFStick-X2 uses RF connection, if using RS485, please skip the relevant instructions of ShineRFStick-X2).
- 2. When the GroHomeManager-X is initially powered on, the white light is always on, and after waiting for 10 seconds, it converts to a yellow light always on
- 3. ShineRFStick-X2 is always on when the white light is on, and after waiting for 30 seconds, it converts to always on when the red light is on, and when it is successfully connected to the photovoltaic equipment, The blue light remains on constantly.

GroHomeManager-X Indicator light status	GroHomeManager-X Working state
Steady White	1. Initializing, please wait patiently 2. Restore factory default settings (long press button 6S to take effect)
Steady Yellow	In Bluetooth mode, please continue to follow the APP instructions for networking/sub device addition process. If networking/sub device addition process is not required, please click the button to exit this mode
Yellow Flashing Slowly	RF pairing mode , please continue to follow the APP instructions to add sub devices, without RF pairing, double-click the button to exit pairing mode
Yellow Flashing	It is in Bluetooth local upgrade mode. Please wait patiently for the upgrade to complete.
Steady Red	Not connected to router, not connected to photovoltaic equipment/RF sub devices, please continue to follow the APP instructions for networking and sub-device addition process

Steady Green	The photovoltaic equipment/RF sub-device is not connected, please continue with the sub-device addition process according to the APP instructions
Green Flashing	The link to the photovoltaic equipment or RF sub-equipment is abnormal, please check whether the RS485 wiring method is correct, or check the ShineRFStick-X2 indicator light to determine the abnormal situation.
Steady Blue	Connected router, not connected server, connected photovoltaic equipment/RF sub-device 1. Check if the router can access the internet 2.Does the router restrict the server and port number? The datalogger needs to use port 7006
Blue Flashing	Unable to connect router, connected photovoltaic equipment/RF sub-device 1. WiFi wireless connection method (1)Check if the router account password filled in during the configuration process is correct (2)Check the router: a)The wireless name of the router should be composed of English and numbers, and special characters are not supported : (""...·€¥) b)For security reasons, please use an encrypted wireless network c)Networks that do not support secondary authentication and bridged wireless signals 2. LAN wired connection method (1)Ethernet cable not connected (2)Restart the router and confirm that the router's automatic IP allocation function is available (3)If a static IP Address is used, determine whether the IP Address is consistent with the router setting network segment

Blue Flashing Slowly	Connected router, connected server, connected photovoltaic/RF sub-device, in normal working mode, slow flash times represent the number of connections of the device
Attention: 1. When the initial network configuration is made, the device will automatically enter Bluetooth mode. 2. When Bluetooth is turned on, there is no data interaction with the APP, and Bluetooth will be automatically turned off after 30Min 3. When a single device is connected, the slow flash frequency is 1S, and the fast flash frequency is 0.5S. When multiple devices are connected, the number of flashes during slow flash represents the number of PV/RF slave devices connected 4. When the Bluetooth mode is turned on, the indicator light prioritizes displaying the yellow light and is always on. Please check the network/sub-device configuration in the APP. If you need to view GroHome device information through the indicator light, click the button to exit the Bluetooth mode	

Table 17 GroHomeManager-X Indicator light working status description

ShineRFStick-X2 Indicator light status	ShineRFStick-X2 Working state
Steady White	1.Initializing, please wait patiently for 30S. 2.Restore factory default settings (long press button 6S to take effect)
Steady Yellow	In Bluetooth mode, please click the button to exit this mode
Yellow Flashing Slowly	RF pairing mode, please follow the APP instructions of the RF host to add the device, no pairing is required, double-click the bottom button to exit pairing mode
Yellow Flashing	It is in upgrade mode. Please wait patiently for the upgrade to complete.
Steady Red	If the RF host is not connected and the photovoltaic device is not connected, please continue to follow the APP instructions of the RF host to add the device

Steady Green	If the photovoltaic equipment is not connected, please check whether the datalogger and inverter are connected normally. If the phenomenon persists after repeated plugging and unplugging, please contact Growatt customer service
Steady Blue	If no RF host is configured, perform RF pairing according to the host RF pairing process
Blue Flashing	Unable to connect to RF host, connected photovoltaic equipment/RF equipment 1. Please check if the host is powered on/online 2. Please check whether the leader/follower is within the recommended distance range 3. Please check whether the host antenna is damaged 4. If it appears repeatedly, please contact Growatt customer service
Blue Flashing Slowly	Connected to RF host, connected to photovoltaic equipment/RF equipment, in normal working mode
Attention: 1. Slow flash frequency 1S, flash frequency 0.5S	

Table 18 ShineRFStick-X2 Indicator light working status description

1.2 Download the ShinePhone app

Scan the QR code below to download ShinePhone, or search for ShinePhone to download the app in Apple Store or Google Play.



【ShinePhone APP】

1.3 User registration

- 1.Run the ShinePhone mobile app and enter the registration page
- 2.Fill in the registration information and click Register (country or region, please select accurate information).

Two screenshots of the ShinePhone app registration process. The left screenshot shows the 'Register' page with fields for Country or region (set to United States), Username, Password, Repeat password, Phone number, Email address, Verification code, and Installer code. A red box highlights the 'Register' button at the bottom. The right screenshot shows the 'Register' page with fields for Country or region (set to United States), Username, Password, Repeat password, Phone number, Email address, Verification code, and Installer code. A red box highlights the 'Register' button at the bottom. Both screenshots show a blue hand icon pointing to the 'Register' button.

1.4 Add/Create Power Station

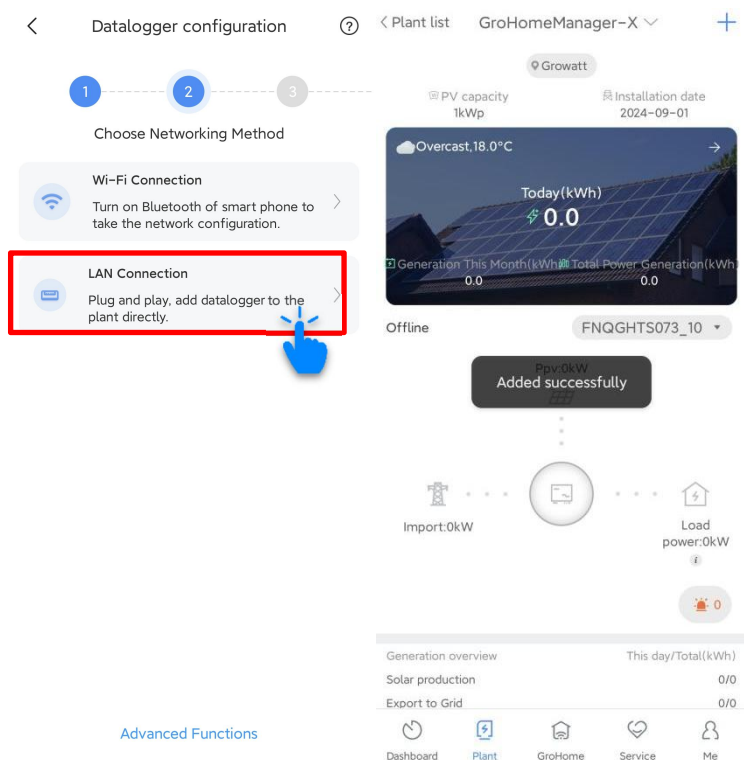
- 1. Enter the add power station page (the first registration will automatically pop up, please click the + sign on the power station page to add the power station later).
- 2. Fill in the power station information
- 3. Click Add Station

1.5 Add GroHomeManager-X to the power station.

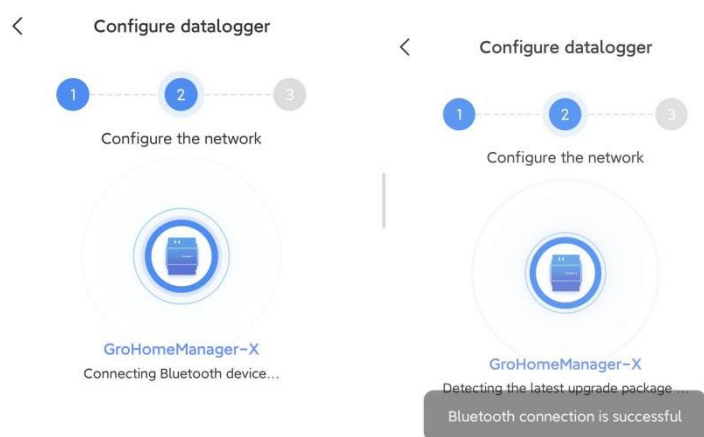
- 1. On the power station page, click "+" to add datalogger (WiFi/GPRS, etc.), and you will enter the page of adding datalogger.
- 2. Scan Serial Number or manually enter Serial Number and Check Code

1.6 Network Configuration - LAN Connection

- 1.Click LAN Connection in Select Network Mode (no network configuration required, directly add to the power station). Remember to plug the network cable into GroHomeManager-X.



- 2.Enter the Bluetooth search mode. The GrHomeManager-X indicator is steady yellow, indicating that Bluetooth is enabled. If Bluetooth is off, press the GroHomeManager-X body key to enable Bluetooth and continue to configure the network.

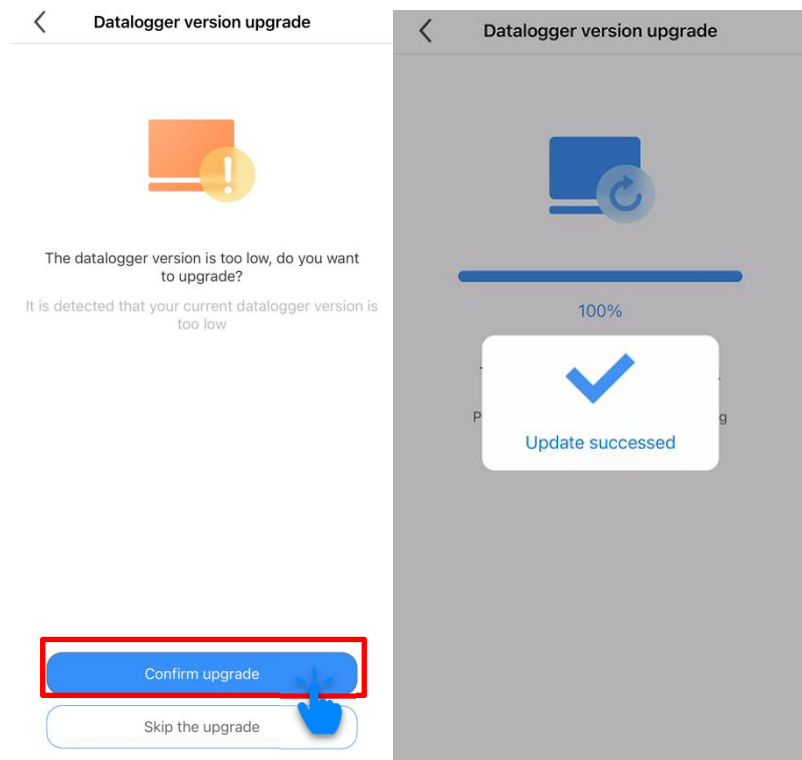


- 3.Datalogger firmware upgrade (only when the datalogger firmware version needs to be updated)

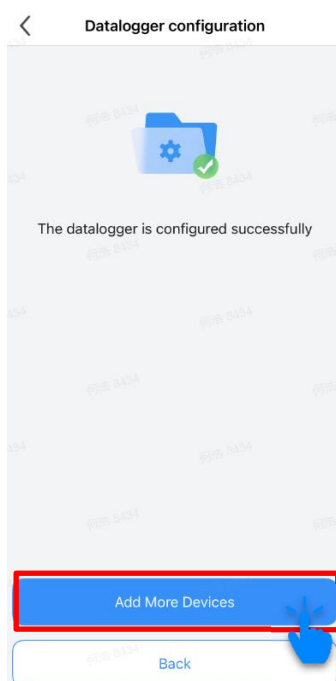
Step 01: Please choose whether to upgrade the datalogger version

Step 02: If you select "Confirm Upgrade", please wait for about 10 minutes. The datalogger will automatically restart after the upgrade is completed

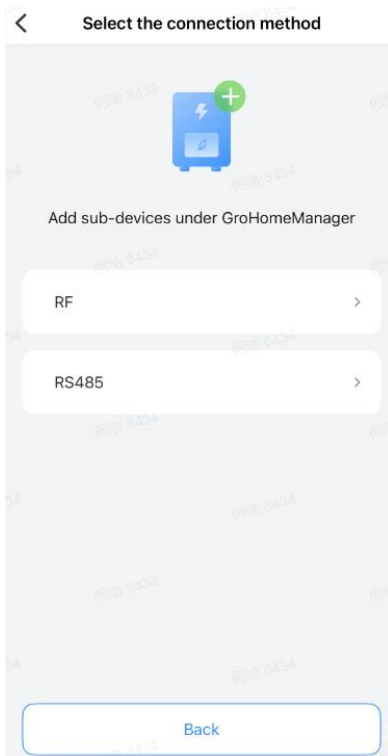
Step 03: After the datalogger automatically restarts, reconnect to the datalogger Bluetooth



- 4. After configuration, an interface for adding More Devices will appear. If you need to Add RF/RS485 sub-devices, please click "Add More Devices". If no devices need to be added, click "Back" to return to the power station page.

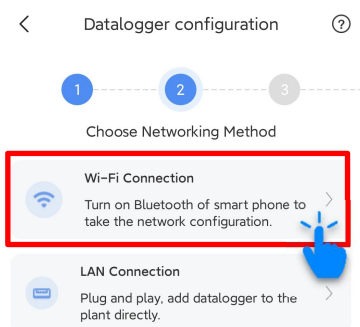


- 5. After clicking "Add More Devices", you need to select the device connection method RF/RS485 that you need to add. For details on the device connection process, Please see "RF device Pairing-directional pairing" and "RS485 device addition"



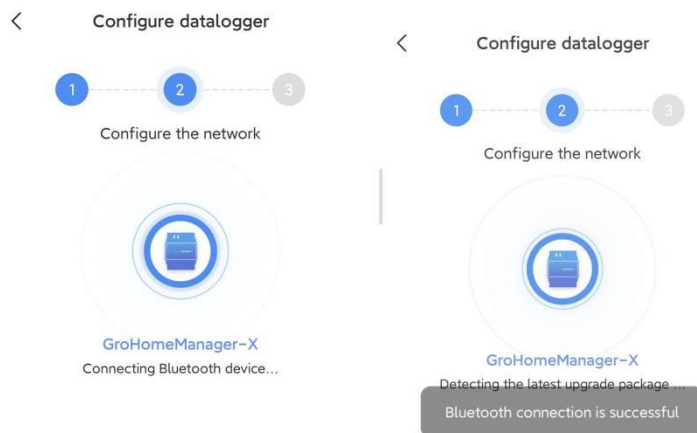
1.7 Network Configuration - WiFi Connection

- 1. Click WiFi Connection in Select Network Mode



[Advanced Functions](#)

- 2. Enter the Bluetooth search mode. The GrHomeManager-X indicator is steady yellow, indicating that Bluetooth is enabled. If Bluetooth is off, press the GroHomeManager-X body key to enable Bluetooth and continue to configure the network.

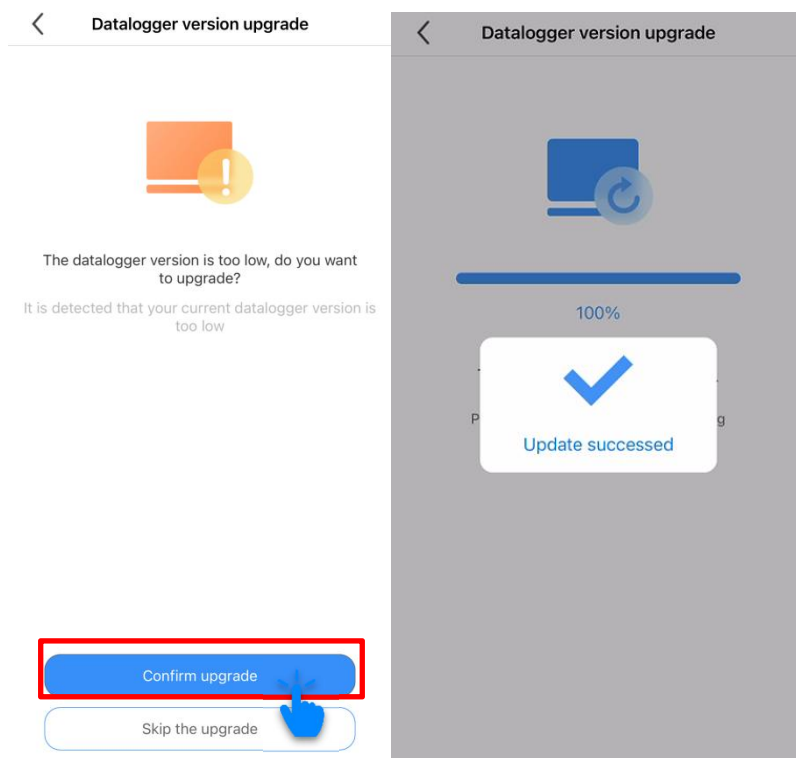


- 3. Datalogger firmware upgrade (only when the datalogger firmware version needs to be updated)

Step 01: Please choose whether to upgrade the datalogger version

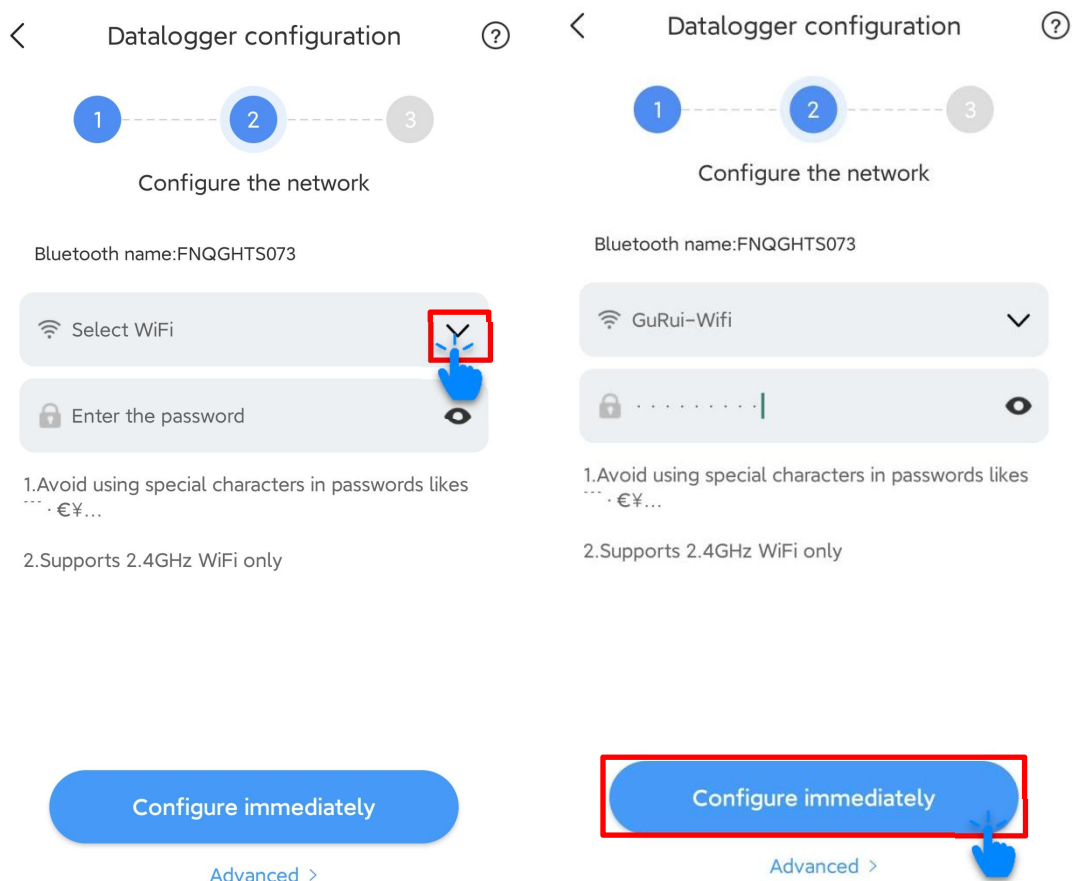
Step 02: If you select "Confirm Upgrade", please wait for about 10 minutes. The datalogger will automatically restart after the upgrade is completed

Step 03: After the datalogger automatically restarts, reconnect to the datalogger Bluetooth

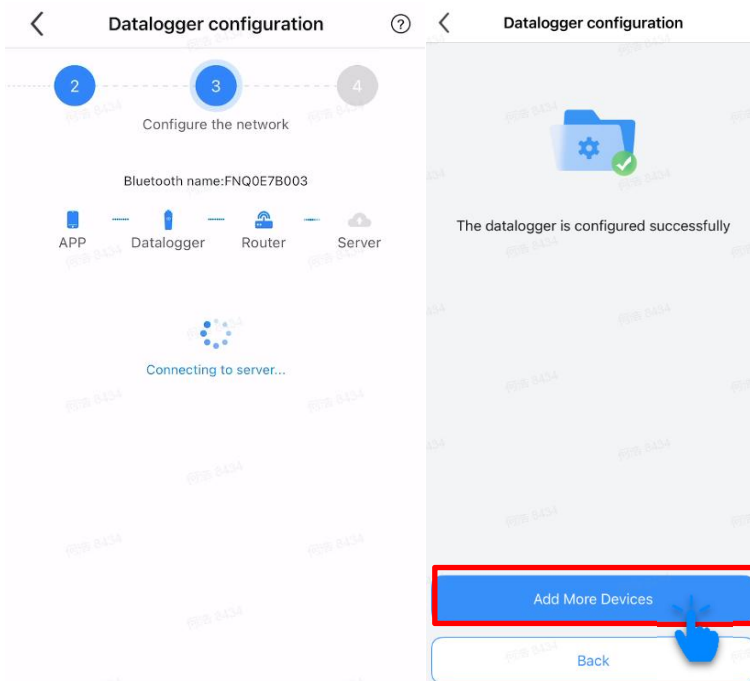


➤ 4.Connect to the home router and configure the network

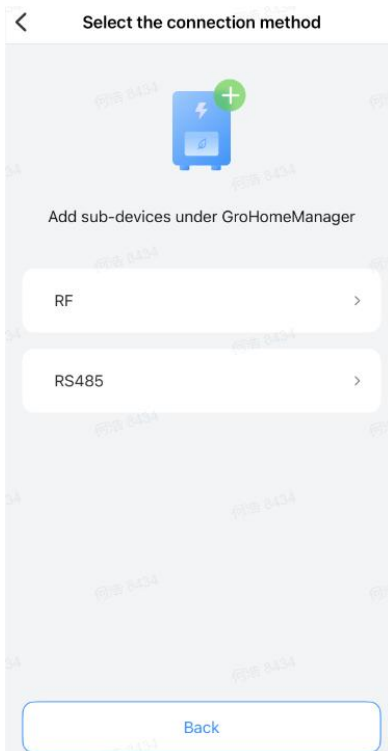
Step 01: After the Bluetooth connection is successful, enter the settings interface, select the home router to connect to, and enter the password



- 5. After configuration, an interface for adding More Devices will appear. If you need to Add RF/RS485 sub-devices, please click "Add More Devices". If no devices need to be added, click "Back" to return to the power station page.



- 6. After clicking "Add More Devices", you need to select the device connection method RF/RS485 that you need to add. For details on the device connection process, Please see "RF device Pairing-directional pairing" and "RS485 device addition"



1.8 RF Device Pairing - Omnidirectional Pairing

- 1.RF starts RF pairing mode from the device .

①ShineRFStick-X2: Double-click the bottom button, the indicator light flashes yellow



- ②GroBoost-X: Long press the Home button, L3 light flashes



③EVCharge: Press the side wall button 3 times within 3 seconds. Indicator blinking yellow (the pairing success buzzer buzzes)



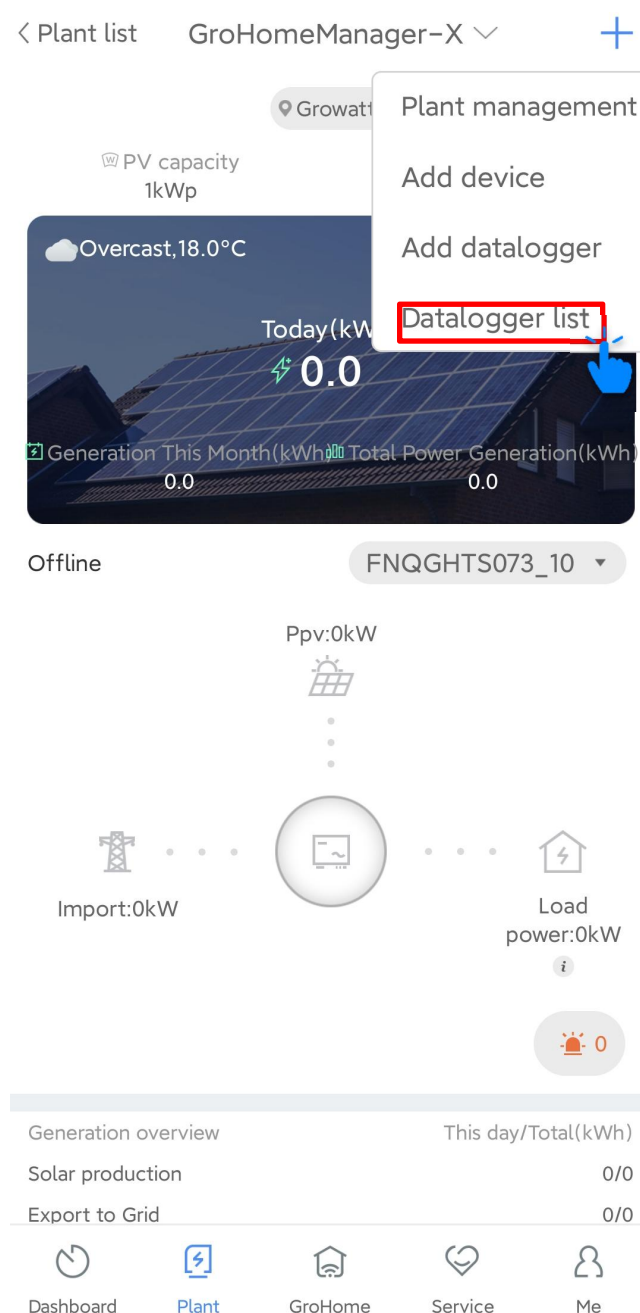
④NEO:Switch AC twice, recommended switching AC time 5S(factory default RF pairing)

➤ 2.GroHomeManager-X enables RF pairing mode

Double-click the top button, turn on the RF pairing mode in the slow flashing yellow light state, automatically start scanning the surrounding RF slave devices and actively add them, and the time is about 2Min.

➤ 3.GroHomeManager-X can be viewed in the device list after adding RF from the device

Step 01: On the power station page, click the "+" datalogger list to enter the datalogger list interface.



Step 02: According to the serial number displayed by GroHomeManager-X, select the datalogger with the corresponding serial number and click "Device List".



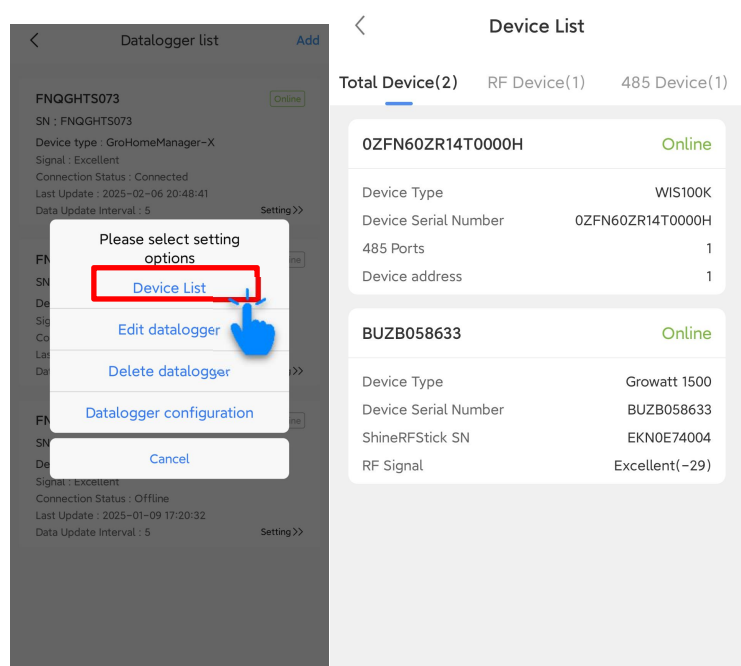
Step 03: The interface mainly has the following functions. This time, we need to view the paired devices. We select the device list to view the currently connected devices

A. Device List - View paired devices

B. Edit datalogger - Alias datalogger

C. Delete datalogger - the datalogger is removed from this station and can be added again in another station

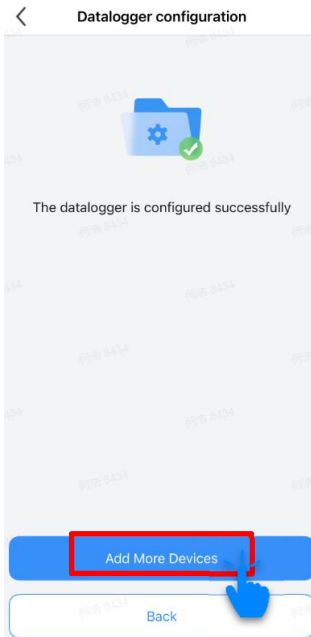
D. Datalogger configuration - reconfigure the datalogger's network and enter the advanced settings interface



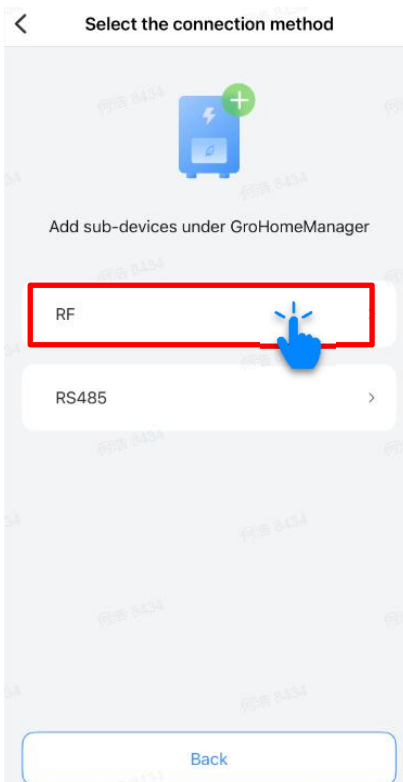
1.9 RF device pairing - directional pairing

1.9.1 Method One: Network configuration successful - Device addition interface

- 1. After the configuration is completed, the system pops up an interface for adding More Devices. Please click "Add More Devices".



- 2. After clicking "Add More Devices", you need to select the connection method RF of the devices you want to add.



- 3.RF device addition can scan/input device serial numbers. When adding RF devices, the RF slave device needs to be in paired mode. After scanning, it appears in the list of devices to be added, and multiple devices can be added at the same time.

The following is a guide for RF slave devices to open pairing mode:

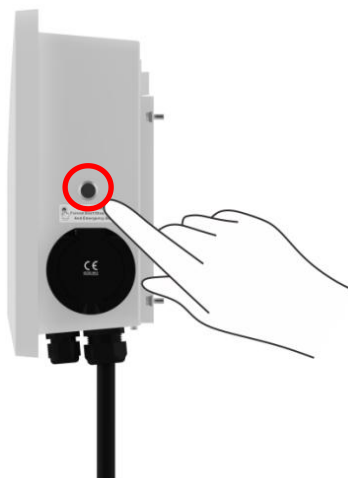
①ShineRFStick-X2: Double-click the bottom button, the indicator light flashes yellow



②GroBoost-X: Long press the Home button, L3 light flashes

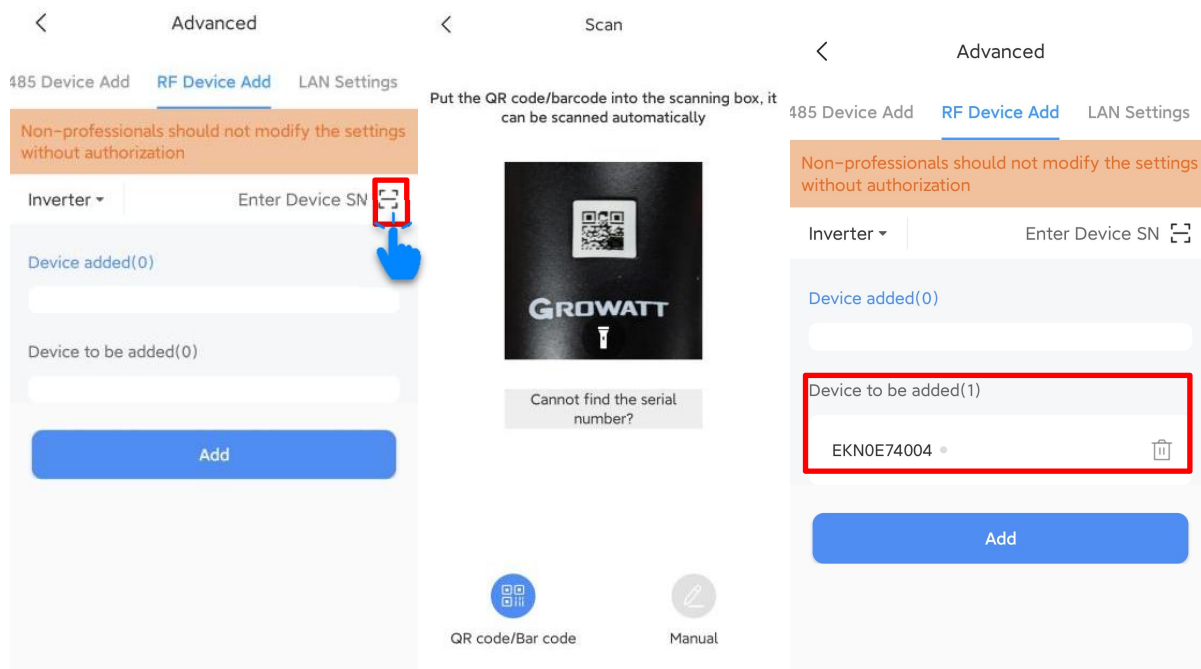


③EVCharge: Press the side wall button 3 times within 3 seconds. Indicator blinking yellow (the pairing success buzzer buzzes)

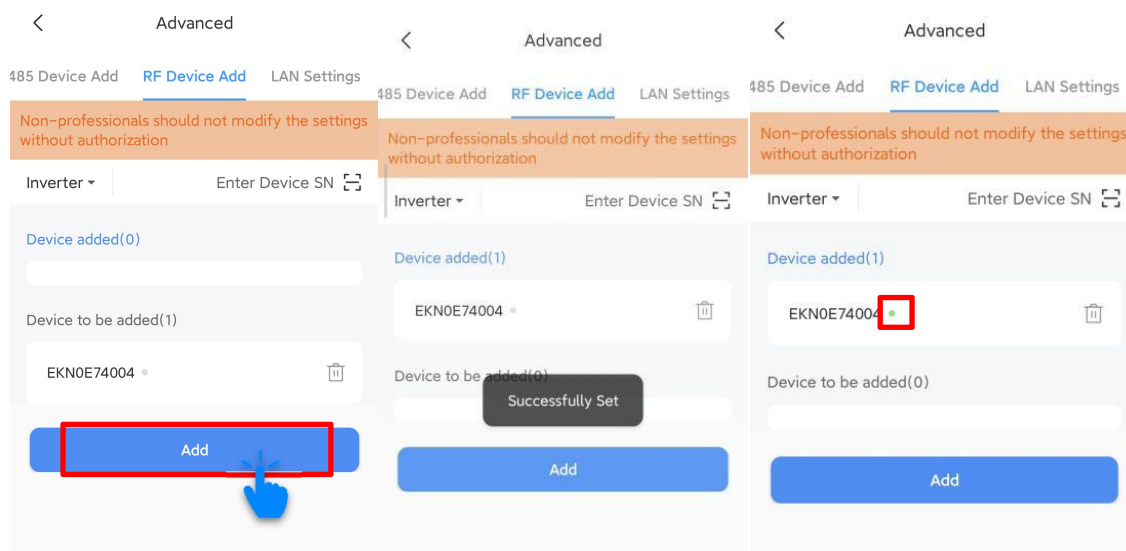


④NEO: Switch AC twice, recommended switching AC time 5S(factory default RF pairing)

The following figure shows the device for adding scanning ShineRFStick-X2. For other models, please refer to the corresponding product QR code.



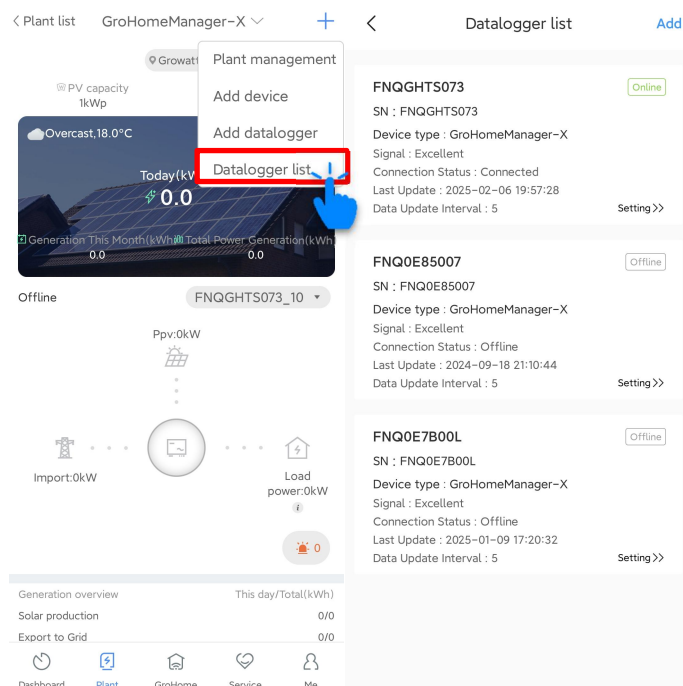
- 4. Click the Add button, GroHomeManager-X will actively pair with the RF slave device. After the pairing is successful, the added device will show a green dot always on.



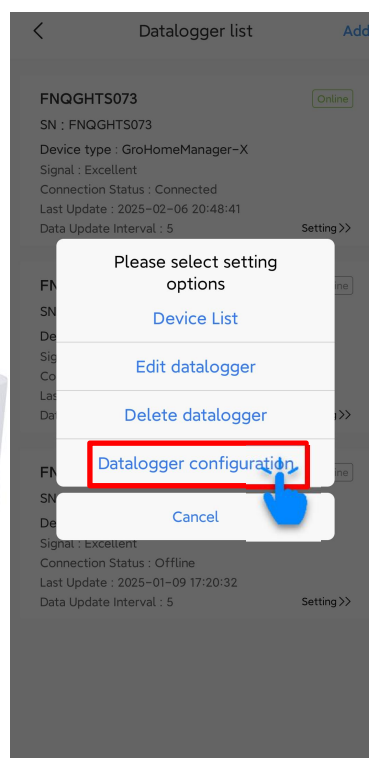
1.9.2 Method Two: Advanced Settings - Device Addition Interface

➤ 1. Enter the advanced settings interface

Step 01: On the power station page, click the "+" datalogger list to enter the datalogger list interface.



Step 02: Select the datalogger corresponding to the serial number displayed by GroHomeManager-X



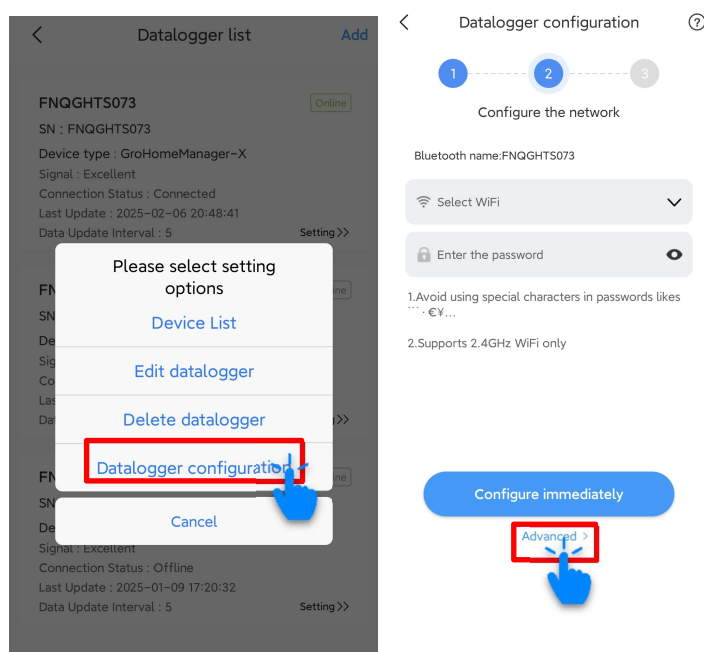
Step 03: To enter the advanced settings, you need to press the button to turn on the Bluetooth mode of GroHomeManager-X. The Bluetooth mode indicator light is yellow and always on. The interface mainly has the following functions. This time, we choose to configure the datalogger in the advanced settings interface

A.Device List - View paired devices

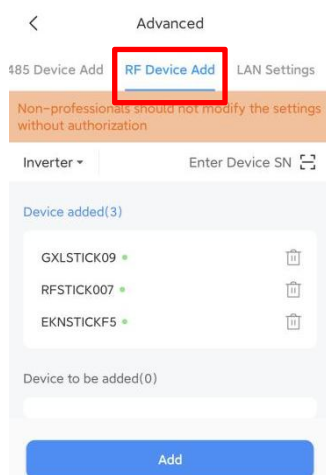
B.Edit datalogger - Alias datalogger

C.Delete datalogger - the datalogger is removed from this station and can be added again in another station

D.Datalogger configuration - reconfigure the datalogger's network and enter the advanced settings interface



➤ 2.Advanced Settings Interface Select RF Device Add



- 3.RF device addition can scan/input device serial numbers. When adding RF devices, the RF slave device needs to be in paired mode. After scanning, it appears in the list of devices to be added, and multiple devices can be added at the same time.

The following is a guide for RF slave devices to open pairing mode:

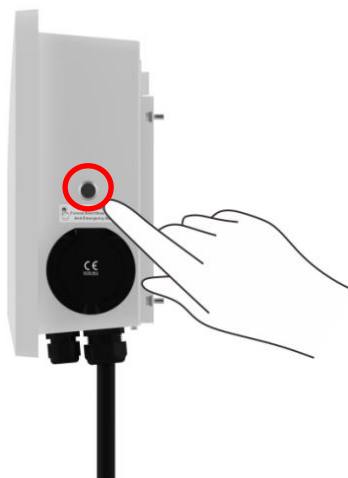
①ShineRFStick-X2: Double-click the bottom button, the indicator light flashes yellow



②GroBoost-X: Long press the Home button, L3 light flashes

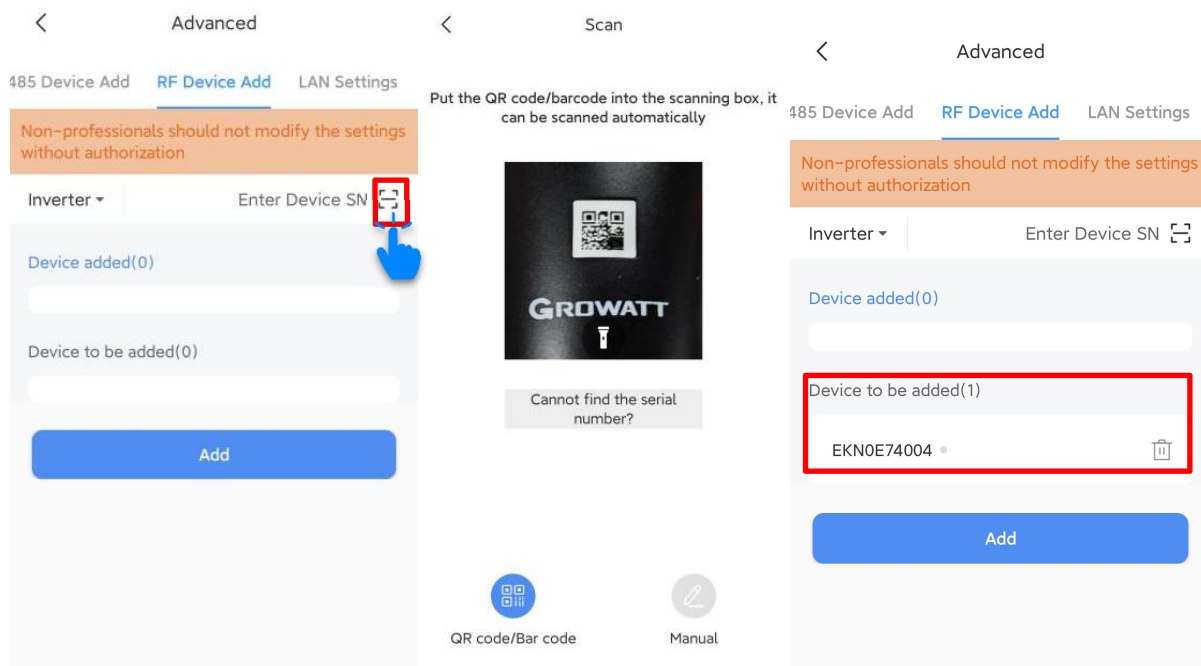


③EVCharge: Press the side wall button 3 times within 3 seconds. Indicator blinking yellow (The buzzer sounds when the pairing is successful)

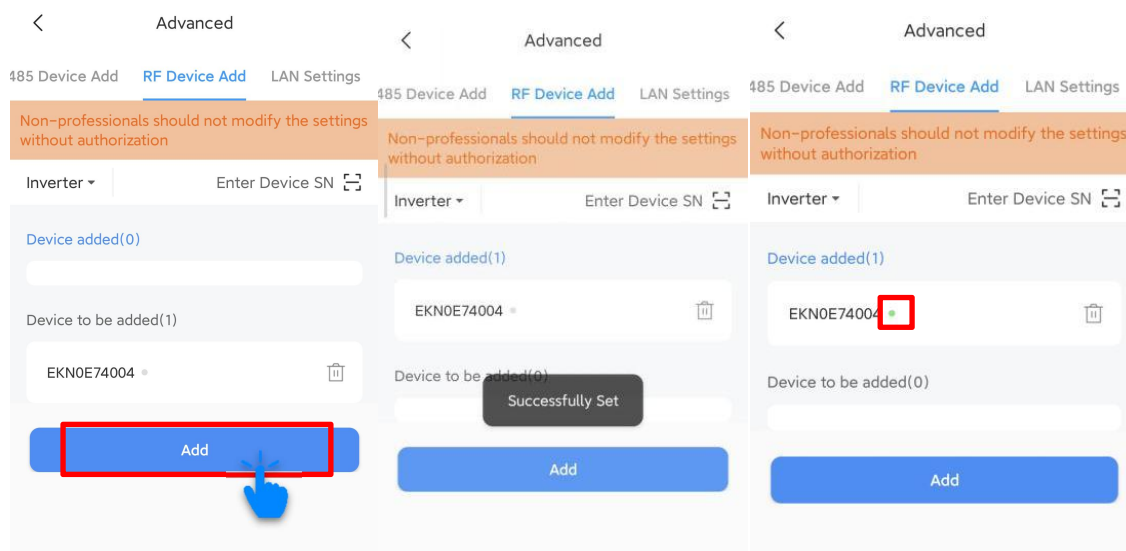


④NEO: Switch AC twice, recommended switching AC time 5S(factory default RF pairing)

The following figure shows the device for adding scanning ShineRFStick-X2. For other models, please refer to the corresponding product QR code.



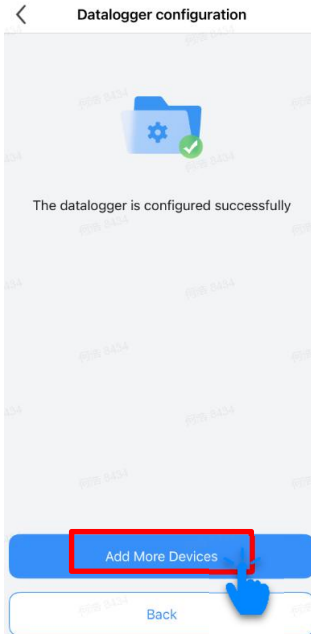
- 4. Click the Add button, GroHomeManager-X will actively pair with the RF slave device. After the pairing is successful, the added device will show a green dot always on.



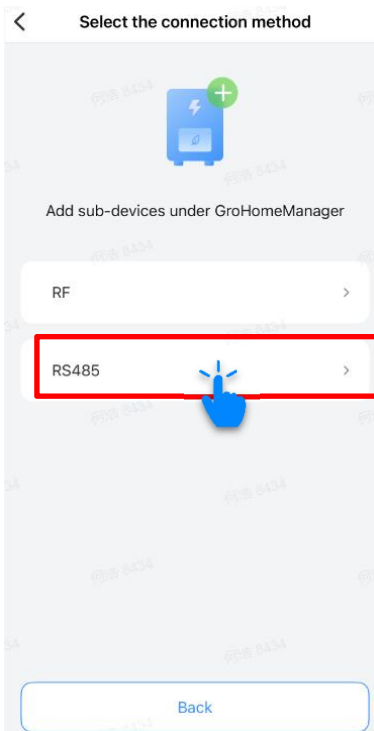
1.10 RS485 device addition

1.10.1 Method One: Network configuration successful - Device addition interface

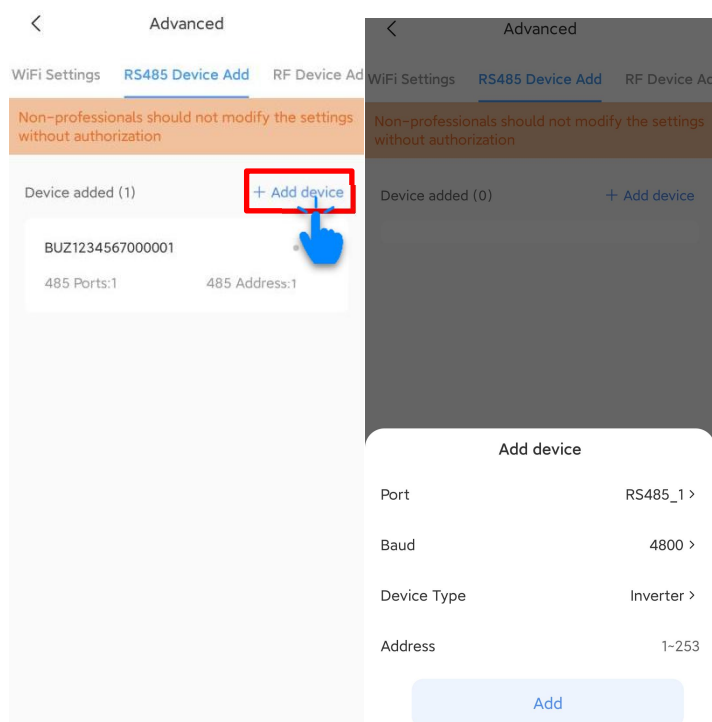
- 1. After the configuration is completed, the system pops up an interface for adding More Devices. Please click "Add More Devices".



- 2. After clicking "Add More Devices", you need to select the connection method RS485 of the devices you want to add.

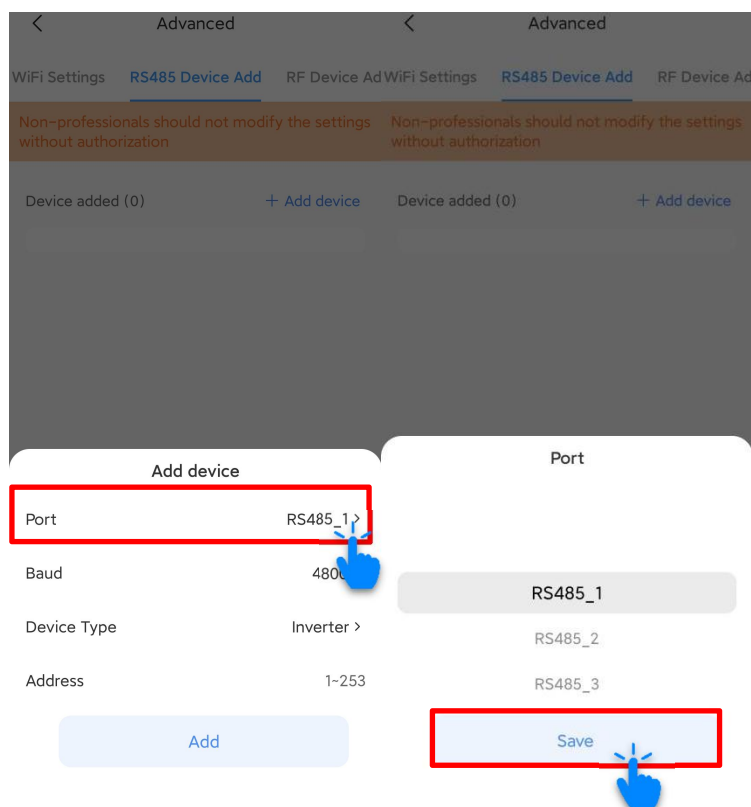


➤ 3. Select RS485 parameter settings in the advanced settings interface

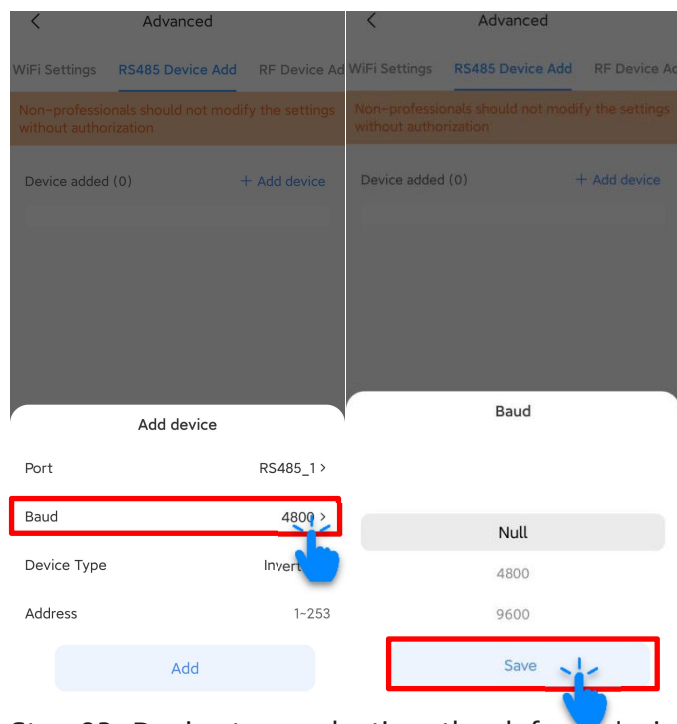


➤ 4. Configure relevant parameters and add them in the RS485 parameter setting interface.

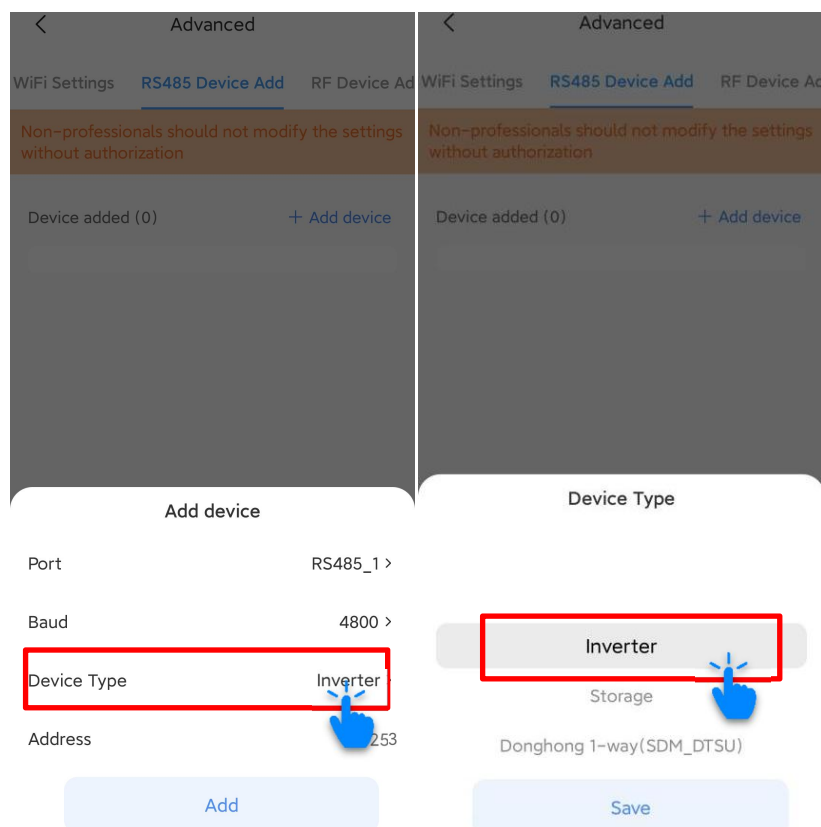
Step 01: Port selection, GroHomeManager-X has 3 485 ports, corresponding to RS485_1, RS485_2, RS485_3, each 485 supports connecting 2 photovoltaic devices, you can choose the corresponding port according to the installation.



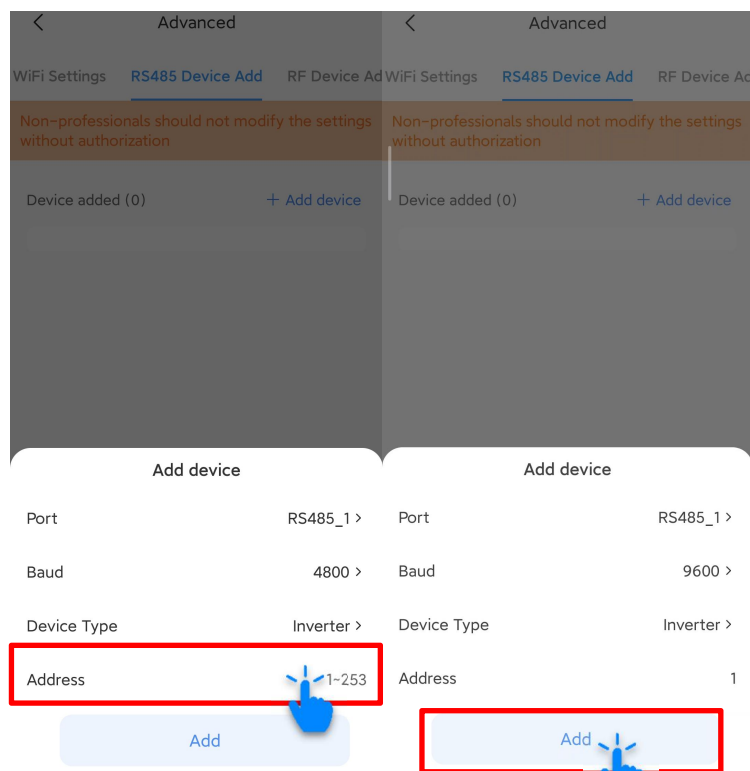
Step 02: Baud rate selection. The default baud rate of GroHomeManager-X is 9600, and it also supports 4800, 38400, 115200, and 19200. You can choose the corresponding baud rate according to the requirements of your device.



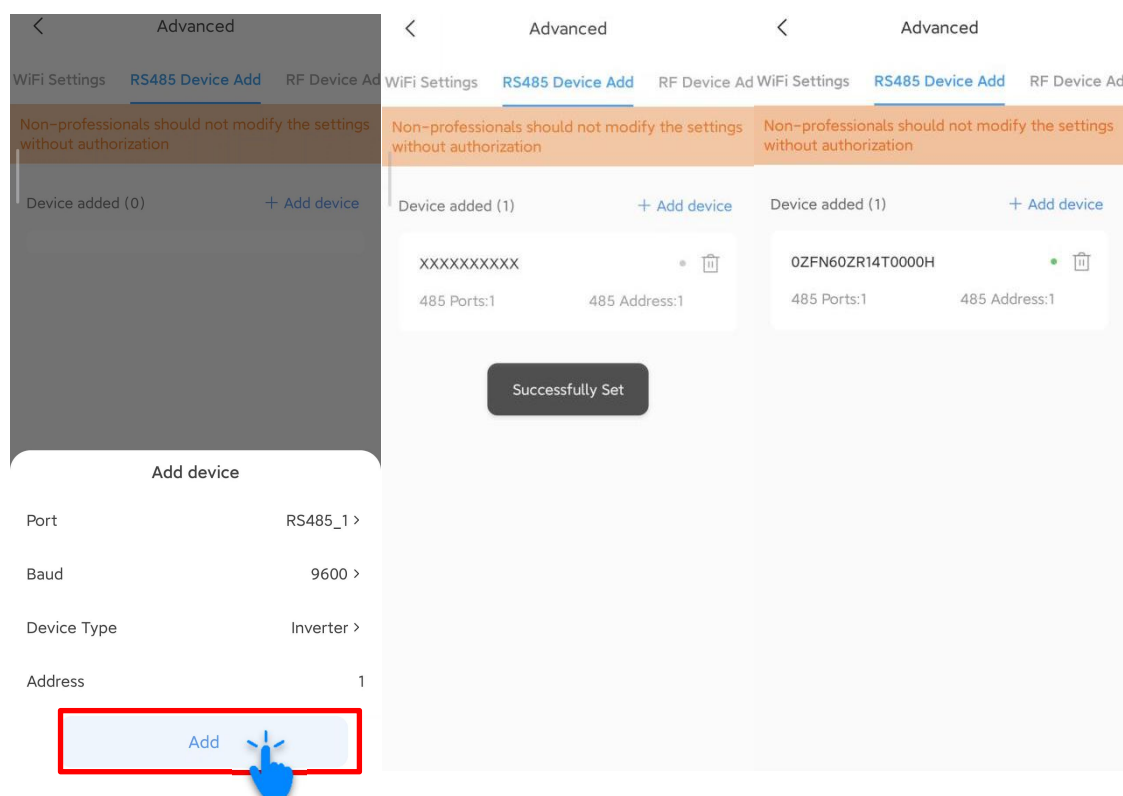
Step 03: Device type selection, the default device type of GroHomeManager-X is inverter, and it can also support energy storage machines. You can choose the corresponding device type according to the requirements of the device.



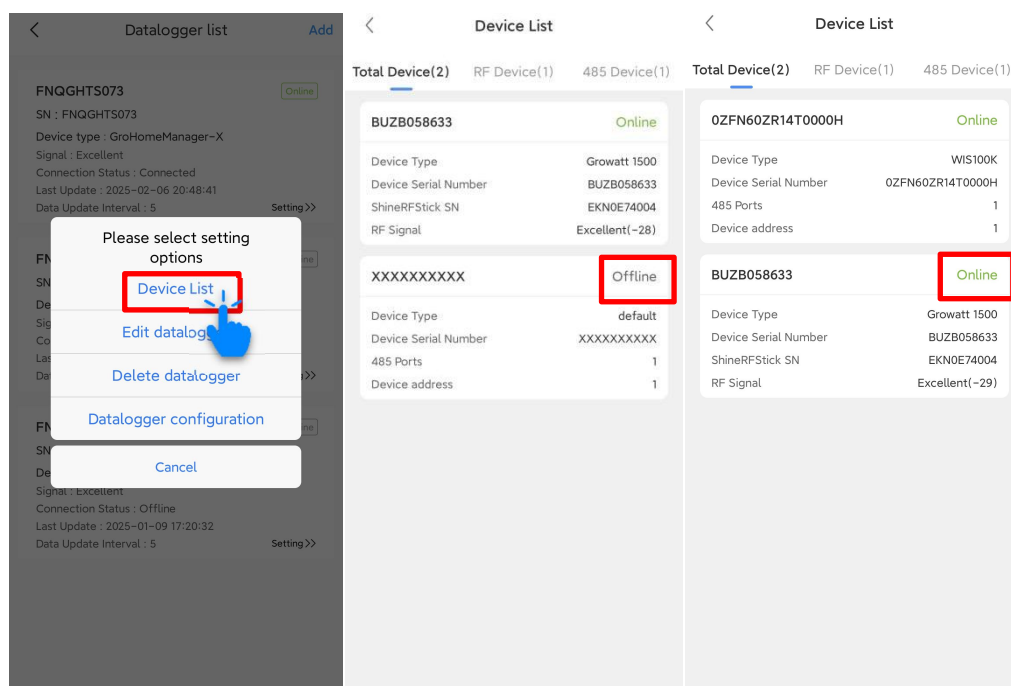
Step 04: Address input, GroHomeManager-X fills in the 485 address of the external device.



Step 05: After confirming the port, baud rate, device type, and address information, click the Add button to add.



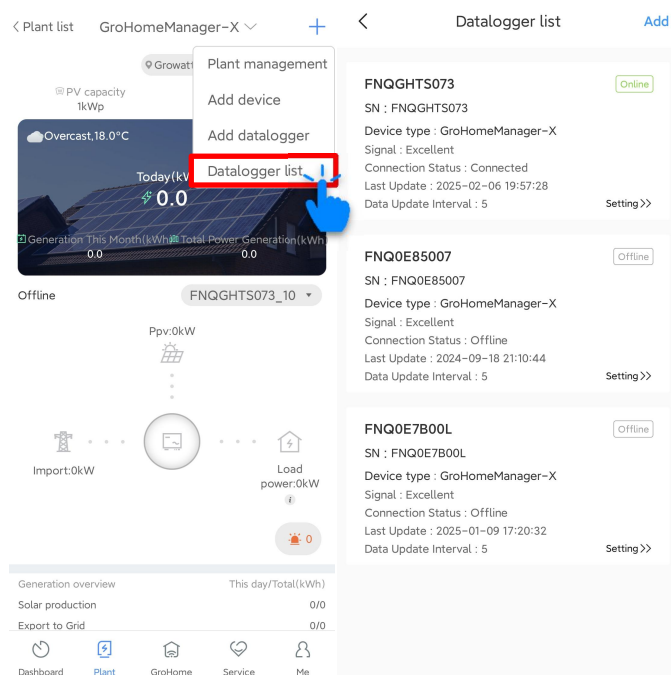
- 5. Check whether the RS485 device is online normally in the device list interface.



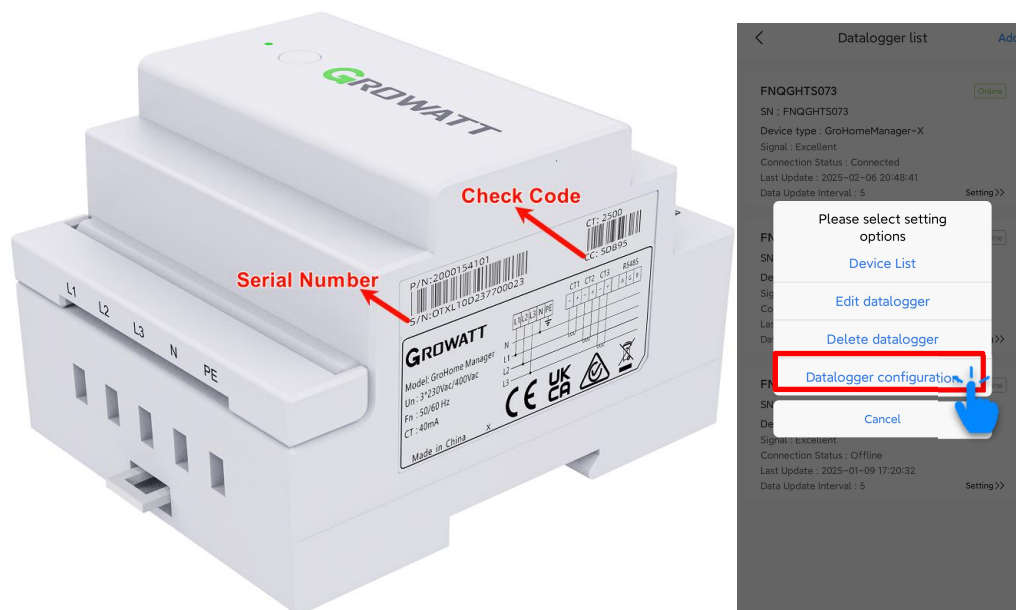
1.10.2 Method Two: Advanced Settings - Device Addition Interface

- 1. Enter the advanced settings interface

Step 01: 在 On the power station page, click the "+" datalogger list to enter the datalogger list interface.



Step 02: Select the datalogger corresponding to the serial number displayed by GroHomeManager-X



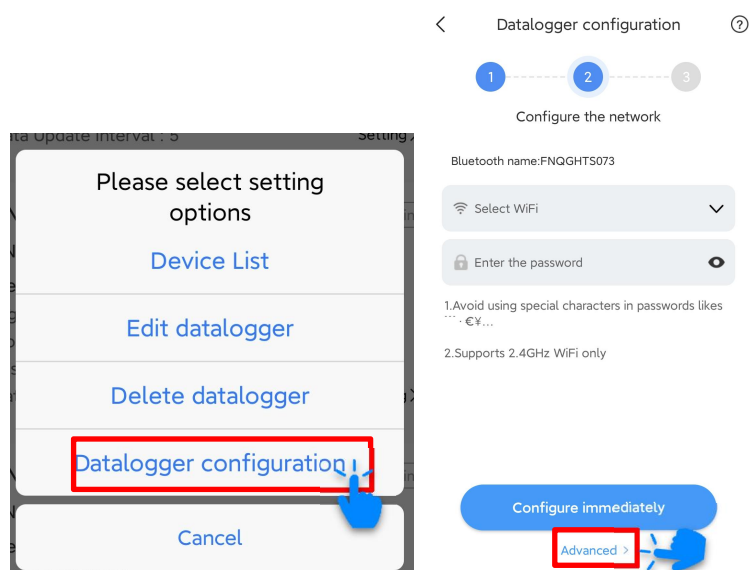
Step 03: To enter the advanced settings, click the button to enable the Bluetooth mode of GroHomeManager-X. The Bluetooth mode indicator light is yellow and always on. The interface mainly has the following functions. This time, we need to enter the advanced settings interface and choose to configure the datalogger

A. Device List - View paired devices

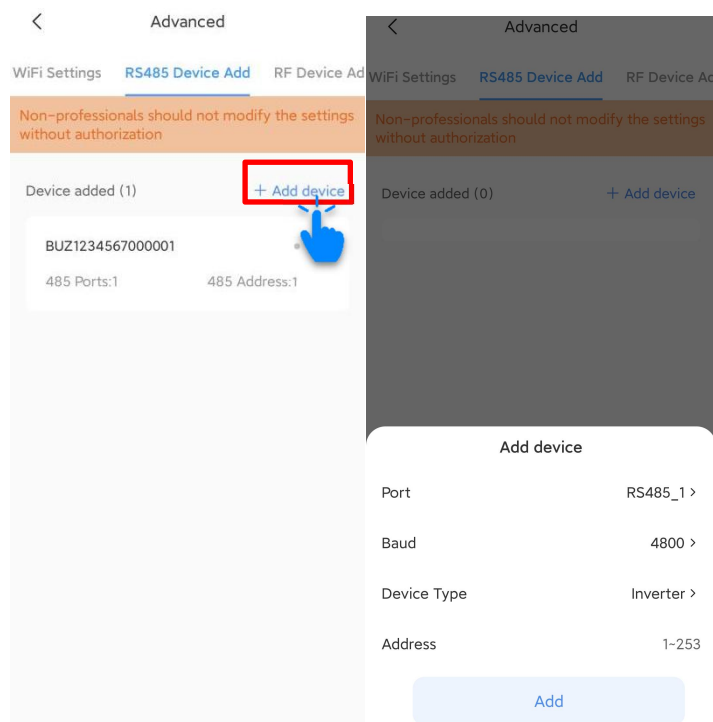
B. Edit datalogger - Alias datalogger

C. Delete datalogger - the datalogger is removed from this station and can be added again in another station

D. Datalogger configuration - reconfigure the datalogger's network and enter the advanced settings interface

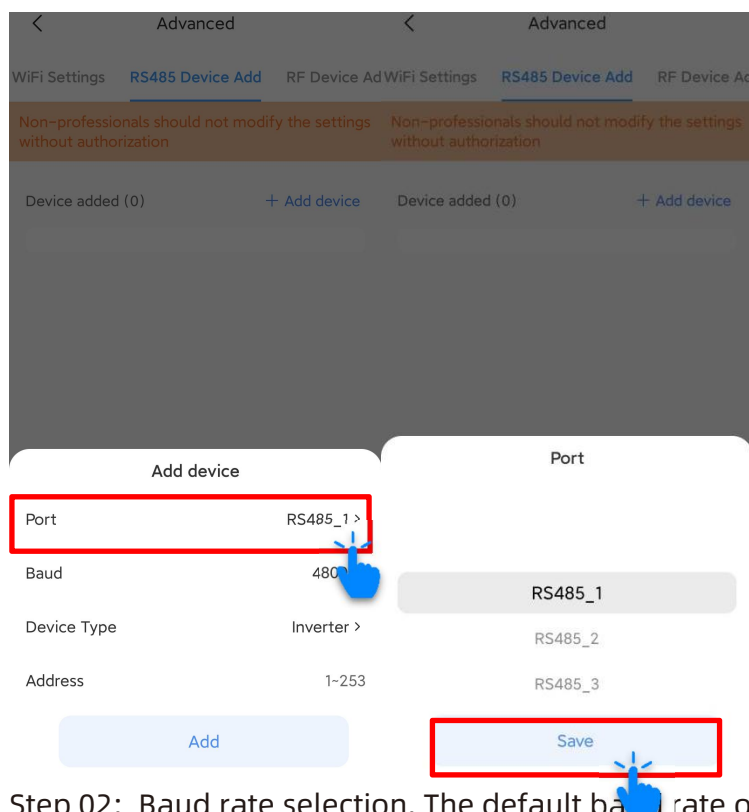


➤ 2. Select RS485 parameter settings in the advanced settings interface

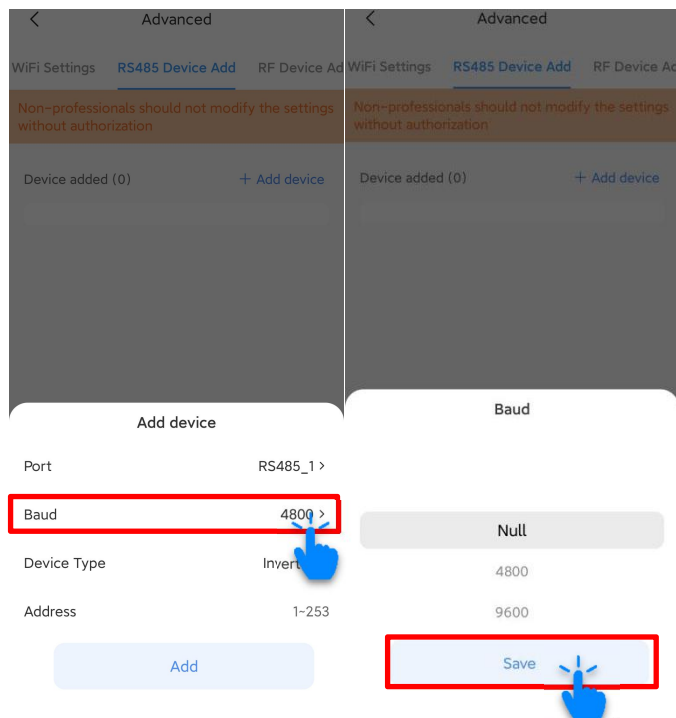


➤ 3. Configure relevant parameters and add them in the RS485 parameter setting interface.

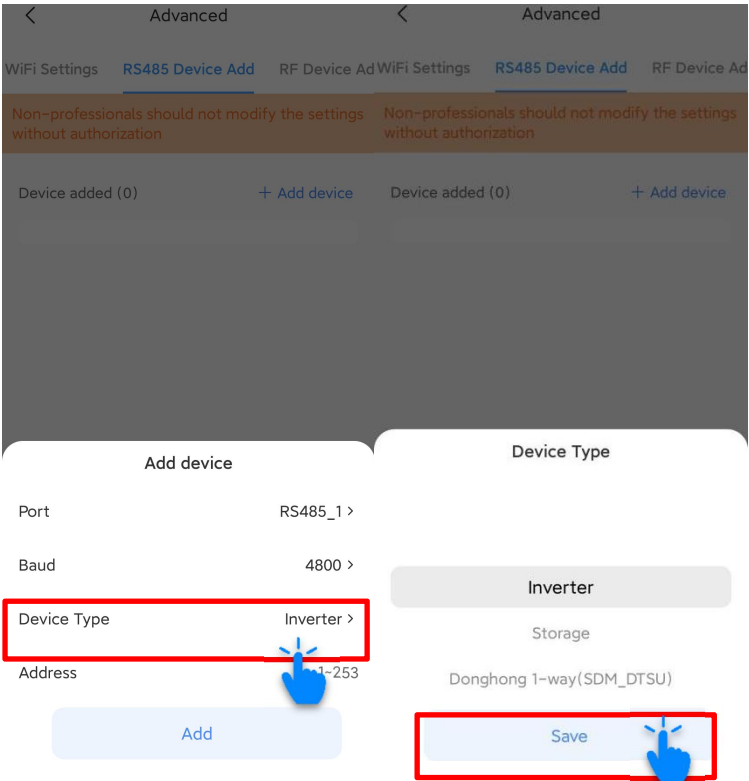
Step 01: Port selection, GroHomeManager-X has 3 485 ports, corresponding to RS485_1, RS485_2, RS485_3, each 485 supports connecting 2 photovoltaic devices, you can choose the corresponding port according to the installation.



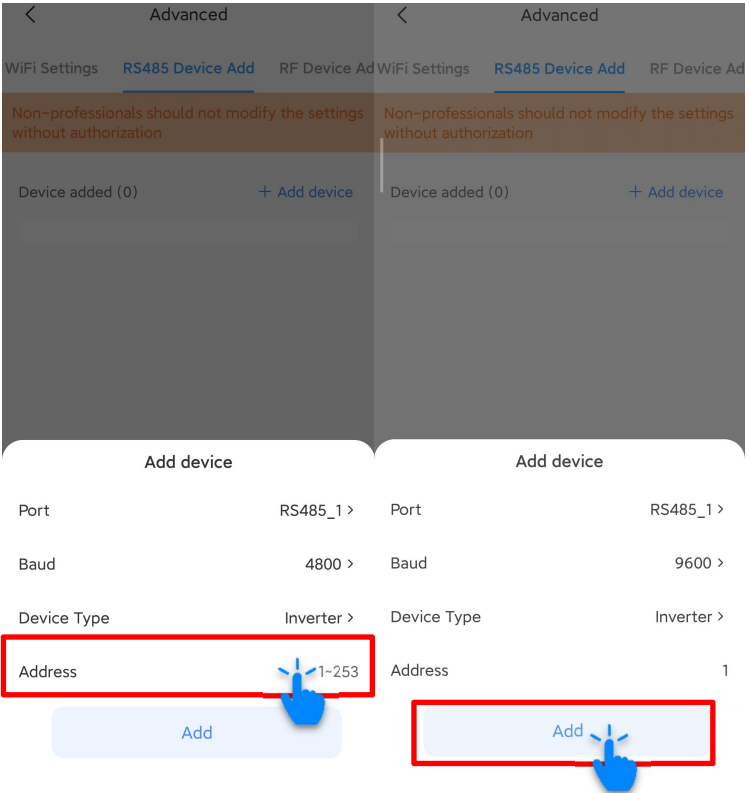
Step 02: Baud rate selection. The default baud rate of GroHomeManager-X is 9600, and it also supports 4800, 38400, 115200, and 19200. You can choose the corresponding baud rate according to the requirements of your device.



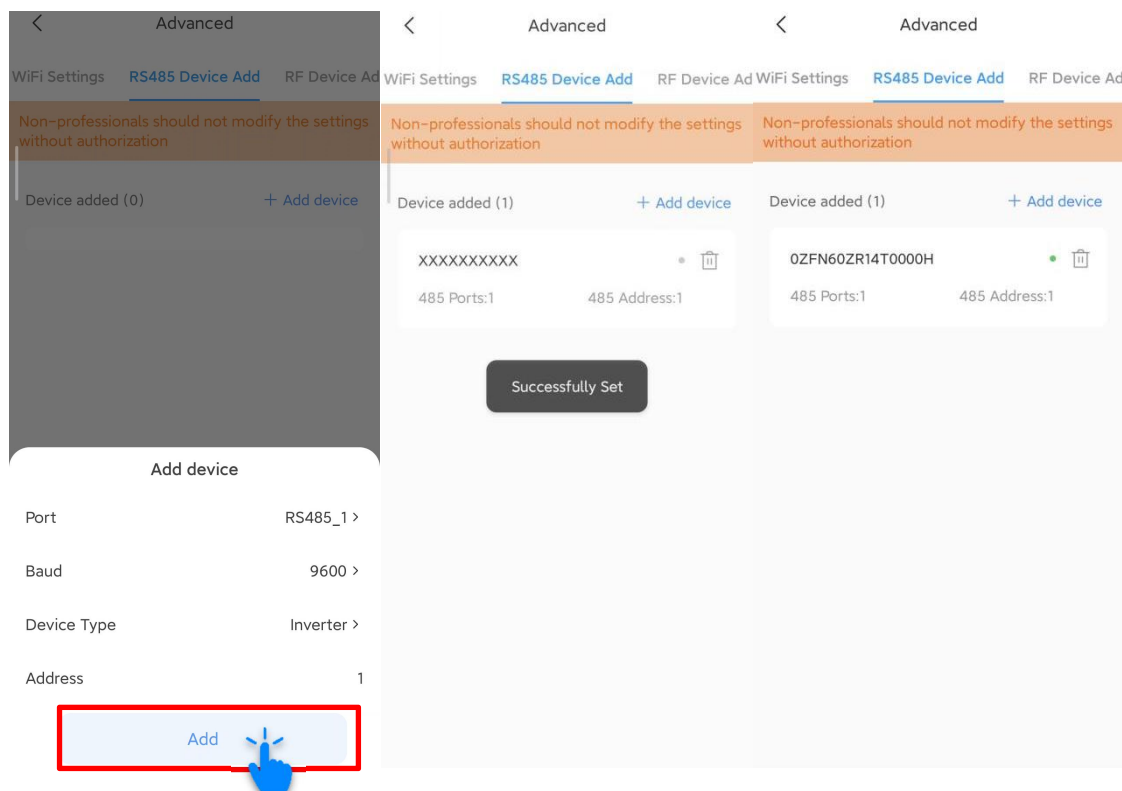
Step 03: Device type selection, the default device type of GroHomeManager-X is inverter, and it can also support energy storage machines. You can choose the corresponding device type according to the requirements of the device.



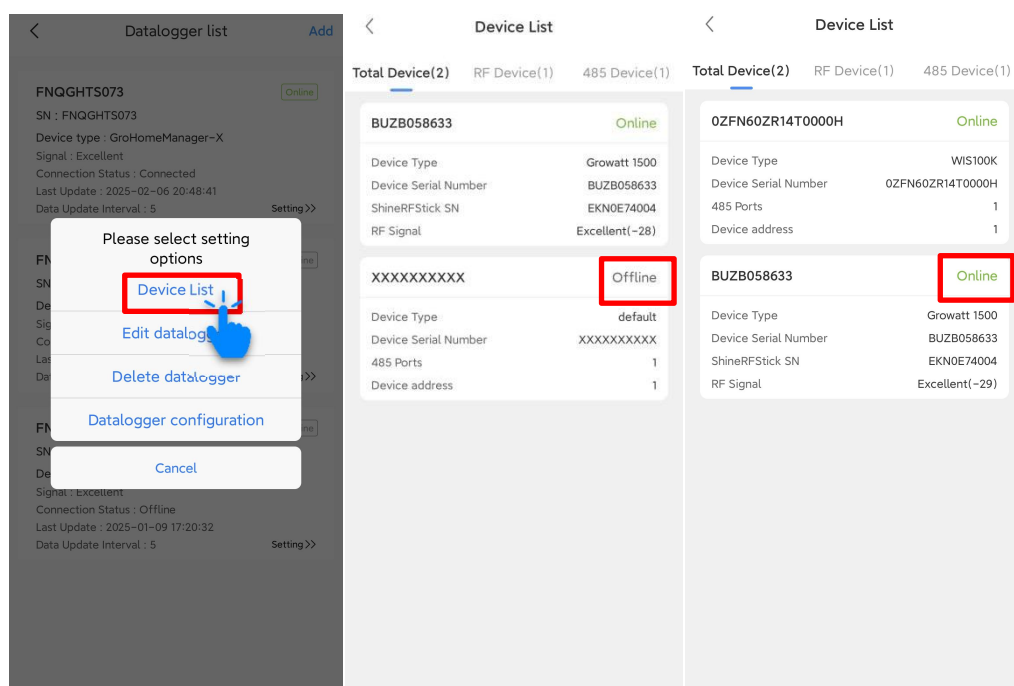
Step 04: Address input, GroHomeManager-X fills in the 485 address of the external device.



Step 05: After confirming the port, baud rate, device type, and address information, click the Add button to add.



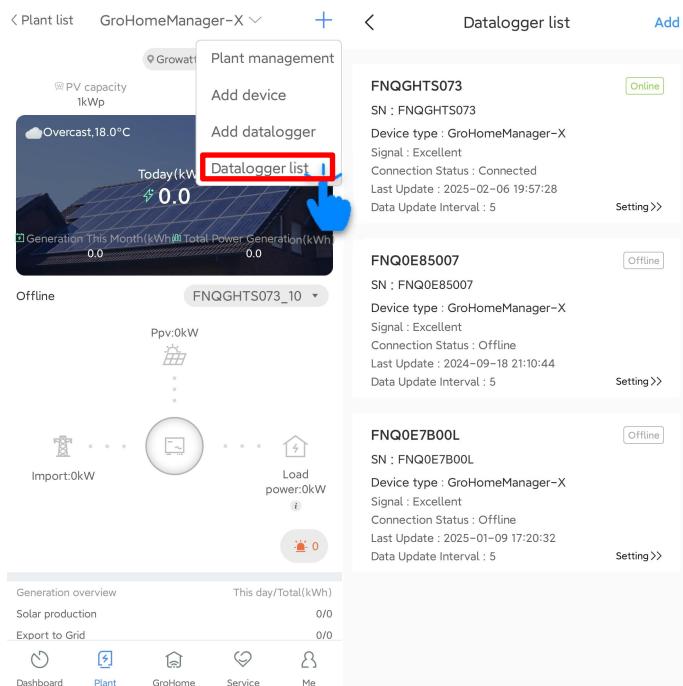
- 4. Check whether the RS485 device is online normally in the device list interface.



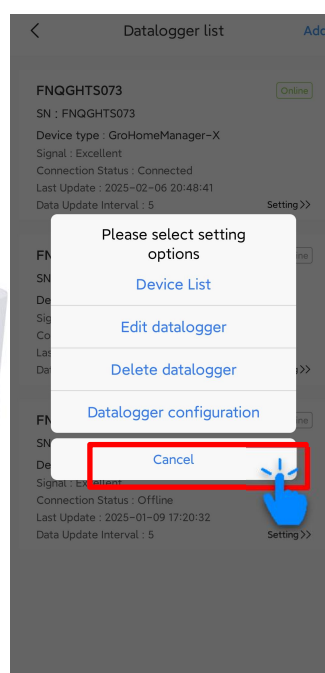
1.11 Static IP settings (This setting is only used when you need to set a static IP, non-professionals, please do not perform this operation)

➤ 1. Enter the advanced settings interface

Step 01: On the power station page, click the "+" datalogger list to enter the datalogger list interface.



Step 02: Select the datalogger corresponding to the serial number displayed by GroHomeManager-X



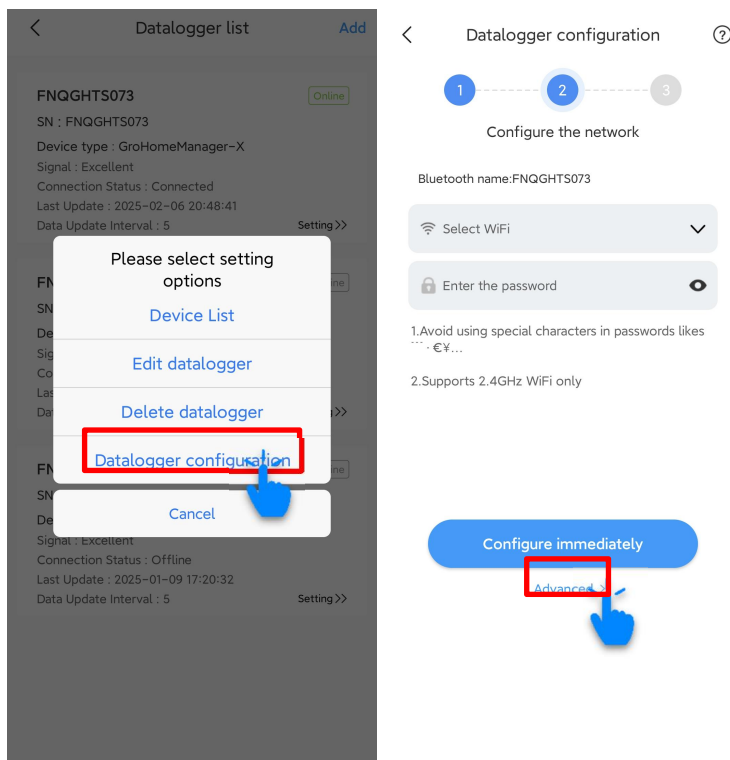
Step 03: To enter the advanced settings, click the button to enable the Bluetooth mode of GroHomeManager-X. The Bluetooth mode indicator light is yellow and always on. The interface mainly has the following functions. This time, we need to enter the advanced settings interface and choose to configure the datalogger

A.Device List - View paired devices

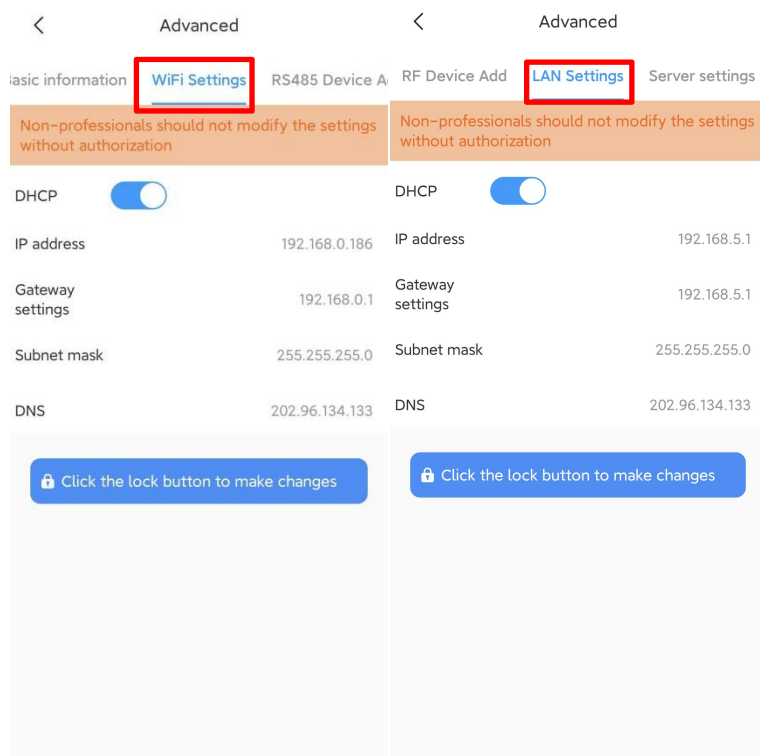
B.Edit datalogger - Alias datalogger

C.Delete datalogger - the datalogger is removed from this station and can be added again in another station

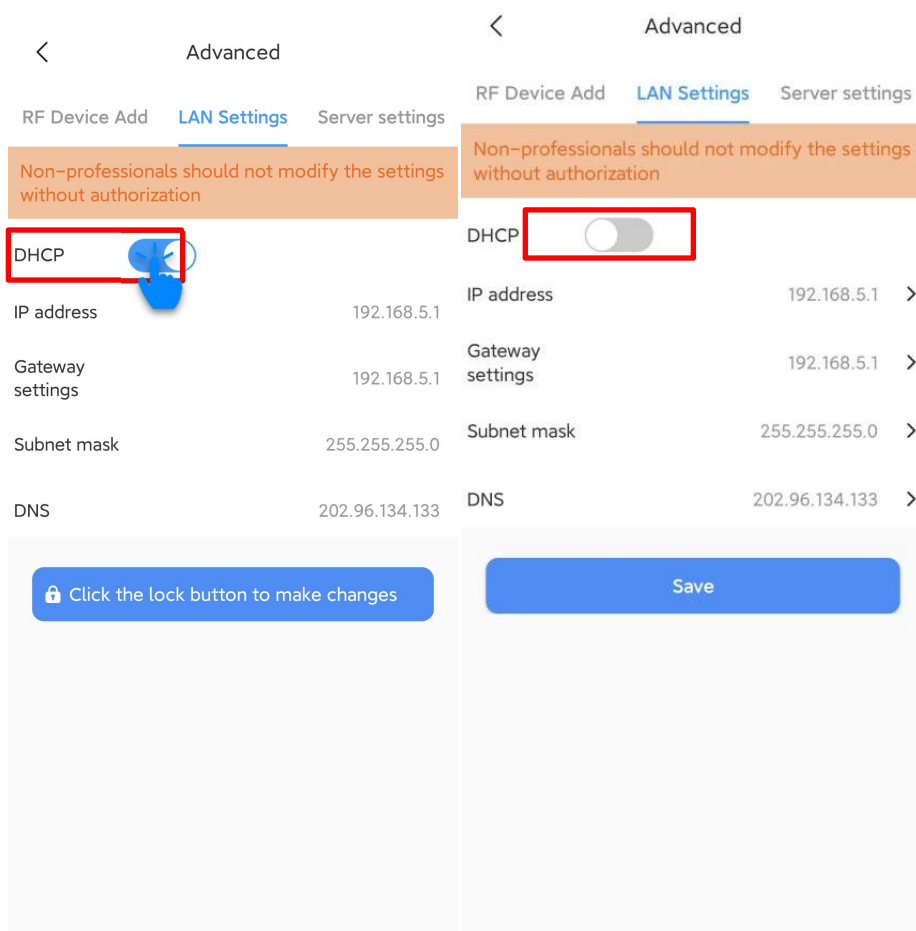
D.Datalogger configuration - reconfigure the datalogger's network and enter the advanced settings interface



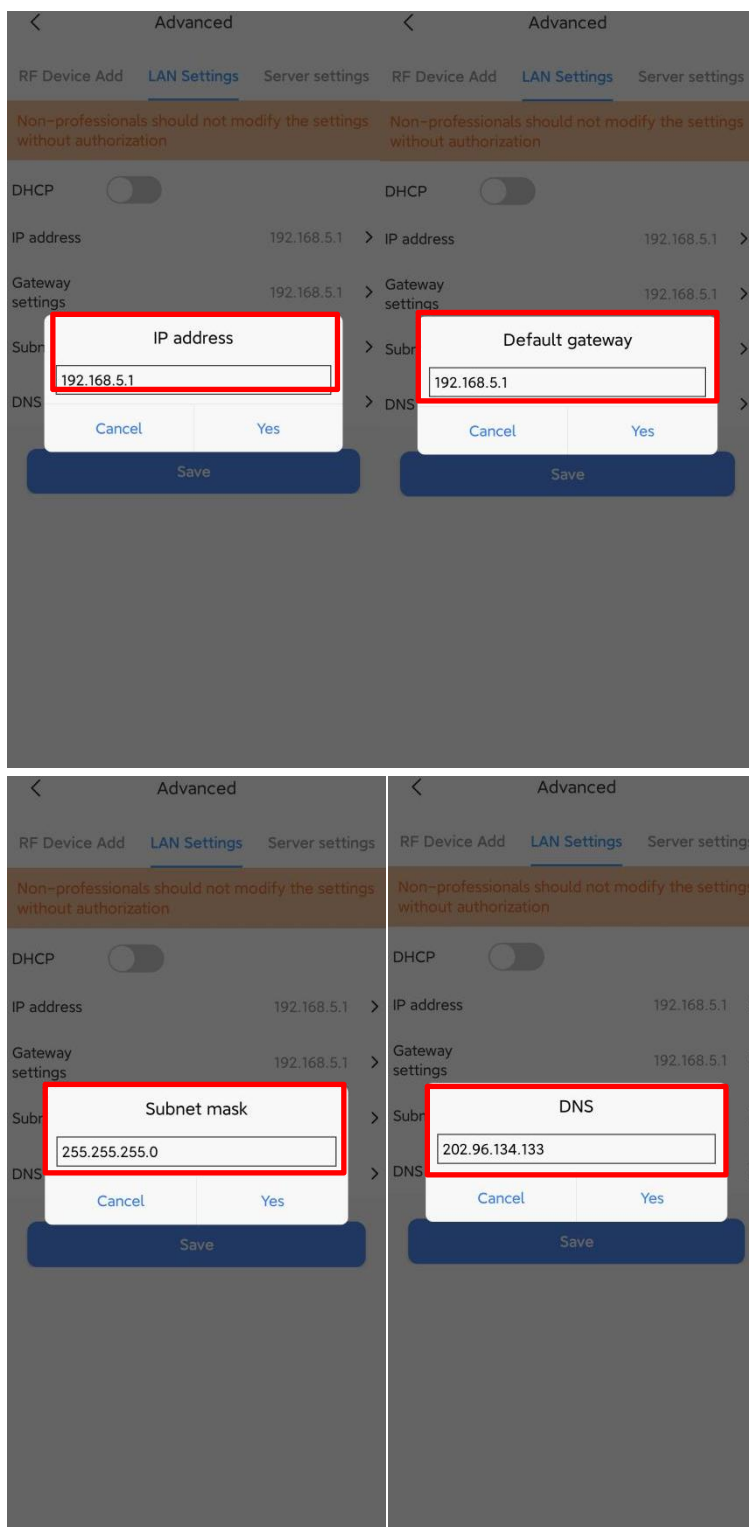
- 2.Select Router Settings/LAN Settings in the Advanced Settings interface, corresponding to the static IP settings for WiFi connection and Ethernet cable connection, respectively



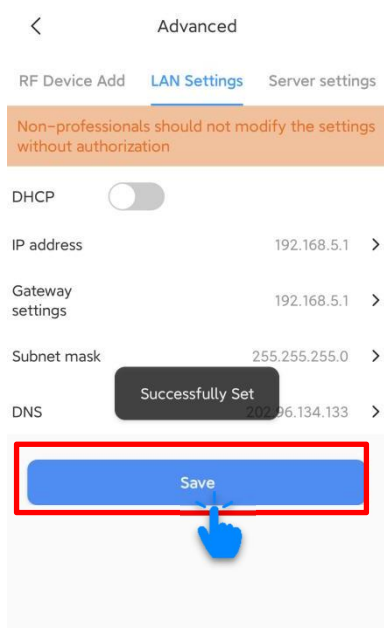
➤ 3. Turn off datalogger DHCP enable



- 4. Click the corresponding arrow and enter the required static IP, gateway, mask, and DNS (The data shown in the figure below is only for display, please enter according to the actual situation).

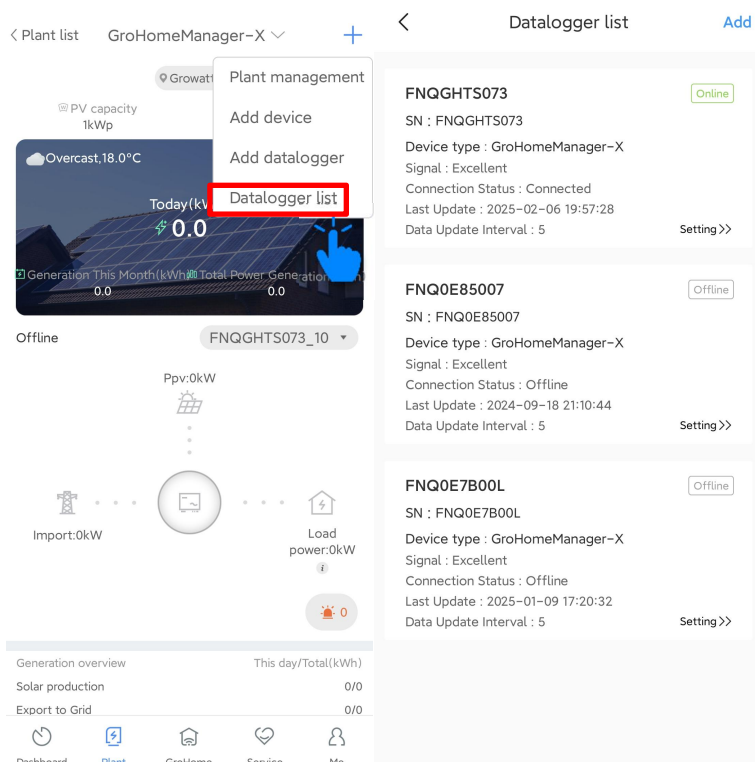


➤ 5.Save

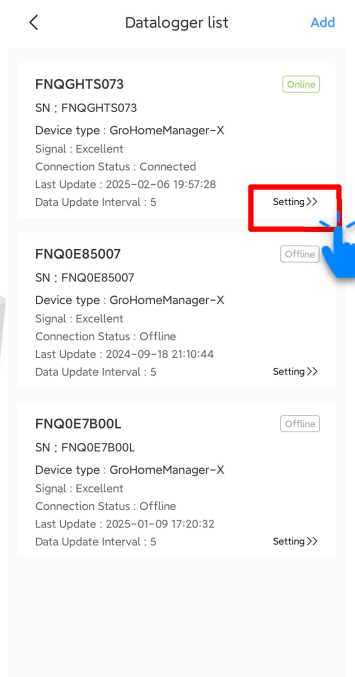


1.12 Export Limitation settings

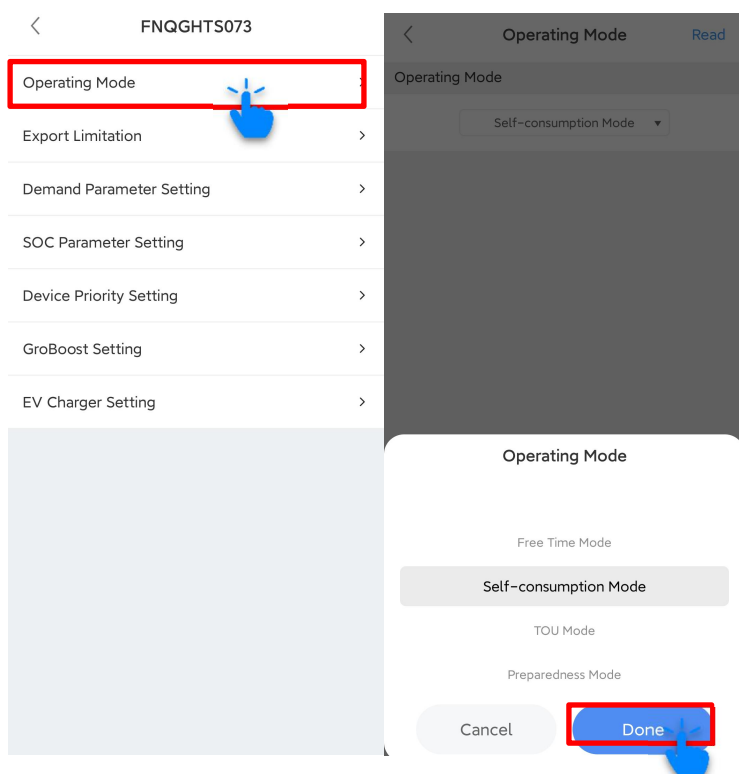
Step01. On the power station page, click the "+" datalogger list to enter the datalogger list interface.



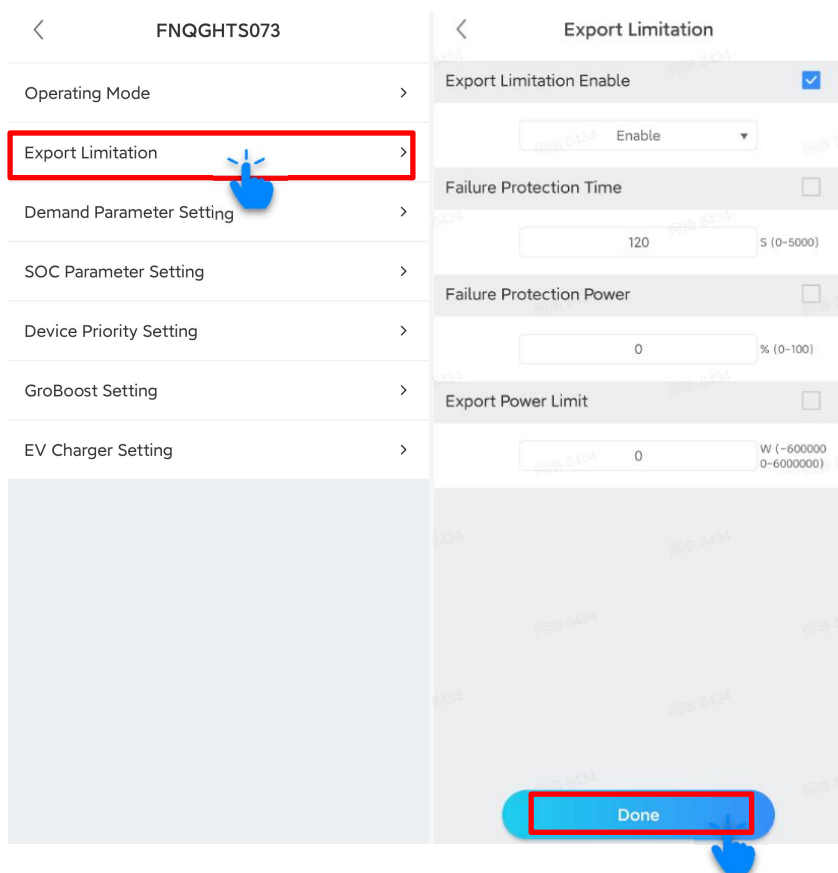
Step 02: According to the serial number displayed by GroHomeManager-X, select the settings option in the lower right corner of the datalogger corresponding to the serial number



Step 03: According to the serial number displayed by GroHomeManager-X, select the setting option corresponding to the serial number at the lower right corner of the datalogger, enter the "Operating Mode" interface, and select "Self-consumption Mode" or "TOU Mode". "Self-consumption Mode" is recommended. Please note that "Free Time Mode/Monitoring Mode" cannot be selected. Otherwise, Export Limitation settings will not take effect.



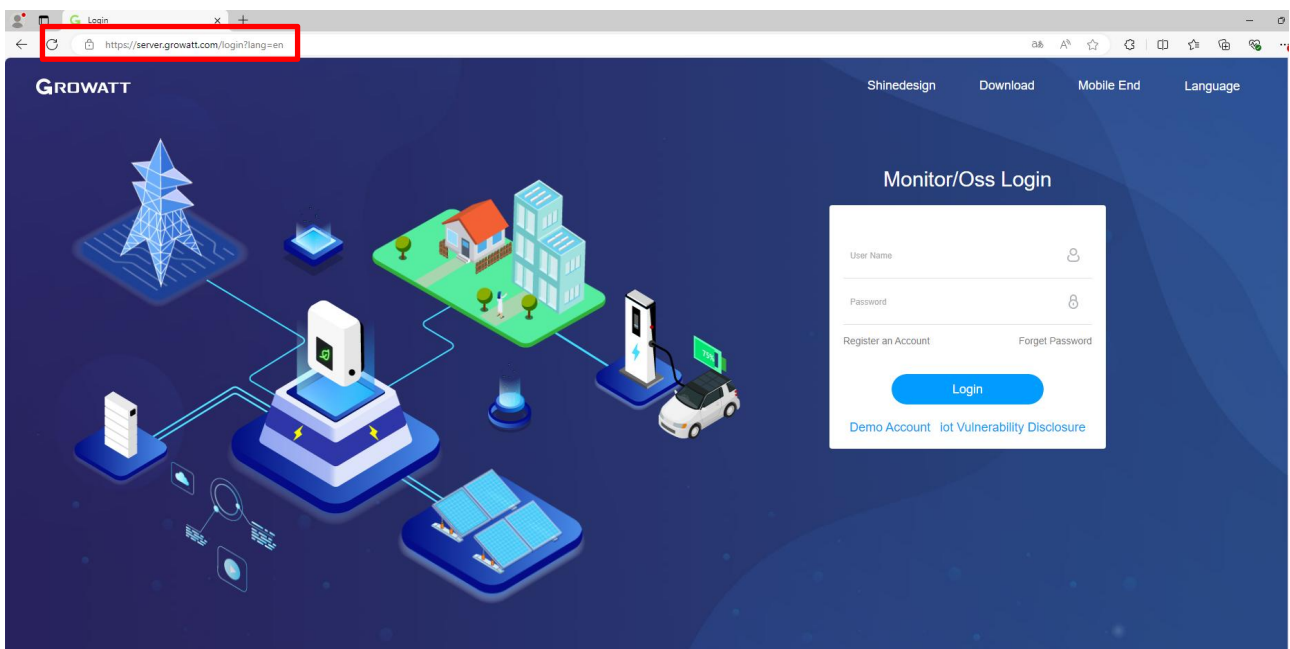
Step 04: Export Limitation Enable enables the Settings of other parameters such as Failure Protection Time, Failure Protection Power and Export Power Limit according to your own needs. Each time you set a parameter, you need to click "Finish" once.



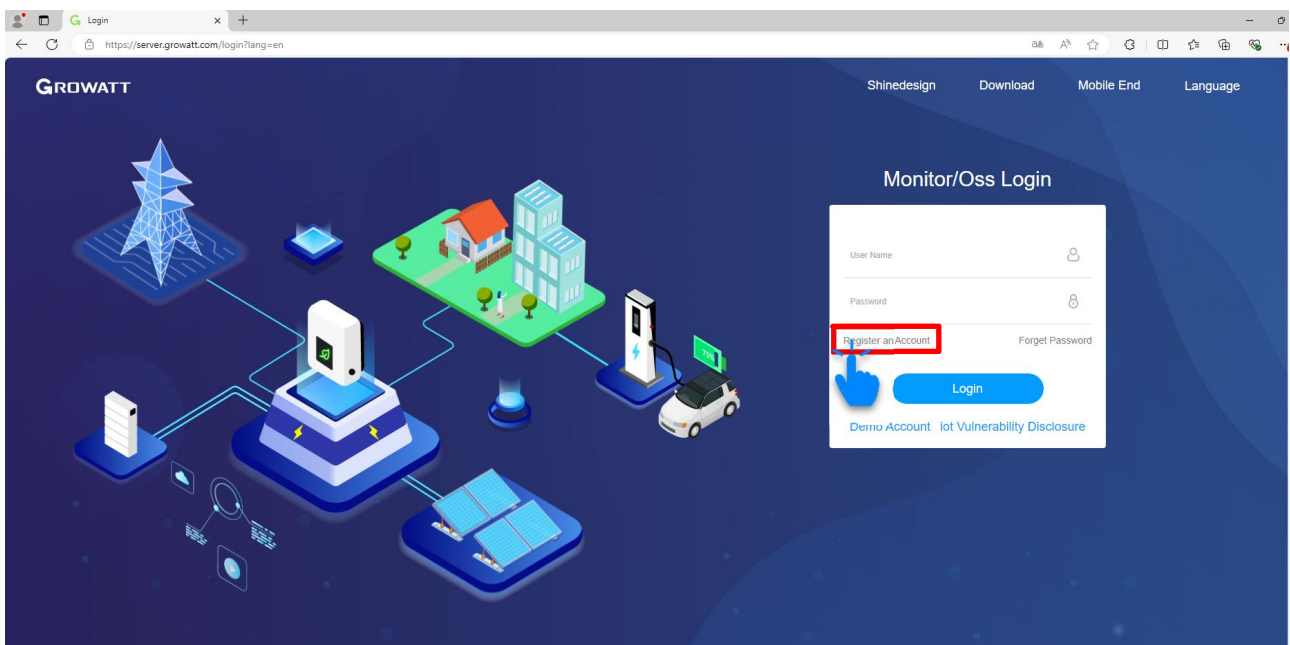
2 Server Operation Guide

2.1 Server registration (Users who have registered for the APP can skip this step and log in directly)

- 1. Use a computer browser to enter the <https://server.growatt.com/login> for server registration



- 2. Click Account Registration



- 3. Users fill in the relevant information and click Next after filling in.

The screenshot shows the GROWATT Register page. The 'User' tab is selected, and the form is highlighted with a red border. The form fields include: Country (dropdown), User Name (text, with a note 'No More than 30 Characters'), Password (text, with a note 'Not less than 6 Digits'), Confirm Password (text, with a note 'Not less than 6 Digits'), Language (dropdown, set to 'English'), Phone Number (text), E-Mail (text), and Installer Code (text). Below the fields is a checkbox for 'I have read and agree to the (Privacy Policy)' and a blue 'Next' button. The page header includes the GROWATT logo, the word 'Register', and a 'Back to Login' link.

- 4. The user creates the power station information, and after filling it in, click Next.

The screenshot shows the GROWATT Register page with the 'Please Fill in the Plant Information' form highlighted by a red border. The form includes: Plant Type (radio buttons for 'Residential Plant' and 'Commercial Plant', with 'Ground-Mounted Plants' as a sub-option), Plant Name (text), Installation Date (text), Time Zone (dropdown, set to 'UTC -12'), Map Selection (button with a location pin icon), a section for 'Please Fill in the Plant Information' with a dropdown set to 'Other' and a text field containing 'The Sun Building, 278 Broadway, New York,', PV Total Capacity(kWp) (text), and Selling Price (text with a dropdown for 'RMB(¥)'). A blue 'Next' button is at the bottom. The page header includes the GROWATT logo, the word 'Register', and a 'Back to Login' link.

- 5. Enter the datalogger serial number and verification code, and click Finish.

GROWATT Register [Back to Login](#)

Add Device (Enter the Datalogger S/N and Check Code) Skip

Serial Number

SN:0123456789

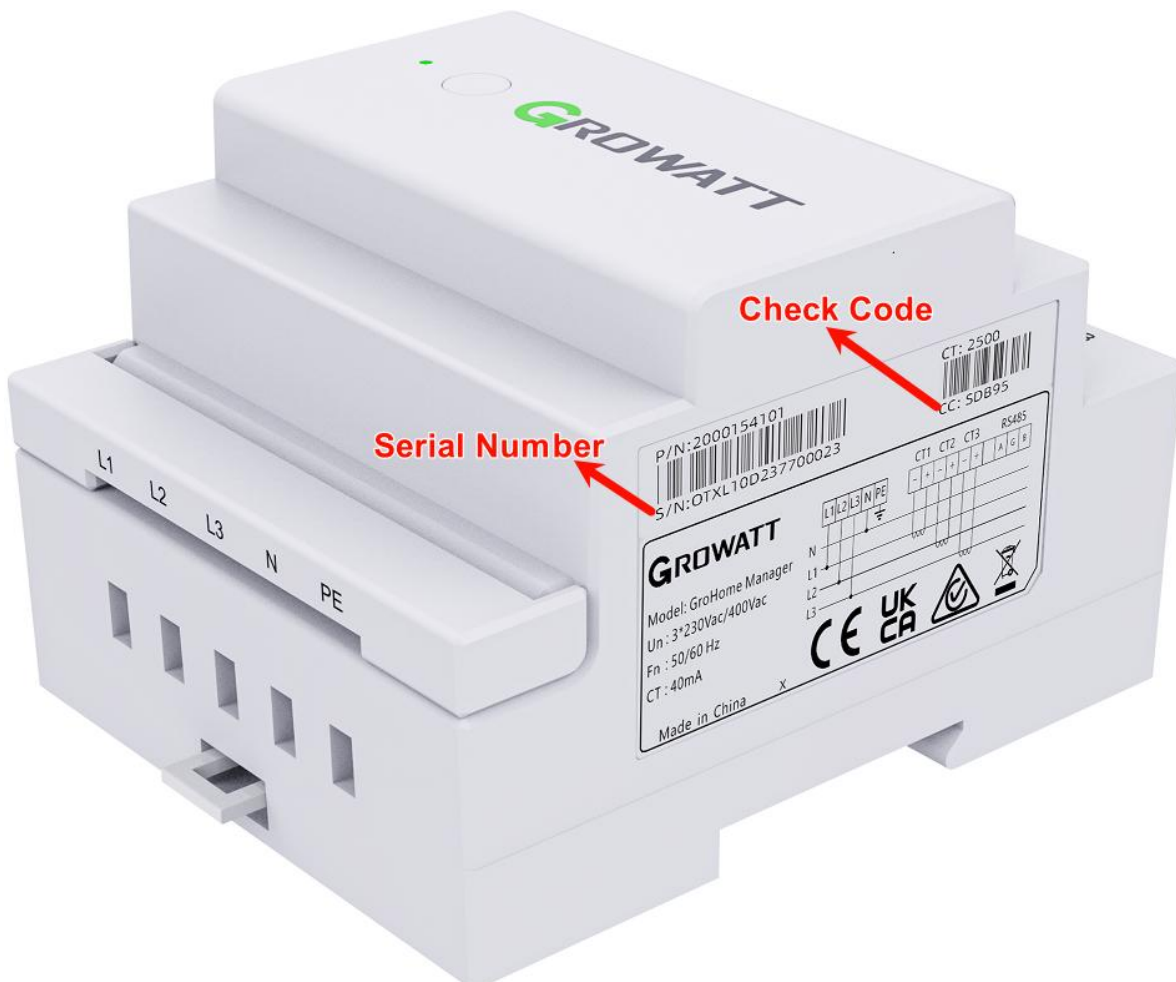
Check Code

CC:12345

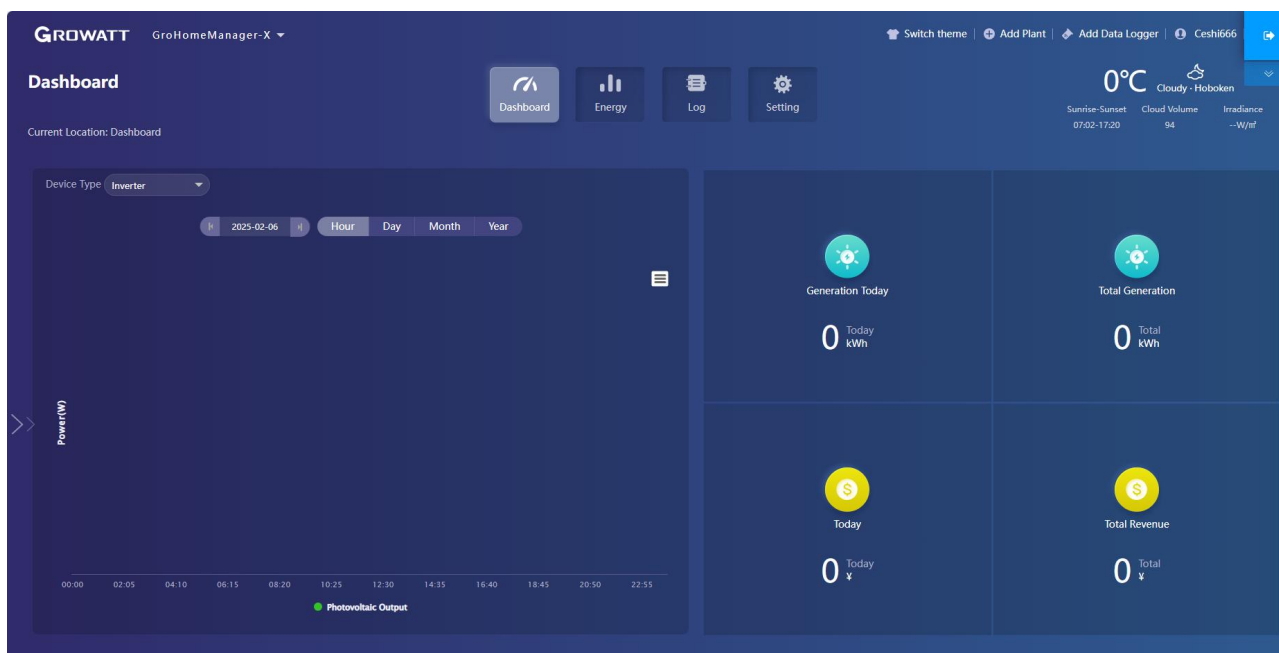
Serial Number

Check Code

Finish

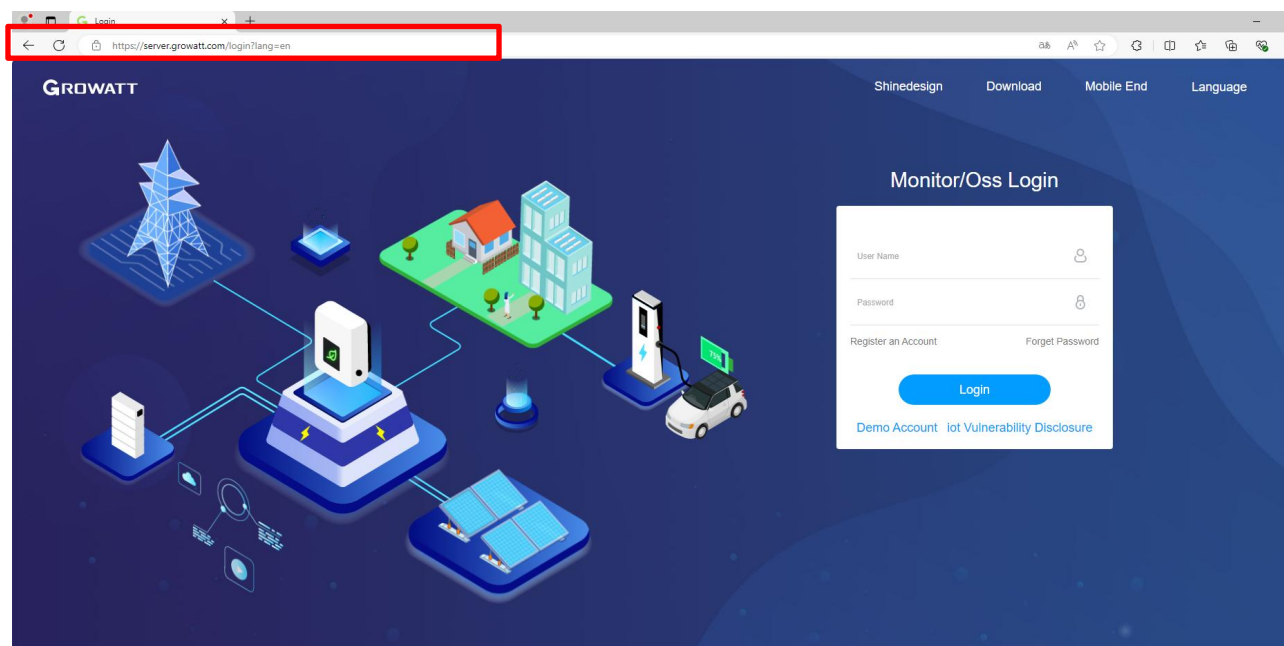


➤ 6.Registration successful, enter the power station page

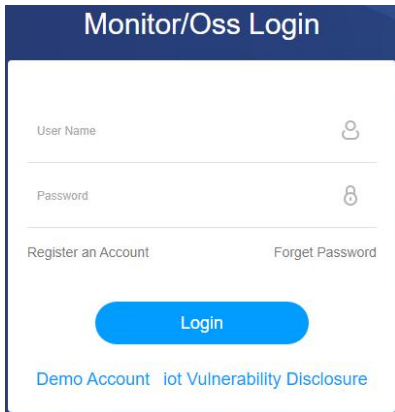


2.2 Server Login

➤ 1.Use a computer browser to enter <https://server.growatt.com/login>

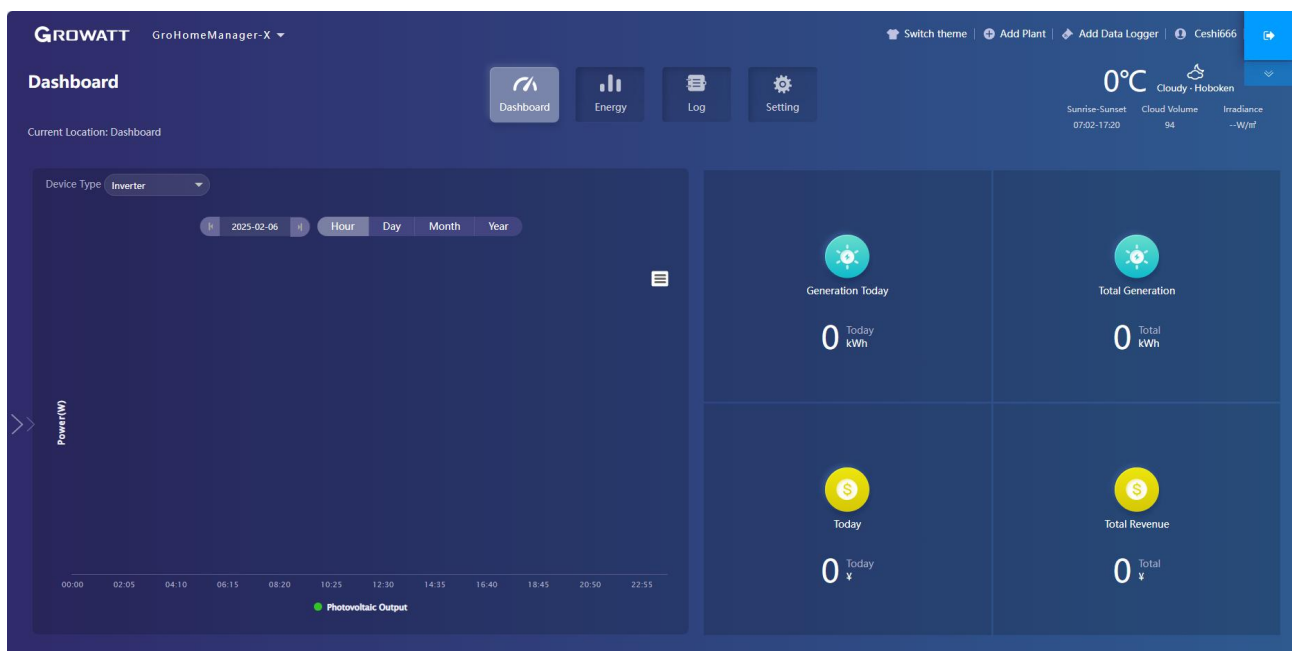


- 2. Enter the username and account registered on the Server/APP side, and click Login.



The login form is titled "Monitor/Oss Login". It contains two input fields: "User Name" with a user icon and "Password" with a lock icon. Below these fields are two links: "Register an Account" and "Forget Password". A blue "Login" button is centered at the bottom. At the very bottom, there are two links: "Demo Account" and "iot Vulnerability Disclosure".

- 3. Login successfully, enter the power station page

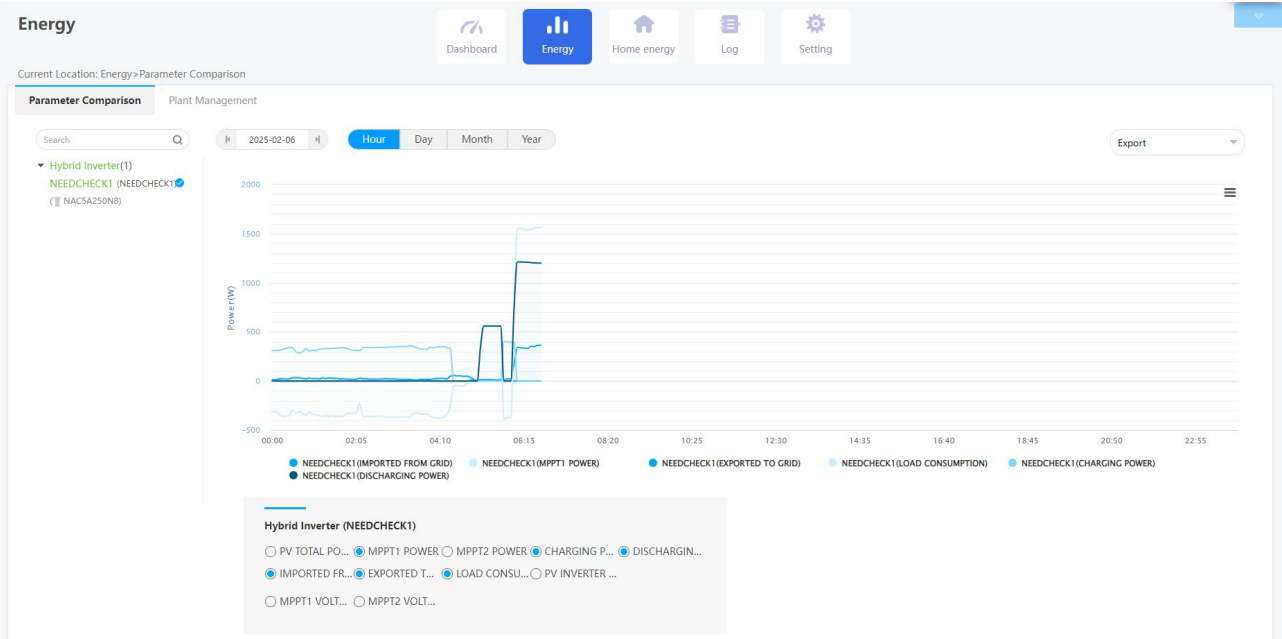


2.3 Server introduction

- 1. Dashboard: Presents current system status, photovoltaic parameters and energy trends, photovoltaic equipment



- 2.Energy: Showing the trend of photovoltaic parameters corresponding to photovoltaic equipment

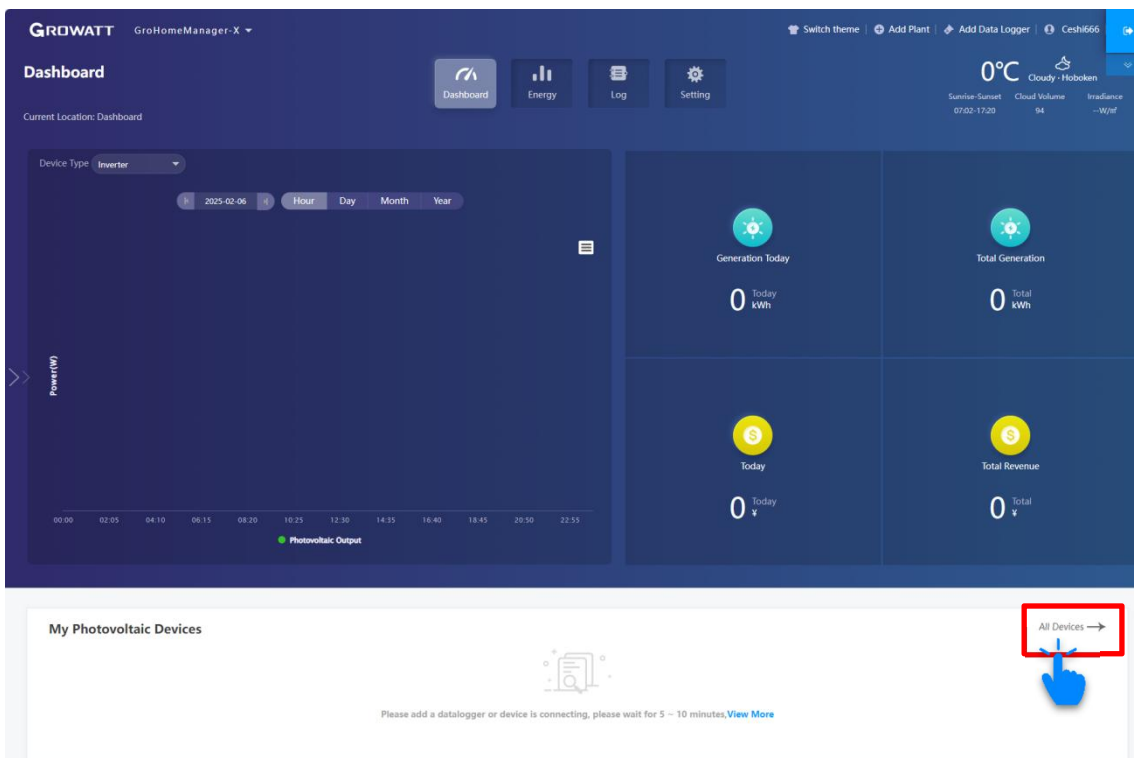


- 3.Settings: Account Settings Interface

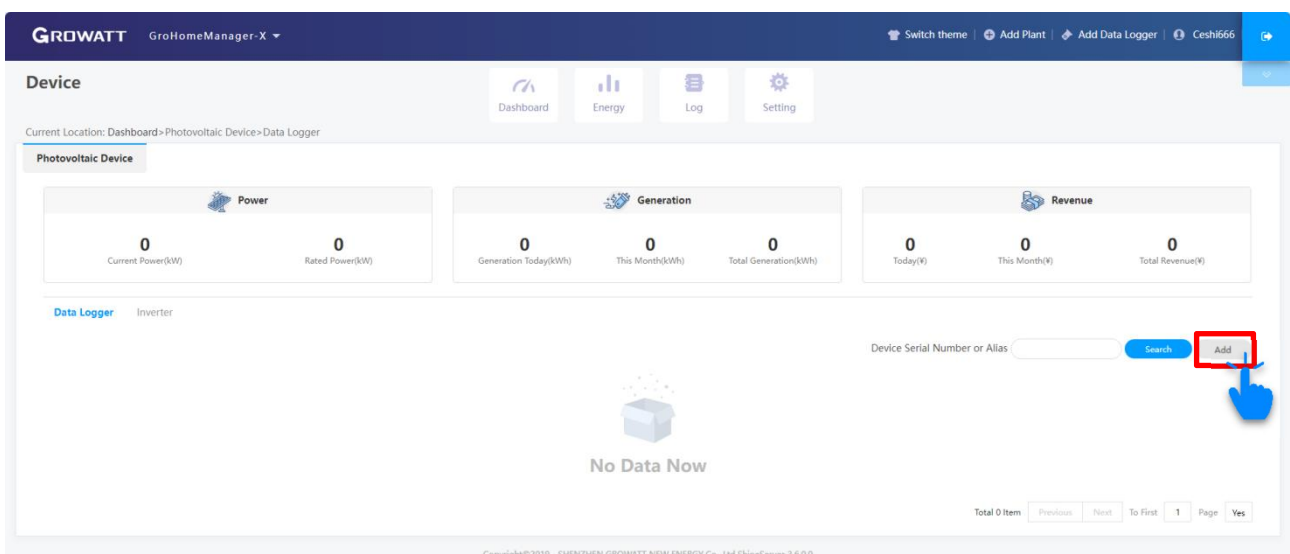
The screenshot displays the 'Setting' section of the GroHomeManager-X interface. The top navigation bar includes 'Dashboard', 'Energy', 'Home energy', 'Log', and 'Setting' (selected). Below the navigation bar, the 'Current Location' is 'Setting>Account Management'. The main area is titled 'Account Management' and 'Visitor Account list'. The 'Userinfo Modify' section contains fields for 'User Name' (test-uk), 'Company Name', 'Real Name', 'E-mail' (jinbin.growatt.com), 'Phone Number', 'Language' (中文), 'Agent Code' (BRWSB), and 'A/P Token' (Open). The 'Modify Password' section contains fields for 'User Name' (test-uk), 'Current Password', 'New Password', and 'Confirm Password'. A 'Save' button is present. The 'Account Security' section is also visible.

2.4 Add energy management device GroHomeManager-X (If added on the APP side/when registering an account, the device can be viewed directly without this step)

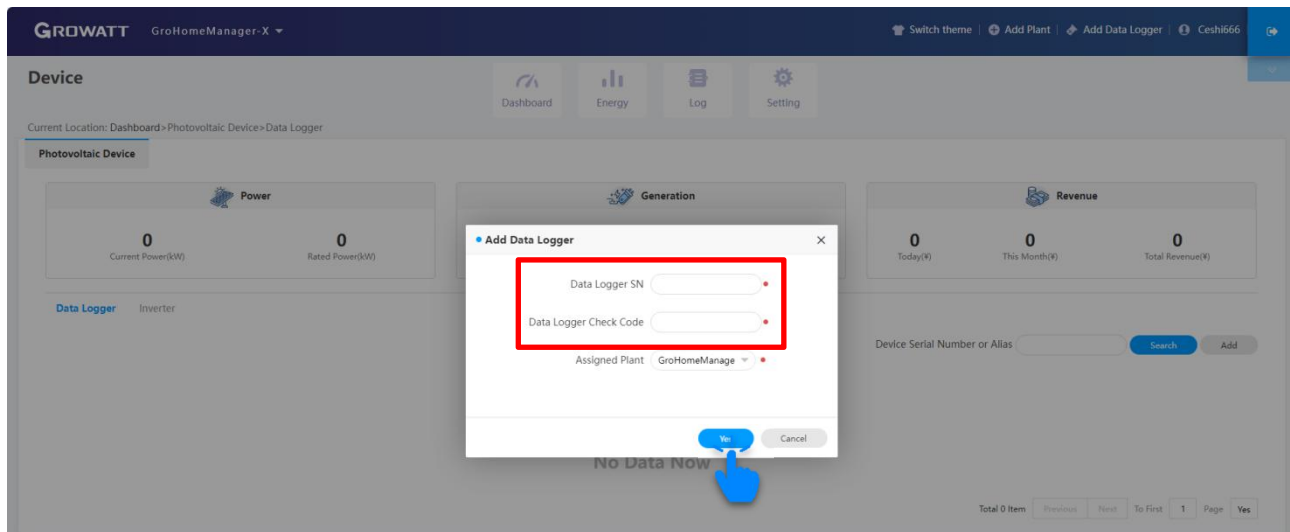
- 1.Scroll down the mouse on the dashboard interface, slide to the My Photovoltaic Equipment interface, and click the All Devices button.

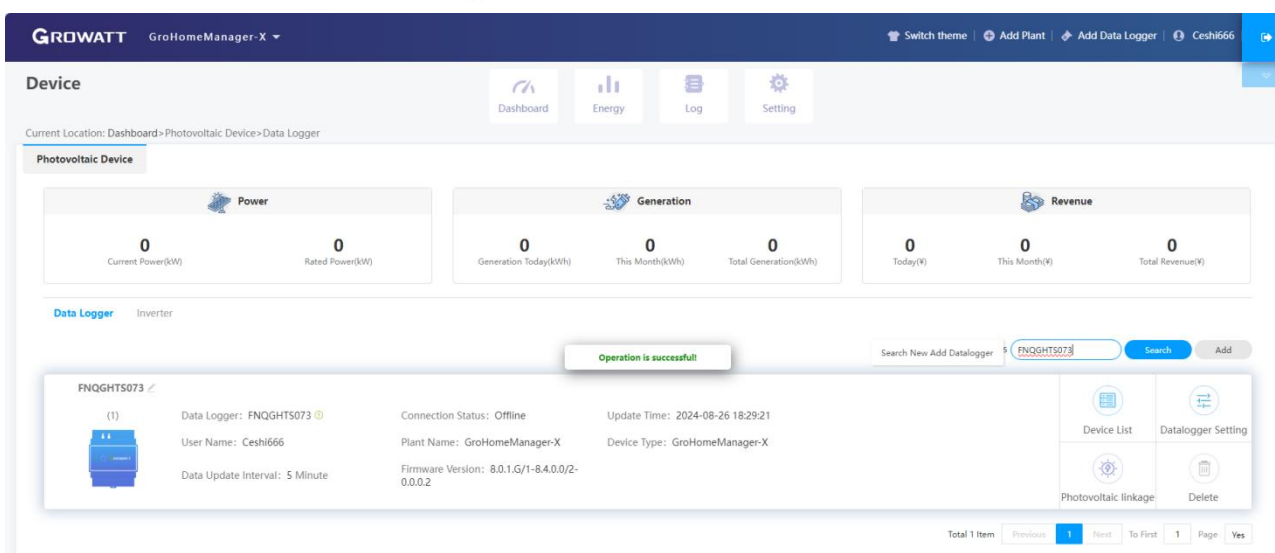
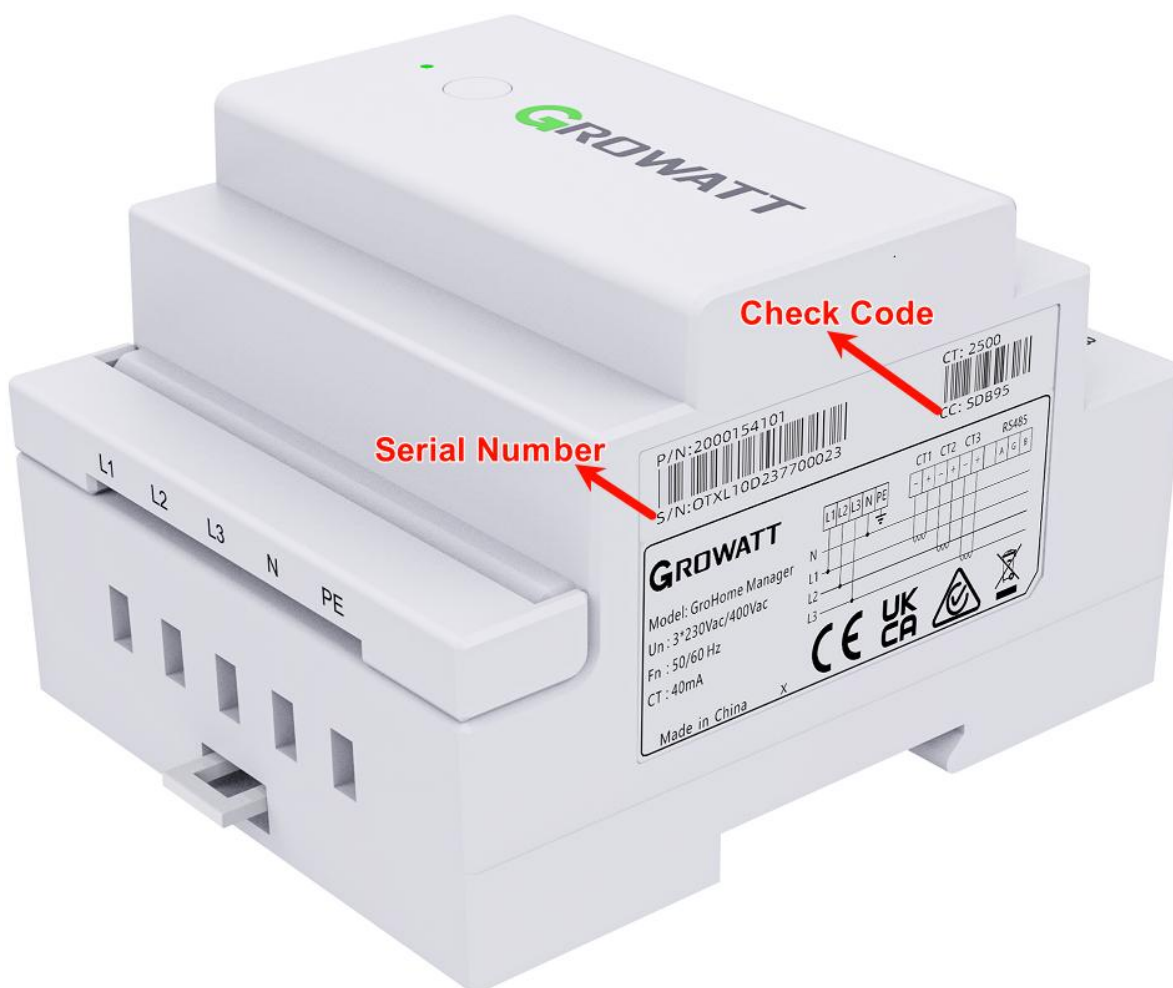


- 2.Click the Add button on the Data Acquisition interface



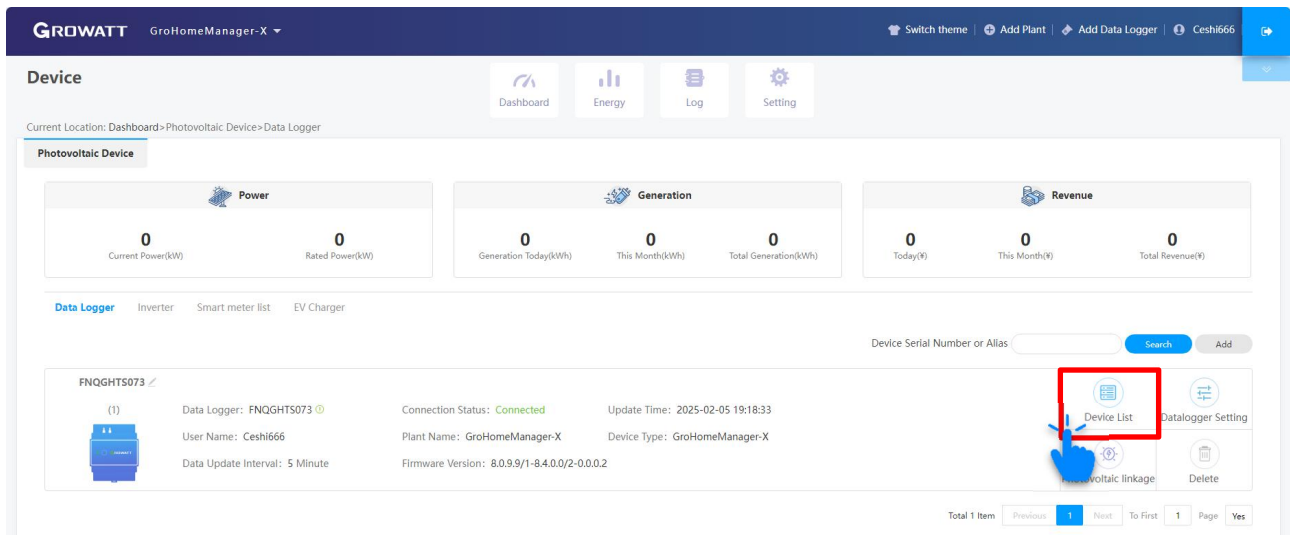
- 3. Enter the datalogger serial number and check code information, and click OK to complete the addition.



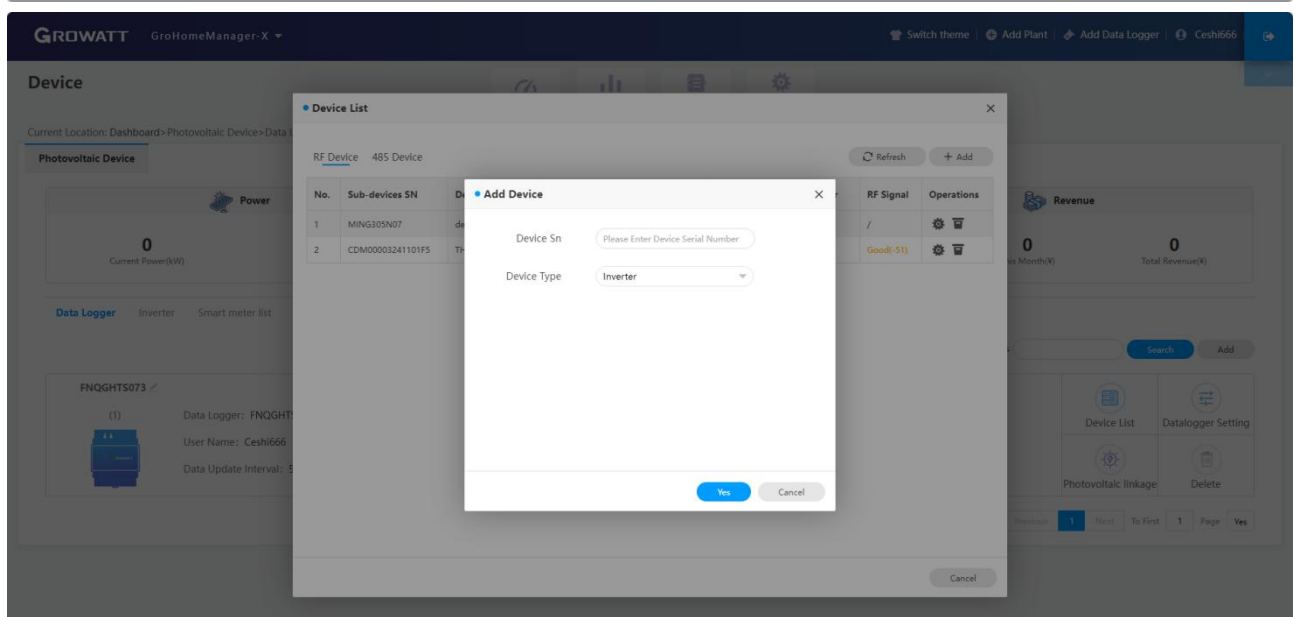
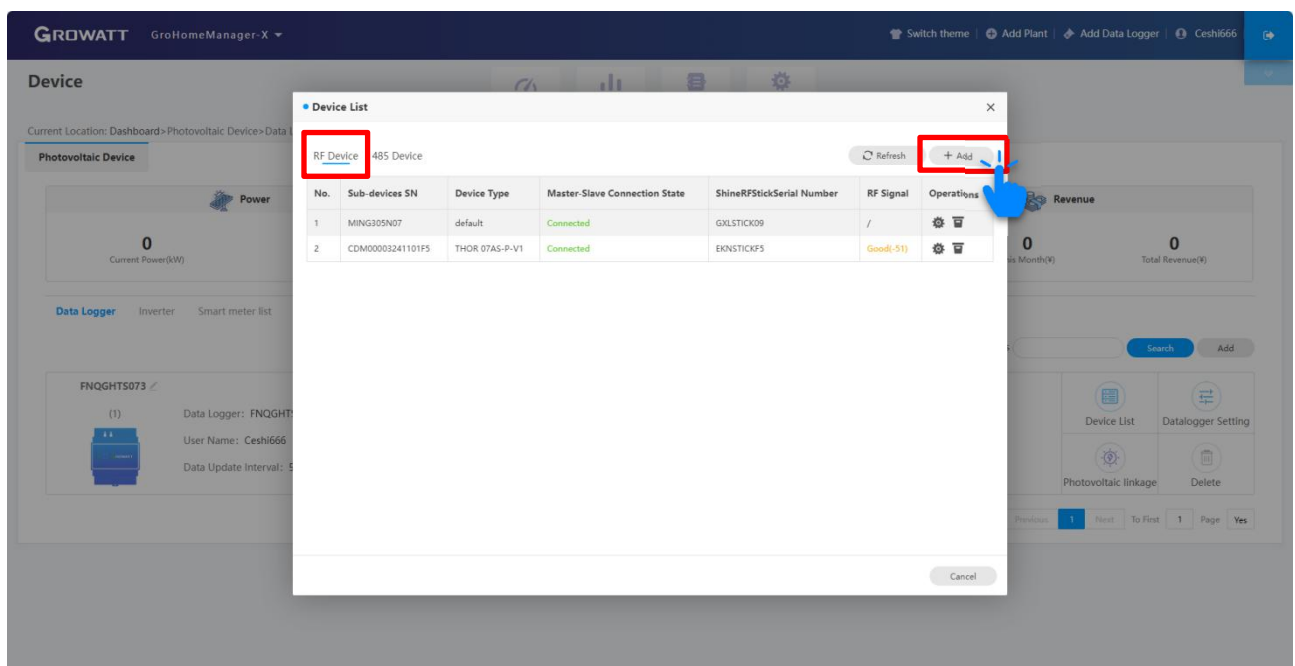


2.5 RF Device Oriented Matching and RF Facility Management

- 1. Click the Facility Management button of the corresponding serial number Energy Manager



- 2. Click the Add button in the RF Devices section of the Facility Management interface



➤ 3. Turn on the pairing mode of the RF slave device

The following is a guide for RF slave devices to open pairing mode:

① ShineRFStick-X2: Double-click the bottom button, the indicator light flashes yellow



② GroBoost-X: Long press the Home button, L3 light flashes

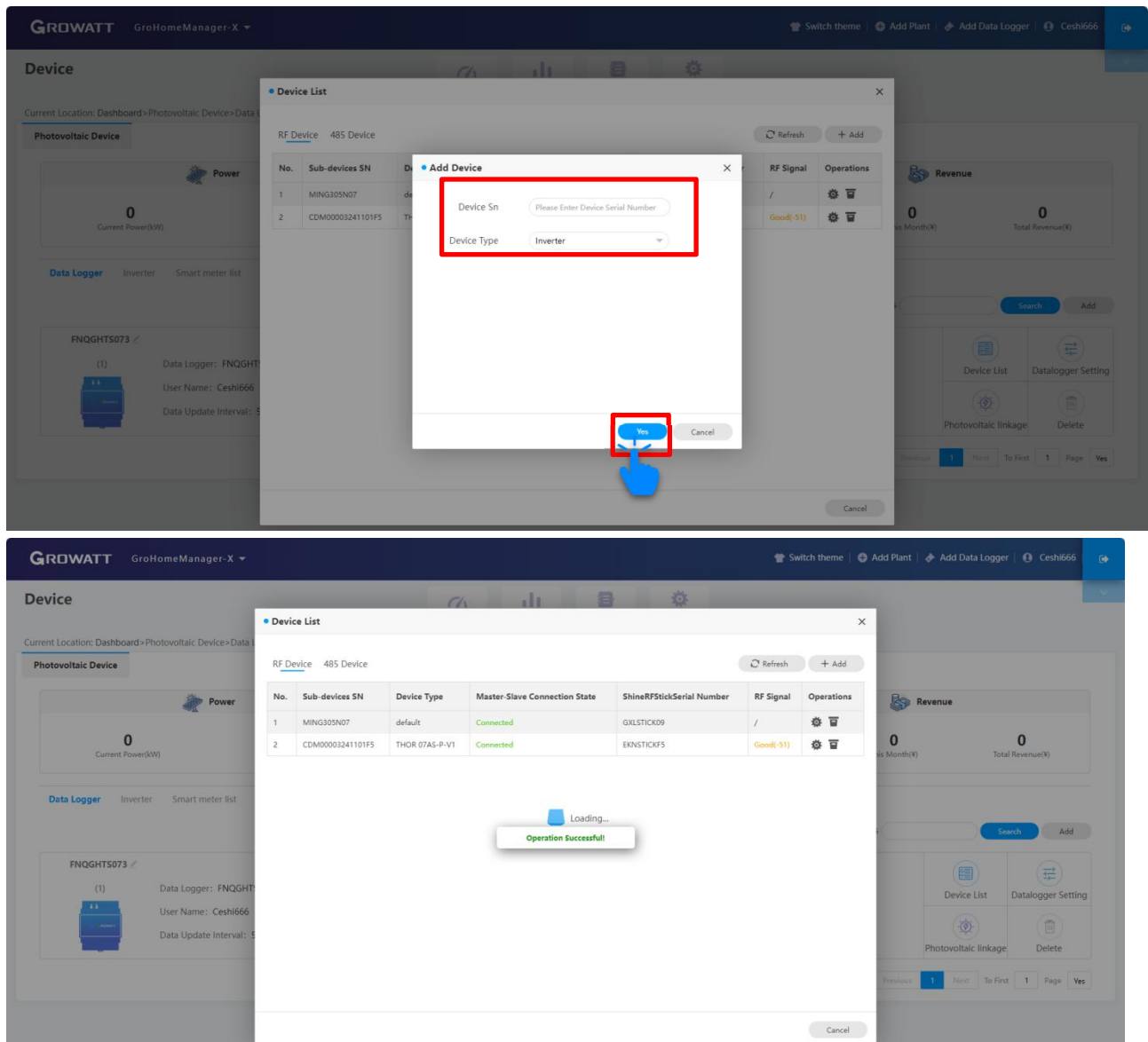


③ EVCharge: Press the side wall button 3 times within 3 seconds. Indicator blinking yellow (the pairing success buzzer buzzes)

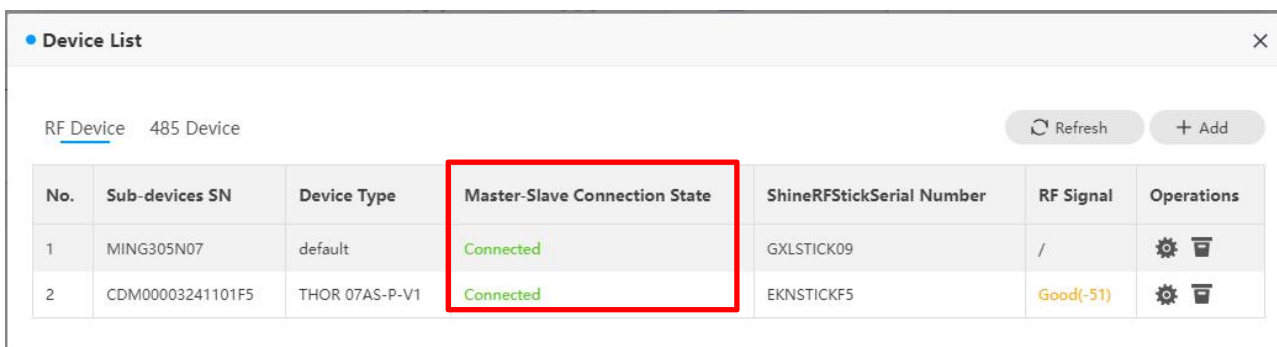


④ NEO: Switch AC twice, recommended switching AC time 5S(factory default RF pairing)

- 4. Enter the serial number of the RF slave device and select the corresponding RF device type, then click OK



- 5. After the RF pairing connection is completed, the status bar of the RF device list of Facility Management will switch from offline to online.

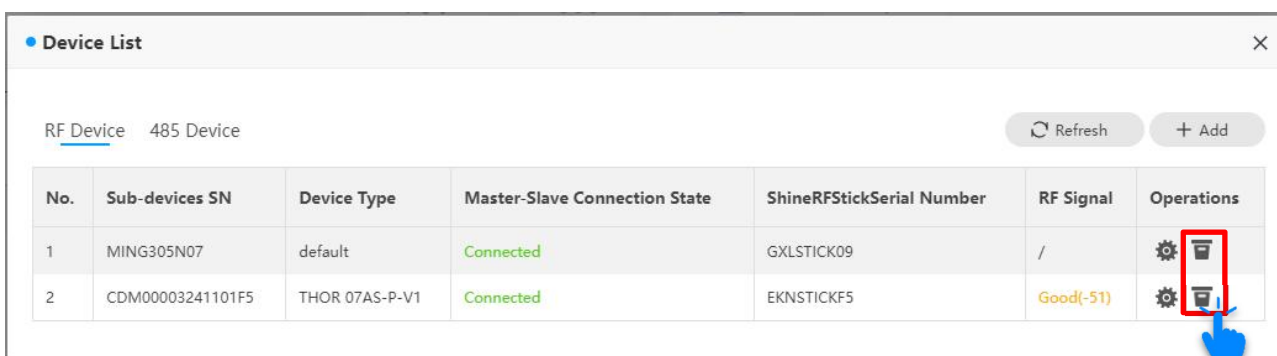


The screenshot shows a 'Device List' window with a table of RF devices. The 'Master-Slave Connection State' column for both devices is 'Connected', highlighted with a red box. The table has columns: No., Sub-devices SN, Device Type, Master-Slave Connection State, ShineRFStickSerial Number, RF Signal, and Operations. There are 'Refresh' and '+ Add' buttons at the top right.

No.	Sub-devices SN	Device Type	Master-Slave Connection State	ShineRFStickSerial Number	RF Signal	Operations
1	MING305N07	default	Connected	GXLSTICK09	/	 
2	CDM00003241101F5	THOR 07AS-P-V1	Connected	EKNSTICKF5	Good(-51)	 

- 6. RF device deletion (non-professionals, please do not perform this operation)

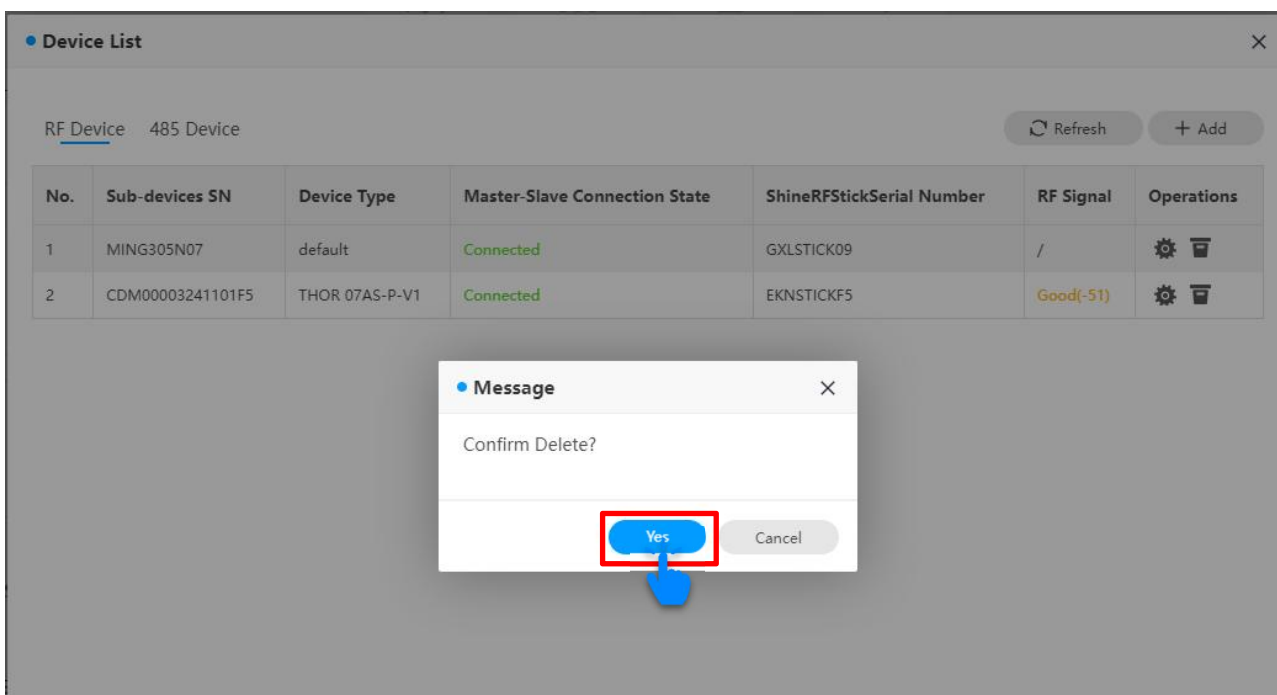
Step 01: Click the trash can button in the operation column of Facility Management to delete the RF device with the corresponding serial number.



The screenshot shows the same 'Device List' window. A red box highlights the trash can icon in the 'Operations' column for the first device (MING305N07). A blue hand cursor is pointing at the trash can icon.

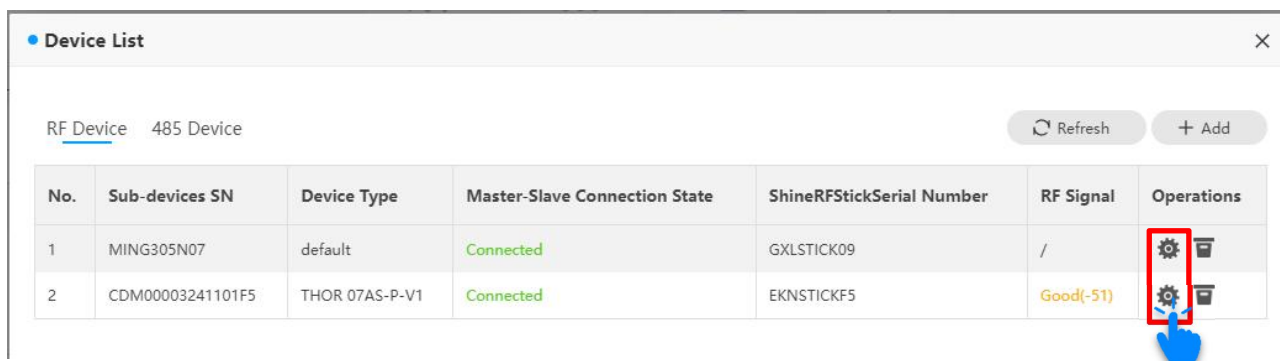
No.	Sub-devices SN	Device Type	Master-Slave Connection State	ShineRFStickSerial Number	RF Signal	Operations
1	MING305N07	default	Connected	GXLSTICK09	/	 
2	CDM00003241101F5	THOR 07AS-P-V1	Connected	EKNSTICKF5	Good(-51)	 

Step 02: Click "YES"

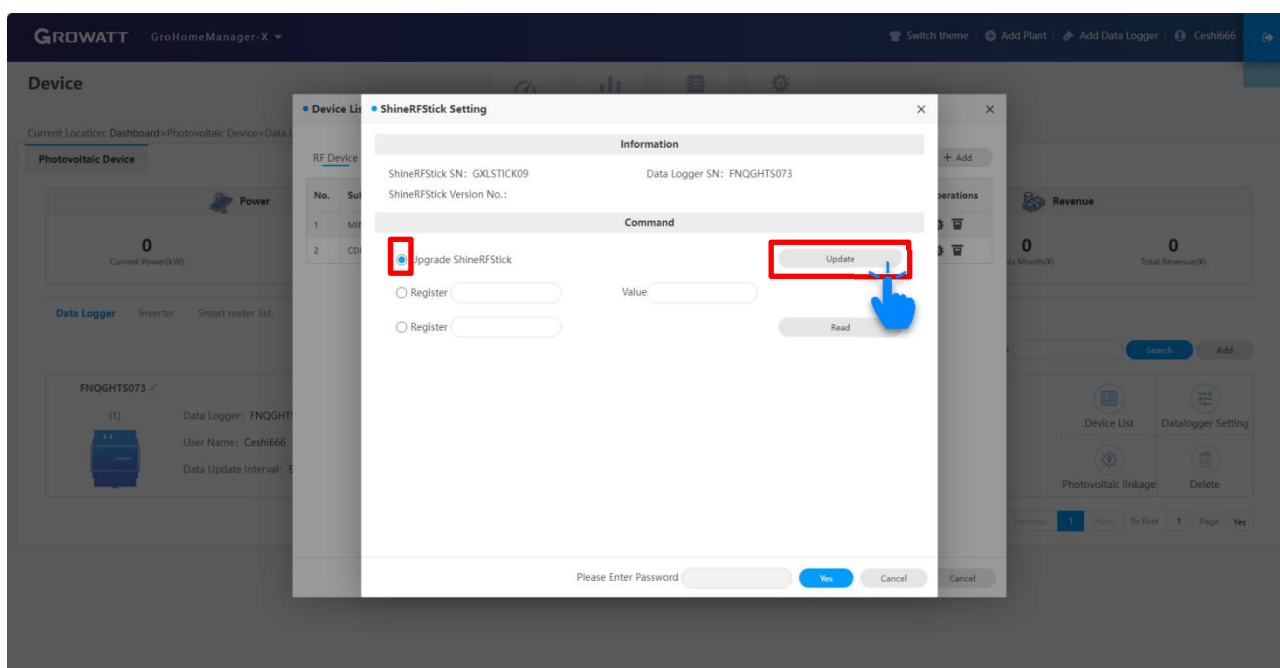


- 7.RF slave device ShineRFStick upgrade (non-professionals, do not perform this operation)

Step 01: Click the gear button for the RF equipment to be upgraded in the Operation section of Facility Management

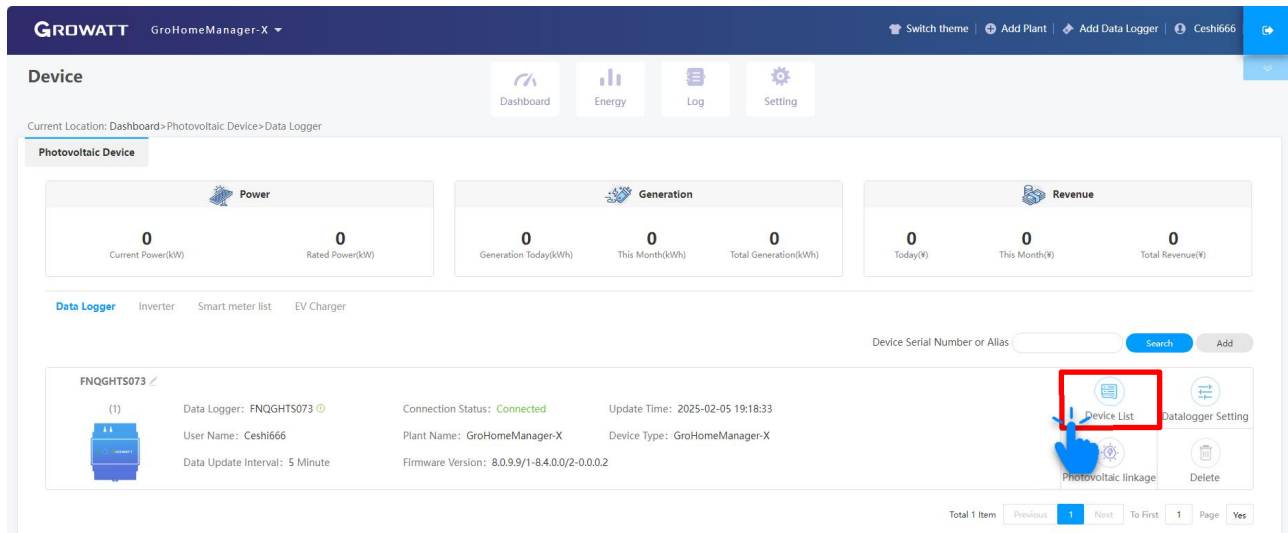


Step 02: Check Upgrade ShineRFStick, click Upgrade, and wait for 15Min to complete the upgrade.

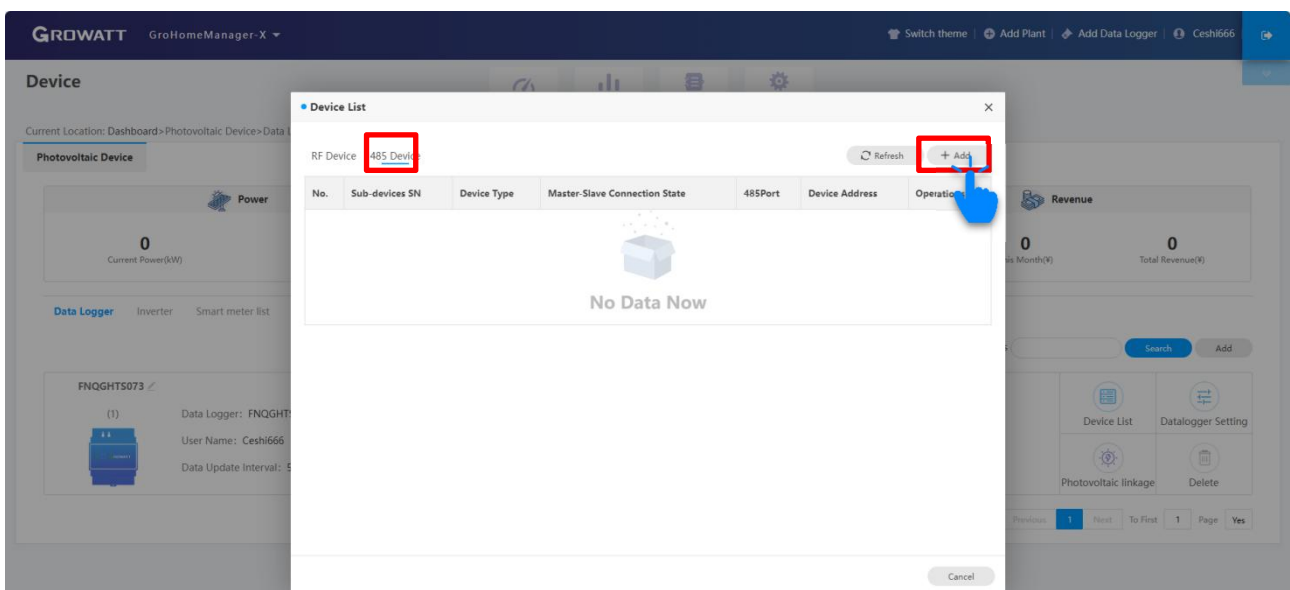


2.6 RS485 device addition and removal

- 1. Click the Facility Management button of the corresponding serial number Energy Manager



- 2. Click the Add button in the RS485 device in the Facility Management interface



- 3. Enter the RS485 parameters corresponding to the added device

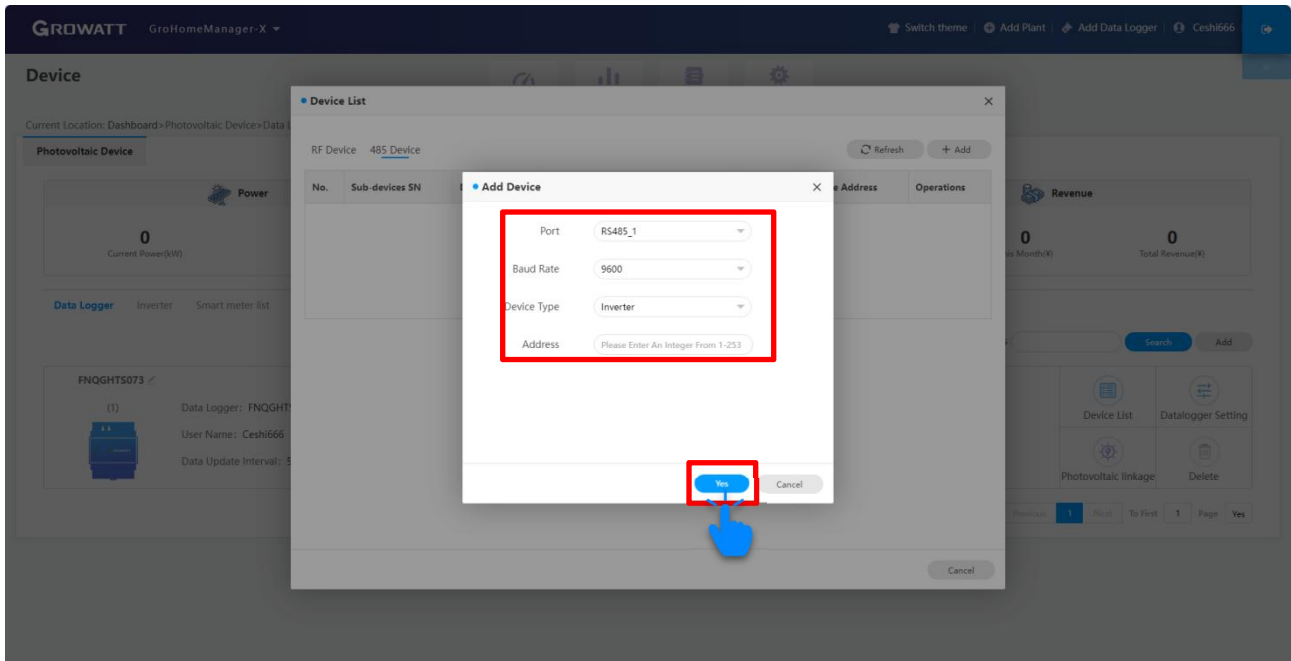
Port selection: GroHomeManager-X has 3 485 ports, corresponding to RS485_1, RS485_2, RS485_3, each 485 supports connecting 2 photovoltaic devices, and the corresponding port can be selected according to the installation.

Baud rate selection: The default baud rate of GroHomeManager-X is 9600

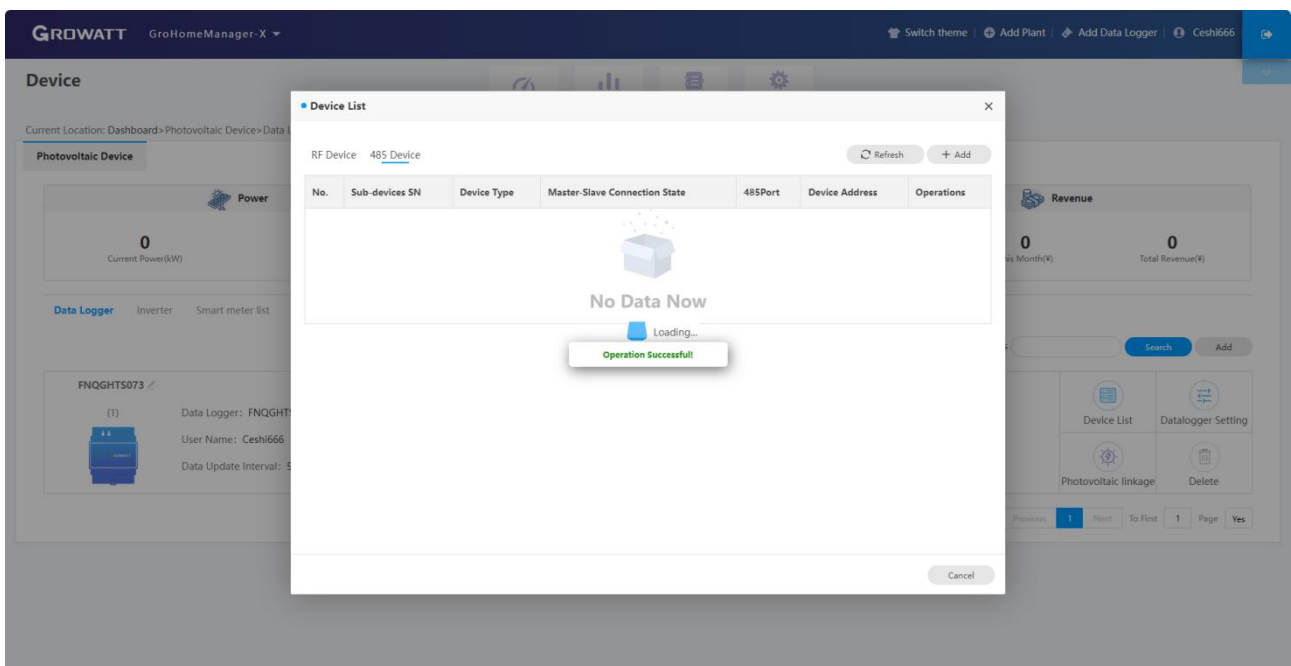
Device type selection: The default device type of GroHomeManager-X is inverter, and it can also support energy storage machines, electric meters, EVCharges, portable power supplies, and GroBoost. You can choose the corresponding device type according to the

needs of the device.

Address input: GroHomeManager-X Fill in the 485 address 1-253 of the external device.



- 4. Click the "OK" button after the input is complete.



- 5. After the RS485 device connection is completed, the status bar of the RS485 device list in Facility Management will switch from offline to online.

Device List						
RF Device		485 Device		Refresh + Add		
No.	Sub-devices SN	Device Type	Master-Slave Connection State	485Port	Device Address	Operations
1	BUZ1234567000001	Growatt 1500	Lost	1	1	

2.7 Equipment upgrade (non-professionals, please do not perform this operation)

- 1.Click datalogger Settings to enter the datalogger settings interface

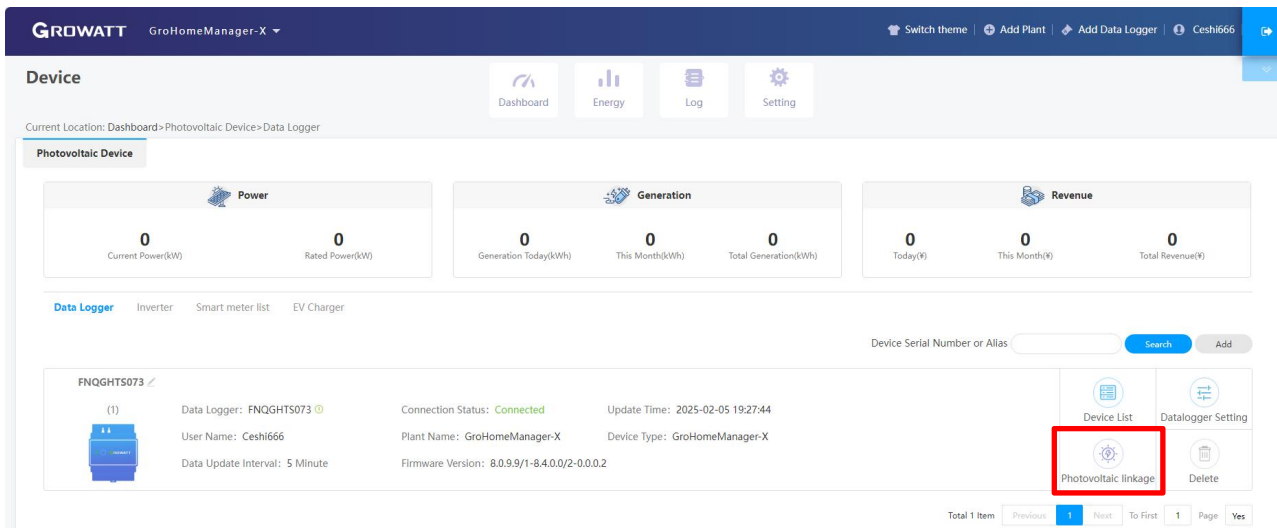
The screenshot shows the GroHomeManager-X interface. The top navigation bar includes 'GROWATT', 'GroHomeManager-X', and several icons. The main content area is titled 'Device' and contains a 'Photovoltaic Device' section. Below this, there are three cards for 'Power', 'Generation', and 'Revenue'. The 'Datalogger' section is active, showing a list of devices. The 'Datalogger Setting' button is highlighted with a red box and a blue arrow pointing to it.

- 2.Check the upgrade datalogger, click detect upgrade, and wait for 5Min to complete the upgrade.

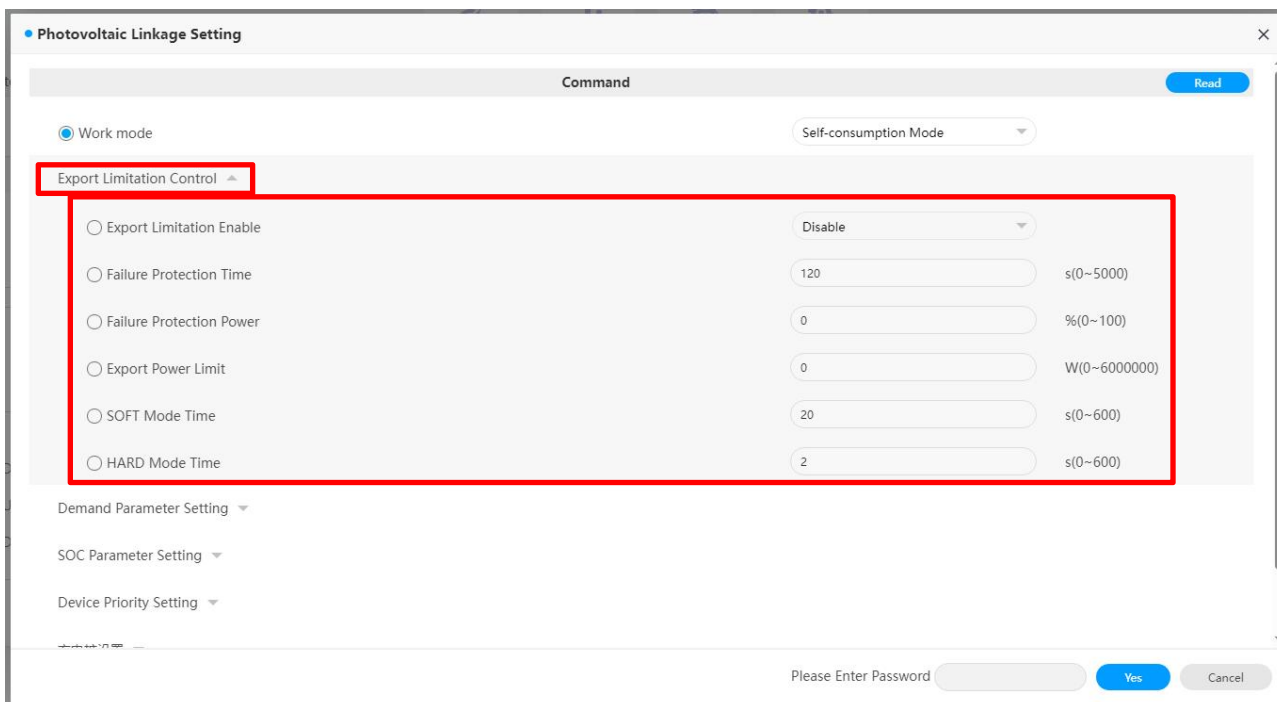
The screenshot shows the 'Datalogger Setting' dialog box. It has two main sections: 'Information' and 'Command'. The 'Information' section displays details for the datalogger 'FNQGHST073', including its alias, update time, and signal/firmware version. The 'Command' section contains several radio buttons for different actions: 'Set IP(Caution IP transfer with)', 'Set Domain', 'Port', 'Update Datalogger', 'Restart Data Logger', and 'Clear Data Logger Log'. The 'Update Datalogger' option is selected, and the 'Detect Upgrade' button is highlighted with a red box. At the bottom, there is a 'Please Enter Password' field and buttons for 'Yes', 'Advanced Setting', and 'Cancel'.

2.8 Export Limitation settings

- 1. Click on the datalogger photovoltaic linkage module to enter the datalogger Export Limitation setting interface



- 2. Enter the "Operating Mode" interface, and select "Self-consumption Mode" or "TOU Mode". "Self-consumption Mode" is recommended. Please note that "Free Time Mode/Monitoring mode" cannot be selected. Otherwise, Export Limitation settings will not take effect. Export Limitation Enable enables the Settings of other parameters such as Failure Protection Time, Failure Protection Power and Export Power Limit according to your own needs. To set a parameter, you need to click "Yes" once.



3 Energy management

3.1 Introduction to Energy Management Model

➤ 1. Self-consumption Mode

Definition: When the photovoltaic power generation is sufficient to meet the household load demand, photovoltaic power should be given priority to reduce the power purchased by the power grid. The power generated by photovoltaic systems is prioritized and provided to the load, batteries (or charging piles), with the remaining excess power fed into the grid. When the photovoltaic power generation is insufficient, energy storage systems should be given priority to supplement the power demand.

Logic:

① Photovoltaic power generation > load demand: Excess electricity is stored in the energy storage system and fed into the grid.

② Photovoltaic power generation = Load demand: Fully powered by the photovoltaic system, no grid power is required.

③ Photovoltaic power generation < load demand: Prioritize the use of photovoltaic power, and the insufficient part will be supplied by the energy storage system or the power grid.

➤ 2. Free Time Mode / Monitoring mode

Definition: In the Free Time Mode / Monitoring mode GroHomeManager-X is only responsible for the monitoring function and does not perform power control on photovoltaic equipment.

➤ 3. TOU Mode

Definition: Charge during the period when electricity prices are lower (off-peak period) and discharge during the period when electricity prices are higher (peak period) to achieve the optimization of electricity charges.

Logic:

① Off-peak electricity price: Prioritize the use of photovoltaic power, and the excess will be charged into the energy storage system or sold to the power grid. If there is not enough photovoltaic power during the off-peak period, the off-peak electricity price can be used to charge the battery. Until the TOU charging stops at SOC%.

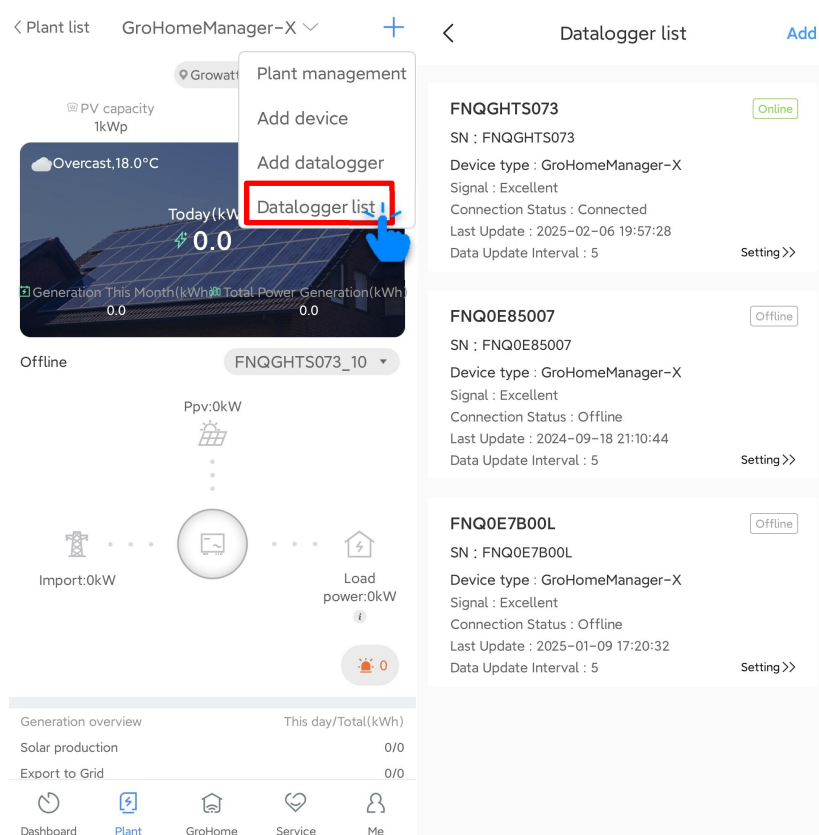
② Peak electricity price: Prioritize the use of energy storage systems for power supply and reduce the purchase of electricity from the power grid.

③ The logical behavior of off-peak electricity prices is equivalent to GROWATT's "Battery First".

④ The logical behavior of peak electricity prices is equivalent to GROWATT's "Grid First".

3.2 Energy Management Mode Settings - APP

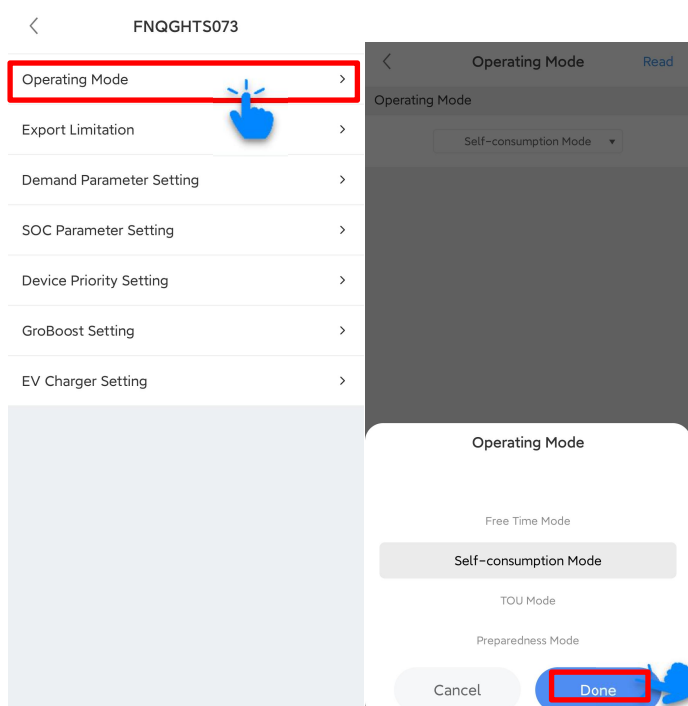
- 1. On the power station page, click the "+" datalogger list to enter the datalogger list interface.



- 2. According to the serial number displayed by GroHomeManager-X, select the settings option in the lower right corner of the datalogger corresponding to the serial number

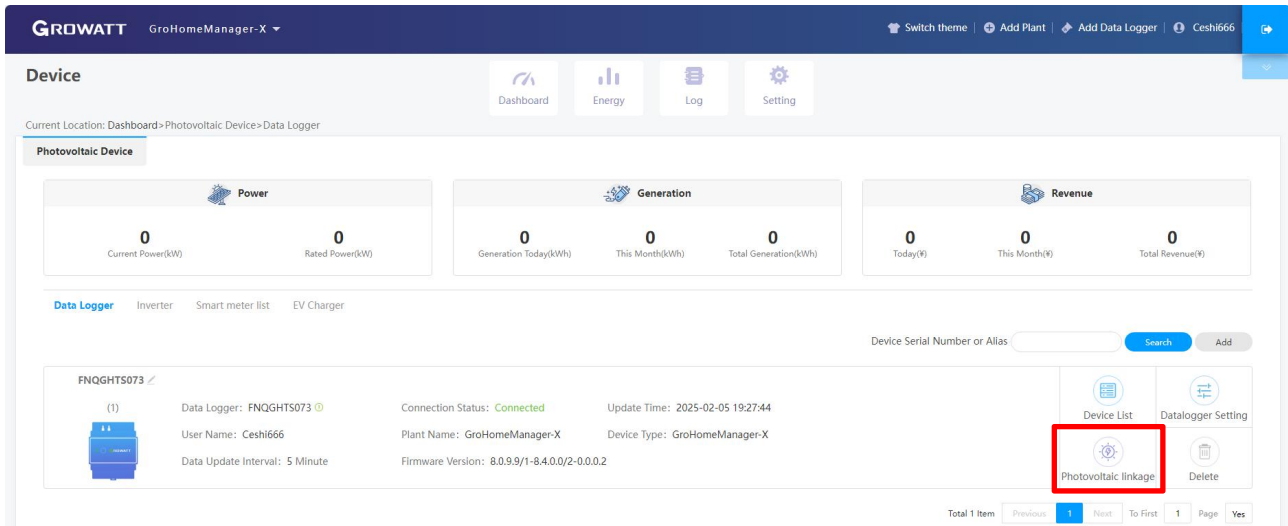


- 3. According to the serial number displayed by GroHomeManager-X, select the setting option in the lower right corner of the datalogger corresponding to the serial number, enter the energy management mode setting interface, then click the working mode, select and click the OK button below to complete the mode setting. After the setting is completed, synchronize and select all settings on the current page according to your own needs, such as Export Limitation setting, demand parameter setting, SOC parameter setting, etc

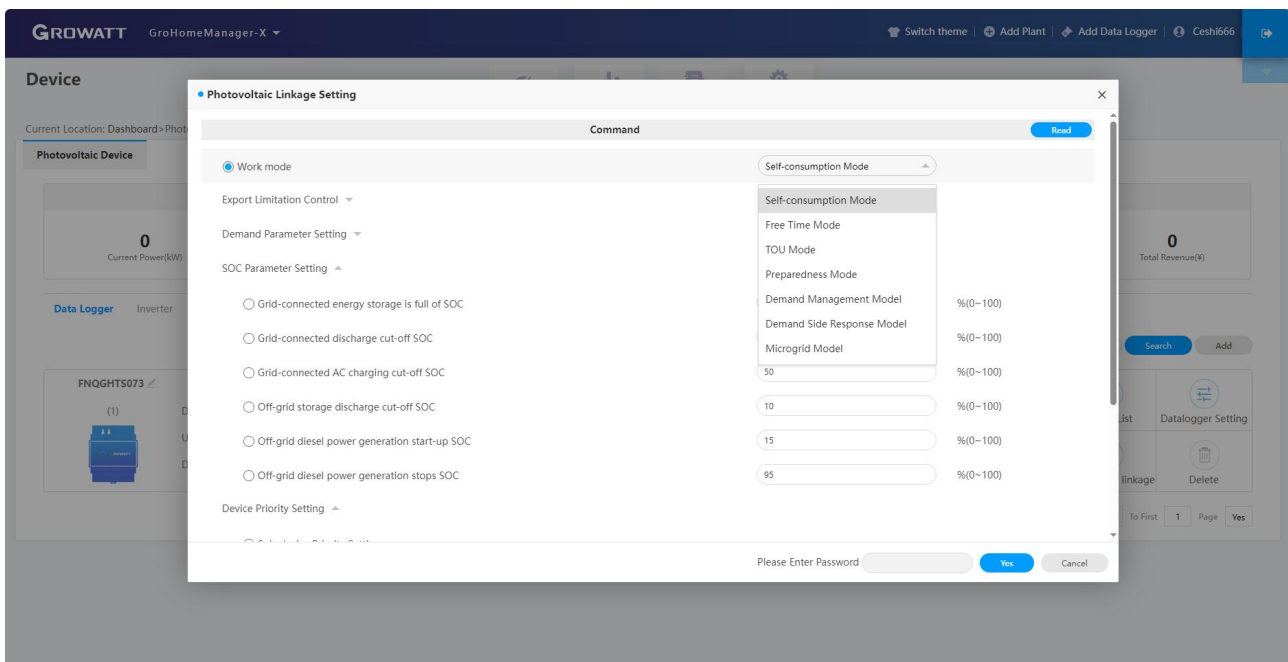


3.3 Energy Management Mode Settings-Server

- 1. In the Server-side device interface, click the datalogger photovoltaic linkage module to enter the datalogger energy management settings.



- 2. Select the working mode and click the "YES" button below to complete the mode setting. After setting, synchronize and select all settings on the current page according to your own needs, such as Export Limitation settings, demand parameter settings, SOC parameter settings, etc.



4 Troubleshooting

4.1 Troubleshooting based on the indicator status

➤ 1.GroHomeManager-X

LED status	Indication	Troubleshooting
Steady White	Initialized or in the state of restoring factory default settings	Wait for 10S initialization to complete
Steady Yellow	In Bluetooth mode	Please continue to follow the APP instructions for networking/sub-device addition process. If networking/sub-device addition process is not required, please click the button to exit this mode.
Yellow Flashing Slowly	RF pairing mode	Please continue to follow the APP instructions to add sub-devices, without RF pairing, double-click the button to exit pairing mode.
Yellow Flashing	It is in Bluetooth local upgrade mode.	Please wait patiently for the upgrade to complete.
Steady Red	Not connected to router, not connected to PV/RF sub-devices	Please continue to follow the APP instructions for networking and sub-device addition process
Steady Green	The photovoltaic equipment/RF sub-device is not connected	Please continue with the sub-device addition process according to the APP instructions
Green Flashing	Connect the photovoltaic/RF sub-device link is abnormal	Please check whether the RS485 wiring method is correct/Check the ShineRFStick-X2 indicator light to determine if there are any abnormal conditions.

Steady Blue	Connected router, not connected server, connected photovoltaic equipment/RF sub-device	1. Check if the router can access the internet 2.Does the router restrict the server and port number? The datalogger needs to use port 7006
Blue Flashing	Unable to connect router, connected photovoltaic equipment/RF sub-device	1. WiFi wireless connection method (1)Check if the router account password filled in during the configuration process is correct (2)Check the router: a)The wireless name of the router should be composed of English and numbers, and special characters are not supported : (""...·€¥) b)For security reasons, please use an encrypted wireless network c)Networks that do not support secondary authentication and bridged wireless signals 2. LAN wired connection method (1)Ethernet cable not connected (2)Restart the router and confirm that the router's automatic IP allocation function is available (3)If a static IP Address is used, determine whether the IP Address is consistent with the router setting network segment
Blue Flashing Slowly	Connected router, connected server, connected photovoltaic/RF sub-device	in normal working mode, slow flash times represent the number of connections of the device.

Attention :

1. When the initial network configuration is made, the device will automatically enter Bluetooth mode.
2. When Bluetooth is turned on, there is no data interaction with the APP, and Bluetooth will be automatically turned off after 30Min
3. When a single device is connected, the slow flash frequency is 1S, and the fast flash frequency is 0.5S. When multiple devices are connected, the number of flashes during slow flash represents the number of PV/RF slave devices connected
4. When the Bluetooth mode is turned on, the indicator light prioritizes displaying the yellow light and is always on. Please check the network/sub-device configuration in the APP. If you need to view GroHome device information through the indicator light, click the button to exit the Bluetooth mode

Table 19 GroHomeManager-X Troubleshooting based on the indicator status

➤ 2.ShineRFStick-X2

LED status	Indication	Troubleshooting
Steady White	Initialized or in the state of restoring factory default settings	Wait for 30S initialization to complete
Steady Yellow	In Bluetooth mode	Please click the button to exit this mode
Yellow Flashing Slowly	RF pairing mode	Please follow the APP instructions of the RF host to add the device, no pairing is required, double-click the bottom button to exit pairing mode
Yellow Flashing	It is in upgrade mode.	Please wait patiently for the upgrade to complete.
Steady Red	If the RF host is not connected and the photovoltaic device is not connected	Please continue to follow the APP instructions of the RF host to add the device
Steady Green	If the photovoltaic equipment is not connected	please check whether the datalogger and inverter are connected normally. If the phenomenon persists after repeated plugging and unplugging, please contact Growatt customer service

Steady Blue	No RF host is configured	Perform RF pairing according to the host RF pairing process
Blue Flashing	Unable to connect to RF host, connected photovoltaic equipment/RF equipment	1. Please check if the host is powered on/online 2. Please check whether the leader/follower is within the recommended distance range 3. Please check whether the host antenna is damaged 4. If it appears repeatedly, please contact Growatt customer service
Blue Flashing Slowly	Connected to RF host, connected to photovoltaic equipment/RF equipment	In normal working mode
Attention: Slow flash frequency 1S, flash frequency 0.5S		

Table 20 ShineRFStick-X2 Troubleshooting based on the indicator statu

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