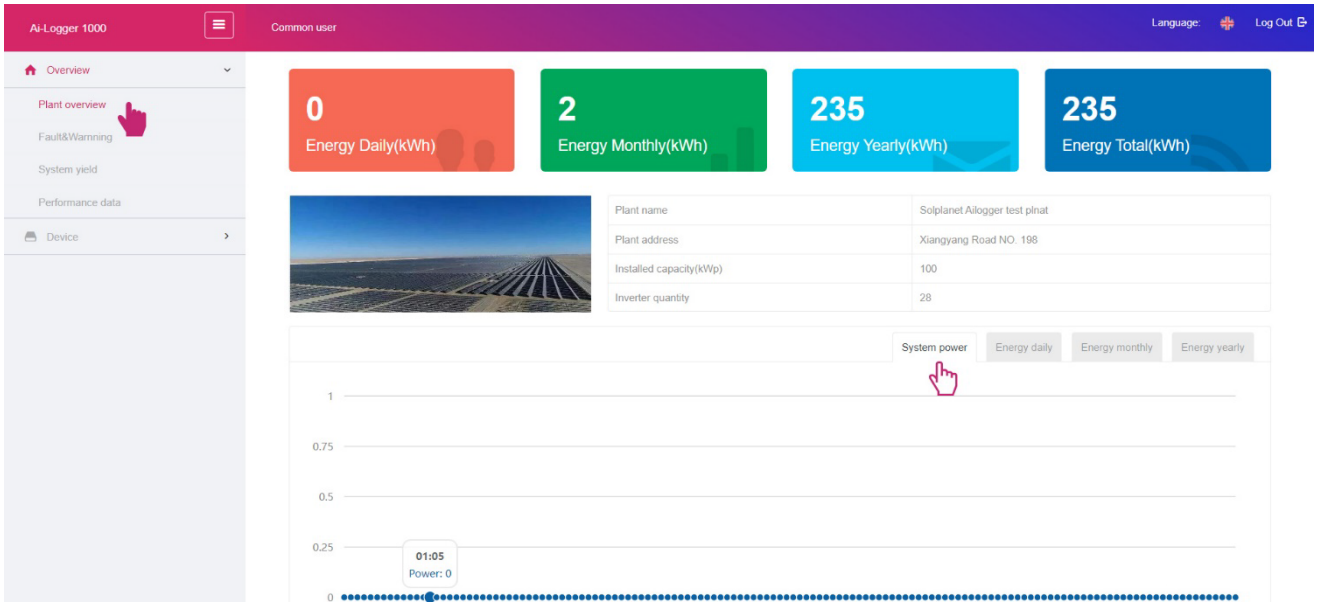
8.3 Overview

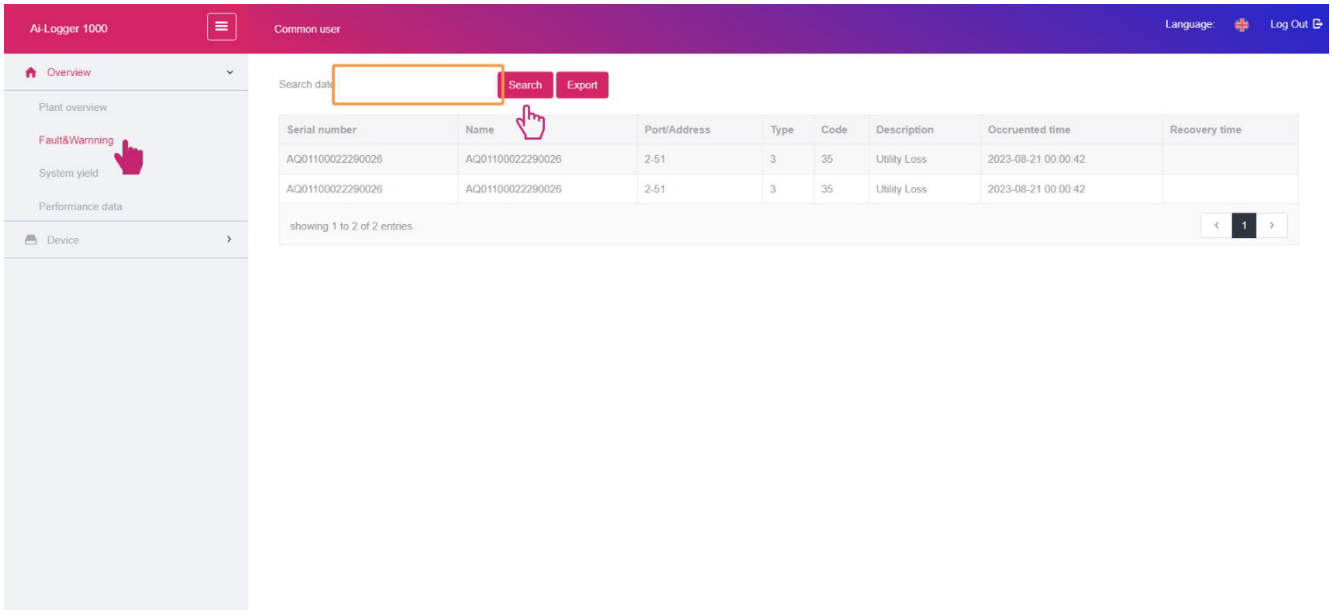
8.3.1 Plant operation information

Click “Overview > Plant Overview” to enter the overview information. And click “Systerm power”, “Energy daily”, “Energy monthly” and “Energy yearly” to find the more details.



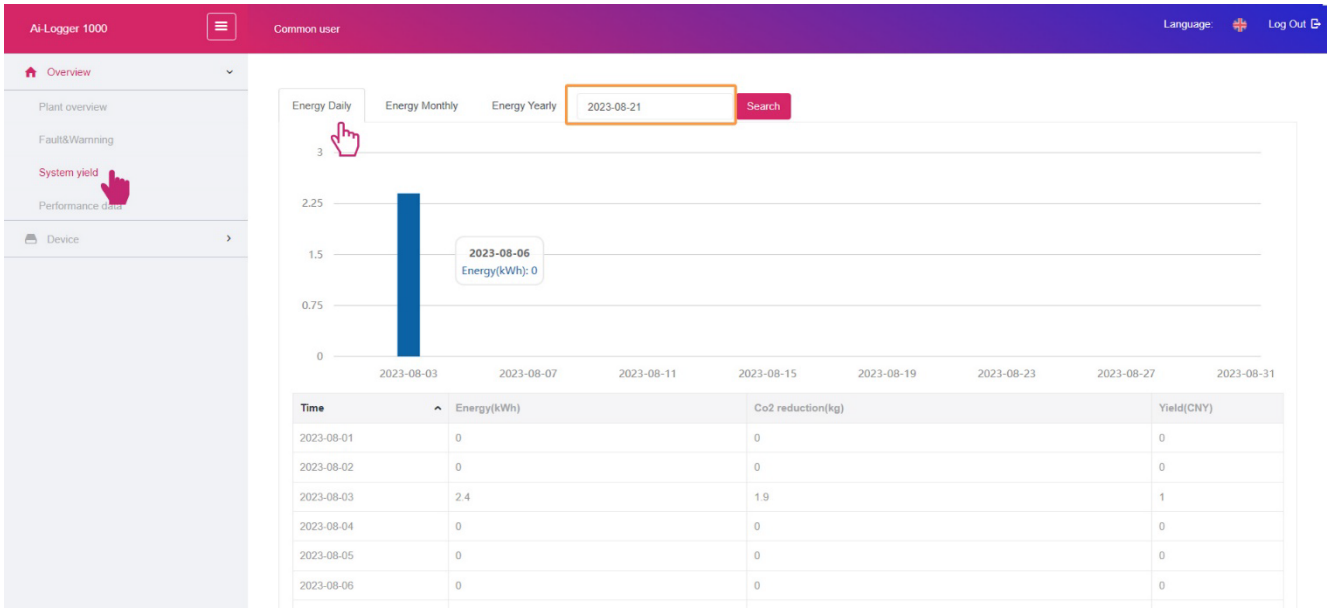
8.3.2 Fault warning

Click “Overview > Fault&Warning” to enter the fault information. The key words can be fill in to search the information.



8.3.3 System power generation

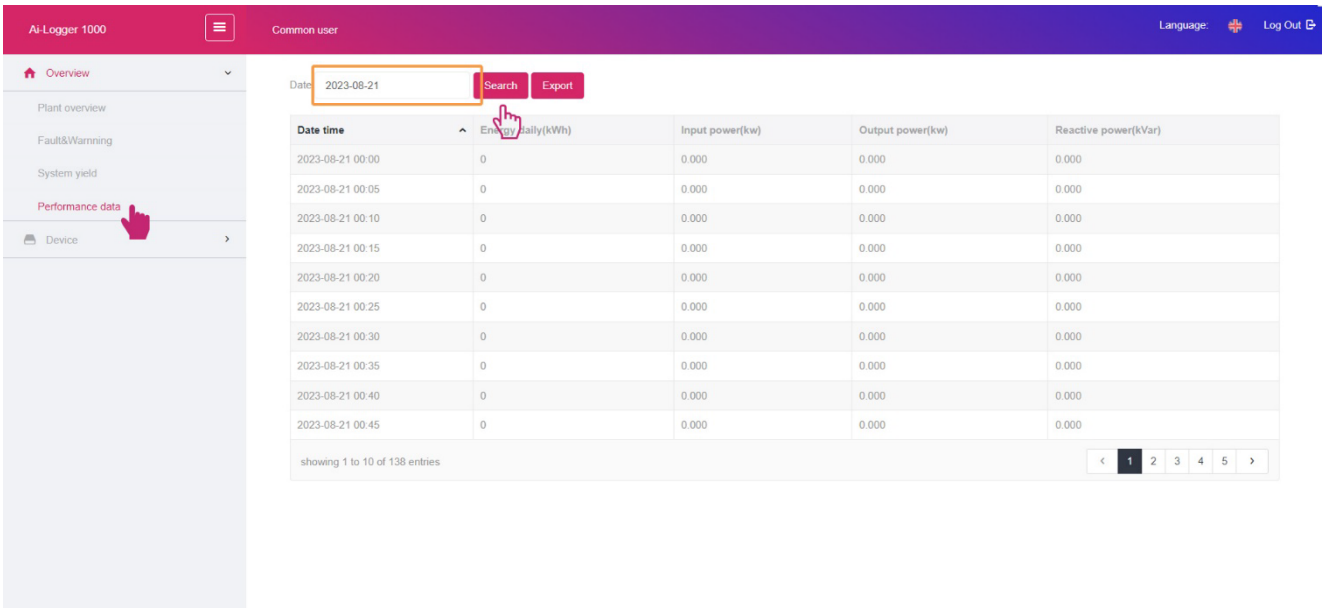
Click“Overview > System yield” to enter the power generation information. Click “Energy Daily”, “Energy Monthly” and “Energy Yearly” to find the the power generation for every day, every month and every year.



- According to the hourly storage (daily power generation), it can be stored for 30 days.
- According to the daily storage (monthly power generation), it can be stored for 1 year.
- According to the monthly storage (annual power generation), it can be stored for 10 years.

8.3.4 Performance data

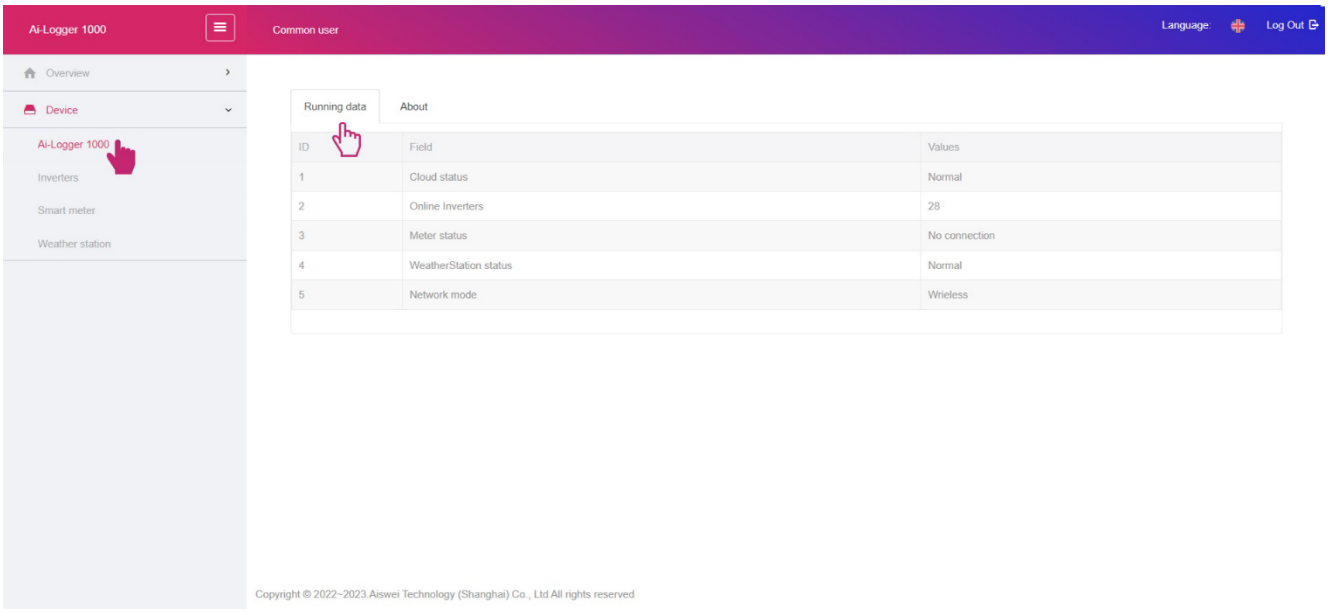
Click “Overview > Performance data” to enter the performance data information.



8.4 Device Monitoring

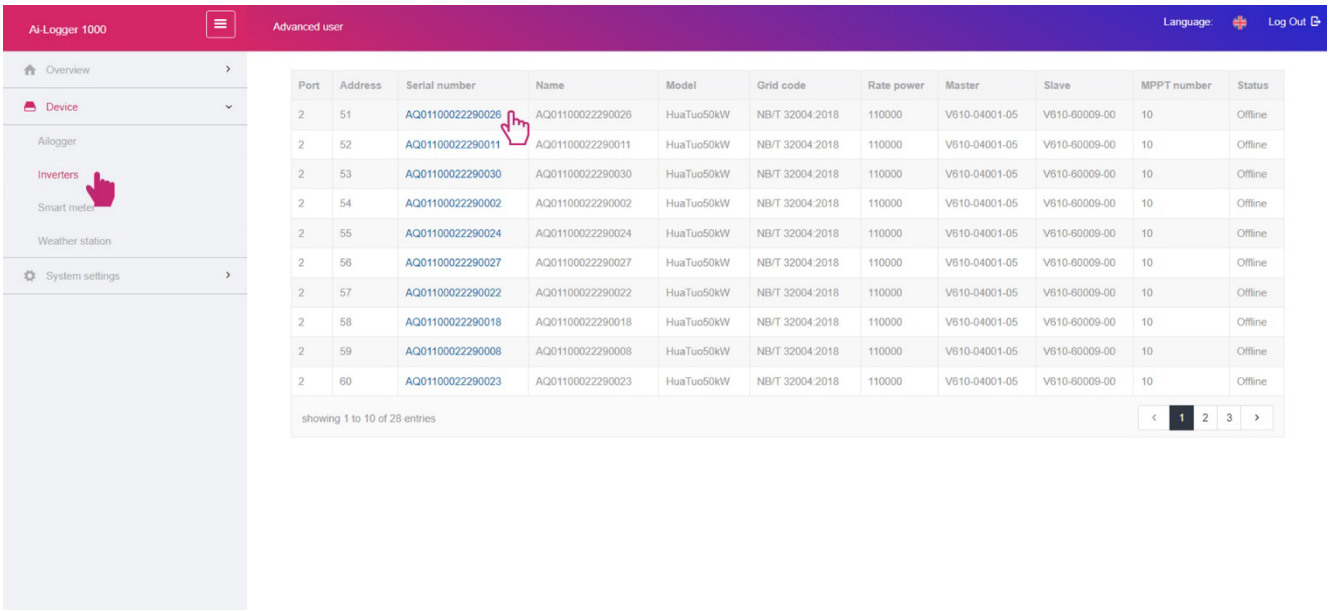
8.4.1 Ai-Logger

Click “Device > Ai-Logger” to enter the related information of Ai-Logger 1000.

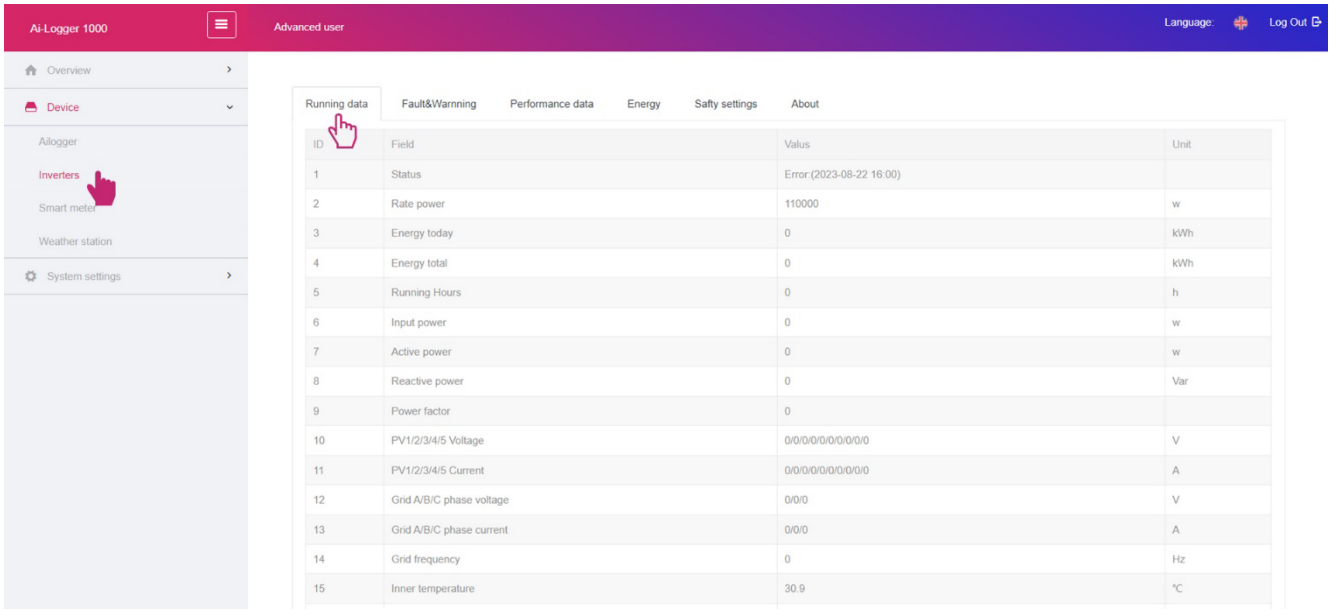


8.4.2 Inverter

Click “Device > Inverter” to enter the inverter list.



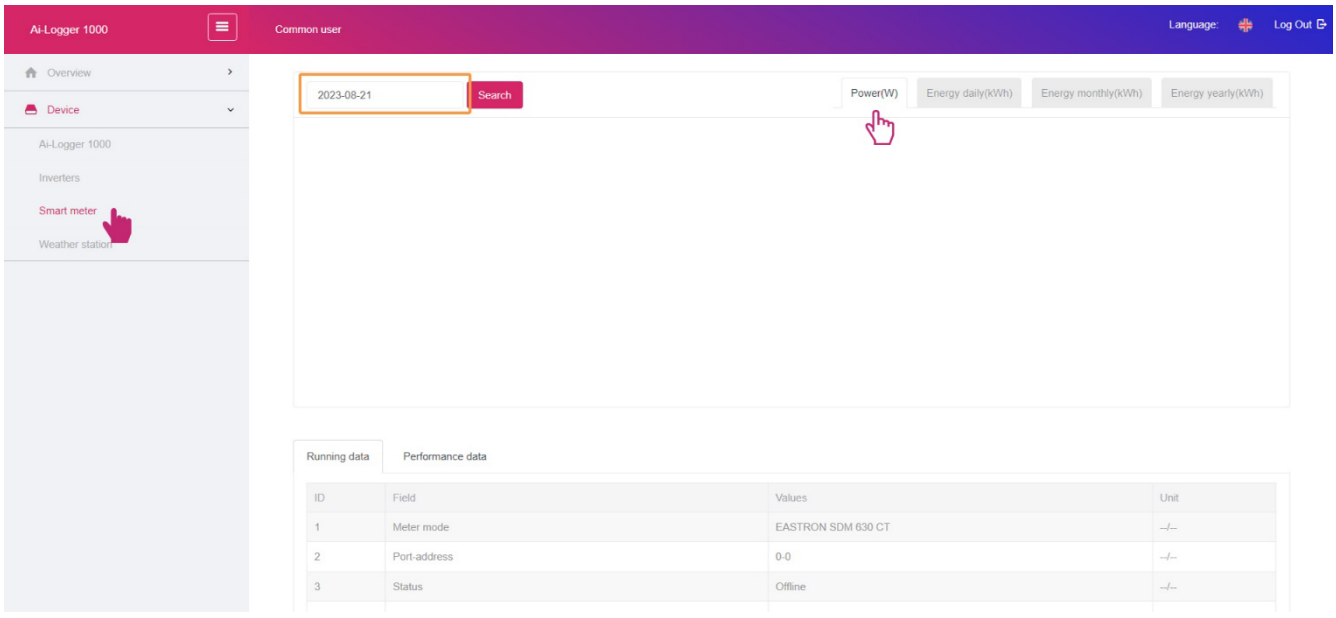
Click the series number in the list to enter the more details information of one of the inverters. Click “Running data”, “Fault&Warning”, “Performance data”, “Energy”, “Safety settings” or “About” to find the detail information for this inverter.



- The “Safety settings” only be shown when you login as the senior user.

8.4.3 Smart Meter

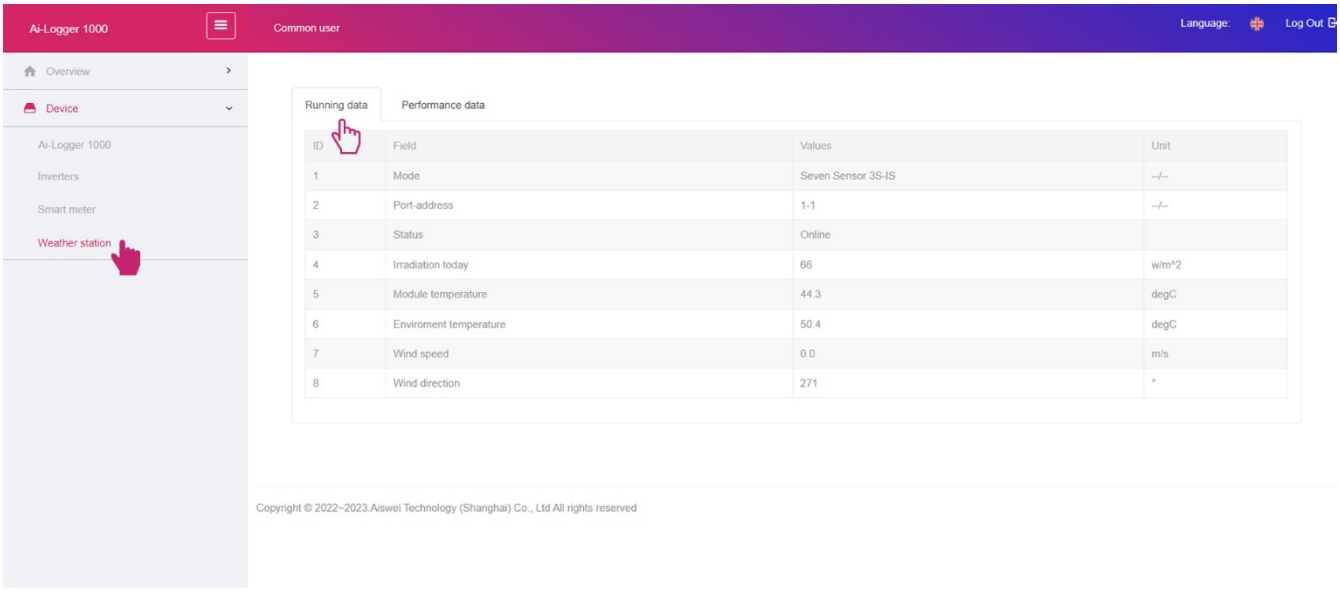
Click “Device > Smart Meter” to enter the related information of Smart Meter. Click “Power(W)”, “Energy Daily(KWh)”, “Energy Monthly(KWh)” and “Energy Yearly(KWh)” to find the the power generation information for this smart meter.



Since different vendors have different protocol points, the parameters must be properly configured on the WEB of Ai-Logger 1000 according to the protocol points provided by the vender in order to get smart meter information properly. The parameters need to be set manually through the embedded WEB of Ai-Logger 1000, please refer to 8.5.4.3 Device Management.

8.4.4 Weather station

Click “Device > Weather Station” to enter the related information of Weather Station.



Since different vendors have different protocol points, the parameters must be properly configured on the WEB of Ai-Logger 1000 according to the protocol points provided by the vender in order to get Weather Station information properly. The parameters need to be set manually through the embedded WEB of Ai-Logger 1000, please refer to 8.5.4.3 Device Management.

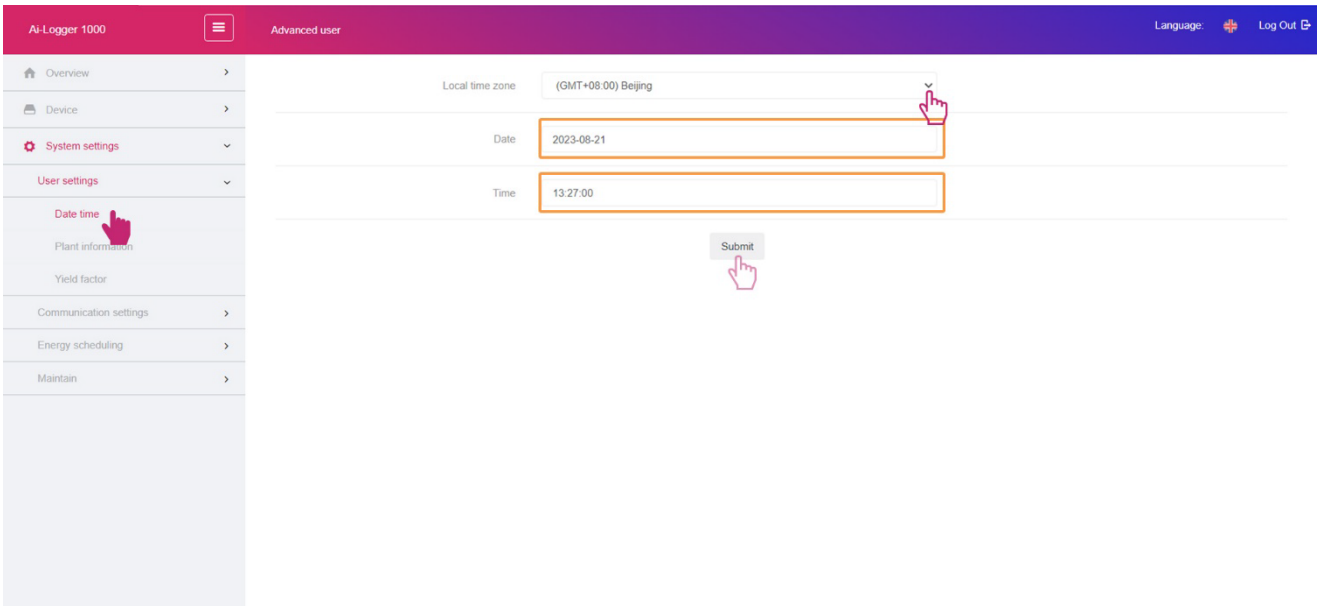
8.5 System settings

The “System setting” only be shown when you login as the senior user. All the parameter only be set by the senior user.

8.5.1 User Parameters

8.5.1.1 Set date and time

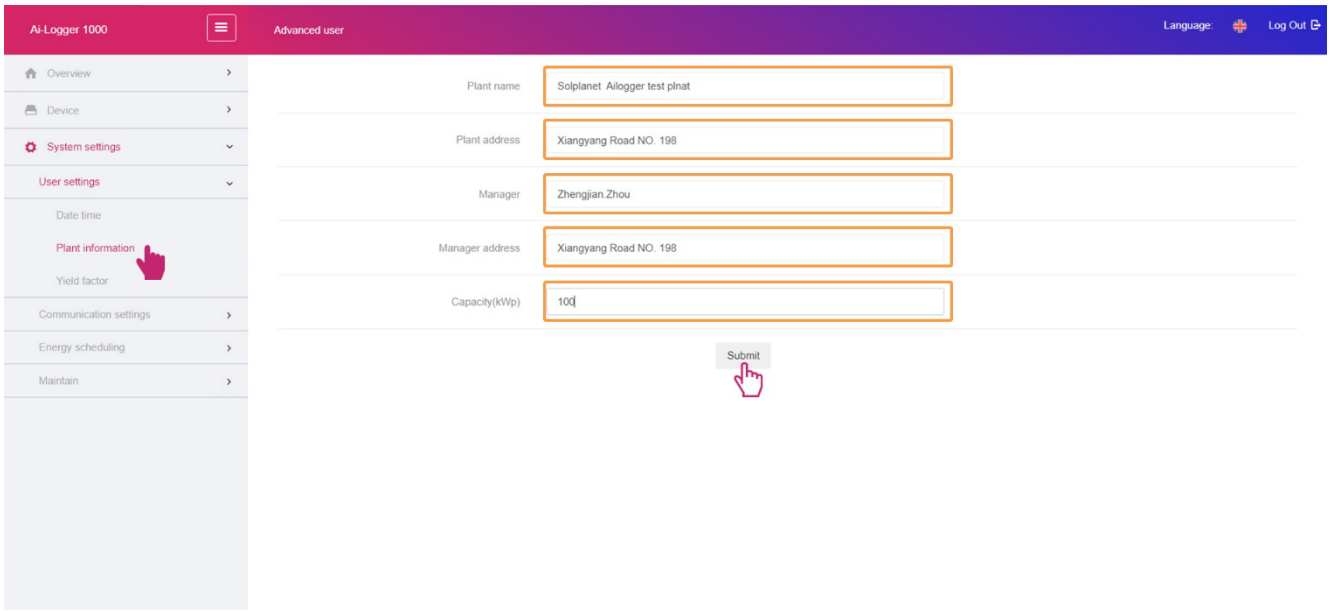
Click “System settings > User settings > Date time” to set the time of the plant. Click “Local time zone” to choose the time zone according to the local place, and then fill in the right date and time information, and then click “Submit” to finish setting.



- There is no “Daylight Saving Time Enable” option in regions that do not involve daylight saving time.
- All inverters connected to the Ai-Logger 1000 will be modified to this time synchronously after the "Date and Time" is set, please make sure the setting is accurate.
- Modifying the “date and time” will affect the integrity of the system's power generation and performance data records. Please do not arbitrarily change the time zone and system time.
- If Ai-Logger 1000 is connected to the Internet, it will automatically synchronize with the cloud server. So there is no need to set the “Date and Time".

8.5.1.2 Set plant information

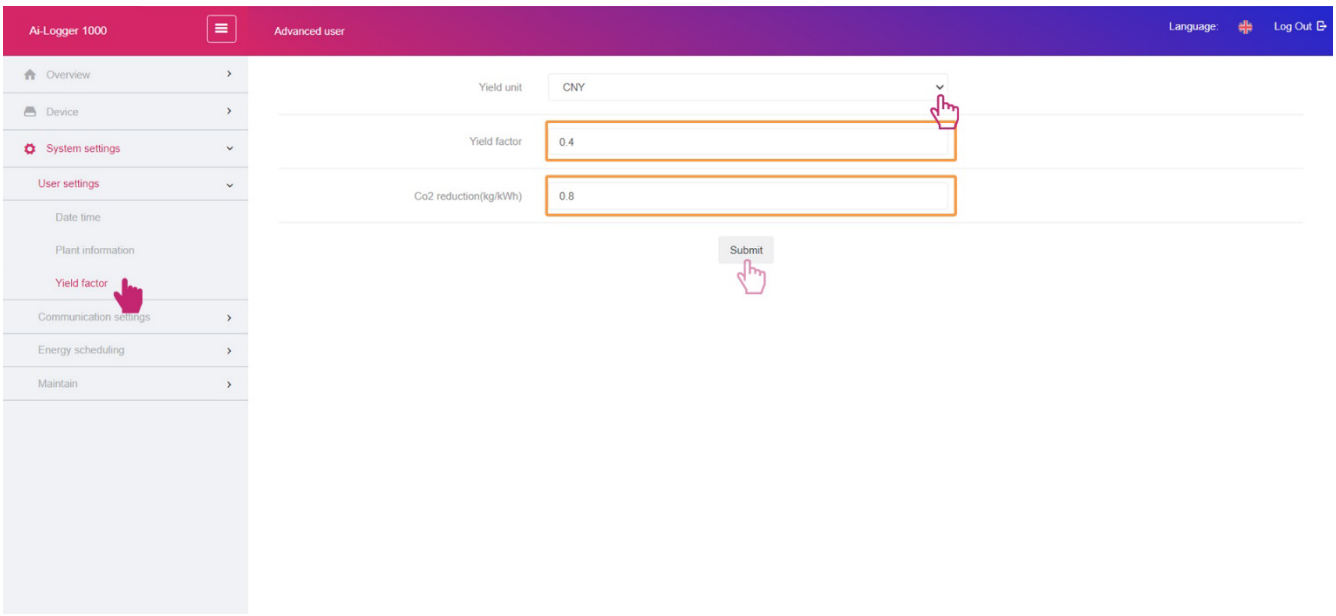
Click “System settings > User settings > Plant information” to set the general information of the plant. Fill in the right information, and then click “Submit” to finish setting.



- All information can only be composed of capital letters, small letters, numerals and dots.

8.5.1.3 Set Yield Parameters

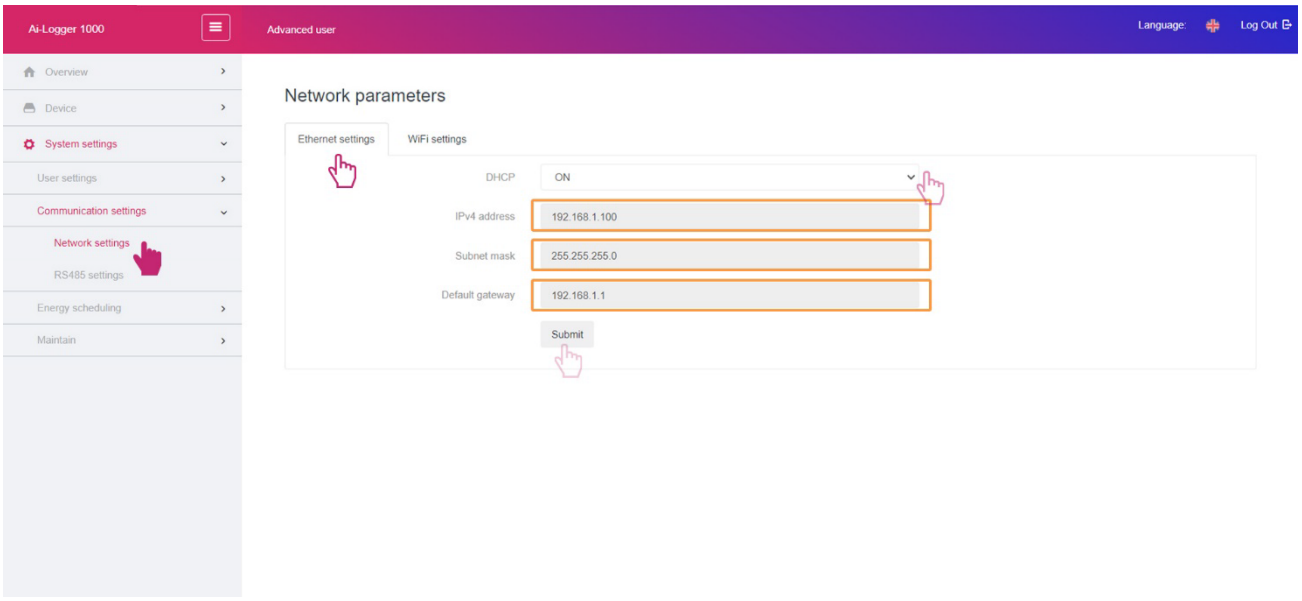
Click “System settings > User settings > Yield factor” to set the yield factor of the plant. Click “Yield unit” to choose your local currency. Then fill in the yield factor as the revenue per kilowatt-hour and the CO2 reduction factor, and then click “Submit” to finish setting.



8.5.2 Communication parameters

8.5.2.1 Set network parameter

Click “System settings > Communication settings > Network settings” to set IP address of the Ai-Logger 1000.

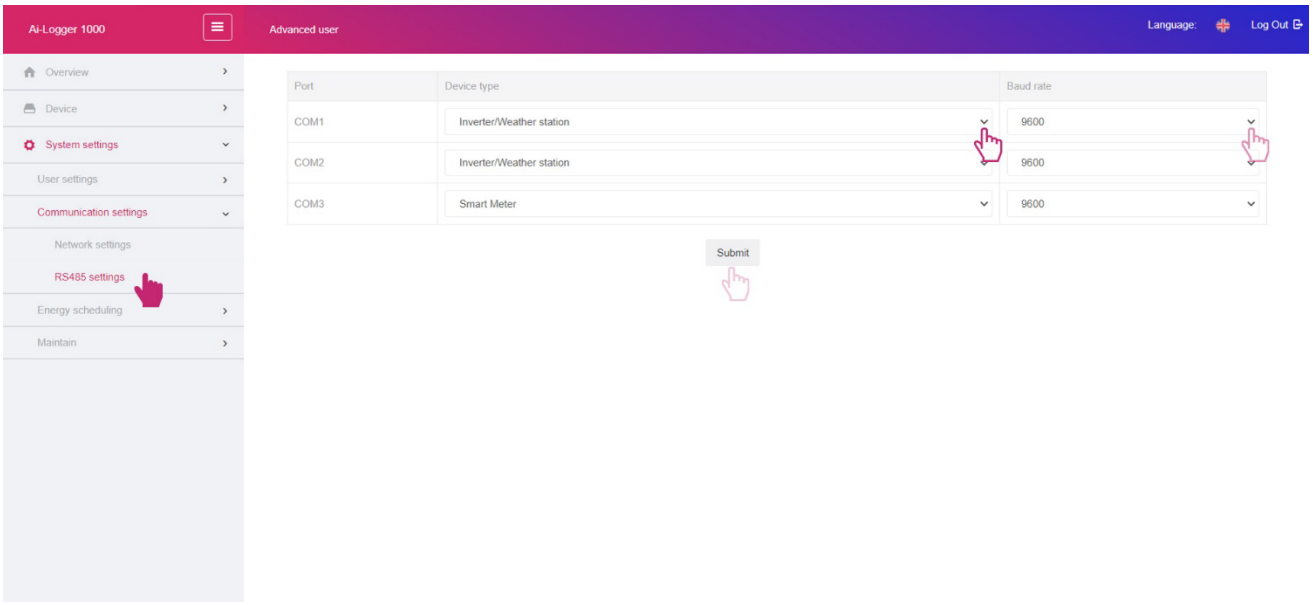


If the Ai-Logger 1000 is connected to Internet through a router, attention to the follow information:

- The IP address of the Ai-Logger 1000 must be in the same network segment as the gateway.
- The gateway address is set same as the IP address of the router.
- The DNS address is usually set to the IP address of the router, or obtained from the network provider.

8.5.2.2 Set RS485 parameter

Click “System settings > Communication settings > RS485 settings” to set the RS485 ports of the Ai-Logger 1000. Click the drop-down menu for the device type to choose the device that will be connected to this port. Click the drop-down menu for the baud rate to choose the baud rate. And then click “Submit” to finish setting.



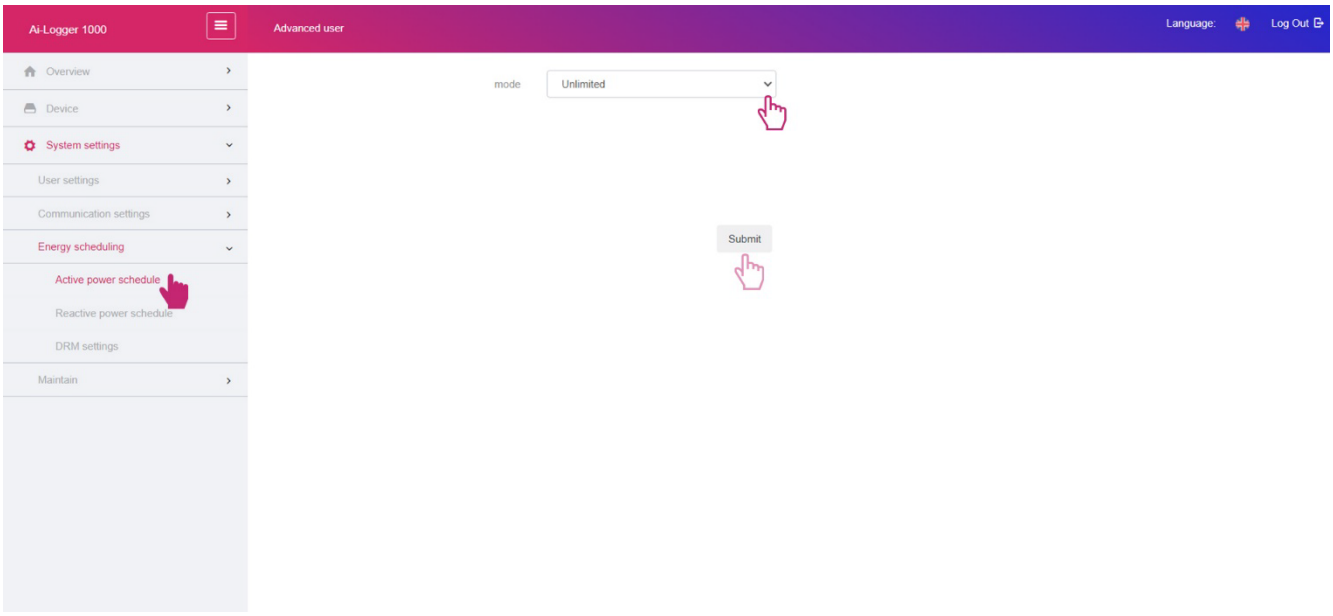
- COM1, COM2 and COM3 correspond to three seperate RS485 interfaces. The baud rates of devices connected to the same RS485 interface must be same.
- Only the device that is approved by Solplanet can be connected to the RS485 interface.

8.5.3 Energy scheduling

If the active power or reactive power of the plant need be limited according to the grid company requirement, the active power control function and the reactive power control function of the inverter shall be enabled firstly.

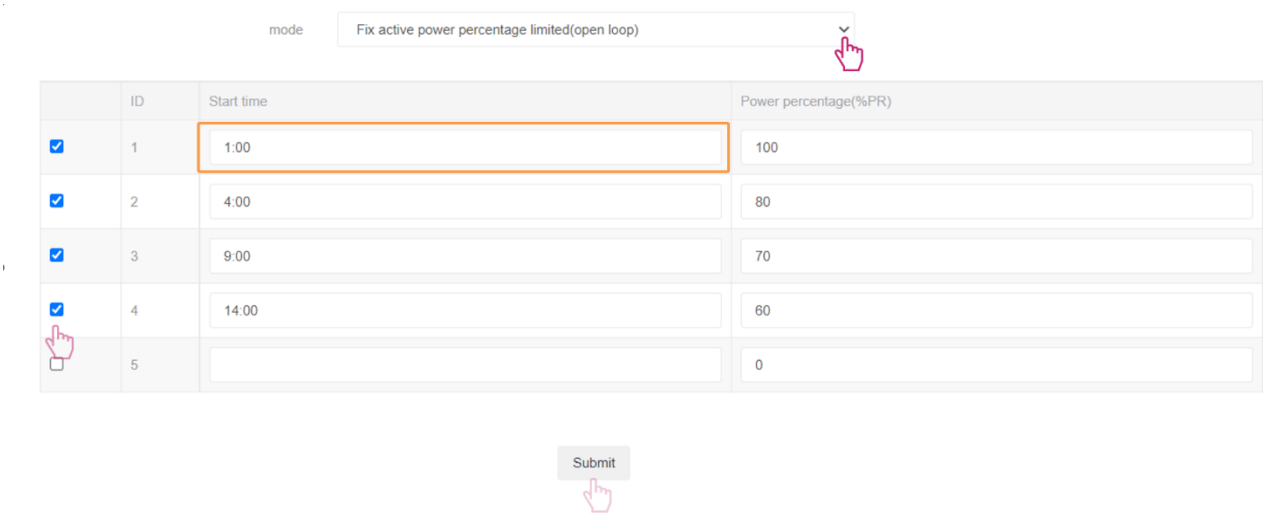
8.5.3.1 Active power schedule

Click “System settings > Energy scheduling > Active power schedule” to set the active control method. Click the drop-down menu for mode to choose the different method.



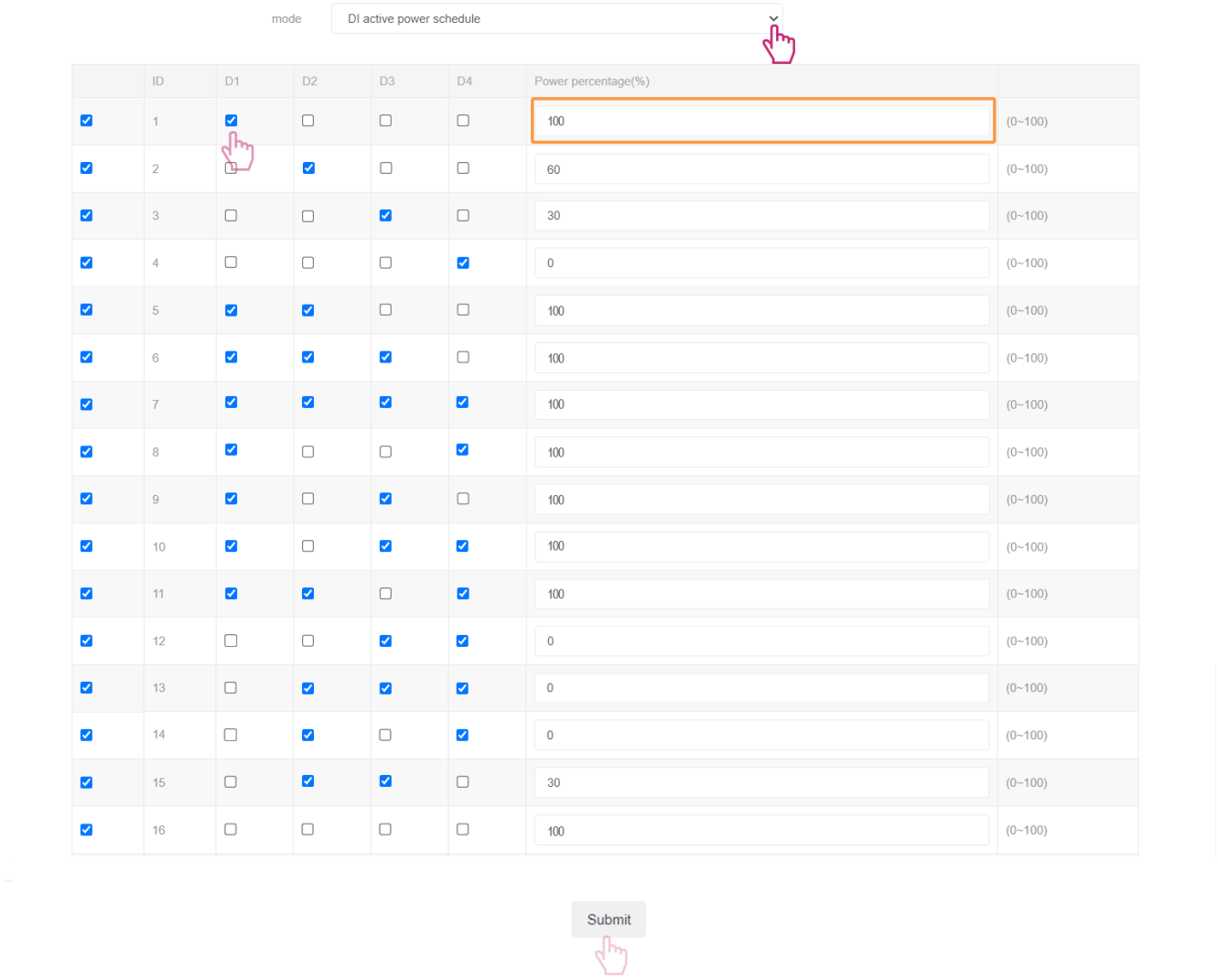
- **Fix active power percentage limited (open loop)**

Ai-Logger 1000 provides a simple active power limited method according to the grid company plan. The time period and the power generation as the percent of the plant rated power can be set here. And then click “Submit” to finish setting. The active power will be limited automatically according to different time periods of the day.



- **Ripple Control Receiver**

When a Ripple Control Receiver is connected to the digital signal input port, the parameter should be set here. And then click “Submit” to finish setting.

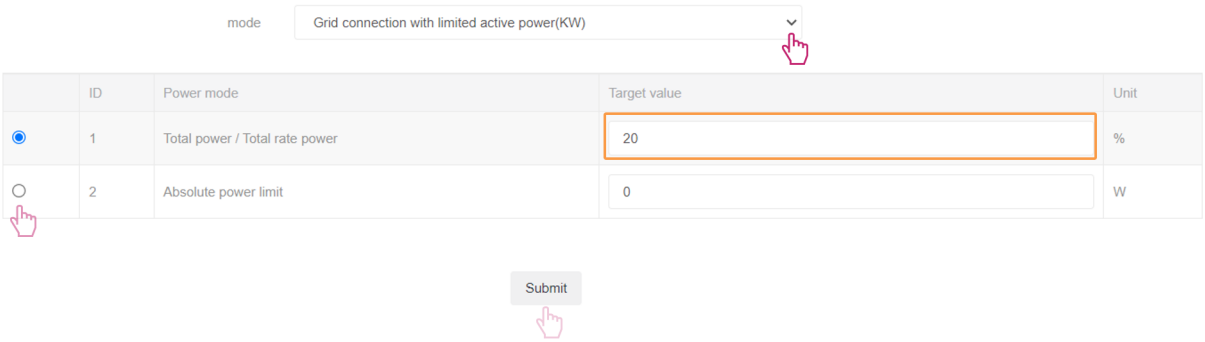


- **Export active power limit**

The export active power control solution measures the active power at the point where the customer's installation is connected to the distribution system (point of grid connection) and then uses this information to control the inverter's output active power in order to prevent the export active power to the distribution system from exceeding the agreed export capacity.

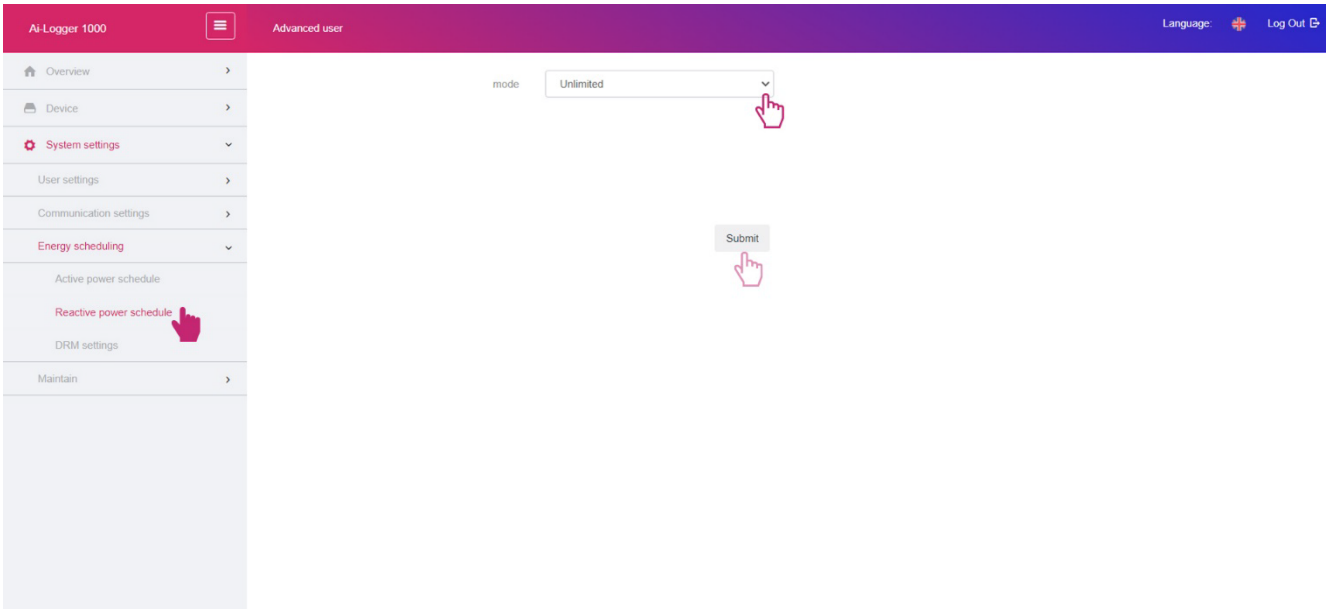
When the smart meter is connected to one of the RS485 interfaces, the export active power parameter should be set here. And then click "Submit" to finish setting.

The limited value can be chosen as the percent of the rated power of the plant or the absolute active power.



8.5.3.2 Reactive power schedule

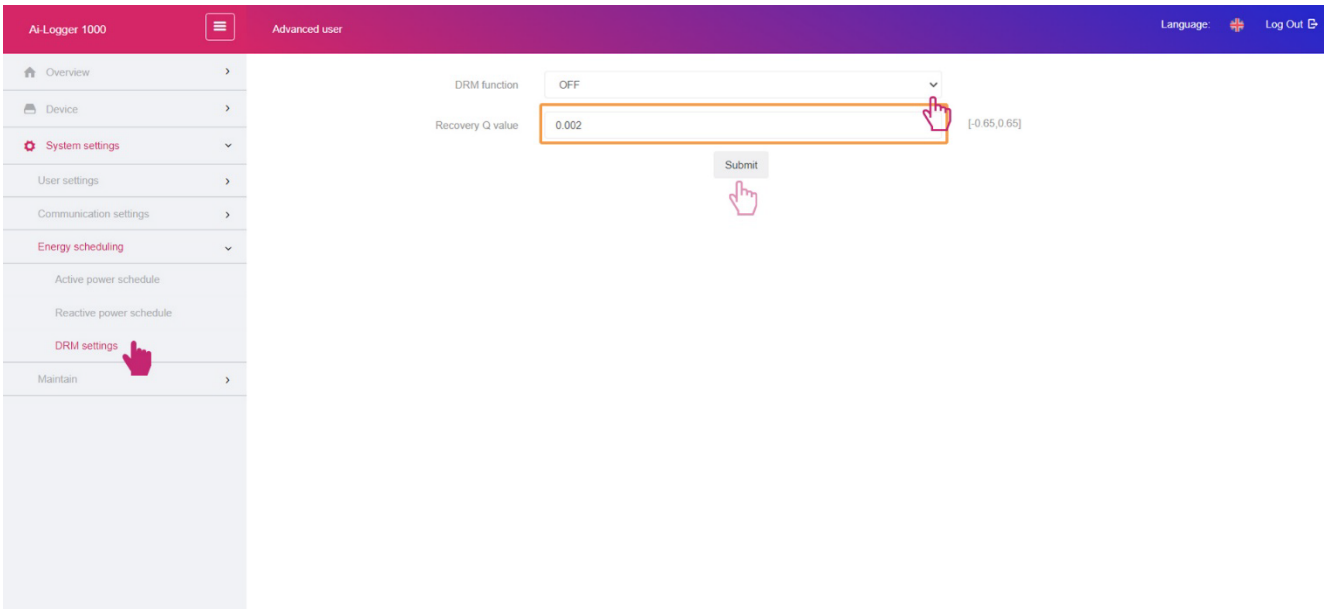
Click “System settings > Energy scheduling > Reactive power schedule” to set the reactive control method. Click the drop-down menu for mode to choose the different method.



8.5.3.3 Set Demand Response Enabling Device (DRED) parameter

Click “System settings > Energy scheduling > DRMs settings” to set the parameter for DRED.

When the Demand Response Enabling Device (DRED) is connected to the digital signal input port, the DRM function should be chosen to “ON” and fill in the maxmum reactive power. And then click “Submit” to finish setting.



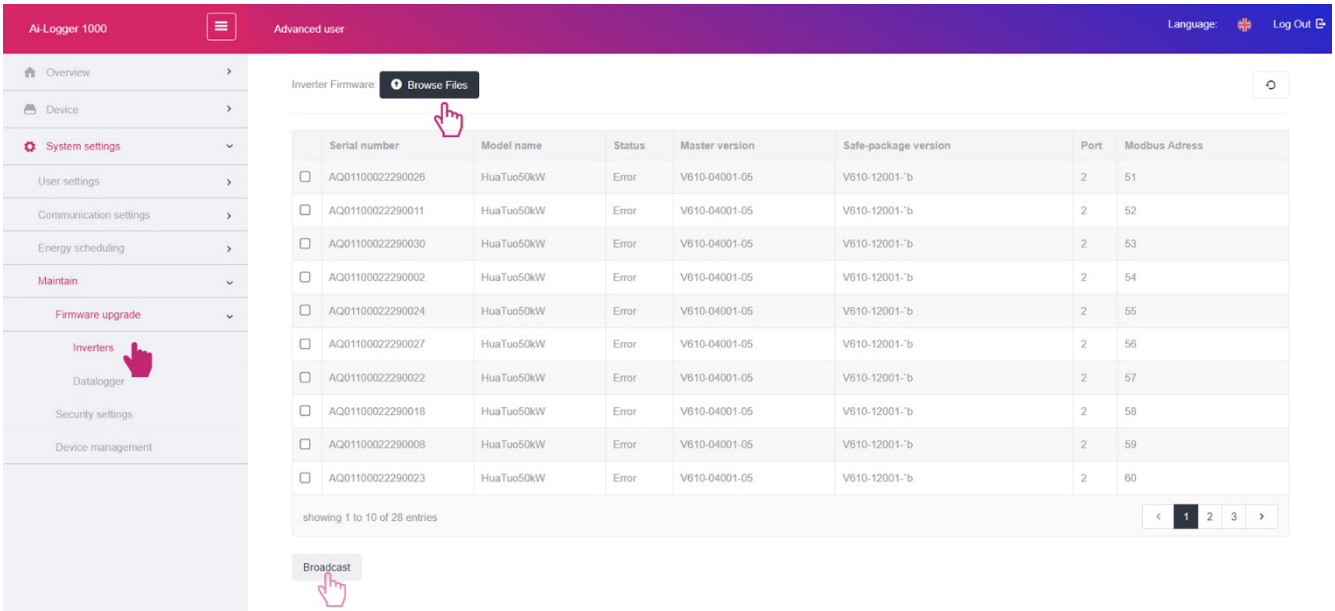
8.5.4 Maintenance

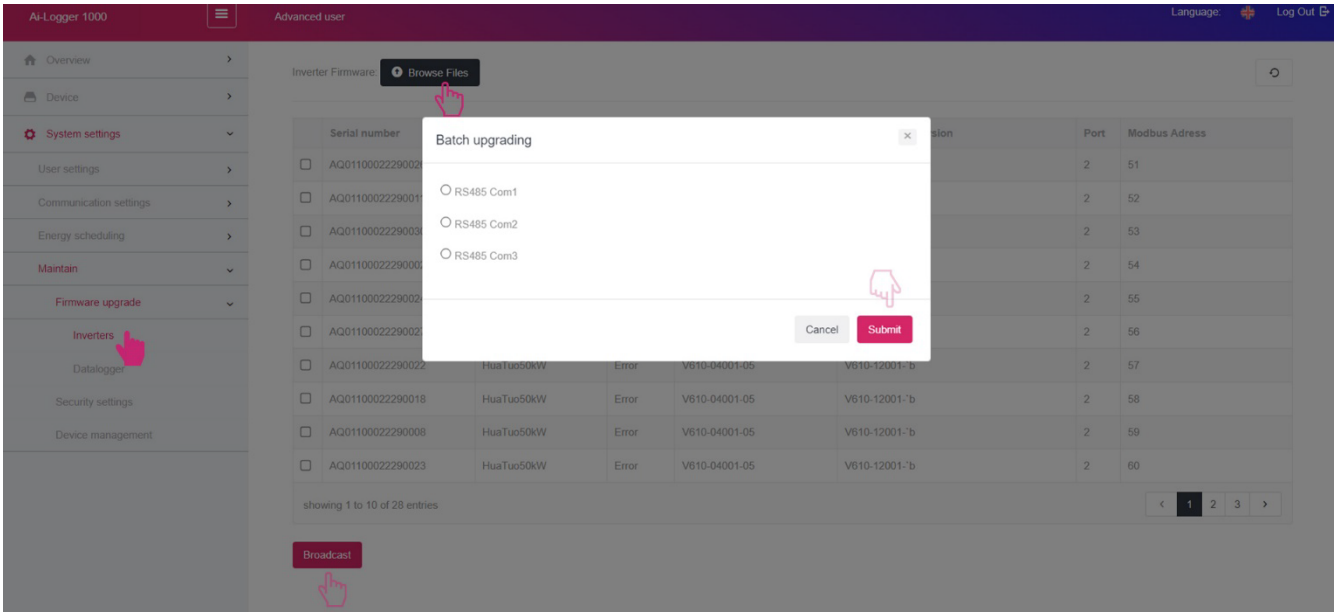
8.5.4.1 Firmware upgrade

- **Inverter firmware upgrade**

Click “Maintain > Firmware upgrade > Inverters” to update the firmware of the inverters that are connected to the Ai-Logger 1000.

Click “Browse Files” to upload the firmware document, and then click “Broadcast” to choose the RS485 port, and then click “Submit” to start update the firmware of the inverters.

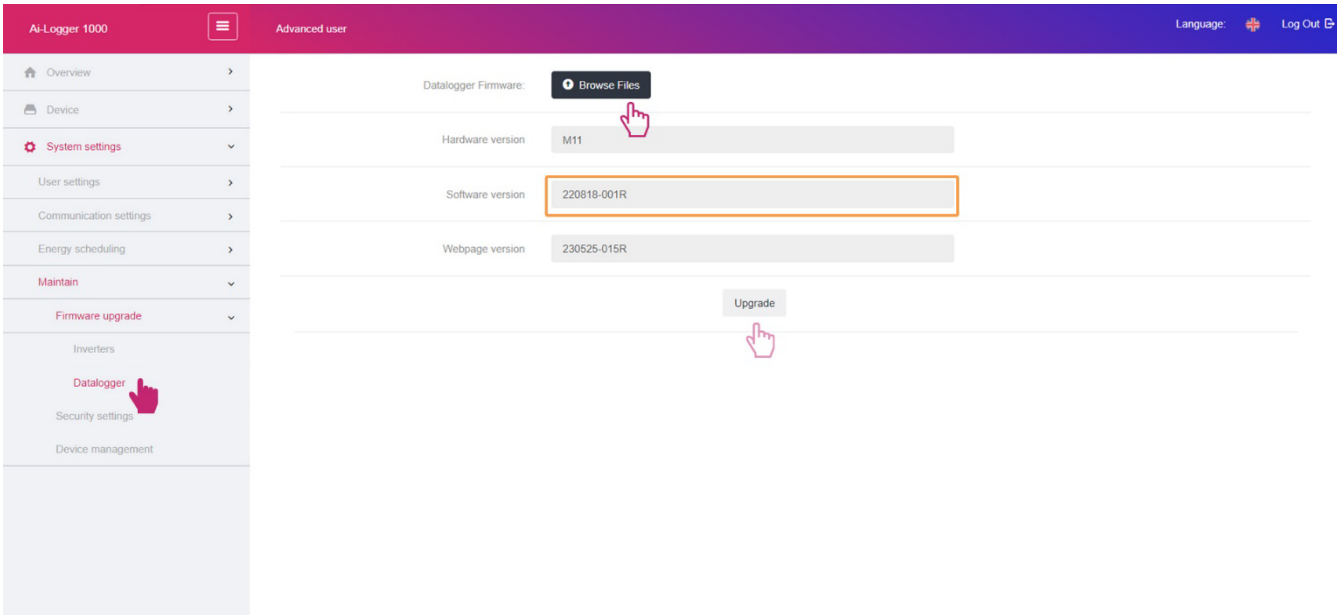




- **Ai-Logger 1000 firmware upgrade**

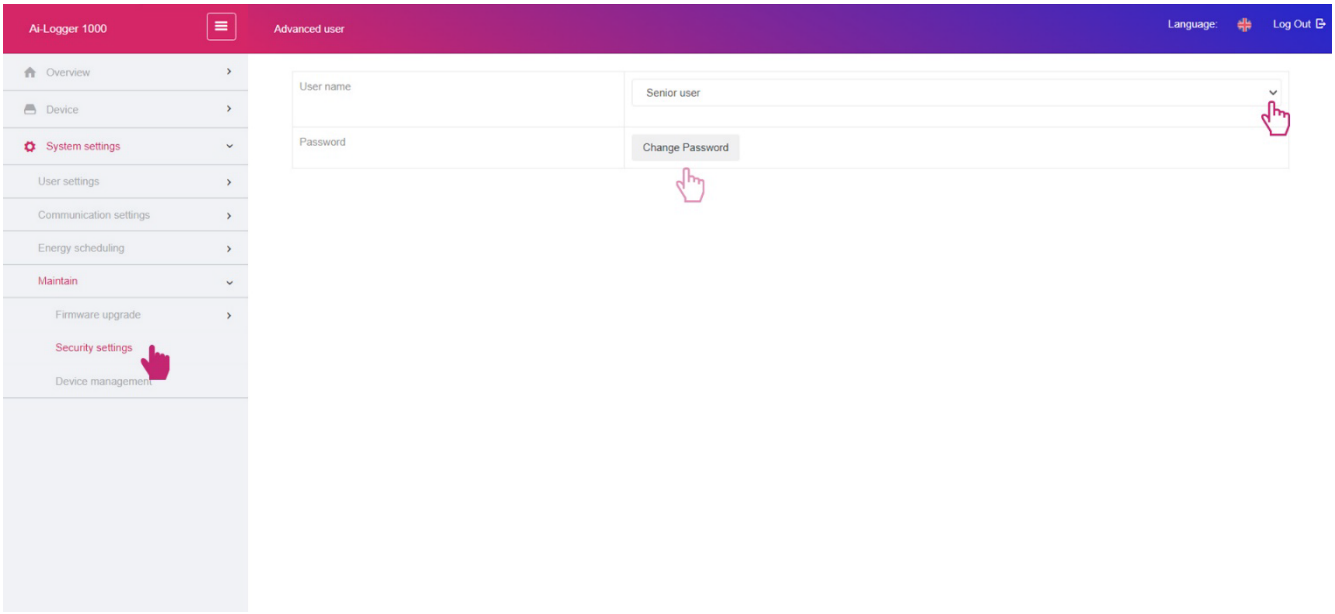
Click “Maintain > Firmware upgrade > Datalogger” to update the firmware of the Ai-Logger 1000.

Click “Browse Files” to upload the firmware document, and then click “Upgrade” to start update the firmware of the Ai-Logger 1000.



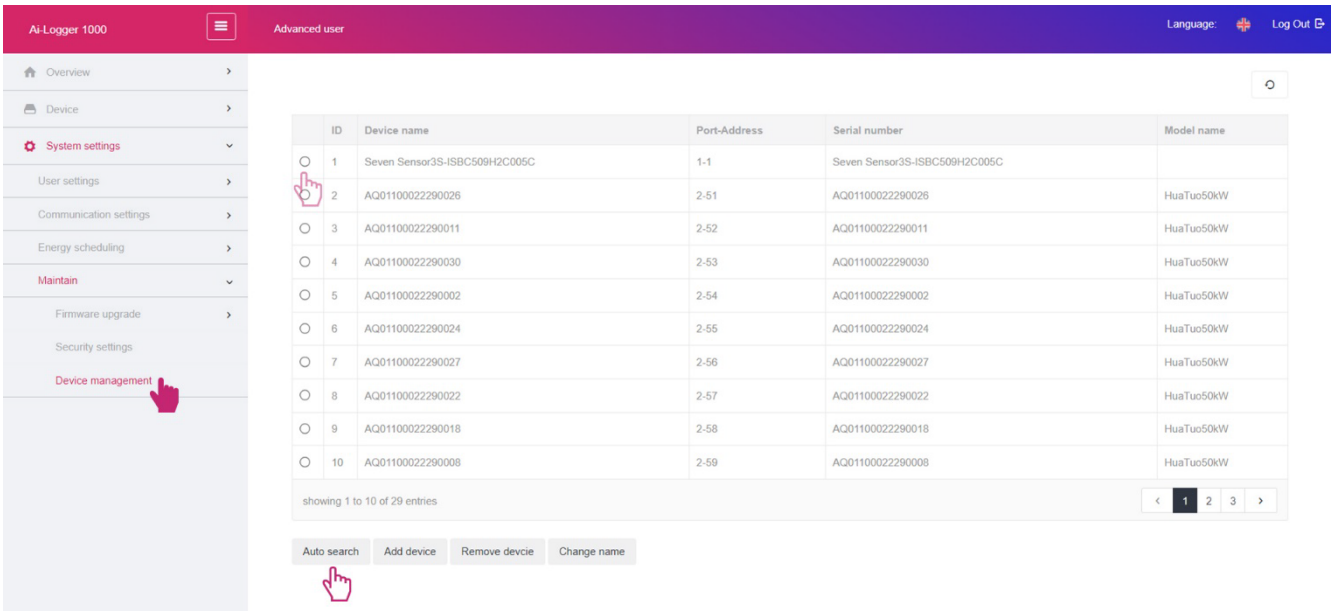
8.5.4.2 Security Settings

Click “Maintain > Security settings” to change the login password.



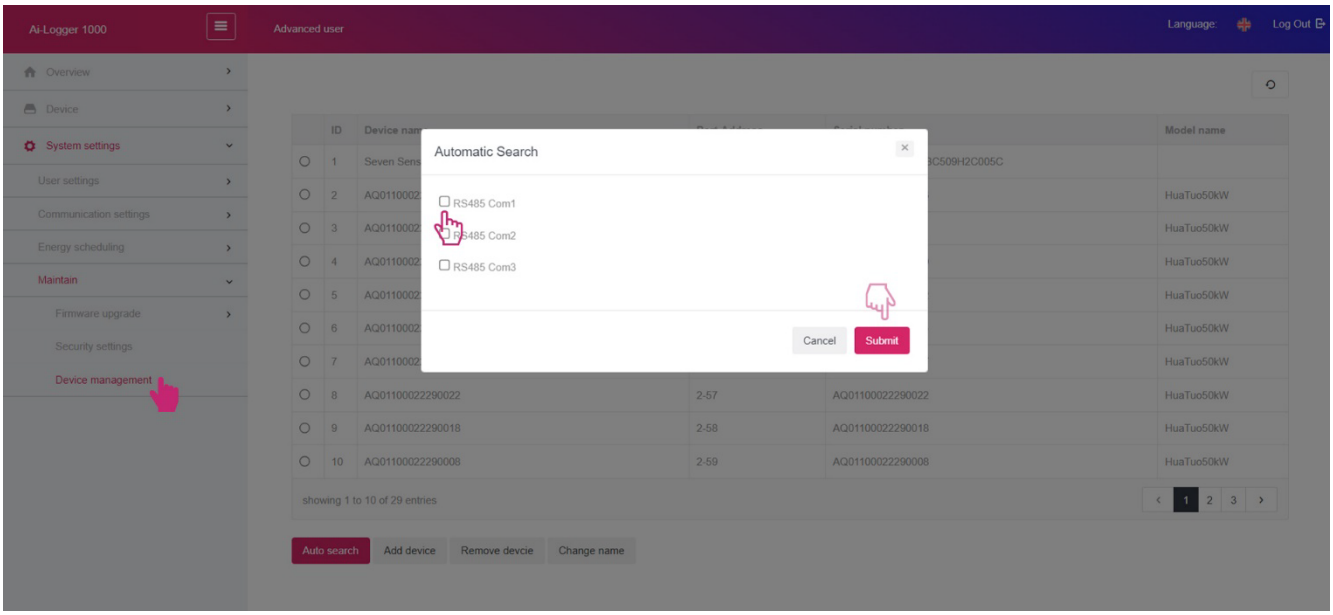
8.5.4.3 Device Management

Click “Maintain > Device management” to manage the devices that are connected to the Ai-Logger 1000.



- **Automatic search for inverters**

Click “Auto search” to choose the RS485 port, and then click “Submit” to automatically search the devices that are connected to the Ai-Logger 1000.

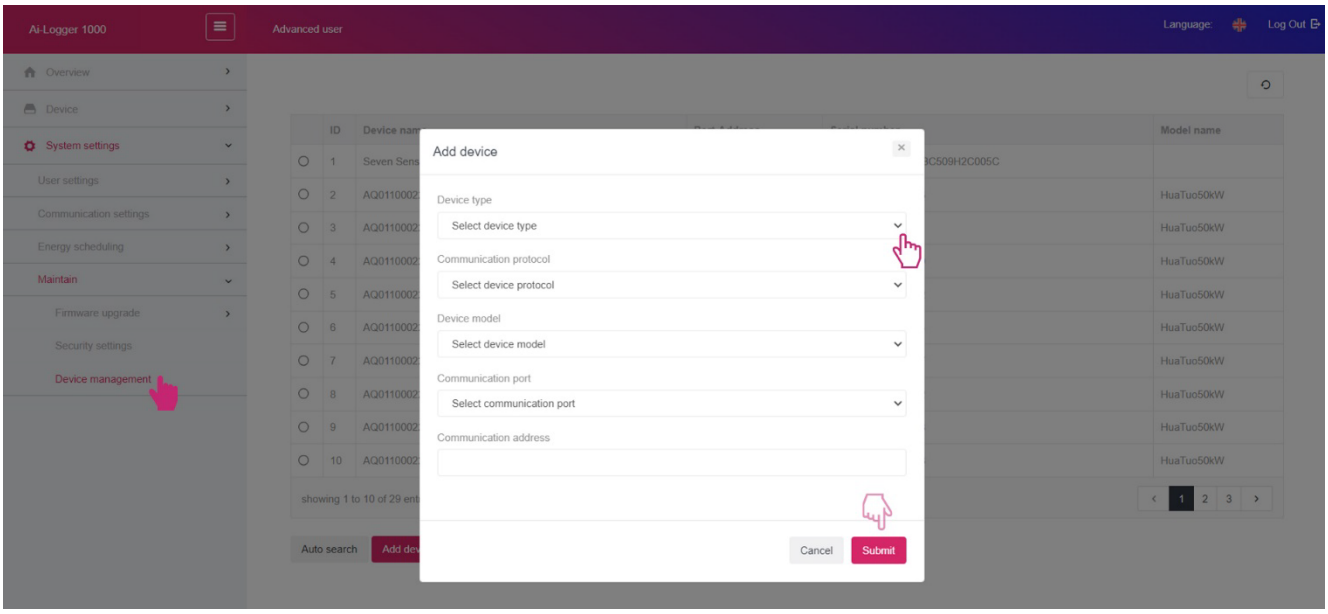


- Solplanet devices can be accessed through automatic search or added manually; weather stations and smart meters do not support automatic search and need to be added manually.
- The connected device can be manually removed, and the removed device can still be added again.
- The device address can be adjusted according to the serial number through “Automatic Address Assignment” . For example, when the device cannot be accessed due to address conflict, you can perform this operation to reassign the device address and access the device.
- After the device is scanned/added, Ai-Logger 1000 will automatically remember the address without rescanning after startup.

- **Add the Weather Station or Smart Meter**

If the Weather Station or the Smart Meter is connected to the Ai-Logger 1000, the device should be added by manual.

Click “Add device” to choose the information for the Weather Station or Smarter Meter. Fill in the communication address and click “Submit” to add the device.



Only the types that are approved by Solplanet can be connected to Ai-Logger 1000 and can be chosen from the drop-menu for device type.

Before manually adding a Modbus meter or DL/T645 meter, you need to set the RS485 parameters correctly on the meter.

9 Decommissioning the product

9.1 Disconnecting all the communication cable

Procedure:

Step 1: Disconnect the external power adapter of the Ai-Logger 1000.

Step 2: Pull out the Micro-SIM card.

Step 3: Disconnect the dry contact output interface connection.

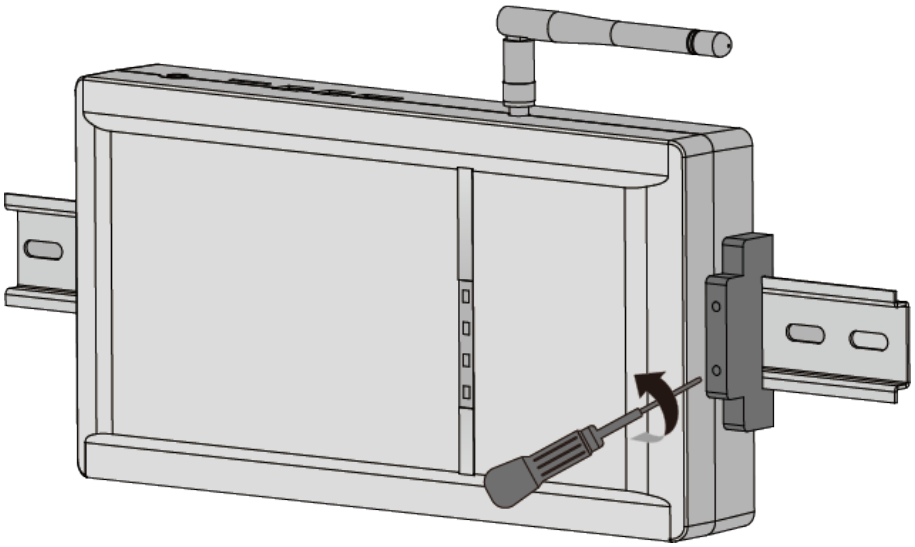
Step 4: Disconnect the digital signal input interface connection.

Step 5: Disconnect the ethernet cable.

Step 6: Disconnect the RS485 connection .

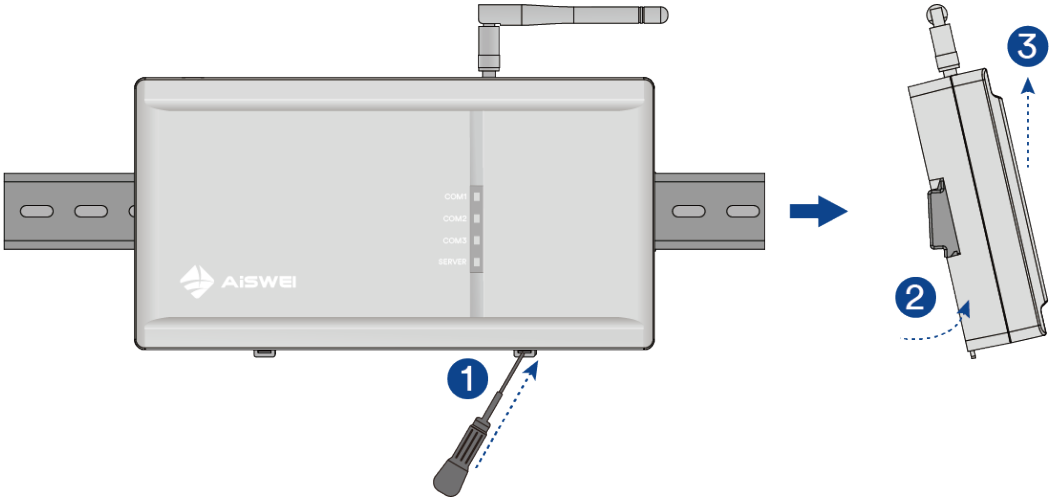
9.2 Remove the rail from the wall

Step 1: Loosen the brackets at both ends fixed on the rail.



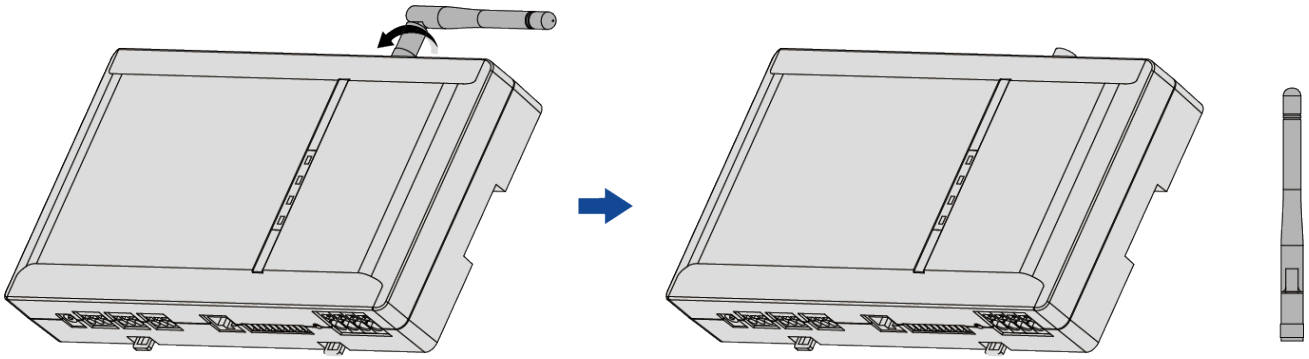
Step 2: Remove the Ai-Logger from the rail.

Method:



9.3 Remove the antenna

Rotate the antenna counterclockwise and remove.



10 Technical data

Ai-Logger 1000	
Communication	
Number of devices managed	80
Communication ports	
RS 485 interface	3, Modbus-RTU
Ethernet	1×RJ45, 10/100Mbps
Digital input	8, max. 24V
Digital output	2, max. 24V
USB	1
Wireless communication	
WLAN communication	802.11 b/g/n, 2.400 GHz ~ 2.497 GHz
Power supply	
DC input	12-24Vdc, 2Adc
Power consuption	<10W
General parameters	
Weight	About 450g
Operating temperature	-20°C～+60°C
Storage temperature	-40°C～+85°C
Relative humidity (non-condensing)	<95%
Altitude	2000m
Ingress protection class	IP20
Installation method	Wall, rail

11 Troubleshooting

When the Ai-Logger 1000 does not operate normally, we recommend the following solution for quick troubleshooting.

Item number	Fault	Possible causes	Suggested solutions
1	Can't power up	1. The DC output of the power adapter is not plugged into The " Power " port of the Ai-Logger. 2. The AC input of the power adapter is not plugged into the AC outlet. 3. Ower adapter failure. 4. Ai-Logger failure.	1. Check the power adapter, plug the DC output into the " Power " port of the Ai-Logger. 2. Check the power adapter, plug the AC input into the AC outlet. 3. Replace the power adapter. If you are purchasing the power adapter yourself, please purchase one that meets the standard. Ai-Logger supports a 12V/2A direct current (DC) power supply. 4. 5.Please contact the supplier or Solplanet Customer Service Center.
2	Device not found	1. There is no device connected to the COM port, or the cable connection is loose, disconnected, or reversed. 2. The RS485 communication parameters are not set correctly. 3. Weather stations are not added manually.	1. Check the connection of the RS485 communication cable. If it is loose, dropped, or reversely connected, it needs to be reconnected and tightened. 2. Check the RS485 communication parameter settings to ensure that the baud rate and communication address are set correctly. 3. Manually add environmental monitors.
3	Ai-Logger shows that the device status is disconnected	1. The cable connection between the device and the Ai-Logger is loose or disconnected. 2. The device is powered off. 3. The baud rate or RS485 address of the device was modified. 4. Device was replaced. 5. The device has been removed and is no longer connected.	1. Check the cable connection between the device and the Ai-Logger . If it is loose or falls off, reconnect and tighten it. 2. After checking that the device is connected correctly, power on the device. 3. Check if the baud rate and RS485 address of the device are set correctly. 4. Check if there is a replaced device, and if so, search again or add the device manually.

			5. If the device has been removed, please perform the “Remove Device” operation through “Device Management”.
4	Failed to add weather station	1. The RS485 communication cable between the weather station and the Ai-Logger is incorrectly connected, or the cable connection is loose or falls off. 2. The weather station is not powered on. 3. 3. The baud rate of the weather station is not set to 9600	1. Check whether the cable connection is correct. If it is loose or falls off, it needs to be reconnected and tightened. 2. Power up the weather station. 3. Check that the baud rate of the weather station is set correctly.
5	able to communicate with the management system on the PC	1. The Ai-Logger is not connected to the PC , or the cable connection is loose or dropped. 2. The Ethernet parameters are not set correctly.	1. Check whether the Ethernet port of the Ai-Logger is properly connected to the PC or router. 2. Check that the Ethernet parameters are set correctly.

- **LED light status description**

Serial number	Fault	Possible causes	Suggested solutions
COM1, COM2, COM3	Blinking	In the case of multiple inverters, one inverter cannot communicate.	1. Check if the inverter is turned on. 2. Check whether the RS485 communication cable is damaged. 3. Rescan the inverter.
SERVER	Blinking	Not connected to cloud server	1. Check if the Ethernet cable is connected properly. 2. Check whether the enterprise routing restricts the server domain name. 3. Check if the enterprise router assigns an IP address.

12 Maintenance

To ensure the Ai-Logger 1000 can run well for a long time, it is recommended to perform routine maintenance according to the descriptions in this document.

- Make sure that no strong electromagnetic interference devices are placed around the Ai-Logger 1000.
- Make sure there are no heat sources placed around the Ai-Logger 1000.
- Make sure the cooling holes are not blocked.
- Wipe down dirt regularly.
- Periodically check for signs of loose cable connections.
- Device Maintenance
- Technical data

13 Recycling and disposal

Dispose of the packaging and replaced parts according to the rules applicable in the country where the device is installed.

Do not dispose of the product together with the household waste but in accordance with the disposal regulations for electronic waste applicable at the installation site.

14 EU declaration of conformity

Within the scope of the EU directives

- Radio Equipment Directive 2014/53/EU(L 153/62-106. May 22. 2014) (RED)
- Restriction of the use of certain hazardous substances 2011/65/EU (L 174/88, June 8, 2011) and 2015/863/EU (L 137/10, March 31,2015) (RoHS) AISWEI Technology Co., Ltd. confirms herewith that the product described in this manual are in compliance with the fundamental requirements and other relevant provisions of the above mentioned directives.

The entire EU Declaration of Conformity can be found at www.solplanet.net.

15 Service and warranty

If you have any technical problems concerning our products, please contact Solplanet service.

Warranty terms and conditions can be downloaded at www.solplanet.net. When the customer needs warranty service during the warranty period, the customer must provide a copy of the invoice, factory warranty card, and ensure the electrical label of the inverter is legible. If these conditions are not met, Solplanet has the right to refuse to provide with the relevant warranty service.

16 Contact Us

EMEA

Service email: service.EMEA@solplanet.net

APAC

Service email: service.APAC@solplanet.net

LATAM

Service email: service.LATAM@solplanet.net

AISWEI Pty Ltd.

Hotline: +61 390 988 674

Add.: Level 40, 140 William Street, Melbourne VIC 3000, Australia

AISWEI B.V.

Hotline: +31 208 004 844 (Netherlands)

+48 134 926 109 (Poland)

Add.: Barbara Strozzilaan 101, 5e etage,kantoornummer 5.12, 1083HN Amsterdam, the Netherlands

AISWEI Technology Co., Ltd

Hotline: +86 400 801 9996

Add.: Room 904 - 905, No. 757 Mengzi Road, Huangpu District, Shanghai 200023

Solplanet