Solar Guardian PC

USER MANUAL

EN

About this manual

This manual aims to provide end-users with Solar Guardian operations and management.

- **Symbols Explanation**

🕮 It means emphasizing and supplementing the descriptions or providing tips to help you solve a problem or save time.

- **Applicable system Instruction**

Applicable system	Example
Select a single menu option	Click "Monitor."

- **The examples in this operation manual are completed using Solar Guardian version 2.0.12 under Windows 7 system.The display interfaces involved are for reference only. Please refer to the real displays.**

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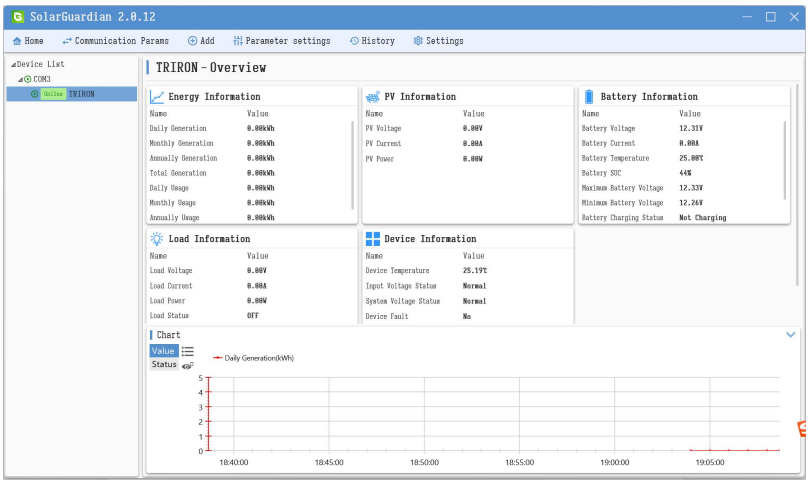
1 Overview

Solar Guardian PC software (after this referred to as "PC software") provides users with a free power station management system. After adding the devices to the PC software, users can directly remotely monitor the devices or set parameters through the PC software. The PC software helps to reduce the device maintenance cost and greatly improves work efficiency.

Features:

- Quick-add the device information
- Global monitor the system status
- Convenient parameters setting function
- Support history data export



2 Quick Start Guide

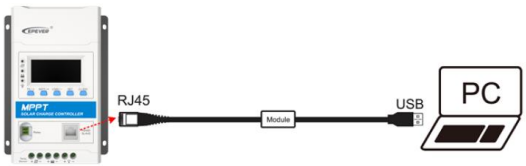
2.1 Install Solar Guardian

For detailed installation procedures, please refer to the ***Solar Guardian Installation***, which is stored in the installation package by default.

2.2 Use Solar Guardian to monitor the device through the serial port

2.2.1 Connect the device

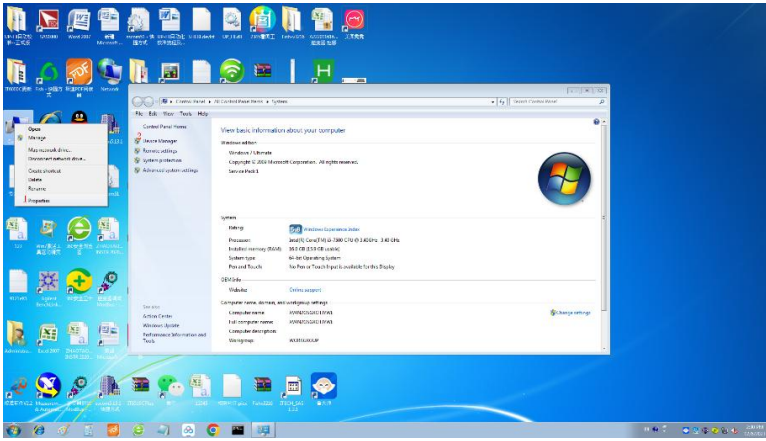
Connect the device to the PC with a dedicated communication cable. The following figure takes the connection of TRIRON and PC as an example. Connect one end (J45 port) of the communication cable (Model: CC-USB-RS485-150U) to the TRIRON, and connect the other end (USB port) to PC. For other devices, the applicable communication cable is determined by the device's communication port.



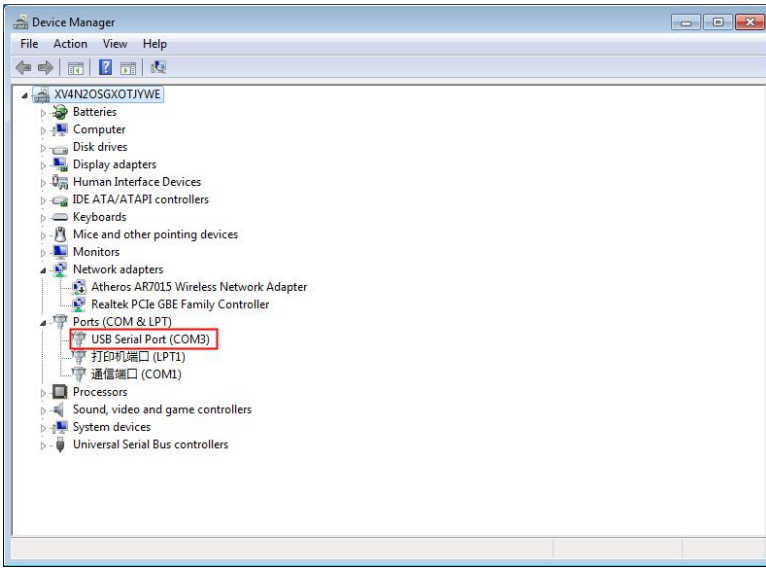
2.2.2 Check the port where the device is connected to the computer

1. Right-click the icon

to pop up the menu and Click “Properties” to pop up the “View basic information about your computer”, then select "Device Manager".



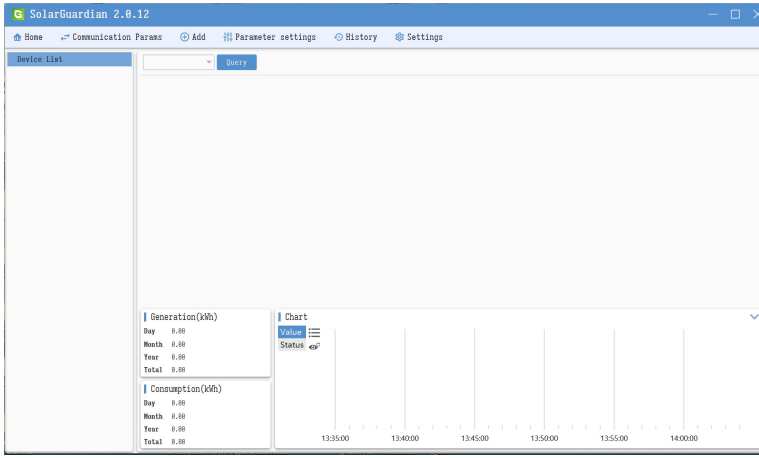
2. In the "Device Manager" interface, select "Port" to view the currently connected COM port. Remember the COM port the device is connected to, which is required when configuring communication parameters. The current COM port in the example is COM3.



2.2.3 Monitoring the device through the serial port

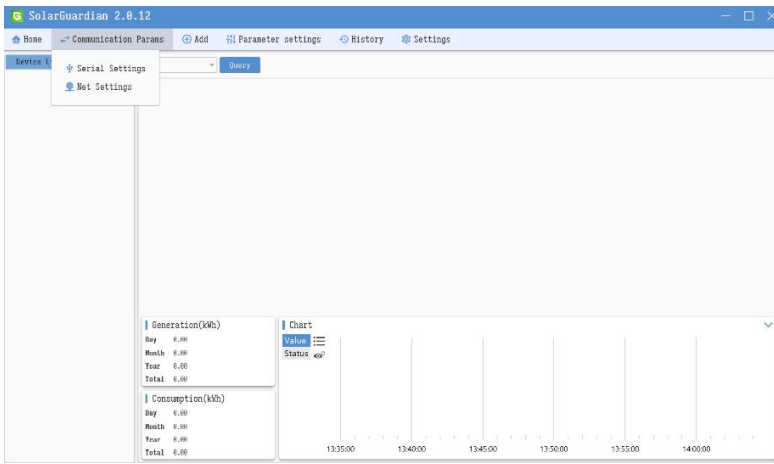
1. Double-click the shortcut

on the computer desktop，Enter the main page of software.

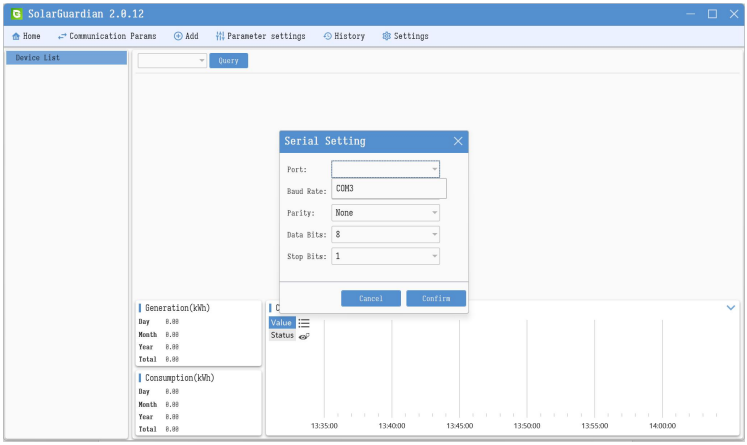


2. Configure communication parameters.

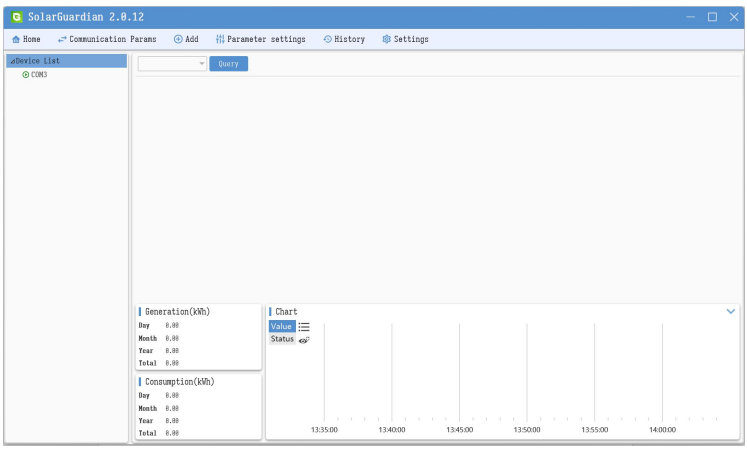
(1) Click "Communication Params" and select "Serial Settings"



(2) The serial port configuration page pops up. Keep the default values for "Baud rate, Parity, Data Bits, stopits" and select the COM port corresponding to the device. The example is COM3. Click "Confirm".

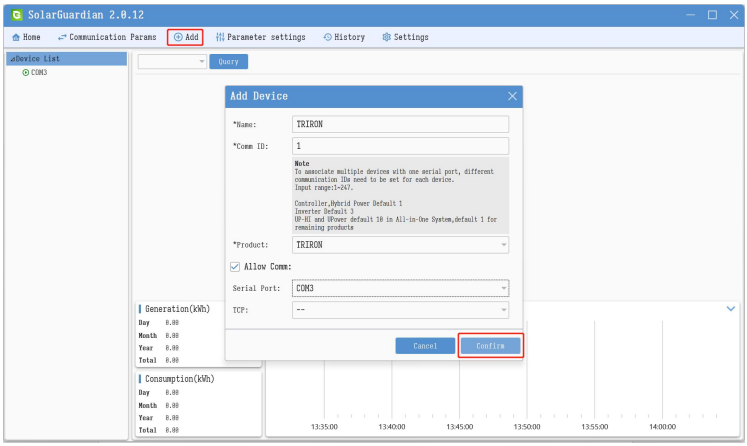


(3) The added COM port is displayed on the left.



3. Add the device that needs to be monitored under the COM port.

(1) Click "Add" in the upper navigation bar to pop up the "Add Device" page.



Fill in relevant information:

(a) Name: fill in whatever you want.

(b) Device communication ID: Fill in the correct communication ID according to the actual device type. XTRA is the controller, so fill in 1.

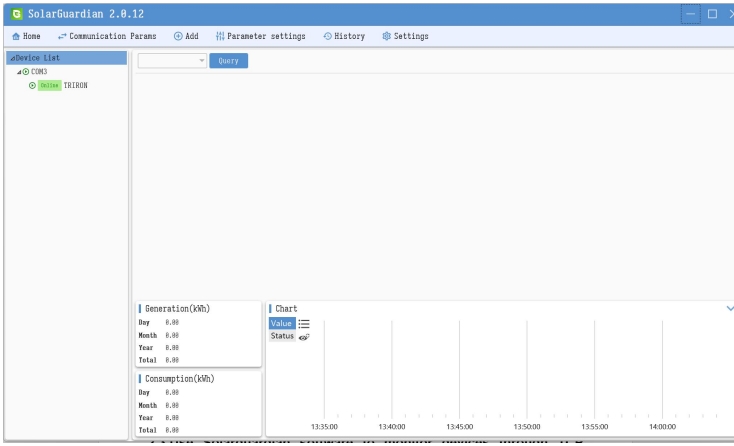
(c) Product: Select the correct product series based on the actual equipment.

(d) Serial port: Select the COM port to which you want to add the device. In the example, "COM3" is selected.

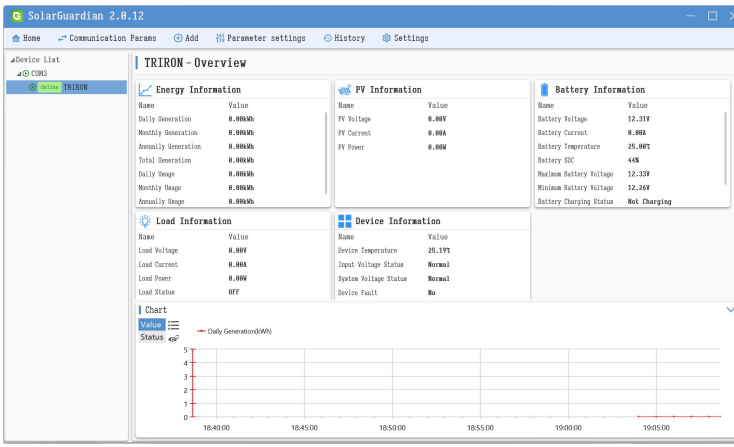
(e) Click "Confirm" and the device XTRA is successfully added under COM3.

Regarding the device communication ID, if the device is an inverter, the default ID is 3; if the device is UP HI, UPower or MT80, the default ID is 10; for other devices, the default ID is 1. If the user has modified the device communication ID, please fill in the actual ID.

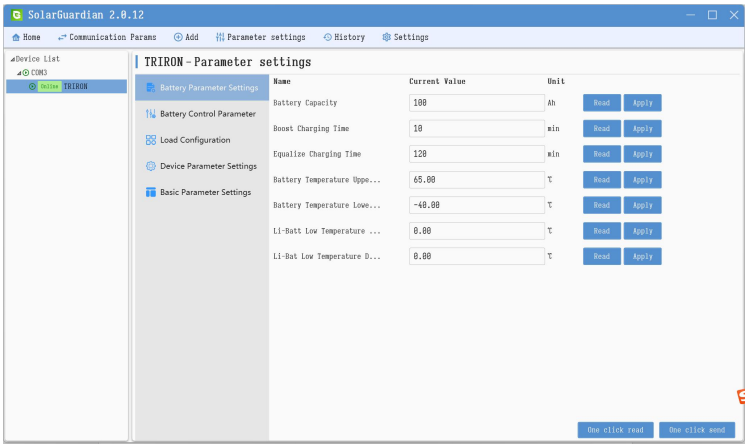
(2) The left side of the interface displays the added devices under the COM port.



4. Double-click the device to view the real-time data of the device.



5. Click "Device Parameter Configuration" in the upper navigation bar to enter the device parameter setting page, where you can set various parameters of the device.



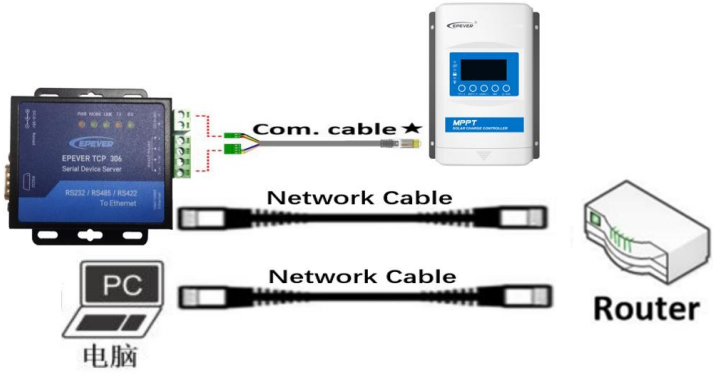
2.3 Use Solar Guardian software to monitor devices through TCP module

2.3.1 Connecting devices

1. Use the 485 communication cable that comes standard with the TCP module to connect the RS422/RS485 interface of the TCP module and the RJ45 communication port of TRIRON.

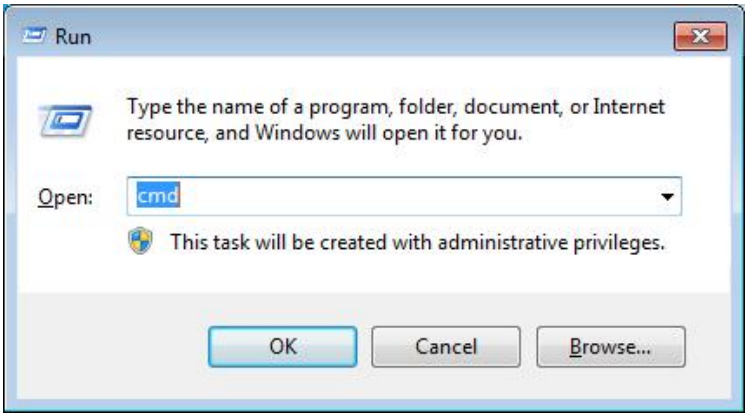
Other controllers, inverters or all-in-one machines use corresponding adapters to connect according to the actual RJ45 communication port.

2. Use the TCP306 standard network cable to connect the Ethernet interface of the TCP module and the router.
3. Connect the computer to the router connected to TCP306 through a network cable to **ensure that TCP306 and the computer are in the same network segment**.

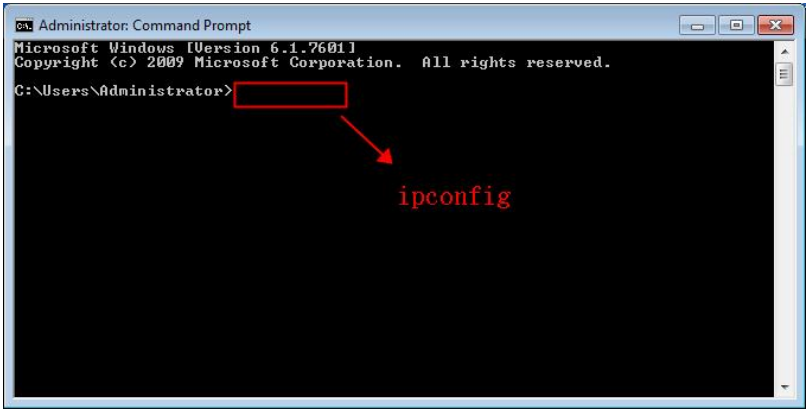


2.3.2 Check the local IP address of the computer

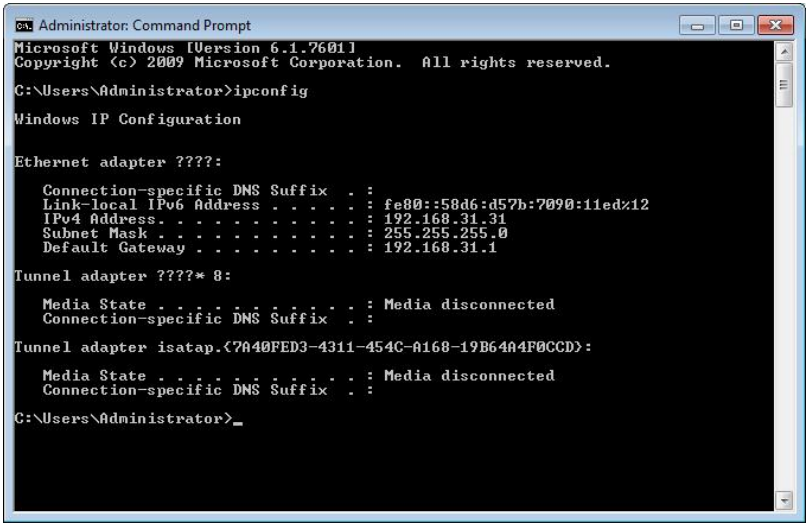
1. Use the PC keyboard shortcut key +R to pop up the run window, enter the "cmd" command and press “OK”.



2. Enter the "ipconfig" command in the pop-up window and press Enter to view the computer's local IP address.



3. As shown in the red box in the figure below: the computer's local IP address: 192.168.31.110; subnet mask: 255.255.255.0; default gateway: 192.168.31.1

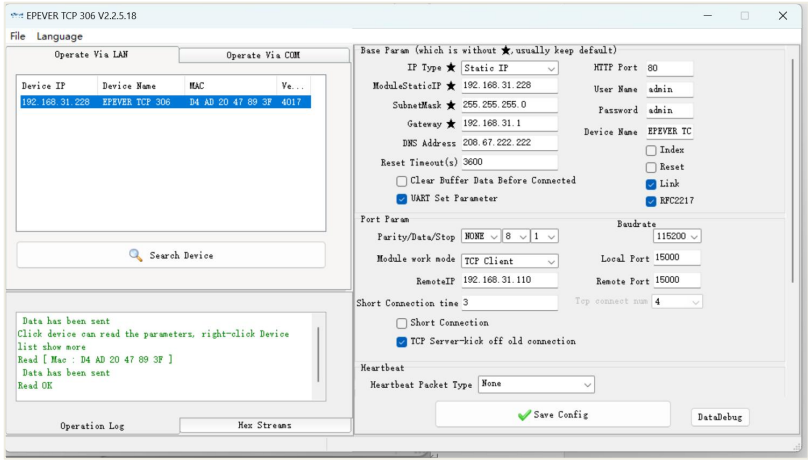


2.3.3 Use TCP configuration tool to modify parameters

1. Open the configuration software EPEVER TCP 306 V2.2.5.18 to configure the TCP module (for configuration software, please contact after-sales technical support), and click "Search Device".

2. The configuration software searches for the TCP module on the same network segment and displays a record on the page.

3. Double-click the TCP306 device record on the page to display the TCP306 configuration page.



Set related parameters:

(1) IP address type: Select "Static IP"

(2) Module static IP: Enter the address in the same network segment as the computer IP. The first 3 digits of "Module Static IP" must be consistent with the first 3 digits of the computer's local IP. The computer's local IP is 169.254.181.93, which needs to be changed to 169.254.181.111 (the last digit can be entered freely in 1-254).

(3) "Subcode mask" and "gateway" need to be consistent with the local subcode mask and gateway of the computer. The computer's subcode mask is 255.255.255.0, and the default gateway is 169.254.181.1. It is modified to the same value here.

(4) Module working mode: Select "TCP client".

(5) Target IP/domain name: The default is hncomm.epsolarpv.com. Fill in the computer's IP (169.254.181.93).

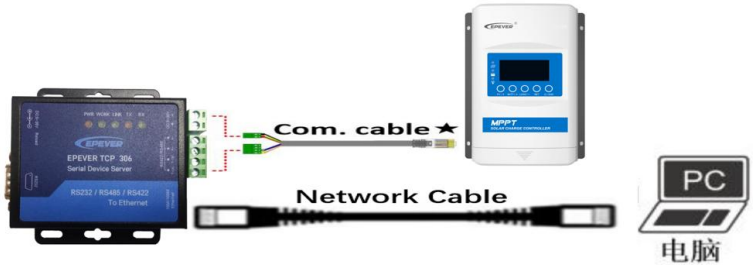
(6) Remote port: fill in 15000.

(7) Click "Save Parameters", and the execution box on the left displays "Correct Execution", indicating that the TCP module parameters are successfully set and saved.

(8) Close the configuration software.

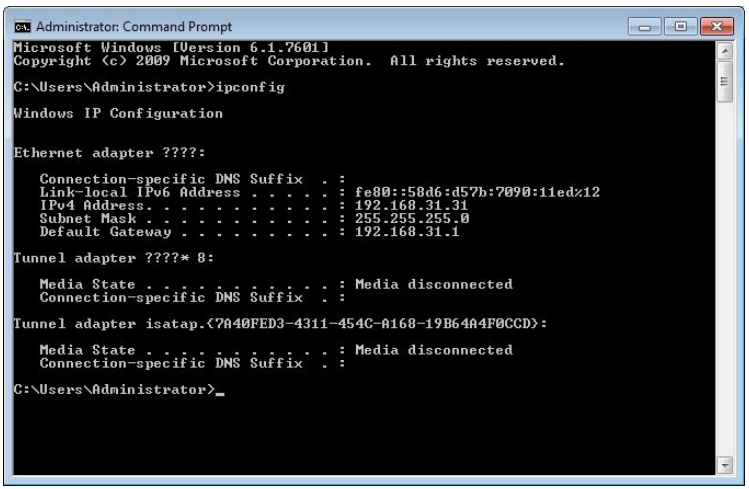
2.3.4 Monitoring equipment through TCP306 module

1. Connect the TCP306 standard network cable between the Ethernet interface of the TCP module and the network port of the computer.



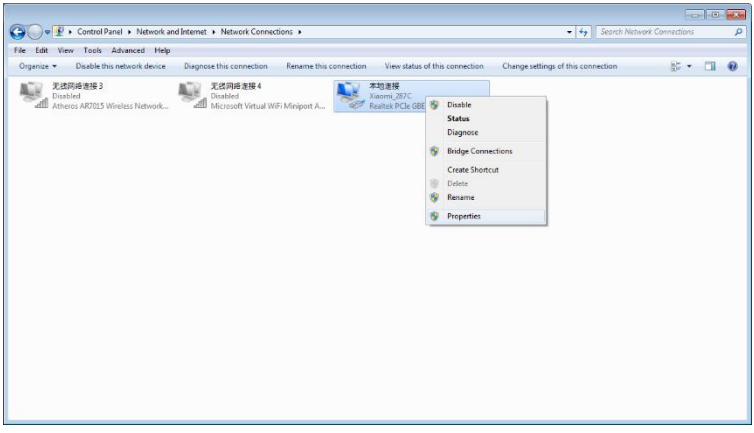
2. After switching the connection method, confirm the IP of the computer.

   (1) To check the computer IP, refer to 2.2.3 check the computer's local IP. Through query, the IP of the computer has changed.

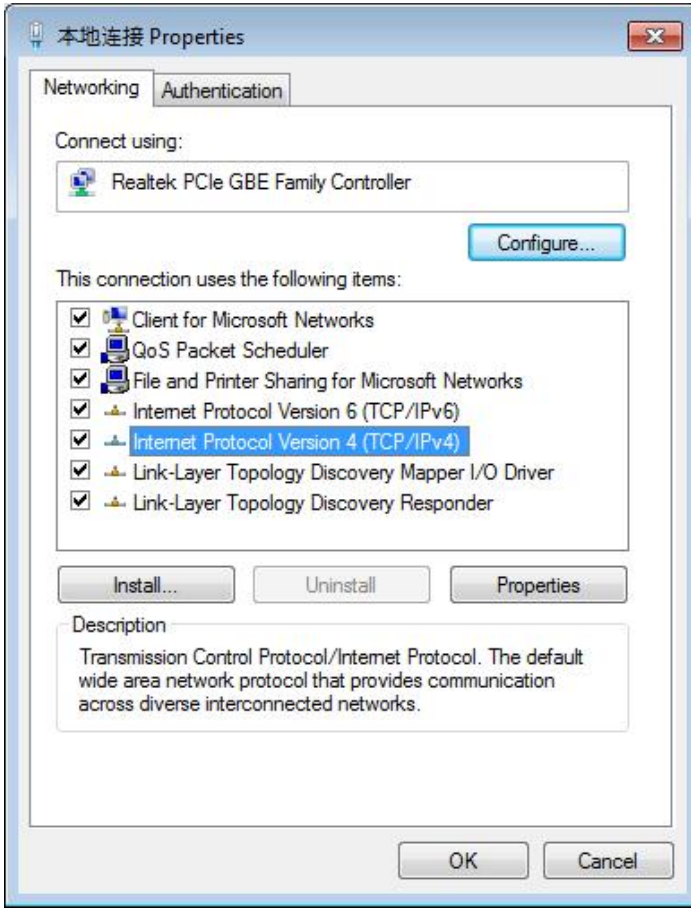


(2) Modify the computer IP to be the same as when connecting to the router to facilitate communication with the TCP module.

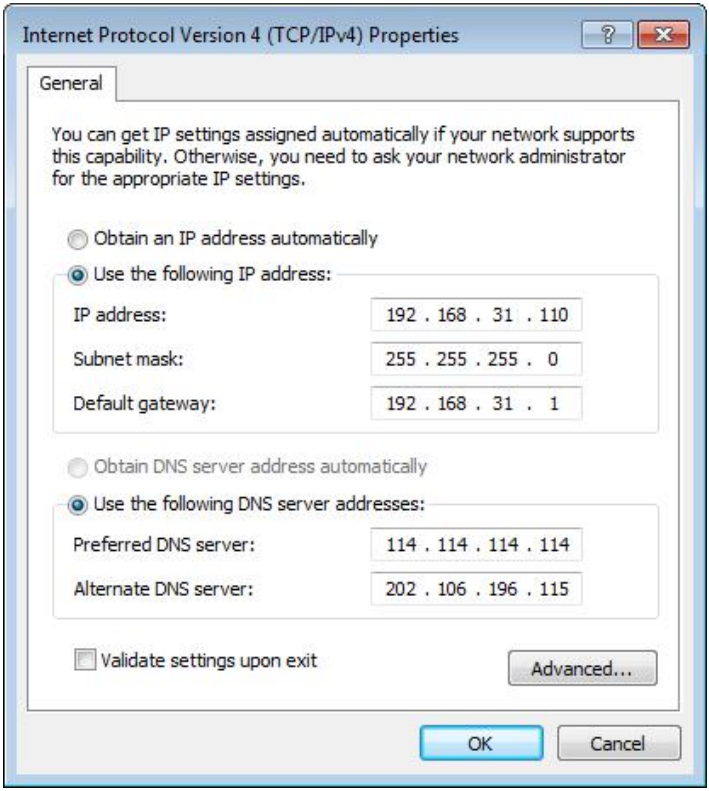
(a) Go to "Network and Internet<Network Connections". Right-Click Broadband connection to pup up the menu and click “Properties” to pop up the “Localconnection Properties”.



(b) Double-click “Internet Protocol Version 4(TCP/IPv4).



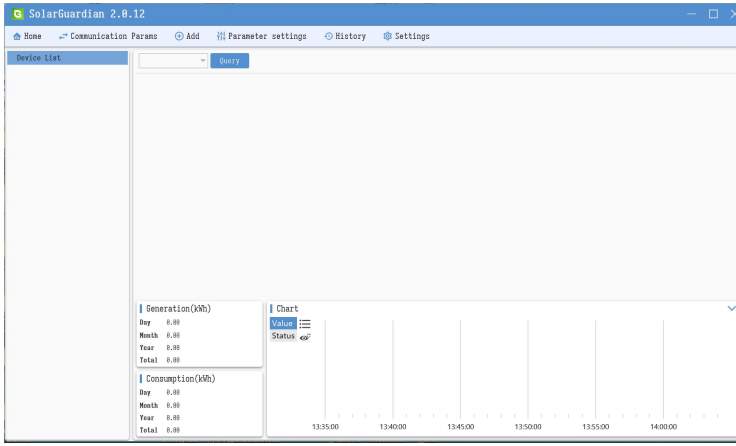
(c) Modify the IP allocation method to manual, fill in the computer's previous IPv4 IP address, gateway, and subnet mask, and fill in the DNS consistent with the subnet mask.Click Ok. The computer IP has been changed to the same as before.



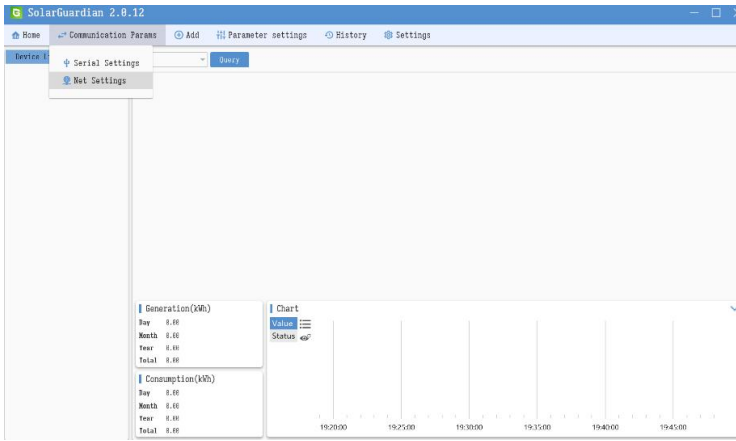
3. Enter the Solar Guardian software to configure communication parameters.

(1) Double-click the shortcut

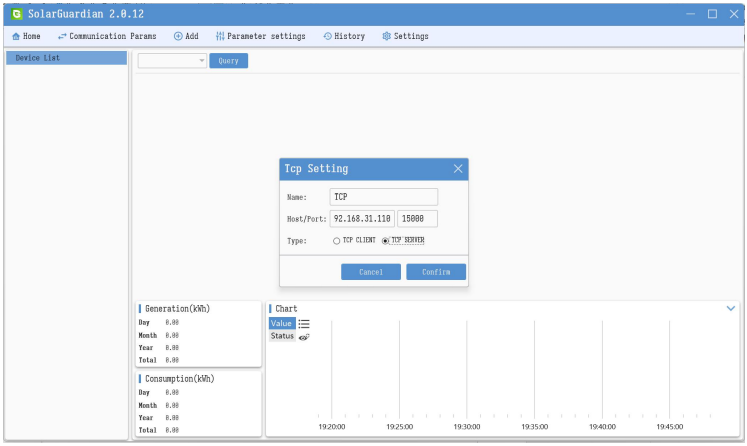
on the computer desktop to enter the main page of the software.



(2) Click "Communication Params" and select "Net Settings".



(3) The "TCP Configuration" interface pops up.



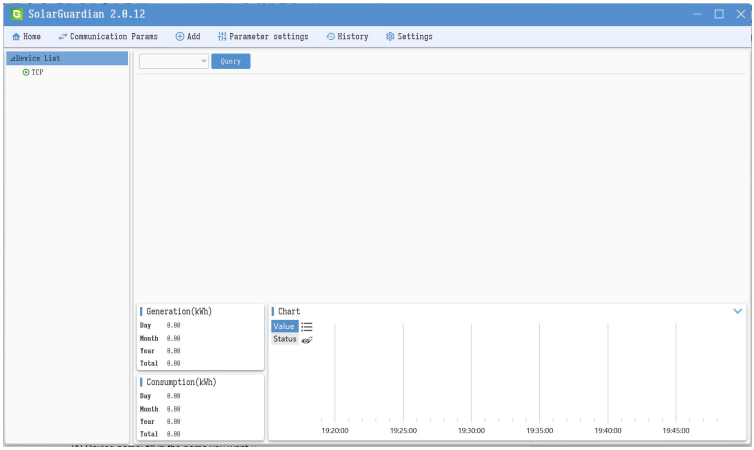
Fill in relevant information:

(a) Name: Fill in the name you want. The example name is TCP.

(b) Host/Port: Fill in the IP and port of the TCP Sever. The mode of TCP 306 is Client, then the computer is the Server, so the IP address and port of the computer are filled in here. The content is consistent with the TCP306 module settings.

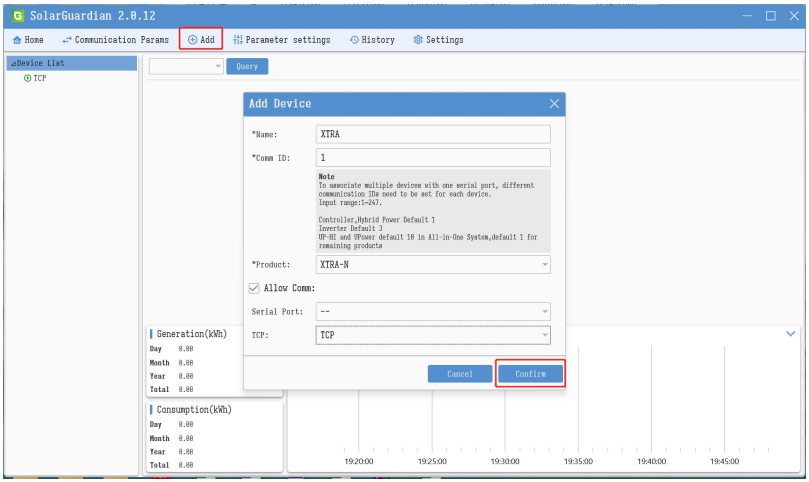
(c) Type: Select the type of computer in communication, here select TCP Sever.

(d) Click "Confirm" to complete the network configuration, and a newly added TCP will appear on the left.



4. Add the device under the configured TCP.

Click "Add" in the navigation bar above the software to pop up the "Add Device" page.



Fill in relevant information:

(1) Device name: fill in the name you want.

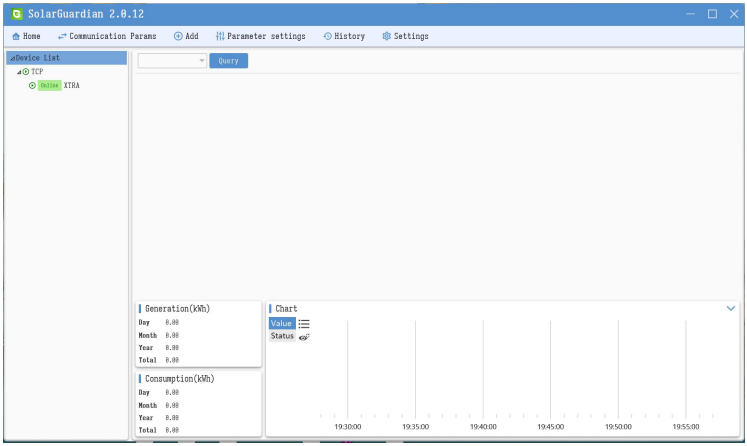
(2) Device communication ID: Fill in according to the actual device type. TRIRON is the controller,

so fill in 1.

(3) Product series: Select the correct product series based on the actual equipment.

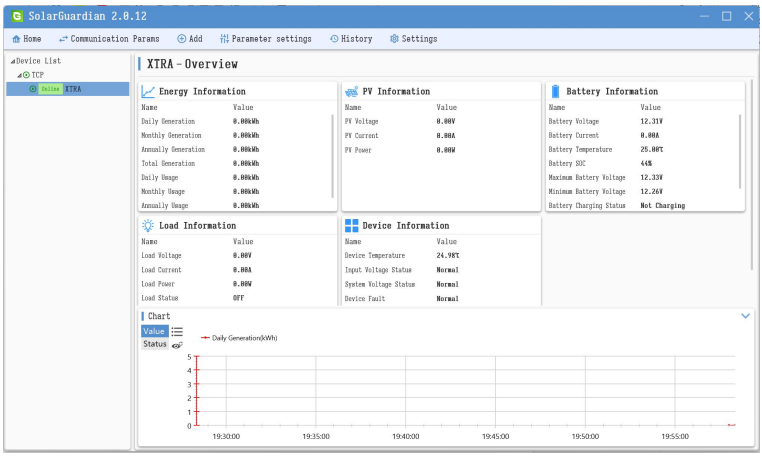
(4) TCP: Select the TCP communication to which the device needs to be added.

(5) Click "OK". Added device TRIRON under TCP communication.

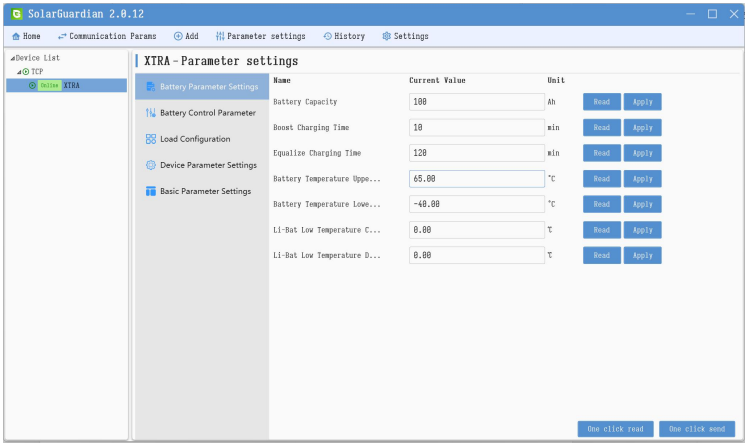


5. View device data

(1) Double-click the device to view the real-time data of the device.



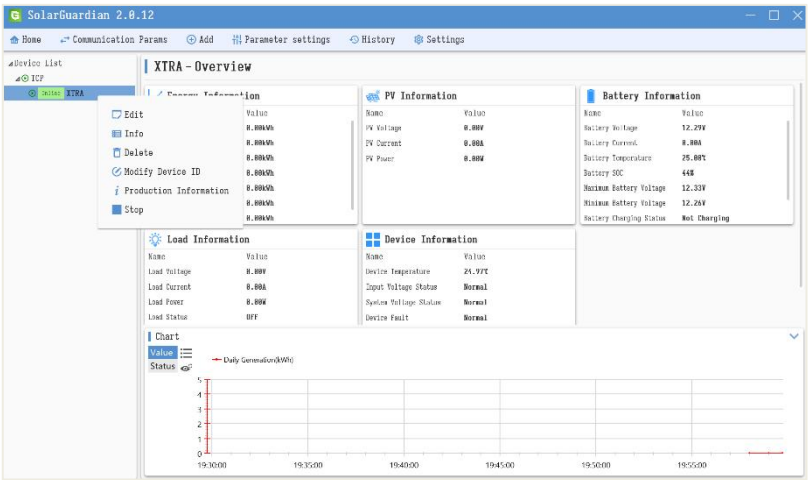
(2) Click "Parameter settings" in the upper navigation bar to enter the device parameter setting page, where you can set various parameters of the device.



3 Others

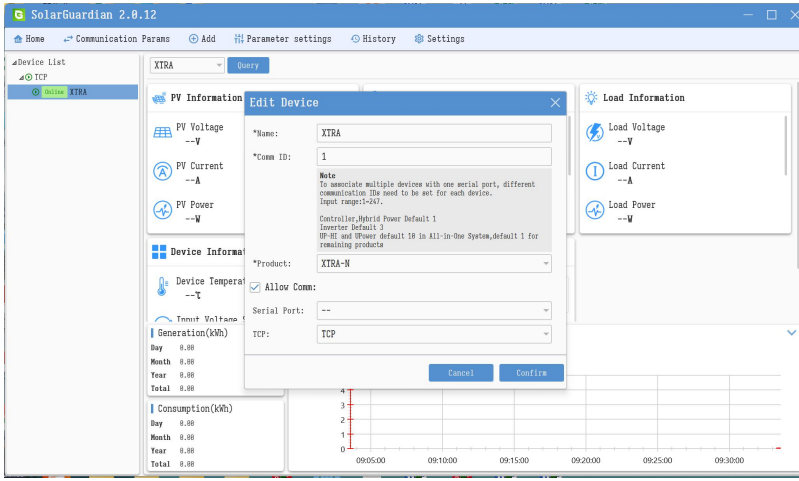
3.1 View device information

Right-click the device to bring up the device's menu.



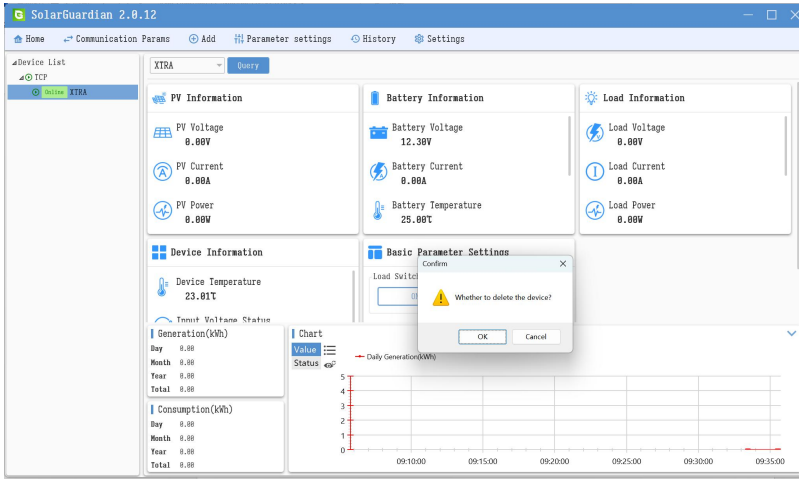
3.1.1 Edit device information

Select Edit in the menu to pop up the device editing page, where you can modify device-related information, such as device communication ID, product series, communication serial port or TCP.



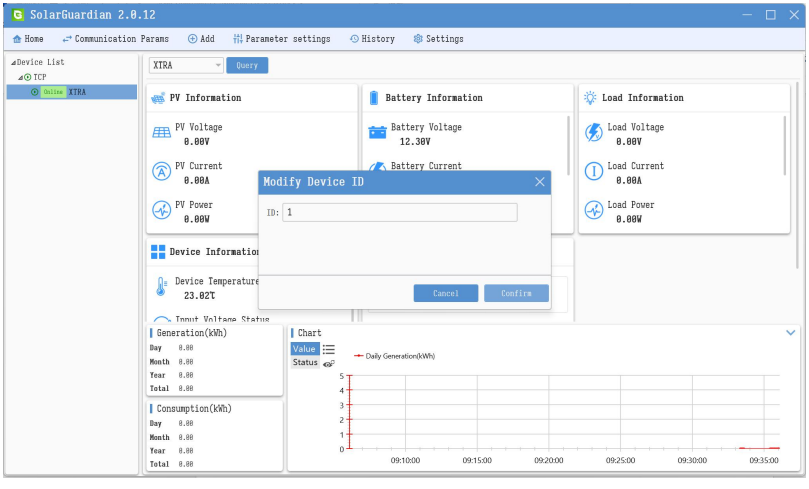
3.1.2 Delete device

Click "Delete" and a prompt box will pop up. If you select OK, the device will be deleted. If you select Cancel, there will be no operation.

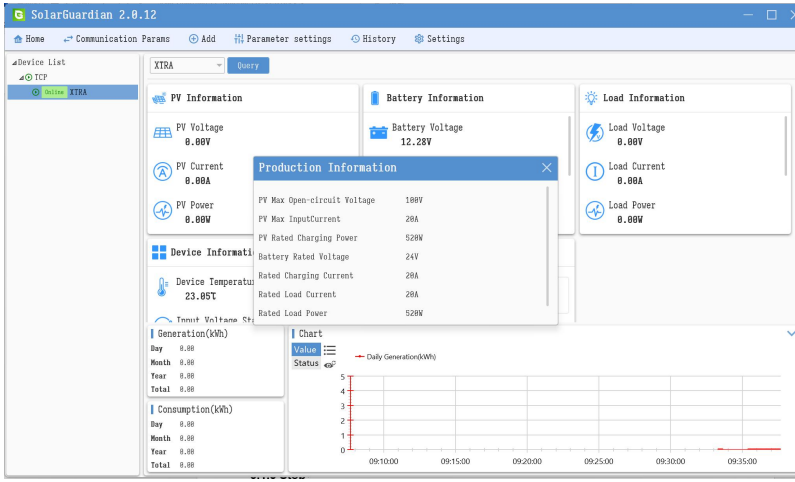


3.1.3 Modify device ID

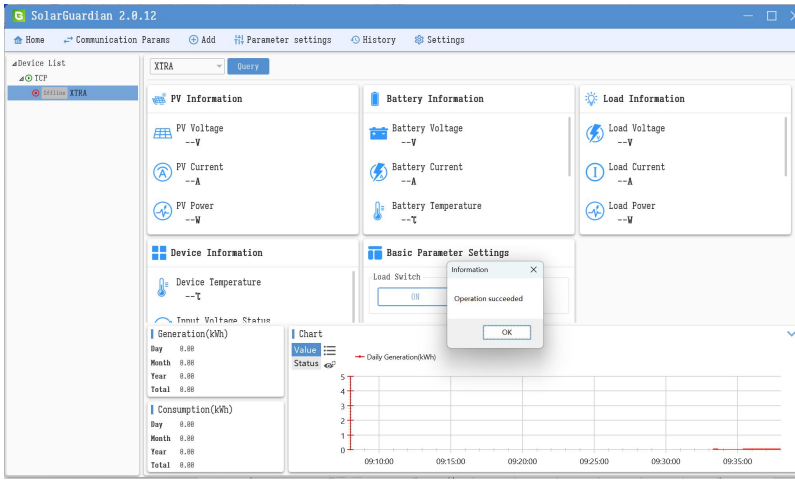
Click "Modify Device ID" to pop up the Modify Device ID page, which will directly read the current ID of the device and display it in the input box. If you need to modify the device ID, edit the ID value in the input box, and then click "OK". When the reply operation is successful, the device ID is modified successfully. If you click "Cancel", there will be no operation.



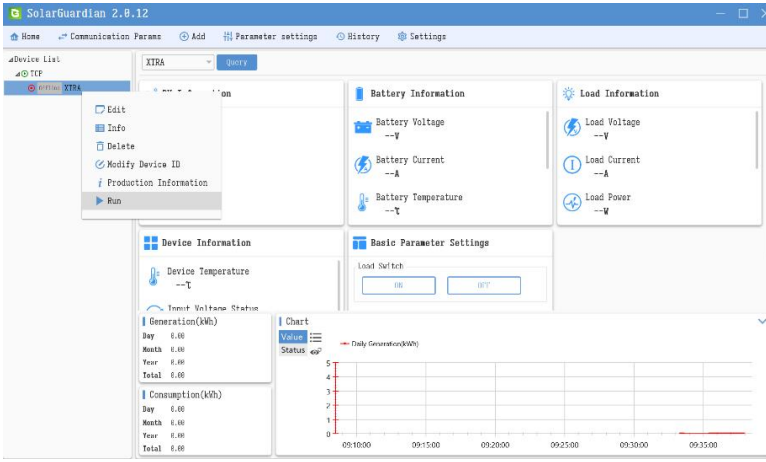
3.1.4 Product Information



3.1.5 Stop

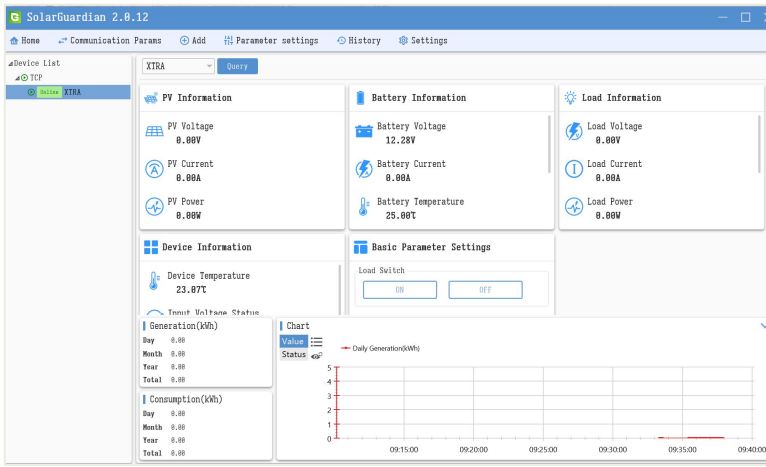


3.1.6 Start



3.2 History

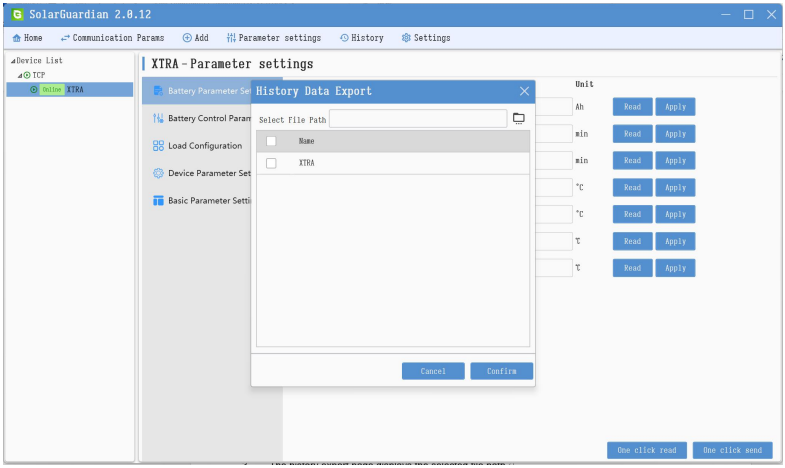
Click "History" in the navigation bar above the software to pop up a submenu that displays history export and device history file export.



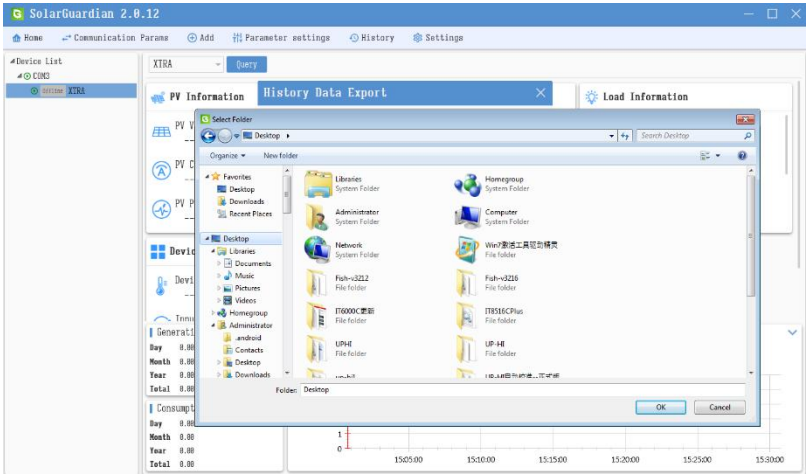
3.2.1 History export

History export: Export historical data records of communication between the device and Solar Guardian software.

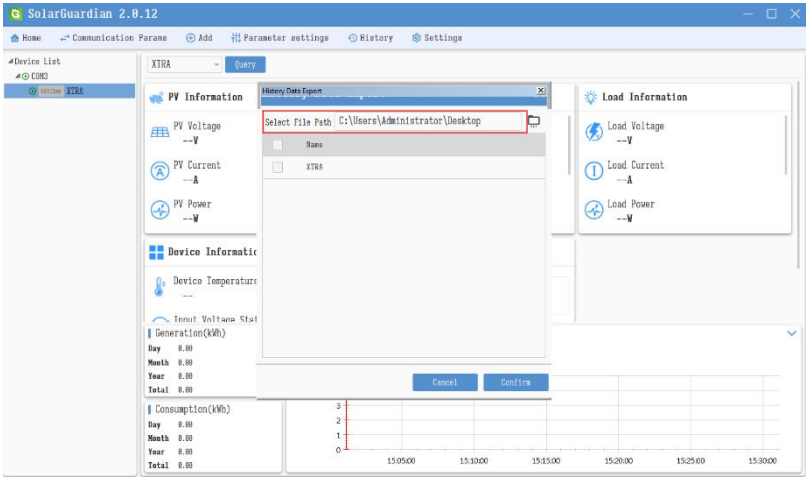
1. Click "History > History Export" in the menu bar of the host computer.



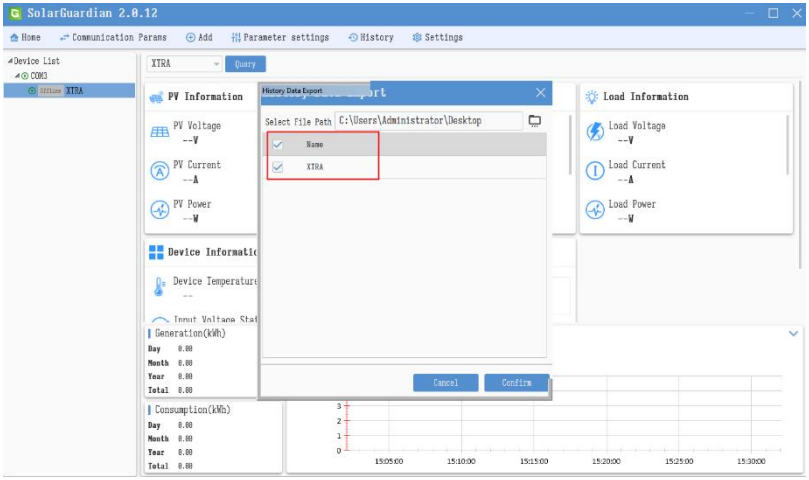
2. The "History Export" box pops up, click the file icon after "Select Save File". Select the path where the exported history records are stored. In the example, the desktop is selected. Click OK.



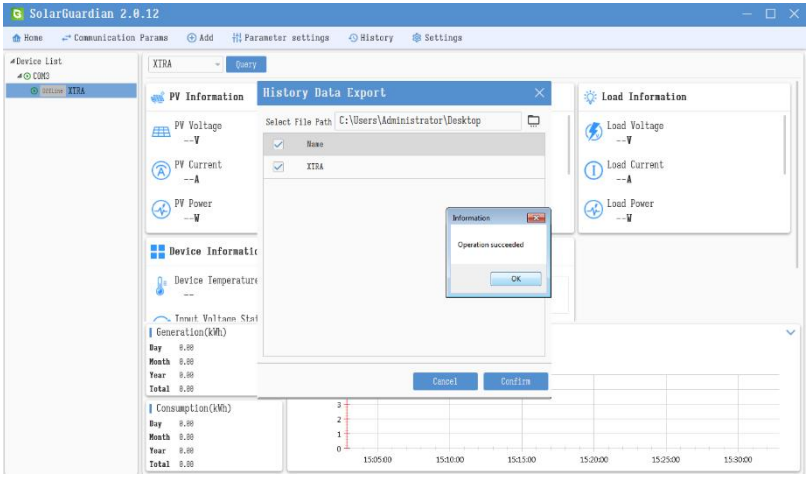
3. The history export page displays the selected file path.



4. Select the device for which the history file needs to be exported. A check mark in front of the device means single selection of the current device, and a check mark in front of the name means selection of all.



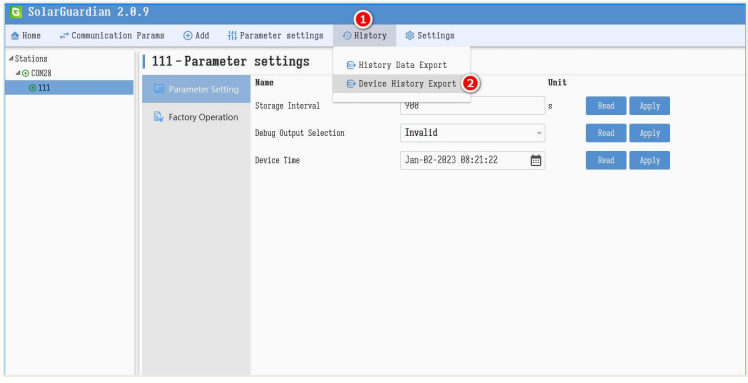
5. Click "OK" and it will prompt that the operation is successful.



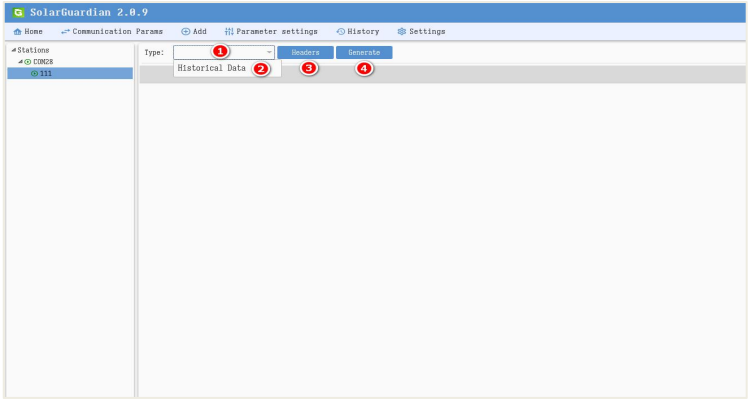
6. The desktop will display the exported device history file, which is named after the device name + export time.

3.2.2 Export device history files

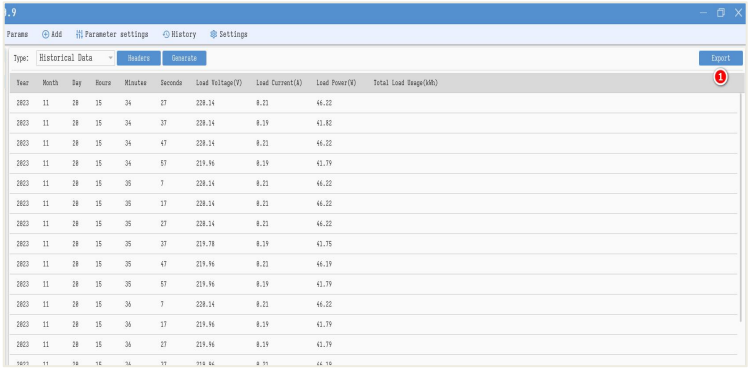
1. Click "History > Export Device History File" in the menu bar of the host computer. Device history file export: Export historical data stored on the device, which has nothing to do with Solar Guardian communication history data. This feature only supports HP series.



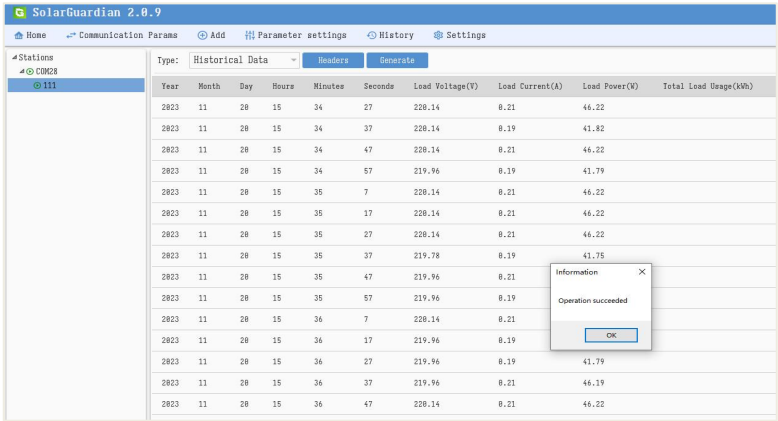
2. Select the file type to export, optional historical data or fault records. Select the table header to export parameters.



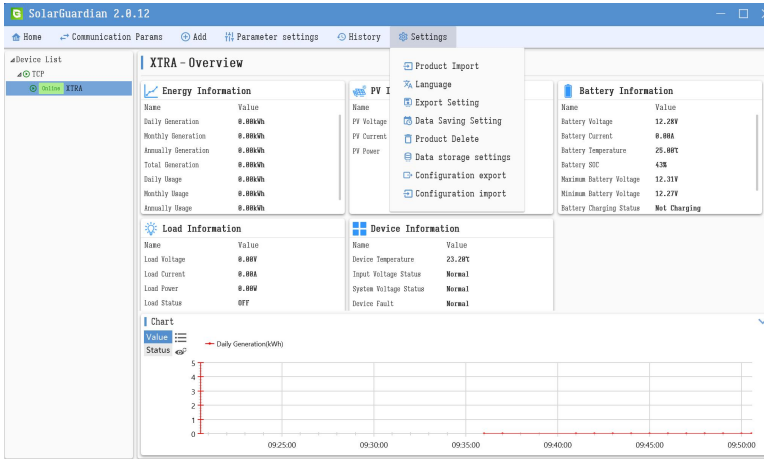
3. Click Generate to display the preview page of the file to be exported.



4. Click "Export" and it will prompt that the operation is successful.

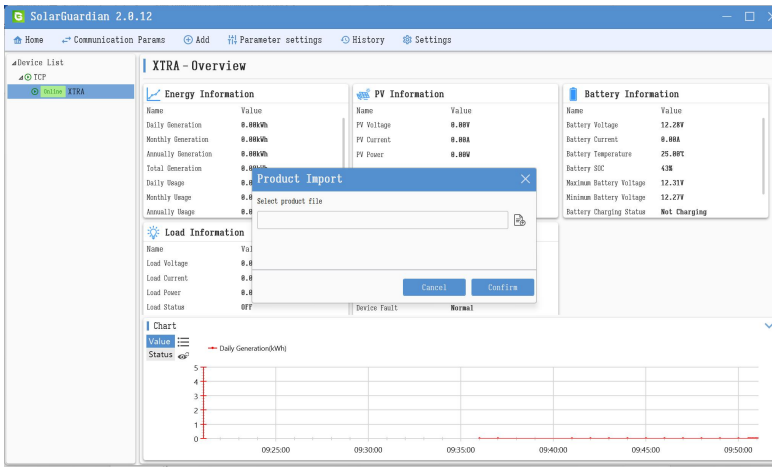


3.3 System settings

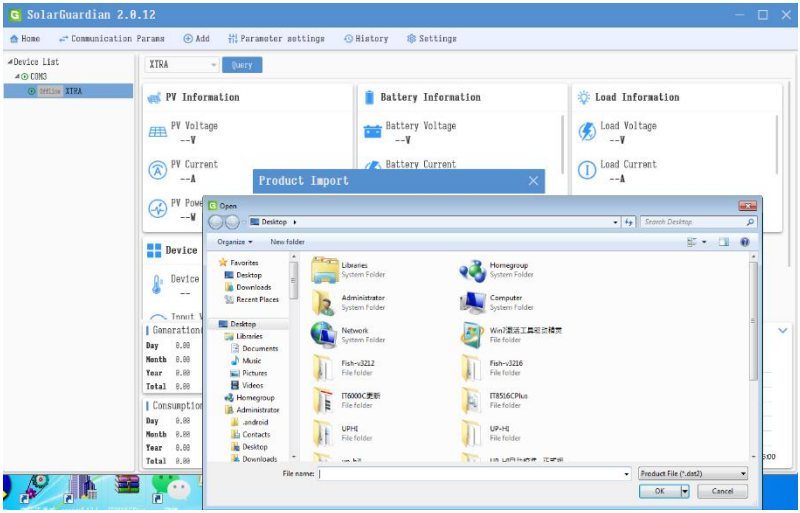


3.3.1 Product series import

1. Click "Import Product Series" in the menu, and the "Import Product Series" box will pop up.

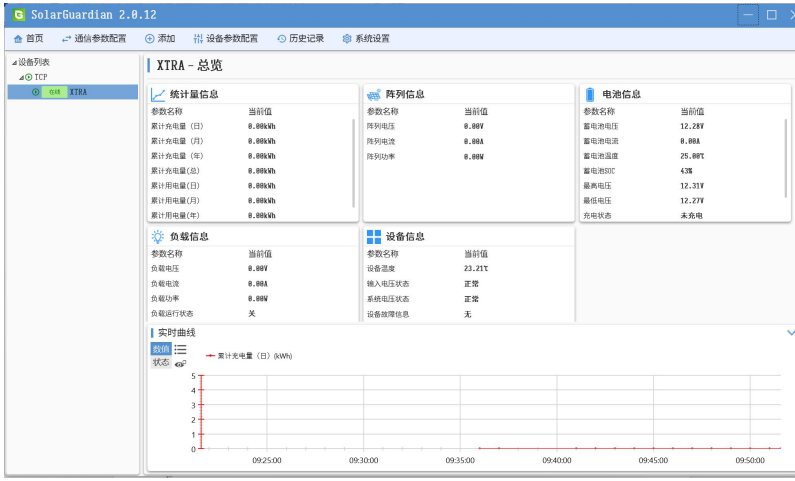


2. Click the icon and select the product series file to be imported. The file must have a .dat2 suffix. If the file name has the same name as an existing product series, the original product series will be overwritten.



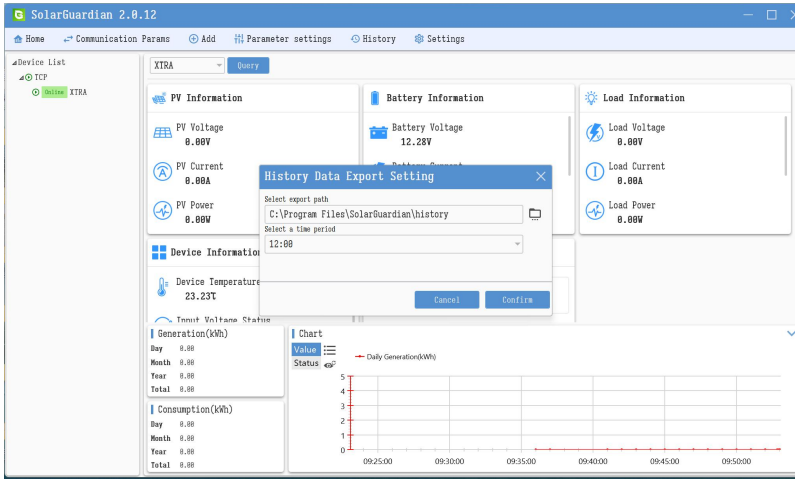
3.3.2 Language

Click "Language " in the menu. If the current English display will be switched to Chinese display, as shown below. If the current Chinese display will be switched to English display. Switch between Chinese and English.

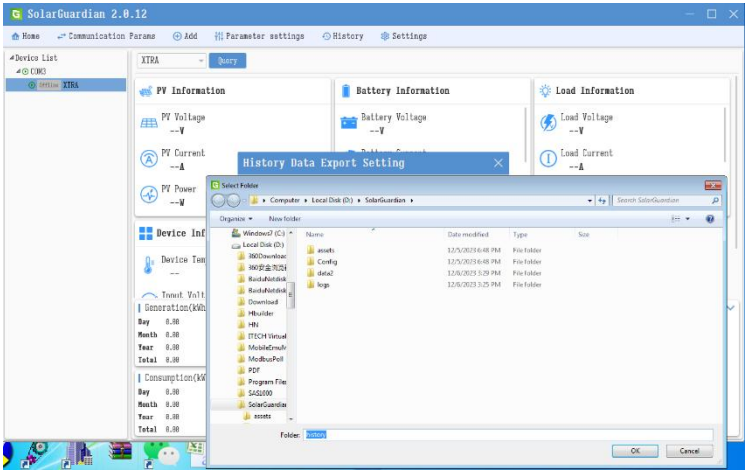


3.3.3 Historical data export settings

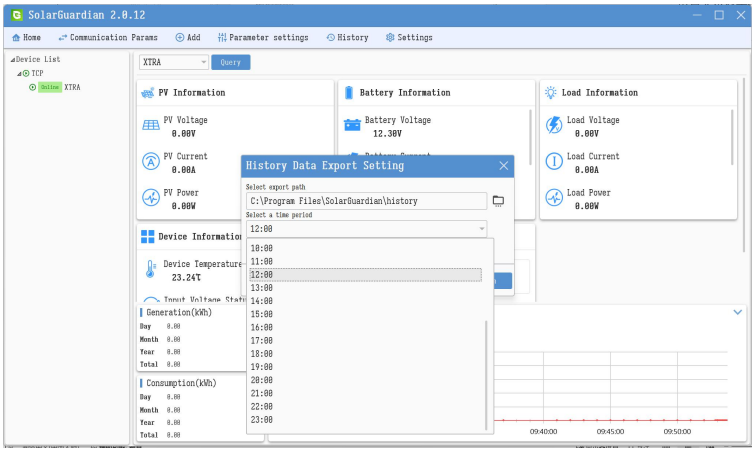
Click "Export Settings" in the menu, and the "Historical Data Export Settings" box will pop up. Displays the current export path of historical files and the time of automatic export every day.



1. Click the icon to modify the historical file export path.

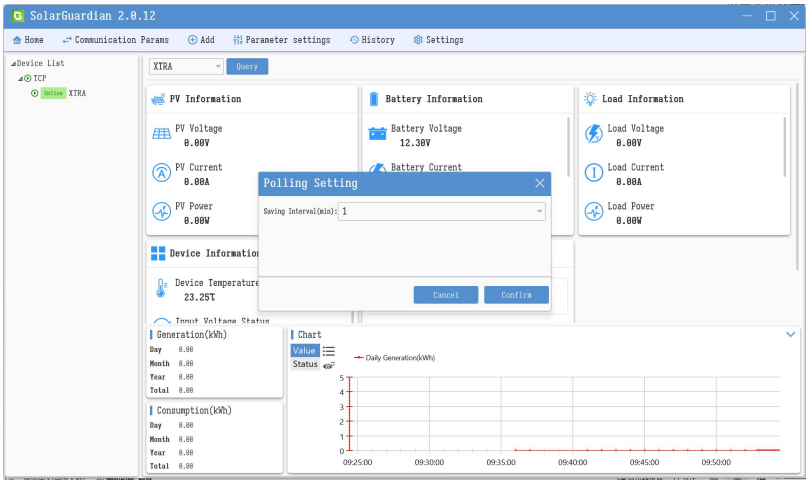


2. Click the time input box and a time selection box will pop up. You can modify the time for automatic export of history records. The default is 12:00 every day.

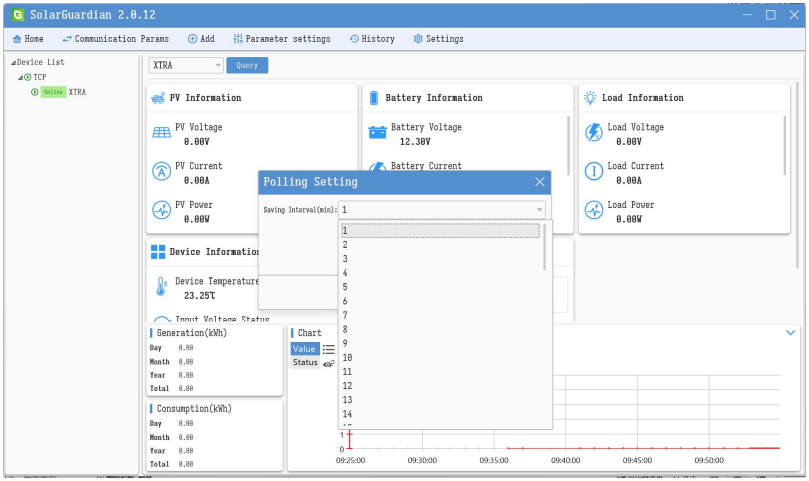


3.3.4 Data Saving settings

1. Click "Data Storage Time Settings" in the menu, and the "Poll Setting" box will pop up.

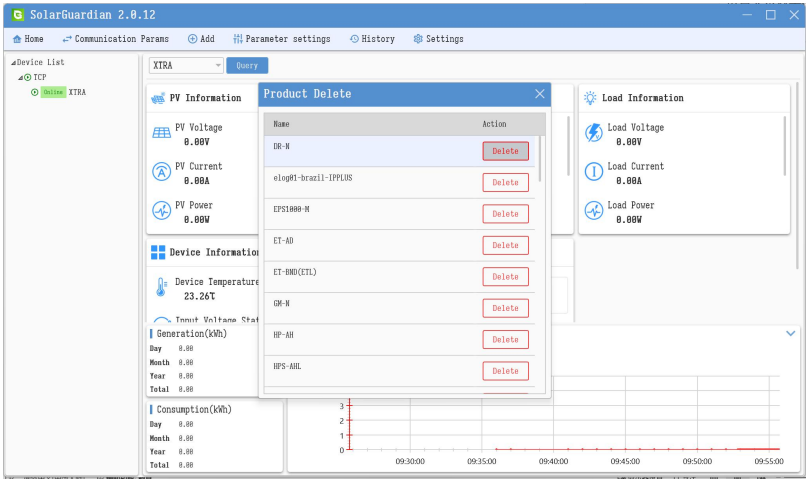


2. Click the time input box and a time selection box will pop up. You can modify the time interval for storing data. The default is to store data every 1 minute.



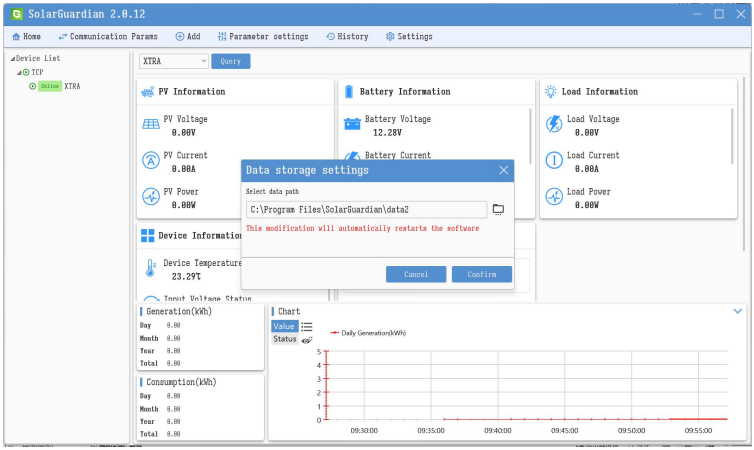
3.3.5 Delete Product

Click "Delete Product" in the menu, and the "Delete Product" box will pop up, displaying all product series. Click the delete button of a certain product series record to delete the product series.

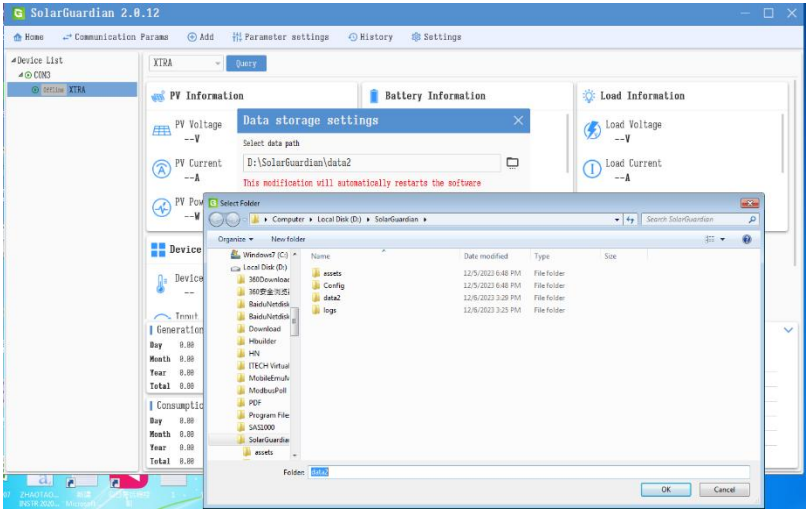


3.3.6 Data Storage settings

1. Click "Data Storage Settings" in the menu, and the "Data Storage Settings" box will pop up. You can modify the data storage path. After modification, the software will restart.



2. Click the icon to modify the data storage path. In the "Select Folder" pop-up window, select the new path and click OK. If the path in the Solar Guardian software pop-up box changes, click "OK" in the pop-up box to restart the software; if you click "Cancel", there is no operation and the new path will not take effect.


SolarGuardian 2.0.12
Home
Communication Params
Add
Parameter settings
History
Settings
Device List
COM3
Offline XTRA
XTRA
Query
PV Information
PV Voltage
--V
PV Current
--A
Battery Information
Load Information
Load Voltage
--V
Load Current
--A
Data storage settings
Select data path
D:\SolarGuardian\data2
This modification will automatically restarts the software
Select Folder
Computer ▸ Local Disk (D:) ▸ SolarGuardian ▸
Search SolarGuardian
Organize
New folder
Windows7 (C:)
Local Disk (D:)
Name
Date modified
Type
Size
assets
Config
data2
logs
12/5/2023 6:48 PM
12/5/2023 6:48 PM
12/6/2023 3:29 PM
12/6/2023 3:25 PM
File folder
Folder:
OK
Cancel
Generation
Consumptio
Day
Month
Year
Total

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