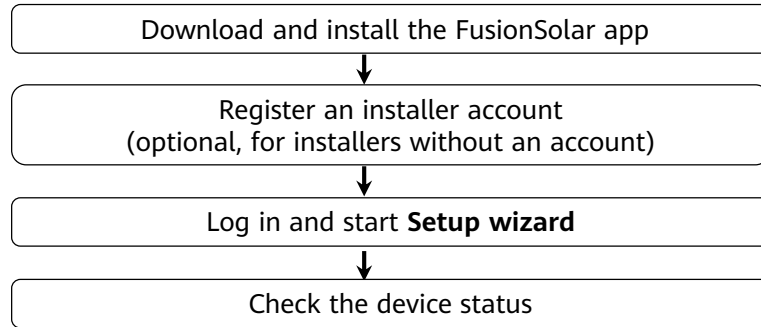


FusionSolar App Quick Settings Operation Procedure



FAQ

- Physical Layout Design of FusionSolar APP
(Connected to the SmartPVMS)
- Physical Layout Design of FusionSolar APP
(The SmartPVMS is not connected)
- Physical layout design of PV modules on the SmartPVMS

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 initial password for connecting to the Smart USB-WLAN adapter is **Changeme**.
- The initial password for the **installer** account is **00000a**. If the system prompts you to change password, set a new password and then log in to the system.
- Some device do not support the initial password. You need to set the initial password upon the first connection. Set the password before log in to the system.
- 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.

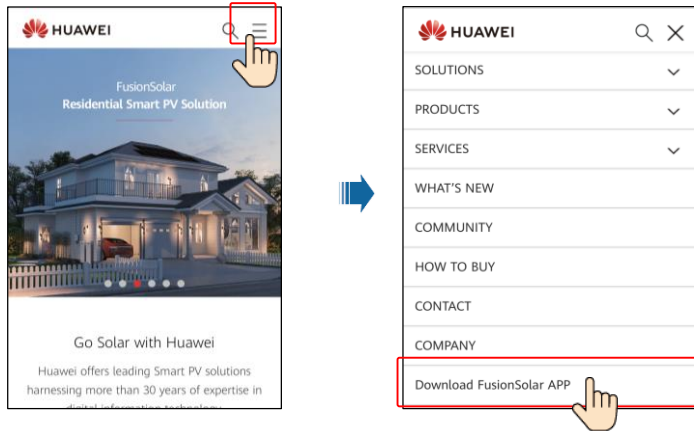
1. Downloading and Installing the FusionSolar App

Method 1: Download and install the app from the app store.

- Huawei phone users: Search for *FusionSolar* in Huawei AppGallery.
- iPhone users: Search for *FusionSolar* in the App Store.
- Other mobile phone users: Select method 2 or 3.



Method 2: Visit <https://solar.huawei.com> using a browser on your mobile phone to download and install the app.

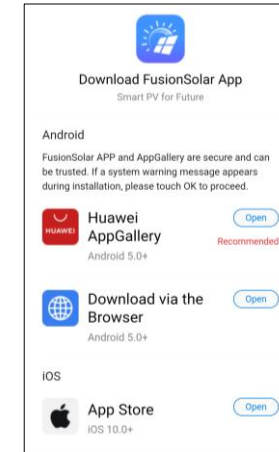


Method 3: Scan the QR code to download and install the app.



Users who select method 2 or 3 can select the download method based on the mobile phone type.

- Huawei mobile phone users: Download from Huawei AppGallery.
- Non-Huawei phone users: Download on a browser.
- iPhone users: Download from the App Store.

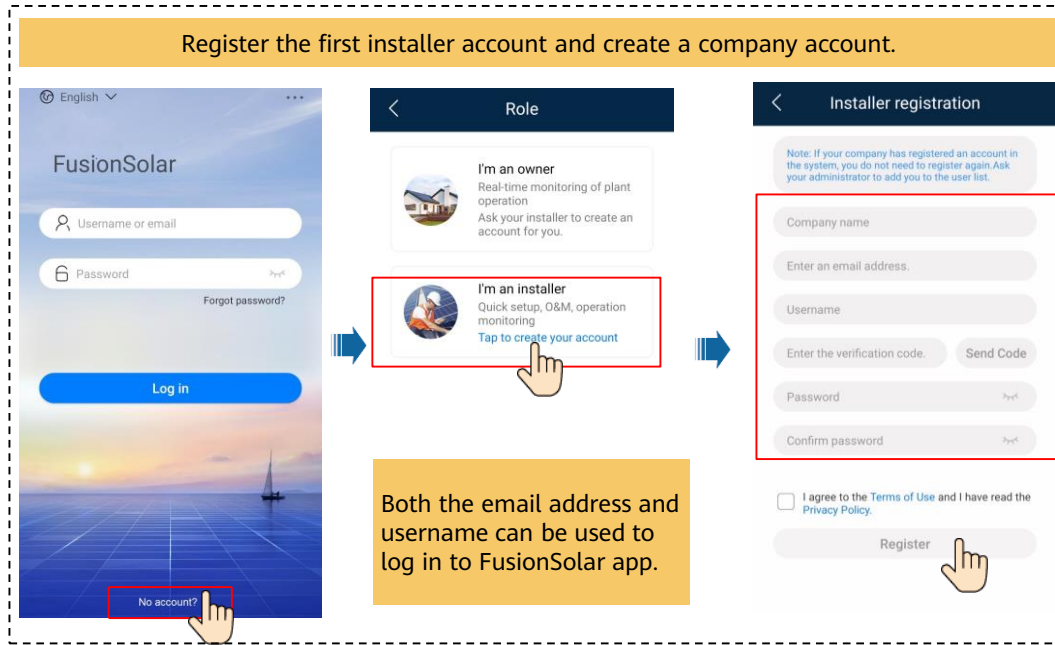


Note:

When you select **Download via the Browser**, if a security warning message is displayed indicating that the app is from an external source, tap **ALLOW**.

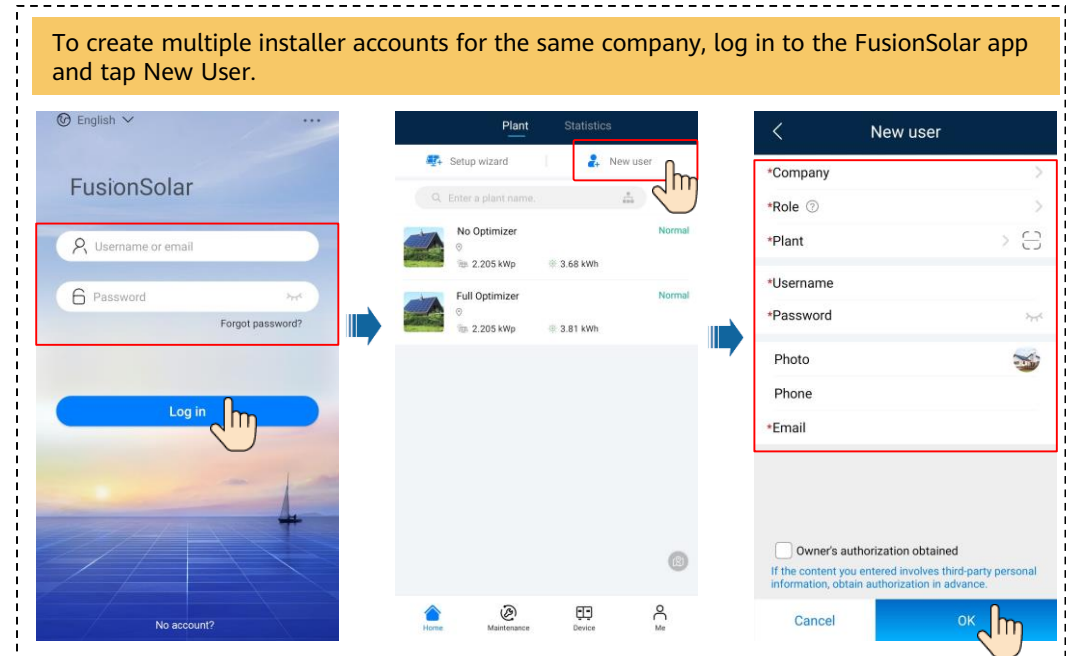
2. Register an Installer Account (Optional, for Installers Without an Account)

Register the first installer account and create a company account.



Both the email address and username can be used to log in to FusionSolar app.

To create multiple installer accounts for the same company, log in to the FusionSolar app and tap New User.



3. Log in and Start Setup Wizard

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

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.

Quick settings

Device Mgmt. Communication networking

Basic parameters Energy storage control Completed

SUN2000-XXX-XX

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

Online Offline

Cascaded inverters 0pcs

S DongleA S DongleA

Power meter

Battery HUAWEI-LUNA2000 20.0kWh Optimizer SUN2000-450W-P (0pcs)

Previous Next

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.

Quick settings

Device magt. Communication networking

Basic parameters Communication networking

The access to the management system must be authorized by the owner.

Monitor the PV plant through the management system.

Dongle

Setting management system parameters

Domain name >

Port 27250

TLS encryption Remote automatic automatic

Setting parameters for the inverter to connect to the router

WLAN LTE-2.4GHz-07DCE8

Password

Previous Next

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 parameters related to the SIM card based on the information obtained from the carrier.

Quick settings

Device magt. Communication networking

Basic parameters Communication networking

The access to the management system must be authorized by the owner.

Monitor the PV plant through the management system.

Dongle

Setting management system parameters

Domain name >

Port 27250

TLS encryption Remote automatic automatic

Dongle parameter settings

APN mode Automatic >

Network mode 4G/3G/2G automatic selection >

Previous Next

Quick settings

Device magt. Communication networking

Basic parameters Communication networking

The access to the management system must be authorized by the owner.

Monitor the PV plant through the management system.

Dongle

Signal strength Strong(-32dBm)

IP address xxx.xxx.xxx.xxx

Subnet mask xxx.xxx.xxx.xxx

Gateway xxx.xxx.xxx.xxx

MAC address c0:a8:a9:01

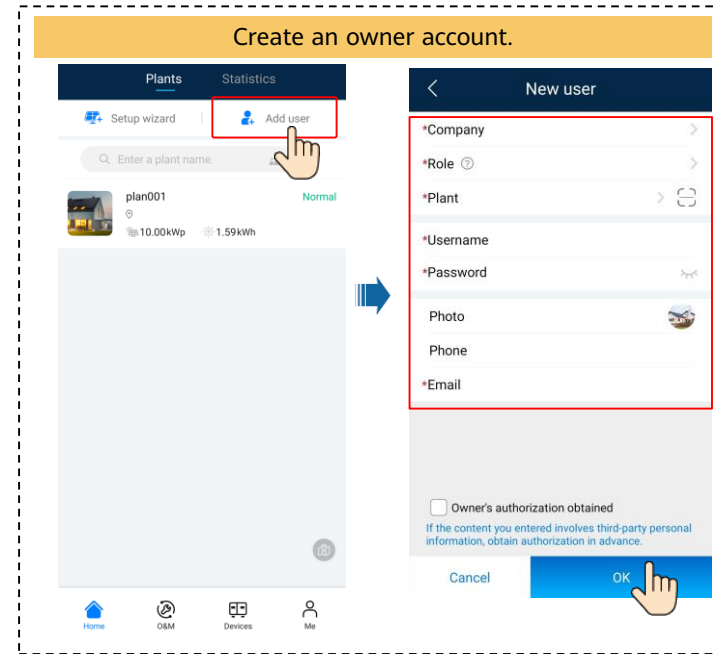
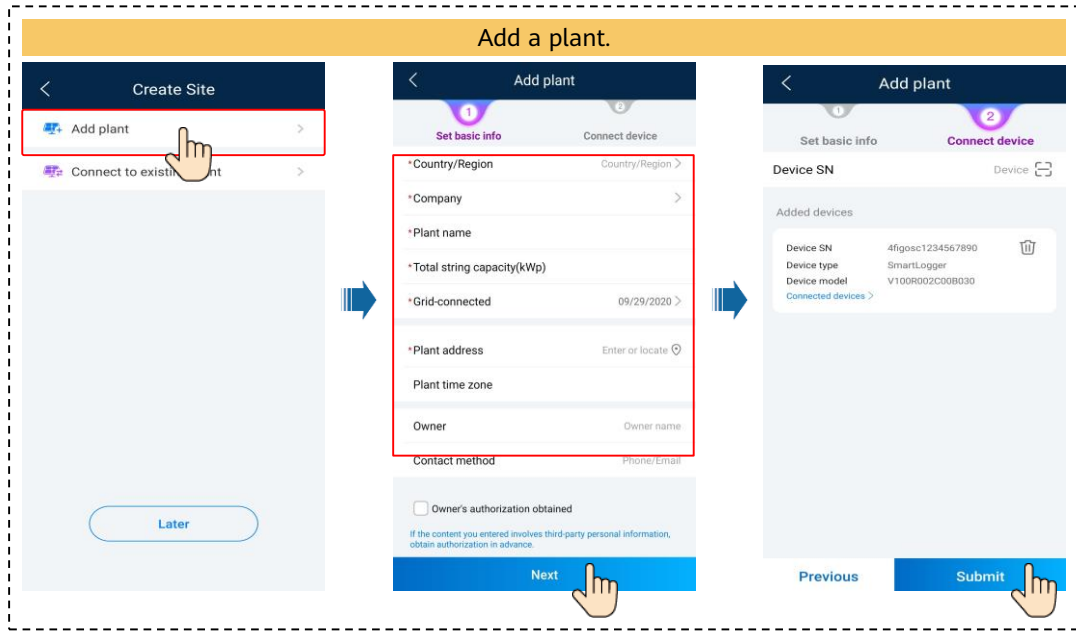
Previous Next

Quick settings are completed. Check the following

- Connect to mgmt sys Success
- Inverter SUN2000-XXXXX 1pcs Grid connected
- Power meter DDSU666-H₁pcs (Single-phase) Online
- Optimizer SUN2000-450W-P 0pcs Searching completed

Previous Finish

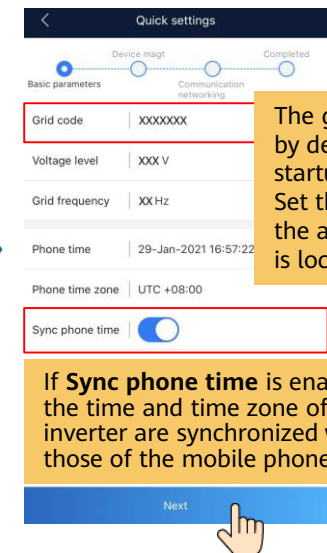
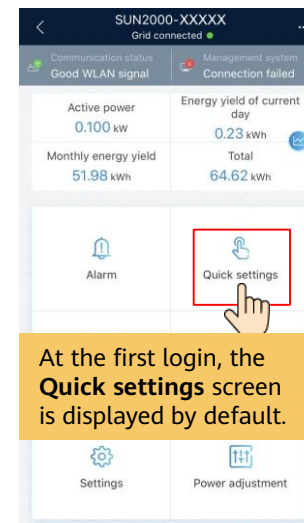
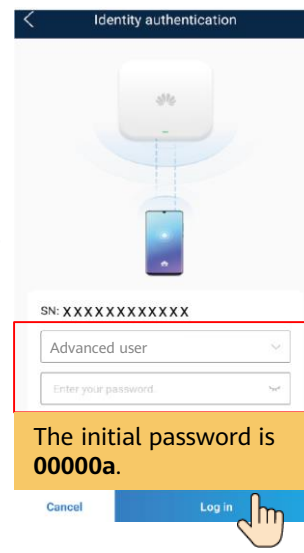
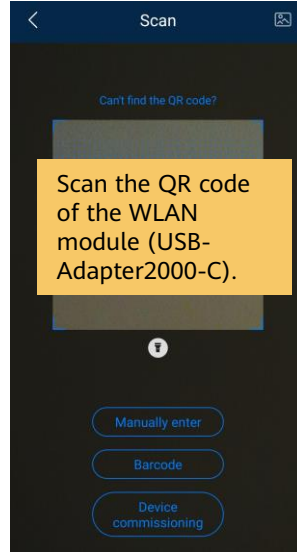
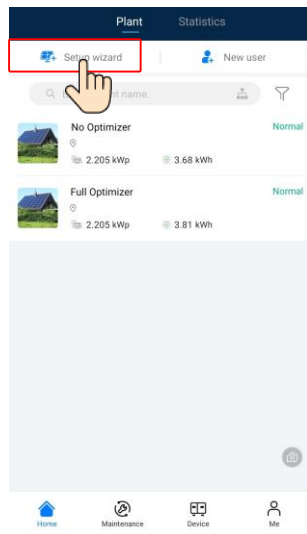
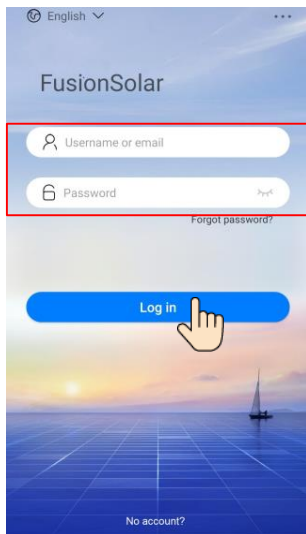
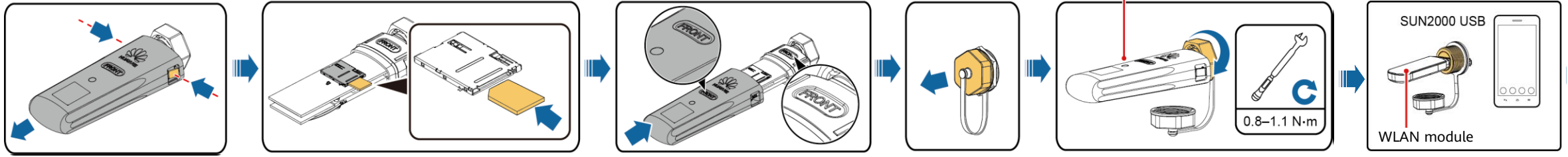
Ensure that the devices are consistent with the actual connected devices.



Local Commissioning Using a Smart USB-WLAN Adapter

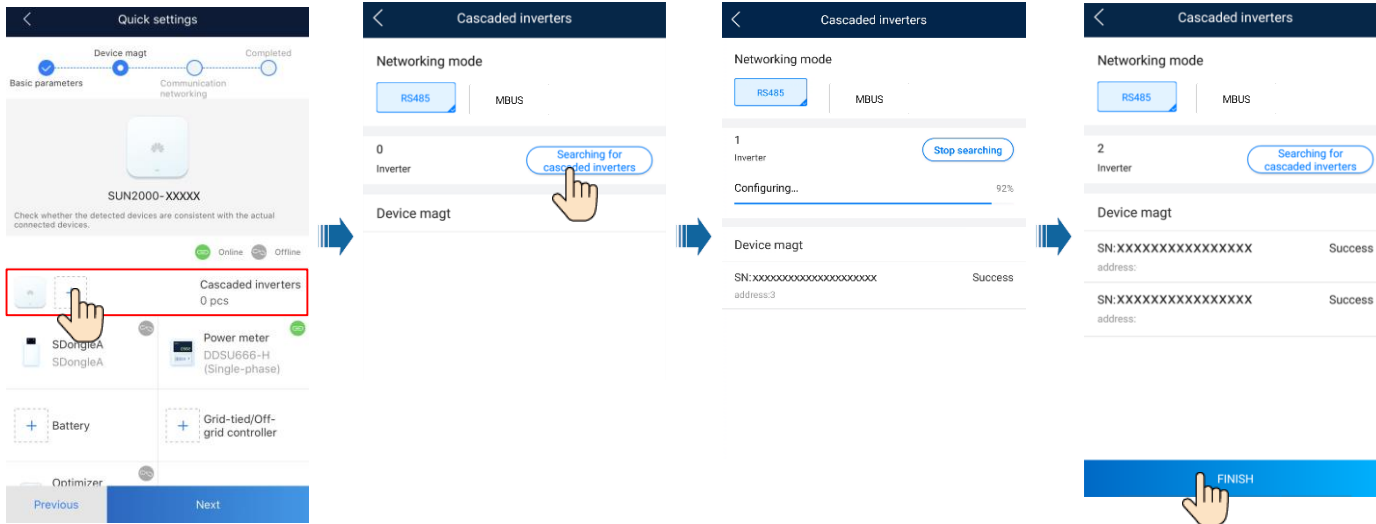
Note:
Before commissioning a commercial inverter, connect the 4G Smart Dongle to identify parameters. If the indicator status is normal, remove the Smart Dongle, and then connect the USB-WLAN adapter to start commissioning.

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.

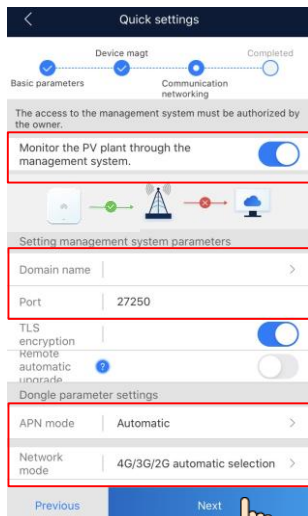


If **Sync phone time** is enabled, the time and time zone of the inverter are synchronized with those of the mobile phone.

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



Set network parameters and domain name.

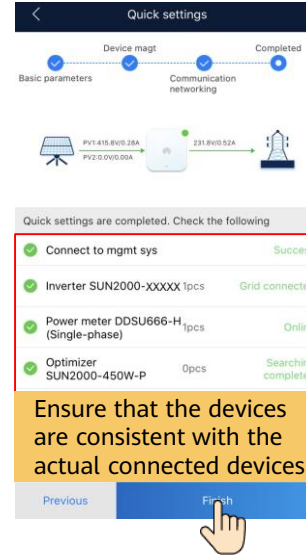


4G communication

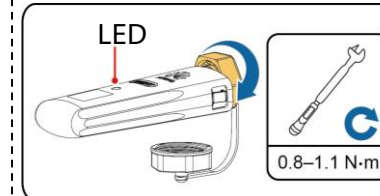
Enabled **Monitor the PV plant through the management system**.

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

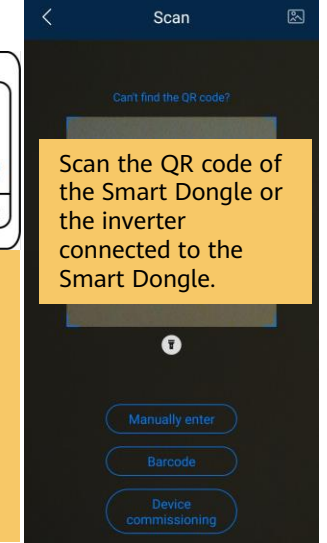
By default, **APN mode** is set to **Automatic**. When this mode cannot be used to access the Internet, set the parameter to **Manual**. In this case, set the parameters related to the SIM card based on the information obtained from the carrier.

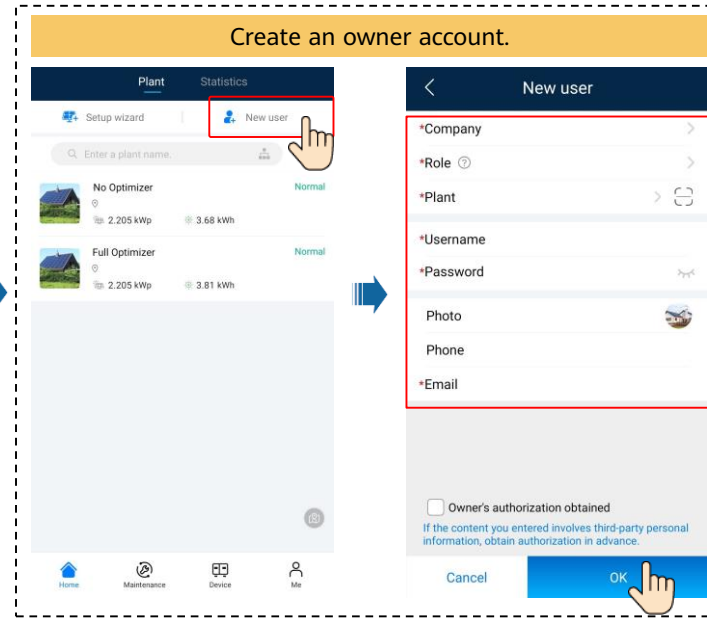
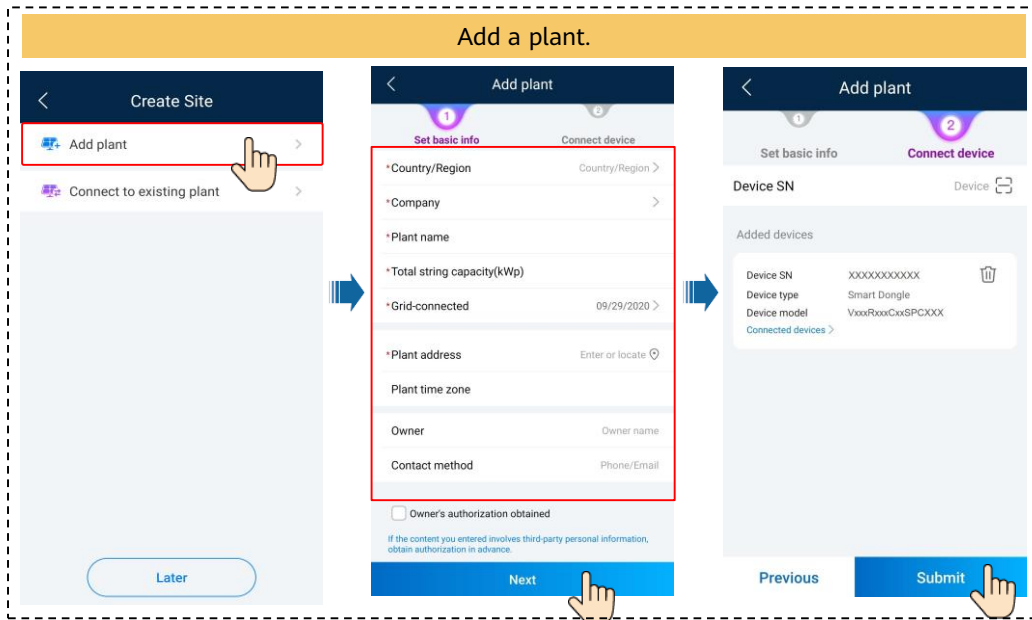


Connect to the management system.



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.



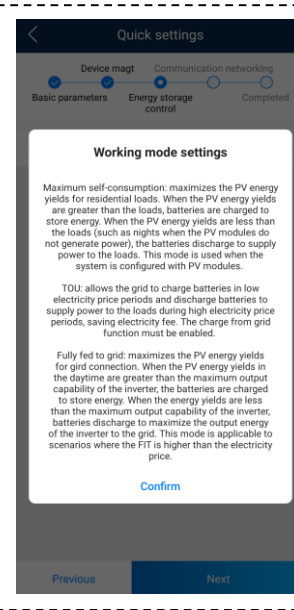
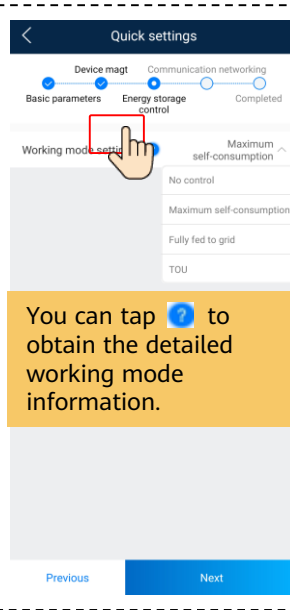
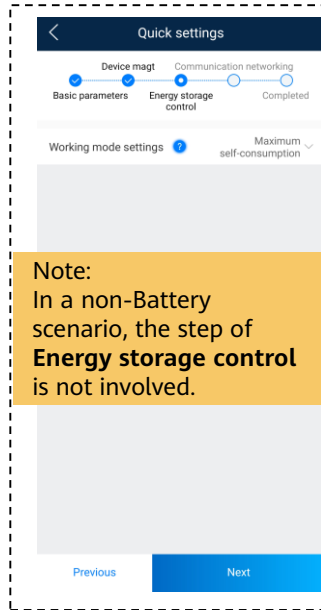
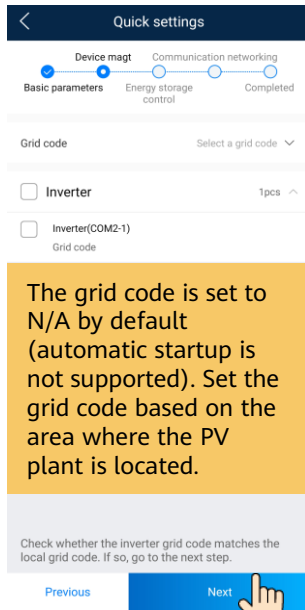
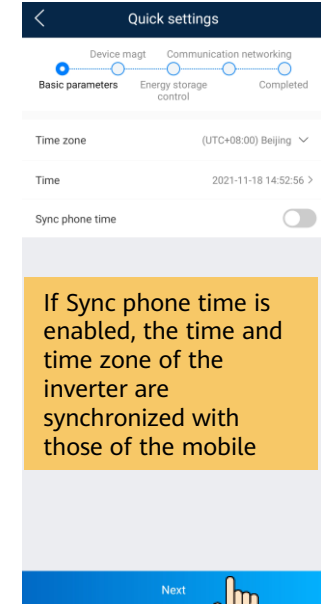
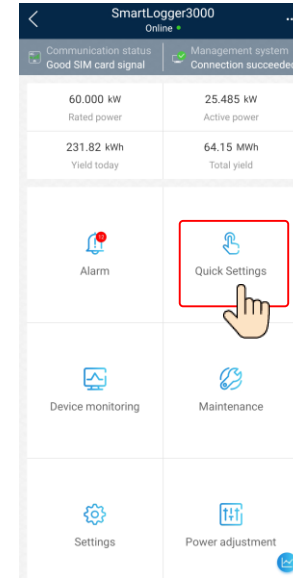
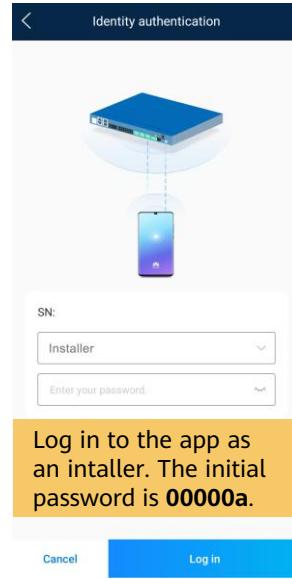
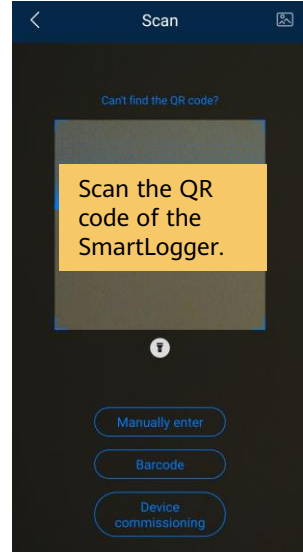
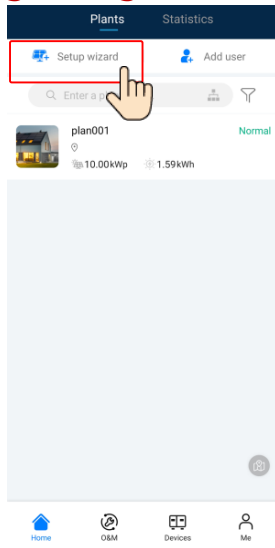
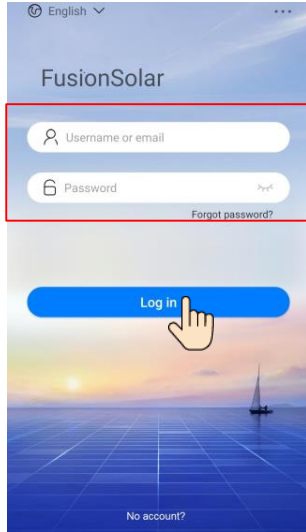


Indicators on the Smart Dongle

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"> Remove and insert the Dongle. Check whether inverters match the Dongle. Connect the Dongle to other inverters. Check whether the Dongle or the USB port of the inverter is faulty.
	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



Quick settings

Device magt Communication networking

Basic parameters Energy storage control Completed

Network settings

Monitor the PV plant through the management system.

Management system parameters

Domain name intl.fusionsolar.huawei.com >

Port 2725

Enabled Monitor the PV plant through the management system. Set the Domain name to intl.fusionsolar.huawei.com and Port number to 27250.

Quick settings

Device magt Communication networking

Basic parameters Energy storage control Completed

When the SmartLogger connects to the SmartPVMS over the wireless network, set Mobile network parameters and Network mode.

Network settings

Monitor the PV plant through the management system.

Wired network parameters

Automatically obtain IP address

*IP address xx.xx.xx.xx

*Subnet mask 255.255.255.0

*Gateway xx.xx.xx.xx

Primary DNS server xx.xx.xx.xx

Secondary DNS server 0.0.0.0

Mobile network parameters

Network mode 4G/3G/2G automatic selection

APN mode Automatic

If there is no available network, tap Skip and connect to the management system later.

Previous Next

Quick settings

Device magt Communication networking

Basic parameters Energy storage control Completed

Network settings

Monitor the PV plant through the management system.

Signal strength Strong(5dBm)

Previous Next

Quick settings

Device magt Communication networking

Basic parameters Energy storage control Completed

Successfully connected to the management system

Device list

SUN2000	1pcs
Inverter(COM2-1) SN:BT2110073553	Online
Other Devices	16pcs

Previous Finish

Add a plant.

Create Site

Add plant >

Connect to existing >

Add plant

1 Set basic info Connect device

*Country/Region Country/Region >

*Company >

*Plant name

*Total string capacity(kWp)

*Grid-connected 09/29/2020 >

*Plant address Enter or locate

Plant time zone

Owner Owner name

Contact method Phone/Email

Owner's authorization obtained

If the content you entered involves third-party personal information, obtain authorization in advance.

Later

Next

Add plant

2 Set basic info Connect device

Device SN Select Device

SN

Device type SmartLogger

Device model Smart Logger

Connected devices >

Previous Submit

Create an owner account.

Plant Statistics

Setup wizard New user

Enter a plant name

No Optimizer 2.205 kWp 3.68 kWh Normal

Full Optimizer 2.205 kWp 3.81 kWh Normal

New user

*Company >

*Role

*Plant >

*Username

*Password

Photo

Phone

*Email

Owner's authorization obtained

If the content you entered involves third-party personal information, obtain authorization in advance.

Cancel OK

4. Checking the Device Status

• Checking the Device Status Using Device Commissioning

Mobile phone connected to the Internet

English

FusionSolar

Username or email

Password

Forgot password?

Log in

No account?

Plants Statistics

demo

plan001

Normal

10.00 kWp

1.59 kWh

Commissioning

Plant management

User management

Company info

Settings

Home O&M Devices Me

Mobile phone not connected to the Internet

English

FusionSolar

Username or email

Password

Forgot password?

Quick Guide

User manual

Commissioning video

Replace certificate

Login setting

Commissioning

CANCEL

Note: If the mobile phone connected to the Internet, tap the screen does not display **Device commissioning**.

User manual

Commissioning video

Replace certificate

Login setting

CANCEL

Check the device status using device commissioning.

Connect

Connect to the inverter WLAN.

Identity authentication

Log in to the app as an installer.

SN:XXXXXXXXXXXX

installer

Enter your password.

Log in

SUN2000-XXXX-XX

OFF: communication interrupted

Active power 0.00 kW

Energy yield of current day 0.00 kWh

Monthly Energy Yield 0.00 kWh

Total 0.00 kWh

Alarm management

Quick settings

Device Monitoring

Maintenance

Settings

Power adjustment

SUN2000-3KTL-L1

Standby: grid detection

0.00 kW

224.1V

0.00A

0.00 kW

PV1 0.0V

PV2 510.9V

0.00A

0.00A

Device monitoring

Power curve

Energy yield statistics

• Checking the Device Status Remotely.

Plants Statistics

plan001

Normal

24°C Sunny 15°C - 24°C

7.53 MWh Yield today

14.07 kW Revenue today

119.70 MWh Yield this month

249.34 MWh Yield this year

249.34 MWh Total yield

Normal

PV

288.260 kW

287.250 kW

Load

Grid

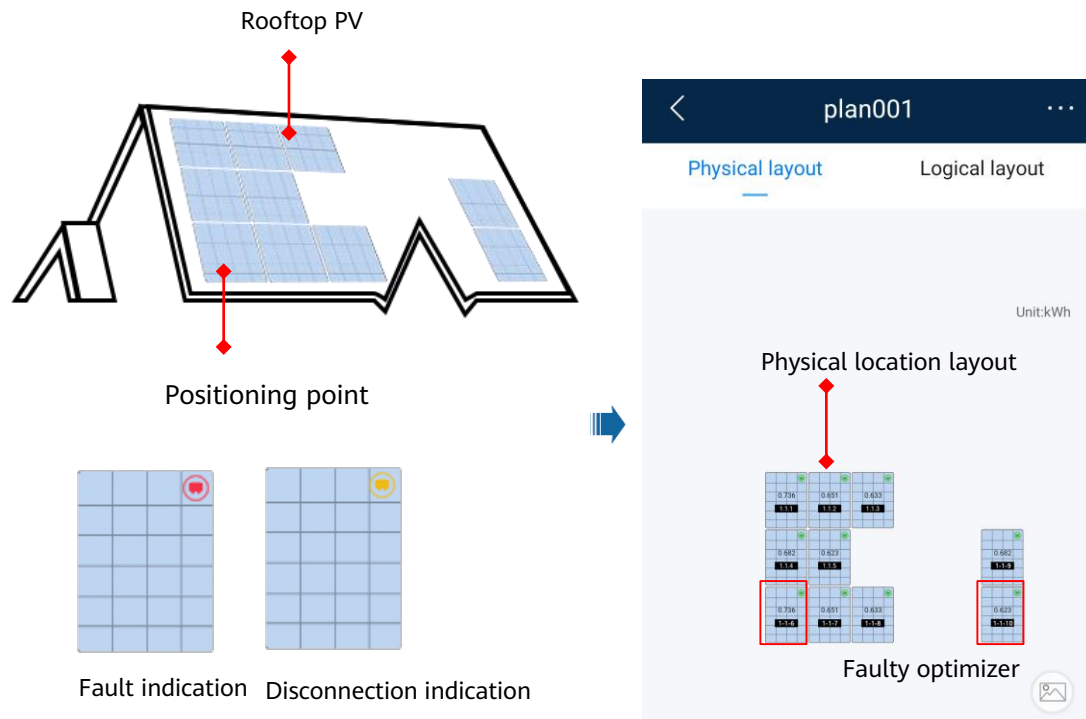
1.010 kW

Home O&M Devices Me

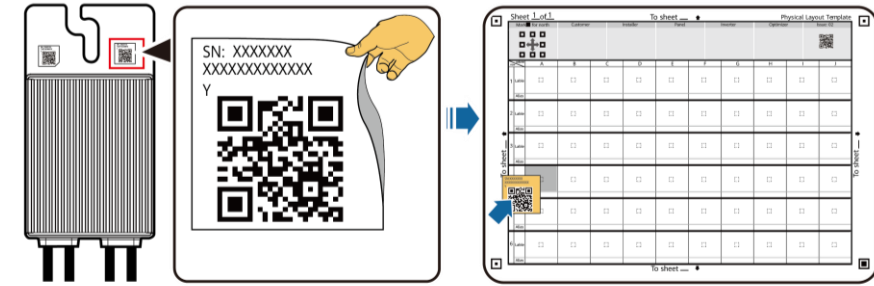
Overview Statistics Plant Layout Devices

FAQ. Physical Layout Design (With Optimizers)

1. The physical layout must be configured for optimizers. When an optimizer is faulty, it can be quickly located and replaced based on the physical layout.
2. The optimizer disconnection detection is available only after the physical layout is complete. Perform optimizer disconnection detection and view the result on the **Optimizer layout** screen.

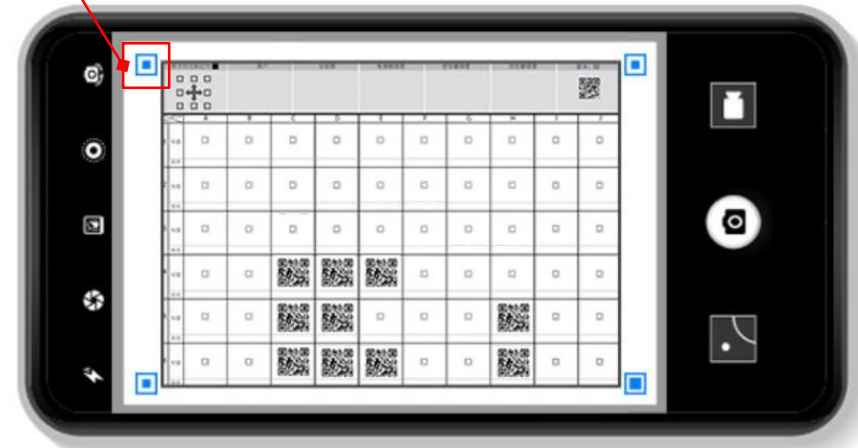


Step 1 After determining the installation position of an optimizer, remove the SN label from the optimizer and attach it to the physical layout template.



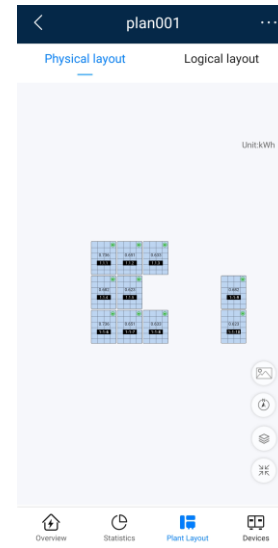
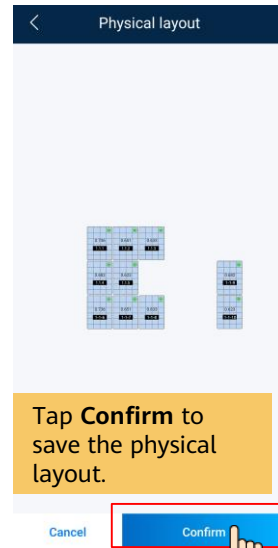
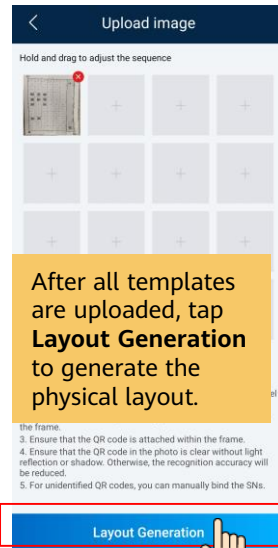
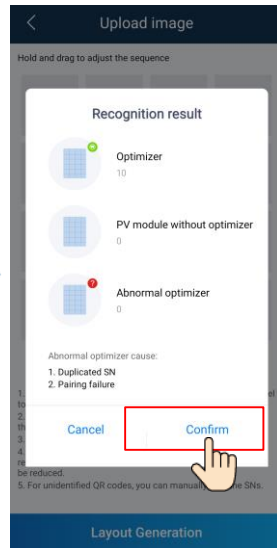
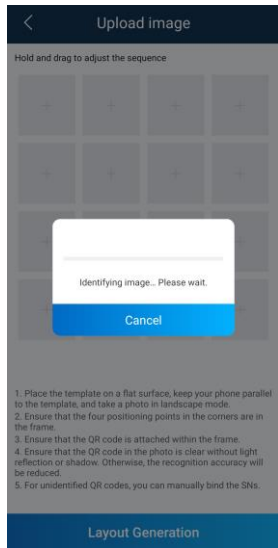
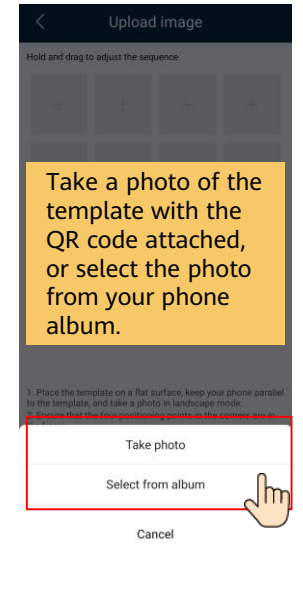
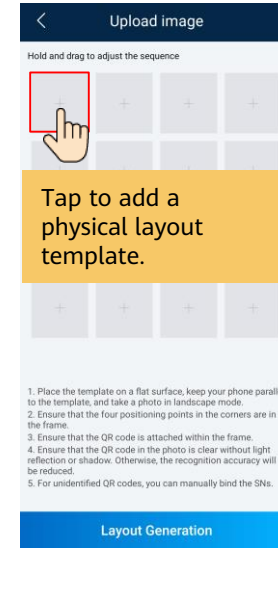
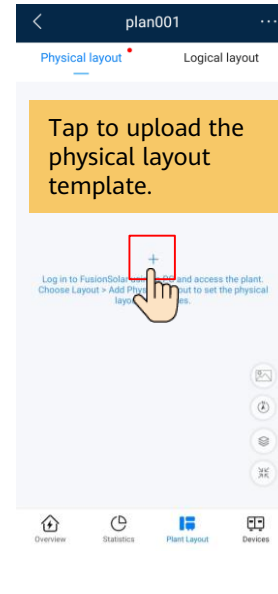
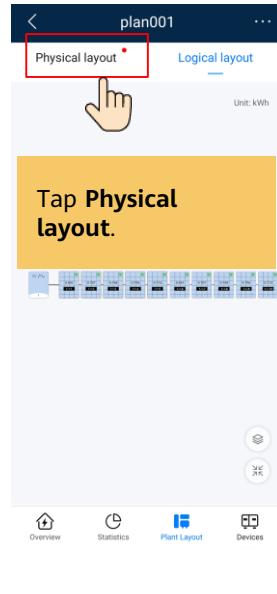
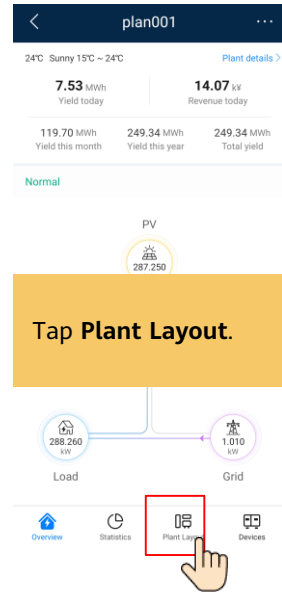
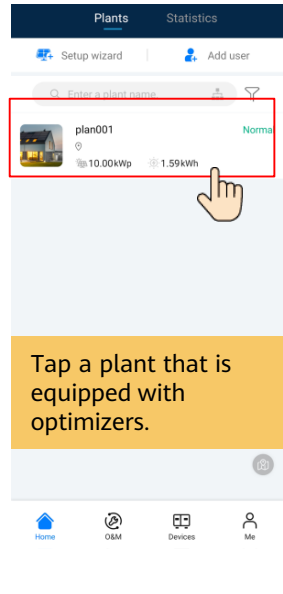
Step 2 Take a photo of the template with the QR code attached.

Positioning point for photographing



Note: Ensure that the four positioning points on the template are within the frame.

FAQ 1. Physical Layout Design on the FusionSolar App (Connected to the SmartPVMS)

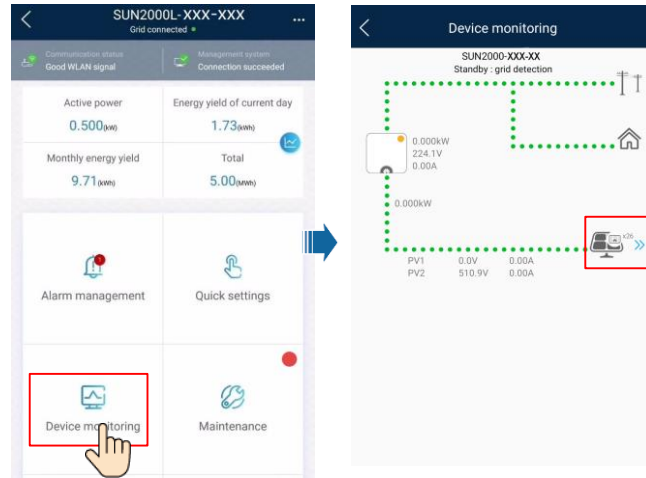


Note:
For some unidentified QR codes, log in to the FusionSolar WebUI to manually bind them. For details, see section "FAQ 3" of this document.

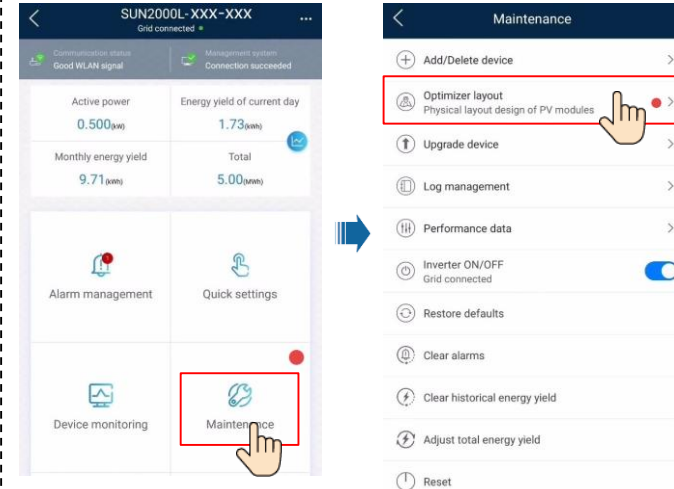
FAQ 2. Physical Layout Design of SUN2000 APP (The SmartPVMS is not connected)

Step 1. 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.

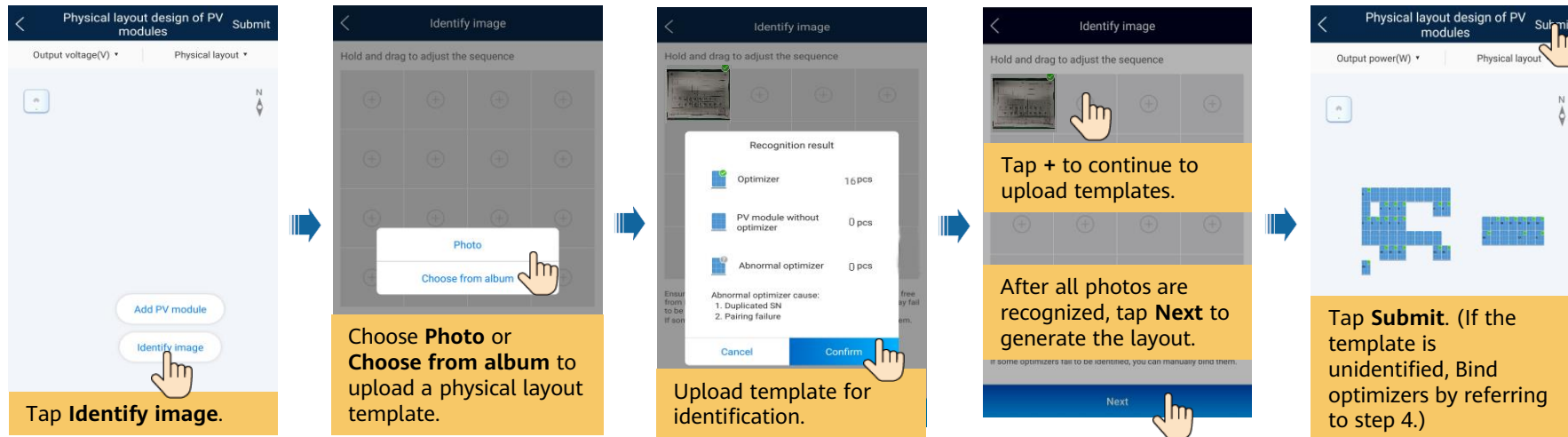


Step 2. Set optimizer physical layout



Tap the blank area. The selection buttons are displayed.

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



FAQ 2. Physical Layout Design of SUN2000 APP (The SmartPVMS is not connected)

Method 2: Tap Add PV modules for manual layout.

Tap Add PV module.

Select the number of rows and columns for added PV modules.

Tap + or - to change the number of rows and columns.

Adjust the PV module angle, and tap Confirm.

Step 3. Bind Smart PV Optimizers

Select a PV module to be bound to the optimizer.

Select the corresponding optimizer.

After the layout is complete, tap Submit.

Step 4. Check the Smart PV Optimizer status.

Tap a corresponding PV string and check the optimizer status.

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.

FAQ 3. Physical Layout Design of PV Modules on the FusionSolar WebUI

Method 1: Automatic generation

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

Plant name: Region:

Grid connection date:

Status Plant Image Plant Name

Step 2. Click **Layout**.

Overview | **Layout** | Reports | Devices

Energy Yields

576.63 kWh Total yield	0.00 kWh Yield today
0.00 kWh Consumption today	0.00 kWh Self-consumpt

Step 3. Upload the physical layout.

Plant Layout

Click to Upload

Click to Upload

Step 4. Click **Generate Layout** to generate a physical layout diagram.

← Back

Plant Layout

Layout_1.png

Move Drawing

Generate Layout

Click to Upload

Click to Upload

Click to Upload

Step 5. Click **Save** to save the generated physical layout diagram.

Result

BT2***305 1.1.1	BT2***607 1.1.2	BT2***628 1.1.3
BT2***017 1.1.4	BT2***686 1.1.5	
BT2***628 1.1.6	BT2***017 1.1.7	BT2***686 1.1.8
		BT2***305 1.1.9
		BT2***607 1.1.10

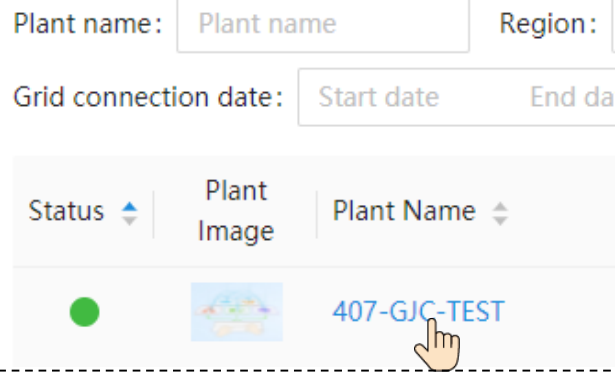
Cancel Save

Note:
For some unidentified QR codes, you can manually bind the SNs.

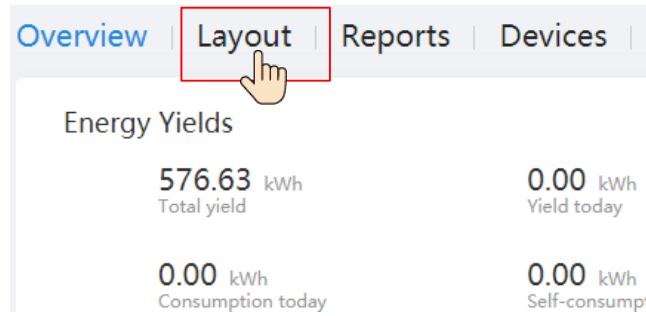
FAQ 3. Physical Layout Design of PV Modules on the FusionSolar WebUI

Method 2: Manual creation

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

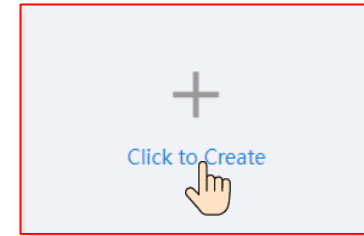


Step 2. Click **Layout**.



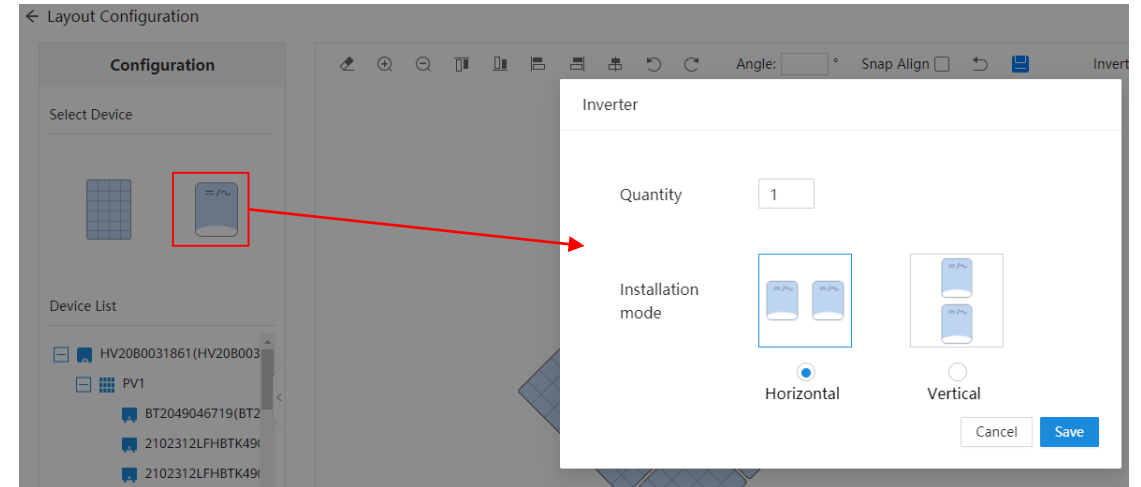
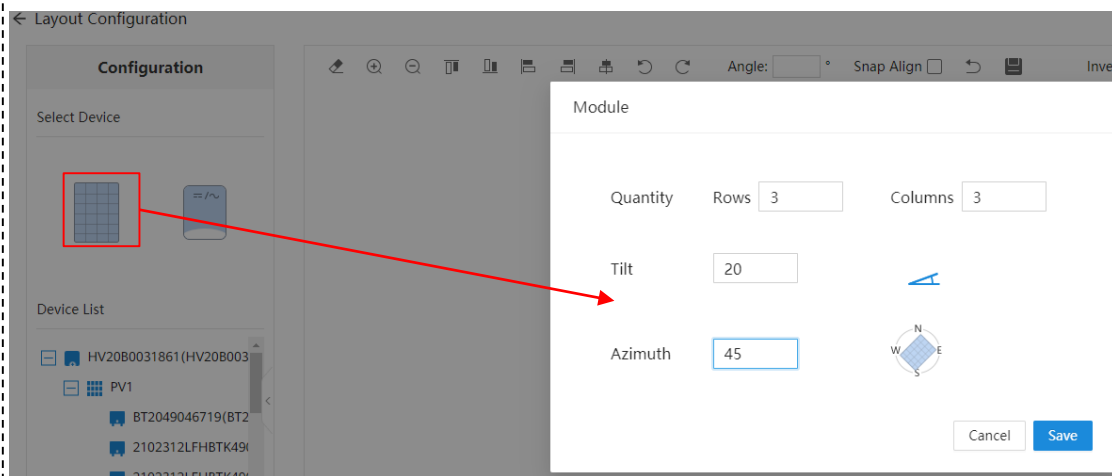
Step 3. Upload the physical layout.

Physical Layout



You have not created a physical layout. Click + to create now.

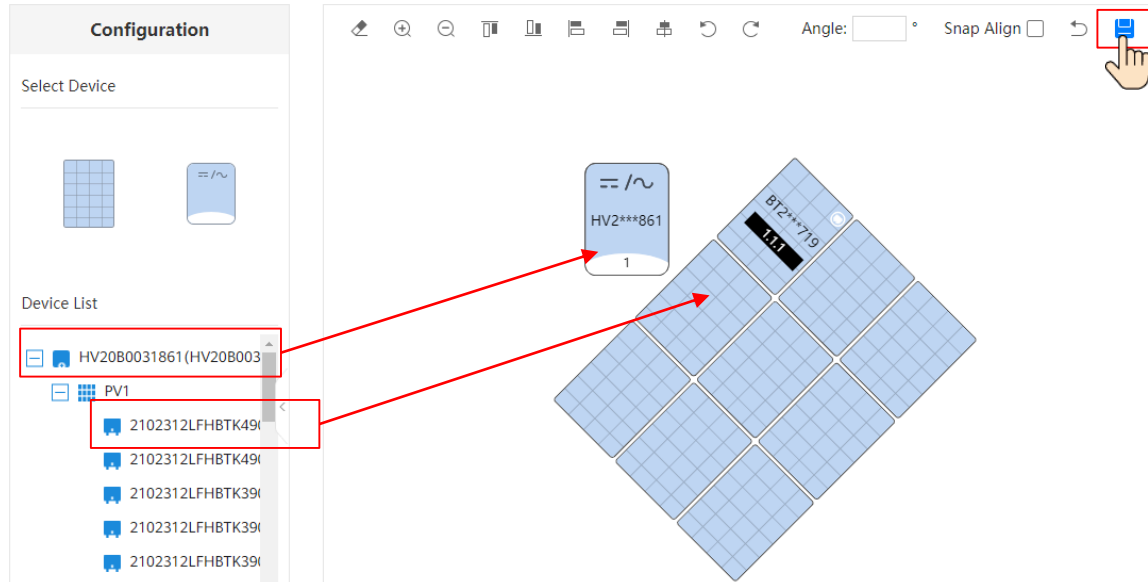
Step 4. Drag the PV module to the physical layout area, increase the number of widgets, and adjust the angle based on the site requirements.



FAQ 3. Physical Layout Design of PV Modules on the FusionSolar WebUI

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

Step 6. Click  on the toolbar to save the settings.



Note:
Right-click a PV module that has been bound to a device to unbind the device.

