FusionSolar App Quick Settings Operation Procedure

Download and install the FusionSolar app

↓

Register an installer account
(optional, for installers without an account)

↓

Log in and start **Setup wizard**

↓

Check the device status
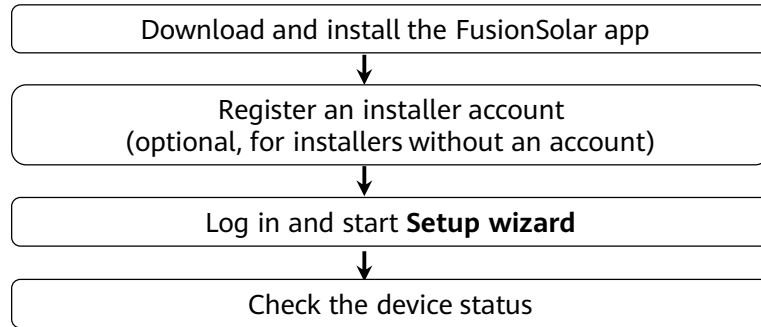
FAQ

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)

- 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 upoinitial 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.

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

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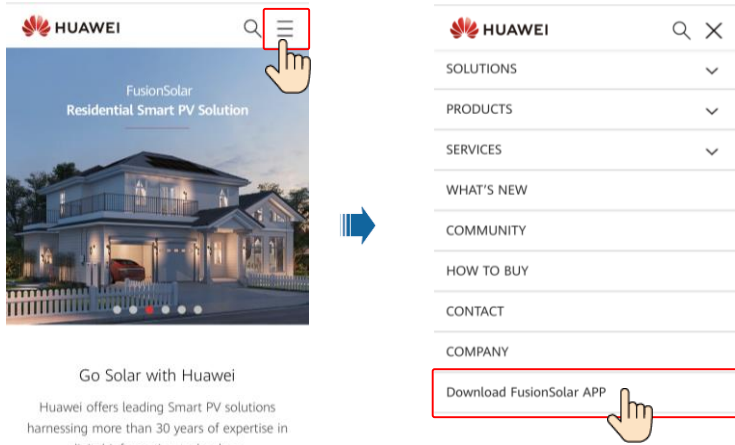
Method 3: Scan the QR code to download and install the app.

FusionSolar

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

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 monitoring
Tap to create your account

Installer registration

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

Company name

Email address

Username

Verification code | Send

Password

Confirm password

☐ I have read and agreed to Terms of Use and Privacy Policy

REGISTER

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.

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**

Scan the QR code of the inverter connected to the Smart Dongle.
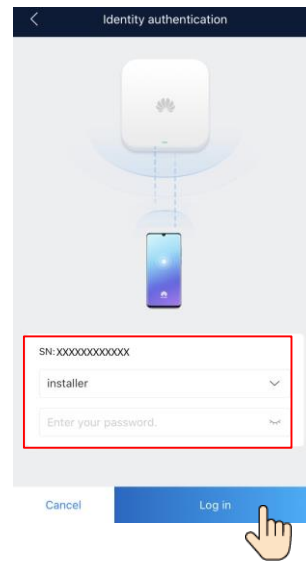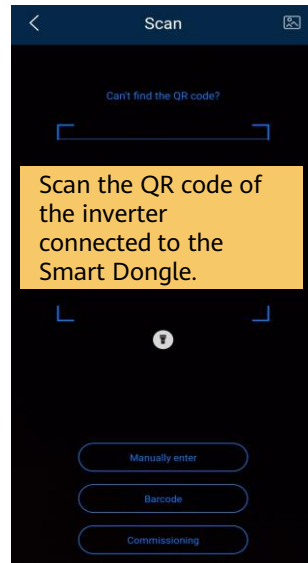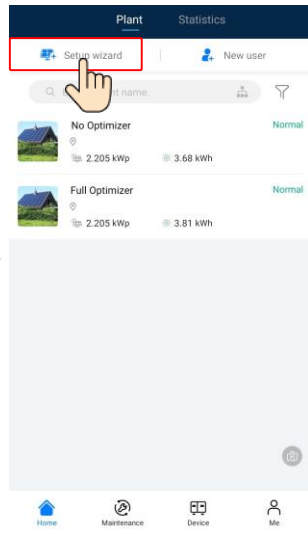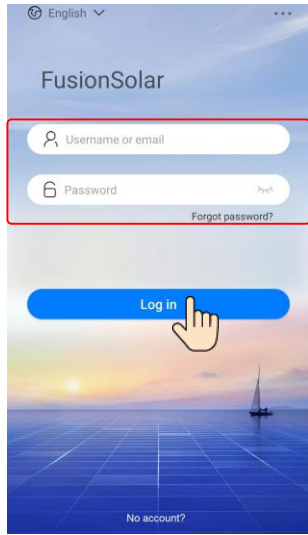
Log in to the app as intaller user. The initial password of the **installer** is **00000a**. If the system prompts you to set a password, set the password and login first power-on and change it immediately after login.
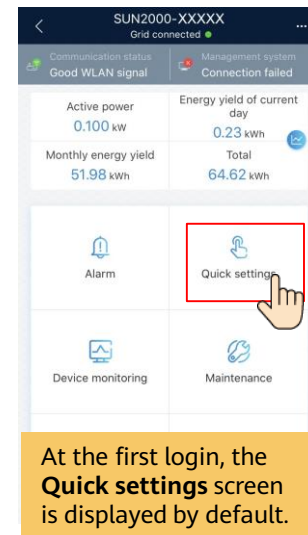
At the first login, the **Quick settings** screen is displayed by default.
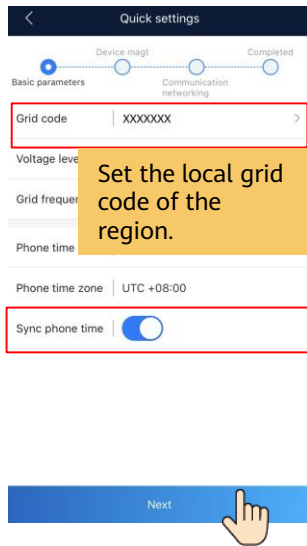
Set the local grid code of the region.

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.

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

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

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.

Add a plant.

Create Site

- Add plant >
- Connect to existing plant >

Later

Add plant

① Set basic info — ② 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.

Next

Add plant

① Set basic info — ② Connect device

Device SN — Device ⊟

Added devices

Device SN	4figosc1234567890 🗑
Device type	SmartLogger
Device model	V100R002C00B030

Connected devices >

Previous | Submit

Create an owner account.

Plant | Statistics

- Setup wizard | New user

🔍 Enter a plant name.

No Optimizer — Normal
⊙
🔋 2.205 kWp   ☀ 3.68 kWh

Full Optimizer — Normal
⊙
🔋 2.205 kWp   ☀ 3.81 kWh

Home | Maintenance | Device | Me

New user

- *Company >
- *Role �ⓘ >
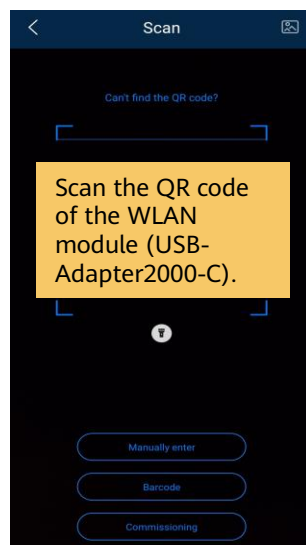- *Plant > ⊟
- *Username
- *Password 👁
- Photo 🏠
- Phone
- *Email

☐ Owner's authorization obtained

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

Cancel | OK

• **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.

SUN2000 USB

WLAN module

0.8–1.1 N·m

Scan the QR code of the WLAN module (USB-Adapter2000-C).

The initial password is **00000a**.

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

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.

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

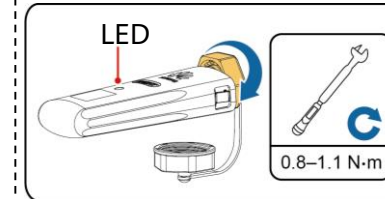## Set network parameters and domain name.

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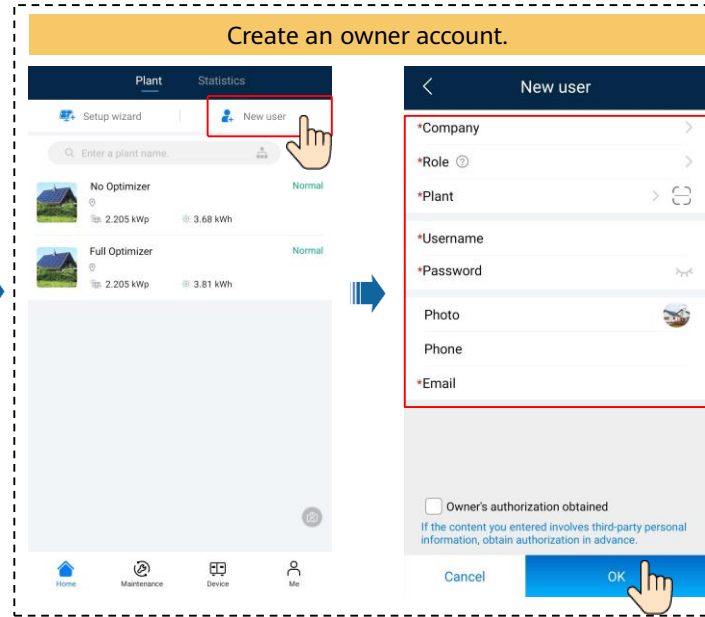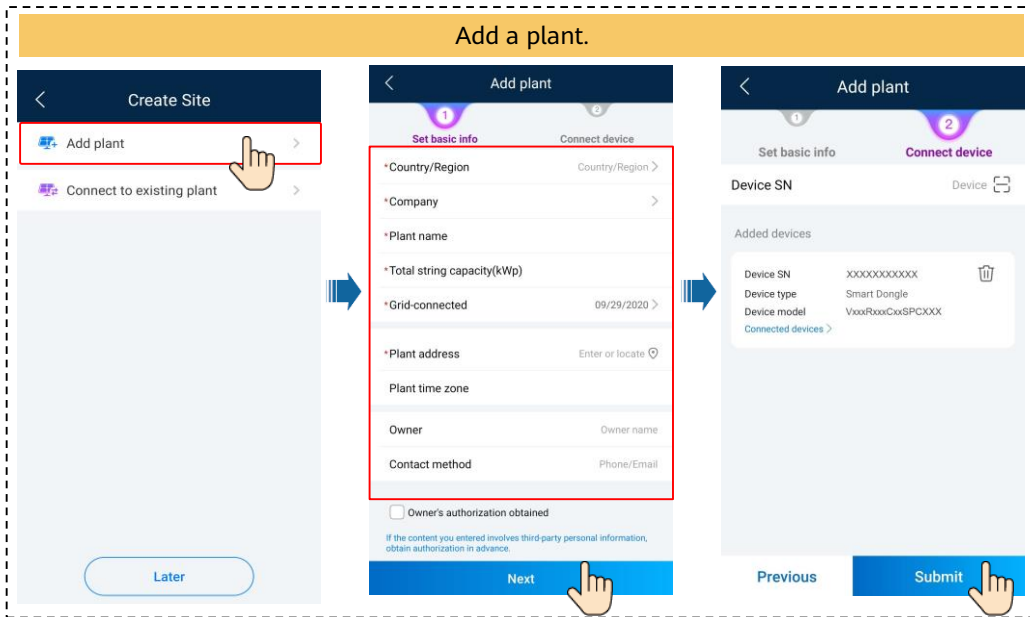
By default, **APN mode** is set to **Automatic**. When this mode cannot be used to access the Internet, set the parameter to **Manual**. In this case, set the parameters related to the SIM card based on the information obtained from the carrier.

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

Connect to the management system.

LED

0.8–1.1 N·m

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.

8

Add a plant.

Create Site

- Add plant
- Connect to existing plant

Later

Add plant

① Set basic info — ② 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.

Next

Add plant

① Set basic info — ② Connect device

Device SN — Device

Added devices

Device SN	XXXXXXXXXX
Device type	Smart Dongle
Device model	VxxxRxxxCxxSPCXXX

Connected devices >

Previous   Submit

Create an owner account.

Plant   Statistics

- Setup wizard   New user

🔍 Enter a plant name.

No Optimizer — Normal
2.205 kWp — 3.68 kWh

Full Optimizer — Normal
2.205 kWp — 3.81 kWh

Home   Maintenance   Device   Me

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

9

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 • 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**

Scan the QR code of the SmartLogger.

Log in as **Advanced user**. The initial password is **00000a**.

Add devices.

Tap **Auto Device Search** to add inverters. You can also add inverters manually. If not all devices are detected due to duplicate communications addresses, tap **Auto Assign Address** to assign and adjust the addresses as prompted.

Tap **Add Devices** to add a smart power sensor. The DTSU666-H smart power sensor is used as an example. Set **Device type** to **Meter, Port number** to the ID of the SmartLogger COM port connected to the smart power sensor, and **Address** to **11**.

Note:
For details about adding devices, see the *SmartLogger User Manual*.

Set the grid code.

Tap the inverter.

Set the date and time.

The SmartLogger supports only one clock source pair, set this parameter as required. (If SmartPVMS is connected, you are advised to select **Management System**.)

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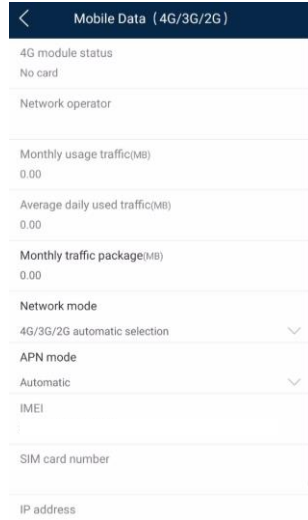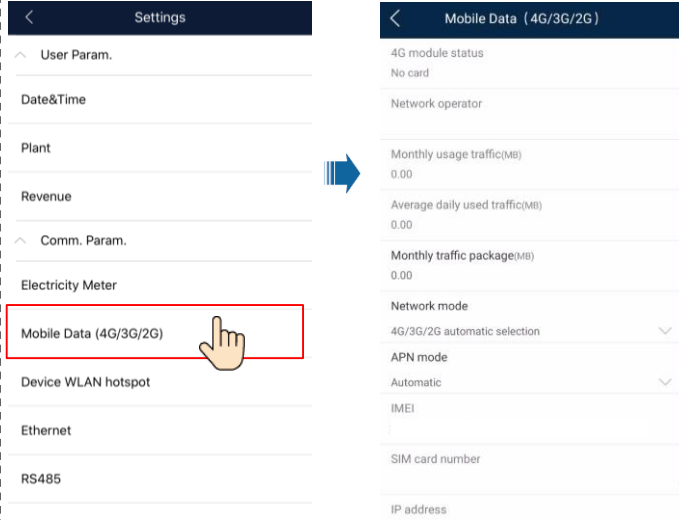
When the SmartLogger connects to the SmartPVMS over the wireless network, set **Monthly traffic package(MB)** and **Network mode**.

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

Set network parameters.

When the SmartLogger connects to the SmartPVMS over a wired network, set **Ethernet** parameters.
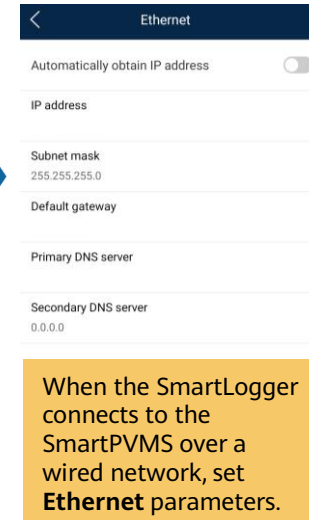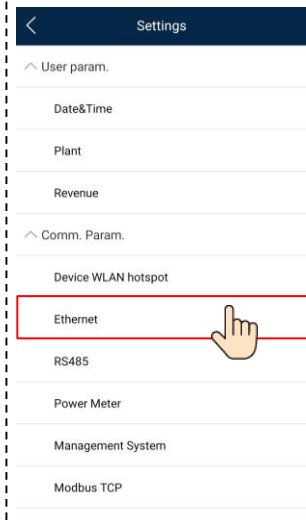
Notes:
- Set **IP address** and **Subnet mask** for the SmartLogger according to the network planning. Ensure that the SmartLogger and the router are on the same network segment and that the SmartLogger has a different IP address from other devices on the LAN.
- Set **Default gateway** and **Primary 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.
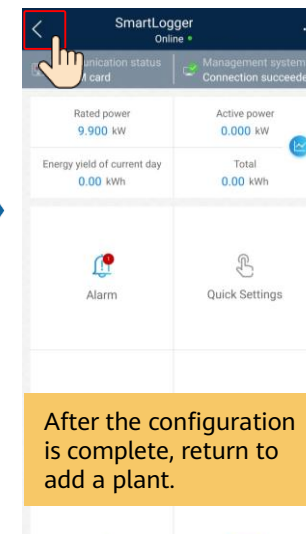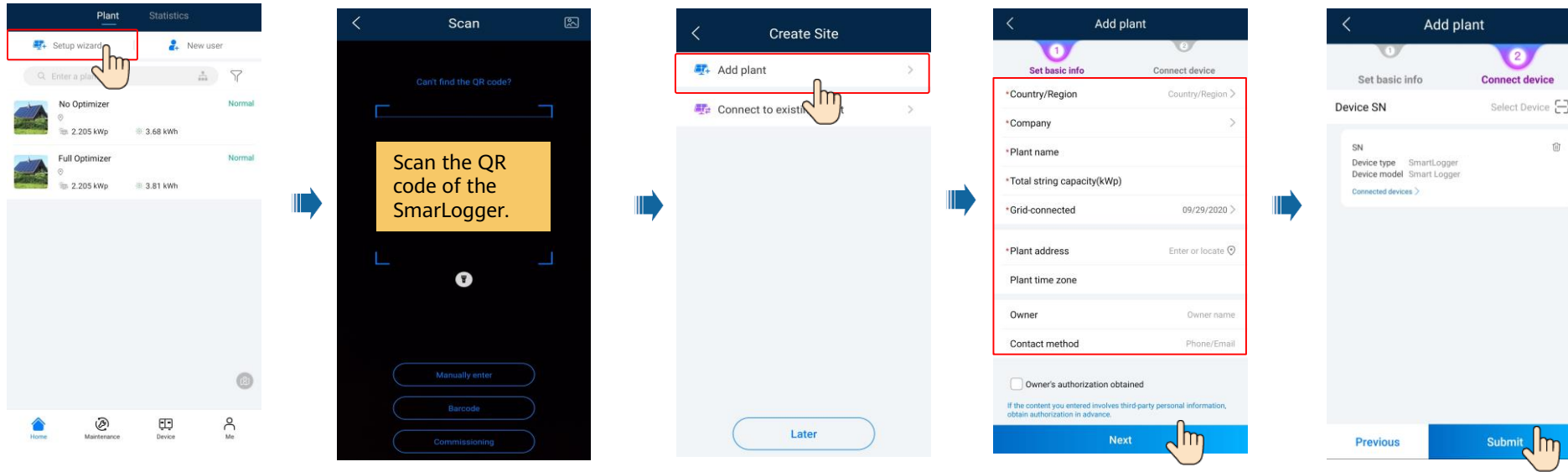
Connect to the SmartPVMS.
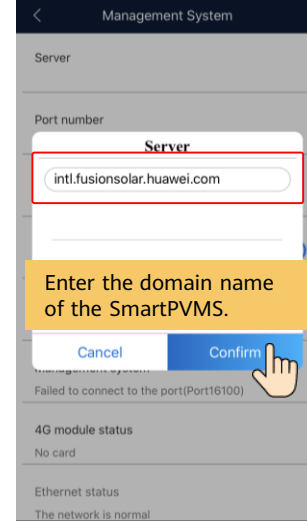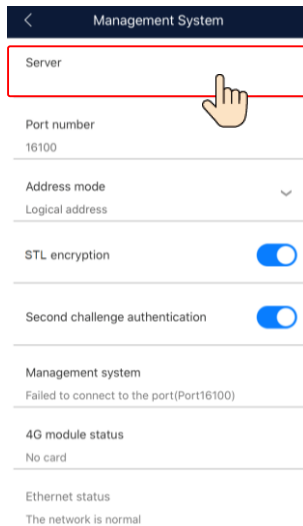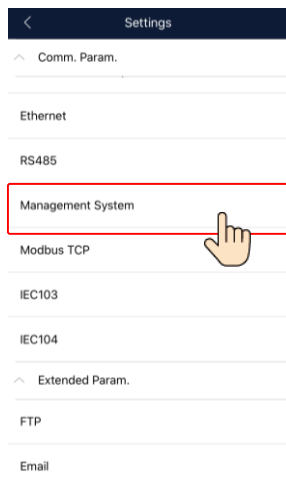
- Set **Server** to **intl.fusionsolar.huawei.com** and **Port number** to **27250**.
- Set **Address mode** to **Logical address**. If the communication address of the device connected to the SmartLogger is unique, you are advised to set **Address mode** to **Comm. address**. In other cases, you must select **Logical address**.
- Enable **TSL encryption and Second challenge authentication**.
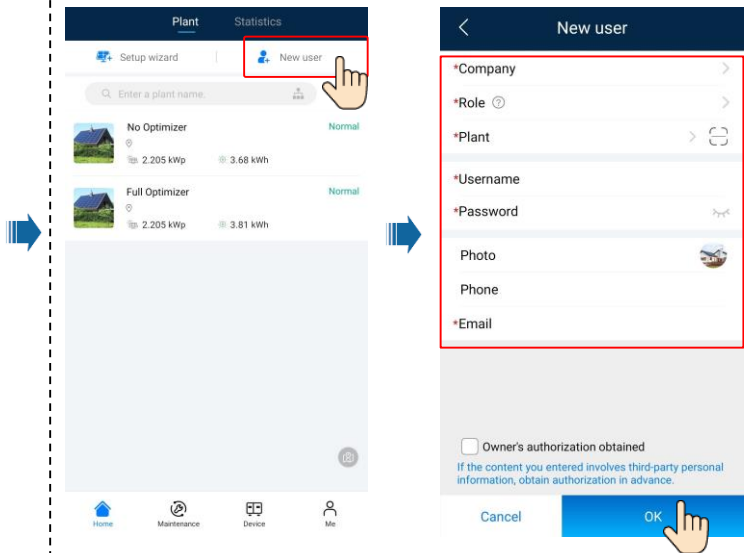- If the status of **Management system** is **Connected**, the SmartLogger is properly connected to the SmartPVMS.

Enter the domain name of the SmartPVMS.

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

Add a plant.

Scan the QR code of the SmarLogger.

| Plant | Statistics |

Setup wizard | New user

No Optimizer — Normal — 2.205 kWp — 3.68 kWh
Full Optimizer — Normal — 2.205 kWp — 3.81 kWh

Scan — Can't find the QR code? — Manually enter — Barcode — Commissioning

Create Site — Add plant — Connect to existing plant — Later

Add plant — ① Set basic info — ② 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.
Next

Add plant — ① Set basic info — ② 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

No Optimizer — Normal — 2.205 kWp — 3.68 kWh
Full Optimizer — Normal — 2.205 kWp — 3.81 kWh

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

Mobile phone not connected to the Internet

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

• **Checking the Device Status Remotely.**

Check the device status using device commissioning.

Connect to the inverter WLAN.

Log in as **Advanced User**.

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.

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

Installation positions of PV modules and optimizers

String number
Offset
String 1   String 2

Huawei Physical Layout Template

String 1   String 2
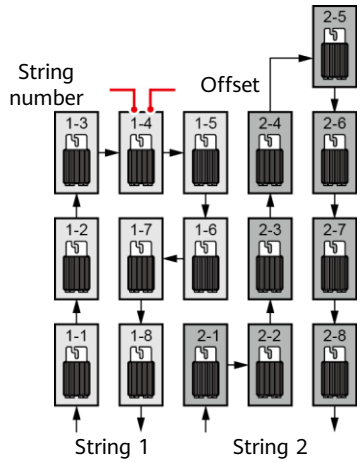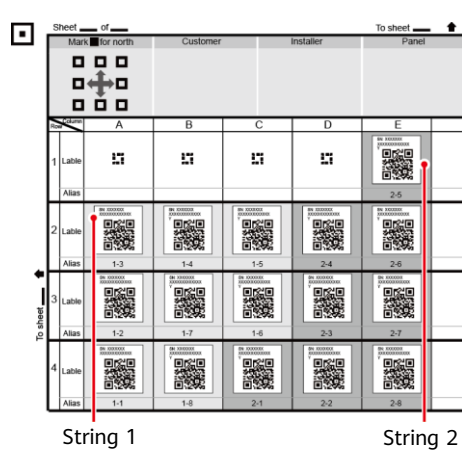
Template shooting

How do I take a photo of a template?
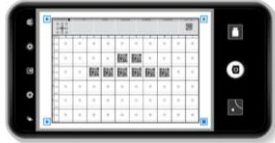
1. Keep your phone parallel to the template and take a photo in landscape mode.
2. Ensure that the four positioning points in the corners are in the frame.
3. Ensure that the QR code is attached within the frame.

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.
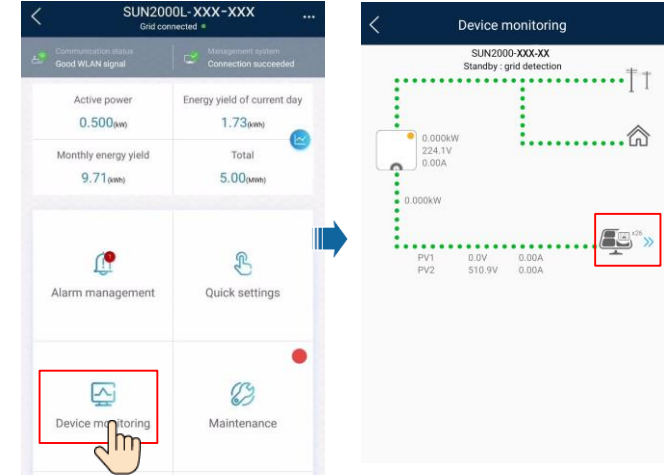
Step 3. Set optimizer physical layout

Tap the blank area. The selection buttons are displayed.
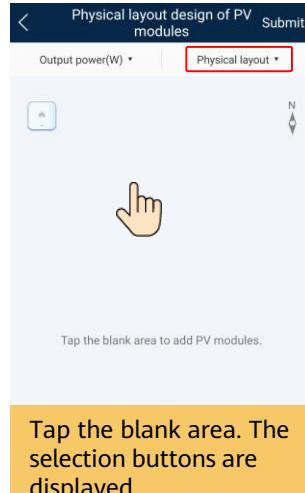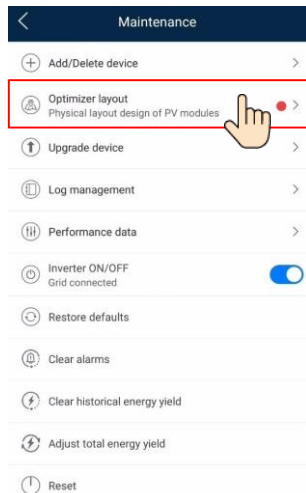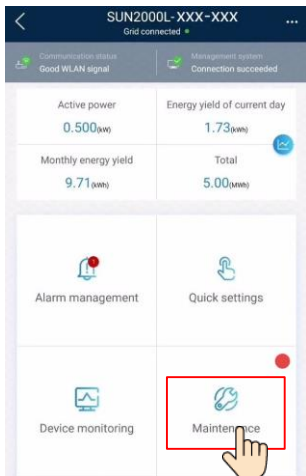
Tap **Identify image**.

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.)

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**.

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

Step 4. Bind Smart PV Optimizers

Select a PV module to be bound to the optimizer.

Select the corresponding optimizer.

Bind

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

Step 5. Check the Smart PV Optimizer status.

Tap a corresponding PV string and check the optimizer status.

Unbind the optimizer.

Step 6. Detect optimizer disconnection.

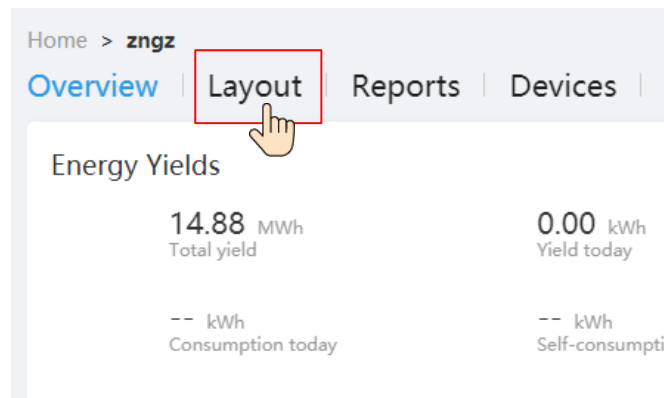Rectify the fault based on the detection result.

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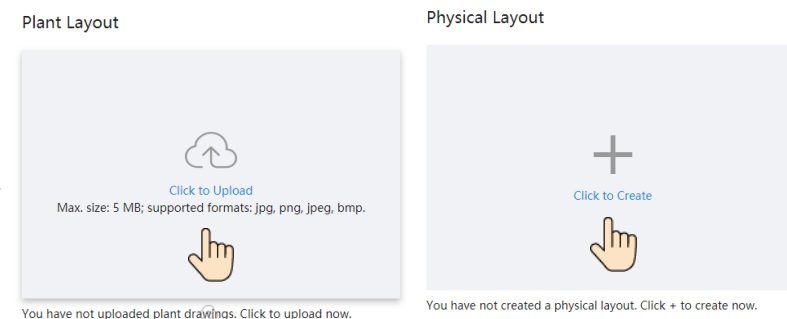
1. On the **Homepage**, click a PV plant to enter the **Single Power Plant** page.
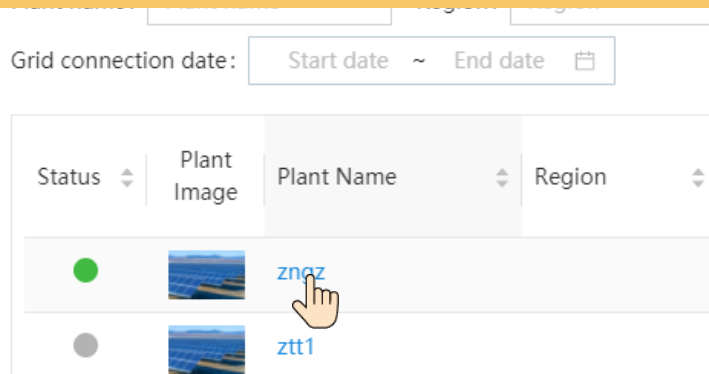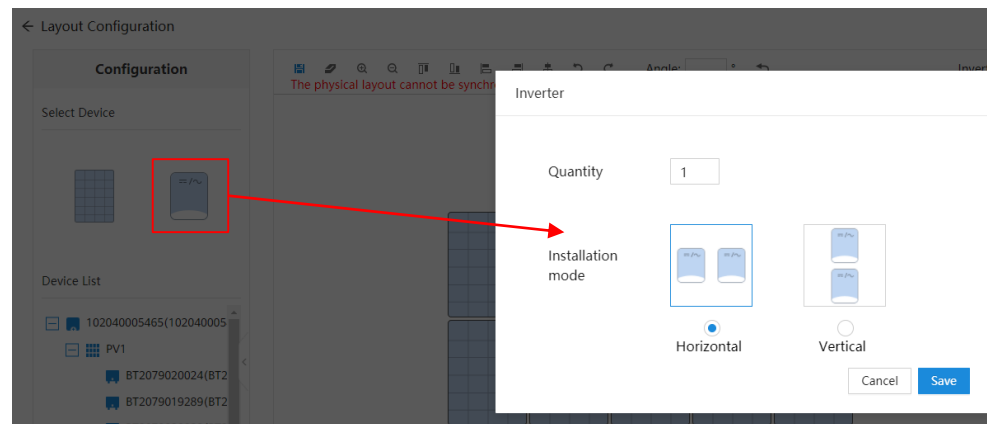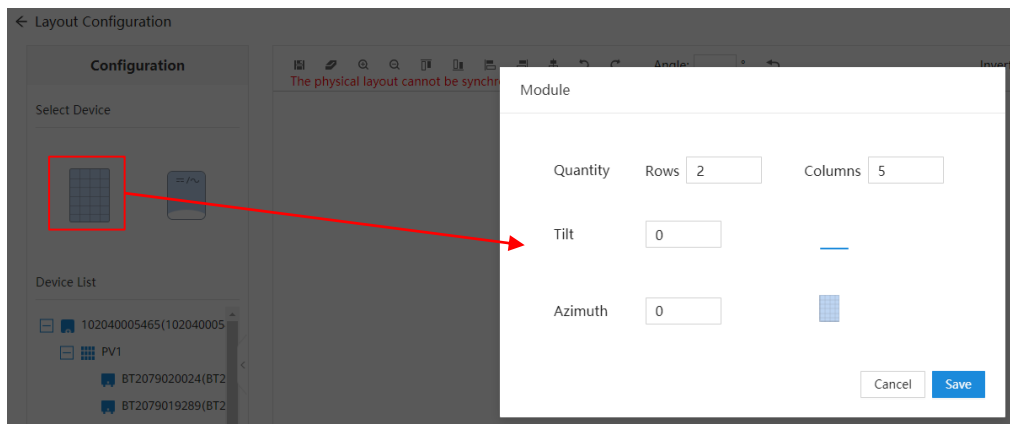

2. Click **Layout**.

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

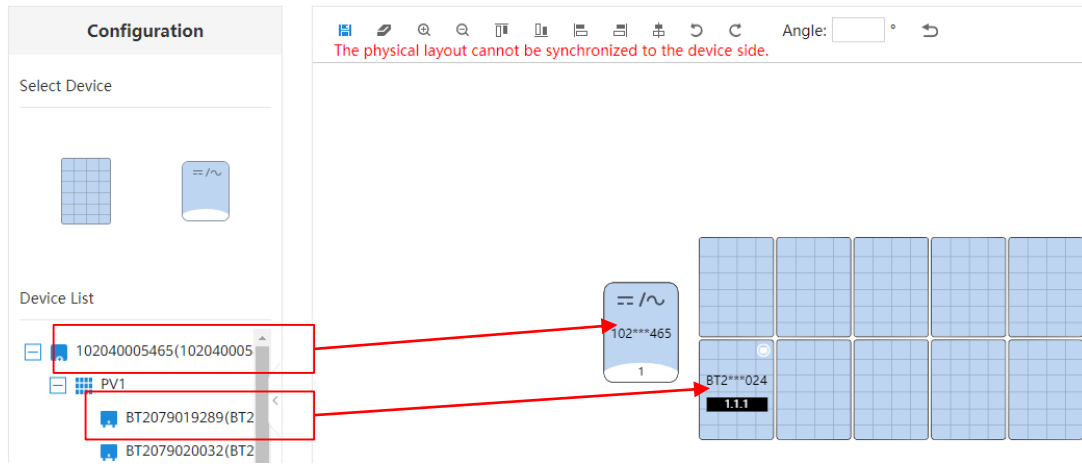Upload the plant drawings for reference.

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.

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