

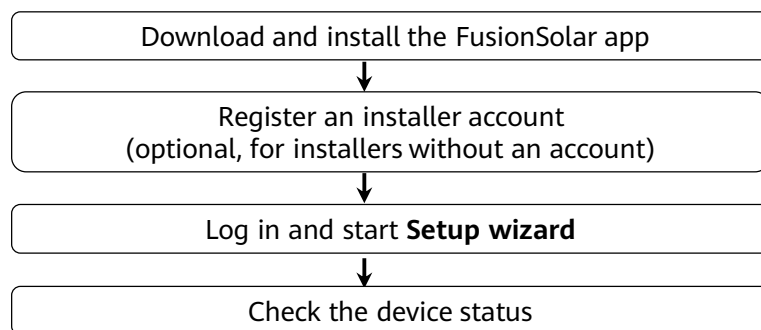
# FusionSolar App Quick Guide

Issue: Draft B  
Date: 2021-02-03



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## FusionSolar App Quick Settings Operation Procedure



## FAQ

Physical Layout Design of PV Modules Using Device  
Commissioning (optional, for scenarios with optimizers)

Physical layout design of PV modules on the SmartPVMS  
WebUI (optional, for scenarios with optimizers)

This document applies to the following scenarios:

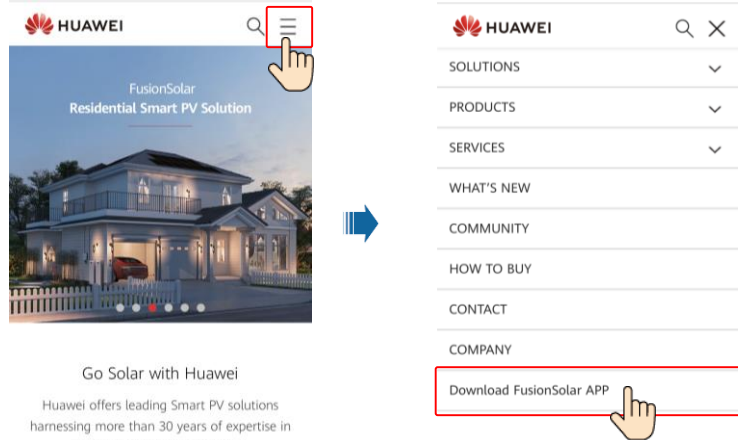
- Inverter with built-in WLAN for local commissioning
- Inverter with a Smart USB-WLAN Adapter for local commissioning
- In RS485 cascading networking.
- Inverter with a SmartLogger for local commissioning

- The figures are for reference only.
- The initial password for connecting the inverter WLAN is **Changeme**.
- The in to the system. Use the initial password upointial password for connecting the Smart USB-WLAN Adapter is **Changeme**.
- The initial password of the **installer** and **Advanced user** is **00000a**. If the system prompts you to set a password, set the password and login first power-on and change it immediately after login.
- To ensure account security, change the password periodically and keep the new password in mind. Not changing the initial password may cause password disclosure. A password left unchanged for a long period of time may be stolen or cracked. If a password is lost, devices cannot be accessed. In these cases, the user is liable for any loss caused to the PV plant.

# 1. Downloading and Installing the FusionSolar App

Method 1: Search for **FusionSolar** in Huawei AppGallery to download and install the app.

Method 2: Access <https://solar.huawei.com> using the mobile phone browser and download the latest installation package.

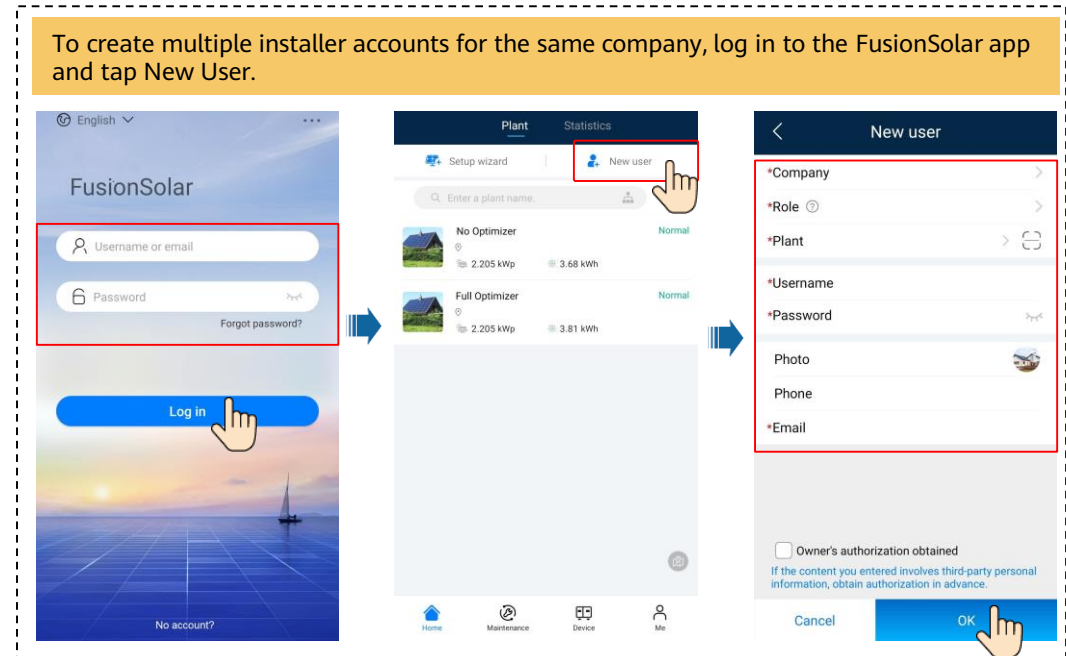
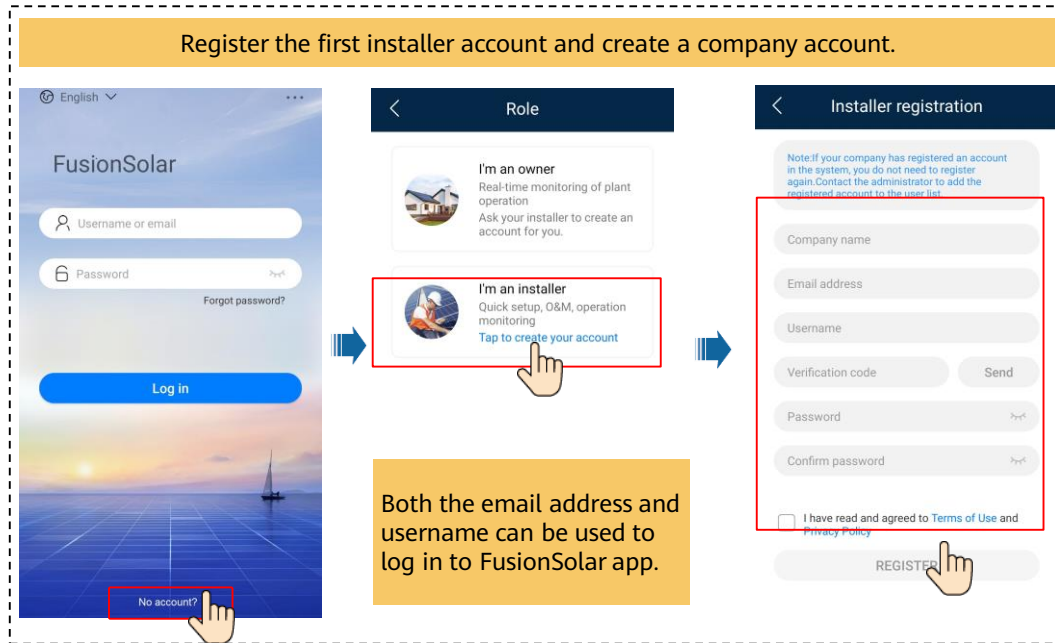


Method 3: Scan the QR code to download and install the app.



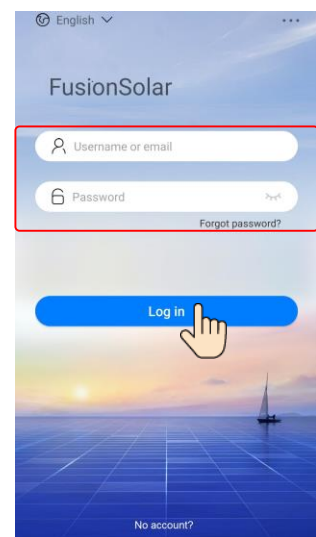
FusionSolar

## 2. Register an Installer Account (Optional, for Installers Without an Account)



### 3. Log in and Start Setup Wizard

- Local Commissioning Using the Built-in WLAN of the Inverter



English

FusionSolar

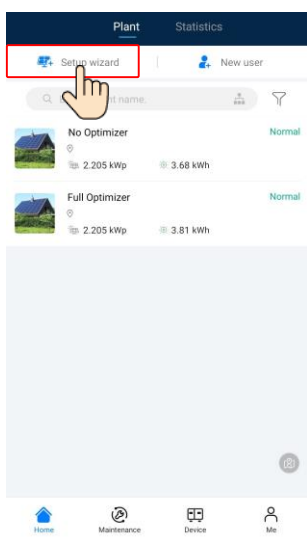
Username or email

Password

Forgot password?

Log in

No account?

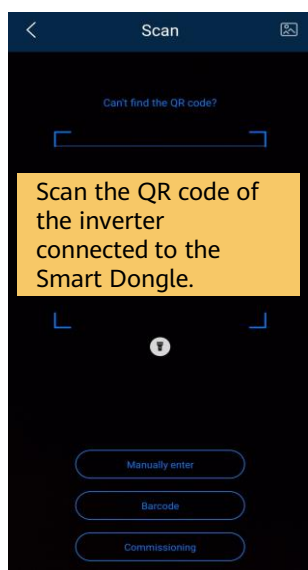


Plant Statistics

Setup wizard New user

No Optimizer 2.205 kWp 3.68 kWh Normal

Full Optimizer 2.205 kWp 3.81 kWh Normal



Scan

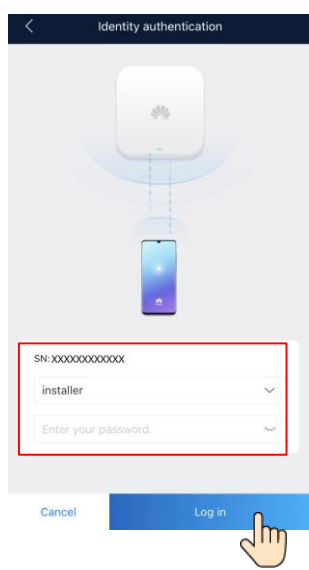
Can't find the QR code?

Scan the QR code of the inverter connected to the Smart Dongle.

Manually enter

Barcode

Commissioning



Identity authentication

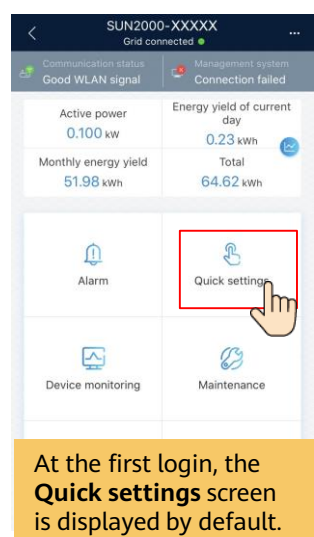
SN:XXXXXXXXXXXX

installer

Enter your password.

Cancel Log in

Log in to the app as installer user. The initial password of the installer is 00000a. If the system prompts you to set a password, set the password and login first power-on and change it immediately after login.



SUN2000-XXXXX Grid connected

Communication status: Good WLAN signal Management system: Connection failed

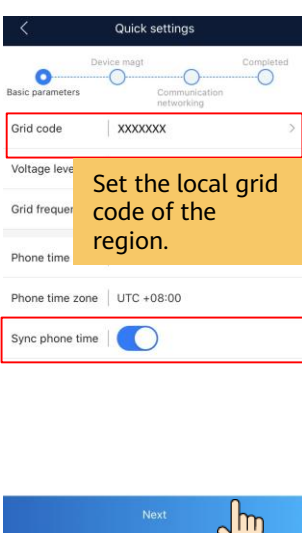
Active power: 0.100 kW Energy yield of current day: 0.23 kWh

Monthly energy yield: 51.98 kWh Total: 64.62 kWh

Alarm Quick settings

Device monitoring Maintenance

At the first login, the Quick settings screen is displayed by default.



Quick settings

Device magt Completed

Basic parameters Communication networking

Grid code XXXXXXXX

Voltage level

Grid frequency

Phone time

Phone time zone UTC+08:00

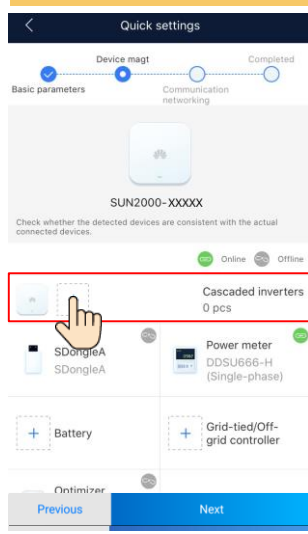
Sync phone time

Next

Set the local grid code of the region.

If Sync phone time is enabled, the time and time zone of the inverter are synchronized with those of the mobile phone.

In a non-cascading scenario, the step of Searching for cascaded inverters is not involved.



Quick settings

Device magt Completed

Basic parameters Communication networking

SUN2000-XXXXX

Check whether the detected devices are consistent with the actual connected devices.

Online Offline

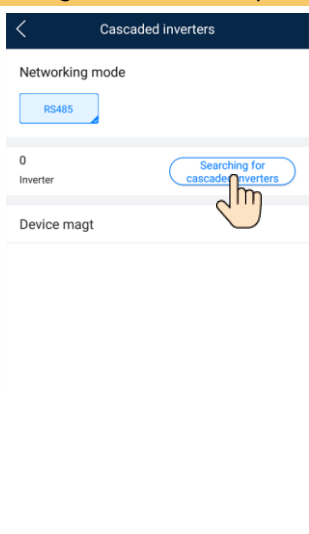
SDongleA SDongleA

Power meter DDSU666-H (Single-phase)

Battery Grid-tied/Off-grid controller

Optimizer

Previous Next



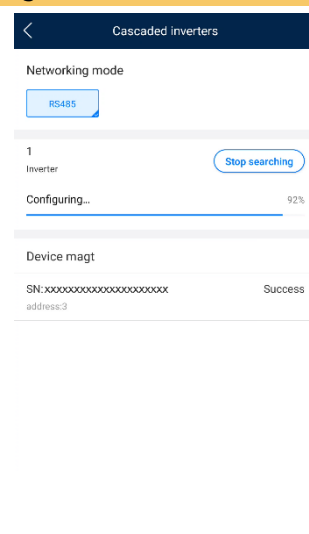
Cascaded inverters

Networking mode RS485

0 Inverter

Searching for cascaded inverters

Device magt



Cascaded inverters

Networking mode RS485

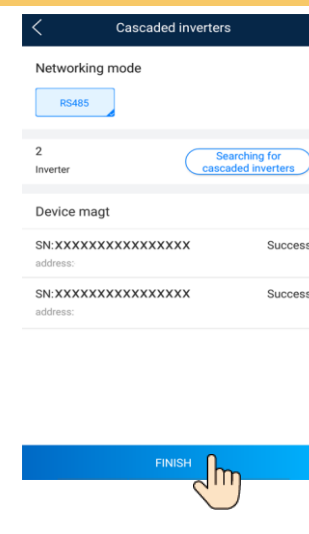
1 Inverter

Searching for cascaded inverters

Configuring... 92%

Device magt

SN:XXXXXXXXXXXXXXXXXXXX address:3 Success



Cascaded inverters

Networking mode RS485

2 Inverter

Searching for cascaded inverters

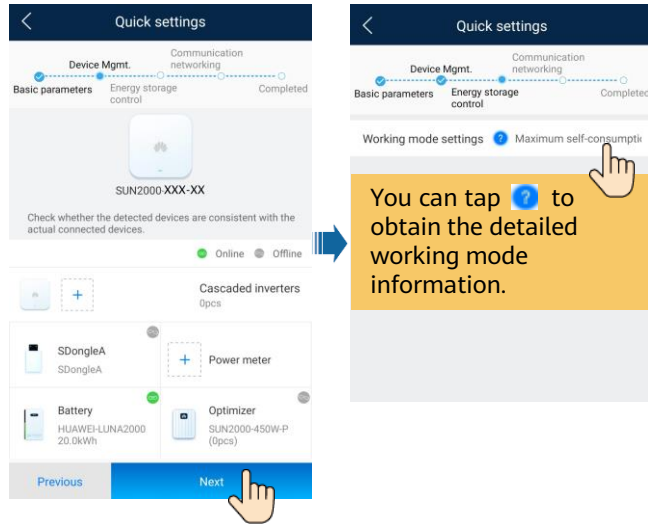
Device magt

SN:XXXXXXXXXXXXXXXXXXXX address: Success

SN:XXXXXXXXXXXXXXXXXXXX address: Success

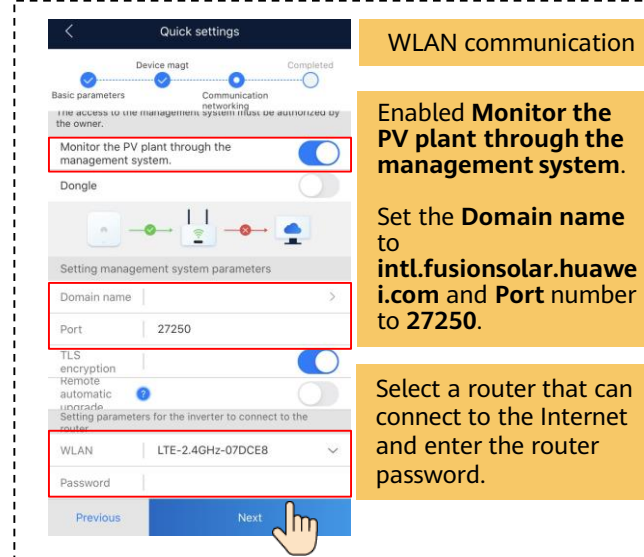
FINISH

In a non-Battery scenario, the step of **Energy storage control** is not involved.



You can tap ? to obtain the detailed working mode information.

Set network parameters and domain name.

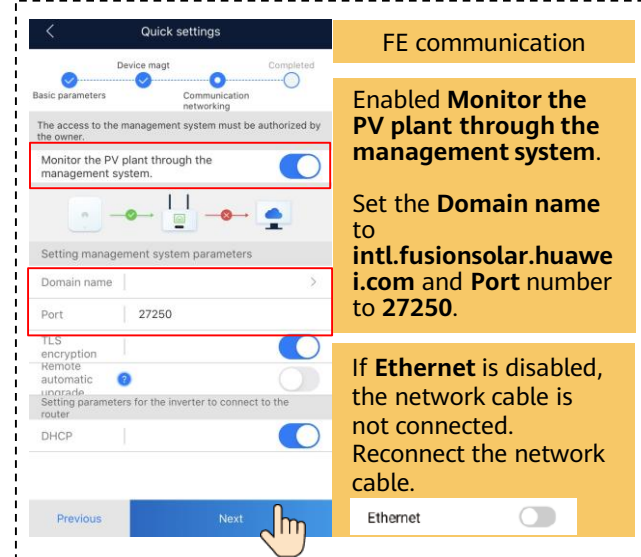


WLAN communication

Enabled **Monitor the PV plant through the management system.**

Set the **Domain name** to **intl.fusionsolar.huawei.com** and **Port number** to **27250**.

Select a router that can connect to the Internet and enter the router password.



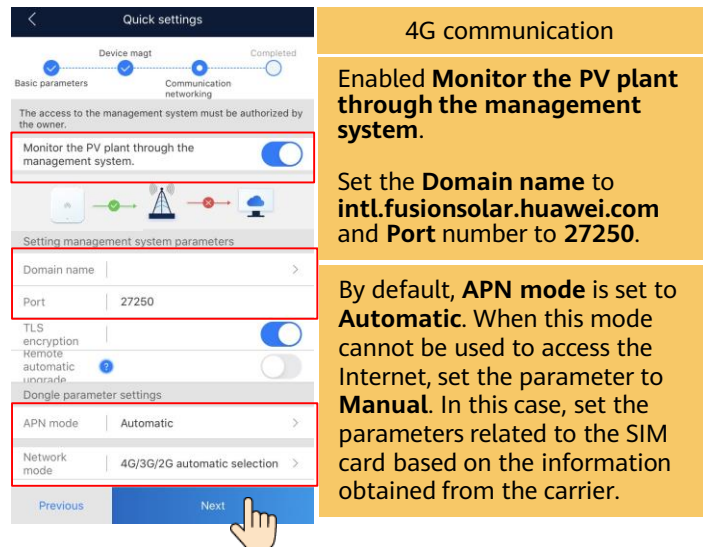
FE communication

Enabled **Monitor the PV plant through the management system.**

Set the **Domain name** to **intl.fusionsolar.huawei.com** and **Port number** to **27250**.

If **Ethernet** is disabled, the network cable is not connected. Reconnect the network cable.

Set network parameters and domain name.

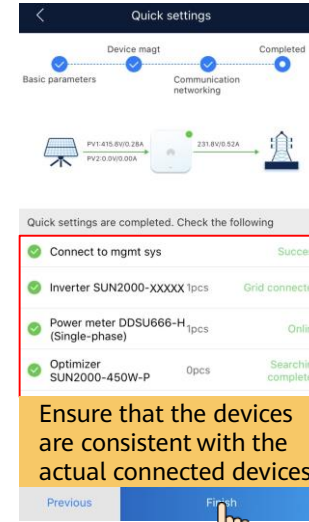
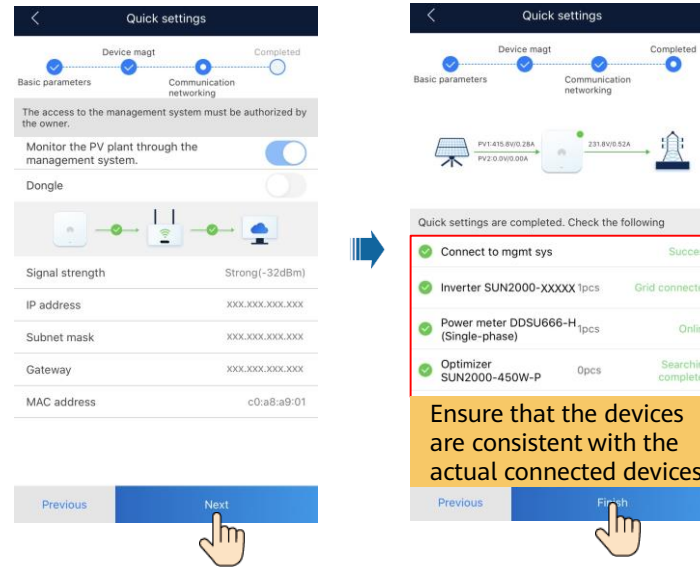


4G communication

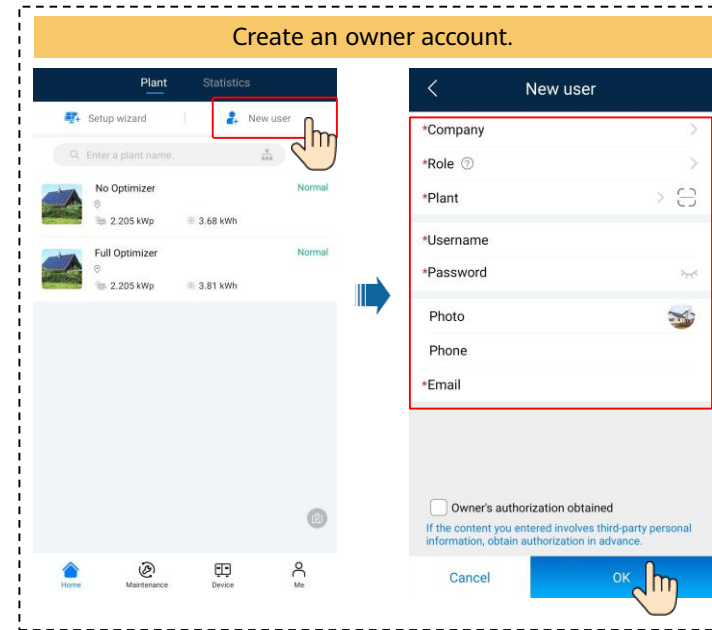
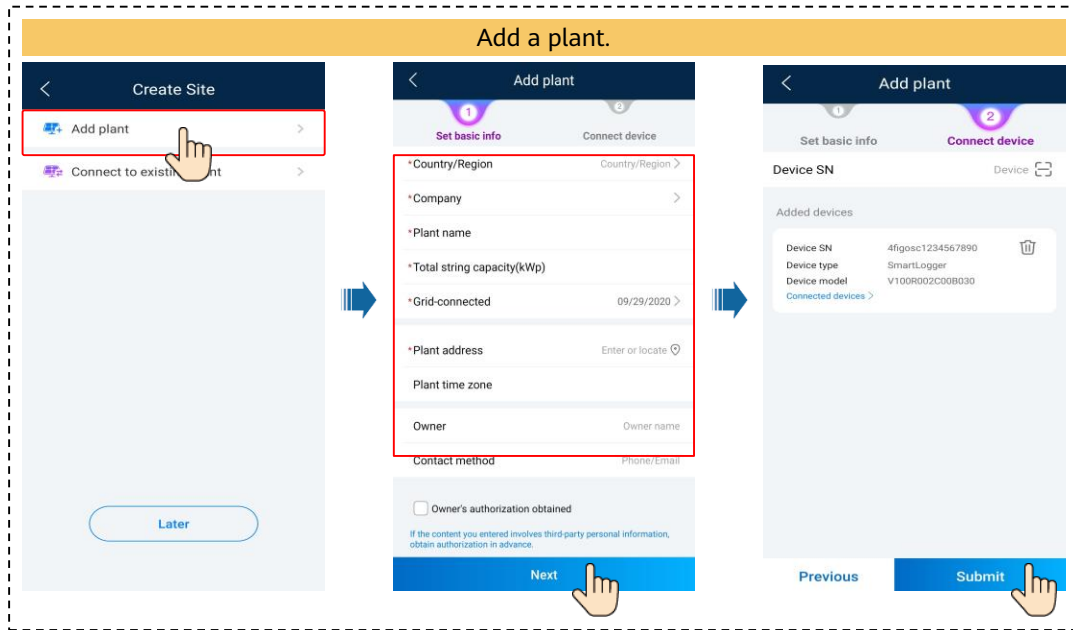
Enabled **Monitor the PV plant through the management system.**

Set the **Domain name** to **intl.fusionsolar.huawei.com** and **Port number** to **27250**.

By default, **APN mode** is set to **Automatic**. When this mode cannot be used to access the Internet, set the parameter to **Manual**. In this case, set the parameters related to the SIM card based on the information obtained from the carrier.



Ensure that the devices are consistent with the actual connected devices.

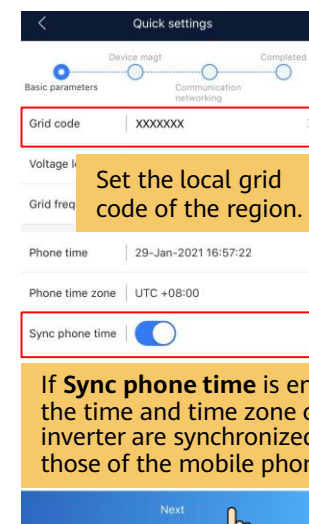
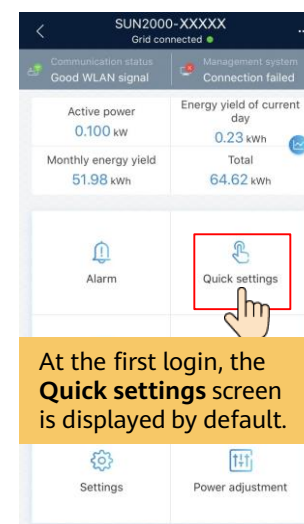
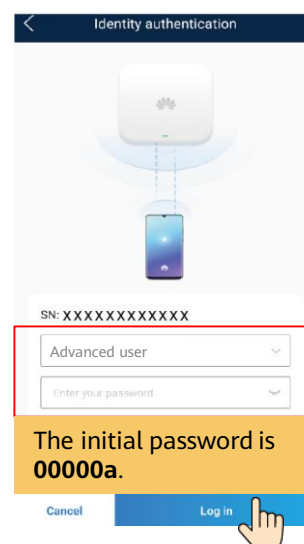
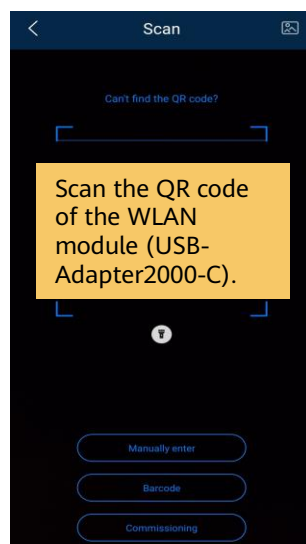
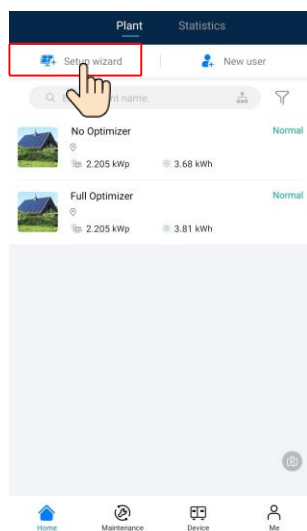
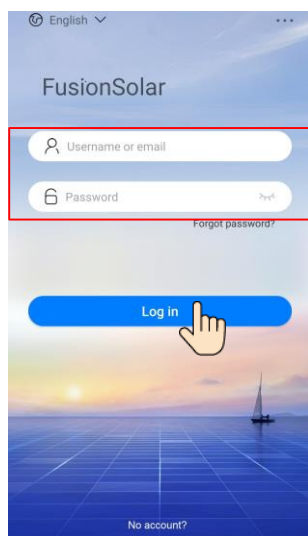
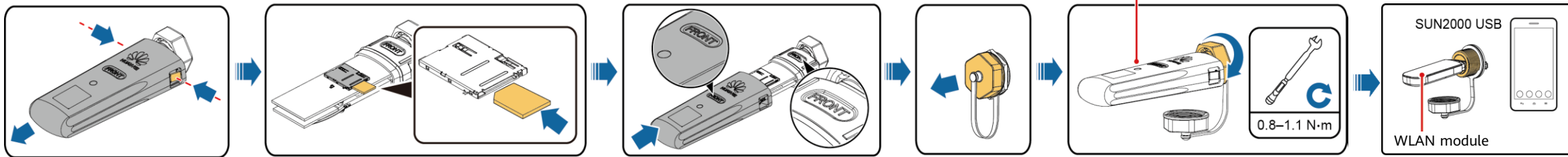


## • Local Commissioning Using a Smart USB-WLAN Adapter

### Note:

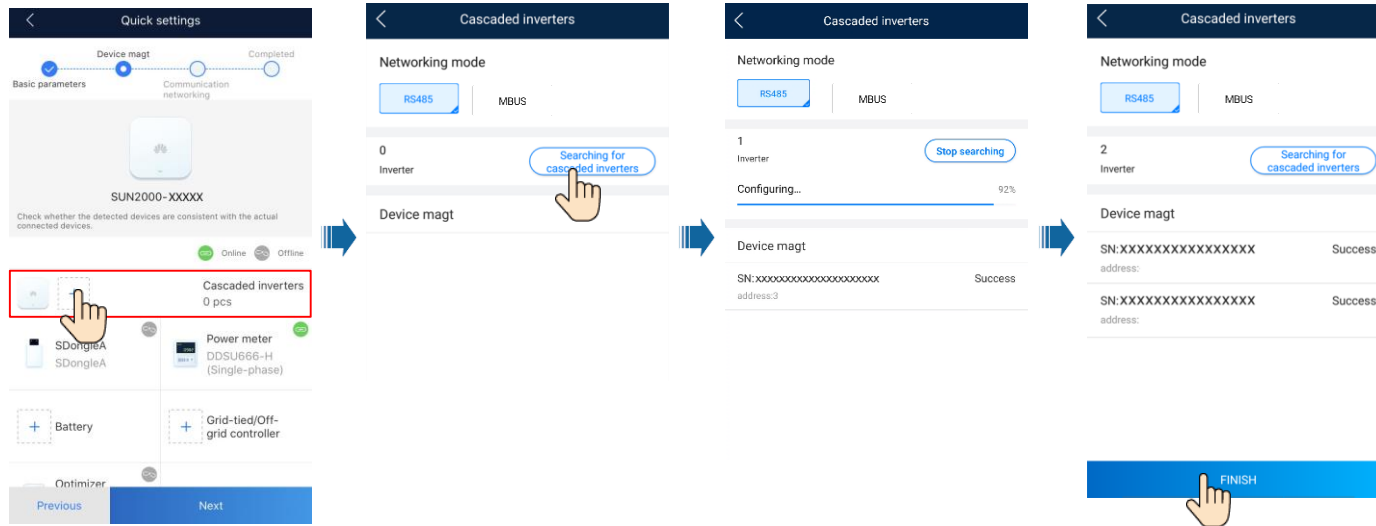
Before commissioning a commercial inverter, connect the 4G Smart Dongle to identify parameters. If the indicator status is normal, remove the Smart Dongle, and then connect the USB-WLAN adapter to start commissioning.

Check the indicator status. When the indicator blinks green at an interval of 2s (on for 0.1s and then off for 1.9s), remove the 4G Smart Dongle.

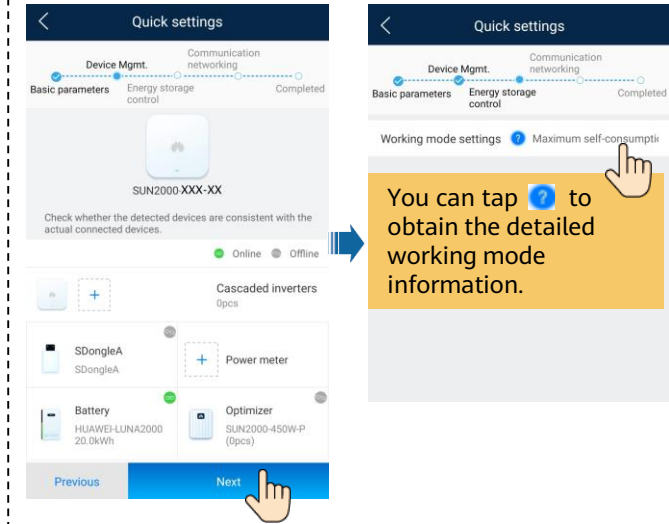


If **Sync phone time** is enabled, the time and time zone of the inverter are synchronized with those of the mobile phone.

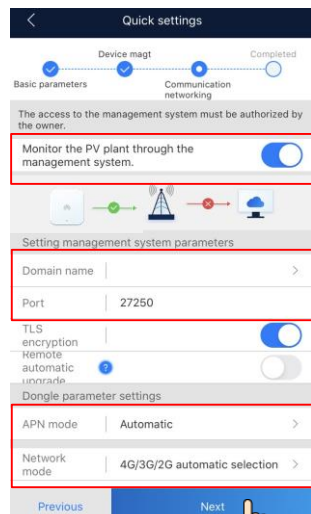
In a non-cascading scenario, the step of **searching for cascaded inverters** is not involved.



In a non-Battery scenario, the step of **Energy storage control** is not involved.



Set network parameters and domain name.

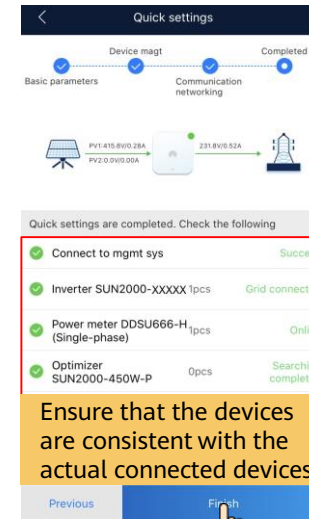
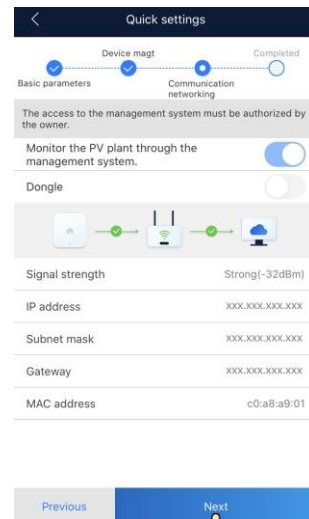


4G communication

Enabled **Monitor the PV plant through the management system**.

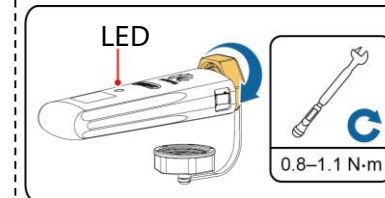
Set the **Domain name** to **intl.fusionsolar.huawei.com** and **Port** number to **27250**.

By default, **APN mode** is set to **Automatic**. When this mode cannot be used to access the Internet, set the parameter to **Manual**. In this case, set the parameters related to the SIM card based on the information obtained from the carrier.



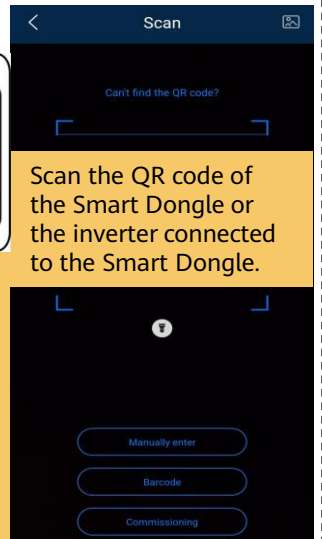
Ensure that the devices are consistent with the actual connected devices.

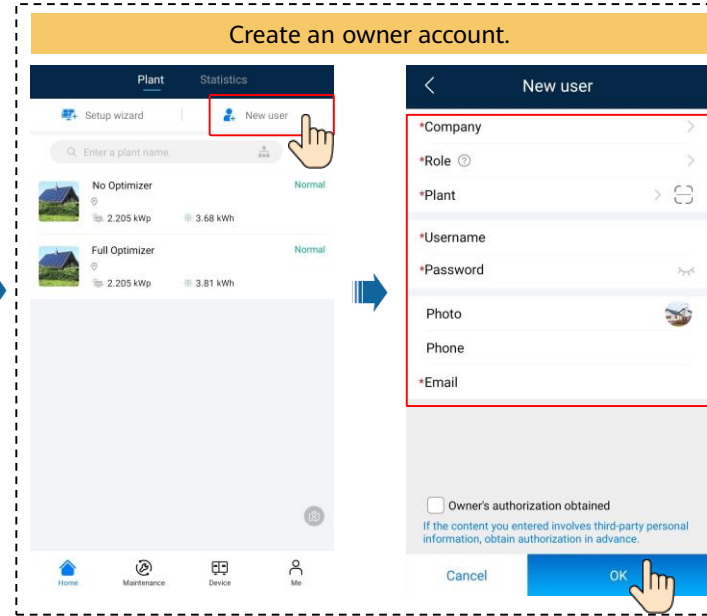
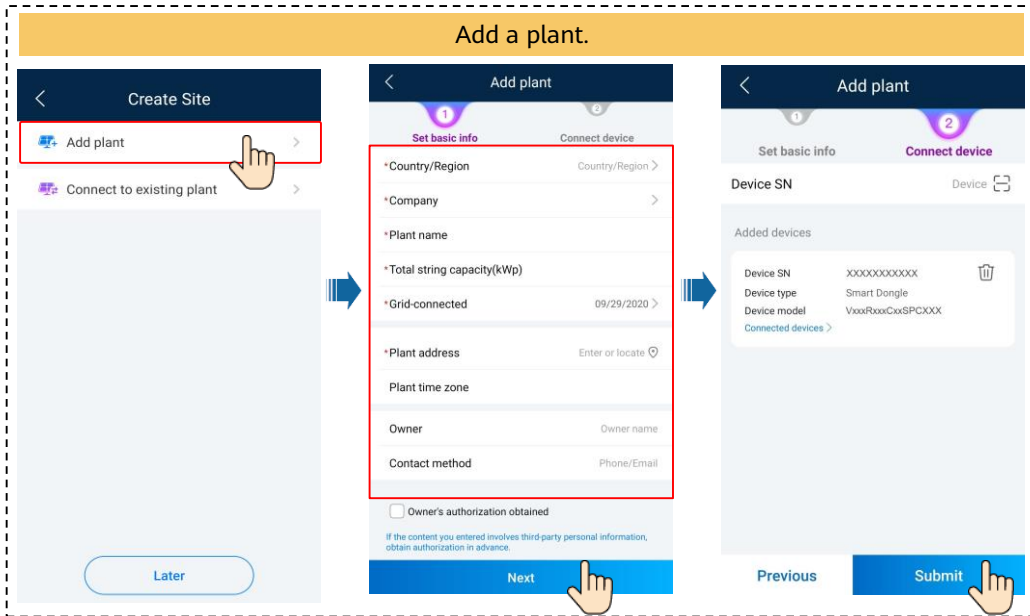
Connect to the management system.



Scan the QR code of the Smart Dongle or the inverter connected to the Smart Dongle.

After the commissioning is complete, remove the USB-WLAN module, install the 4G module. Check the indicator status. After the indicator is steady green or blinks at short intervals (on for 0.2s and then off for 0.2s) add a PV plant.



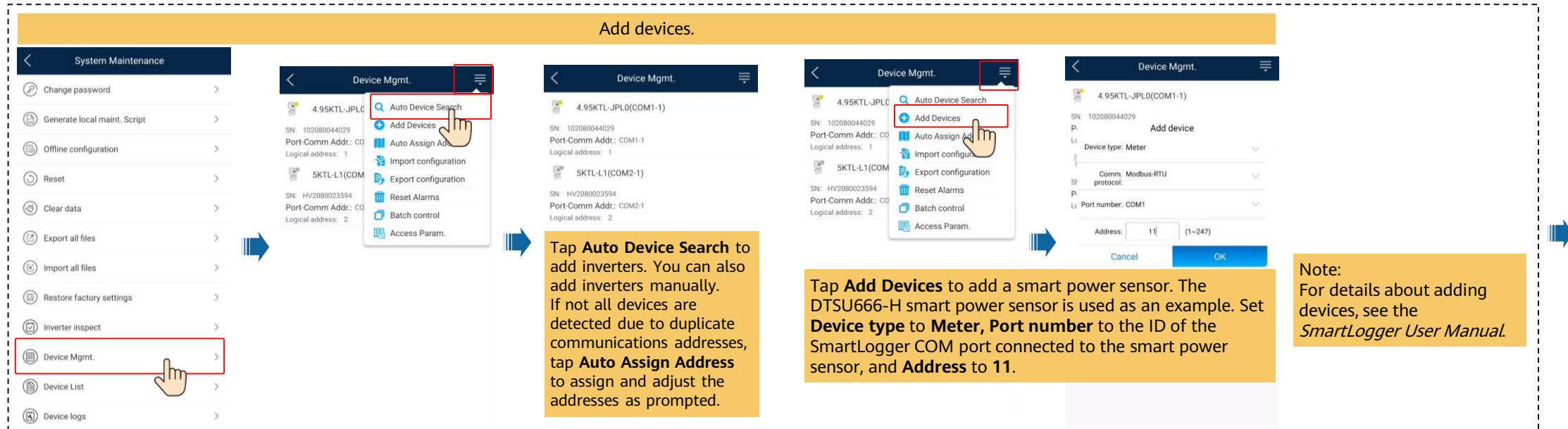
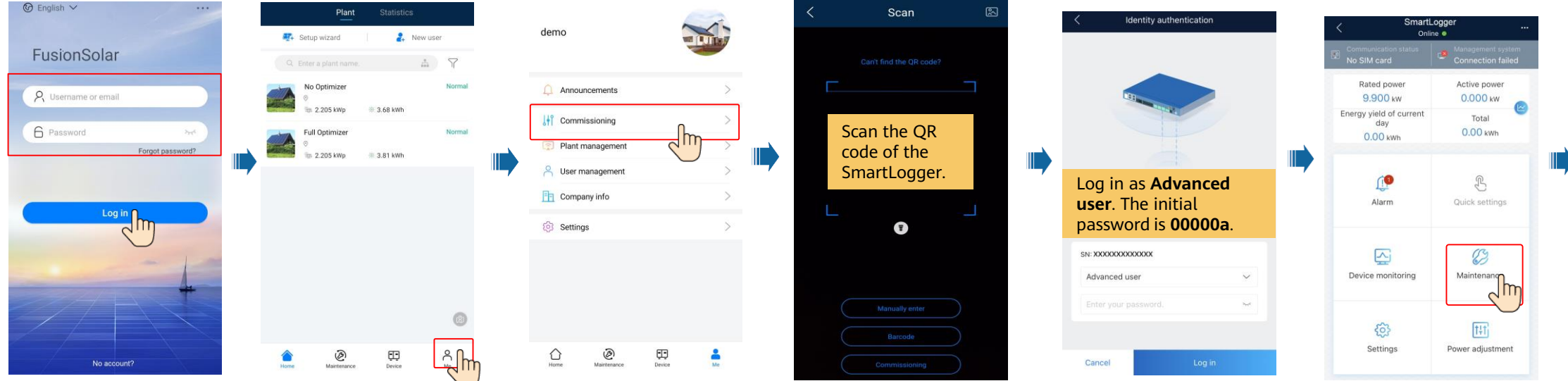


## Indicators on the Smart Dongle

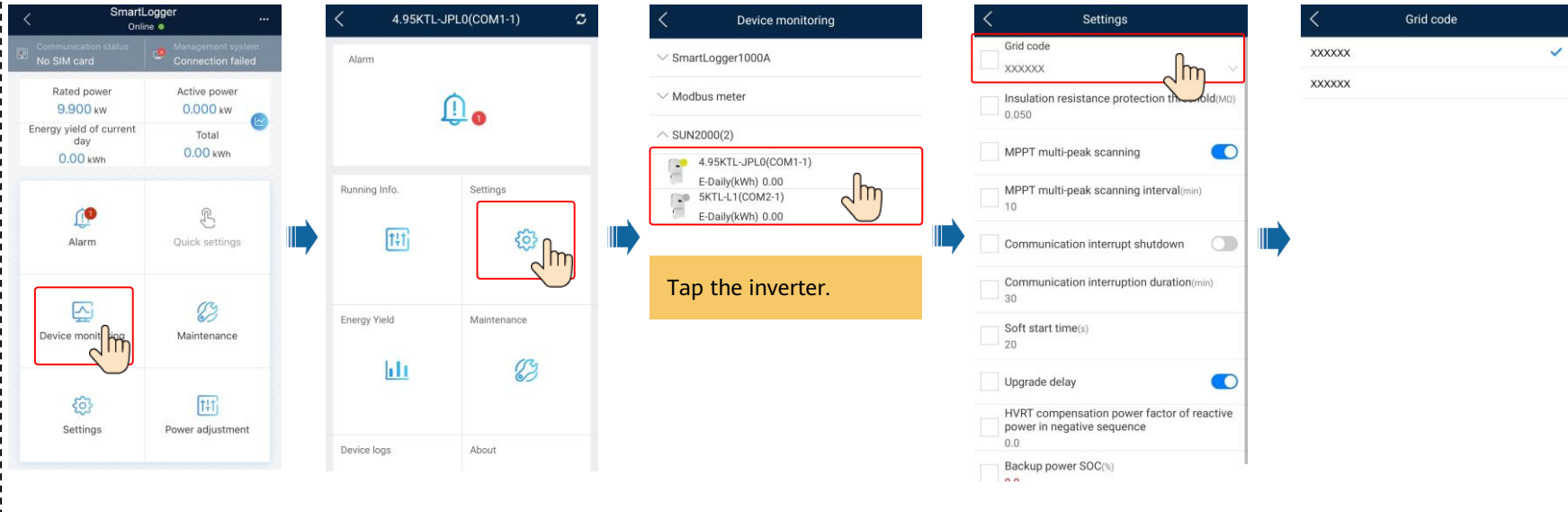
| LED                                            |                                                                  | Remarks  | Description                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------|------------------------------------------------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Color                                          | Status                                                           |          |                                                                                                                                                                                                                                                                                                                                                                                          |
| N/A                                            | Off                                                              | Normal   | The Dongle is not secured or is not powered on.                                                                                                                                                                                                                                                                                                                                          |
| Yellow (blinking green and red simultaneously) | Steady on                                                        |          | The Dongle is secured and powered on.                                                                                                                                                                                                                                                                                                                                                    |
| Green                                          | Blinking in a 2-second cycle (on for 0.1s and then off for 1.9s) | Normal   | Dialing (duration < 1 min)                                                                                                                                                                                                                                                                                                                                                               |
|                                                |                                                                  | Abnormal | If the duration is longer than 1 min, the 4G parameter settings are incorrect. Reset the parameters.                                                                                                                                                                                                                                                                                     |
|                                                | Blinking at long intervals (on for 1s and then off for 1s)       | Normal   | The dial-up connection is set up successfully (duration < 30s).                                                                                                                                                                                                                                                                                                                          |
|                                                |                                                                  | Abnormal | If the duration is longer than 30s, the settings of the management system parameters are incorrect. Reset the parameters.                                                                                                                                                                                                                                                                |
|                                                | Steady on                                                        | Normal   | Successfully connected to the management system.                                                                                                                                                                                                                                                                                                                                         |
|                                                | Blinking at short intervals (on for 0.2s and then off for 0.2s)  |          | The inverter is communicating with the management system through the Dongle.                                                                                                                                                                                                                                                                                                             |
| Red                                            | Steady on                                                        | Abnormal | The Dongle is faulty. Replace Dongle.                                                                                                                                                                                                                                                                                                                                                    |
|                                                | Blinking at short intervals (on for 0.2s and then off for 0.2s)  |          | The Dongle has no SIM card or the SIM card is in poor contact. Check whether the SIM card has been installed or is in good contact. If not, install the SIM card or remove and insert the SIM card.                                                                                                                                                                                      |
|                                                | Blinking at long intervals (on for 1s and then off for 1s)       |          | The Dongle fails to connect to the management system because it has no signals, weak signal, or no traffic. If the Dongle is reliably connected, check the SIM card signal through the APP. If no signal is received or the signal strength is weak, contact the carrier. Check whether the tariff and traffic of the SIM card are normal. If not, recharge the SIM card or buy traffic. |
|                                                |                                                                  |          |                                                                                                                                                                                                                                                                                                                                                                                          |
| Blinking red and green alternatively           | Blinking at long intervals (red for 1s and green for 1s)         |          | No communication with the inverter <ul style="list-style-type: none"> <li>Remove and insert the Dongle.</li> <li>Check whether inverters match the Dongle.</li> <li>Connect the Dongle to other inverters. Check whether the Dongle or the USB port of the inverter is faulty.</li> </ul>                                                                                                |
|                                                | Blinking at short intervals (red for 0.2s and green for 0.2s)    | Normal   | The Dongle is being upgraded locally.                                                                                                                                                                                                                                                                                                                                                    |

### 3. Log in and Start Setup Wizard

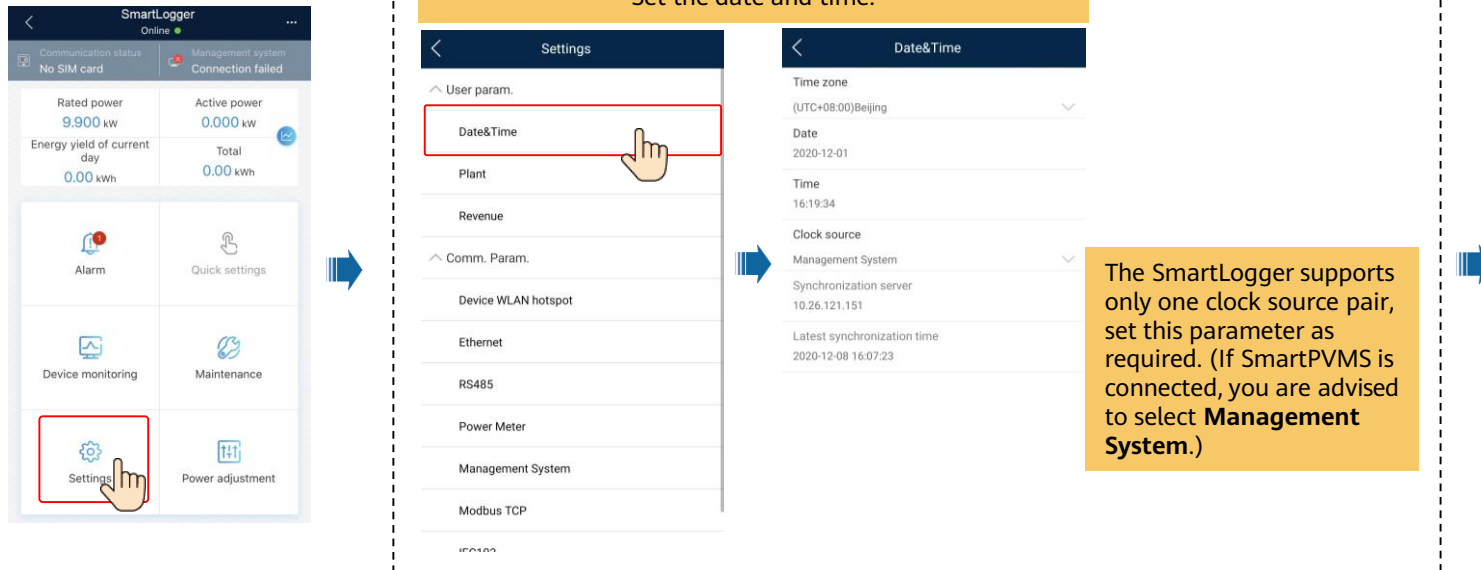
#### • Local Commissioning Using the SmartLogger of the Inverter



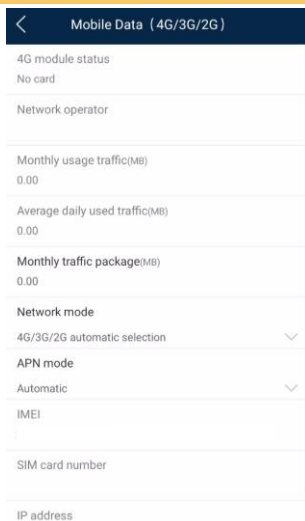
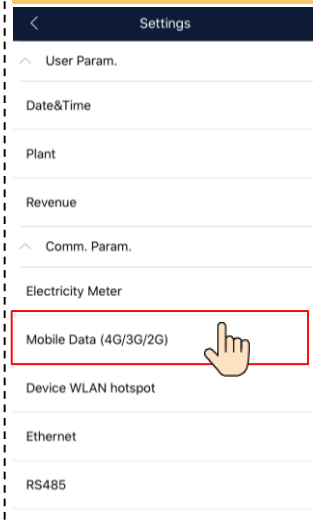
## Set the grid code.



## Set the date and time.



## Set network parameters.

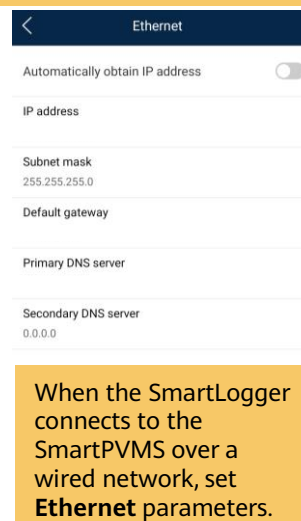
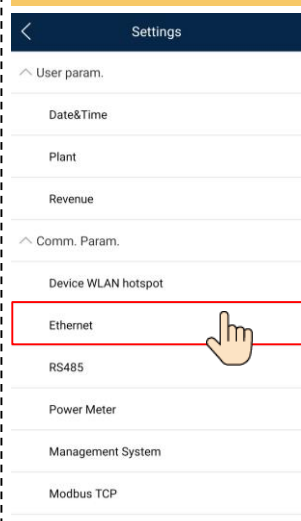


When the SmartLogger connects to the SmartPVMS over the wireless network, set **Monthly traffic package(MB)** and **Network mode**.

Note:

- Set **Monthly traffic package(MB)** and **Network mode** based on the SIM card information.
- By default, **APN mode** is set to **Automatic**. When this mode cannot be used to access the Internet, set the parameter to **Manual**. In this case, set the parameters related to the SIM card based on the information obtained from the carrier.
- When **4G module status** is **Connected** and an IP address has been assigned, SmartLogger dialup is successful.

Or



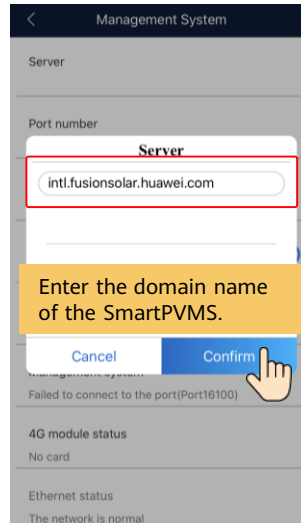
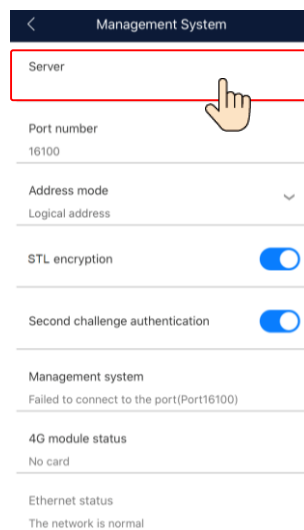
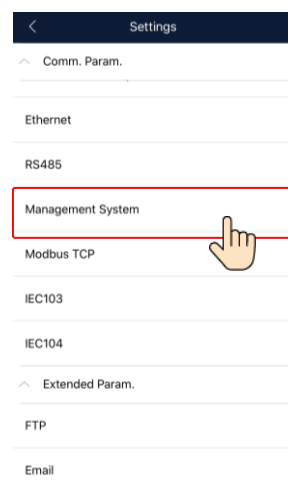
When the SmartLogger connects to the SmartPVMS over a wired network, set **Ethernet** parameters.

Notes:

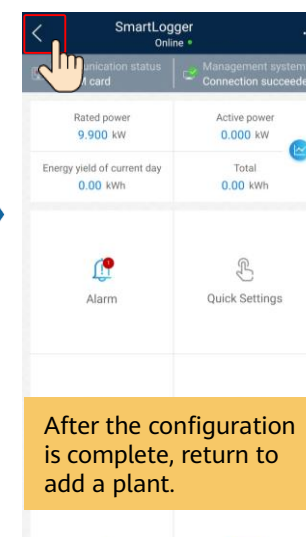
- Set **IP address** and **Subnet mask** for the SmartLogger according to the network planning. Ensure that the SmartLogger and the router are on the same network segment and that the SmartLogger has a different IP address from other devices on the LAN.
- Set **Default gateway** and **Primary DNS server** to the IP address of the LAN router.
- If the primary DNS server cannot resolve the domain name, use the secondary DNS server.



## Connect to the SmartPVMS.

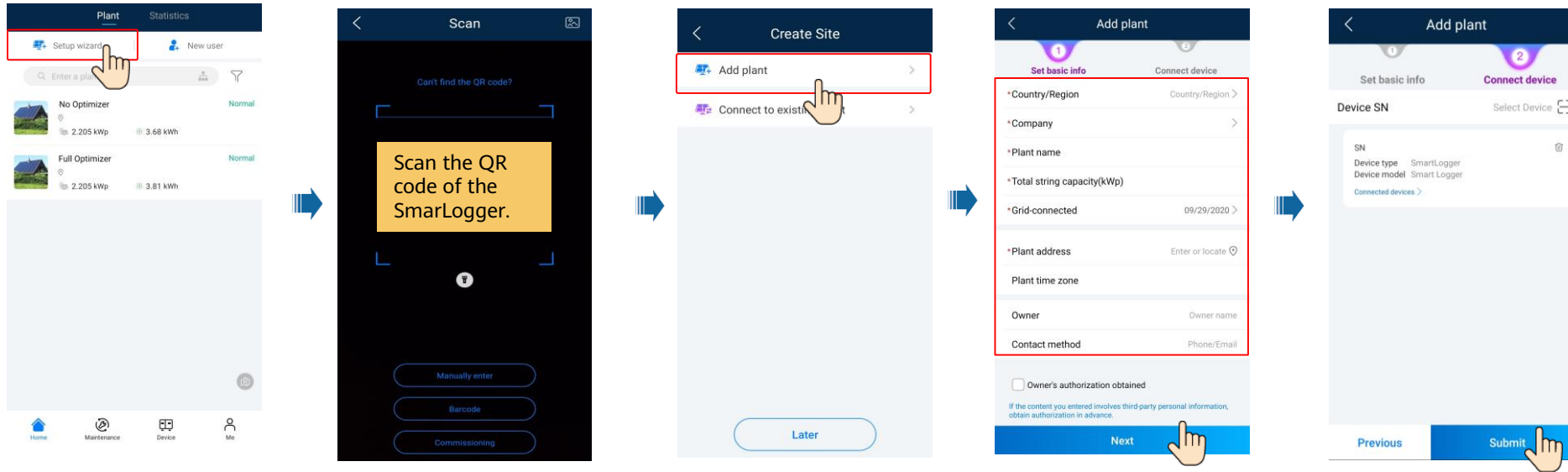


- Set **Server** to **intl.fusionsolar.huawei.com** and **Port number** to **27250**.
- Set **Address mode** to **Logical address**. If the communication address of the device connected to the SmartLogger is unique, you are advised to set **Address mode** to **Comm. address**. In other cases, you must select **Logical address**.
- Enable **TSL encryption** and **Second challenge authentication**.
- If the status of **Management system** is **Connected**, the SmartLogger is properly connected to the SmartPVMS.

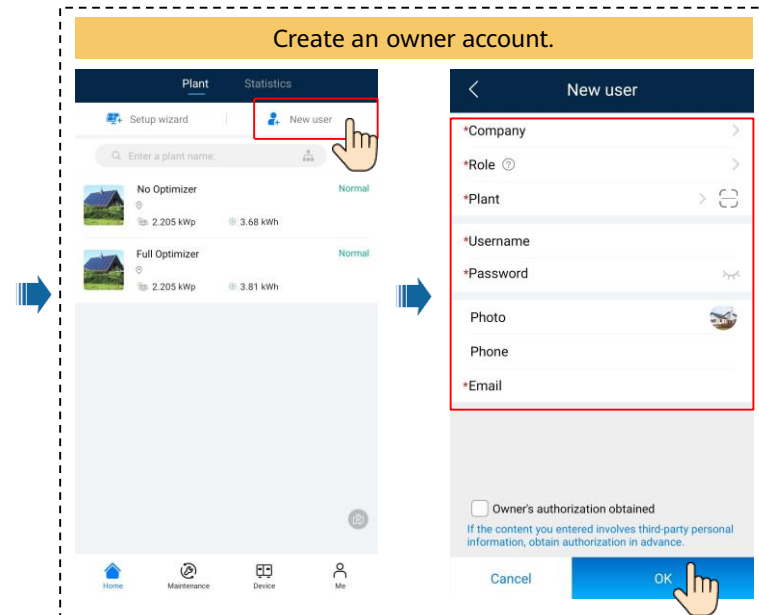


After the configuration is complete, return to add a plant.

## Add a plant.

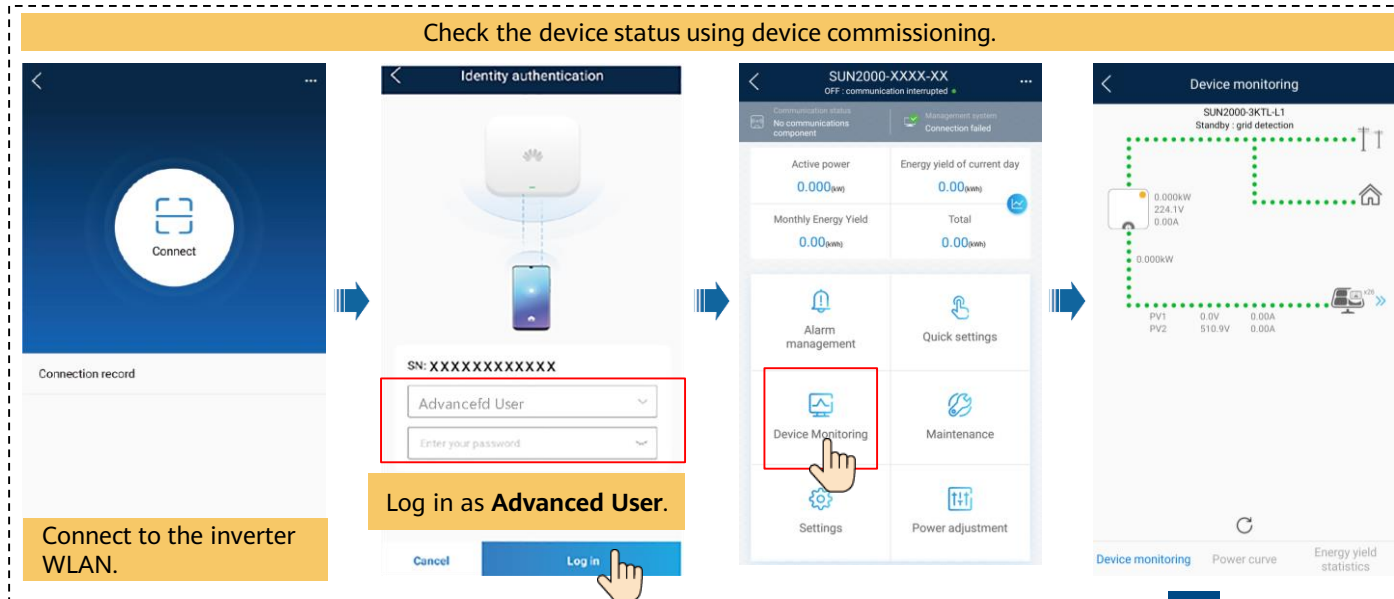
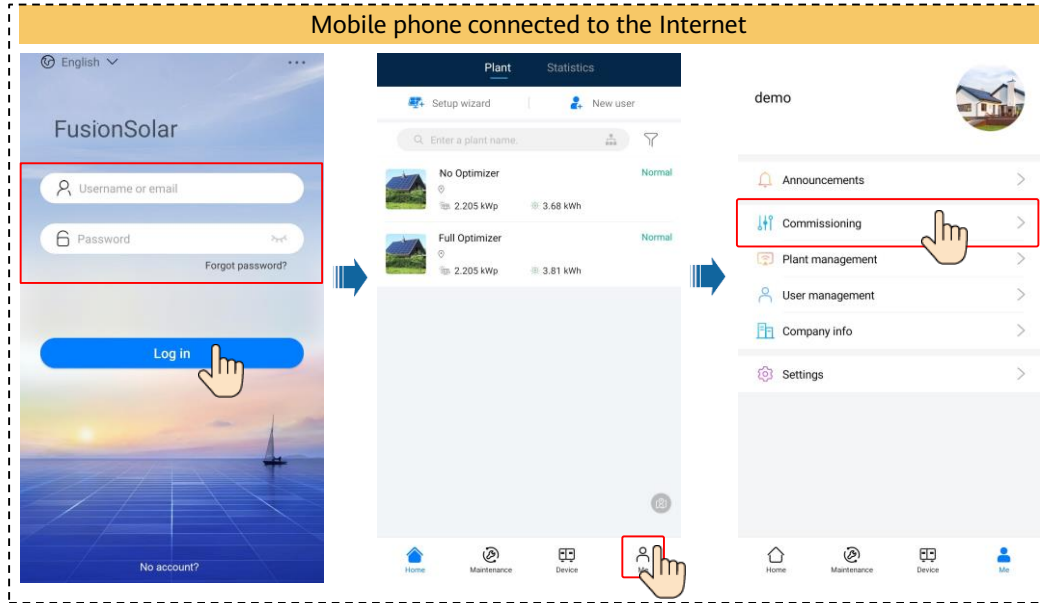


## Create an owner account.

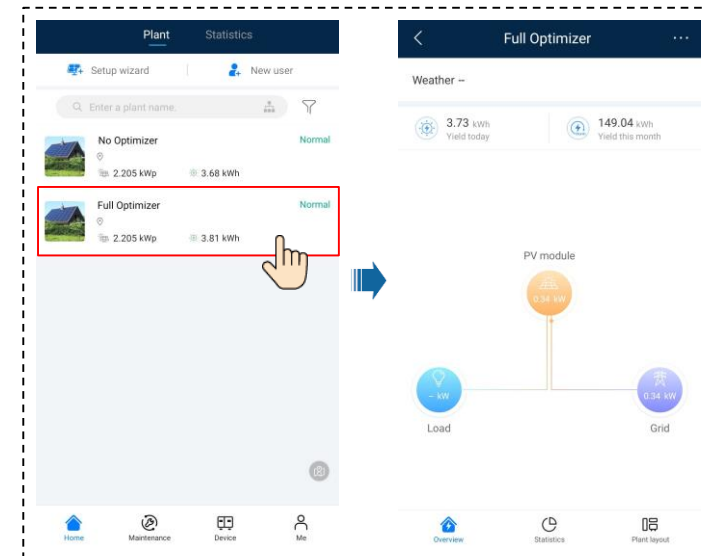


## 4. Checking the Device Status

### • Checking the Device Status Using Device Commissioning



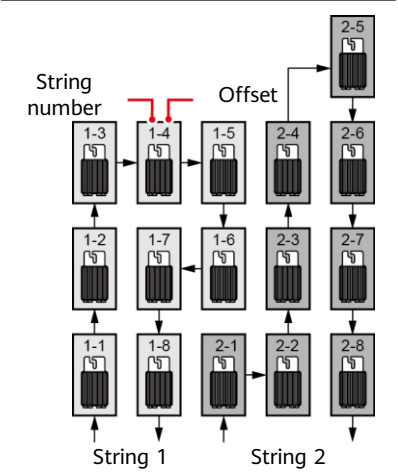
### • Checking the Device Status Remotely.



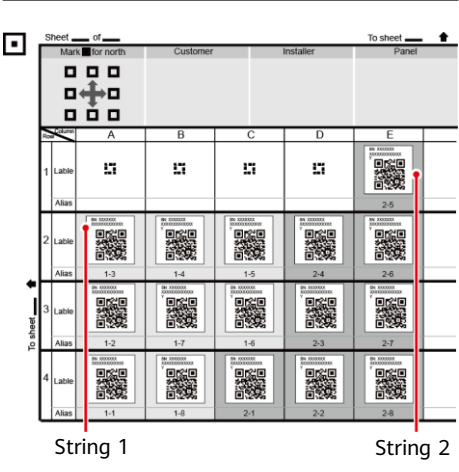
# FAQ 1. Physical Layout Design of PV Modules Using Device Commissioning (Optional, for Scenarios with Optimizers)

Step 1. Check that the SN labels of the Smart PV Optimizers have been attached to the Huawei physical layout template.

### Installation positions of PV modules and optimizers



### Huawei Physical Layout Template

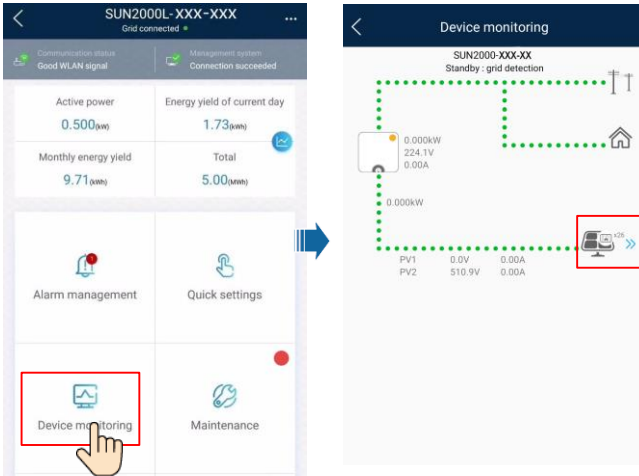


### Template shooting

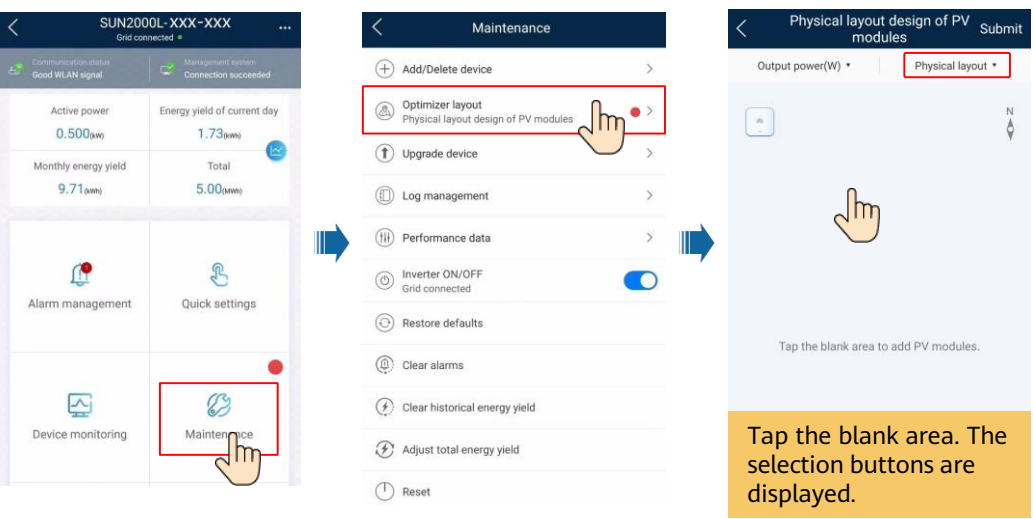


Step 2. Check that the Smart PV Optimizers are successfully searched.

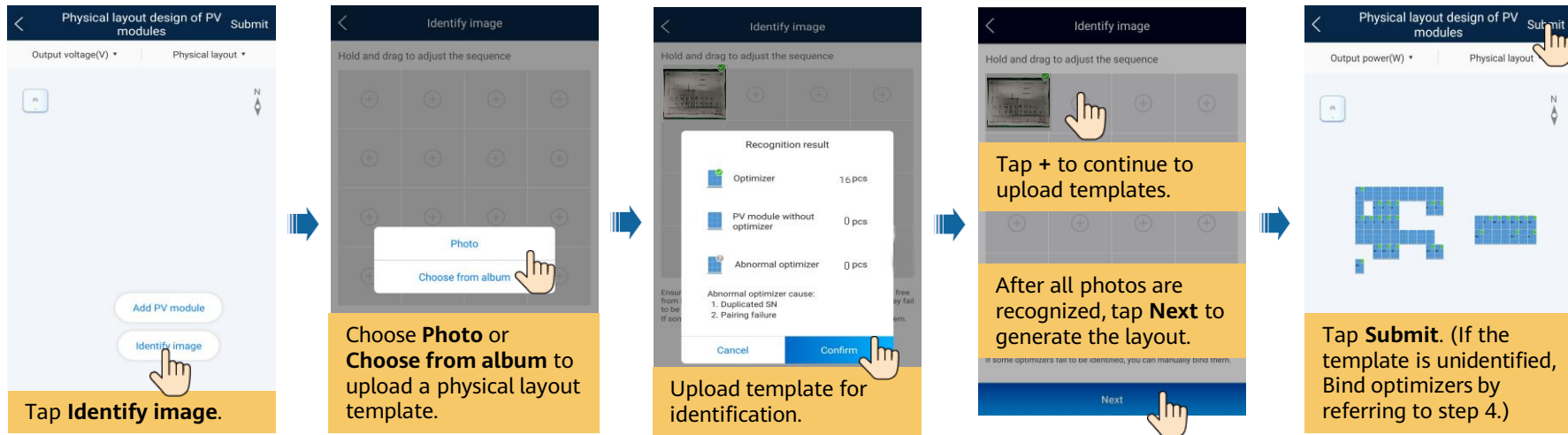
1. Open the **FusionSolar** app, log in to intl.fusionsolar.huawei.com using the installer account, choose **My > Device commissioning**, and connect to the WLAN hotspot of the solar inverter.
2. Select **installer** and enter the login password.



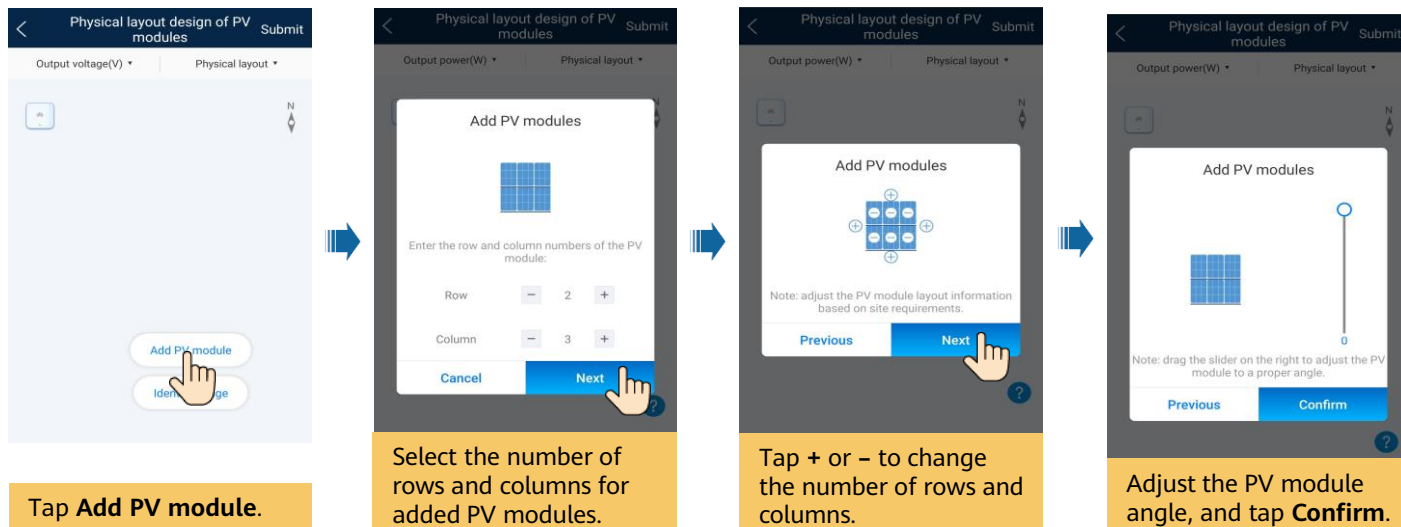
Step 3. Set optimizer physical layout



method 1: Tap **Identify image** for automatic layout.



method 2: Tap **Add PV modules** for manual layout.



# FAQ 1. Physical Layout Design of PV Modules Using Device Commissioning (Optional, for Scenarios with Optimizers)

### Step 4. Bind Smart PV Optimizers

Physical layout design of PV modules

Output power(W) Physical layout

Select a PV module to be bound to the optimizer.

Physical layout design of PV modules

Output power(W) Physical layout

SN: xxxxxxxxxxxx  
Device name: 4617

Select the corresponding optimizer.

Physical layout design of PV modules

Output power(W) Physical layout

Bind

After the layout is complete, tap Submit.

### Step 5. Check the Smart PV Optimizer status.

SUN2000-XXXX-XX

Communication status: No communications component

Management status: Connection failed

Active power: 0.00kW

Energy yield of current day: 0.00kWh

Monthly Energy Yield: 0.00kWh

Total: 0.00kWh

Alarm management Quick settings

Device Monitoring Maintenance

Tap a corresponding PV string and check the optimizer status.

Device monitoring

SUN2000-XXX-XX

Standby: grid detection

0.000kW 224.1V 0.00A

0.000kW

PV1 PV2 0.0V 510.9V 0.00A 0.00A

Tap a corresponding PV string and check the optimizer status.

Physical layout design of PV modules

Output power(W) Logical layout

Output power(W)

Input voltage(V)

Output voltage(V)

Input current(A)

Module temperature(°C)

Total(kWh)

Tap a corresponding PV string and check the optimizer status.

Physical layout design of PV modules

Output power(W) Physical layout

Optimizer: XXXX

|                |            |
|----------------|------------|
| Running status | Operating  |
| Output power   | 98W        |
| Input voltage  | 28.4V      |
| Output voltage | 20.7V      |
| Input current  | 3.53A      |
| Output current | 4.74A      |
| Total          | 98.06kWh   |
| SN             | xxxxxxxxxx |

Unbind the optimizer.

### Step 6. Detect optimizer disconnection.

Maintenance

- Add/Delete device
- Physical layout design of PV modules
- Upgrade device
- Log management
- Performance data
- Optimizer disconnection detection
- AFCl self-check
- Inverter ON/OFF
- Restore defaults
- Clear alarms
- Clear historical energy yield

Optimizer disconnection detection

Optimizing...

Rectify the fault based on the detection result.

Optimizer disconnection detection

If the fault is rectified, perform diagnosis again to confirm.

Optimizer disconnection detection

Optimizing...

Rectify the fault based on the detection result.

Optimizer disconnection detection

If the fault is rectified, perform diagnosis again to confirm.

Optimizer disconnection detection

Optimizing...

Rectify the fault based on the detection result.

Optimizer disconnection detection

If the fault is rectified, perform diagnosis again to confirm.

Optimizer disconnection detection

Optimizing...

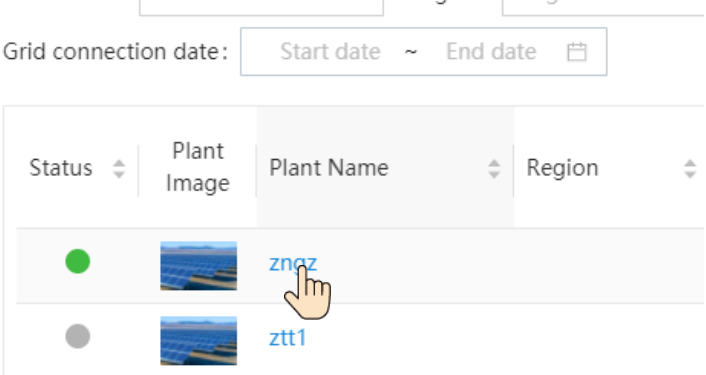
Rectify the fault based on the detection result.

17

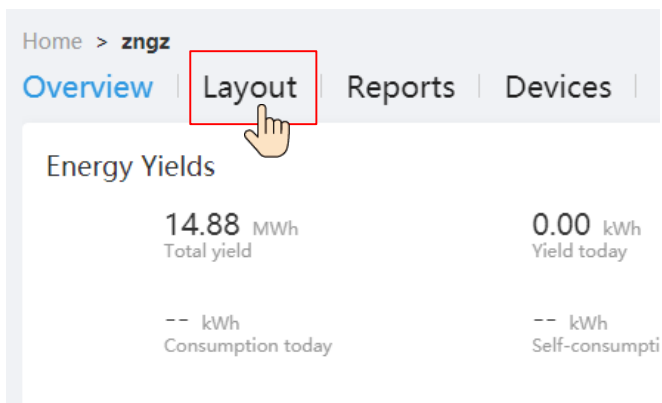
# FAQ 2. Physical Layout Design of PV Modules on the FusionSolar WebUI (Optional, for Scenarios with Optimizers)

Log in to the SmartPVMS WebUI as an intaller user at <https://intl.fusionsolar.huawei.com>.

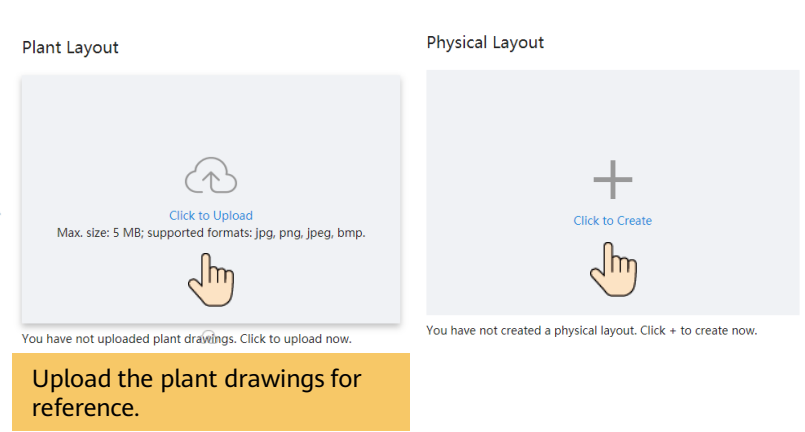
1. On the **Homepage**, click a PV plant to enter the **Single Power Plant** page.



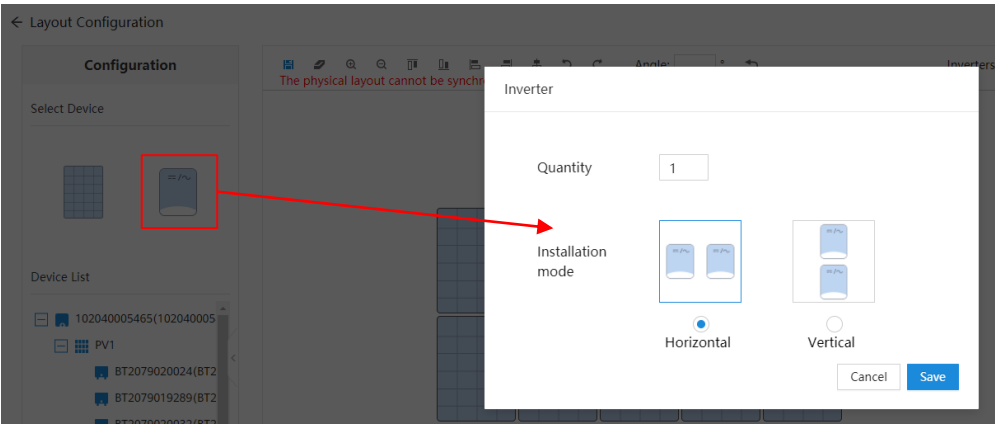
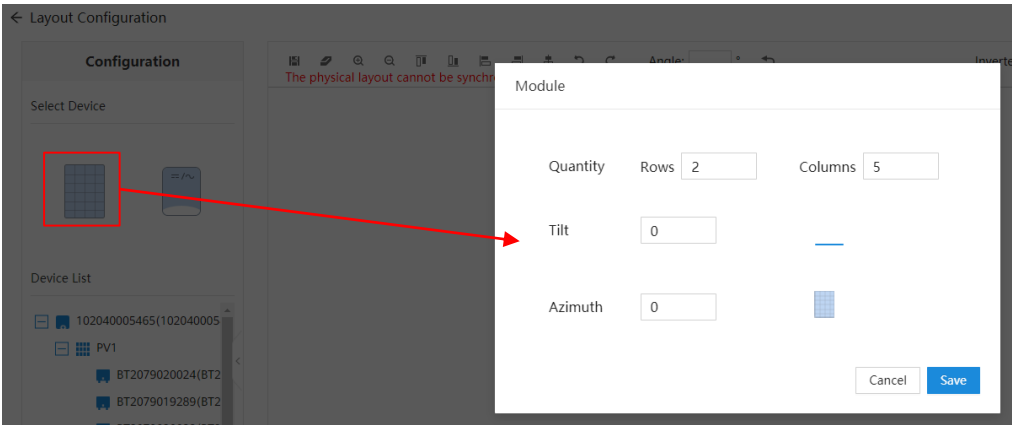
2. Click **Layout**.



3. Upload a plant drawing and click **Physical Layout**.

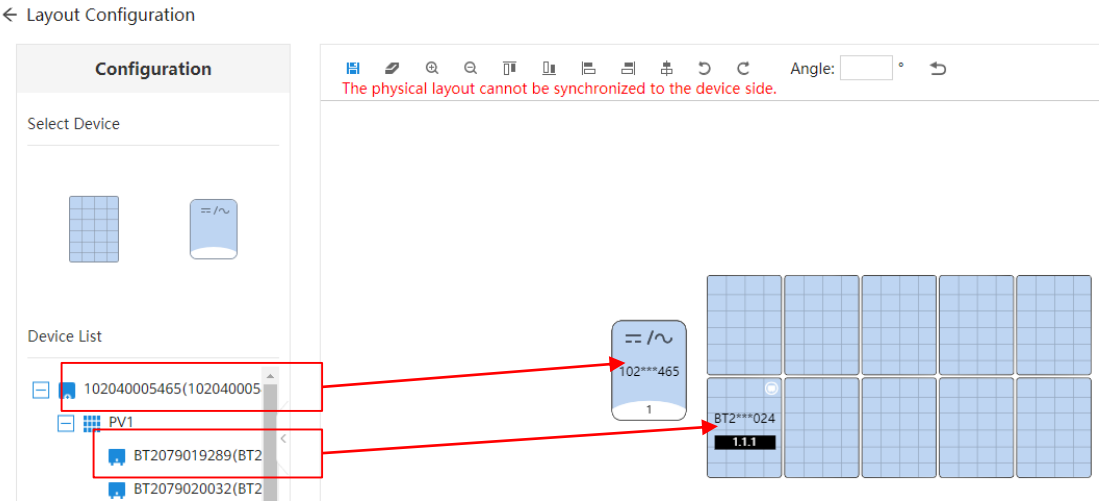


4. Drag the PV module to the physical layout area, increase the number of widgets, and adjust the angle based on the site requirements.



# FAQ 2. Physical Layout Design of PV Modules on the FusionSolar WebUI (Optional, for Scenarios with Optimizers)

5. Select a device in the device list, and drag it to the corresponding icon position to bind the device to the icon.



6. Click  on the toolbar to save the settings.

