

# FusionSolar App Quick Guide

Issue: 02

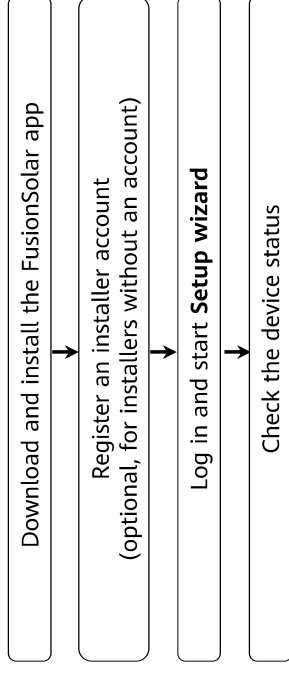
Date: 2022-01-25



HUAWEI

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## 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.

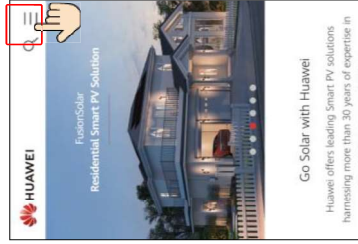
# 1. Downloading and Installing the FusionSolar App

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.

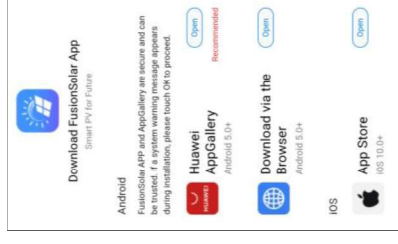


Method 3: Scan the QR code to download and install the app.



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.

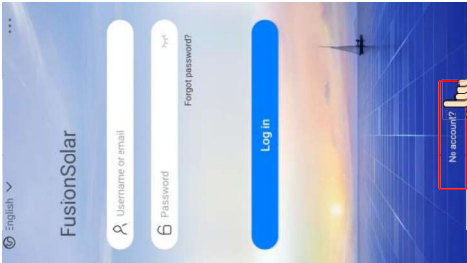


Note:

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.



**Role**

**I'm an owner**  
Real-time monitoring of plant operation  
Ask your installer to create an account for you.

**I'm an installer**  
Quick setup, O&M, operation  
Tap to create your account

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

**Installer registration**

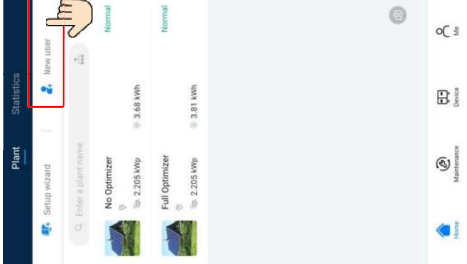
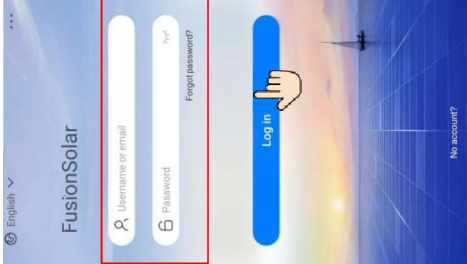
Note: If your company has registered an account in the system, you do not need to register again. Ask your administrator to add you to the system.

Company name  
Enter an email address  
Username  
Enter the verification code  
Send Code  
Password  
Confirm password

I agree to the Terms of Use and I have read the Privacy Policy.

Register

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



**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

### 3. Log in and Start Setup Wizard

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

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

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

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

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

The grid code is set to N/A by default (automatic startup is not supported). Set the grid code based on the area where the PV plant is located.

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-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.

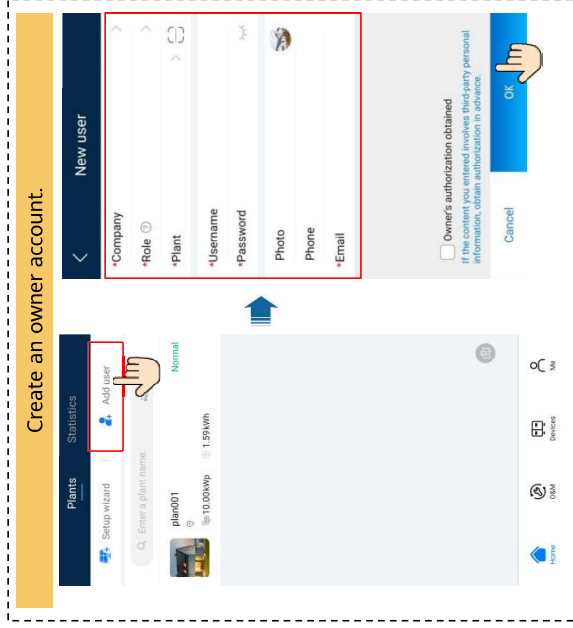
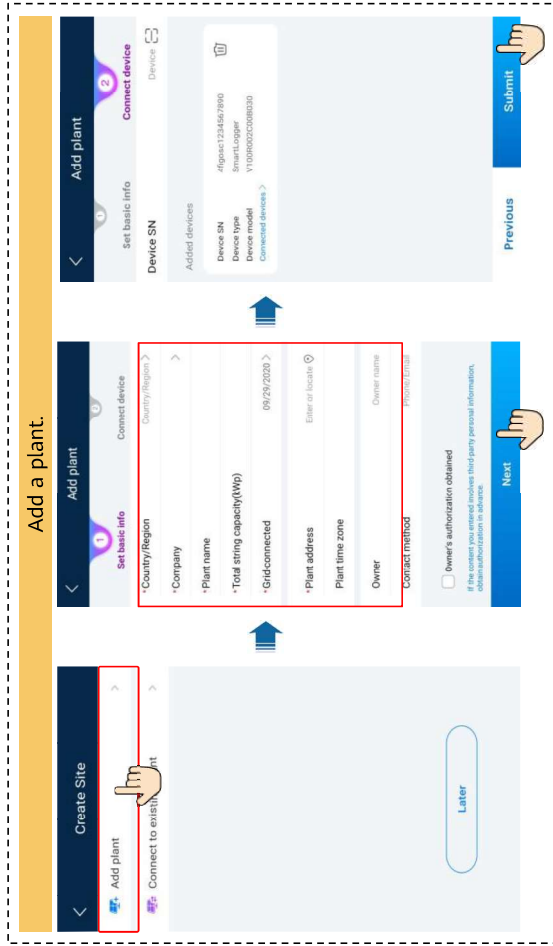
**Set network parameters and domain name.**

**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.





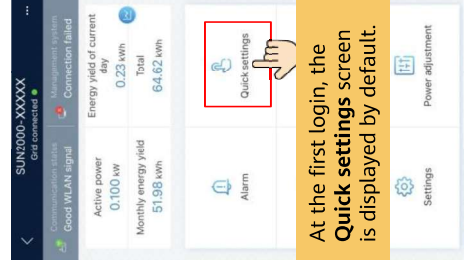
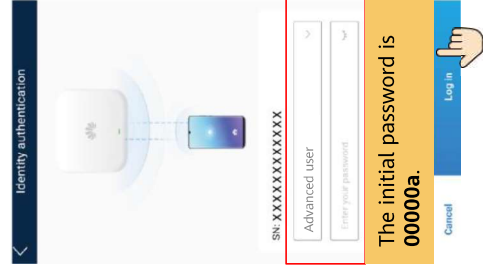
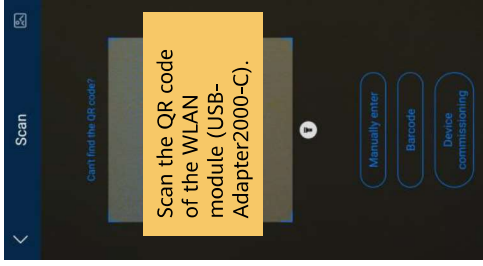
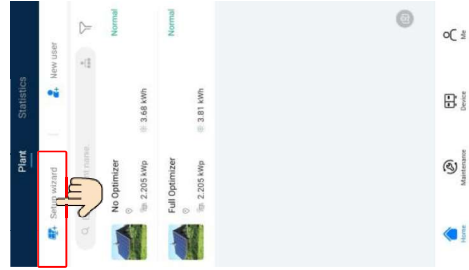
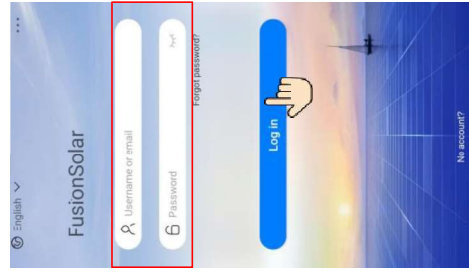
## • Local Commissioning Using a Smart USB-WLAN Adapter

Note:

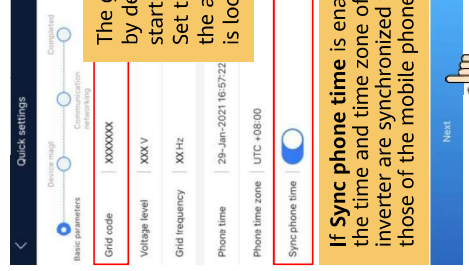
Before commissioning a commercial inverter, connect the 4G Smart Dongle to identify parameters. If the indicator status is normal, remove the Smart Dongle, and then connect the USB-WLAN adapter to start commissioning.



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.



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



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.

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.

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.



**Add a plant.**

**Create Site**

- Add plant
- Connect to existing plant

**Add plant**

**Set basic info**

**Connect device**

Country/Region >

Company >

Plant name >

Total string capacity(Wp) >

Grid-connected 09/29/2020 >

Plant address >

Plant time zone >

Owner >

Contact method >

Owner name >

Contact method >

Phone/Email >

Owner's authorization obtained  
if the content you entered involves third-party personal information, obtain authorization in advance.

Next

Later

**Set basic info**

Device SN

Added devices

Device SN	XXXXXXXXXX
Device type	Smart Dongle
Device model	VuorfoocusPCXXX
Connected devices	>

Device

Submit

Previous

**Create an owner account.**

**Plant**

Statistics

New user

Setup wizard

Enter a plant name.

No Optimizer 3.68 Wp

Full Optimizer 3.81 Wp

**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

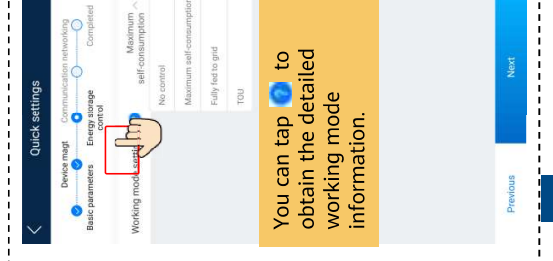
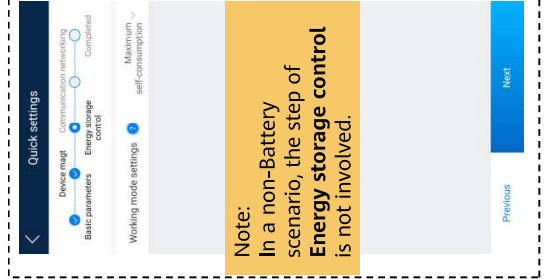
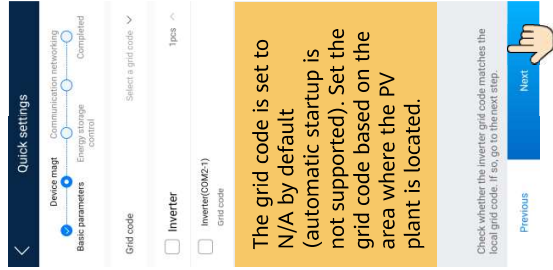
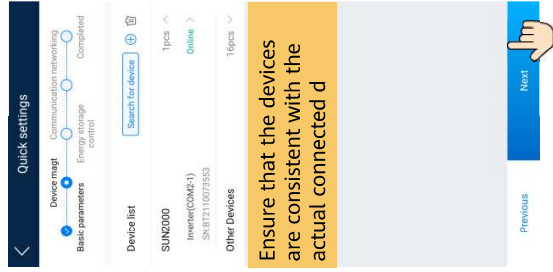
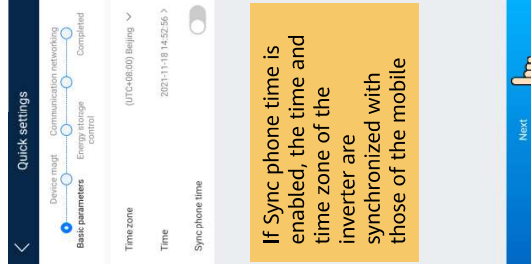
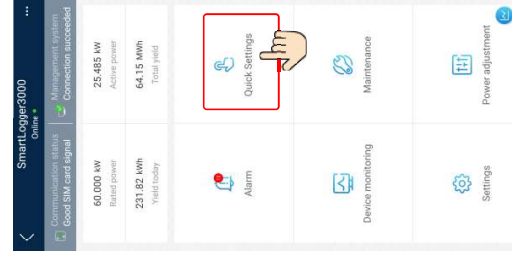
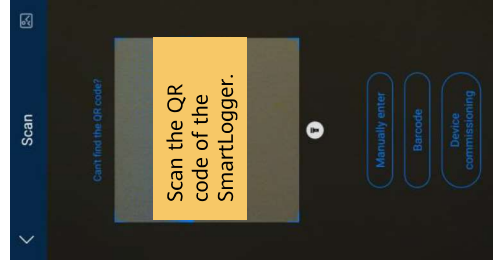
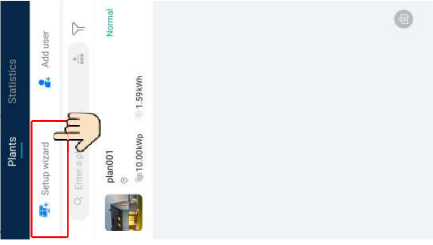
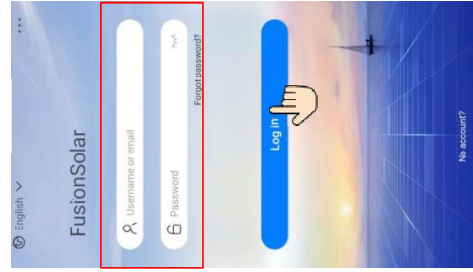
OK

## 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)
	Blinking at long intervals (on for 1s and then off for 1s)	Abnormal	If the duration is longer than 1 min, the 4G parameter settings are incorrect. Reset the parameters.
		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.
Red	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.
	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.
			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 red and green alternatively	Blinking at long intervals (red for 1s and green for 1s)	Normal	The Dongle is being upgraded locally.
	Blinking at short intervals (red for 0.2s and green for 0.2s)		

### 3. Log in and Start Setup Wizard

- Local Commissioning Using the SmartLogger of the Inverter



Quick settings

Device mgmt Communication networking  
Basic parameters Energy storage control Completed

Network settings

Monitor the PV plant through the management system.

Management system parameters

Domain name int.fusionsolar.huawei.com

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

Quick settings

Device mgmt Communication networking  
Basic parameters Energy storage control Completed

Network settings

Monitor the PV plant through the management system.

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

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.

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

Quick settings

Device mgmt Communication networking  
Basic parameters Energy storage control Completed

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

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

Quick settings

Device mgmt Communication networking  
Basic parameters Energy storage control Completed

Network settings

Monitor the PV plant through the management system.

Signal strength

Strong(55lm)

Other Devices

1pcs Online

16pcs

Quick settings

Device mgmt Communication networking  
Basic parameters Energy storage control Completed

Successfully connected to the management system.

Device list

SUN0000

Inverter(CM2-1) SN:87210073553

Finish

Create Site

Add plant

Connect to existing

Later

Add plant

Set basic info

Country/Region

Company

Plant name

Total string capacity(kWp)

Grid-connected

Plant address

Plant time zone

Owner

Contact method

Owner's authorization obtained

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

Next

Add plant

Set basic info

Device SN

SN

Device type SmartLogger

Device model SmartLogger

Connected devices

Previous

Submit

Create an owner account.

New user

Enter a plant name

No Optimizer 3.68 kWh

Full Optimizer 2.205 kWh

Full Optimizer 2.205 kWh

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

Mobile phone not connected to the Internet

Mobile phone connected to the Internet

Mobile phone not connected to the Internet

## Check the device status using device commissioning.

Mobile phone connected to the Internet

Mobile phone not connected to the Internet

Mobile phone connected to the Internet

Mobile phone not connected to the Internet

Mobile phone connected to the Internet

Mobile phone not connected to the Internet

Mobile phone connected to the Internet

Mobile phone not connected to the Internet

Mobile phone connected to the Internet

Mobile phone not connected to the Internet

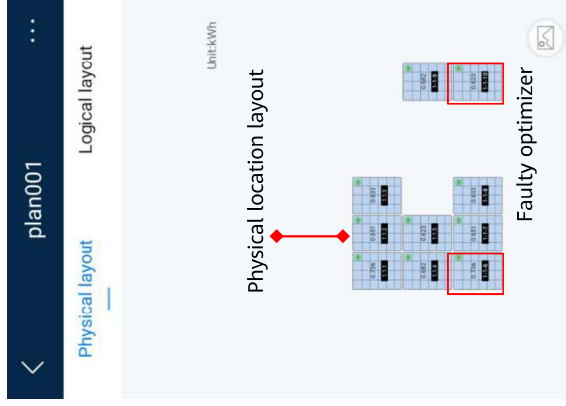
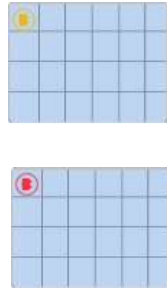
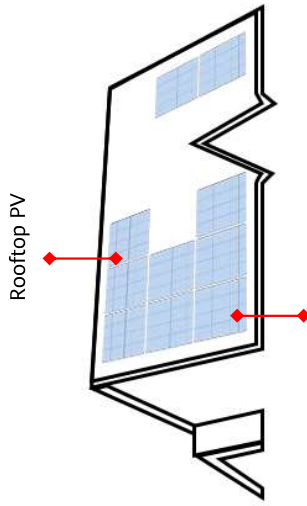
Mobile phone connected to the Internet

Mobile phone not connected to the Internet

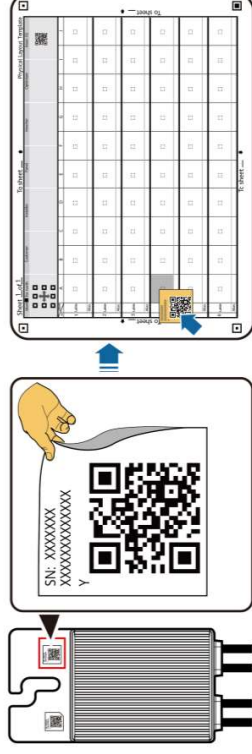
## • Checking the Device Status Remotely.

## 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.

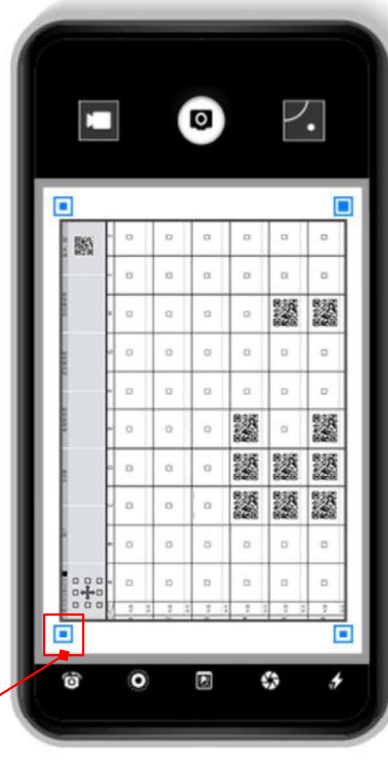


Step 1 After determining the installation position of an optimizer, remove the SN label from the optimizer and attach it to the physical layout template.



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

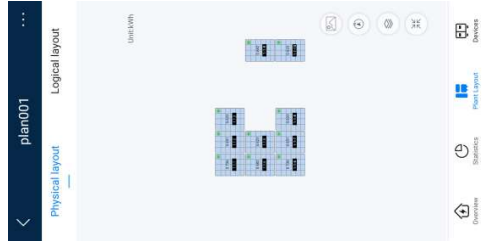
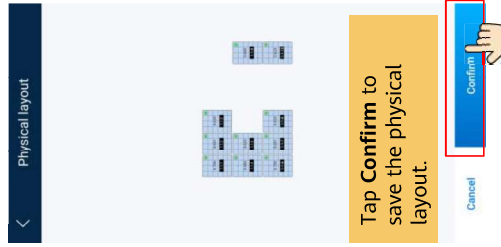
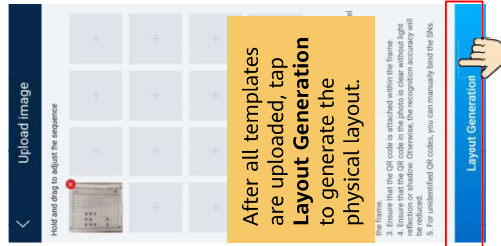
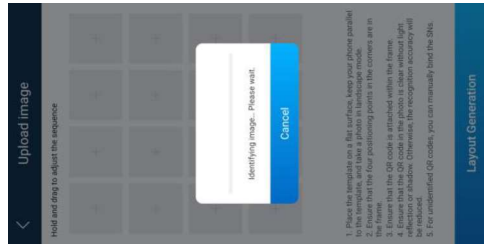
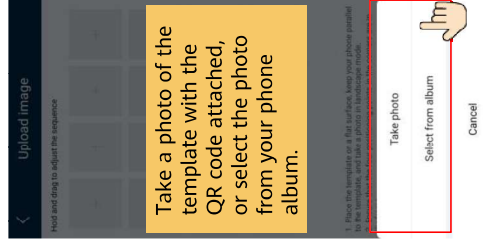
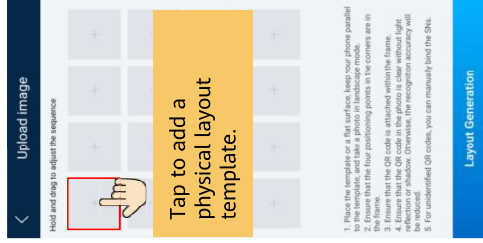
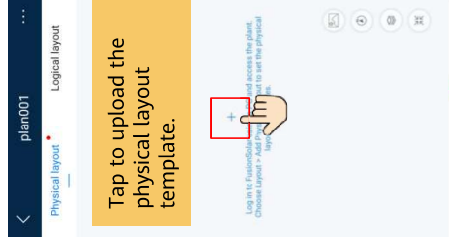
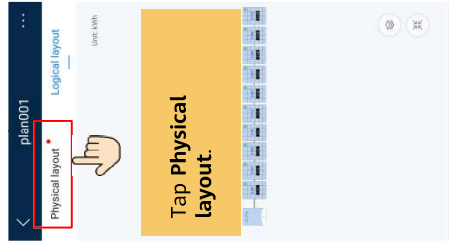
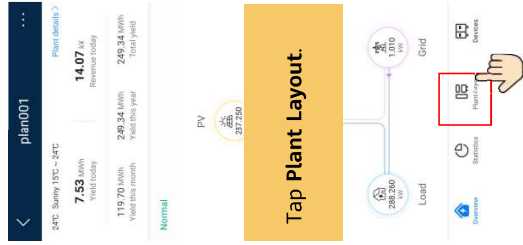
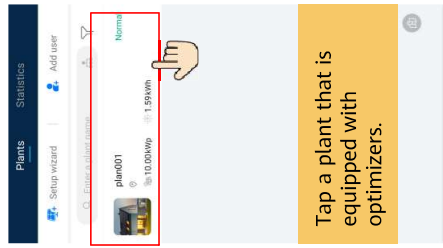
Positioning point for photographing



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)

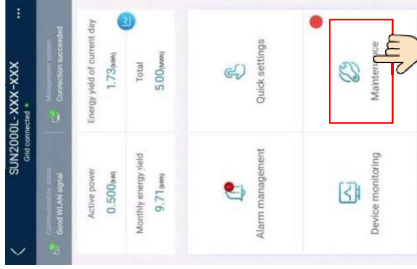


Note:  
For some unidentified QR codes, log in to the FusionSolar WebUI to manually bind them.  
For details, see section "FAQ 3" of this document.

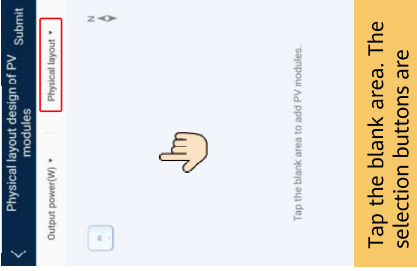
## FAQ 2. Physical Layout Design of SUN2000 APP (The SmartPVMS is not connected)

Step 1. Check that the Smart PV Optimizers are successfully searched.

1. Open the FusionSolar app, log in to intl.fusionsolar.huaweic.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

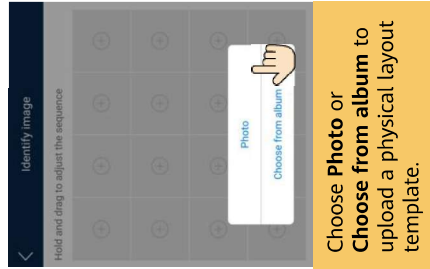


Tap the blank area to add PV modules.  
Tap the blank area. The selection buttons are displayed.

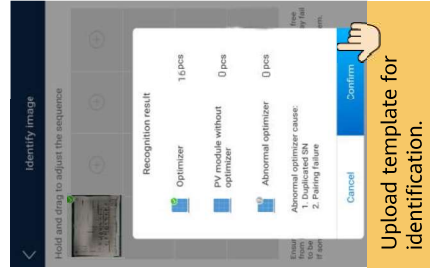
Method 1: Tap **Identify image** for automatic layout.



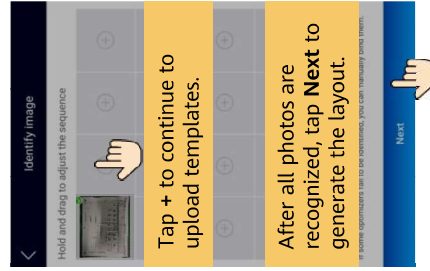
Tap **Identify image**.



Choose **Photo** or **Choose from album** to upload a physical layout template.

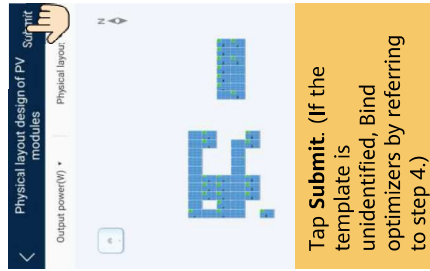


Upload template for identification.



Tap + to continue to upload templates.

After all photos are recognized, tap **Next** to generate the layout.



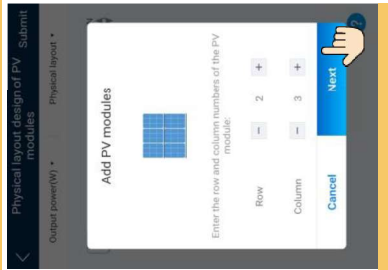
Tap **Submit**. (If the template is unidentified, Bind optimizers by referring to step 4.)

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

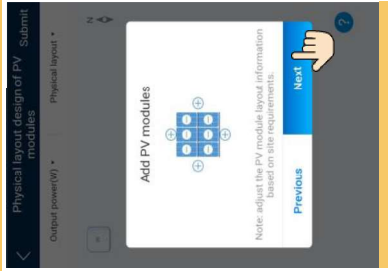
## Method 2: Tap Add PV modules for manual layout.



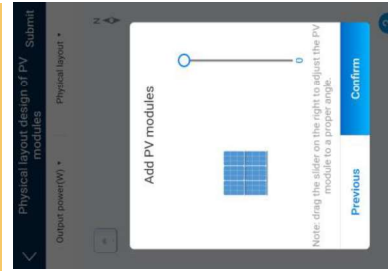
Tap **Add PV module**.



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

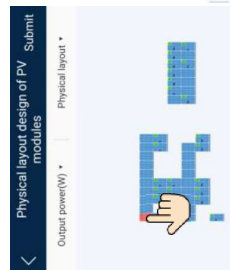


Tap + or - to change the number of rows and columns.

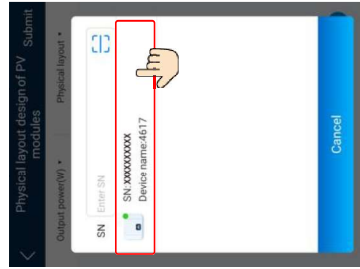


Adjust the PV module angle, and tap **Confirm**.

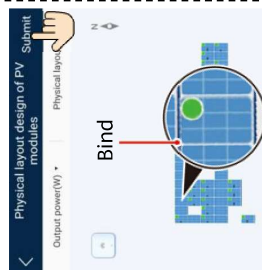
## Step 3. Bind Smart PV Optimizers



Select a PV module to be bound to the optimizer.

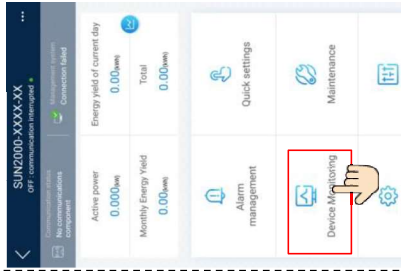


Select the corresponding optimizer.

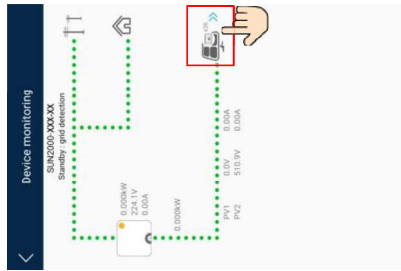


After the layout is complete, tap **Submit**.

## Step 4. Check the Smart PV Optimizer status.



Tap a corresponding PV string and check the optimizer status.



Tap a corresponding PV string and check the optimizer status.



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:  Plant name Region:

Grid connection date: Start date End date

Status  Plant Image  Plant Name

407-G/C-TEST

Step 2. Click **Layout**.

Overview | **Layout** | Reports | Devices

Energy Yields

576.63 kWh  
Total yield

0.00 kWh  
Consumption today

0.00 kWh  
Yield 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***305 1.1.9
BT2***017 1.1.4	BT2***686 1.1.5	BT2***607 1.1.10	
BT2***628 1.1.6	BT2***017 1.1.7	BT2***686 1.1.8	

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.

Plant name:  Region:

Grid connection date:  Start date:  End date:

Status:  Plant Name:

Plant Image: 

Step 2. Click **Layout**.

Overview | **Layout** | Reports | Devices

Energy Yields

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

Step 3. Upload the physical layout.

Physical Layout

+  
Click to Create

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.

Layout Configuration

Configuration

Select Device

Device List

HV2080031861 (HV208003)

PV1

BT2049046719(BT2)

2102312LFHBT49

2102312LFHBT49

Module

Quantity:  Rows:  Columns:

Tilt:  Azimuth:

Angle:

Snap Align

Cancel Save

Layout Configuration

Configuration

Select Device

Device List

HV2080031861 (HV208003)

PV1

BT2049046719(BT2)

2102312LFHBT49

2102312LFHBT49

Inverter

Quantity:

Installation mode:  Horizontal  Vertical

Angle:

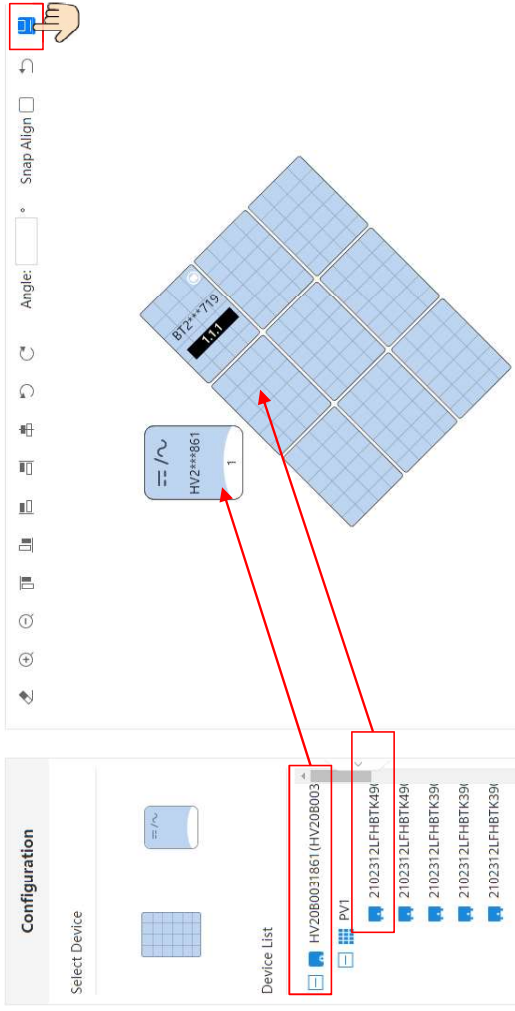
Snap Align

Cancel Save

# 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.

