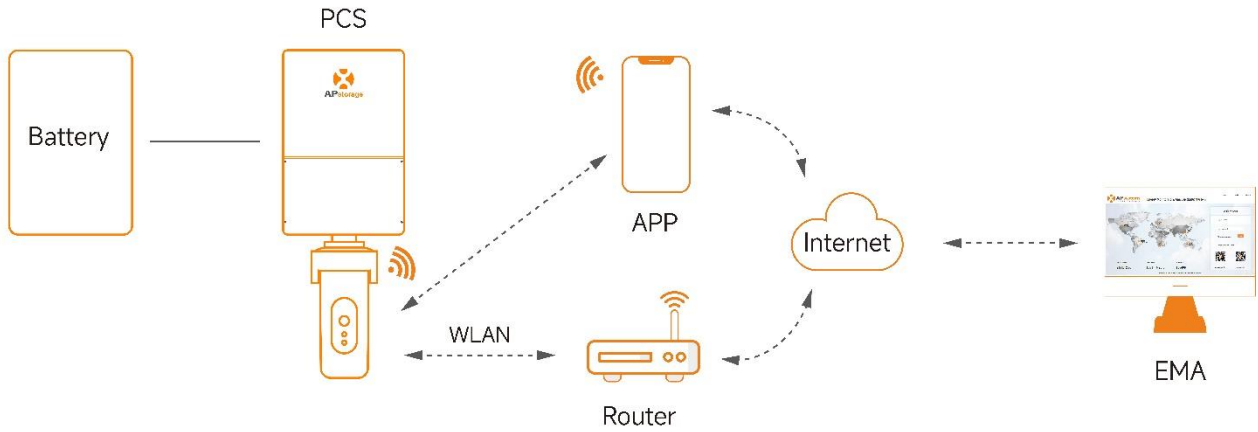


# AP Dongle Installation & User Manual

# 1.Usage scenario

AP Dongle is an intelligent communication expansion module used in conjunction with APStorage to achieve wireless communication between APStorage and the management system through WLAN and Bluetooth.



**NOTE:** Please confirm that the distance between AP Dongle and the router is appropriate, and that there is no interference with communication in the environment.

## 2.Installation and Commissioning

- Pull out the protective cover of the USB interface.
- Insert AP Dongle into the USB interface.
- Compare the LED status in the table below to obtain the working status of AP Dongle.



## 2. Installation and Commissioning

Operate	LED		Remarks	Illustrate
	Colour	State		
install	Green	Light	Normal	AP Dongle is fixed and APstorage is started
		Extinguished		AP Dongle not fixed or APstorage not started
Connect AP Dongle to the cloud server	Blue	Light	Normal	Connected to cloud server
		Extinguished		Not connected to the cloud server. Please confirm that AP Dongle is connected to the router and that the router is connected to the internet.

Professional and certified Installer can commission, monitor and maintain the APstorage solution and performance via the AP EasyPower APP. Please search for the APP in APP Store or Google Play, or use mobile browser to scan the QR codes to download the APP..You can also click on the link below to download the APP: <http://q-r.to/1OrC>



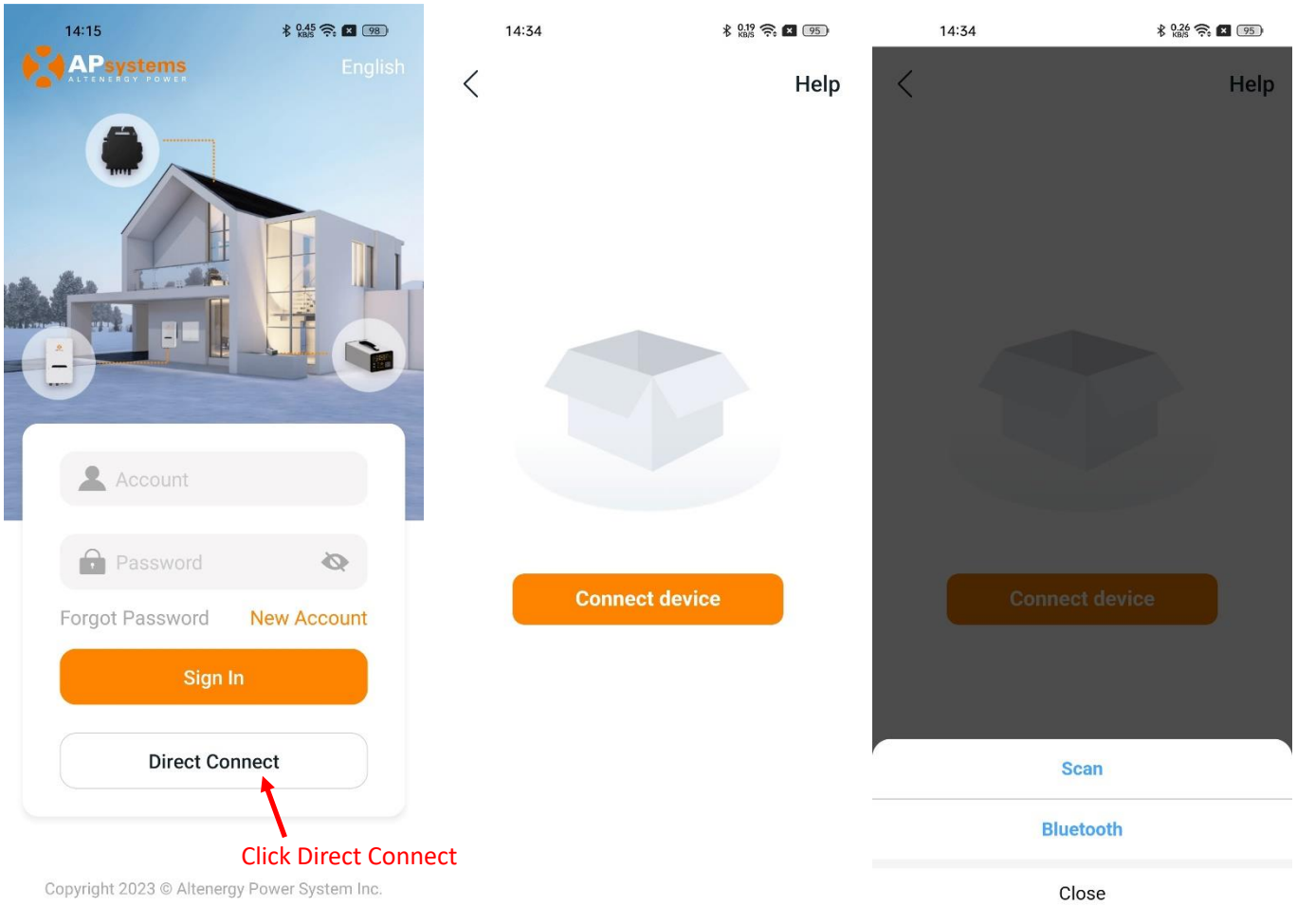
**NOTE:** Connect the phone and AP Dongle through Bluetooth, and connect AP Dongle to the router through the AP EasyPower APP.

# 3.APstorage User Interface

## 3.1 Configure APstorage with AP EasyPower

The APstorage PCS has been designed with local connection and management functionality. You can access this local functionality through AP EasyPower.

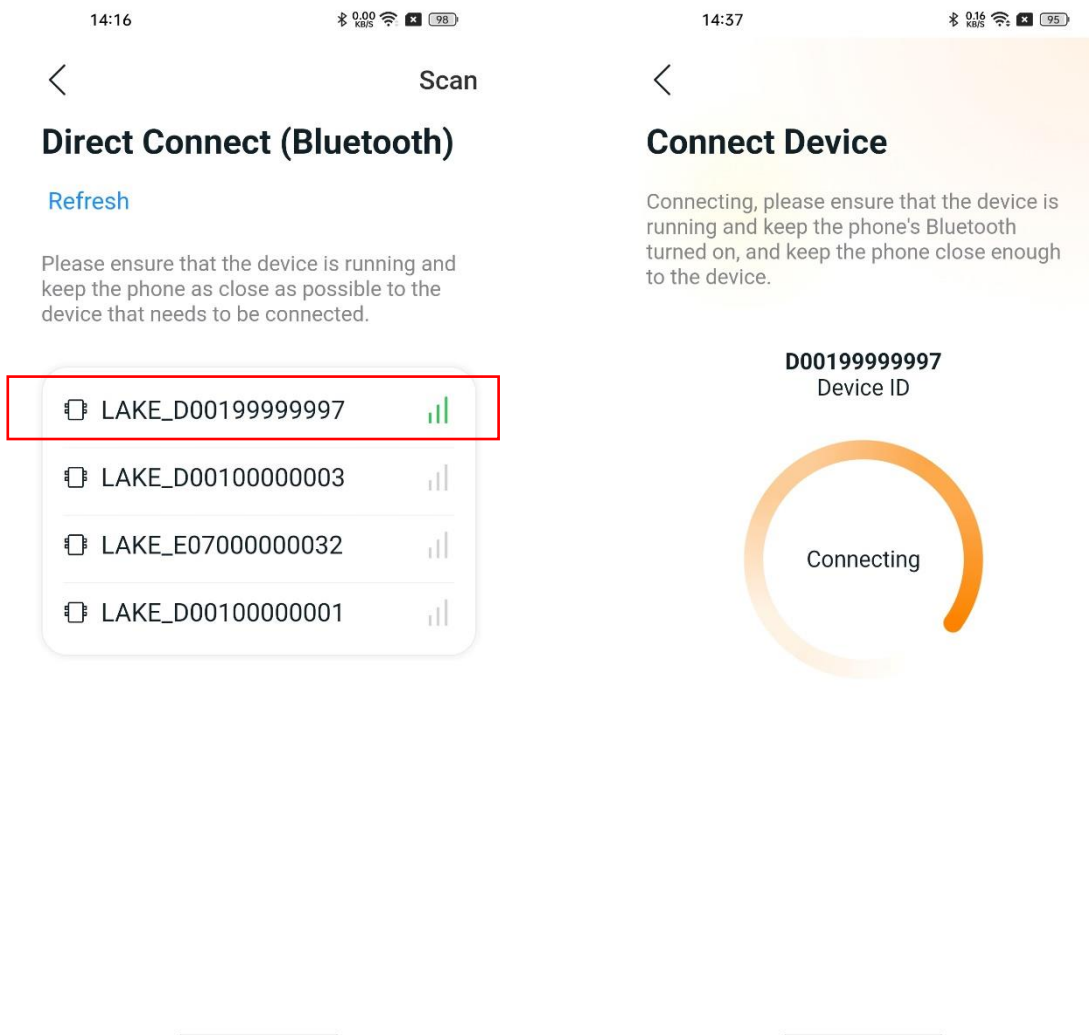
Click "**Direct Connect**" to enter this function.



You will be notified if your smartphone or tablet does not have bluetooth enabled, please click "Enable" to go to the settings page to enable it.

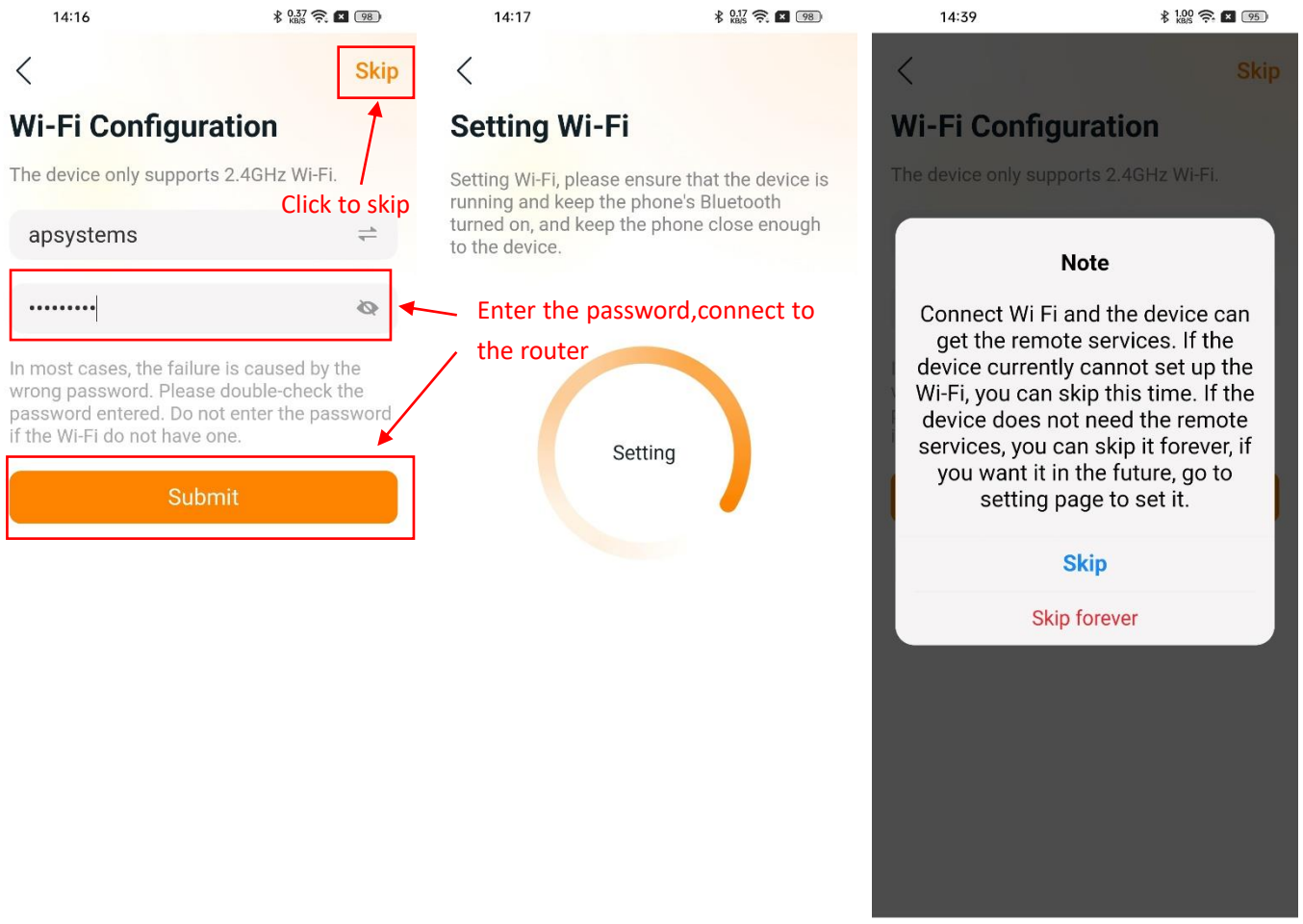
- Step1: Click "Connect Device", select "Scan" or "Bluetooth" in the dialog box, "Scan" can enter the device ID by scanning the barcode, and "Bluetooth" will get the list of nearby devices.

## 3. APstorage User Interface



- Step 2: Click the ID of the device that needs to be connected, the APP will connect to this device, wait a moment.
- Step 3: After connecting the device, you can immediately connect the device to the designated router, or skip this step and go directly to the next page.

## 4. APstorage User Interface



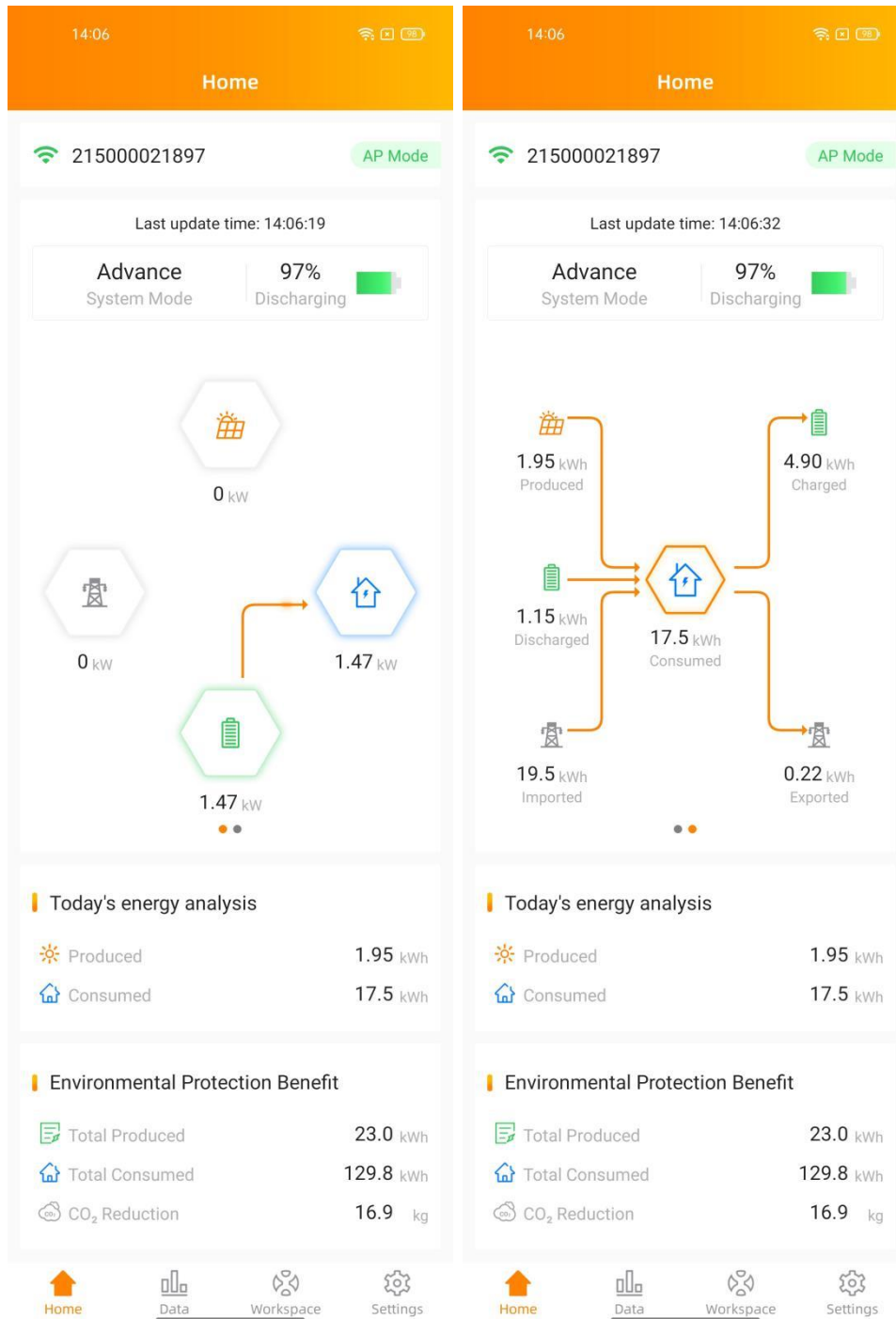
The remote service will not be available when the device is not connected to the Internet. You can use this APP to connect the APstorage PCS to the router via Lan or Wlan. (Please refer to chapter 4.5.3)

# 3. APstorage User Interface

## 3.2 Home Page

Once setting the wifi configuration, you can enter the homepage.

4.2.1 You can view the system ID, charge and discharge status, real-time power, SOC, today's charged energy, total charged energy since installed, and CO<sub>2</sub> reduction.



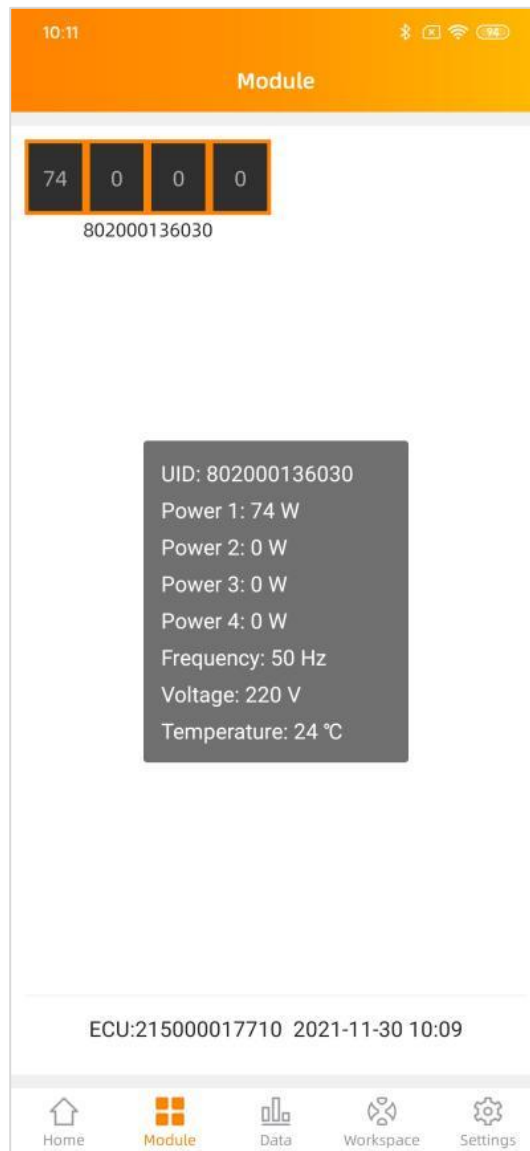
# 3. APstorage User Interface

## 3.3 Module

This page displays the real-time power of the photovoltaic inverter.

Click on the Module, the detailed information of the microinverter will be displayed, including the microinverter ID, PV module power, grid voltage, frequency and temperature.

You need to install APsystems microinverters with the PV modules to view these data.





# 3. APstorage User Interface

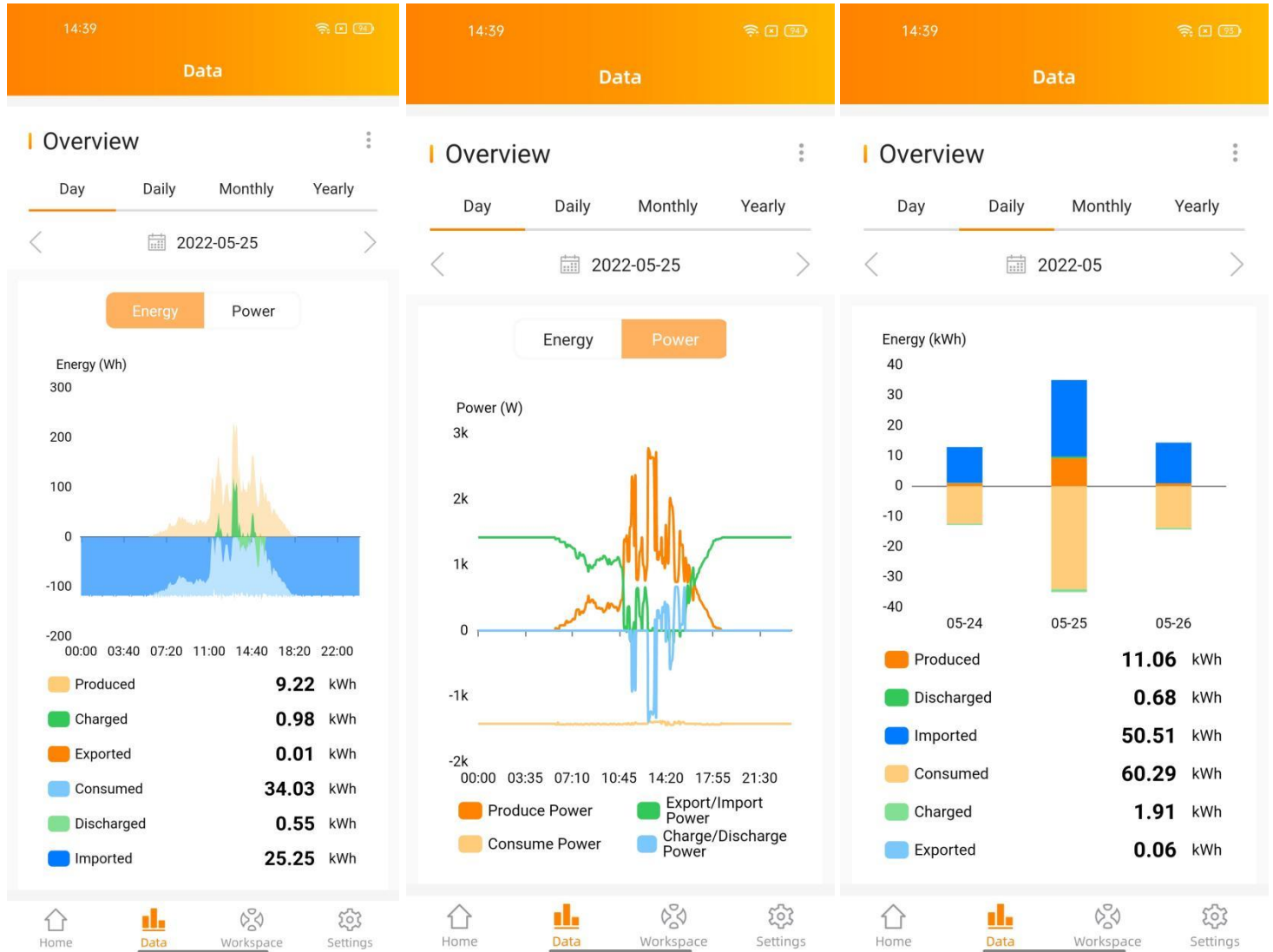
## 3.4 Data

### 3.4.1 Data overview

This page is used to display the system overview. Select a date to view the system's power summary information and power distribution information and its graph.

Click on the "Energy" or "Power" buttons to view the energy and power chart of the system for the day.

Select Daily, Monthly or Yearly to display the current month, current year, and historical data.

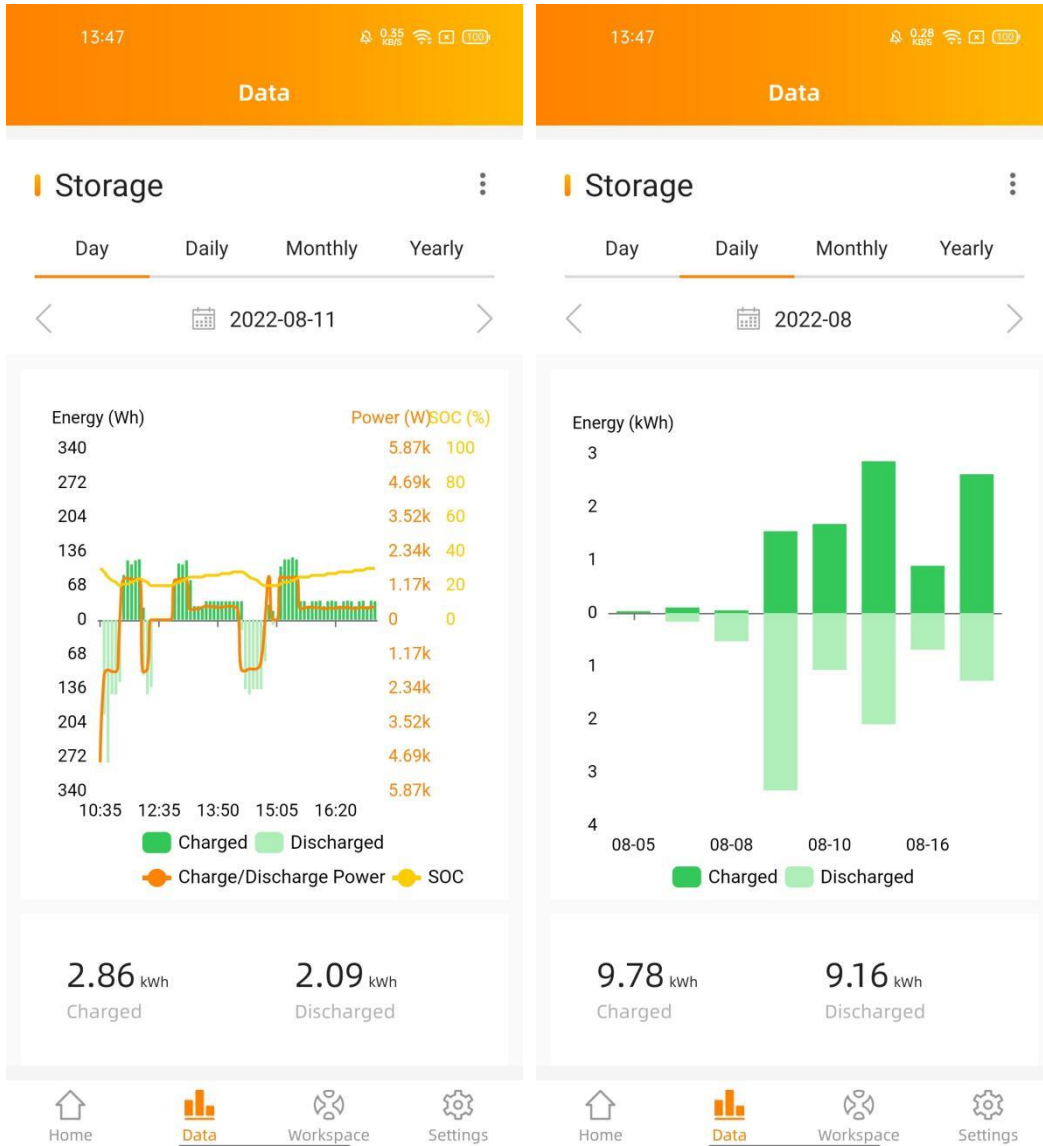


# 3. APstorage User Interface

## 3.4.2 Storage data

The daily energy storage power curve is displayed on this page. Select a date to view the historical power and electricity curve of energy storage.

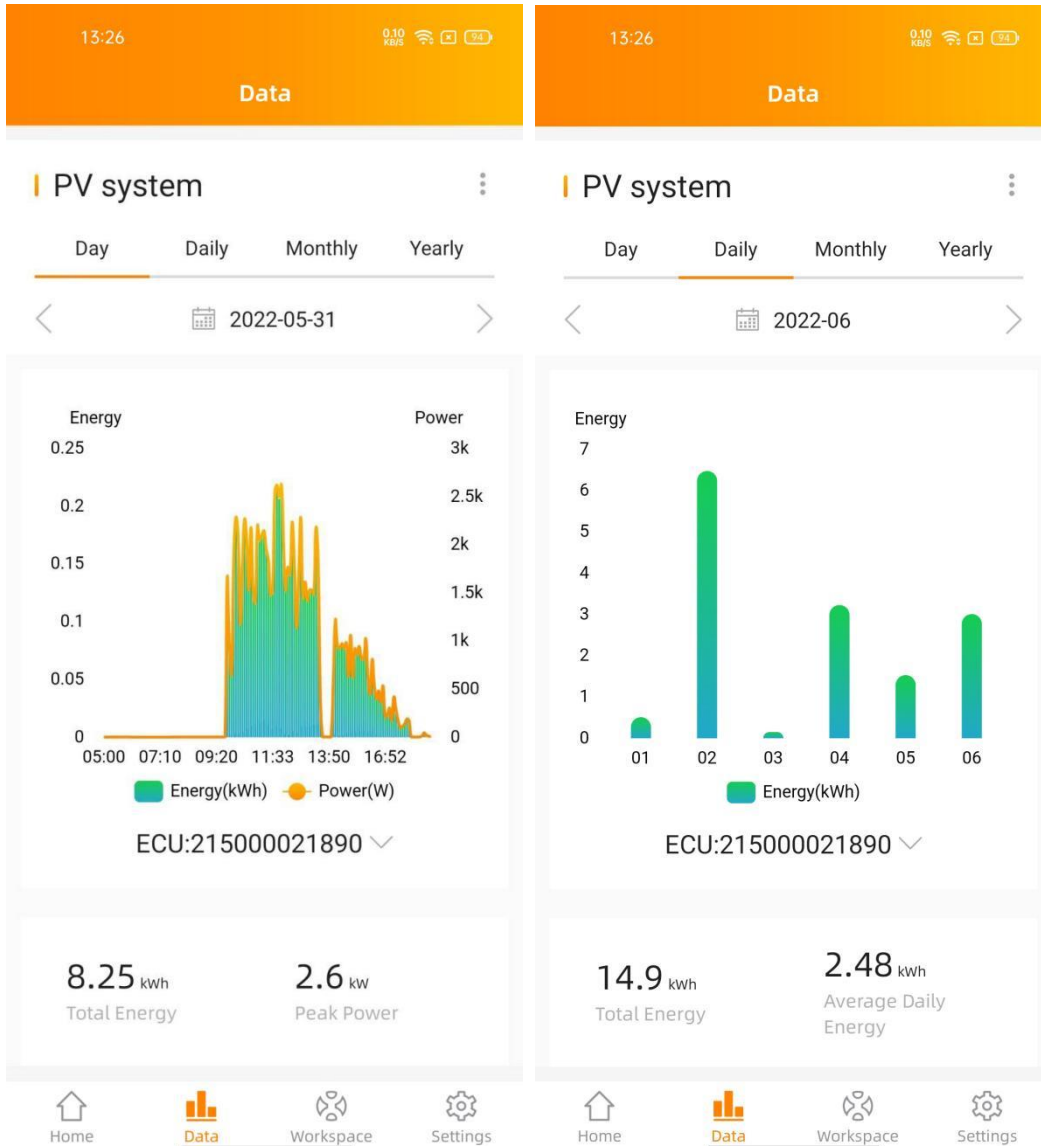
Select Daily, Monthly or Yearly to display the current month, current year, and historical data curve.



# 3. APstorage User Interface

## 3.4.3 ECU data

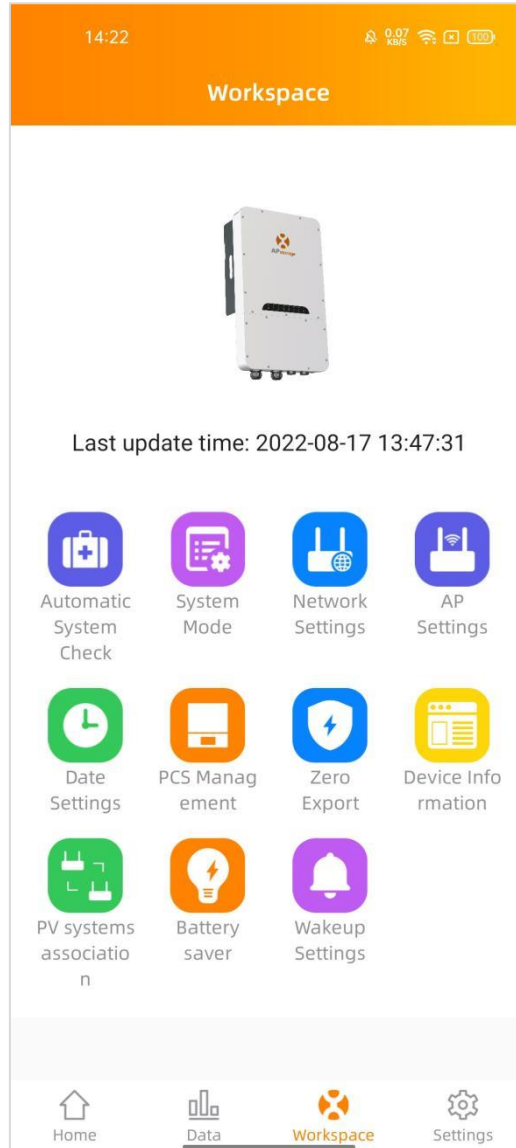
The daily photovoltaic power curve is displayed on this page. Select the date to view the PV system data. Select Daily, Monthly or Yearly to display the current month, current year, and historical power curve. You need to install PV system with APsystems microinverters to view these data.



# 3. APstorage User Interface

## 3.5 Workbench

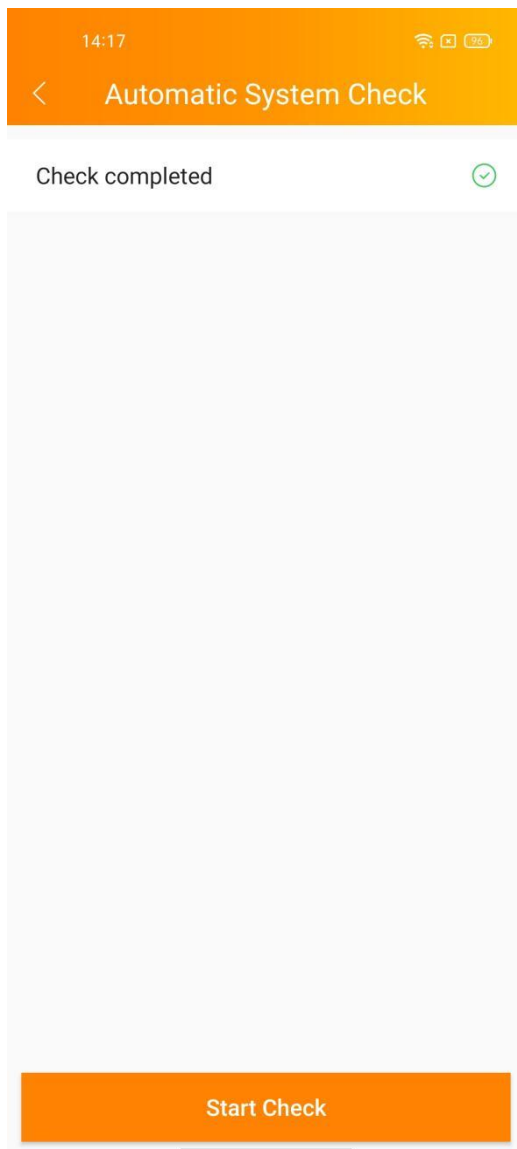
The workbench displays the latest communication time, and currently supported function catalog. Click the corresponding button to enter the function page.



## 3. APstorage User Interface

### 3.5.1 Automatic System Check

Enter the Automatic System Check interface, you can check the APstorage information. If there is an alarm, you can click to view the detailed information.



## 3. APstorage User Interface

### 3.5.2 System Mode

The system mode of the APstorage PCS includes backup power supply mode, residual power Self-Consumption mode and advanced mode. If you need to set the system working mode, please select the corresponding working mode and set the parameters, and then click "OK".

#### Backup power supply mode:

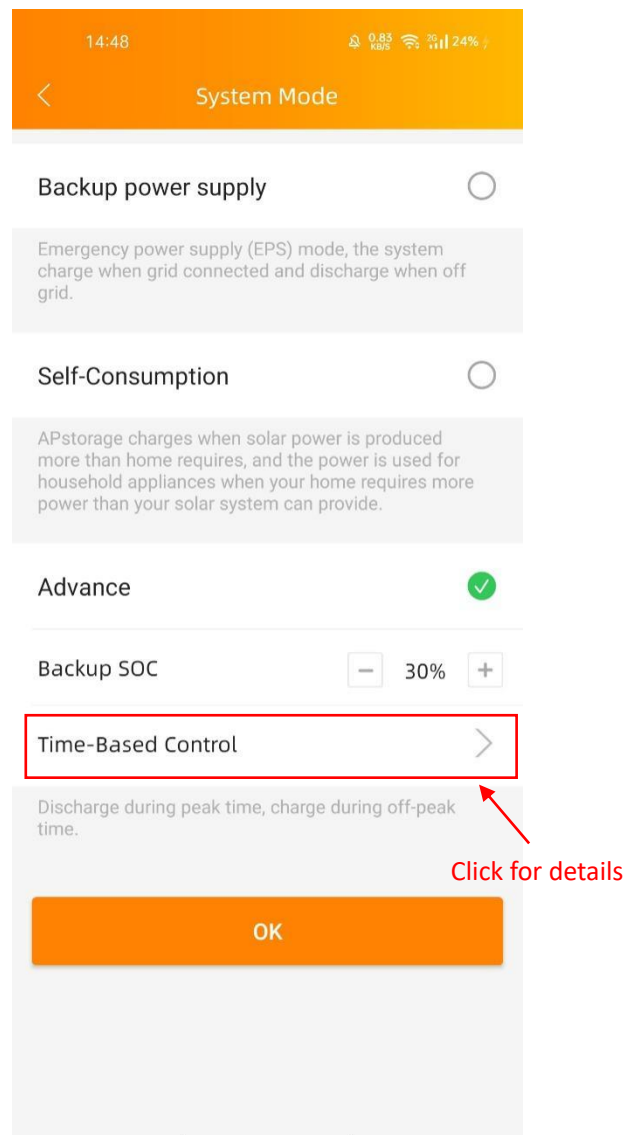
Emergency power supply (EPS) mode, the system charge when grid connected and discharge when off grid.

#### Self-Consumption mode:

APstorage charges when solar power is produced more than home requires, and the power is used for household appliances when your home requires more power than your solar system can provide.

#### Advanced mode:

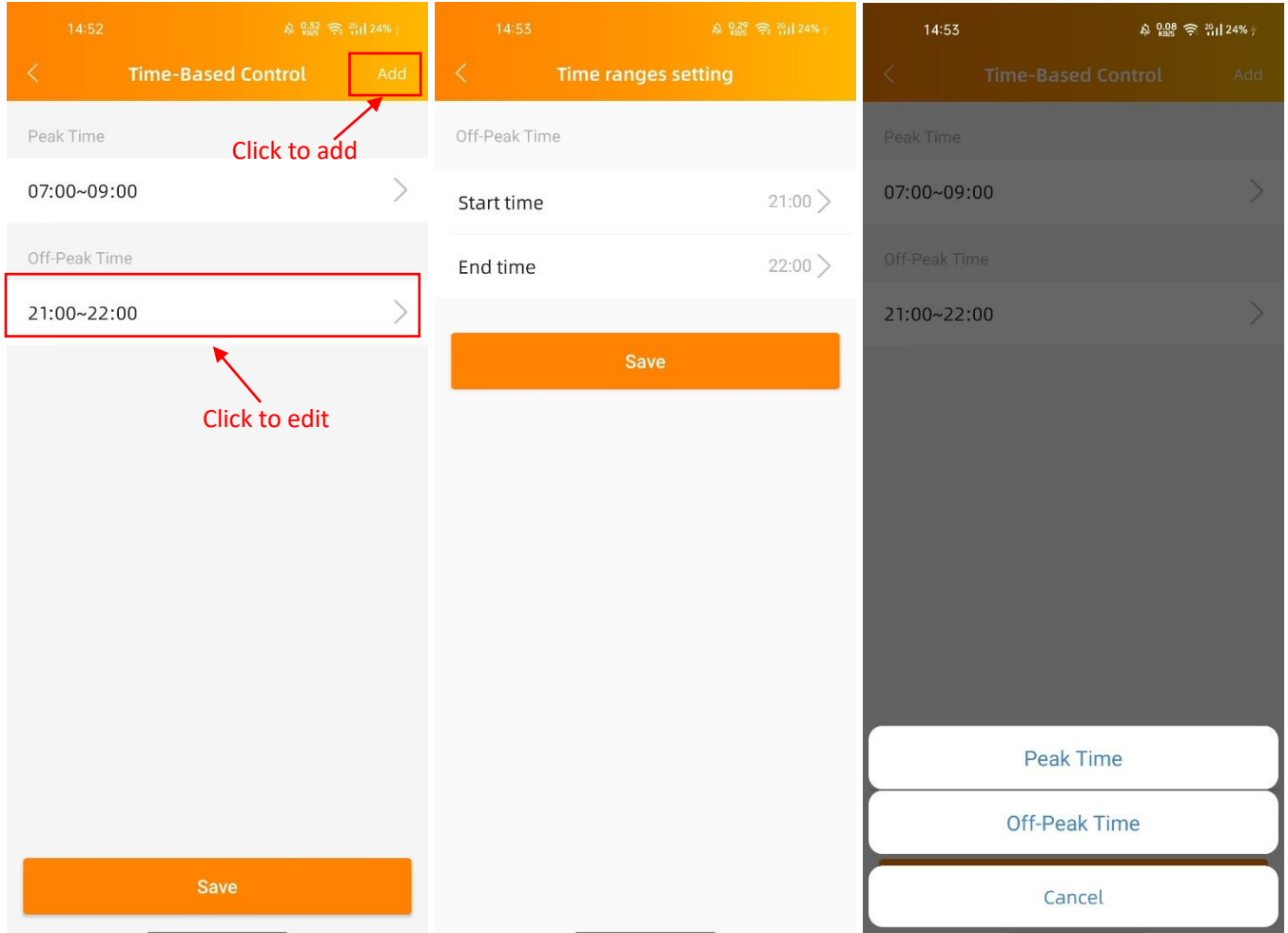
Discharge during peak time, charge during off-peak time.



# 3. APstorage User Interface

## 3.5.2.1 Time-Based Control

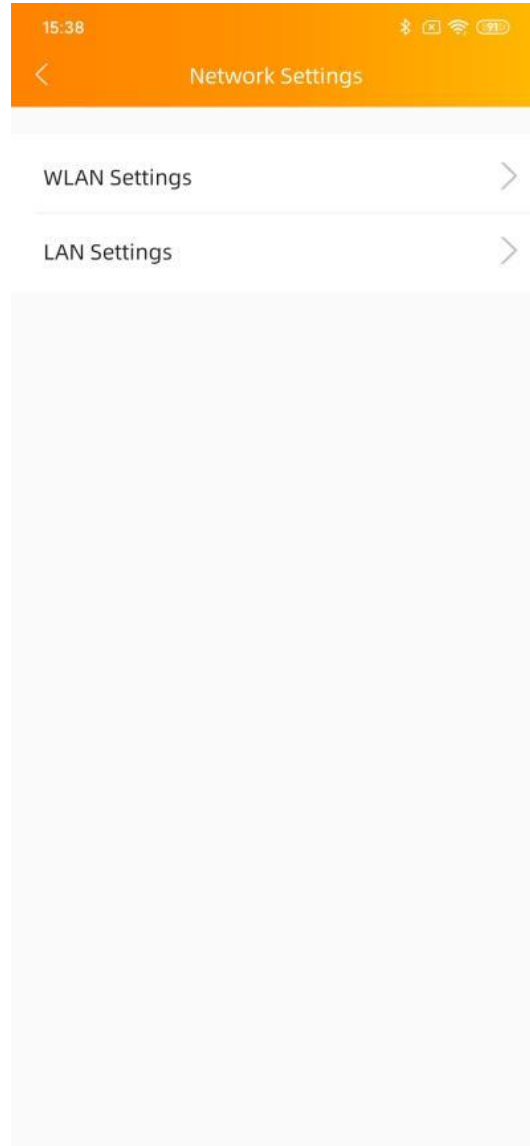
Click "Time-Based Control", you can view the list of peak times and off-peak times currently set. You can edit the time ranges by clicking on it. Click on the "Add" button to select the peak time or off-peak time to be added.



## 3. APstorage User Interface

### 3.5.3 Network Setting

Click the button to enter the WLAN Settings or LAN Settings page.



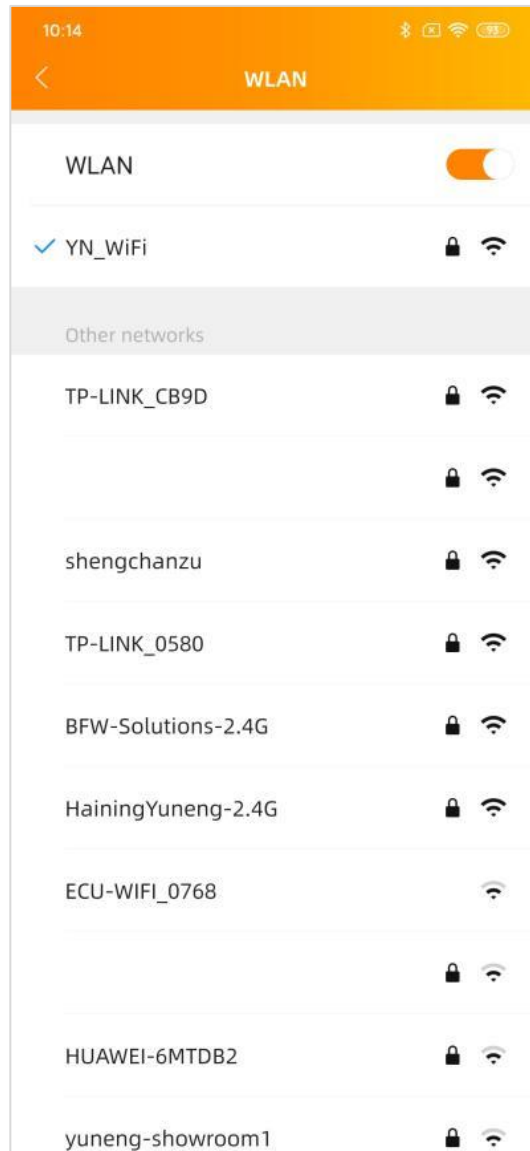


# 3. APstorage User Interface

## 3.5.3.1 WLAN Settings

This interface will display the WLAN connection status of the ECU. Scroll down the screen and the available SSID will be displayed. Click SSID, and enter the password.

After entering the password, the ECU will restart. Please reconnect the ECU.

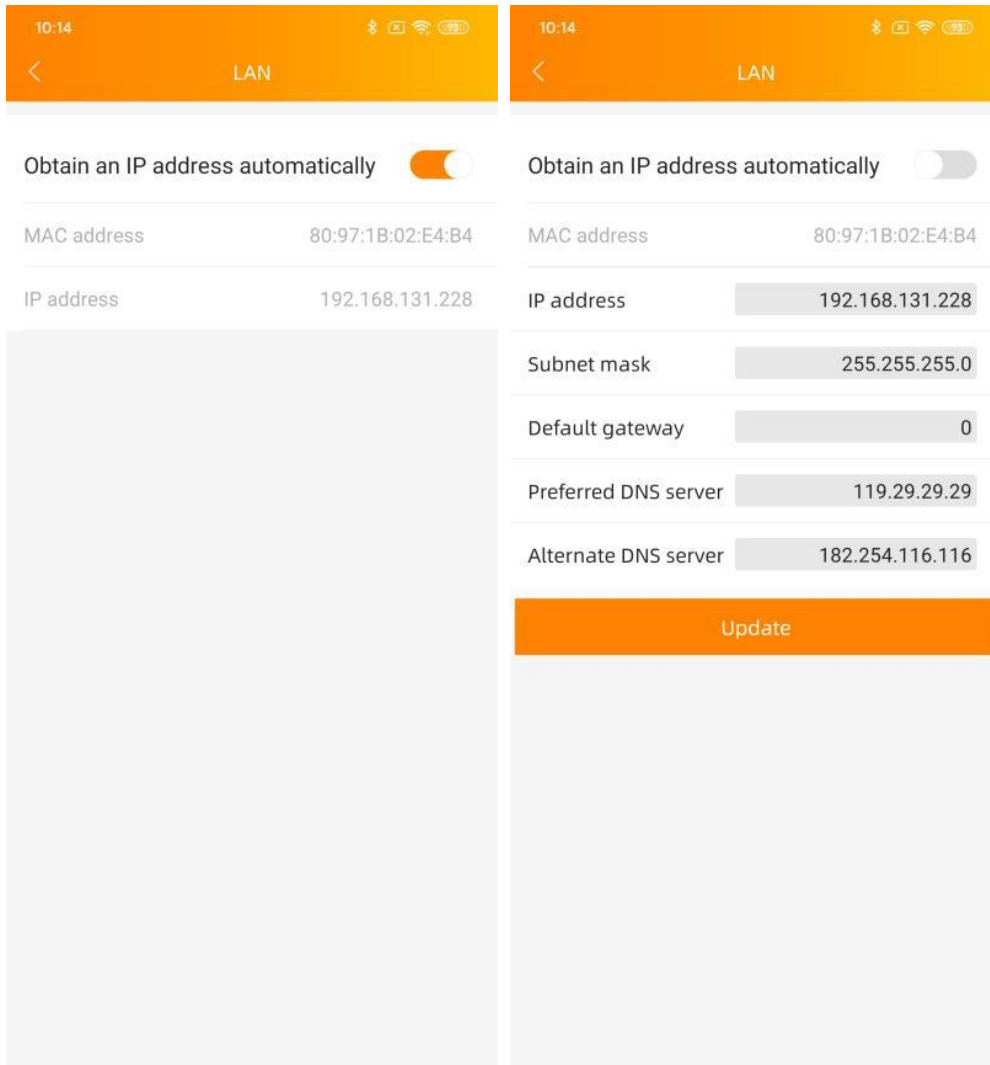


# 3. APstorage User Interface

## 3.5.3.2 LAN Settings

The LAN setting of ECU is divided into automatically obtaining IP address and using fixed IP address.

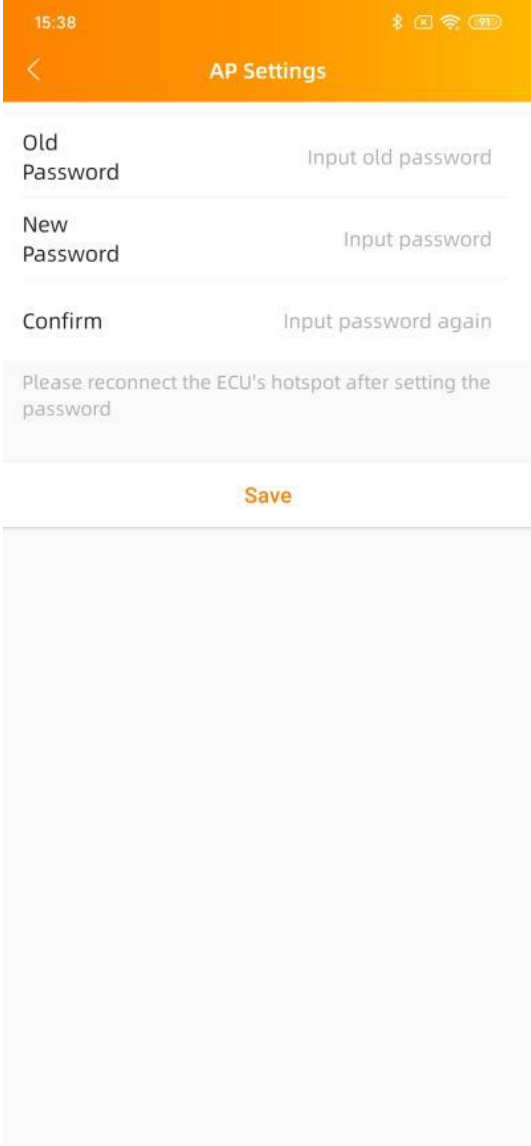
Obtaining an IP address automatically (recommended) means that the router will automatically assign the IP to the ECU. When using a fixed IP, please enter the IP address, subnet mask, default gateway, preferred DNS server and alternate DNS server.



## 3. APstorage User Interface

### 3.5.4 Hotspot Settings

Enter the hotspot setting interface, you can change the hotspot password of the ECU. After setting the password, please reconnect to the hotspot of the ECU.

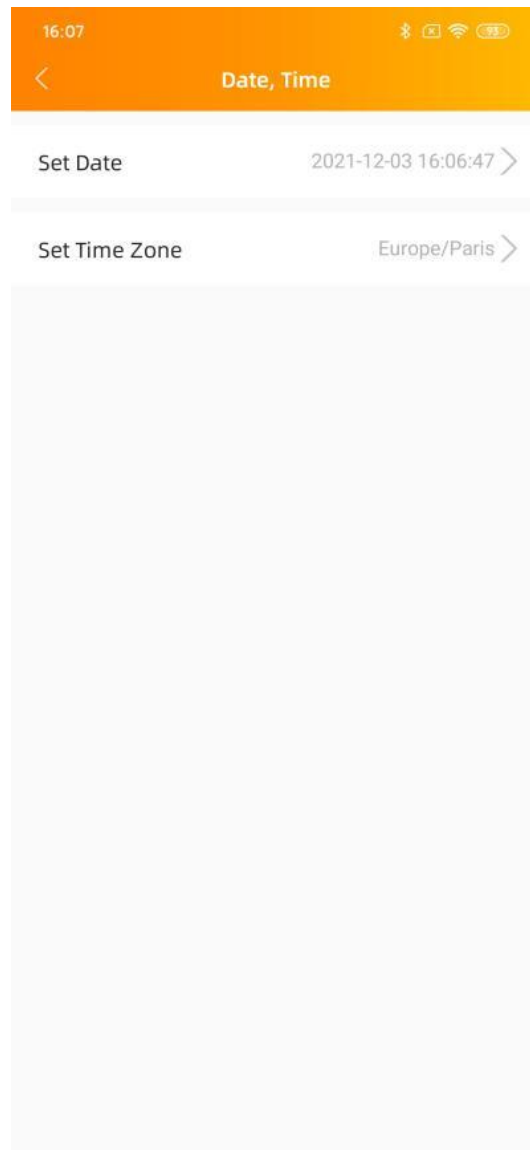


The screenshot shows a mobile application interface titled "AP Settings". At the top, the time is 15:38 and there are icons for Bluetooth, Wi-Fi, and battery. Below the title bar, there are three input fields: "Old Password" with the placeholder "Input old password", "New Password" with the placeholder "Input password", and "Confirm" with the placeholder "Input password again". Below these fields is a message: "Please reconnect the ECU's hotspot after setting the password". At the bottom of the form is a "Save" button.

## 3. APstorage User Interface

### 3.5.5 Data Settings

After entering this page, the time will be displayed on the right. Click on the date, time, and time zone to modify.



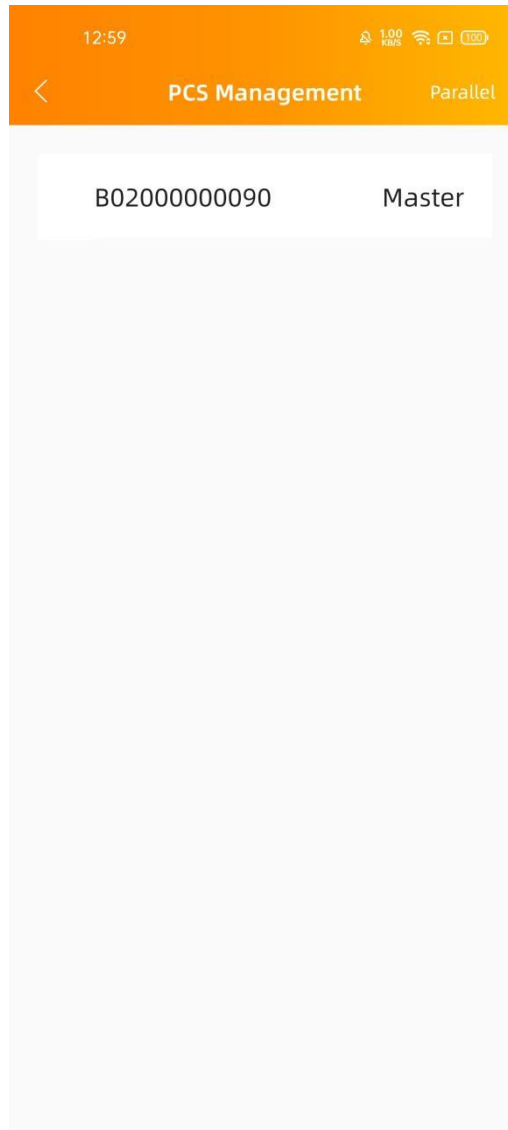
## 3. APstorage User Interface

### 3.5.6 PCS

This page displays a list of PCSs in the system. If the PCS supports the master-slave setting, you can click on "Parallel" to enter the Parallel page.



**NOTE:** Unconfigured PCS, must be set as "Master" or "Slave" to use parallel function.



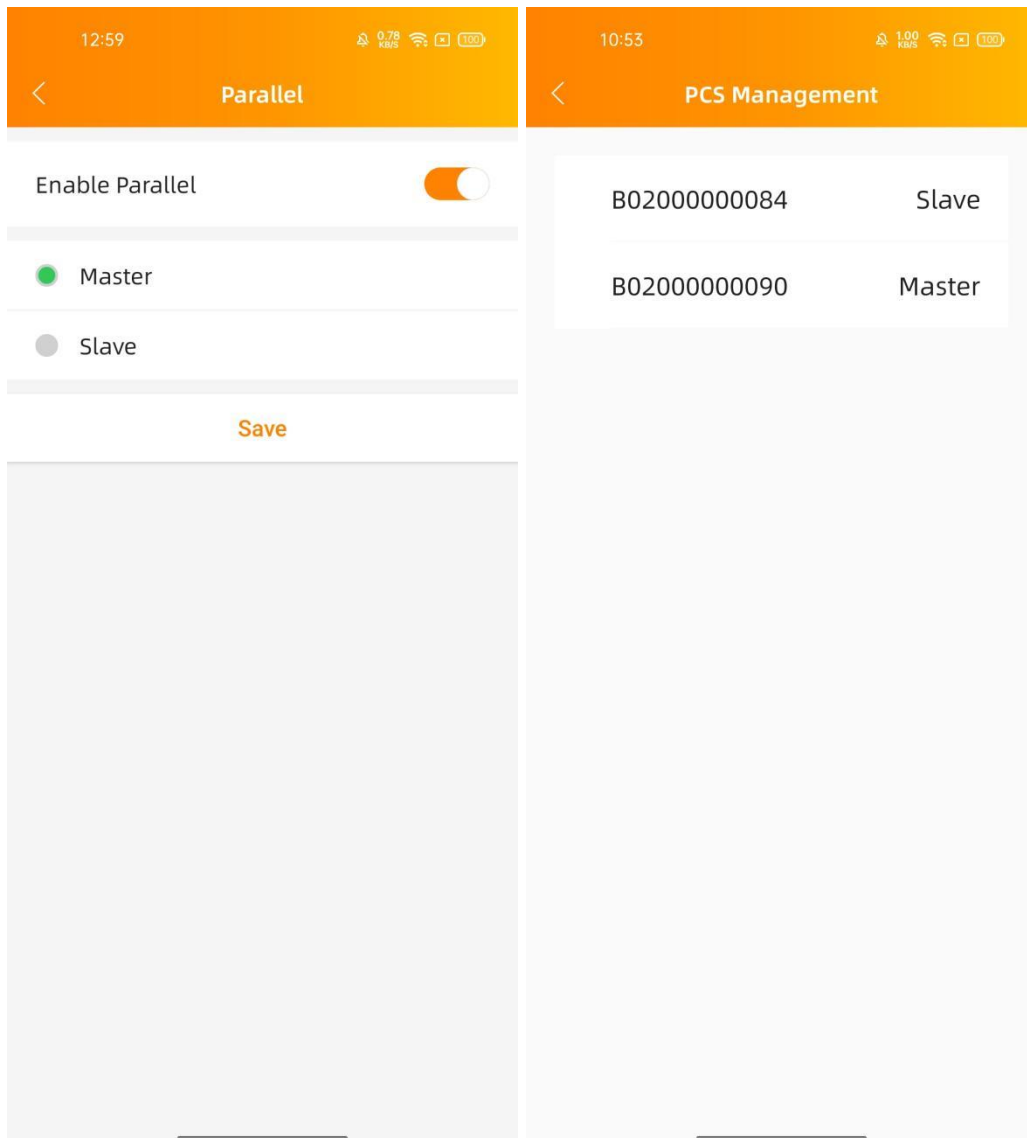
## 3. APstorage User Interface

### 3.5.6.1 PCS Parallel

Select "master" or "slave" and click "save" to complete the setting. After setting, you can see whether PCS is master or slave.



**NOTE:** After the setting is completed, the system will restart, please reconnect the system.



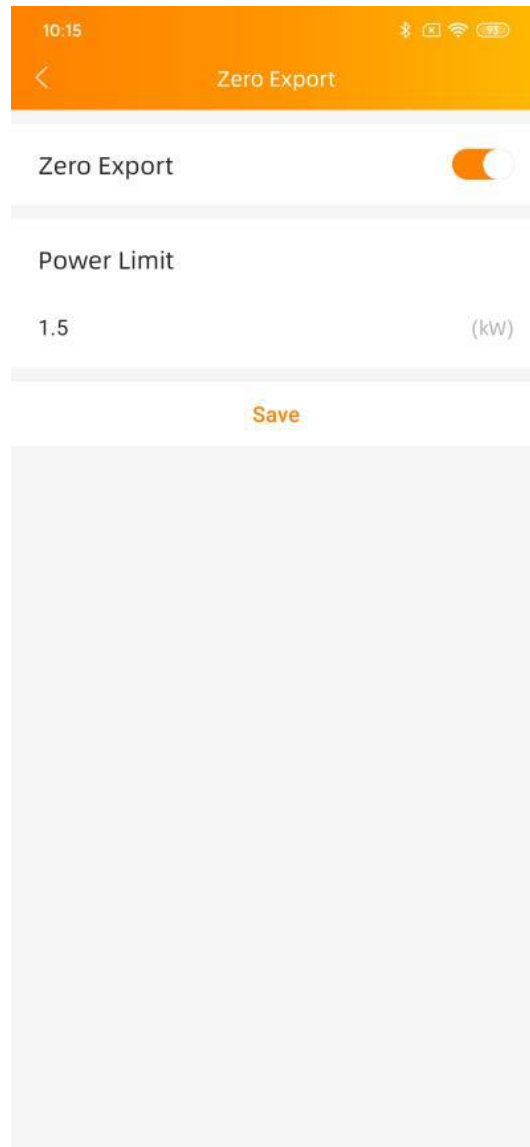
## 3. APstorage User Interface

### 3.5.7 Zero Export

When the APstorage PCS is associated to an APsystems PV system, if needed, the Zero Export function can limit the PV output power to the grid, and the user can set the maximum allowable reverse current power when the Zero Export function is turned on.



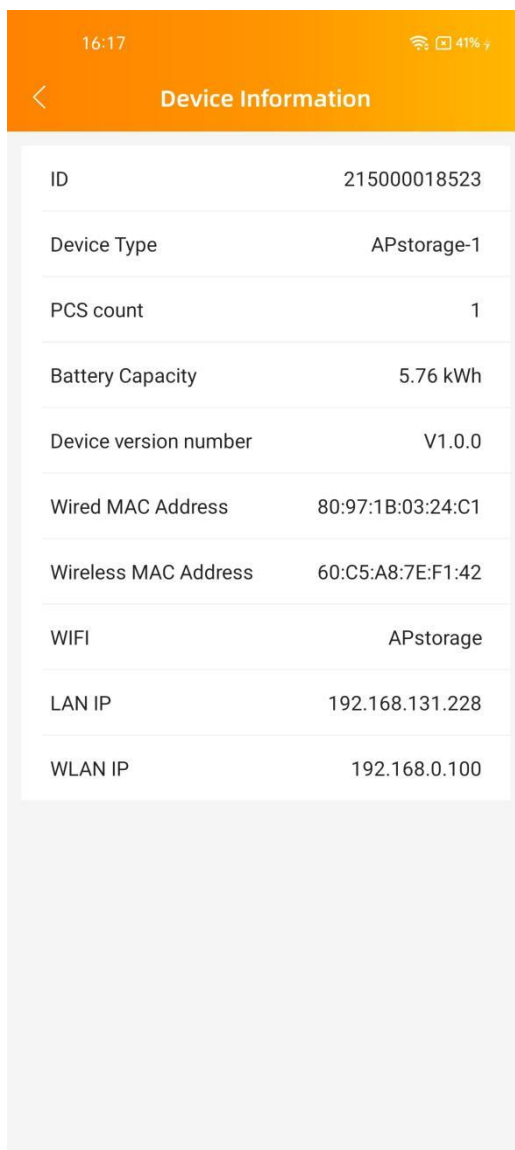
**NOTE:** The minimum reverse current power power is set to 0.1KW.



## 3. APstorage User Interface

### 3.5.8 Device Information

The device information page displays the device ID, device type, PCS number, battery capacity, device version number, wired and wireless network MAC, currently connected router SSID, IP address.



The screenshot shows a mobile application interface for 'Device Information'. The top status bar displays the time '16:17' and battery level '41%'. The page title is 'Device Information' with a back arrow on the left. The data is presented in a list of key-value pairs, each on a separate row with a light gray background and a thin border.

ID	215000018523
Device Type	APstorage-1
PCS count	1
Battery Capacity	5.76 kWh
Device version number	V1.0.0
Wired MAC Address	80:97:1B:03:24:C1
Wireless MAC Address	60:C5:A8:7E:F1:42
WIFI	APstorage
LAN IP	192.168.131.228
WLAN IP	192.168.0.100

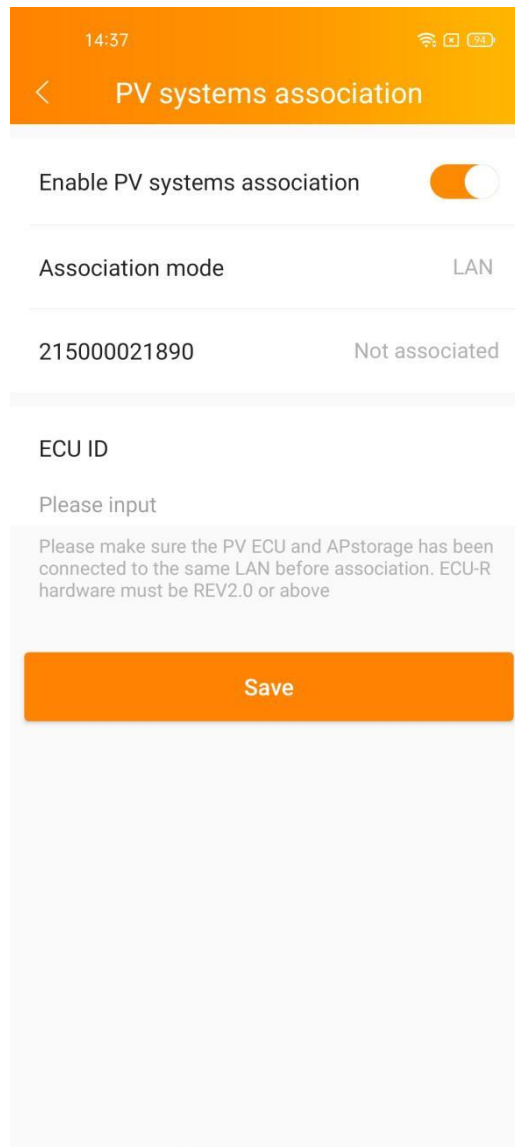


## 3. APstorage User Interface

### 3.5.9 Pair APstorage with the PV system

Enter this page, you can view the current association status.

If you have installed APsystems microinverters with an ECU, you can pair the APstorage with the PV system. Enter the PV ECU's ID, then click Save, the APstorage will associate with PV system automatically. It is necessary if you want to turn on zero export function.

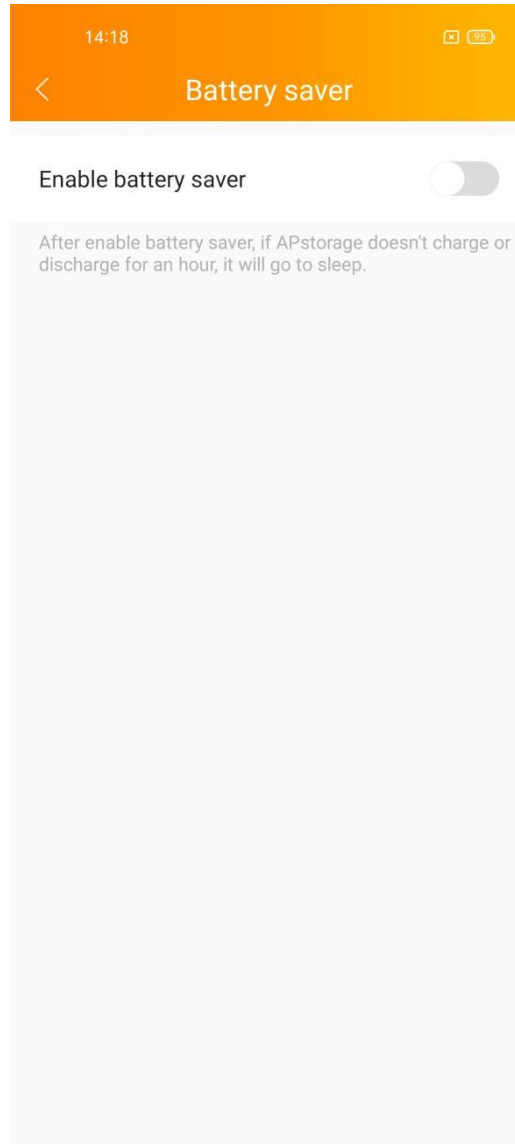


The screenshot shows a mobile application interface for "PV systems association". At the top, the status bar shows the time 14:37 and icons for Wi-Fi, signal strength, and battery. Below the title bar, there is a toggle switch for "Enable PV systems association" which is currently turned on. Underneath, the "Association mode" is set to "LAN". A section for "ECU ID" shows the value "215000021890" and the status "Not associated". Below this, there is a text prompt "Please input" and a detailed instruction: "Please make sure the PV ECU and APstorage has been connected to the same LAN before association. ECU-R hardware must be REV2.0 or above". At the bottom of this section is a prominent orange "Save" button.

## 3. APstorage User Interface

### 3.5.10 Battery saver

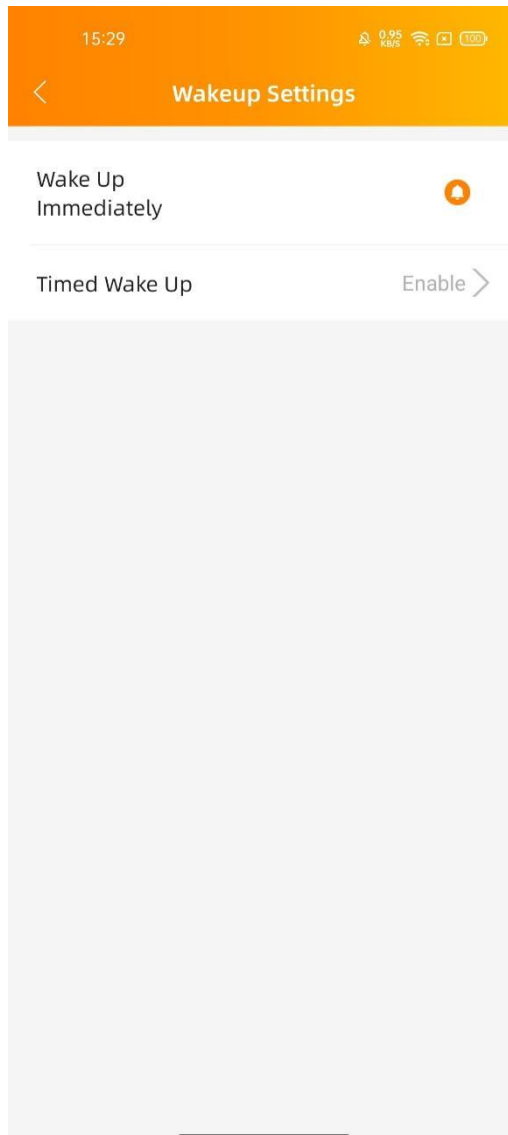
Enter this page, you can enable the "battery saver" function. After enabling the "battery saver" function, if APstorage doesn't charge or discharge for an hour, it will go to sleep.



## 3. APstorage User Interface

### 3.5.11 Wakeup Settings

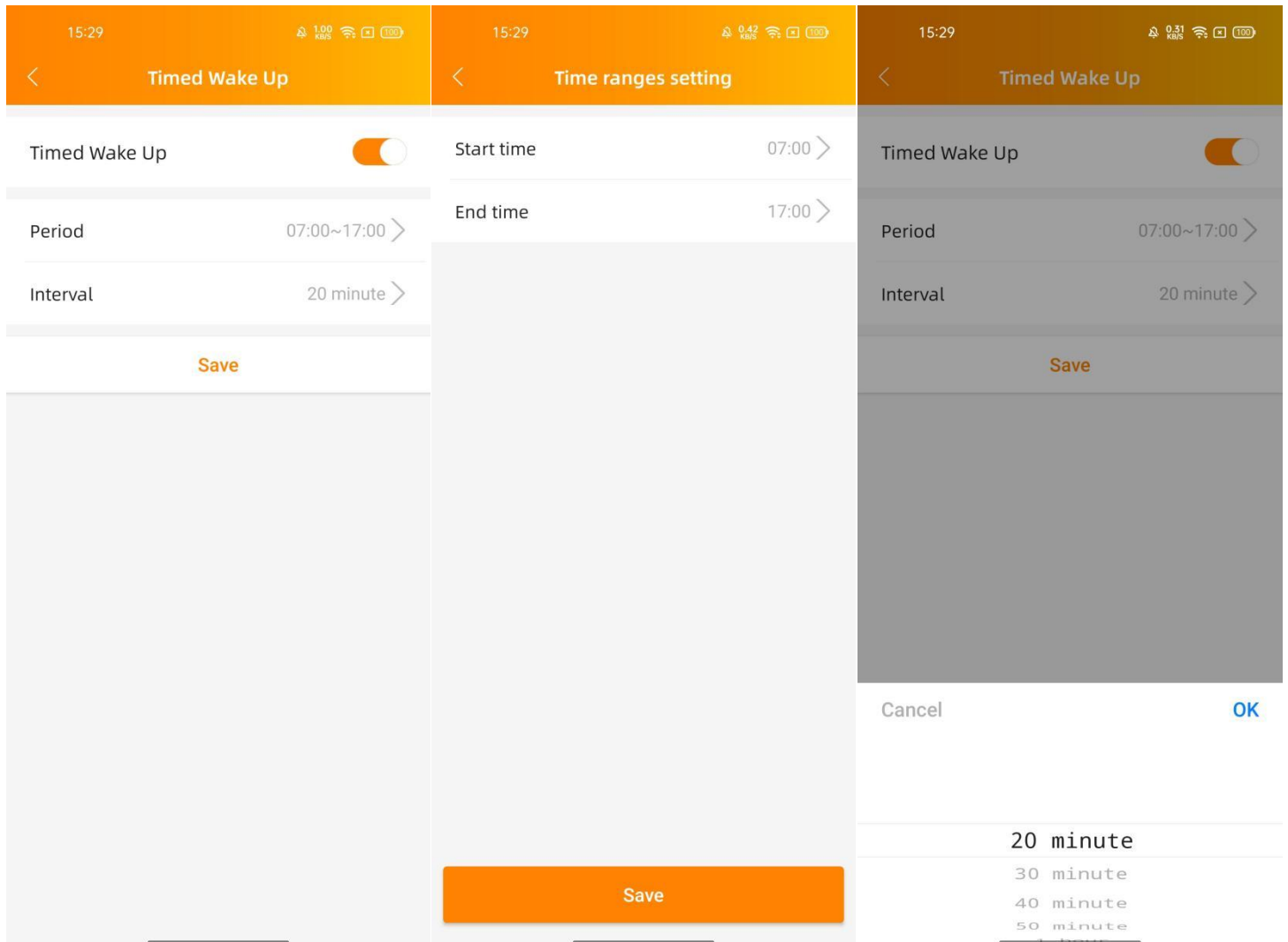
When system enters into sleeping mode, you can wake it up by clicking on "Wake Up Immediately".



# 3. APstorage User Interface

## 3.5.11.1 Timed Wake Up

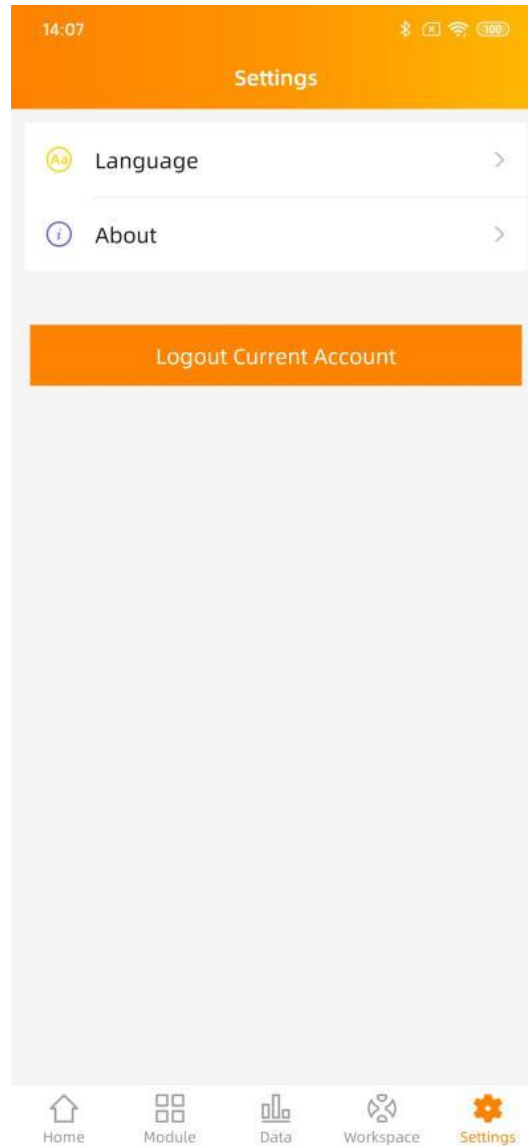
On this page, you can set the wake-up time period and interval.



# 3. APstorage User Interface

## 3.6 Settings

Select "Language" to set the APP language, and "About" to view the APP introduction.



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Specifications subject to change without notice please  
ensure you are using the most recent update found at web :  
[usa.APsystems.com](http://usa.APsystems.com)

## 4. Contact Information

### **APsystems America**

8701 N. Mopac Expy, Ste 160, Austin, TX 78759

Mail: [info.usa@APsystems.com](mailto:info.usa@APsystems.com)

Web: [usa.APsystems.com](http://usa.APsystems.com)

#### FCC Statement

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

#### FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Note : This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### ISED RSS Warning:

This device complies with Innovation, Science and Economic Development Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

#### ISED RF exposure statement:

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Le rayonnement de la classe B respecte ISED fixaient un environnement non contrôlés. Installation et mise en œuvre de ce matériel devrait avec échangeur distance minimale entre 20 cm ton corps. Lanceurs ou ne peuvent pas coexister cette antenne ou capteurs avec d'autres.