GATEWAY-ECC

User Manual

Version 0.0

www.solaxpower.com

eManual in the QR code or at
http://kb.solaxpower.com/

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About This Manual

Scope of Validity

This manual is an integral part of Gateway ECC. It describes the installation, electrical connection, commissioning, maintenance and troubleshooting of the product. Please read it carefully before operating.

Note:

"ECC" refers to the communication gateway energy control center-WiFi.

Target Group

The installation, maintenance and grid-related setting can only be performed by qualified personnel who

- Are licensed and/or satisfy state and local jurisdiction regulations.
- Have good knowledge of this manual and other related documents.

Explanation of Symbols

The symbols that may be found in this manual are defined as follows.

Symbol	Description
DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION!	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE!	Provides tips for the optimal operation of the product.

Change History

Version 00 (2023-09-19)

Initial release

Table of Contents

1 Preface

1.1 Read this First

Gateway ECC is well designed and tested to meet all applicable states and international safety standards. However, like all electrical and electronic equipment, safety precautions must be observed and followed during the installation of the ECC to reduce the risk of personal injury and to ensure a safe installation.

Before installing the device, the installer must carefully read, fully understand and strictly follow the detailed instruction of the user manual and other related regulations. And the safety instructions in this document are only supplements to local laws and regulations.

SolaX shall not be liable for any consequences caused by the violation of the storage, transportation, installation, and operation regulations specified in this document, including, but not limited to:

- ECC damage due to force majeure, such as earthquake, flooding, thunderstorm, lighting, fire hazard, volcanic eruption, etc.
- ECC damage due to man-made cause.
- ECC used or operated against any items in local policy.
- Failure to follow the operation instructions and safety precautions on the product and in this document.
- Installation and use under improper environment or electrical condition.
- Unauthorized modifications to the product or software.
- ECC damage caused during transportation by the customer.
- Storage conditions that do not meet the requirements specified in this document.
- Installation and commissioning operated by unauthorized personnel who are not licensed and /or satisfy state and local jurisdiction regulations.

1.2 Safety

Save these important safety instructions. Failure to do so may result in damage to the ECC and injury.

RF EXPOSURE WARNING!

- Install and operate the device in accordance with provided instructions.
- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the equipment & your body.
- End-users and installers must be provided with antenna installation instructions and equipment operating conditions for satisfying RF exposure compliance.

CAUTION!

- Before installation, ensure all power of the device has been cut off.
- Do not dismantle or scrap by force.
- Strictly follow the installation guide to connect cables and the enclosure must be well locked before the device is electrified.
- Unauthorized opening and cable connection will void the warranty and cause lethal danger or serious injury due to electric shock.
- Refer to the corresponding installation guide for related safety requirements when it is connected to other devices.
- Anti-static measures should be taken to decrease the damage of static electricity to electronic components.
- Keep away from flammable, explosive materials.
- All the product labels and nameplate on the device shall be maintained clearly visible.

FCC RULES

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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

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

2 ECC System

2.1 ECC System Description

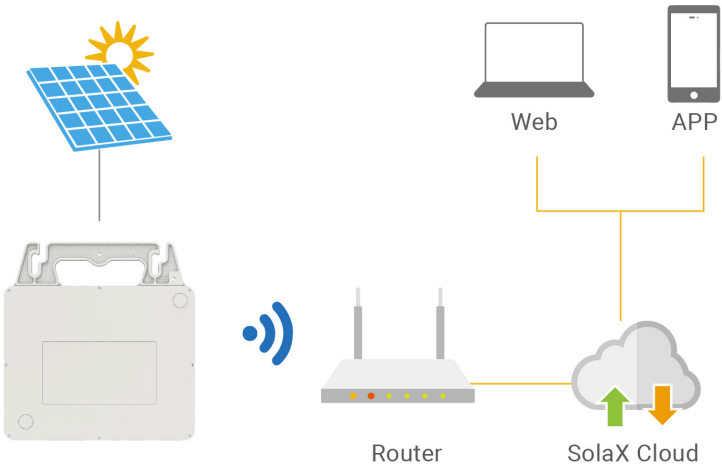


Figure 2-1 System overview diagram

ECC (energy control center)

ECC is a crucial component in this ECC system, functioning as a communication gateway. It gathers the operation data of the system and uploads the data to SolaXCloud, establishing a fundation for data monitoring and remote operation.

X1-Microinverter

Currently, we developed X1-microinverter 1 in 1, 2 in 1 and 4 in 1 series. 2 in 1 and 4 in 1 are applicable to WiFi version, and 1 in 1 is applicable to PLC version. For 2 in 1 and 4 in 1, ECC only needs to be connected to meter. For 1 in 1, ECC connects to ECC-PLC and matches to the whole system for use.

PV module

PV Module is an assembly of photovoltaic cells, also known as solar cells. To achieve a required voltage and current, a group of PV modules are wired into large array that called PV array. A PV module is the essential component of any PV system that converts sunlight directly into direct current electricity.

Grid

220V / 230V/ 240V grid are supported.

SolaXCloud

SolaXCloud is an intelligent, multifunctional monitoring platform that can be accessed either remotely or through a hard wired connection. With the SolaX Cloud, the operators and installers can always view key and up-to-date data and set it remotely. You can log in to your user account at any time through a personal computer, IOS or Android device to view real-time monitoring data or historical data, and perform remote settings as needed.

2.2 Highlights

- Apply advanced PLC (power line carrier) technology at the forefront of worldwide in the photovoltaic industry
- Make it possible to realize AC-coupling plan when matching to certain models
- Meets IEEE 2030.5 in the multiple-model scence
- Support fault diagnosis, software upgrade, remote power dispatching, and reactive power compensation
- Enable the network configuration and data interaction of hundreds of inverter terminals
- Easy and convenient to be installed, configured and used

2.3 Appearance

2.3.1 Overview

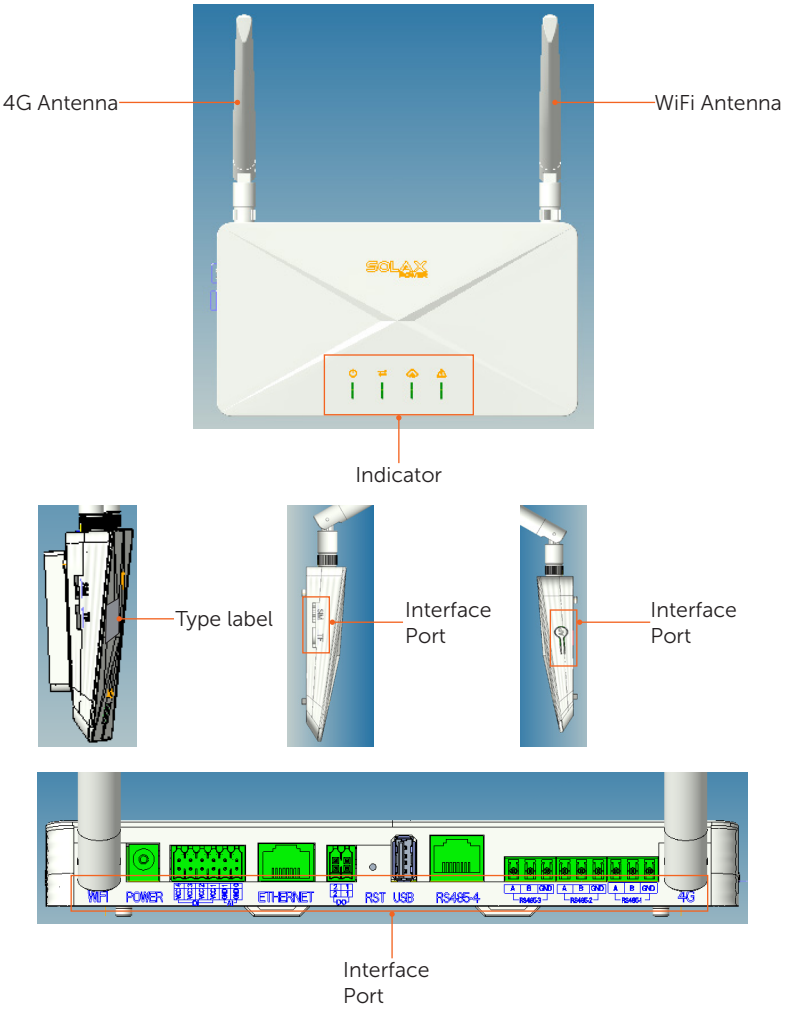


Figure 2-2 Apprearance

Table 2-1 Desciption of appearance

Item	Description
4G Atenna	To receive and transmit WiFi signal.
WiFi Atenna	To receive and transmit 4G signal.
Indicator	Show the status of the device.
Type label	Type label clearly identifies the device type, serial number, specific DC/AC parameters, certification, etc.
Interface port	Interface port is used for communication connection (like WiFi), power connection, grid connection and other functions.

2.3.2 Dimensions

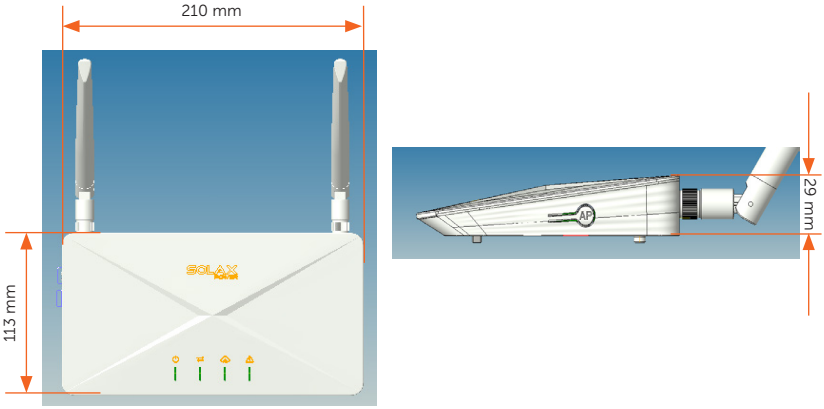


Figure 2-3 Dimensions

2.3.3 Symbols on the Label and ECC

Table 2-2 Description of symbols

Symbol	Description
CE	CE mark. The ECC complies with the requirementsof the applicable CE guidelines.
FC	FCC mark of conformity.
C SP® US	CSA mark for UL1973

	Read the enclosed documentations
	Do not dispose of the ECC together with household waste.

3 Interface Description

3.1 Interface Layout

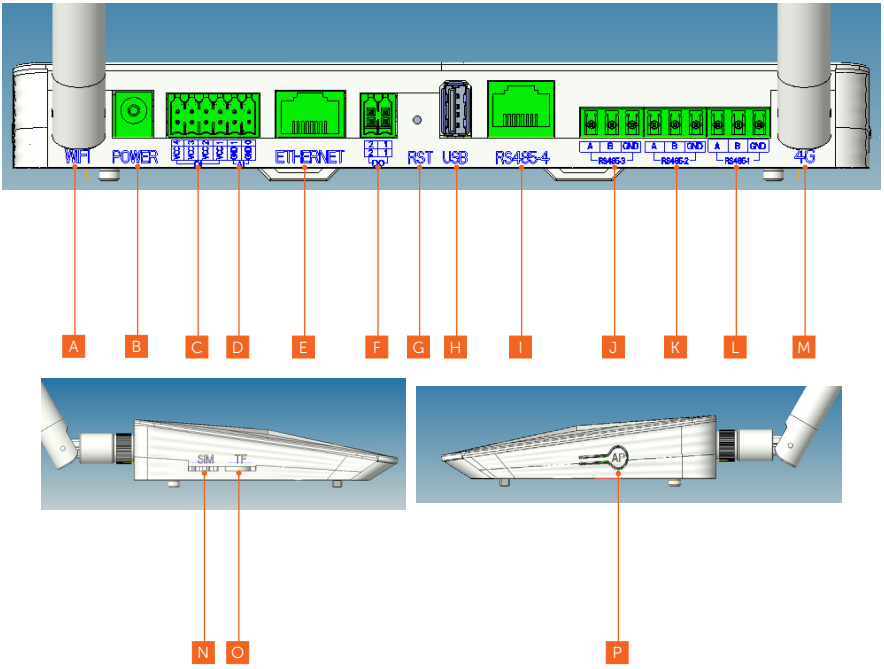


Table 3-3 Interface description

Number	Item	Description
A	Wi-Fi antenna	1 string; one of the method of connecting to the router
B	Power	Input voltage: 11 ~ 13 V type C port power supply / adapter
C	DI	4 strings; DRM, DRM0/5/6/7/8 responds according to grid-connection needs
D	AI	2 strings; Measure wind speed, temperature and radiation
E	Ethernet	10/100 m network port; one of the method of connecting to the rouher
F	DO port	2 strings; Active DO; output dry contact, heat pump (1st generation) and generator
G	RST	Long press to restart ECC
H	USB port	1-string standard USB for data export and local upgrade
I	RS485 port-4	For use with heat pump
J	RS485 port-3	For communication with energy storage system for AC-coupling plan
K	RS485 port-2	For Modbus to be connected with third-party hosts (to measure wind speed, temperature and radiation)
L	RS485 port-1	For PLC module reused with wired meter; Communicating with ECC-PLC and wired meter
M	4G antenna	1 string; one of the method of connecting to the router
N	SIM card slot	For 4G (Cat M1) SIM card installation
O	TF card slot	For TF card installation to realize data storage; Supported maximum capacity: 64 GB
P	AP button	1. Click the button and the hotspot will be activated 2. The hotspot will be turned off by default after 1 hour. Click the button again to turn on it 3. Long press 10s to clear the networking information

3.2 Interface Description

3.2.1 WiFi antenna

There are 3 methods of connecting ECC to router. WiFi antenna is one of the method of connection between ECC and router in a wireless way.

3.2.2 Power

Plug in the power adapter to power on or off ECC. The Input voltage is 11 ~ 13 V.

3.2.3 DI port

There are 4 strings of DI ports. DRM, DRM0/5/6/7/8 responds according to grid-connection needs.

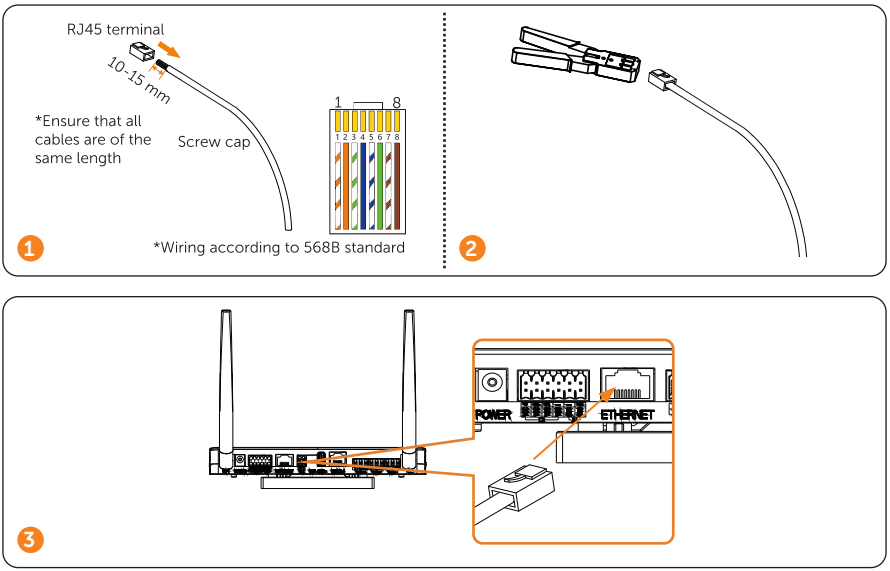
3.2.4 AI port

There are 2 strings of AI ports. This function can be used to measure wind speed, temperature and radiation.

3.2.5 Ethernet

There are 3 methods of connecting ECC to router in a wired way. ECC allows users to communicate with SolaXCloud, or log into the local page of ECC without the wired LAN and WiFi, to set up the system and view the system data via Ethernet network port.

Ethernet installation steps:



NOTICE!

- For stable communication between ECC and router, ethernet cable connection is recommended.

3.2.6 DO port

There are 2 strings of active DO ports (12 V). And DO port can output to dry contact, heat pump (1st generation) and generator.

3.2.7 RST

RST stands for the restart button. Long press the button to restart the system.

3.2.8 USB port

1 string standard USB for data export and local upgrade. USB port is designed for data export and local upgrade. There is only 1 string of standard USB.

3.2.9 RS485 port (4 strings)

There are 4 strings of RS485. 1 string for reused with wired meters; 1 string for modbus communication with the third party host (to measure wind speed, temperature and radiation strength); 1 string for AC-coupling communication with energy storage system; 1 string for heat pump.

3.2.10 4G antenna

There are 3 methods of connecting ECC to router. 4G antenna is one of the method of connection between ECC and router in a wireless way.

3.2.11 SIM card slot

SIM card slot is applied to install SIM card. The built-in slot is optional.

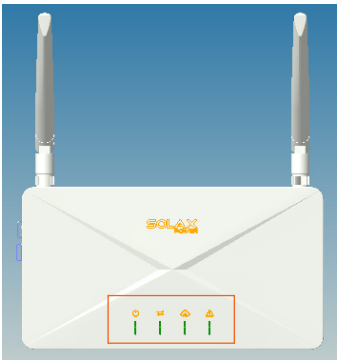
3.2.12 TF card slot

TF card slot is applied for TF card installation, thereby achieving data storage.

3.2.13 AP button

Networking button: Click the button and the hotspot will be activated; The hotspot will be turned off by default after 1 hour. Click the button again to turn on it; Long pree 10s to clear the networking information.

3.2.14 LED Indicator



LED indicator status

Symbol	Indicator	Description
	Power	Display the status of electricity power
	Local communication	Display the local communication status
	SolaXCloud communication	Display the communication with SolaXCloud
	Warning	Warning important faults

LED indicator description

Indicator	Status	Description
ALL	4 indicators flash several times in turn (green, green, green, red)	Firmware upgrade
RUN	Green light steady on	ECC runs normally
	Green light flashes slowly	Mobile phones connect to the ECC AP locally
	Green light off	ECC not power on
SERVE1	Green light steady on	Connected to all microinverters
	Red/Green light flashes quickly alternately (300 ms)	Connected to partial microinverters
	Red/Green light flashes slowly alternately (1 s)	Connecting to microinverters
	Red light steady on	Not connected to any microinverters

Indicator	Status	Description
SERVE 2 (WiFi)	Green light steady on	Router connection succeeds; SolaXCloud connection succeeds
	Red/Green light flashes quickly alternately (300 ms)	Router connection succeeds; SolaXCloud connection fails
	Red/Green light flashes solwly alternately (1 s)	Router connection succeeds; Connecting to SolaXCloud
	Green light flashes quickly (200 ms)	Connection to router fails
	Green light flashes slowly (1 s)	Connection to router (ECC and router)
SERVE 2 (4G)	Red light flashes slowly (1 s)	Connecting to the base station
	Red light flashes quickly (200 ms)	Connection to the base station fails
	Red/Green light flashes slowly alternately (1 s)	Connection to the base station succeeds; Connecting to SolaXCloud
	Red/Green light flashes quickly alternaterly (300 ms)	Connection to the base station succeeds; Connection to SolaXCloud succeeds
	Red light steady on	Connection to the base station succeeds; Connection to SolaXCloud succeeds
ALARM	No light on	Normal
	Red light steady on	ECC error
	Red light flashes quickly	Microinverter error
	Red light flashes slowly	Meter error
RUN	Green light steady on	ECC-PLC connects to ECC normally
	Red light steady on	ECC-PLC connects to ECC abnormally

4 Installation Preparation

4.1 Unpacking

- The ECC undergoes 100% testing and inspection before shipping from the manufacturing facility. However, transport damage may still occur. Before unpacking the ECC , please verify that the model and outer packing materials for damage, such as holes and cracks.
- Unpacking the ECC according to the following figure.

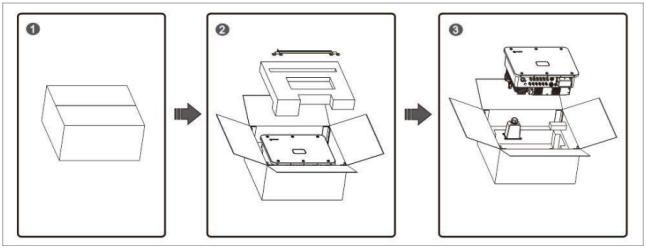
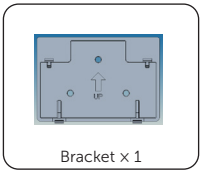


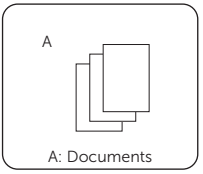
Figure 4-1 Unpacking the ECC

- Be careful when dealing with all package materials which may be reused for storage and relocation of the ECC in the future.
- Upon opening the package, check whether the appearance of the ECC is damaged or lack of accessories. If any damage is found or any parts are missing, contact your dealer immediately.

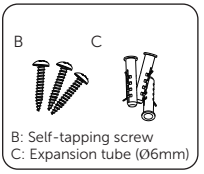
4.2 Packing List


ECC x 1

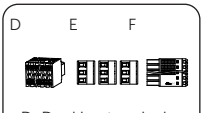

Bracket x 1



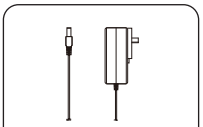
A: Documents



B: Self-tapping screw
C: Expansion tube (Ø6mm)



D: Docking terminal
E: Plug-in terminal A
F: Plug-in terminal B


Power adapter (optional)[1]

Item No.	Items	Quantity
/	ECC	1 pc
/	Bracket	1 pc
A	Documents	/
B	Self-tapping screw	3 pc
C	Expansion tube	3 pc
D	Docking terminal	1 pc
E	Plug-in terminal A	3 pc
F	Plug-in terminal B	1 pc
G	Expansion bolt	3 pc

* Note: 1. Select the power adapter according to the socket in the installation site; The length of power adapter wire is 1.2 m. If the wire length doesn't meet the installation requirement, please use an appropriate power strip.
2. Refer to the actual delivery for the optional accessories.

4.3 Selection of Installation Location

The installation location selected for the ECC is quite critical in the aspect of the guarantee of machine safety, service life and performance.

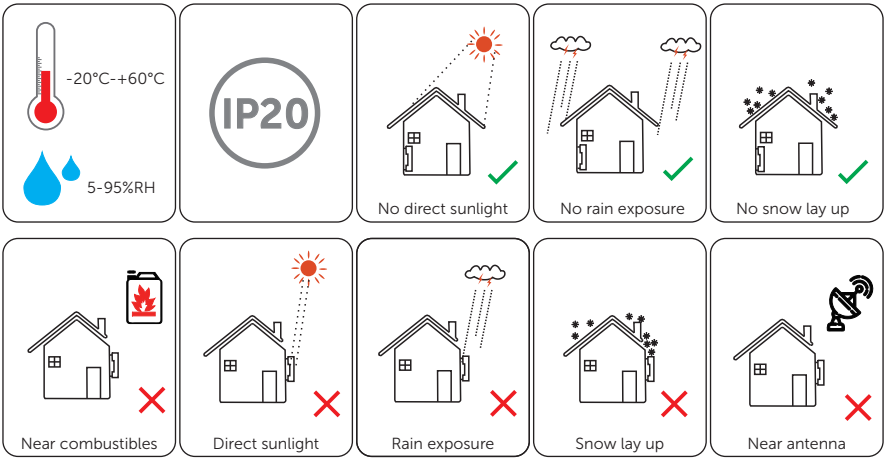
- It has the IP20 ingress protection, which allows it to be installed outdoor;
- The installation position shall be convenient for wiring connection, operation and maintenance.

4.3.1 Environment Requirement

Make sure the installation site meets the following conditions:

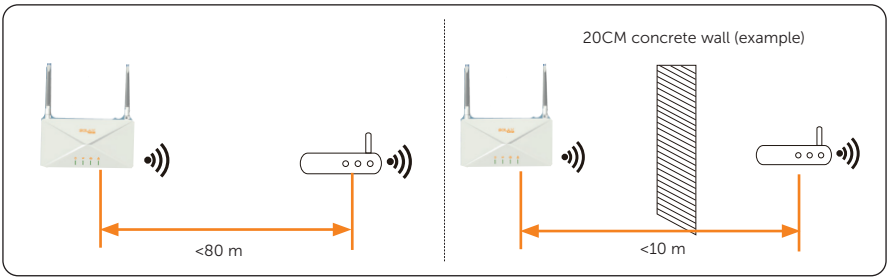
- The ambient temperature: -20°C to +60°C;
- The humidity shall be between 5%-95%;
- Do not install the ECC in the areas where the altitude exceeds 2000 m;
- Install the ECC in a well-ventilated environment for heat dissipation;
- Do not install the ECC in areas with flammable, explosive and corrosive materials;
- Do not install the ECC in areas near combustibles and antenna;
- Install all ECCs and DC connectors under the PV modules.
- Avoid direct exposure to UV, rain and other harmful weather events.

- Avoid electromagnetic inlterference in case of the malfunction of electronic equipment.



4.3.2 Preinstallation check

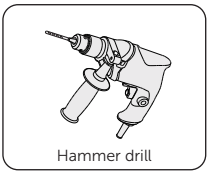
For Wi-Fi mode, the longest connection distance between the router and the equipment should be no more than 80 m; if there is a wall between the router and the equipment, the longest connection distance is 10 m.



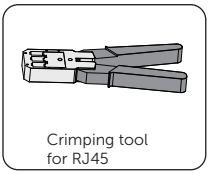
4.4 Tools Requirement

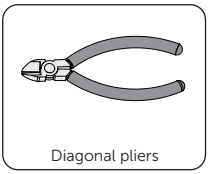
4.4.1 Recommended Equipment

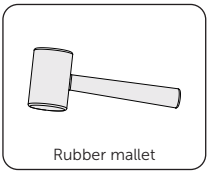
Installation tools include but are not limited to the following recommended ones. If necessary, use other auxiliary tools on site.

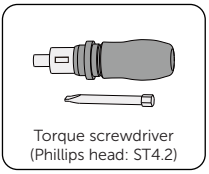

Hammer drill

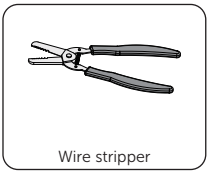

Marker


Crimping tool for RJ45


Diagonal pliers


Rubber mallet

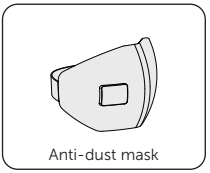

Torque screwdriver (Phillips head: ST4.2)


Wire stripper


Safety gloves


Safety boots


Safety goggles


Anti-dust mask

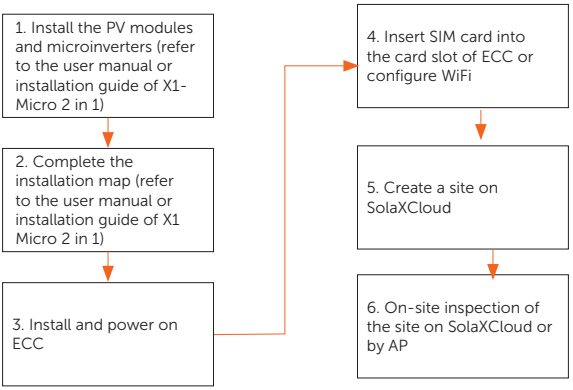
4.4.2 Additionally Required Items

Table 4-4 Additionally required wires

No.	Required Material	Type	Conductor Cross-section
1	Communication cable	Network cable CAT5	4 mm^2
2	RJ45 terminal	Standard	/

4.5 System Installation Steps

Step 1 to 6 have to be done on site. Step 7 to 9 can be finished either on site or at home. Step 6 must be finished correctly to create site on SolaXCloud.


1. Install the PV modules and microinverters (refer to the user manual or installation guide of X1-Micro 2 in 1)
2. Complete the installation map (refer to the user manual or installation guide of X1 Micro 2 in 1)
3. Install and power on ECC
4. Insert SIM card into the card slot of ECC or configure WiFi
5. Create a site on SolaXCloud
6. On-site inspection of the site on SolaXCloud or by AP

5 Installation

5.1 Indoor Installation

5.1.1 Installation method 1 (on the wall):

Step 1: Check the box for the items as follows:

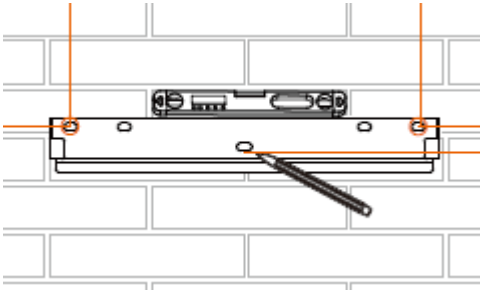
i) ECC

ii) Bracket

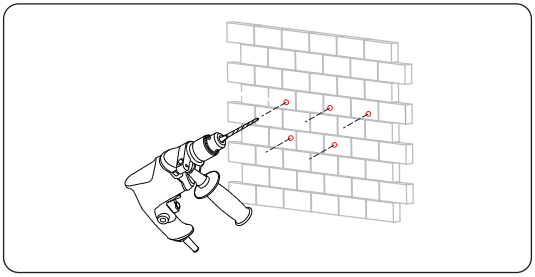
iii) Expansion tube

iv) Expansion bolt

Step 2: User the bracket as a template to mark the position of the 3 holes on the wall using a marker, and adjust it even using the spirit level.

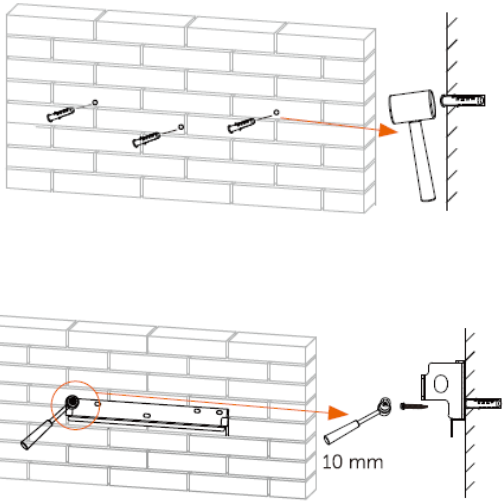


Step 3: Drill holes with a drill (drill bit: ø6 mm), make sure the holes are deep enough (at least 40 mm) for installation.

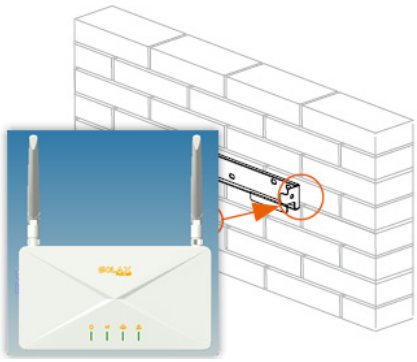


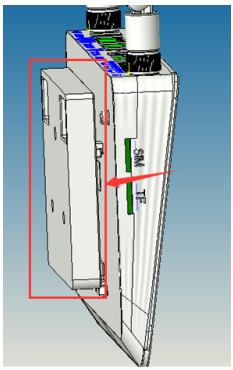
Step 4: Insert the expansion tubes in the holes, place the wall bracket and use self-

tapping screws to tighten the bracket.

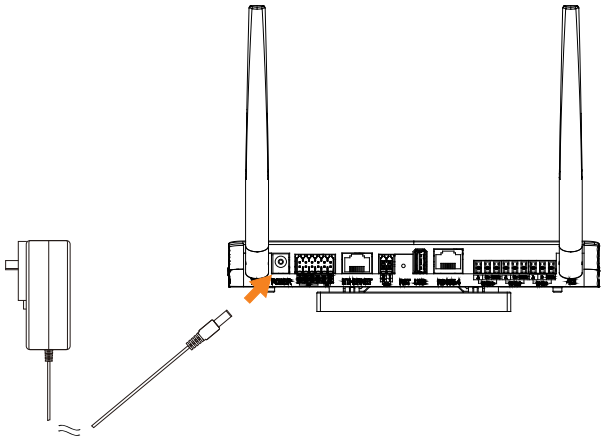


Step 5: Attach ECC to the bracket. Make sure the back side of ECC is fixed well with buckles on the bracket.

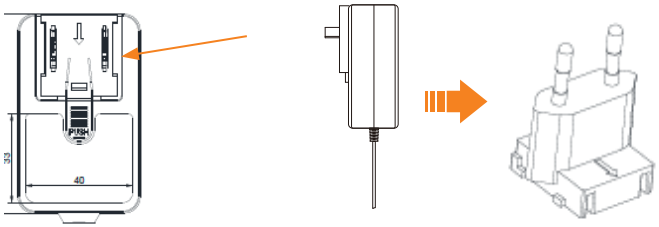




Step 6: Plug in the power adapter to power on ECC.

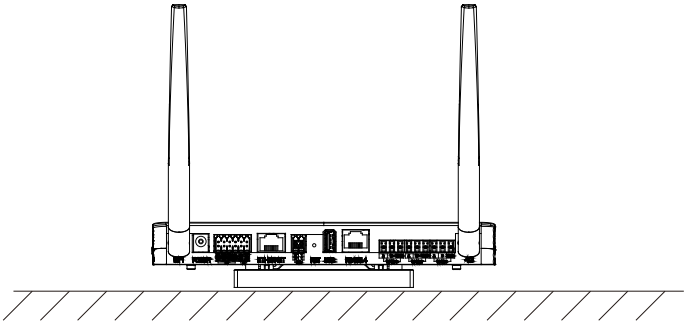


Step 7: Plug in the power adapter to the socket.

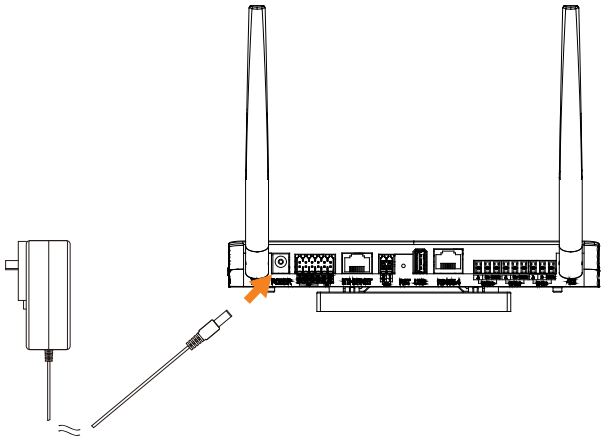


5.1.2 Installation method 2 (on the platform)

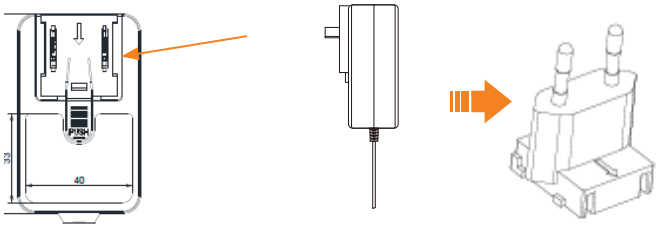
Step 1: Place ECC on a horizontal platform.



Step 2: Plug in the power adapter to power on ECC.、

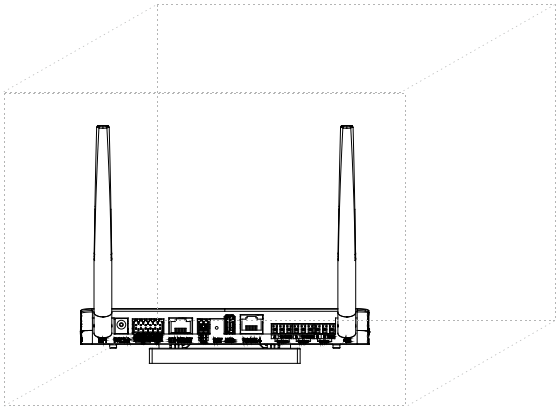


Step 3: Plug in the power adapter to the socket.



5.2 Outdoor Installation

The outdoor installation steps are the same as indoor installation. In addition, a water-proof box is needed to protect ECC.



5.3 Power on ECC

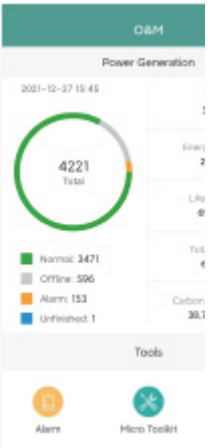
Step 1: Power on ECC.[待提供】

5.4 Connect ECC with Internet

Step 1: Download ECC mobile installer App.

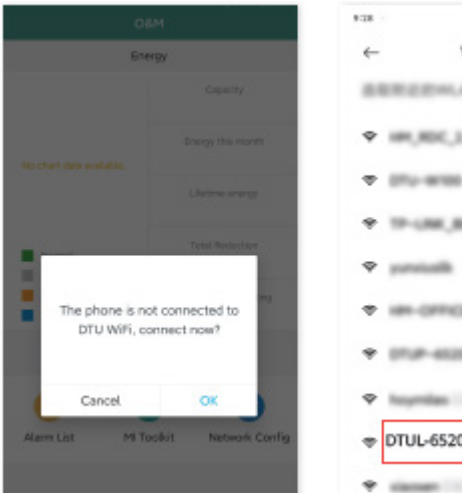
Step 2: Use the APP to connect to the ECC.

i) Open the Installaer App on smart phone/tablet and log in. Click "O&M" at the bottom of the page and then click "Network Config".



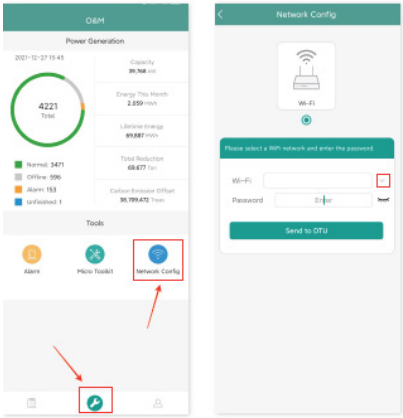
5.5 On-site Inspection to Check the Communication between ECCs and ECC

Step 1: Select the ECC wireless network and click "Connect". The network name of the ECC is composed of UL and product serial number. The network is password-free by default.



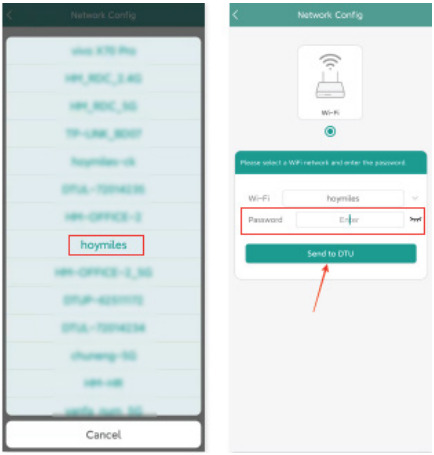
Step 2: Set up with Internet

When the connection is successful, click "Network Config" again and enter the Network Config page.



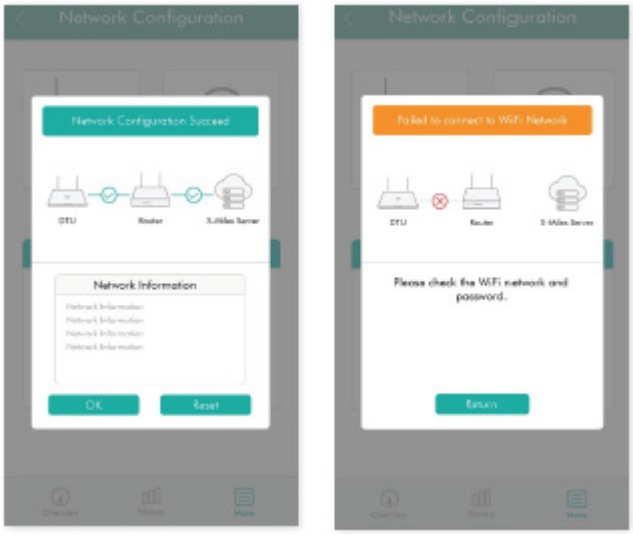
Step 3: Select the router Wi-Fi and enter the password.

Step 4: Click "Send to ECC".



Step 5: The network configuration takes about 1 minute, please be patient.

Step 6: If the network is not connected, please check the Internet as instructed.



Step 7: Check the indicator light of ECC when the connection is successful (green light shall remain on).

NOTICE!
• If your configuration page is inconsistent with the above, please update .the ECC firmware to the latest version.

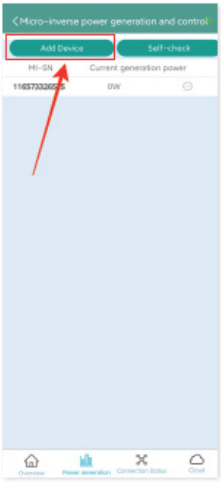
5.6 Create a Site

5.7 Add ECC ID

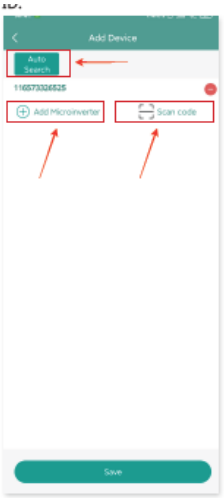
Step 1: If power station is not yet created on the platform, you need to type in ECC SN to view power station data as instructed below.

Step 2: Click "Power generation" button.

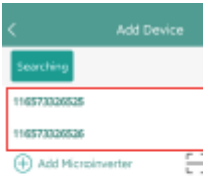
Step 3: Press the "Add Device" button to add the ECC to the list. The ECC added here is only used for on-site debugging, and it will not be uploaded to the server, nor can it replace the power station creation on SolaXCloud.



Step 4: You can click "Automic search" to add ECC, or you can type in/scan the ECC ID.



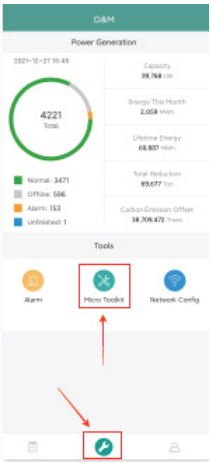
Step 5: The search result of ECCs and ECCs added will be displayed in the list. Tap the button on the right if you want to delete it.



Step 6: Confirm that the ECC ID in the list is correct, and tap Save.

5.8 View Data on SolaXCloud

Step 1: Click O&M and enter SolaxCloud.



Step 2: Click "Power Generation" and you can see the list of ECC and PV power of each ECC.

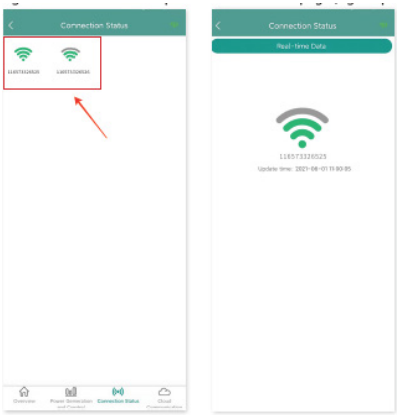
Step 3: If you want to see more details of one ECC, just click the serial number, then you can check the input and output data on the page shown as below.

NOTICE!
• If the ECC signal is so weak that the real-time data are not updated, move the ECC closer to the ECC.

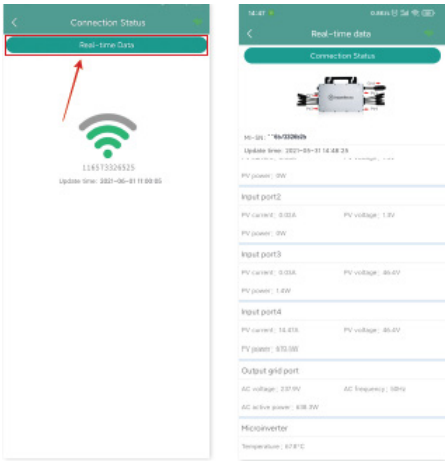
5.9 View Communication Status with ECC

Step 1: Re-enter SolaXCloud and tap "Connection Status".

Step 2: On this page, you can check the signal strength between the ECC and each ECC. Tap the signal icon to enter the respective ECC page (signal quality is constantly refreshed).



Step 3: You can also tap the button to switch the signal quality and real-time data page.



NOTICE!

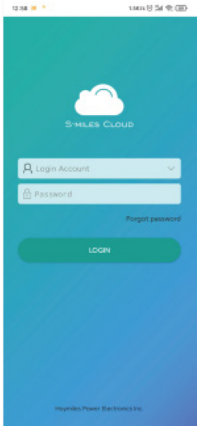
- If the ECC has no signal, please check whether the ECC is powered on or refer to the ECC user manual for troubleshooting.

5.10 Create a site on SolaXCloud

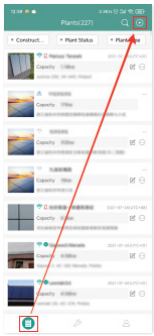
This is a brief description of how to create a new site. You can refer to "Quick Installation for SolaXCloud" for detailed account creation instructions.

Step 1: Search "SolaXCloud" in the APP store or the Play store, or scan the QR code to download the SolaXCloud APP.

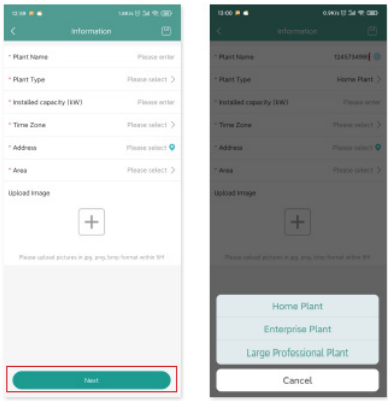
Step 2: Open the app and log in with your installer account and password. If you are a new installer with SolaXCloud, please apply for an installer account from your distributor in advance.



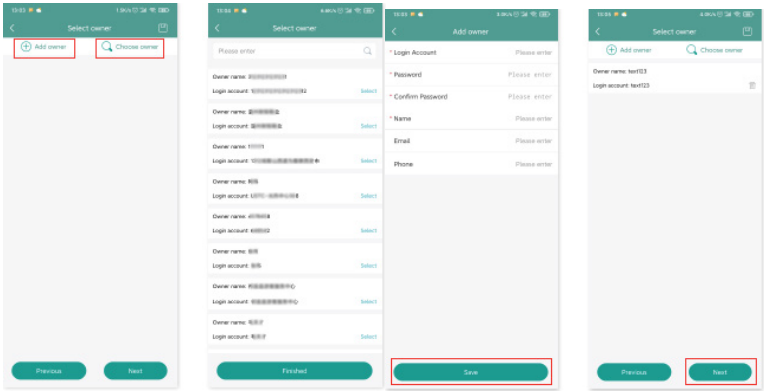
Step 3: Select the station tab on the button, and then select ⊕ on the right top side of the page to add station.



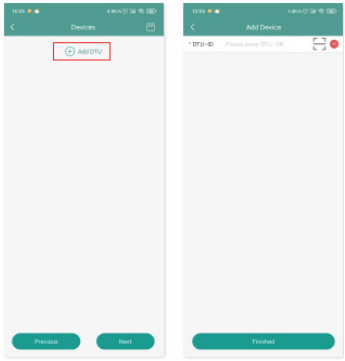
Step 4: Fill in the station details and press "Next". Select one from the three types of plants, enterprise plant and large professional plant.



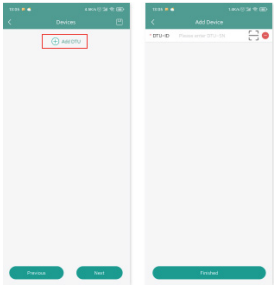
Step 5: Select ower for the plant. Create a new one if there is none.



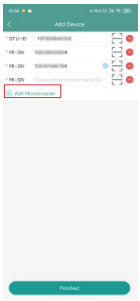
Step 6: Press add ECC, scan or input the ECC.



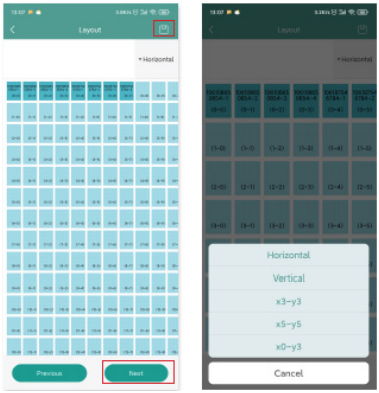
Step 7: Scan or input the ECC ID.



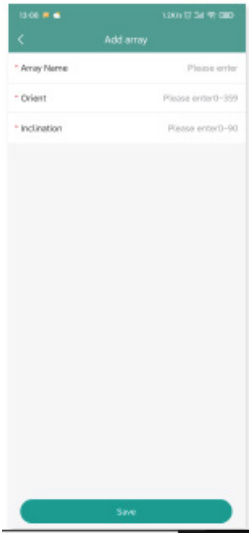
Step 8: Scan or input the ECC ID. Press Finish when all ECC IDs have been input.



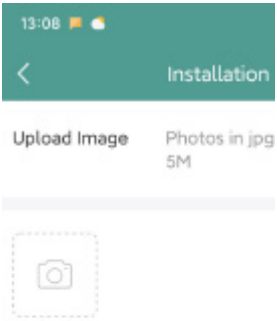
Step 9: Customized the layout based on the installation or click the tick box on the top right to select preset layouts.Then tap next.



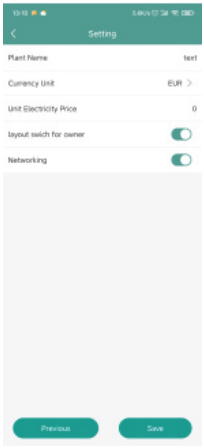
Step 10: Save the design layout and fill in the information.



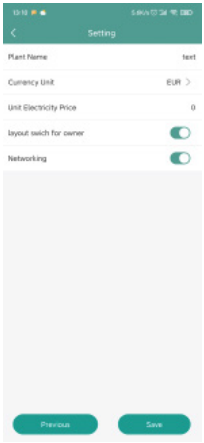
Step 11: Upload a picture of the site and tap next.



Step 12: Please enter the currency unit and your wlwctricity price. Click networking button and tap save to complete the site creation.

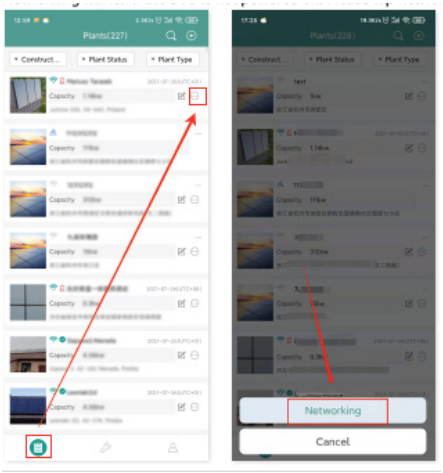


Step 13: The new site will appear on the station list under the installer account.



Step 14: Please wait about 30 minutes, and the station will appear online where you can see the ID of all ECC.

Step 15: Networking will fail if the ECC is not powered on, please tap networking again after the ECC is powered on.



5.11 Customer Login

Step 1: Please download the End User app by searching “Hoymiles” in App Store (IOS) or Play Store (Android).

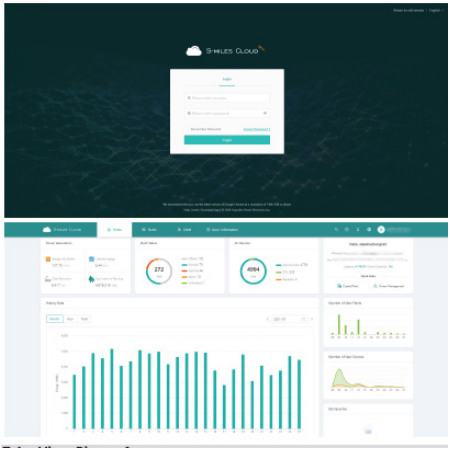
Step 2: Log in with the password and username that have been set up by the installer on the previous step.

Step 3: Customers wii be able to view all details once the data start to upload. If it's the first power station created, normally it takes around 30 minutes for the data to come through.

Step 4: Customers can also view power generation details on SolaXCloud monitoring platform at our website.

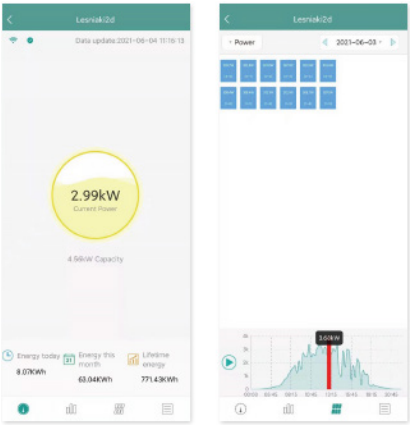
5.12 Browse Station on Website

Log in to your account and browse the station on webpage.



5.13 View Phone App

Download the app on your mobile phone and view station information.



6 Troubleshooting and Maintenance

6.1 LED Indicator Status

Red light	Description
Flashes every 1 second	Wi-Fi disconnected
Flashes every 0.5 second	Connection with server failed
Blue light	**Description**
Flashes every 1 second	No ID
Flashes every 0.5 second	Received data from server
Green light	**Description**
Flashes every 0.5 second	ID searching incomplete
Lights up constantly	Normal
Red+Green+Blue	**Description**
Each color flashes once every 1 second	Power on
Each color flashes twice every 1 second	Firmware upgrade

6.2 Troubleshooting

This section contains information and procedures for resolving possible problems with the ECC , and provides the troubleshooting tips to identify and solve most problems that may occur. Please check the warning or fault information on the App and read the suggested solutions below when error occurs. Contact SolaX Customer Service for further assistance. Please be prepared to describe the details of your system installation and provide the model and serial number of the ECC .

6.3 Maintenance

Regular maintenance is required for the ECC. The table of "Proposal of Maintenance" below lists the operational maintenance for expressing the optimum device performance. More frequent maintenance service is needed in the worse work environment. Please make records of the maintenance.

⚠ WARNING!

- Only qualified person can perform the maintenance for the ECC .
- Only use the spare parts and accessories approved by SolaX for maintenance.

6.3.1 Maintenance routines

Item	Check Notes	Maintenance Inverval
Safety check	• Check the items mentioned in section 1 "Safety" • The safety check shall be performed by manufacturer's qualified person who has adequate training, knowledge, and practical experience.	Every 9~12 months

6.3.2 Upgrading Firmware

Upgrade precautions

WARNING!

- Please make sure that the power supply is normal.

CAUTION!

- If the firmware upgrade fails or stops, please unplug the U disk power off the ECC and restart it. Then repeat the upgrade steps.

Upgrade preparation

- Please check the ECC version and prepare a U disk (USB 2.0/3.0) and personal computer before upgrading. Please make sure that the format is FAT FAT 32.
- Please contact our service support to obtain the firmware, and store the firmware in the U disk according to the following path.

  » ECC_Gateway/xxxxxxxxxxxx_xxx_xxxxxxx_Vxxx.xx_xxxxxxxx.usb (for example: ECC_Gateway/323101049400_ECC_Gateway_V001.01_20240102.usb)

NOTICE!

- VX.XX refers to the file version, XX.XX refers to date.

Upgrade steps

a. Plug the U-disk into the USB port of ECC.

b. Wait for ECC to detect the upgrading files and upgrade automatically.

6.3.3 Device Replacement

a. To disassembling the ECC

» Pull the power adapter.

» Unbind the original ECC on the APP and bind a new one.

7 Decommissioning

7.1 Disassembling the Gateway

Refer to a. To disassembling the ECC for disassembling the ECC.

7.2 Packing the Gateway

- Load the ECC into the original packing material if possible.
- If the original packing material is not available, you can also use the packing material which meets the following requirements:

» Suitable for the weight of product.

» Easy to carry.

» Be capable of being closed completely.

7.3 Transportation and Storage

If the ECC is not put into use immediately, the transportation and storage requirements needs to be met:

Transportation

- Observe the caution signs on the packaging of ECC before transportation.
- Pay attenting to the weight of ECC. Handle with care.
- Wear protective gloves when carrying the equipment by hand to prevent injuries.
- When lifting up the ECC, hold the bottom position of the ECC. Keep ECC horizontal in case of falling down due to tilt.

Storage

- The ECC must be stored indoors.
- Do not remove the original packaging material and check the outer packaging material regularly.
- The storage temperature should be between -40°C and +60°C. The humidity should be between 5% and 95%.
- Stack the ECC in accordance with the caution signs on the ECC carton to prevent their falling down and device damage. Do not place it upside down.
- If the ECC has been stored for more than 10 years, it must be checked and tested by professionals prior to use.

7.4 Disposal of the Gateway

Please dispose of the ECCs or accessories in accordance with the disposal regulations for electronic waste applied at the installation site.

8 Technical Data

Power adapter	100~240 V 50/60 HZ 0.8 A AC input 12 V 2 A DC output
Ethernet	10/100 M
Wi-Fi frequency range	2.4 GHz
Wi-Fi EIRP power	19.5 dBm
Degree of protection	IP20
Operating temperature range [°C]	-20°C ~ 60°C
Humidity	5%~95%
Dimensions [mm]	210 * 113 * 29
Safety	EN 62368-1
EMC	EMC-ETSI EN 301 489-1 V2.2.2, ETSI EN 301 489-17 V3.2.3, EN 55032, EN 55035, EN IEC 61000-3-2, EN 61000-3-3

9 Appendix

9.1 INSTALLATION MAP

Microinverter Installation Map

Make sure N for North

Panel Type:
Azimuth:
Tilt:
Sheet_of_

Customer information:

Gateway series number:

ROW \ COLUMN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A																
B																
C																
D																

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SOUTH AFRICA
service.za@solaxpower.com

Warranty Registration Form

For Customer (Compulsory)

Name _____ Country _____

Phone Number _____ Email _____

Address _____

State _____ Zip Code _____

Product Serial Number _____

Date of Commissioning _____

Installation Company Name _____

Installer Name _____ Electrician License No. _____

For Installer

Module (If Any)

Module Brand _____

Module Size(W) _____

Number of String _____ Number of Panel Per String _____

Battery (If Any)

Battery Type _____

Brand _____

Number of Battery Attached _____

Date of Delivery _____ Signature _____

Please visit our warranty website: https://www.solaxcloud.com/#/warranty or use your mobile phone to scan the QR code to complete the online warranty registration.

For more detailed warranty terms, please visit SolaX official website: www.solaxpower.com to check it.

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