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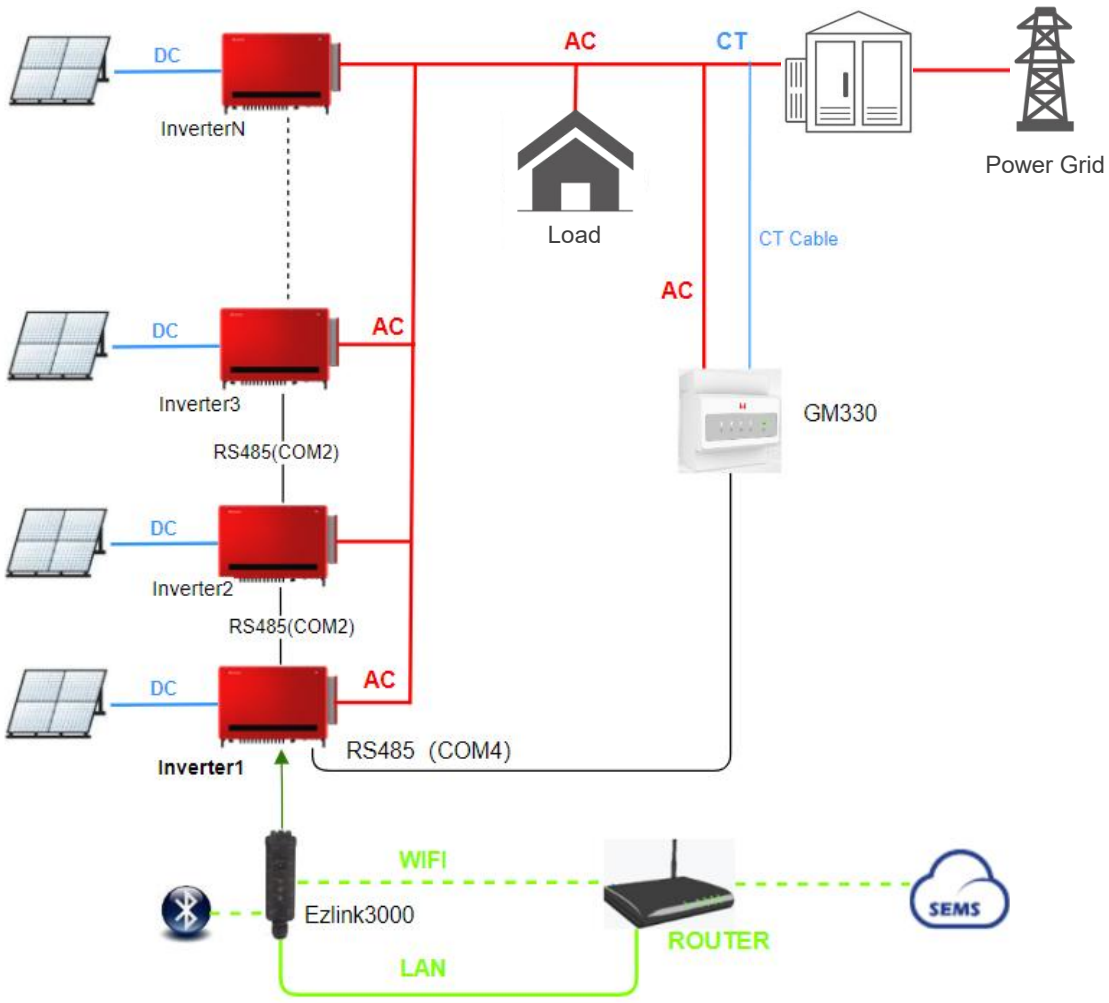
HT Parallel Solution With Ezlink3000+GM330



The HT+Ezlink3000+GM330 parallel solution can satisfy the power export limit function and load monitoring. This proposal shows the 485 connection method between multiple HT inverters, the installation method of the electricity meter, how to configure the Ezlink3000 network, how to adjust the power export limit function, and how to establish a power station.

Notice: this solution is only available for the Australian region.

System Diagram and Introduction



As shown in the figure, Inverter1 is selected as the master inverter, which is connected to the electricity meter GM330 and Ezlink3000. The other inverters are slave machines, and the master and slave inverters are connected in RS485 handheld manner. This solution currently supports a maximum of 10 units in parallel.

Required Devices and Preparation

Required devices

Ezlink3000 module and meter need to be separately purchased.

- ***EzLink3000:*** Customer need to purchase the standard Ezlink3000 and prepare standard network cable themselves for communication connection.



- ***Smart Meter GM330:*** GMA0300-15-00P

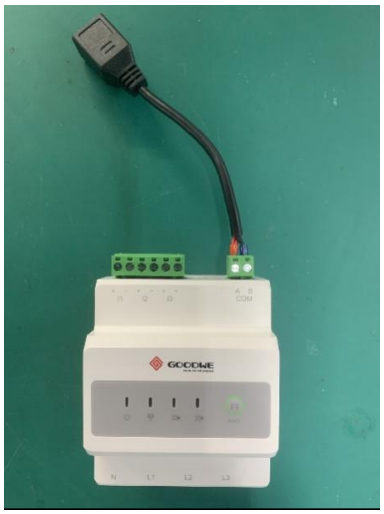


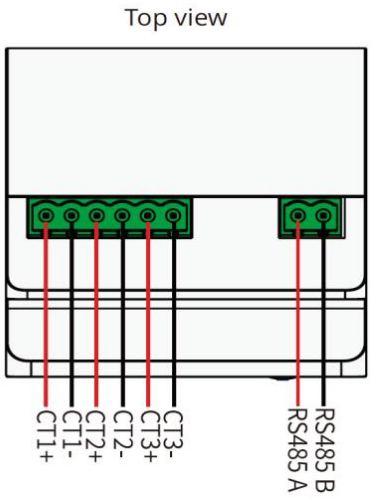
Usage Precautions

Install Ezlink3000 on the USB port (COM1) of the communication module of the host inverter (as shown in the figure below). Then power on the inverter, download and install SolarGo, and open Bluetooth to connect the device using the APP. If using LAN mode, no network configuration is required. If using WiFi, connection configuration is required.



- **Choose Master:** Use HT inverter to set parallel, it is recommended to use the model with the largest power as the master inverter and plug in Ezlink module.
- **Communication:** The master operates normally if there is a slave abnormality. If the slave does not work, the whole parallel system can operate normally. If the host is abnormal, the whole system cannot work.
- **Cable:** Customers need to prepare cables according to their scenario. Use standard STP CAT5E/CAT6 cable with a length better within 5m. If the length exceeds 5m, it is recommended to use CAT7, but the total length should not exceed 10m. Communication cables are daisy-chained for each inverter.
- **GM330:** There is no CT in the delivery. The customer needs to prepare NA:5A CT separately or order from GoodWe. Connect the red and black wires of the RS485 adapter cable to the 2-PIN green terminals in the accessory package. Plug the adapter cable into the COM A and B ports (red to A, black to B).

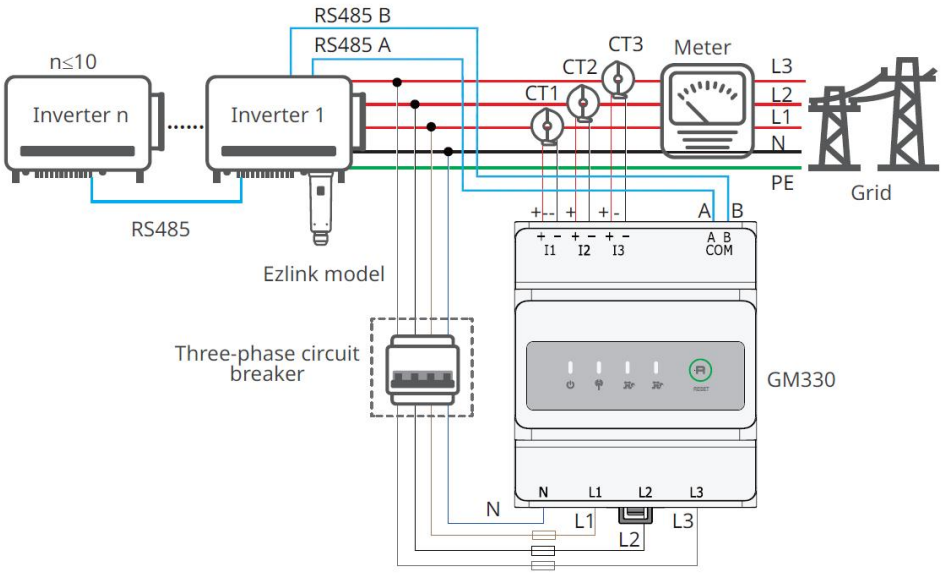




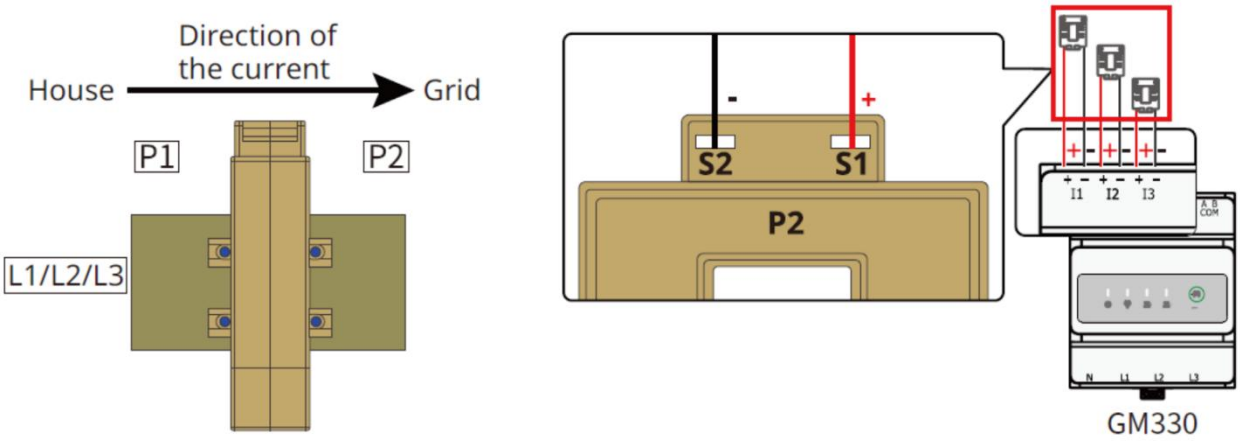
Plug the network cables from the accessory pack into the Meter port of the inverter and the port of the GM330 adapter. Install the smart meter to the master inverter; otherwise, it may lead to abnormal communication.

Communication Type	COM Port	Port Definition	Function Description
RS485	COM2	1、RS485 A1 2、RS485 B1 3、RS485 A2 4、RS485 B2 5、Grounding 6、Grounding	Used to connect the inverter to other inverters and master inverter connect ezlink
	COM4	1、RS485 A 2、RS485 B	Used to connect smart meters and complete anti backflow function

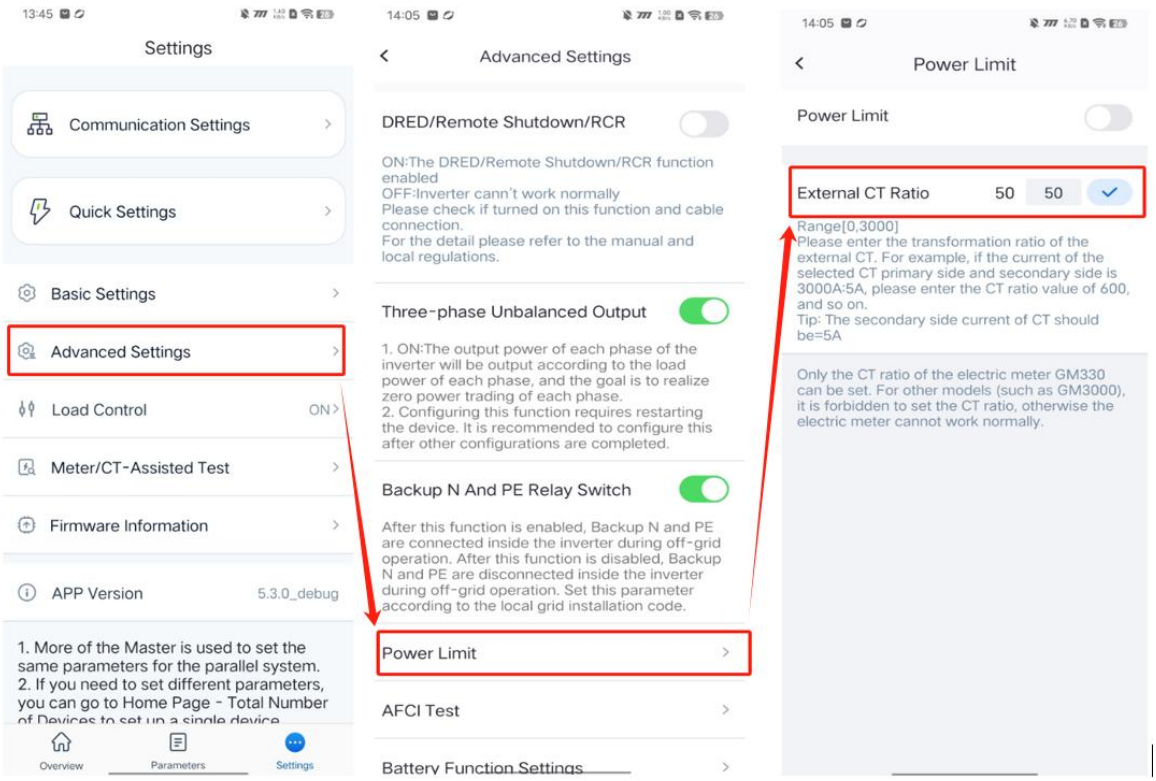
Theoretically, the connection could enter from A1 and B1 or A2 and B2 of the inverter and lead out the other end. For future operation and maintenance, temporarily define A1B1 as the RS485 entry end and exit from A2B2. A1B1 on the host side connects to the Ezlink3000, and A2B2 connects to the next slave.



Current Transformer: The CT is connected to the I1, I2, and I3 ports of the meter, respectively. Connect the GM330 and CT according to the diagram below. The CT direction should be P1→P2 for the inverter→grid. S1 on the CT is the I+ of the pin on the meter. When selecting CT, pay attention to the size of the hole opening and the specifications of the copper plate to ensure compatibility.



Process of setting CT ratio should be done in SolarGo. Fill it in according to the maximum value of CT undertaking currents-nA: 5A. For example, if using CT1000A, fill in the value of 1000A/5A = 200.



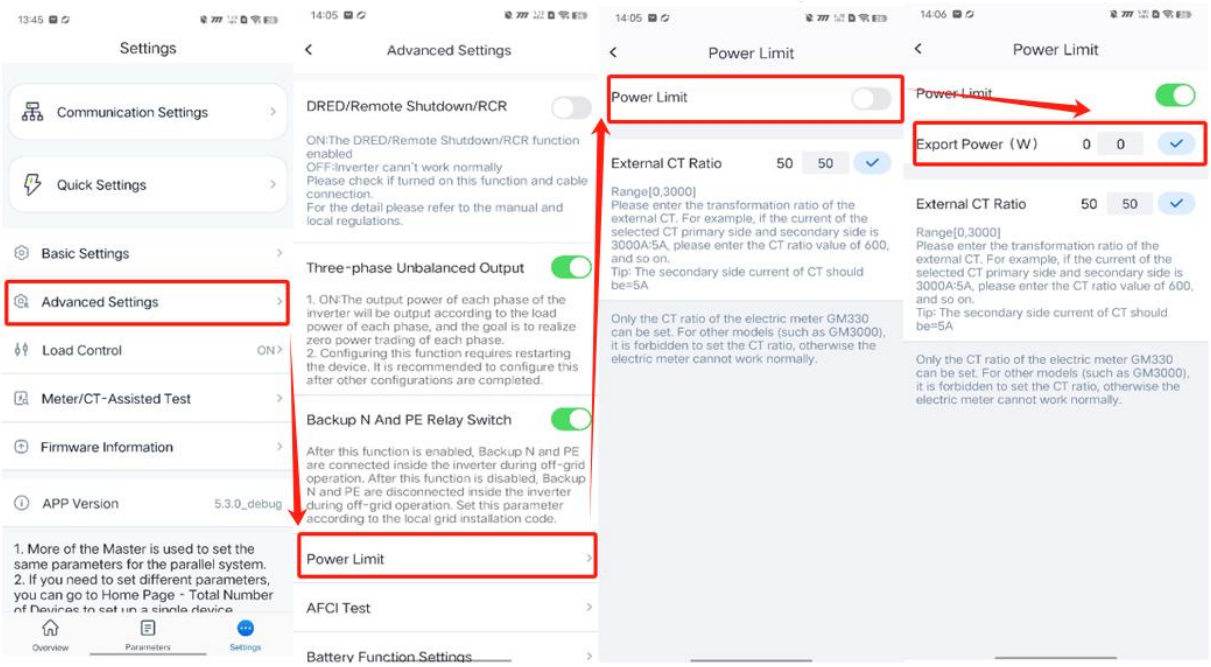
Power Limit Solution

With GM330, the export power limit function can be realized when the system contains multiple inverters in parallel connection. Install and connect the smart meters to the master inverter to avoid abnormal communication, which may cause the whole system to malfunction. The export power unit is in W, and this value can be set to positive, negative, or zero. For example:

+100W: Continuously deliver up to 100W to the grid.

-100W: Continuous purchase of 100W from the grid.

0W: Zero export, limit upstream power to 0W.

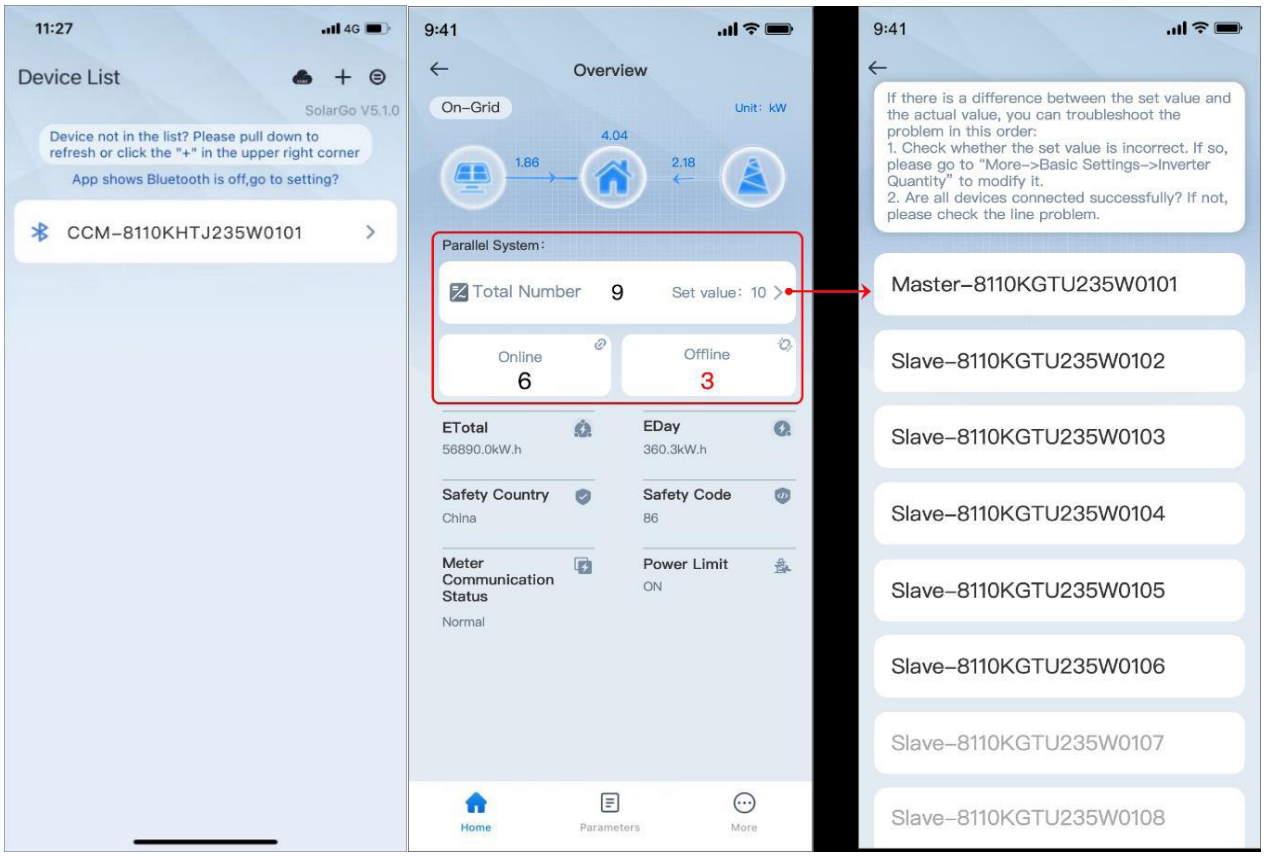


Note: Please turn off the power limit if no export limit is required

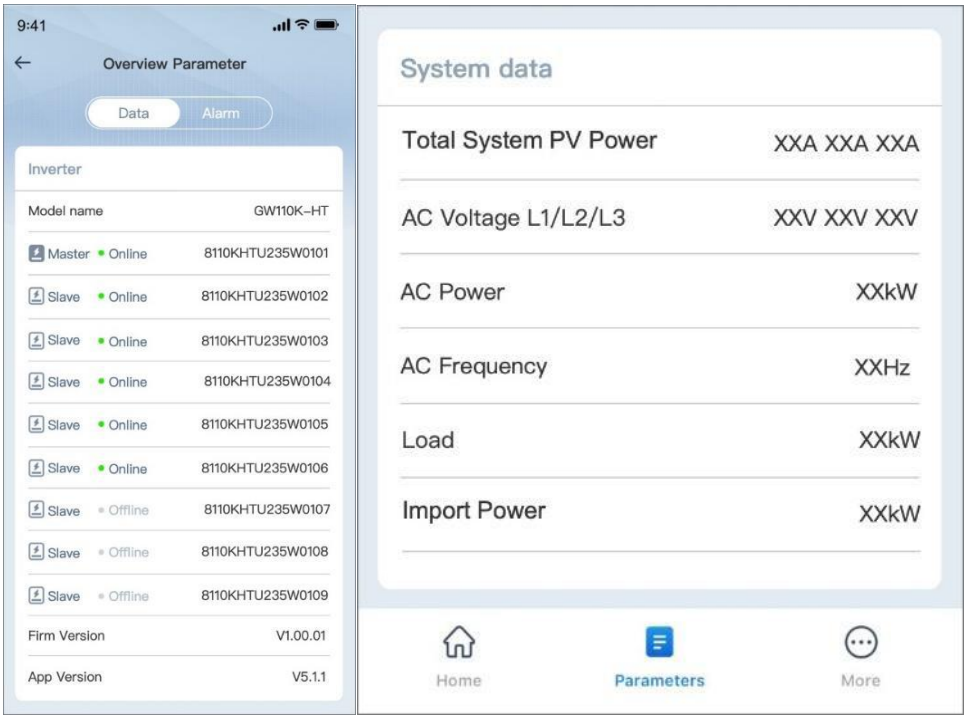
Set Parameters in Parallel System

- Check the inverter firmware version through the SolarGo app. Ensure all the inverters have the same firmware version (DSP higher than 18, ARM higher than 16, Ezlink3000 higher than 04, SolarGo higher than 5.4.0). If not, contact GoodWe to upgrade the software version. All firmware is recommended to be upgraded before grid connection to avoid reading errors.
- Connect the Ezlink3000 of the master inverter with Bluetooth in SolarGo (check the master's SN). The first part will have a Parallel icon CCM (Ezlink3000), and the rear part is SN. Enter into the parallel interface; at this time, the Ezlink3000 will automatically detect the number of parallels. Click Settings and select Communication Settings to configure the network. (The Ezlink3000 can only be connected via Bluetooth, then connect WIFI to enter the Local Area Network).

After entering the homepage, you can view the total number of devices connected to Ezlink3000, the number of online and offline devices, the total and daily power generation of the power station, and other related parameters. Click on "Parallel System" ->"Total Number" to expand the SN of the master-slave inverter.

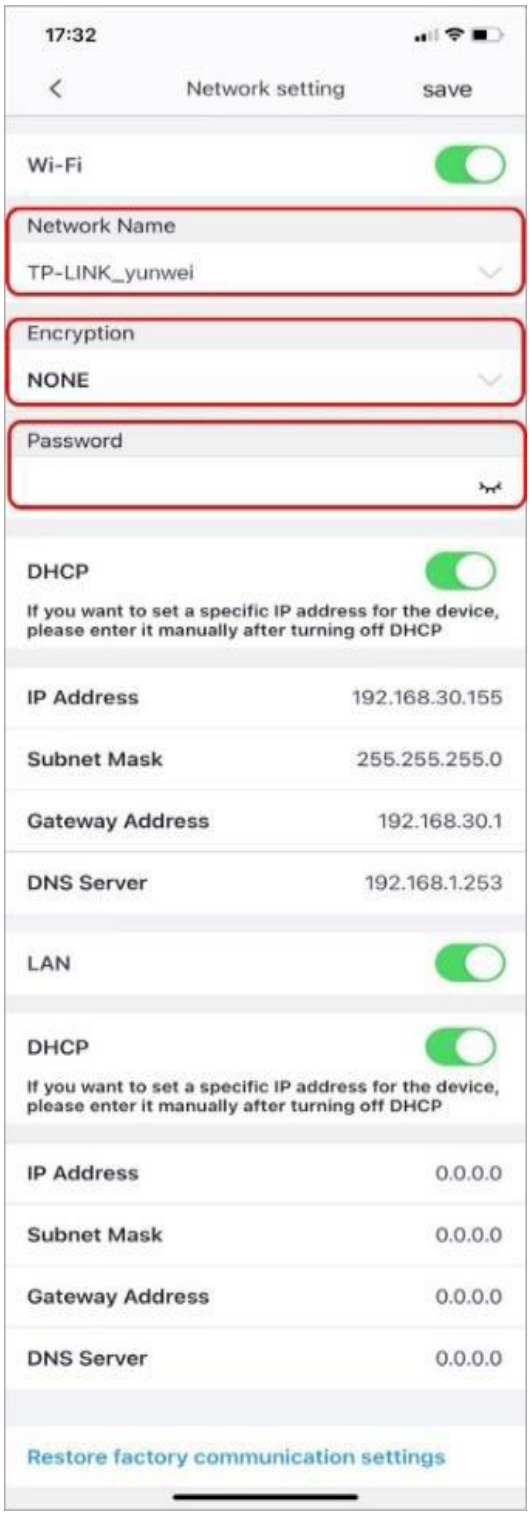


Select "Parameters" to view all device statuses and system data in parallel operation.



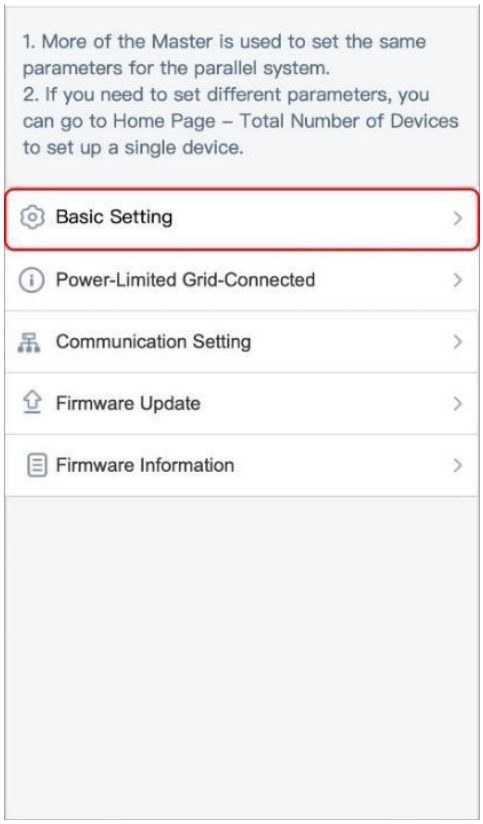
Configure Ezlink3000 network

Select "More" -> "Communication Setting". If using Wi-Fi communication, fill in the "Network Name", "Encryption", and "Password" for the cloud board to connect to the router. After filling out, click the "save" button to save. Observe the status of the cloud panel communication light.



Initialize the inverter(s)

After Ezlink3000 is connected to the master and slave inverters by hand, power on each inverter. Ezlink3000 will self-network based on the queried inverters. Open SolarGo, click on the Bluetooth SSID for the corresponding inverter -> "Setting" -> "Basic Setting". Here, set the number of inverters for the current parallel system and select the safety code required by the local power grid.



Power Limited Grid Connected

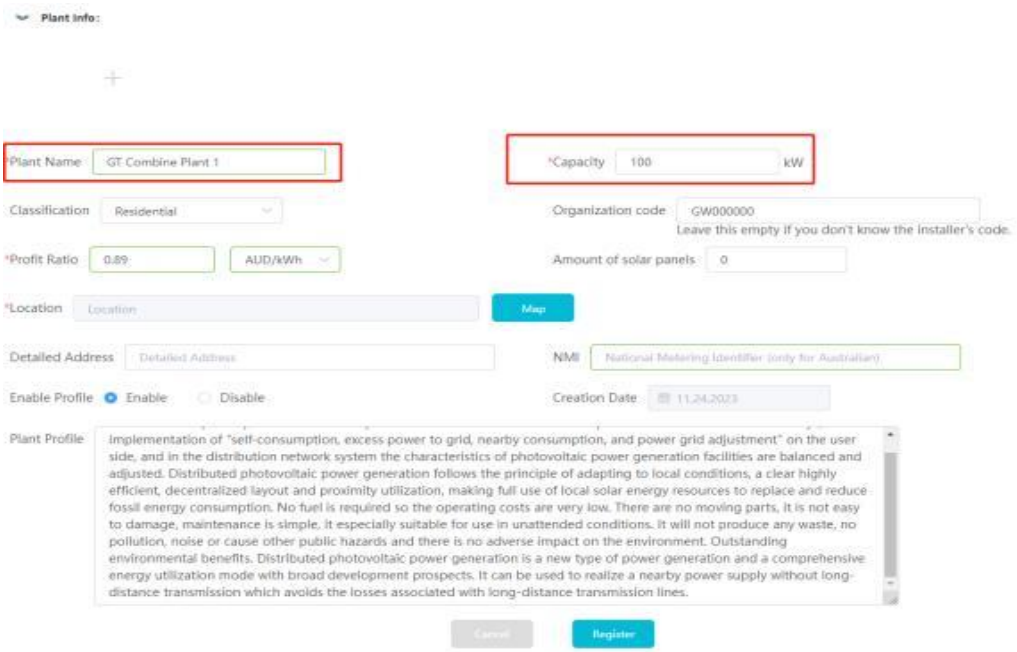
Click "More" -> "Power Limited Grid-Connected", and in the pop-up page, enable the power export limit switch "Power Limited Grid Connected" to set the power export limit-related parameters.

Parameter	Description
Power-Limited Grid-Connected	If the power limiting and grid connection are enabled, the following parameter configurations will automatically unfold
Power-Limited Type	Choose total power control or single-phase power control mode
System Installed Capacity	Maximum power of a single machine * maximum number of parallel machines
Maximum Feeding Grid Power	The maximum power allowed for the inverter to output to the grid. It is recommended to be set according to the threshold allowed by the grid company for reverse current.

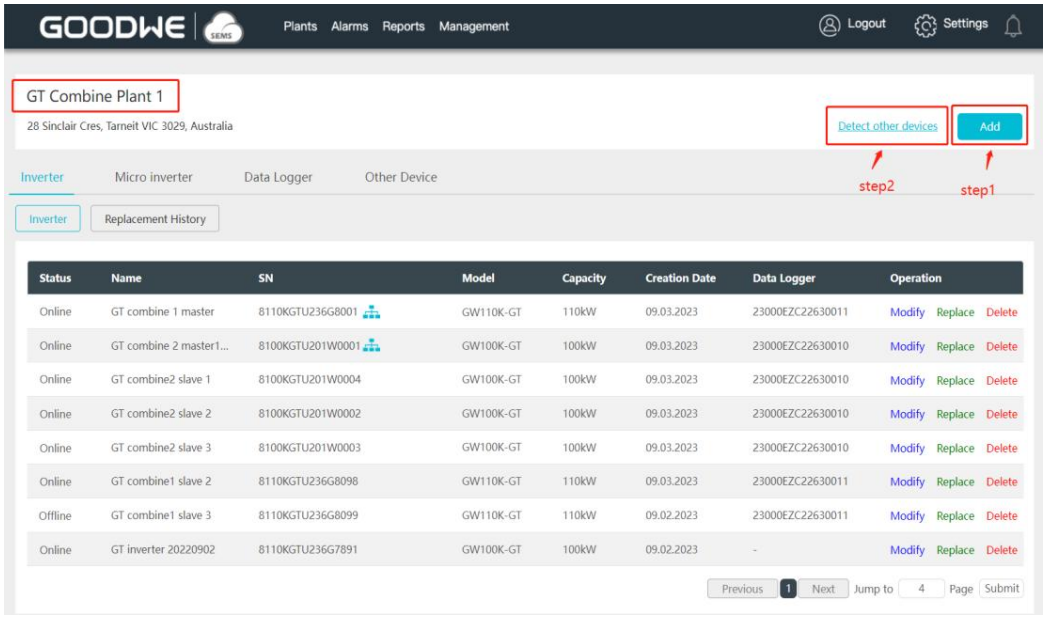
Maximum Feed Grid Power Offset	Allow the output power based on the power grid power based on the maximum feed power grid
Power Regulation Period	When conducting power regulation, Ezlink sends the time interval between two adjacent control commands to the inverter
Maximum Protection Time(s)	Set the maximum time from the inverter detecting the reverse current phenomenon to adjusting the inverter output power to 0.
Handling Protection Exceptions	When the setting value of the anti-countercurrent overrun protection is required, the power limit or the network processing needs to be performed.
MeterCommunication Exception Handing	When Ezlink detects abnormal communication between the inverter and the meter, set Ezlink to control the percentage of inverter output power or shutdown.
Inverter Commnuication Exception Handing	When Ezlink detects abnormal communication with the inverter, set the percentage of output power of the inverter controlled by Ezlink or shut it down.
Communication Timeout Setting(s)	The longest time from detecting the reflux phenomenon to adjusting the output power of the device to 0

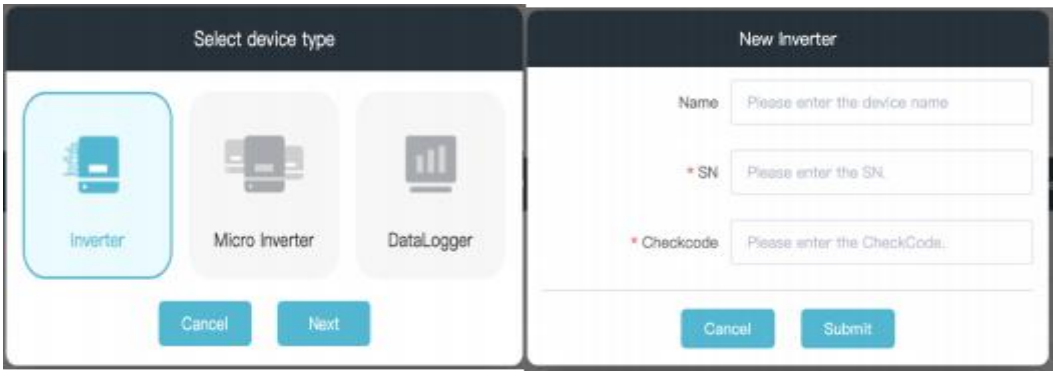
Create a Plant

Login to the SEMS platform, click on "Plants" -> "Create", and then fill in the Plant Name, Capacity, and other related power plant information.



After creating the power station, click "Add" on the plant page to add equipment. Select "Inverter Add", input relevant information of the inverter, and bind the power station and equipment.

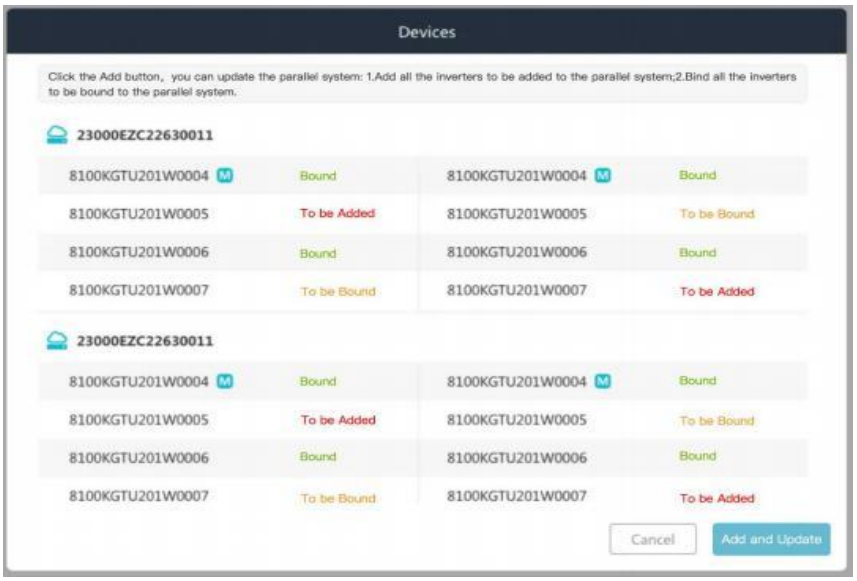




Click "Detect other devices" -> "Scan by Inverter" to scan the relevant inverters.



All inverters connected to Ezlink3000 will be displayed in this pop-up box, showing the inverter SN and the corresponding Ezlink3000 SN. Also, the load consumption will be shown on the SEMS portal.





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