



## EMA APP User Manual (PV Version)

V8.14.0

### APsystems EMEA

Karspeldreef 8, 1101 CJ  
Amsterdam  
Phone: +31 (0)85 3018499  
Email: [info.emea@APsystems.com](mailto:info.emea@APsystems.com)  
[emea.APsystems.com](http://emea.APsystems.com)

### APsystems France

22 avenue Lionel Terray  
69330 Jonage  
France  
Phone: 031-10-2582670  
Email: [info.emea@APsystems.com](mailto:info.emea@APsystems.com)  
[emea.APsystems.com](http://emea.APsystems.com)

© All Rights Reserved

# Table of Contents

<b>Introduction .....</b>	<b>1</b>
<b>1. APP Download .....</b>	<b>2</b>
<b>2. System Configuration .....</b>	<b>3</b>
2.1 Register Account .....	3
2.1.1 Account Information .....	4
2.1.2 Device Information: ECU Information .....	5
2.1.3 Device Information: Inverter Information .....	7
2.2 ECU Initialization.....	10
2.2.1 Link Inverters.....	10
2.2.2 Network Configuration.....	11
2.2.3 ECU Setting.....	12
<b>3. Data Monitor.....</b>	<b>17</b>
3.1 Remote Monitor .....	17
3.1.1 Home .....	17
3.1.2 Module .....	19
3.1.3 Data .....	20
3.2 Local Monitor.....	22
3.2.1 ECU .....	22
3.2.2 Inverter .....	23
<b>4. Account management.....</b>	<b>24</b>
4.1 Forgot Password .....	24
4.2 Account Information Edit .....	25
4.3 Account Security.....	26
4.3.1 Reset Password.....	26
4.3.2 Account Cancellation .....	27
4.4 Device Information Edit .....	28
4.4.1 ECU Information Edit.....	28
4.4.2 Inverter Information Edit .....	29
4.4.3 Installer Information .....	30
<b>5. App Setting.....</b>	<b>31</b>
5.1 Language.....	31
5.2 Night Mode .....	32

# Introduction

EMA APP is designed for APsystems microinverters system owners and DIY users. It allows users to track real-time performance of the photovoltaic system, see the system output by day, month, year, calculate energy savings and environmental benefits. It also allows system commission and configuration.

# 1.APP Download

- Method 1: Search "EMA APP" in "APP Store" or "Google Play"
- Method 2: Scan the QR code to download.



## Note

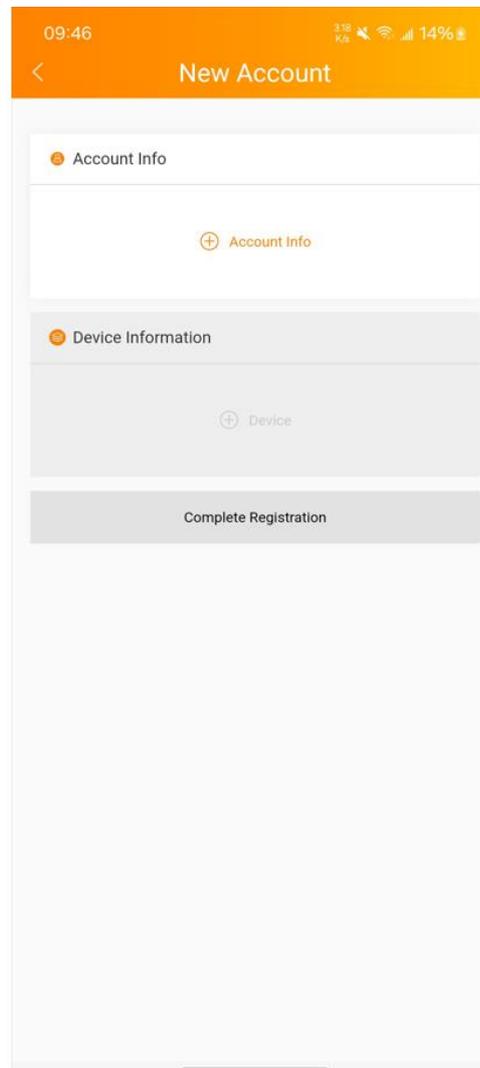
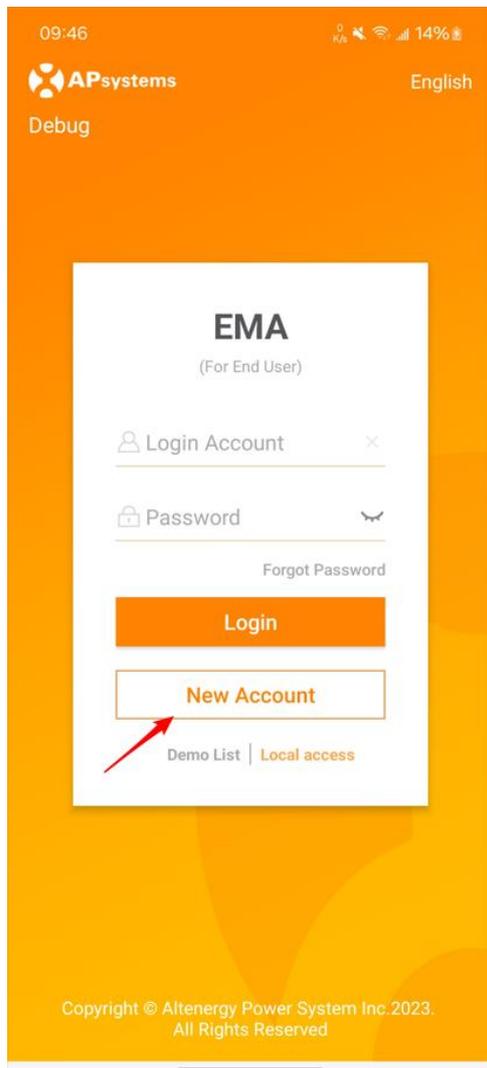
- ◆ iOS 13.1 and onwards
- ◆ Android 7.0 and onwards

# 2. System Configuration

## 2.1 Register Account

If you don't have an EMA account yet, you can register through the EMA APP. The following introduction takes the example of registering an account first and then configuring the ECU. You can also configure the ECU first and then register an account.

- Register is divided into the following steps:
  - Step1: Click **"New Account"** to enter the registration navigation page.
  - Step2: Account Information (Required)
  - Step3: Device Information (Required)

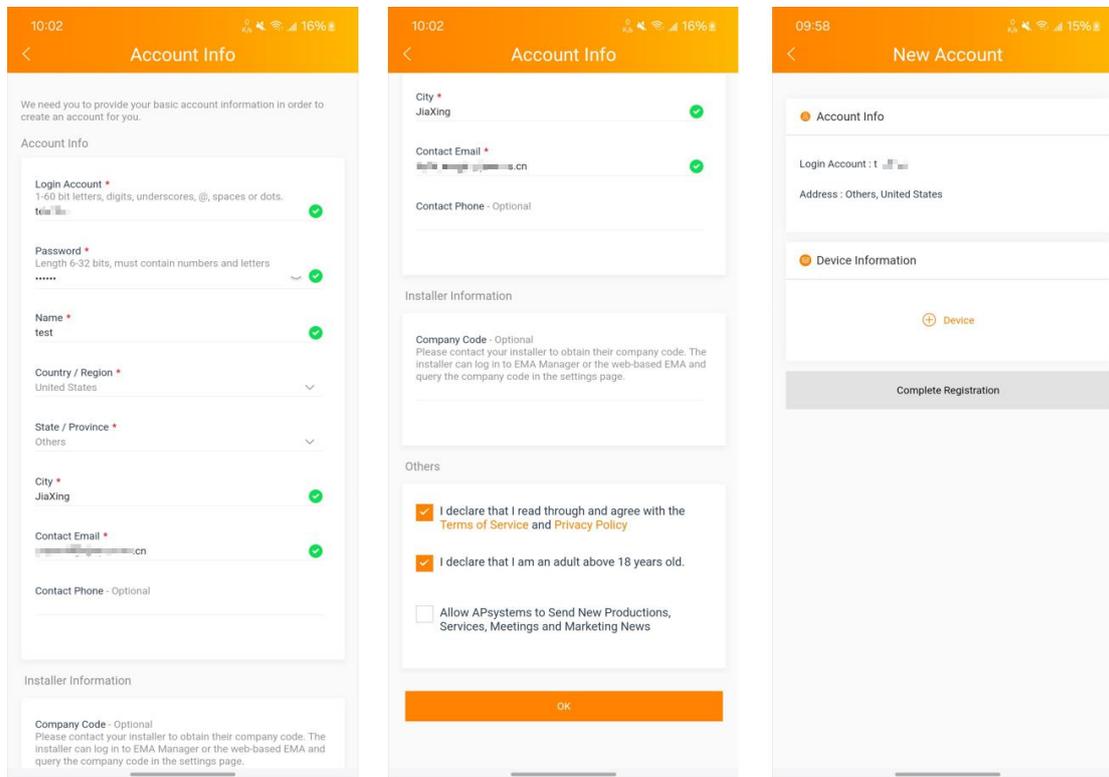


# 2. System Configuration

## 2.1.1 Account Information

On this page, please fill in the information related to your account. Required fields are marked with "\*".

- To complete account information:
  - Click "**Account Info**",
  - Enter the necessary information according to the prompts on the page and tick the relevant agreements,
  - Click "**OK**" to complete.
- Click "**Device**" to add devices.



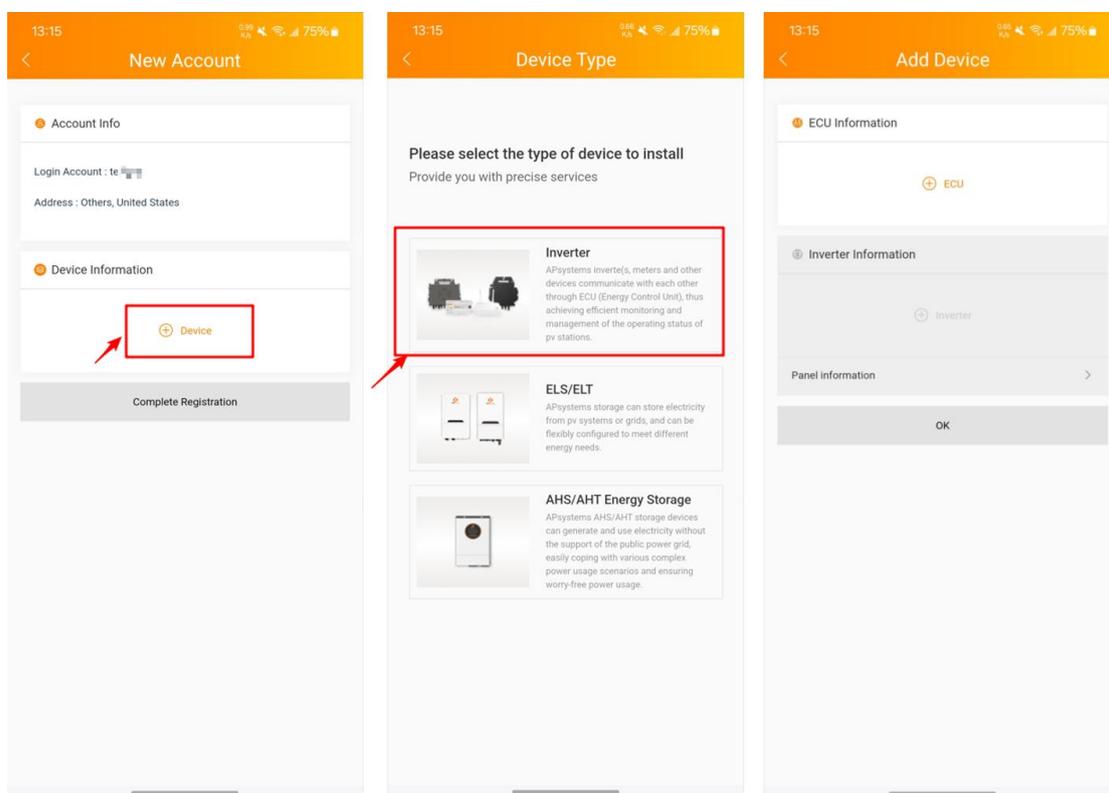
### Note

- ◆ You can enter the **company code** to make the link to your installer/retailer. This field is optional.
- ◆ Installer/retailer can login EMA Manager or EMA web portal and get the **company code** in the "Setting" page.

## 2. System Configuration

### 2.1.2 Device Information: ECU Information

- To complete ECU information:
  - Click **"Device"** to add devices.
  - Click **"Inverter"** in the [Device Type] page.
  - ECU Information(Required)
  - Inverter Information(Required)
  - Module Information (Required)



- To complete ECU information:
  - Click **"ECU"**,
  - Enter the corresponding ECU information according to the page prompts (the ECU entry method is divided into "scan code entry" and "manual entry"),
  - Click **"OK"** to complete.

## 2. System Configuration

13:17 0.91 K/s 74%

< Add ECU

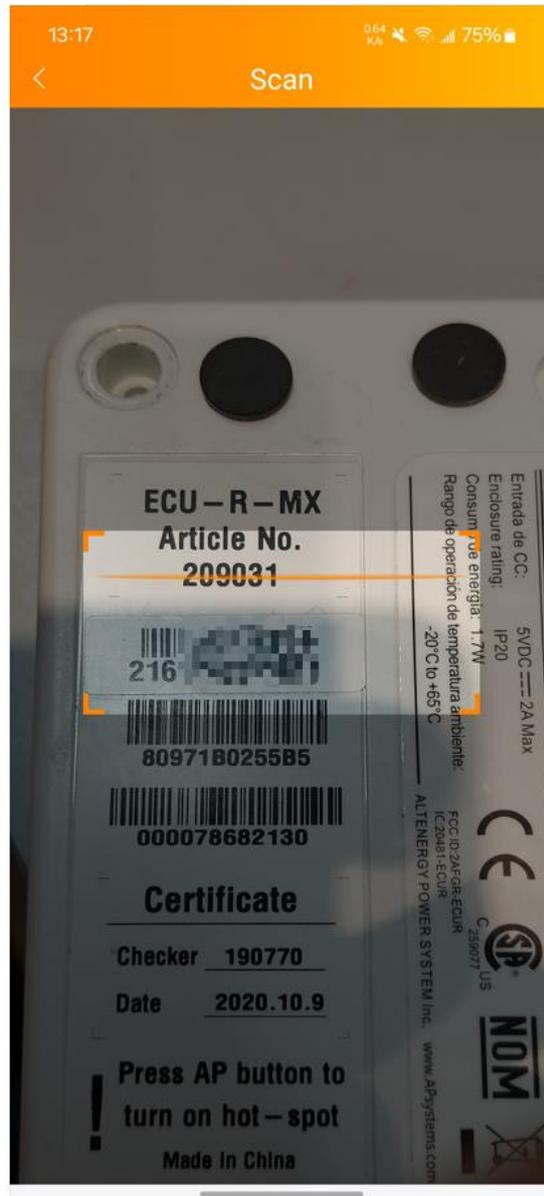
ECU Info ^

Collect the ECU of PV system. ECU ID is a 12-digit number located on the top of ECU, as well as on the front flap of the shipping box.

ECU ID \*  
12-digit number located on the top of ECU, or on the front flap of the shipping box.  
216 [ ]

ECU Name  
Custom ECU name

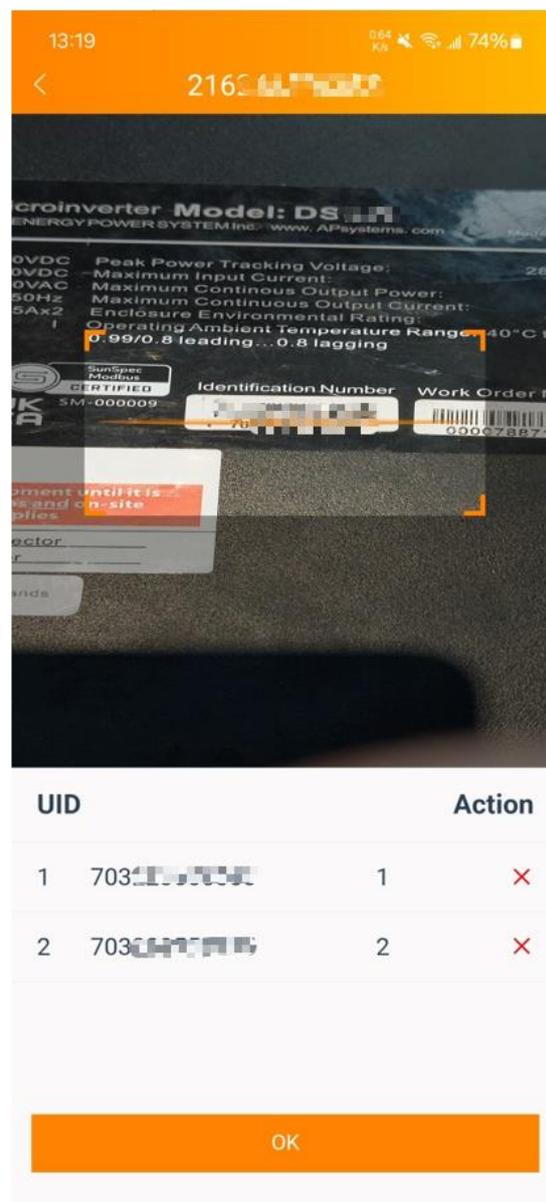
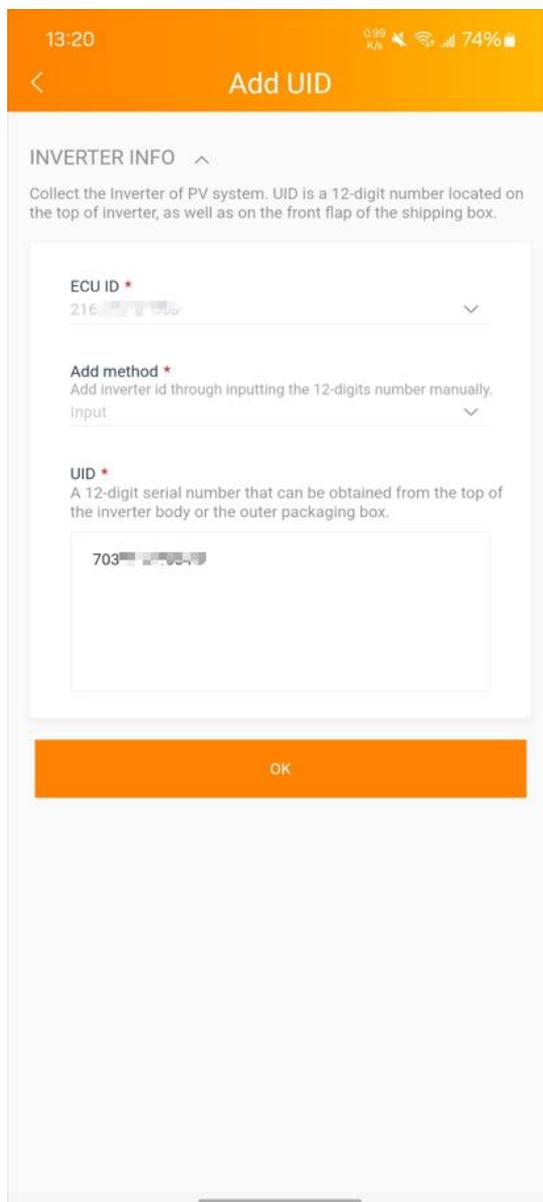
OK



# 2. System Configuration

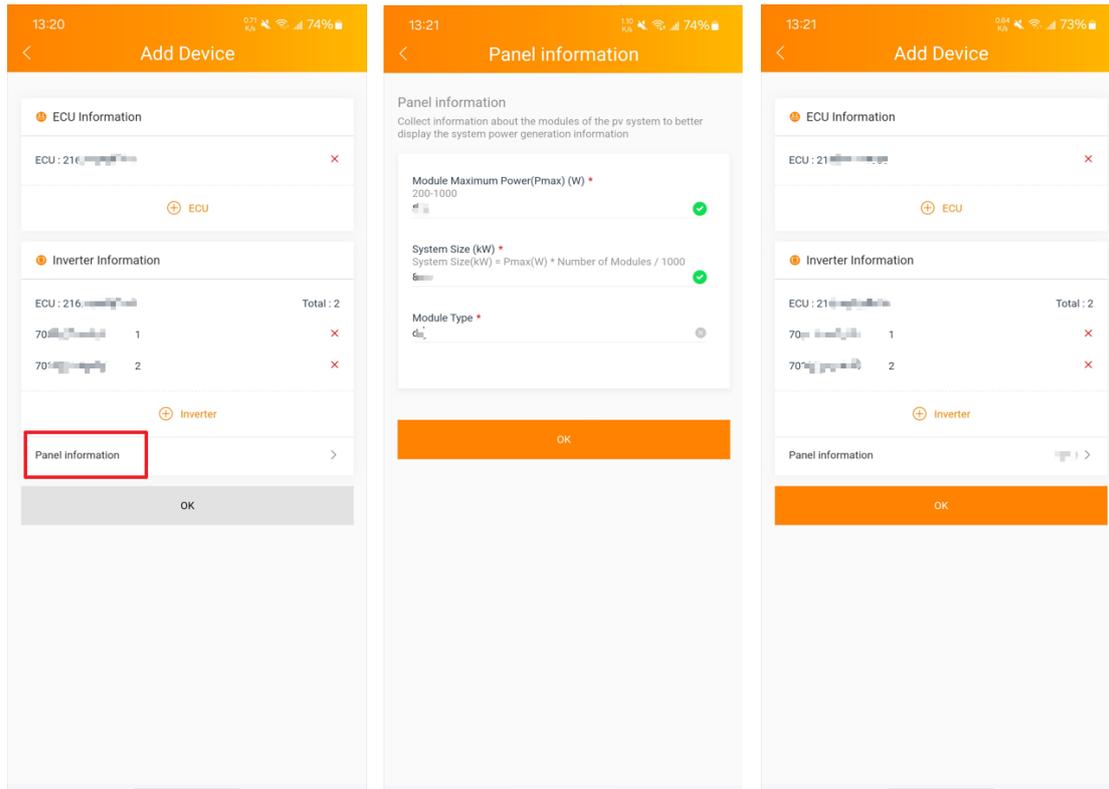
## 2.1.3 Device Information: Inverter Information

- To complete Inverter information:
  - Click **"Inverter"** to enter,
  - Enter the corresponding inverter information according to the page prompts (the entry method of the inverter is divided into "scan code entry", "manual entry" and "import from ECU" ),
  - Click **"OK"** to complete.



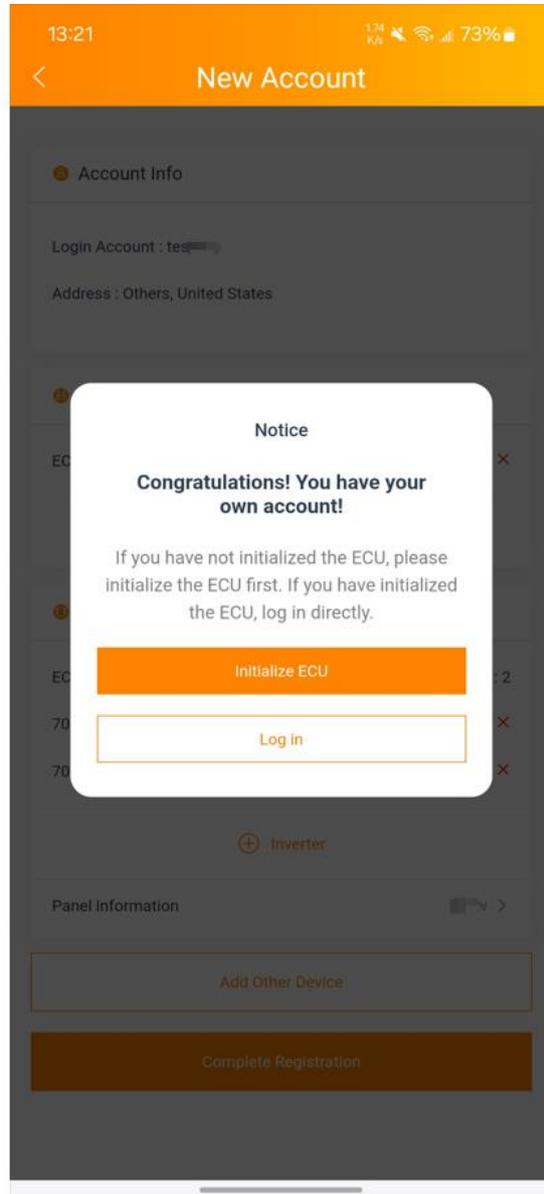
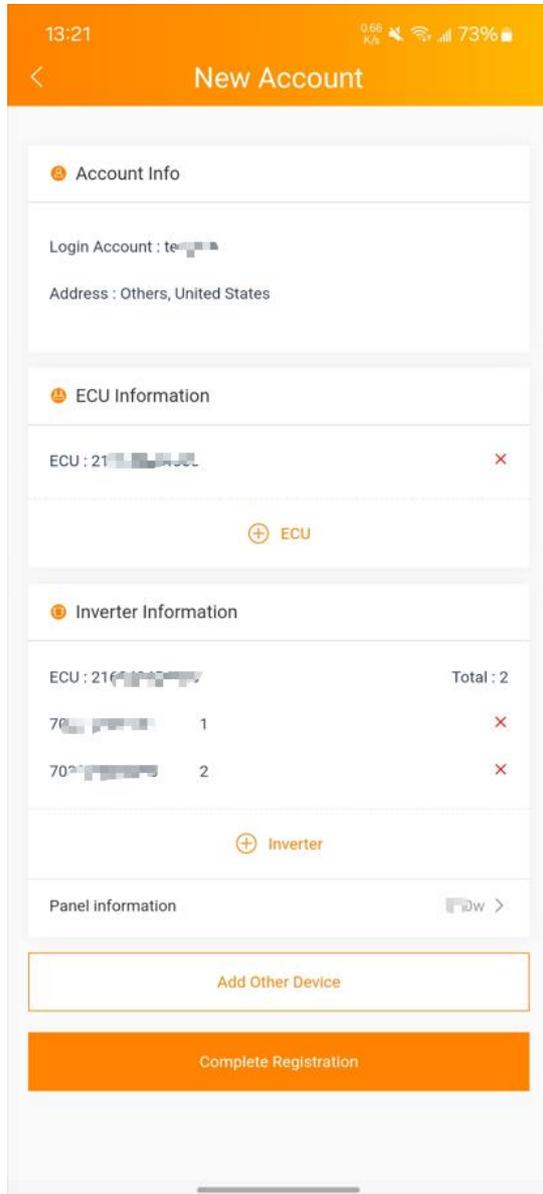
## 2. System Configuration

- To complete module information:
  - Click **"Panel information"** to enter,
  - Enter the corresponding information according to the page prompts,
  - Click **"OK"** to complete.



## 2. System Configuration

- Click "Complete Registration" to complete.



# 2. System Configuration

## 2.2 ECU Initialization

After the account registration is completed, you can initialize the ECU.

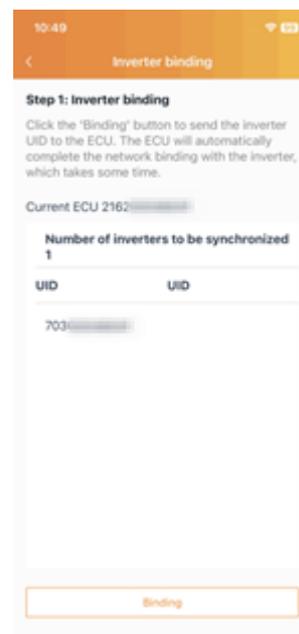
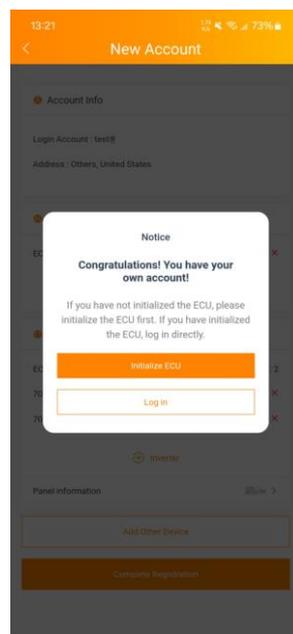
### Note

When configuring the ECU, you need to switch the mobile phone network to the ECU hotspot. The default password for the ECU hotspot is 88888888.

### 2.2.1 Link Inverters

- Click "ECU Initialization" to enter,
- Correct the inverter number, click the "Bind" button, and send the inverter UID to the ECU. The ECU will automatically complete the network binding with the inverter. This process takes some time.

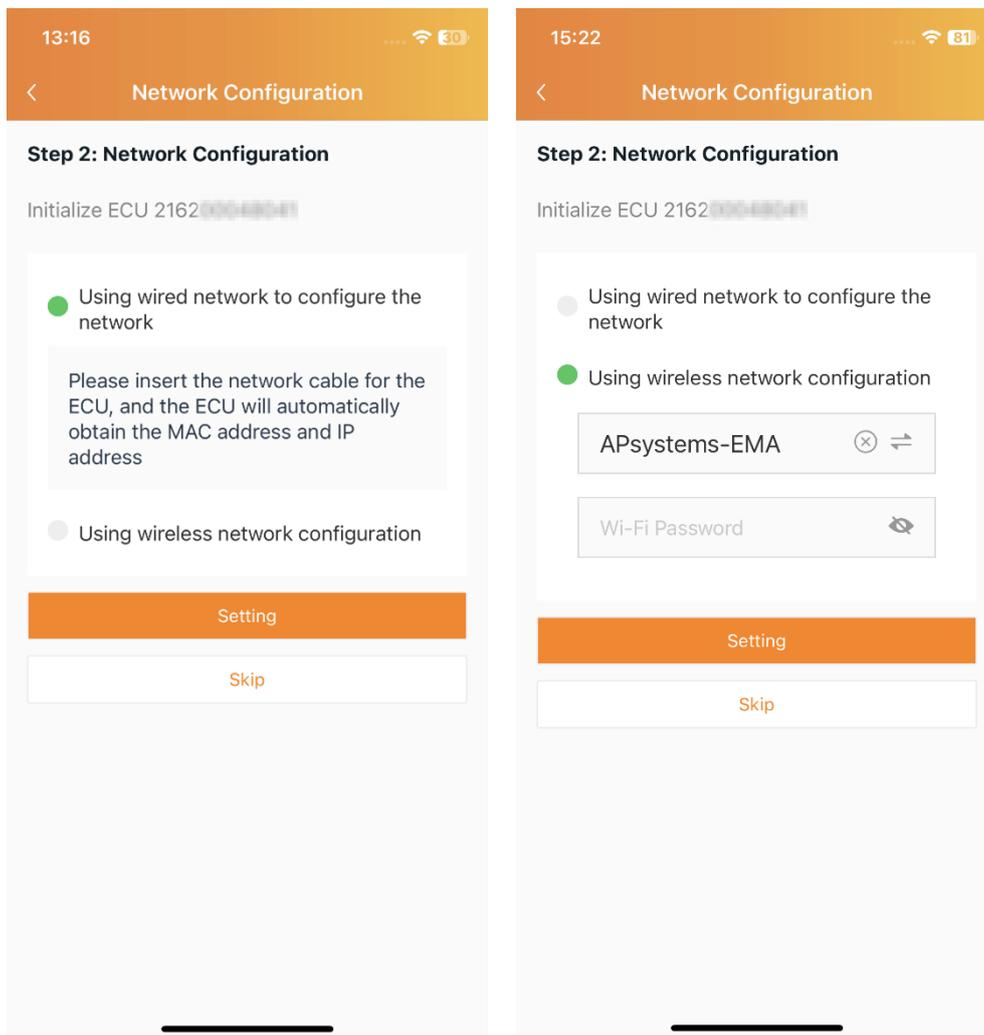
If you skip account registration and proceed directly to ECU initialization, you need to enter the inverter information.



# 2. System Configuration

## 2.2.2 Network Configuration

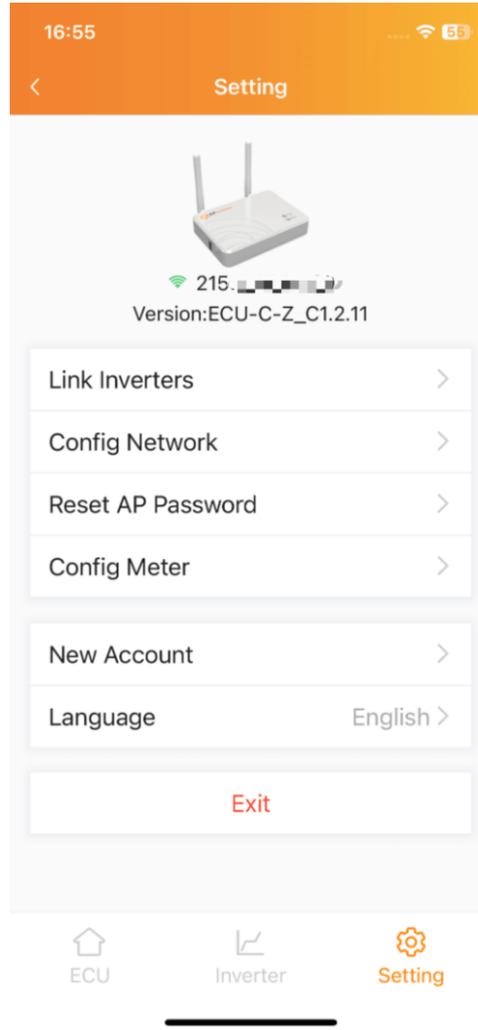
- Select the Internet Wi-Fi that can be connected in the ECU work area and enter the Wi-Fi password or choose wired network configuration,
- Click "OK" to complete the network configuration.



# 2. System Configuration

## 2.2.3 ECU Setting

You can view and set various configuration items of the ECU.



# 2. System Configuration

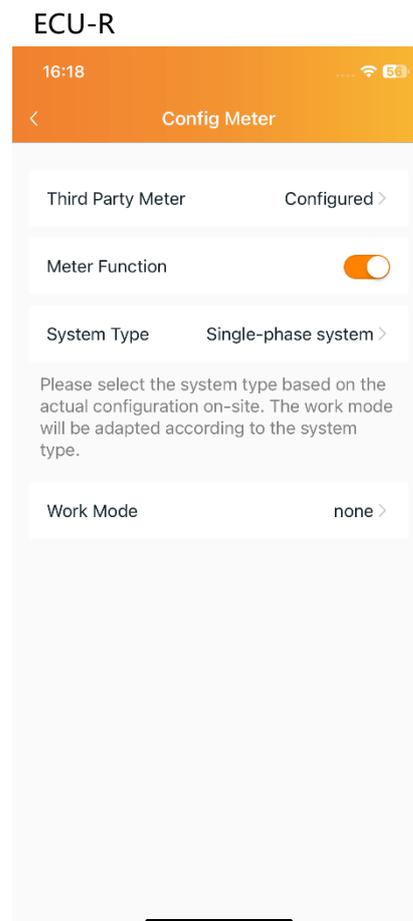
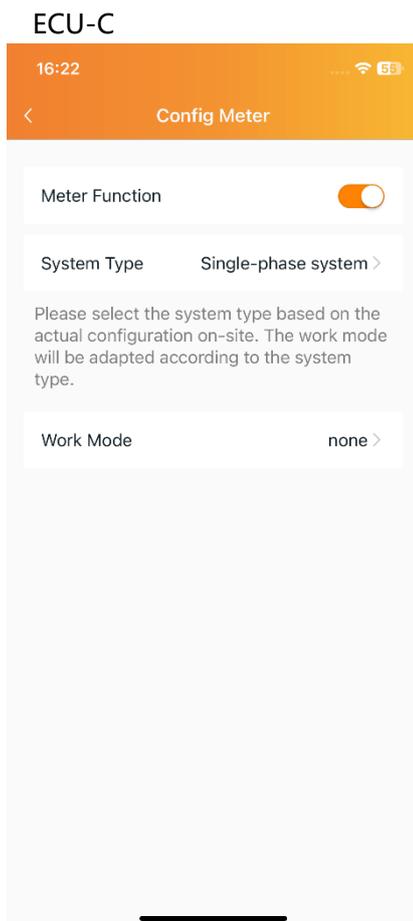
## 2.2.3.1 Config Meter

Different models of ECU have different meter setting functions.

- Select the system type and turn on the meter function,
- According to the actual configuration requirements, select the appropriate working mode for configuration to ensure safe system operation.

### Note

- For the ECU-R series, you need to complete the basic settings of the third-party meter before you can turn on the meter function and set the working mode.



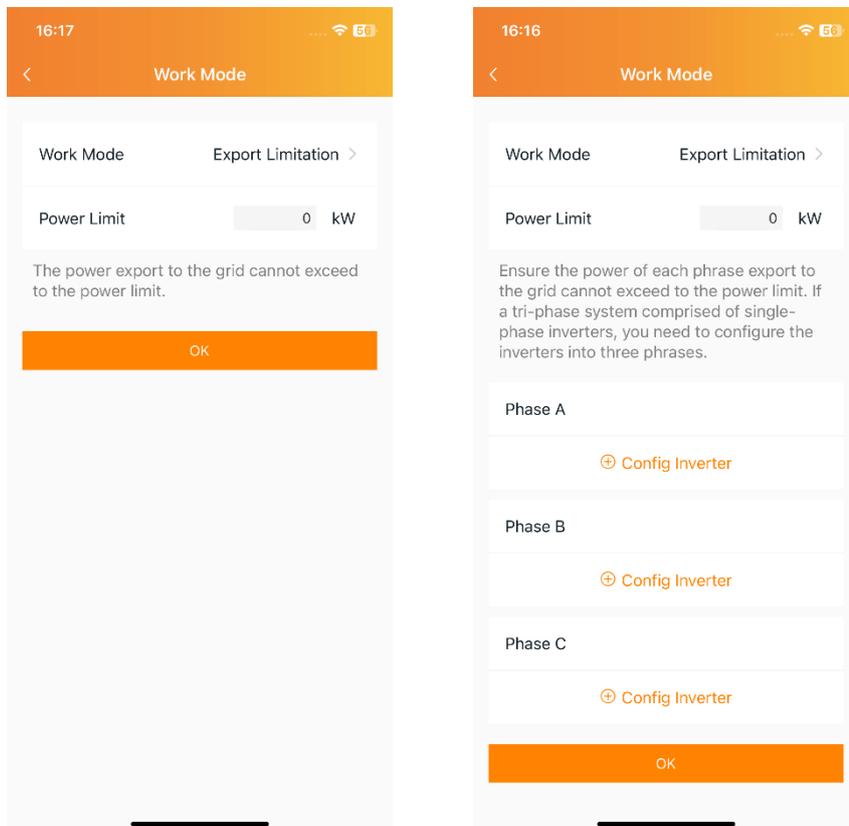
# 2. System Configuration

## 2.2.3.1.1 Export Limitation

After the export limitation function is turned on, if the power limit value is not filled in, it defaults to 0. That is, when the ECU-C detects that the generated energy from the photovoltaic system is uploaded to the grid (reverse power), it immediately sends an instruction to reduce the output power of the inverter, eliminating the problem. Reverse power, when the forward power flowing from the grid to the load increases, the inverter output power increases again. This dynamic adjustment can not only realize the export limitation function, but also maximize the use of solar energy.

Limit the power on the grid: limit the reverse power value, for example, input 3, which means the ECU limits the upper limit of the reverse power uploaded to the grid through the control system power generation to 3KW. The default value is 0, which is the 0-export function.

Three-phase configuration: If the three-phase system composed of APsystems single-phase micro-inverters needs to realize the independent anti-backflow or limit the power on the Internet function of each phase, the micro-inverter connected to each phase needs to be registered in the corresponding frame.

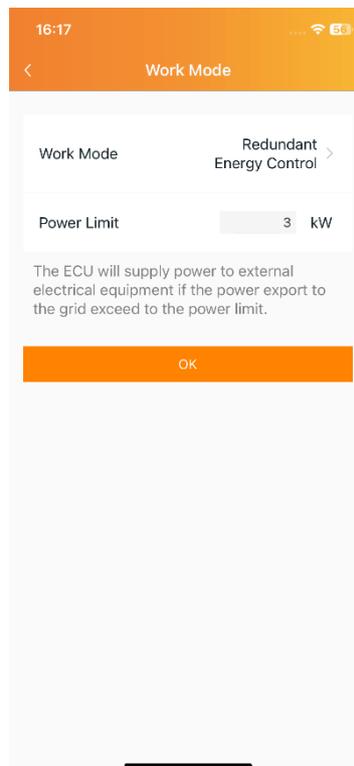


## 2. System Configuration

### 2.2.3.1.2 Redundant Energy Control

The function of the redundant energy control is to control the opening of the external AC contactor by closing the internal relay of ECU-C when the electric energy uploaded to the power grid reaches a certain power value, thereby supplying power to external electrical equipment (such as water heaters), and trying to maximize the power uploaded to the grid by local load consumption.

The threshold indicates that when the power uploaded to the power grid reaches this value, the relay is closed and controls the external contactor to conduct. For example, if the power of the water heater is 2KW, you can set the start-up threshold to 2KW. In this way, when the power uploaded to the grid exceeds 2KW, the water heater will be powered through relay control without consuming power from the grid.



#### Note

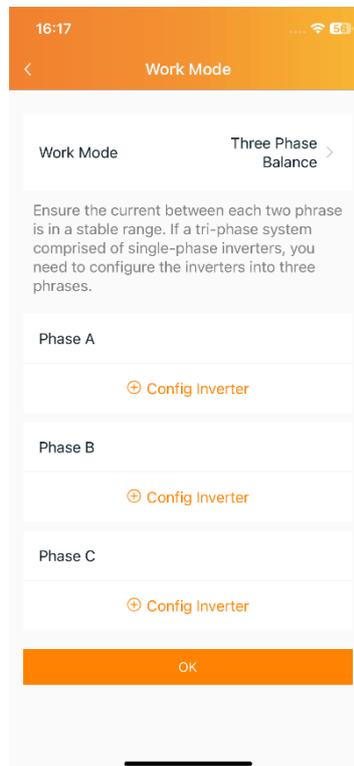
This feature is currently only available for single-phase systems.

# 2. System Configuration

## 2.2.3.1.3 Three-phase Balance

When a three-phase system is composed of a single-phase microinverter from APsystems, the three-phase balance function can be turned on to ensure that the three-phase current difference does not exceed 16A.

To realize the three-phase balance function, you can connect the external CT to detect the current, and the response speed is faster; you can also collect the micro-inverter data detection on each phase through the ECU. There is no need to connect an external CT, but the response speed will be slow, and generally the maximum time required is 5 minutes. It is necessary to register separately according to the micro-inverter serial number of each phase in the three-phase configuration.



# 3.Data Monitor

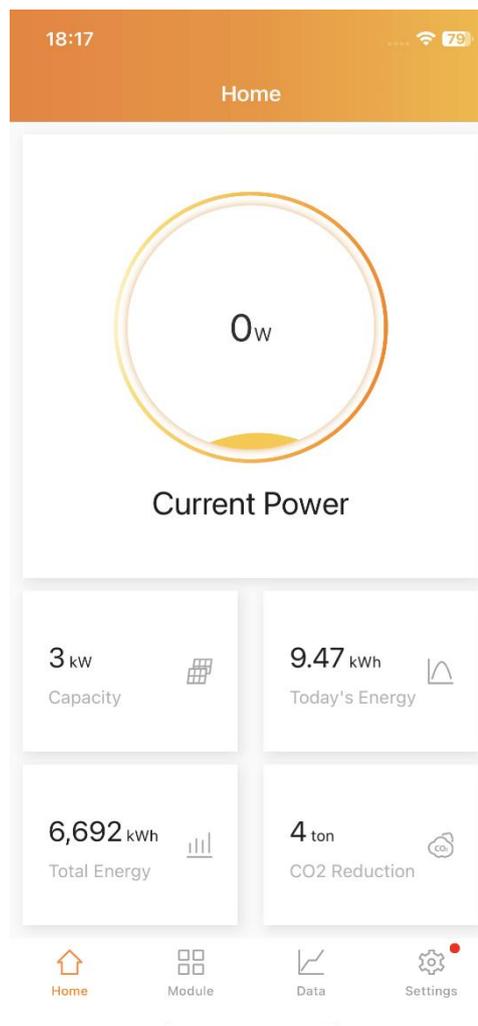
## 3.1 Remote Monitor

### Note

Remote monitoring requires logging in to an EMA account.

### 3.1.1 Home

"Home" displays the real-time operating status and system benefits;



# 3 Data Monitor

## Note

The home of a system with a smart electricity meter installed is not the same as the home of a simple PV system.

The smart electricity meter user home page contains four parts: system status, power flow diagram, energy analysis and environmental benefits.

### Power flow diagram

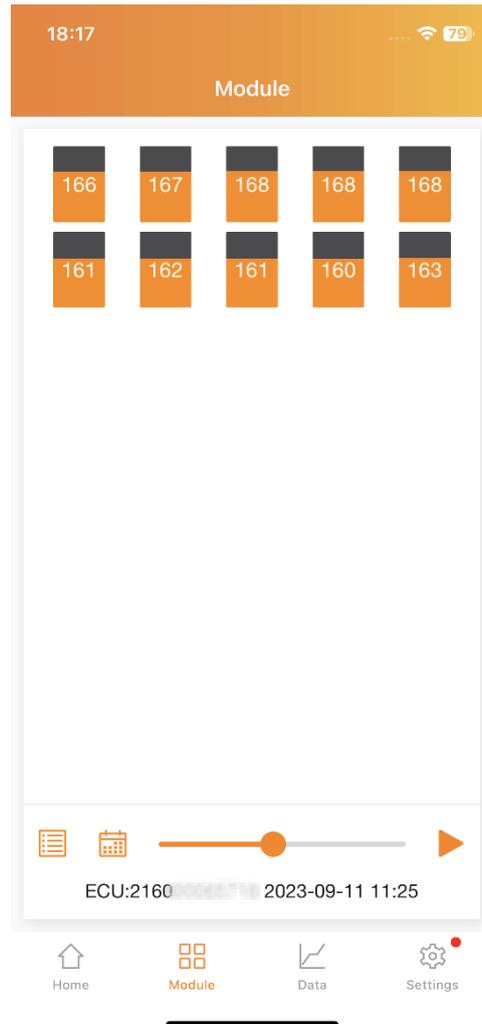
### Energy Diagram



# 3 Data Monitor

## 3.1.2 Module

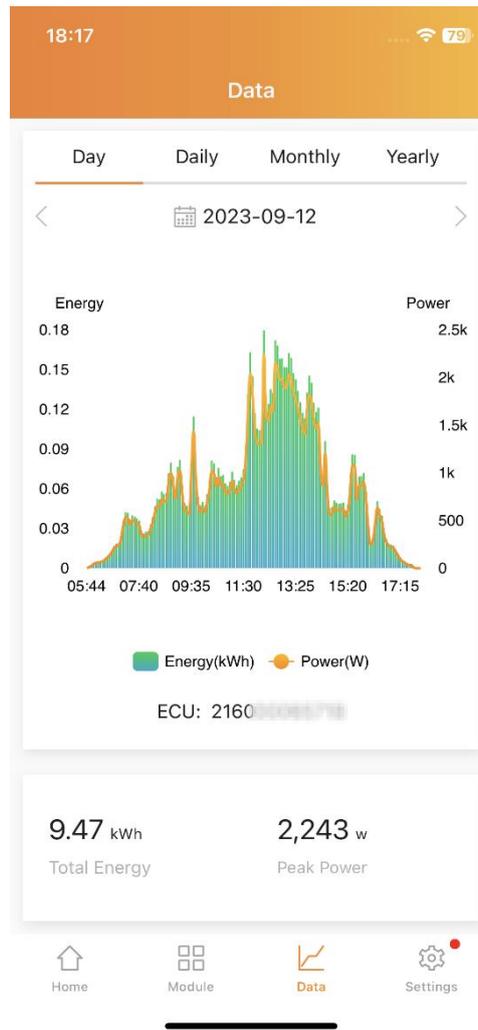
"Module" displays the system module level operating status;



# 3 Data Monitor

## 3.1.3 Data

"Data" displays the current operating status and historical power generation of the system.



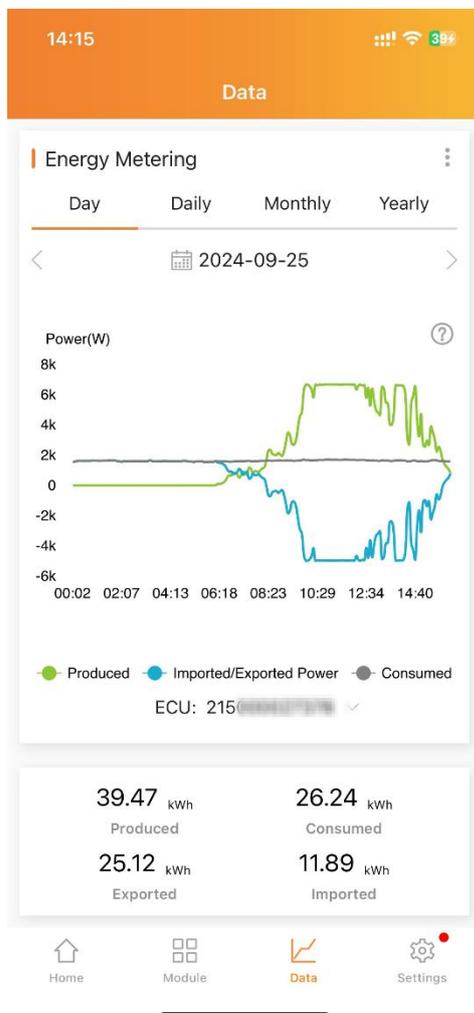
# 3 Data Monitor

## Note

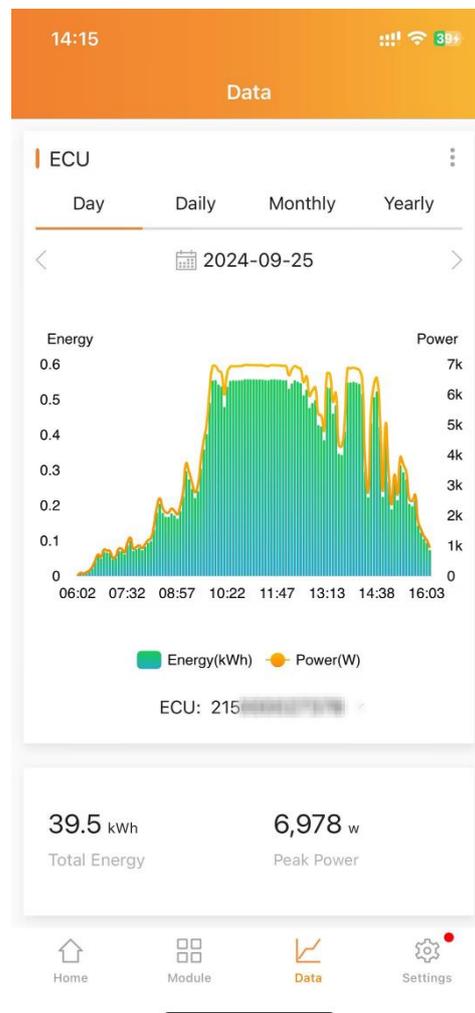
The data of a system with a smart electricity meter installed, the data page will display two types of data: "Energy Metering" and "ECU". By default, the "Energy Metering" is displayed first.

Energy Metering displays the system's power generation and consumption analysis data.

### Energy Metering



### ECU



# 3 Data Monitor

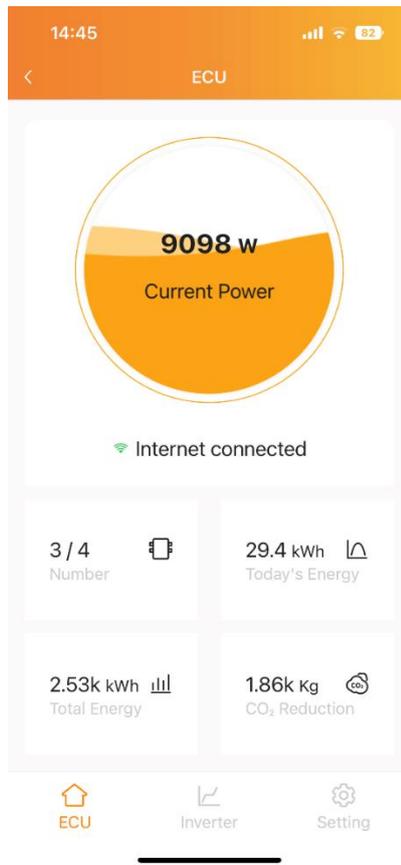
## 3.2 Local Monitor

### Note

You need to switch the mobile phone network to the ECU hotspot and click "Local Access" on the login page. The default password for the ECU hotspot is 88888888.

### 3.2.1 ECU

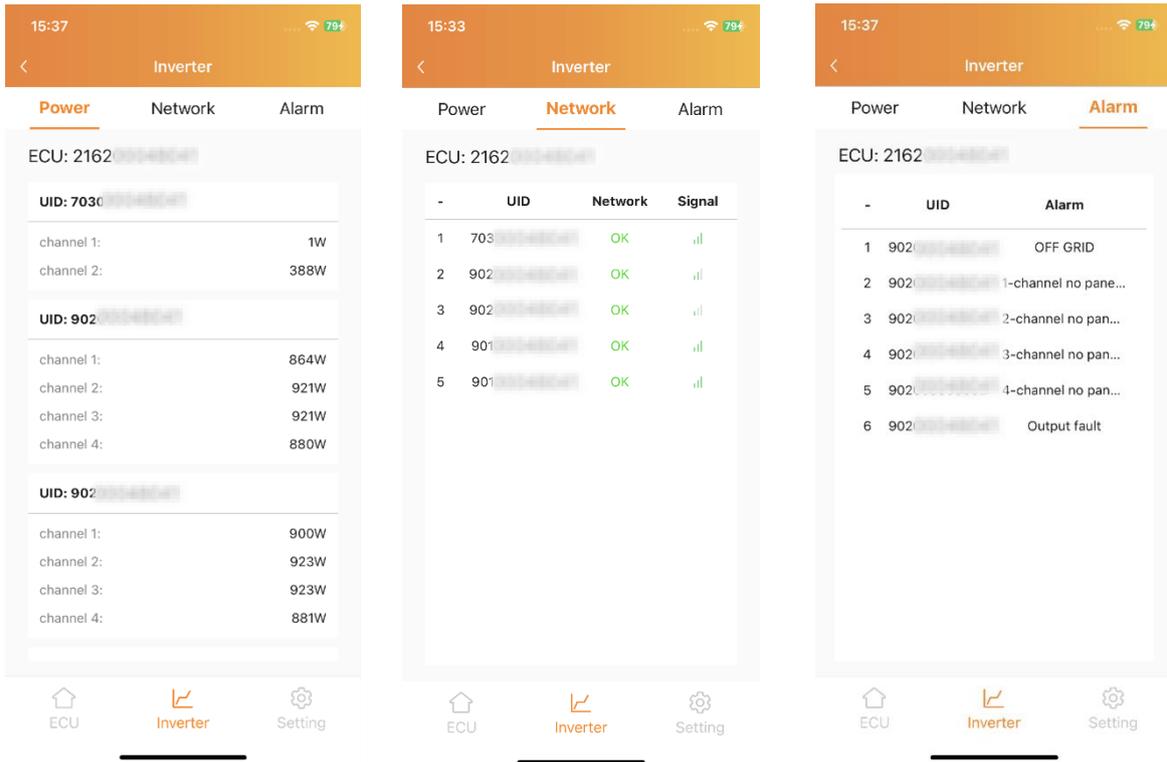
"ECU" displays the real-time operating status of the system and the system's environmental benefits;



# 3 Data Monitor

## 3.2.2 Inverter

"Inverter" displays the device level power generation data, the progress of the network between the device and the ECU and the alarm information of the device.

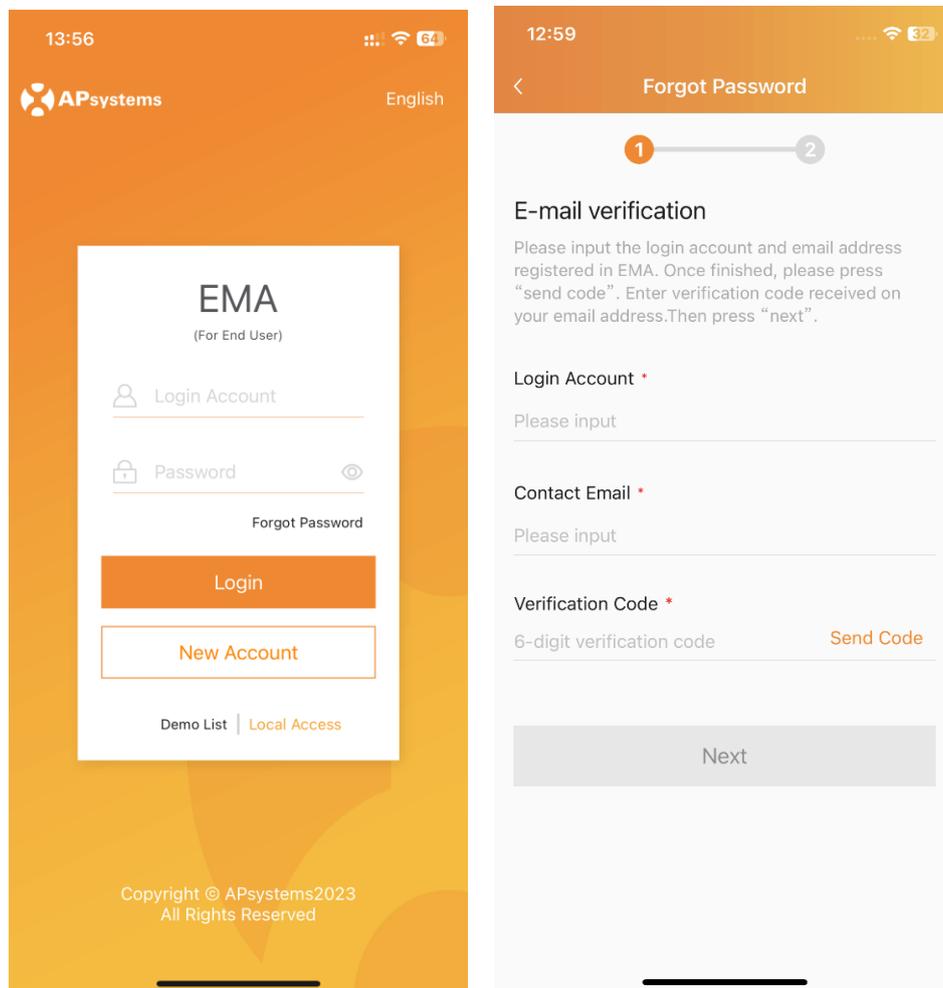


# 4.Account management

## 4.1 Forgot Password

If you forget your EMA account login password, you can reset your account password through the password retrieval process.

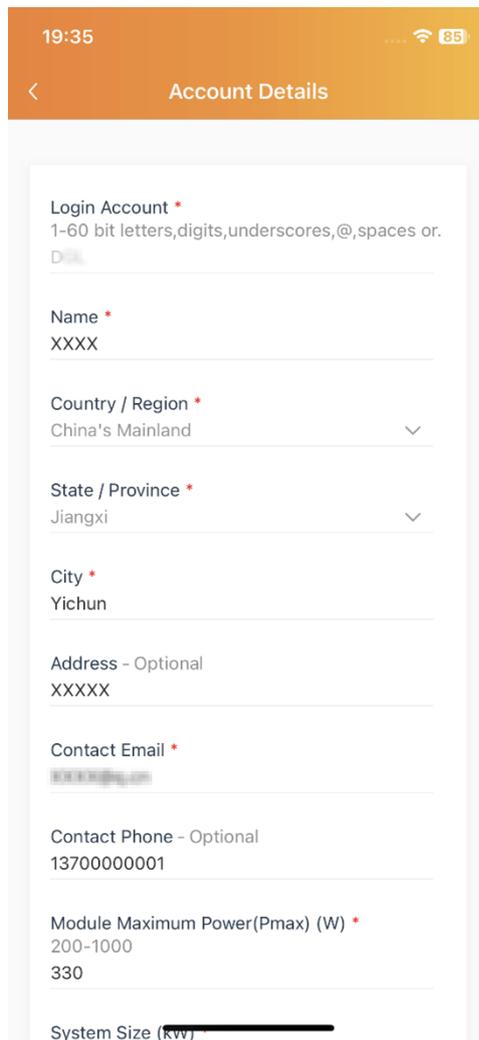
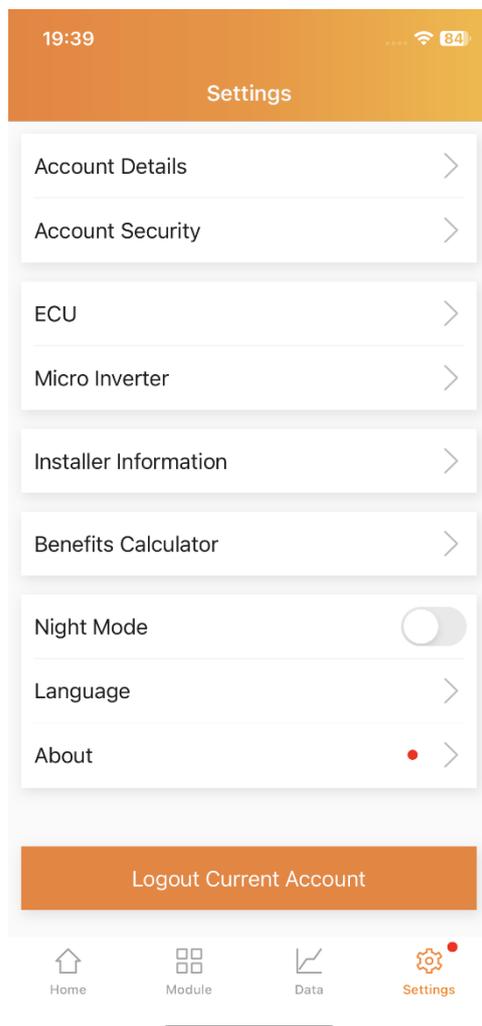
- Click "Forgot Password",
- Enter your account name and email, click to get the verification code, then consult your email to retrieve the verification code (verification code is valid for 5 minutes), and return to the APP to verify the information,
- Enter the new password and click "Finish" to complete.



# 4 Account management

## 4.2 Account Information Edit

- Log in to your account and enter "Account Details" on the "Settings" page,
- Enter the correct information in the input box where the information needs to be modified, and click "OK" to save the modified information.

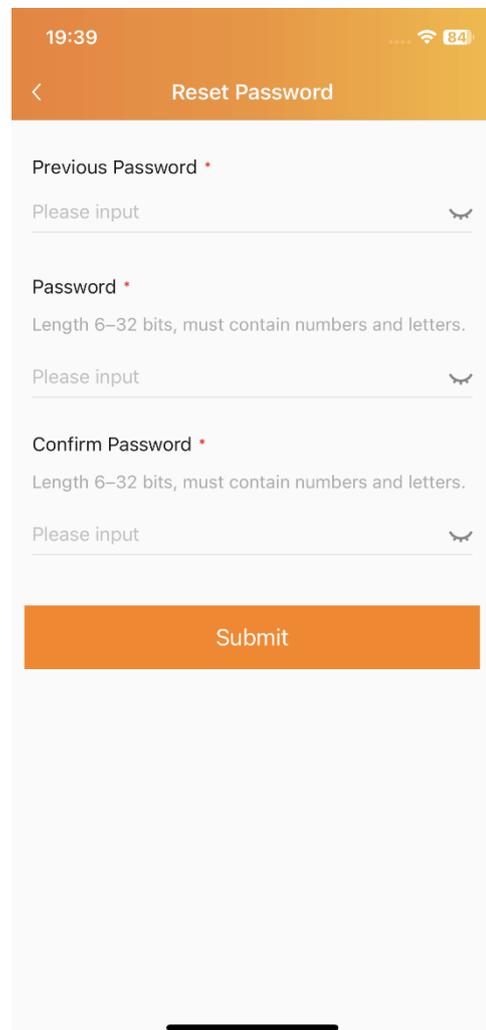
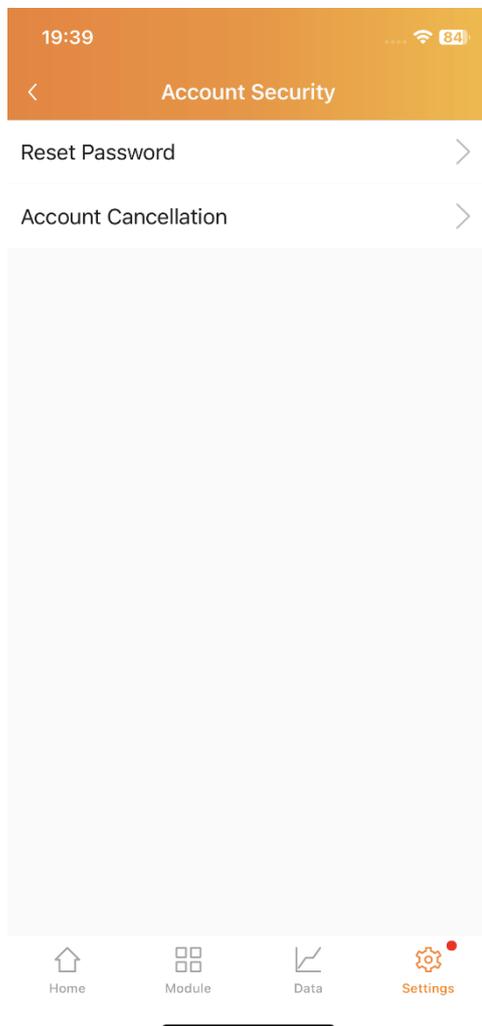


# 4 Account management

## 4.3 Account Security

### 4.3.1 Reset Password

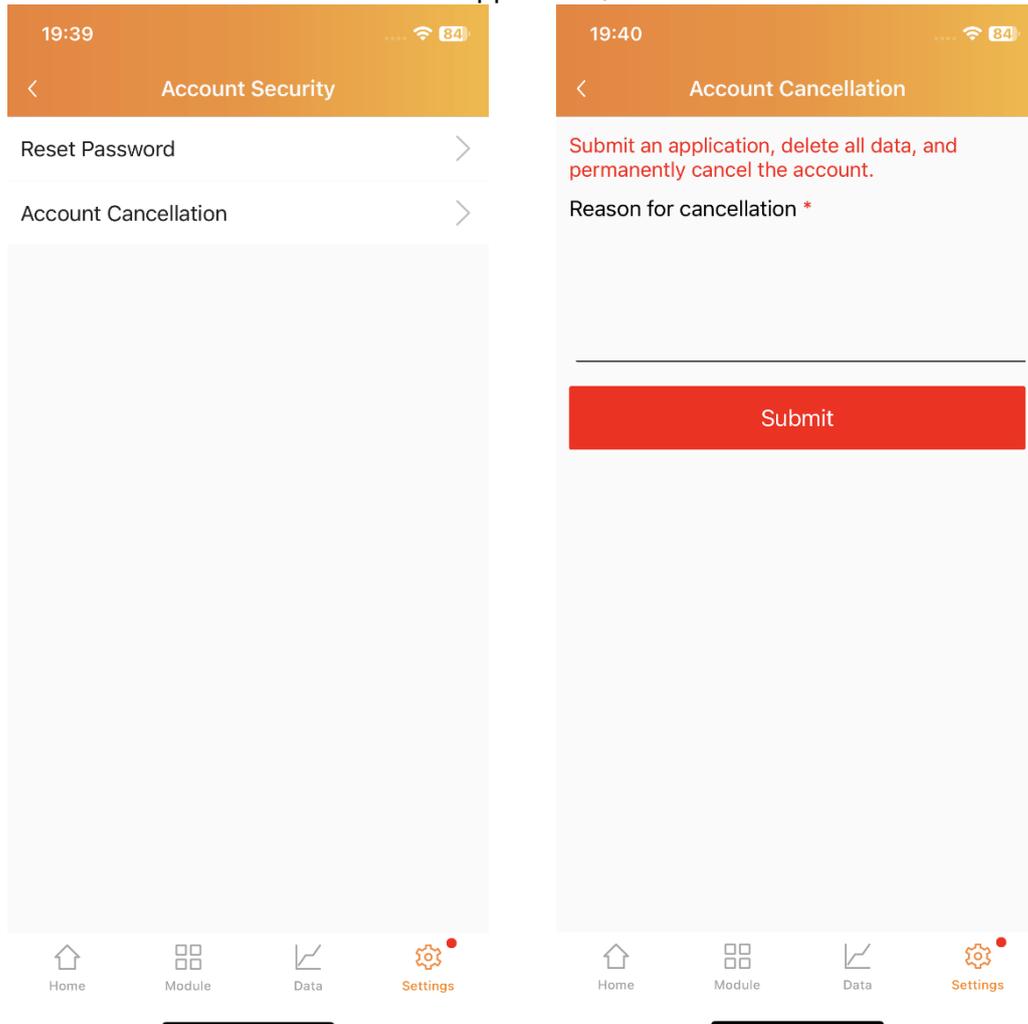
- Log in to your account and enter "Account Security" on the "Settings" page,
- Click "Reset Password", enter the new password, and click "Submit" to complete the password reset,



# 4 Account management

## 4.3.2 Account Cancellation

- Log in to your account and enter "Account Security" on the "Settings" page,
- Click "Account Cancellation", enter the reason for cancellation, and click "Submit" to send the account cancellation application,



### Note

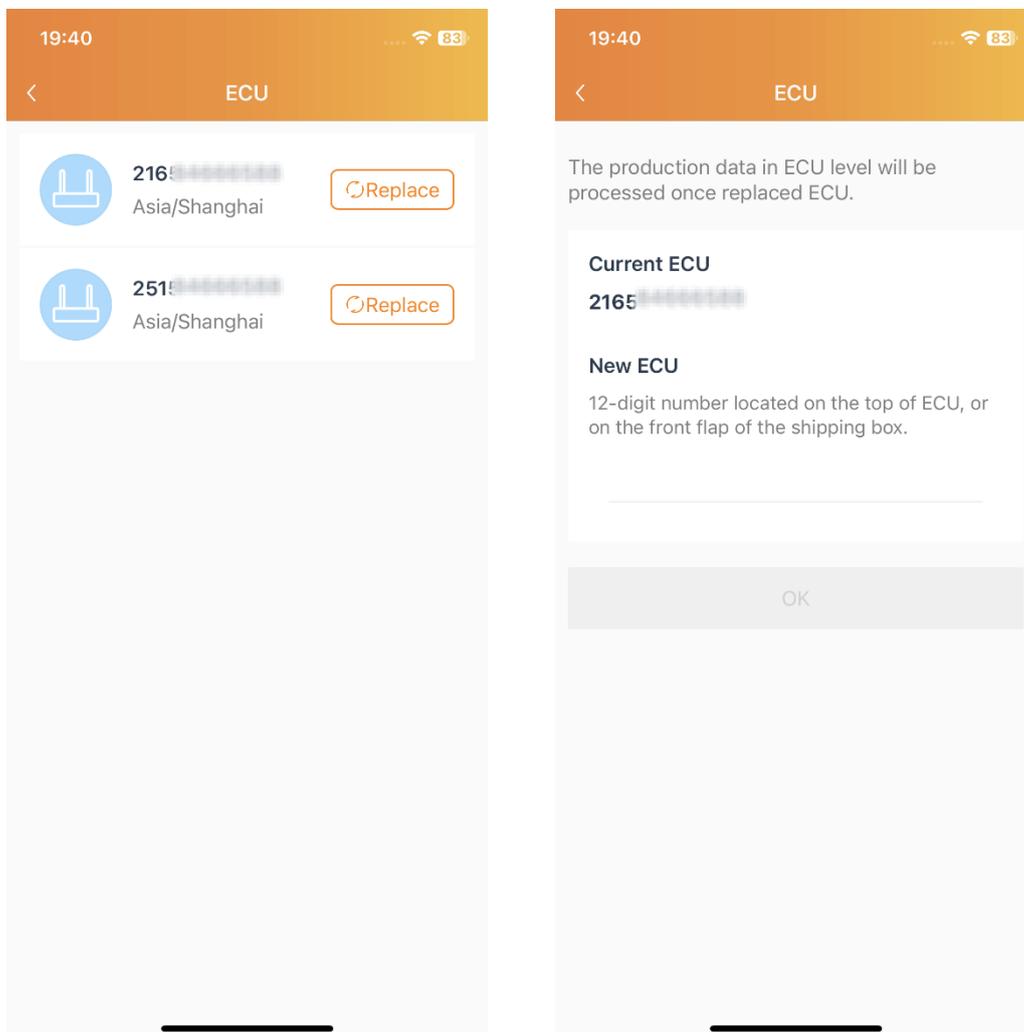
EMA will process the submitted application within 48 hours.

# 4 Account management

## 4.4 Device Information Edit

### 4.4.1 ECU Information Edit

- Log in to your account and enter "ECU" on the "Settings" page,
- Click "Replace", enter the new ECU ID in the input box, and click "OK" to update the ECU information,



# 4 Account management

## 4.4.2 Inverter Information Edit

- Log in to your account and enter "Inverter" on the "Settings" page,
- Click "Replace", select the inverter replacement method, edit the new device information according to the page prompts, and click "OK" to update the inverter information,

Method 1: Replace by device

19:41

Micro Inverter

Replacing DC equipment, DC level data will not be processed for continuation

Current ECU  
2165

Current Inverter    Type  
4060    YC600

Replace method  
Device

New inverter  
12-digit number located on the top of inverter, or on the front flap of the shipping box.  
Please enter the new inverter ID

OK

Method 2: Replace by channel

19:41

Micro Inverter

Replacing DC equipment, DC level data will not be processed for continuation

Current ECU  
2165

Current Inverter    Type  
4060    YC600

Replace method  
Channel

New inverter  
12-digit number located on the top of inverter, or on the front flap of the shipping box.  
Please enter the new inverter ID

Current Channel    New Channel  
2    Please sele...

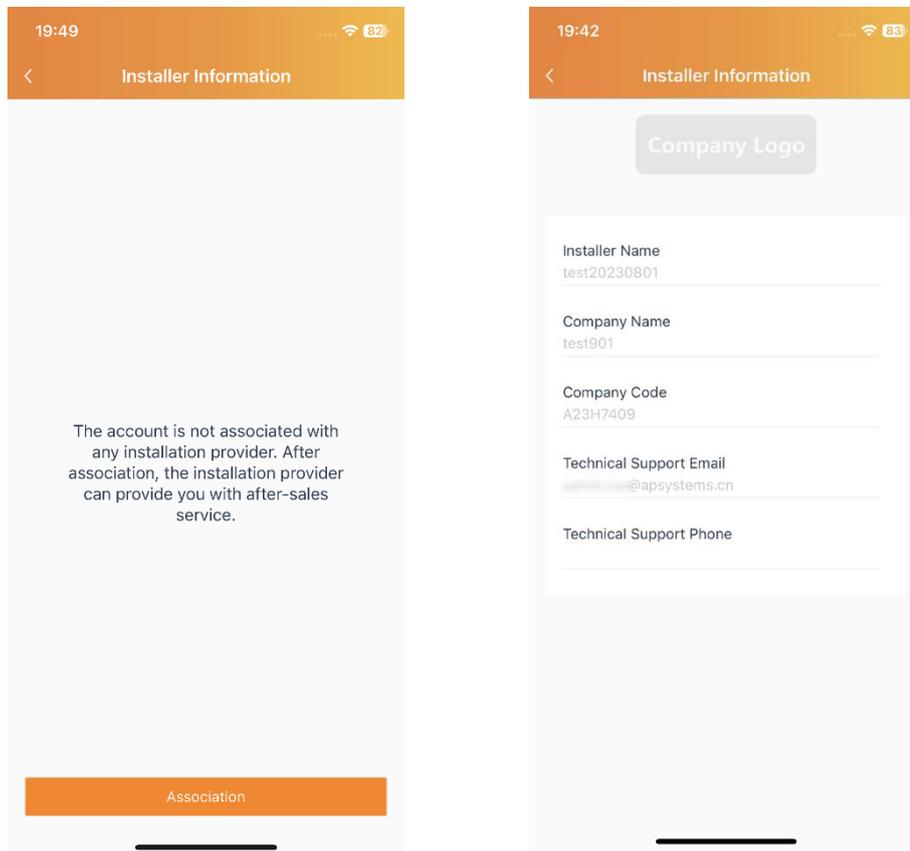
OK

# 4 Account management

## 4.4.3 Installer Information

The user can associate the registered user account with the installer's technical support account here. After the account is associated, the user can view the installer's information on this page.

- Log in to your account and enter "Installer Information" on the "Settings" page,
- If the installer's company code is not associated when registering the account, you can click the "Associate" button and enter the installer's company code to associate the account; if the installer's company code has been associated, the installer's information will be displayed on the page,



### Note

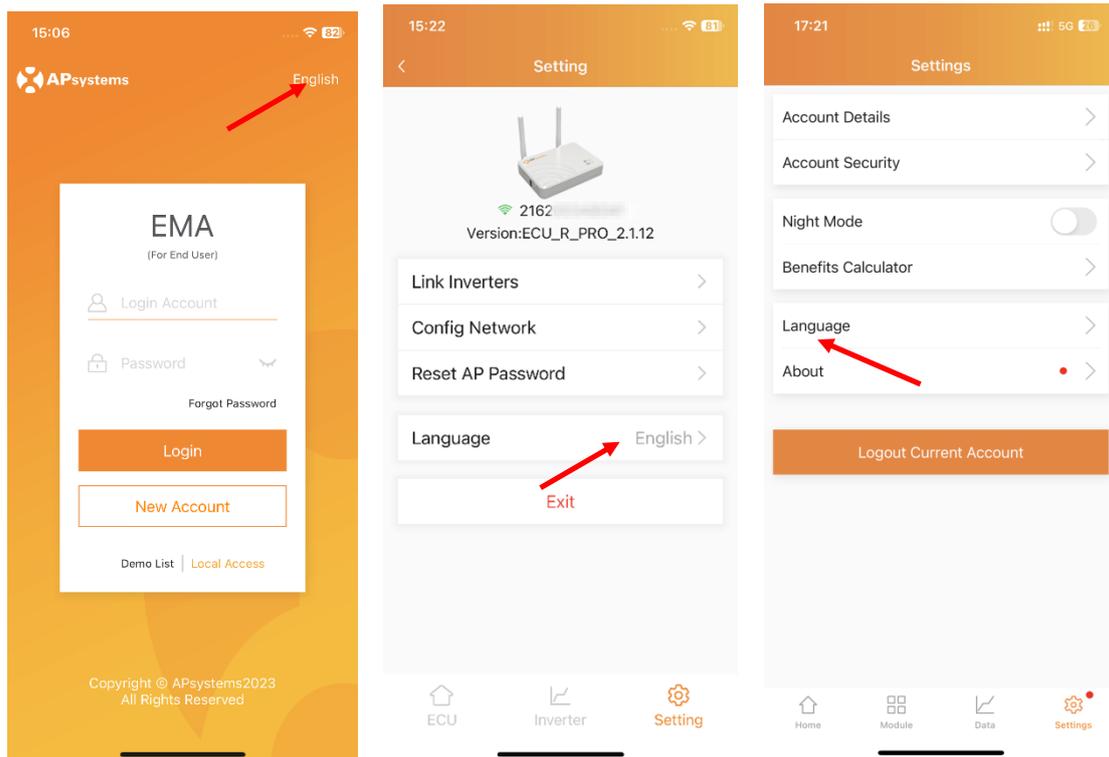
You can enter the **company code** to make the link to your installer/retailer. This field is optional.

Installer/retailer can login EMA Manager or EMA web portal, and get the company code in the "Setting" page.

# 5.App Setting

## 5.1 Language

You can switch the language on the "Login" page and "Setting" page.



# 5.App Setting

## 5.2 Night Mode

The App interface can be switched to night mode.

