# S3-Gateway-DG Datalogger

User Manual

Ginlong Technologies Co., Ltd.

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# 1. About this document

This manual is applicable to the following data logger of Ginlong Technology Co., Ltd.
S3-Gateway-DG.

## 1.1 Target

Provide users with detailed product information and installation, operation and maintenance instructions of S3-Gateway-DG.

## 1.2 Note

This manual is applicable to the on-site installation and configuration of S3-Gateway-DG data logger, and requires professional technicians to operate.

## 1.3 Symbol Description

In order to ensure the safety of users, power grid, and equipment when using this product, the manual provides relevant warning symbols. Please read it carefully to better use the equipment and avoid personal and property damage.



**Danger:**
Indicates a high potential danger, which may cause personal injury or property damage if it cannot be avoided.



**WARNING:**
Indicates a moderate potential danger, which may result in personal injury or property damage if it cannot be avoided.



**CAUTION:**
Indicates a low potential hazard which, if not avoided, may result in personal injury or property damage.



**Note:**
Indicates that there is a low potential danger, if it cannot be avoided, it may cause personal injury and property damage.

# 2. Safety Notice

S3-Gateway-DG is designed in accordance with international safety regulations in order to ensure the safety of people, power grid and equipment. As a power electronic product, relevant safety regulations must be followed in the stages of installation, commissioning, operation, and maintenance. Improper operation may result in casualties and equipment damage.
Special attention: Only professionals with relevant qualifications can perform installation, wiring and other operations on this product.



**Danger:**
Please install and connect this product by professionals with relevant knowledge.

# 3. Product Description

## 3.1 Product Introduction

S3-Gateway-DG is mainly used in industrial and commercial, distributed photovoltaic projects, safe and reliable, easy to install, flexible networking, multi-device access, intelligent operation and maintenance.

**Easy to install:** Desktop installation, rail installation

**Flexible networking:** Support 4 channels of RS485, 1 channel of Ethernet communication

**Multi-device access:** Support inverter, electricity meter, weather station equipment access (standard modbus

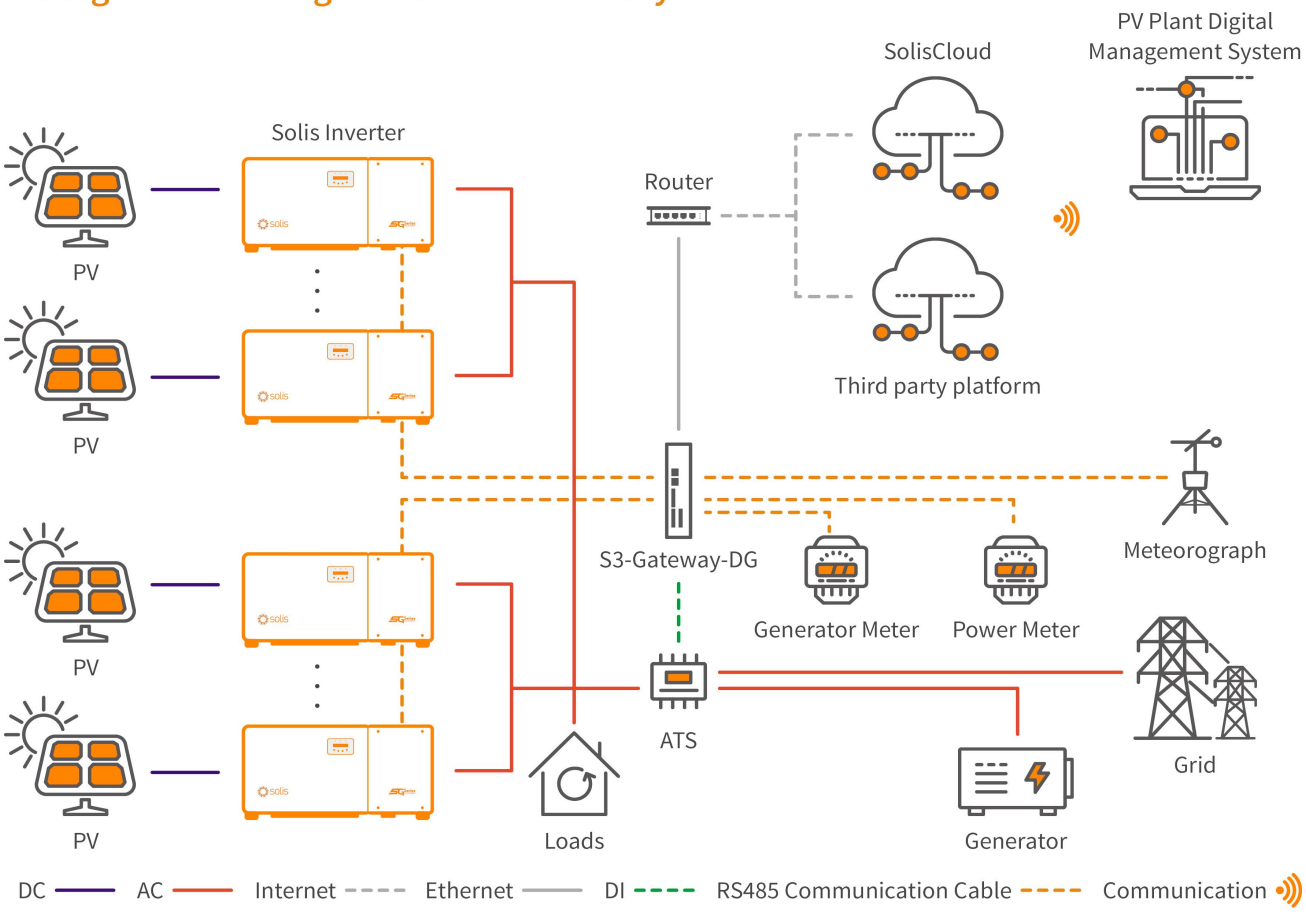
**Support Protocol:** RS485: support modbus-RTU / Ethernet: support modbus-TCP, 104

**Intelligent operation and maintenance:** support EPM, breakpoint resume and other functions

## 3.2 Application Scenarios Introduction

Application scenarios of data logger

### Intelligent Monitoring Solution - S3-Gateway-DG



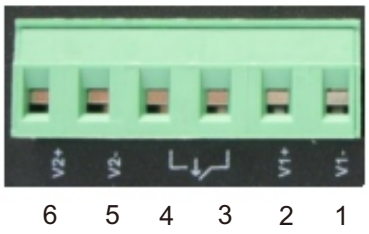
# 3. Product Description

## 3.3 Appearance

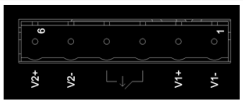



## 3.4 Communication terminal description

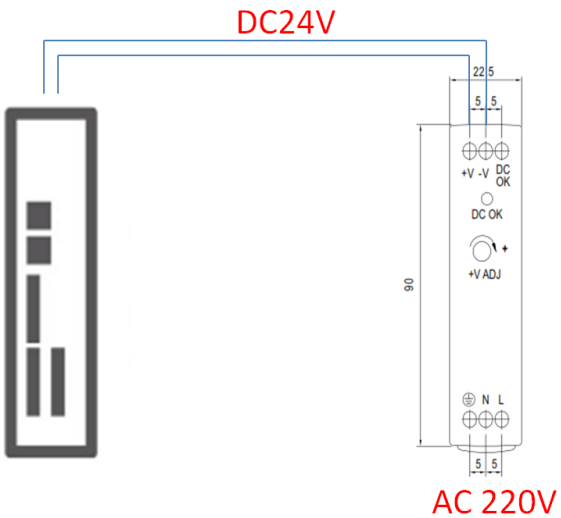
### 3.4.1 Power supply terminal

| SN | definition | caption |
|---|---|---|
| 1 | Power input 1- |  |
| 2 | Power input 1+ | |
| 3 | Power on indication output empty contact+ | |
| 4 | Power on indication output empty contact+ | |
| 5 | Power input 2- | |
| 6 | Power input 2+ | |



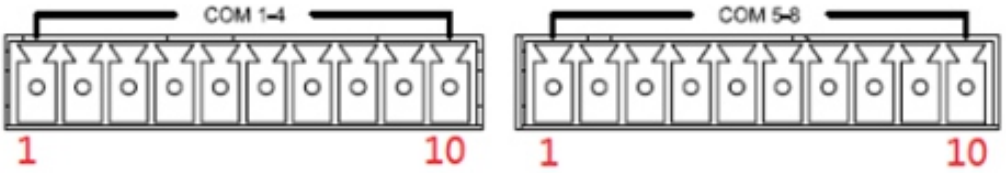
| SN | define | caption |
|---|---|---|
| 1 | power input 1- |  |
| 2 | power input 1+ | |
| 3 | Power on indication output empty contact + | |
| 4 | Power on indication output empty contact - | |
| 5 | power input 2- | |
| 6 | power input 2+ | |





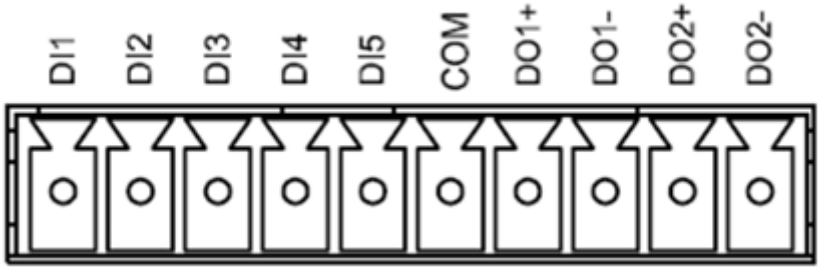
# 3. Product Description

3.4.2 RS485 terminal block




| NO. | definition | NO. | definition |
|---|---|---|---|
| 1 | COM1 RS-485_A | 1 | COM5 RS-485_A |
| 2 | COM1 RS-485_B | 2 | COM5 RS-485_B |
| 3 | COM2 RS-485_A | 3 | COM6 RS-485_A |
| 4 | COM2 RS-485_A | 4 | COM6 RS-485_B |
| 5 | GND | 5 | GND |
| 6 | COM3 RS-485_A | 6 | COM7 RS-485_A |
| 7 | COM3 RS-485_B | 7 | COM7 RS-485_B |
| 8 | COM4 RS-485_A | 8 | COM8 RS-485_A |
| 9 | COM4 RS-485_A | 9 | COM8 RS-485_B |
| 10 | GND | 10 | GND |

3.4.3 DI terminal block



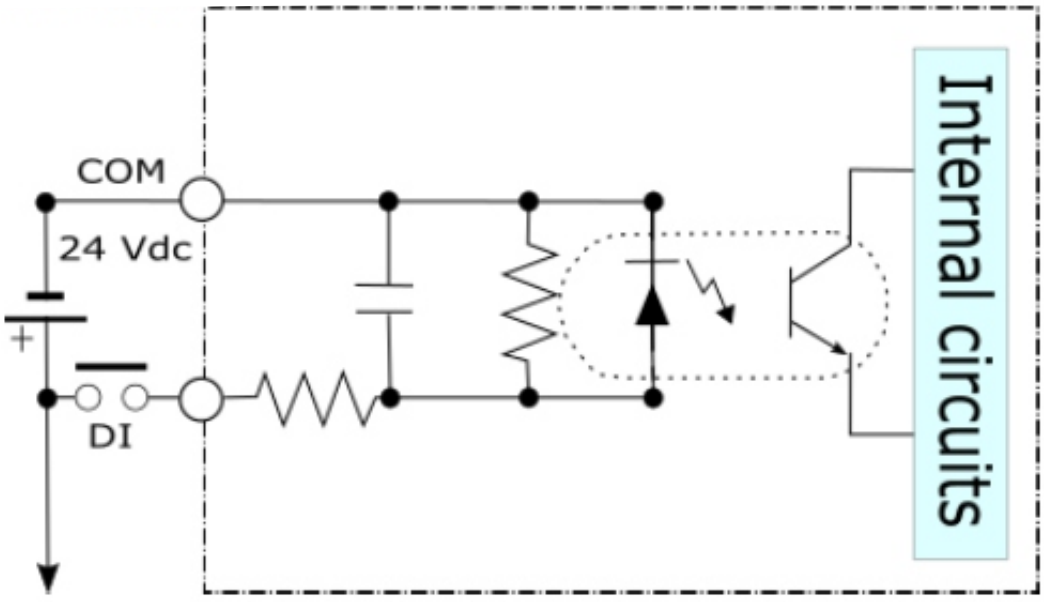

Provide 5 DI input interfaces, each from Di1 to 5, sharing a negative terminal.
Provide two wiring definitions as follows:

# 3. Product Description

| NO. | define |
|---|---|
| 1 | DI 1 |
| 2 | DI 2 |
| 3 | DI 3 |
| 4 | DI 4 |
| 5 | DI 5 |
| 6 | COM |

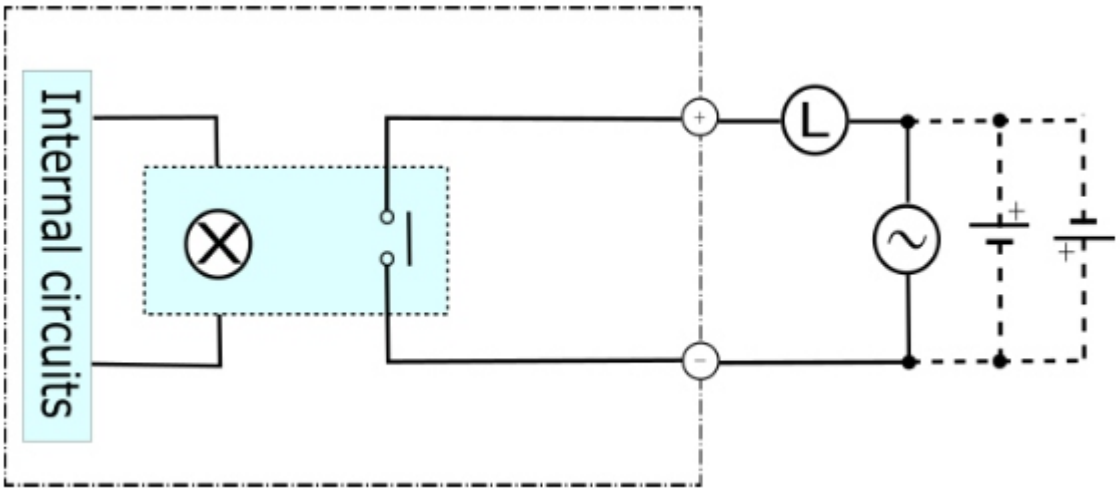
The DI input interface supports 24Vdc voltage input (up to 36Vdc), with an anti backflow diode installed internally. The DI× pin must be connected to the positive pole, and the COM pin must be grounded(or negative pole)

The typical wiring configuration diagram of the digital input function is shown in the following figure



# 3. Product Description

Including 2 independent relay input interfaces, supporting input and output voltage less than 250V, and current less than 0.3A.
The digital output adopts relay output mode, and the following figure is a typical wiring configuration diagram using the DC function

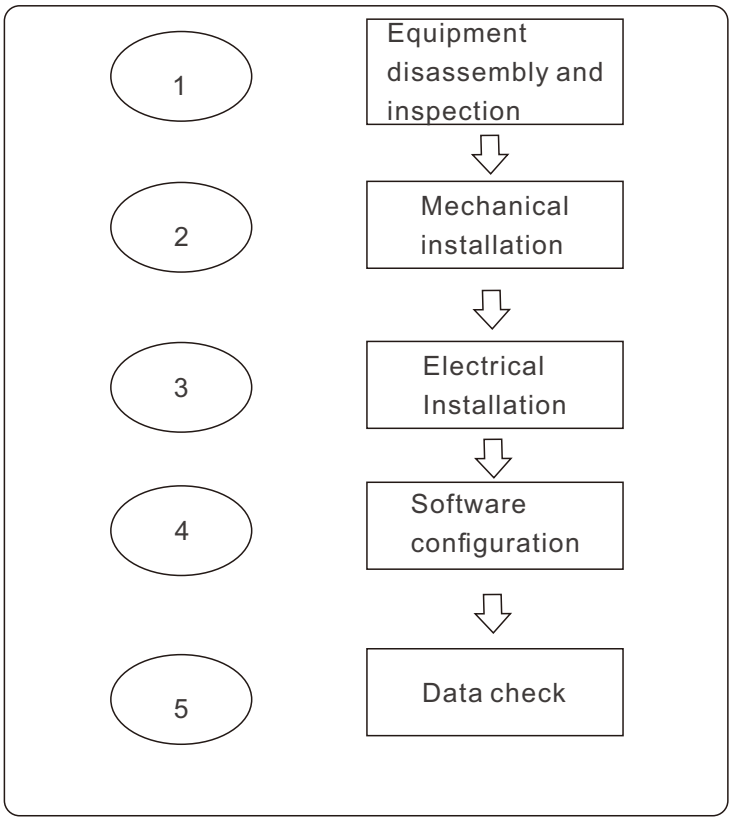



**Danger:**
Please strictly follow the above example for wiring.

# 3. Product Description

| pilot lamp | Lamp color | Status | function |
|---|---|---|---|
| PWR | green | steady on | After powering on, it remains on for a long time and the power supply is normal |
| | | off | Power outage |
| RUN | green | flash | The program is running normally |
| | | steady on or off | The program is not functioning properly. |
| F1 | green | flash | 4G data communication |
| F2 | green | flash | 4G module communication status |
| Link | green | steady on | Network connected |
| | | off | Network not connected |
| Act | green | flash | There is network data transmission and reception |
| | | off | No network data transmission |
| RxD | green | flash | Serial port receiving data |
| | | off | Serial port not receiving data |
| TxD | green | flash | Sending data through serial port |
| | | off | Sending  no data through serial port |
| DI | green | steady on | DI Input is high level |
| | | off | DI Input is low level or DI is not connected |

# 4. Installation Process




| NO. | Process | Reference Chapter |
|---|---|---|
| 1 | Equipment disassembly and inspection | 5.1 |
| 2 | Mechanical installation | 5.2 |
| 3 | Electrical Installation | 6 |
| 4 | Software configuration | 7 |
| 5 | Data check | 7 |

# 5. Mechanical Installation

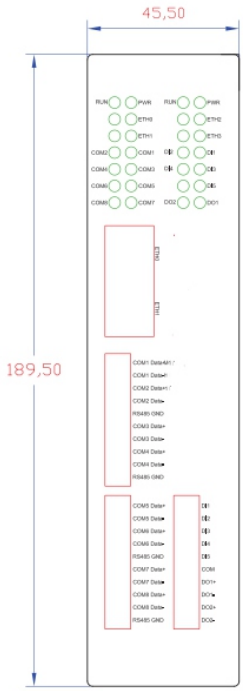
## 5.1 Equipment Disassembly

Check that the delivery is complete and undamaged according to the packing list inside the package

| NO. | Name | Num | Comment |
|---|---|---|---|
| 1 | S3-Gateway-DG | 1 | |
| 2 | Power supply terminal block | 1 | |
| 3 | Serial communication terminal blocks | 2 | |
| 4 | DI terminal blocks | 1 | |
| 5 | Terminal resistor | 4 | 120 ohm resistor |
| 6 | Commissioning wire | 1 | RJ45-DB9 commissioning wire |
| 7 | Switching power supply | 1 | MDR-20-24, AC/DC 220V input, DC 24V output |

## 5.2 Device Installation

It can be Installed on the wall, desktop or rail according to the actual situation of the site



# 5. Mechanical Installation

Wall and desktop installation

1. Choose a suitable place (wall, metal surface, desktop);
2. Use a marker to mark the drilling position;
3. Use an electric drill/impact drill to make holes at the marked locations;
4. Fasten with expansion screws (wall) or with nuts (metal surface)



**Danger:**
Please avoid other wires in the wall when drilling to avoid casualties.

Rail installation

1. Fix the guide rail in a suitable position
2. S3-Gateway-DG is tilted at a certain angle, so that the upper clip fits into the guide rail
3. Push the lower part of S3-Gateway-DG and snap it into the guide rail



**Warning:**
Please observe the surrounding environment during installation to avoid hand scratches

Power supply installation
The power supply only supports rail installation. For installation steps please refer to the S3-Gateway-DG rail installation steps

# 6. Power supply installation steps

1. Use a 2.5mm² wire, strip the insulation for 8-10mm.
2. The +V and -V terminals of the power supply are respectively connected to the V+ and V- terminals of the S3-Gateway-DG device.

**Danger:**
Please be sure to check the corresponding terminal carefully when wiring, so as

RS485 cable requirements

1. Use 1~1.5mm2 twisted pair with shielding layer;
2. Strip the protective layer of the communication cable by about 20mm and strip the insulation layer of the wires by about 10mm;
3. Connect the stripped wires to the RS485 port of the S3-Gateway-DG device;
4. If multiple inverters need to be monitored on site daisy-chain cables can be used for the inverters. Each serial port of S3-Gateway-DG can connect 15 inverters.

DI port cable requirements

1. Use 0.75 mm2 twisted pair with shielding layer;
2. Strip the protective layer of the communication cable by about 20mm and strip the insulation layer of the wires by about 10mm;
3. Connect the stripped wires to the DI port of the S3-Gateway-DG device;

**Note:**
When wiring, RS485A is connected to the A port of the S3-Gateway-DG device, and RS485B is connected to the B port of the S3-Gateway-DG device.

# 7. Configuration

## 7.1 Network Configuration

The product adopts WEB configuration, it is recommended to use browser Chrome version 100 or above, and the resolution of computer is recommended to be 1920*1080. If there is a firewall on site, please let the firewall allow the following IP and port, so that the data collected can be effectively uploaded.

IP: Allocation according to firewall policy, Logger for adaptation.

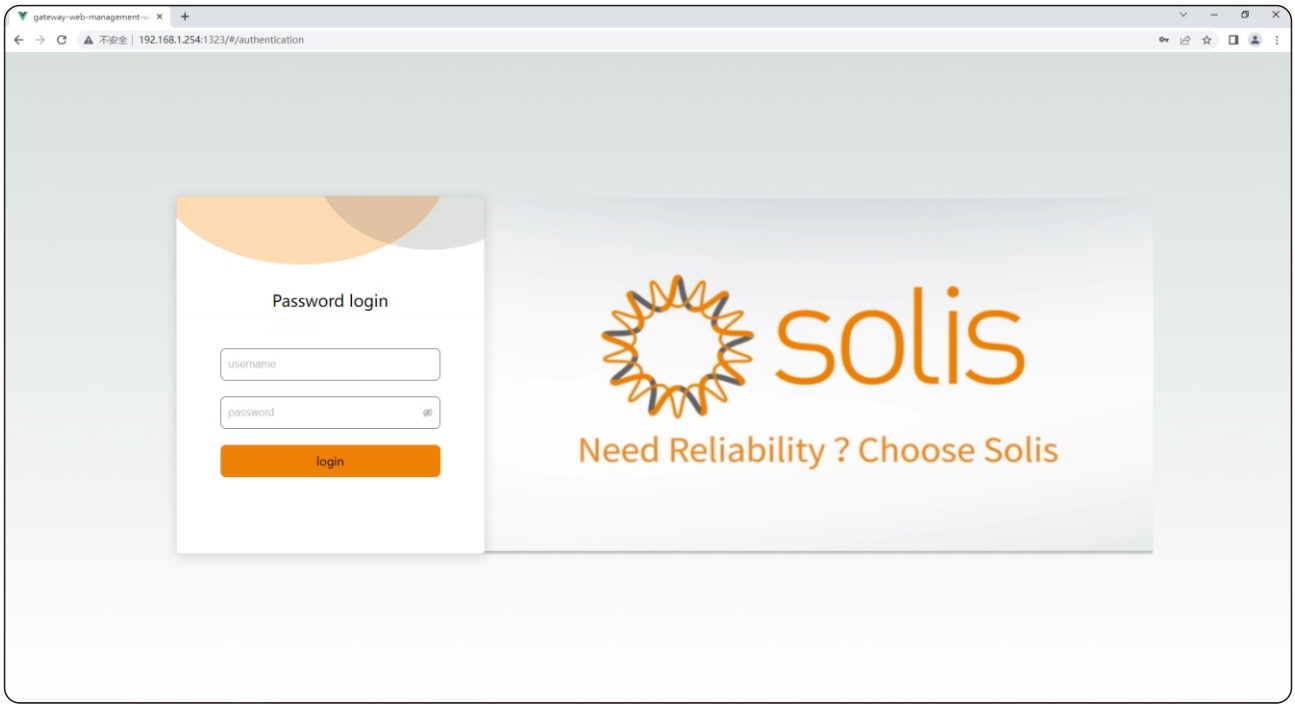
Solis cloud platform: port 1883.

IEC104 protocol: 2404-2405 ports.

Remote maintenance IP address: http//43.131.47.77/ ,ports: 47, 1723, 1777 ports.

## 7.2 Software Configuration

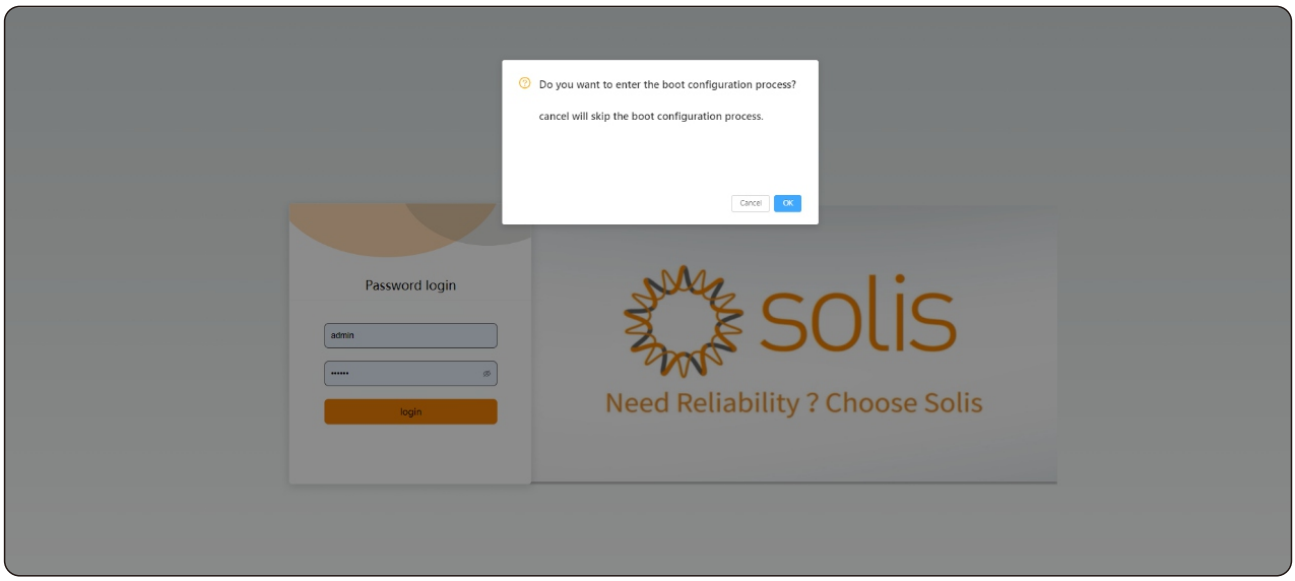
1. Modify the computer IP, and keep the computer and S3-Gateway-DG IP in the same network segment, and use the network cable to connect the computer and S3-Gateway-DG device.
2. Enter 192.168.1.254:1323 in the URL bar of the browser.
   Account: admin; Password: 123456



# 7. Configuration

3. Enter the boot configuration interface

Every time you enter the system, you will be prompted whether you need to boot. You can click OK to enter the boot configuration or choose not to boot.

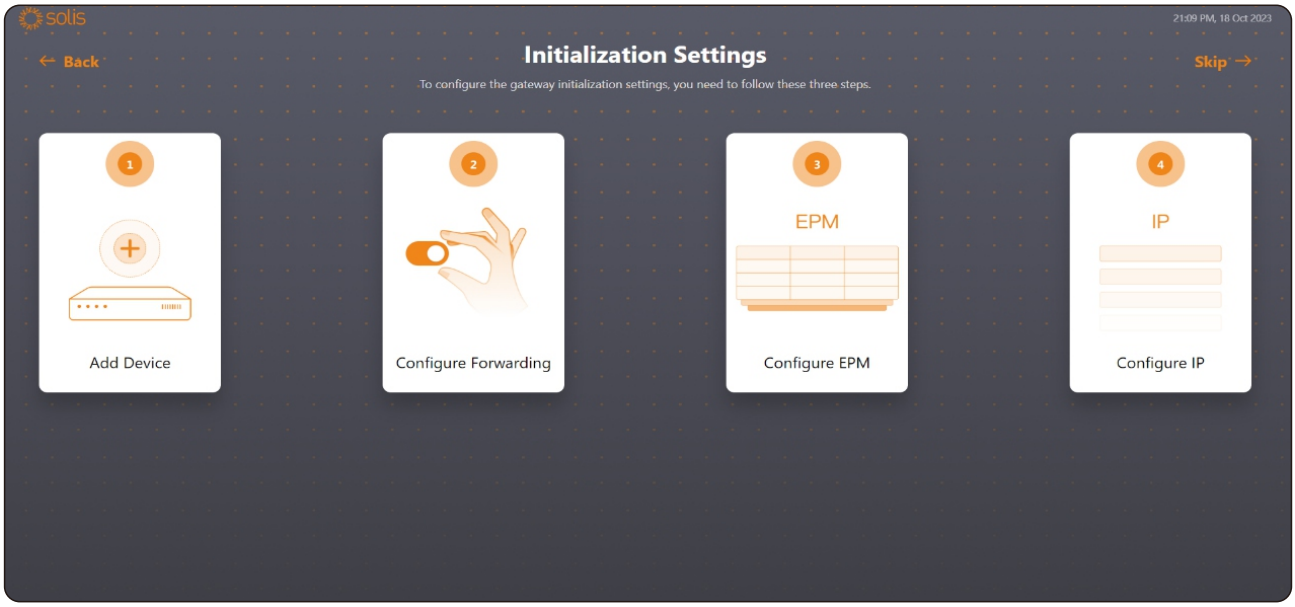



4. Enter the guidance interface

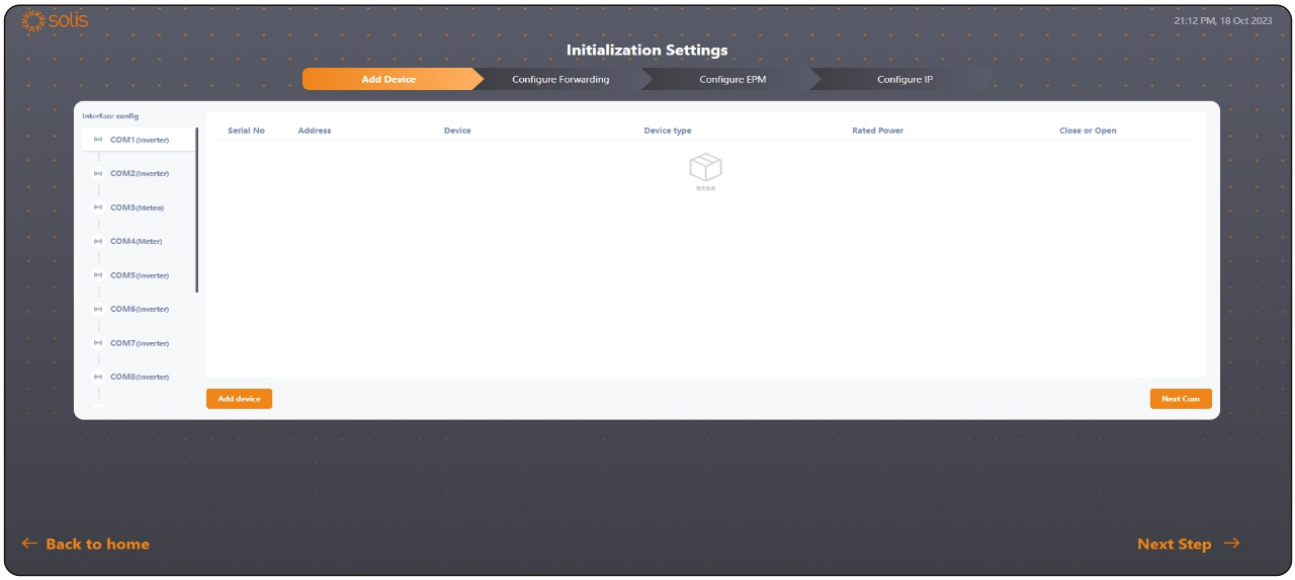


# 7. Configuration

5. Click start Configuration, through the guidance interface, you can configure inverters, weather meters, electricity meters, data forwarding, EPM, and device IP addresses

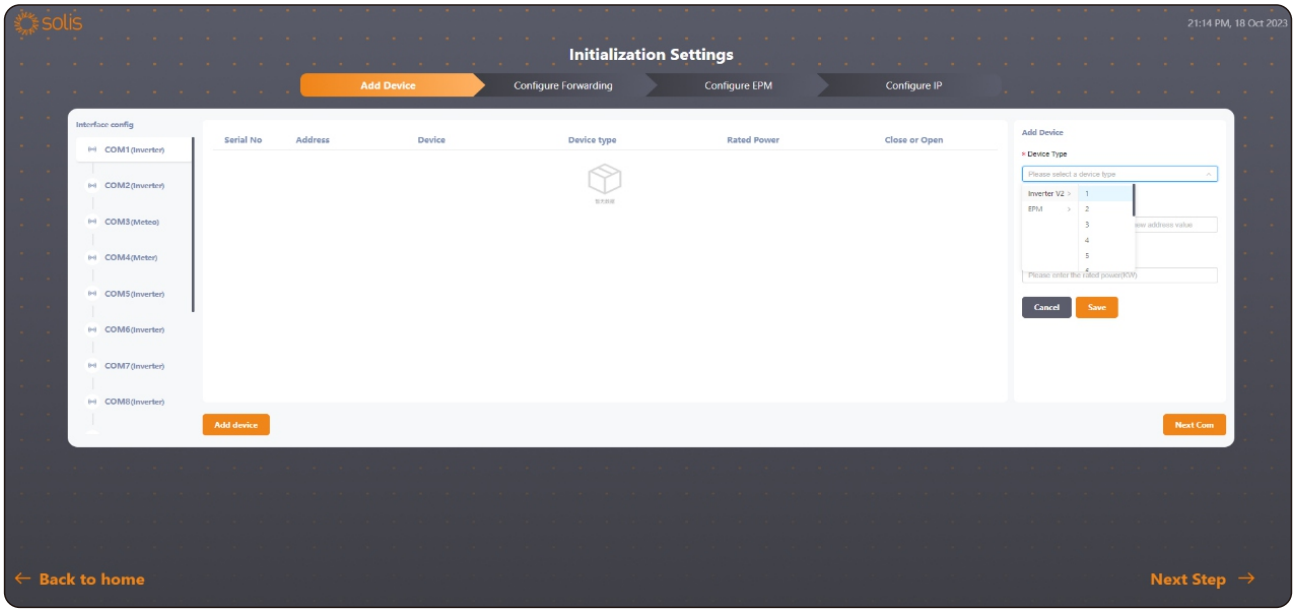



6. Click Skip to enter the configuration

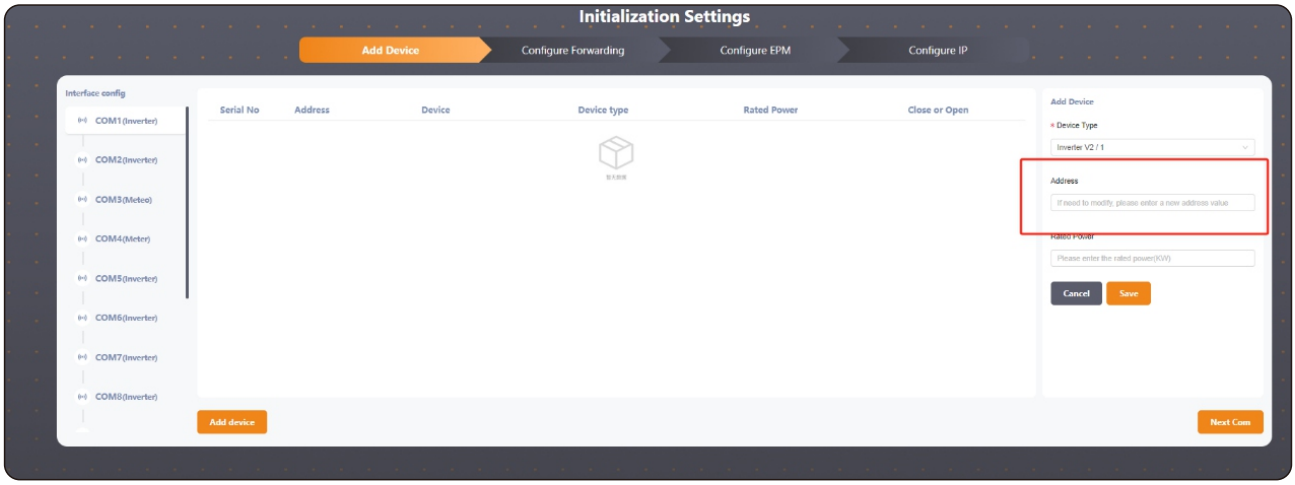


# 7. Configuration

7. Click Add device:(default COM1,COM2,COM5,COM6,COM7,COM8 is interver,COM3 is Meteo, COM4 is Meter.

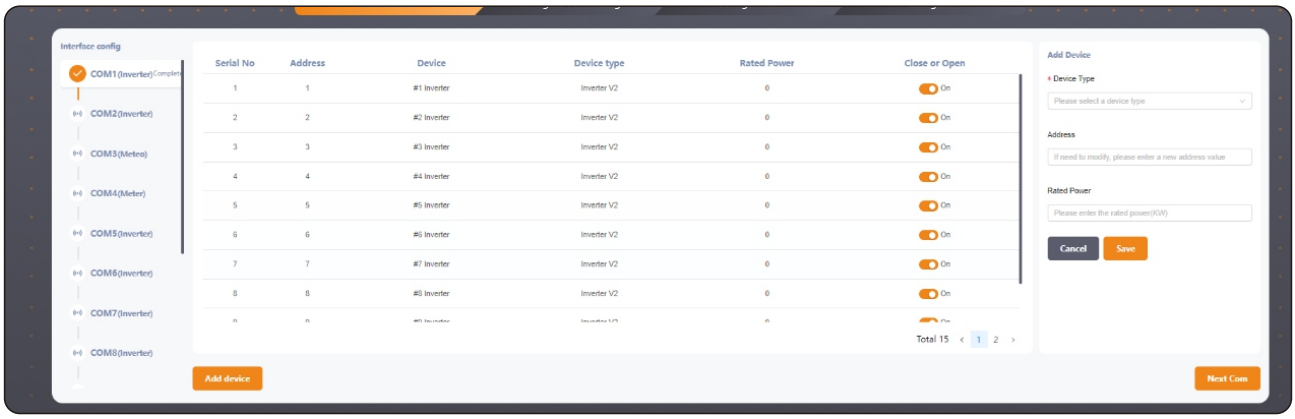



8. Modify according to the address of the inverter, Rated power of the inverter, please note that if using the EPM function, it must be filled in here.

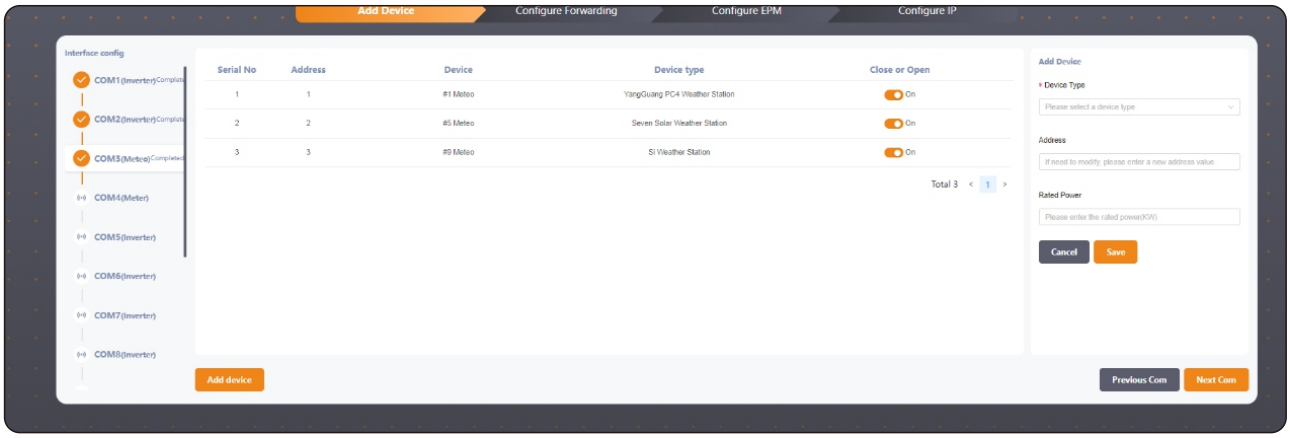


# 7. Configuration

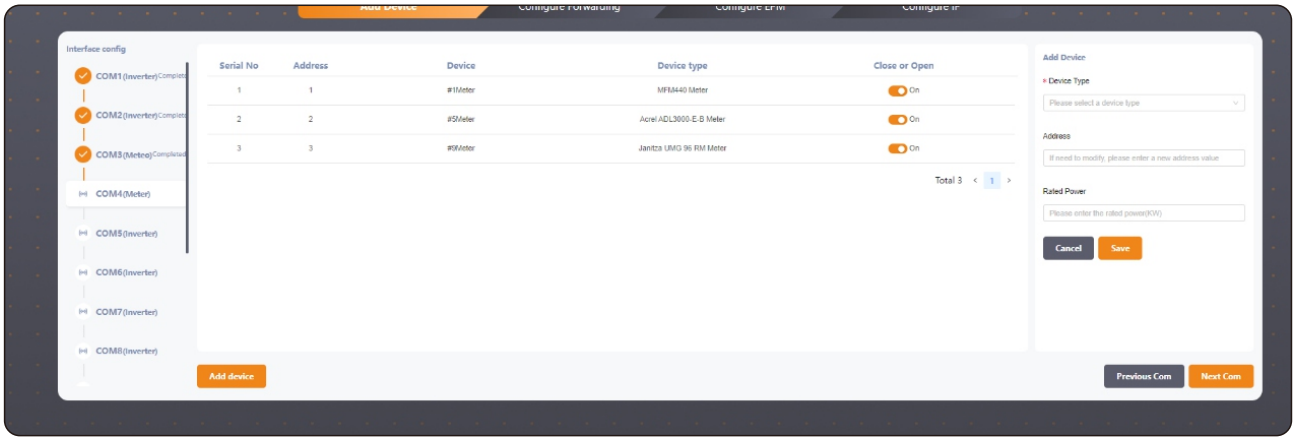
9. After adding COM1 inverter, as shown in the figure




10. Meteo instrument page

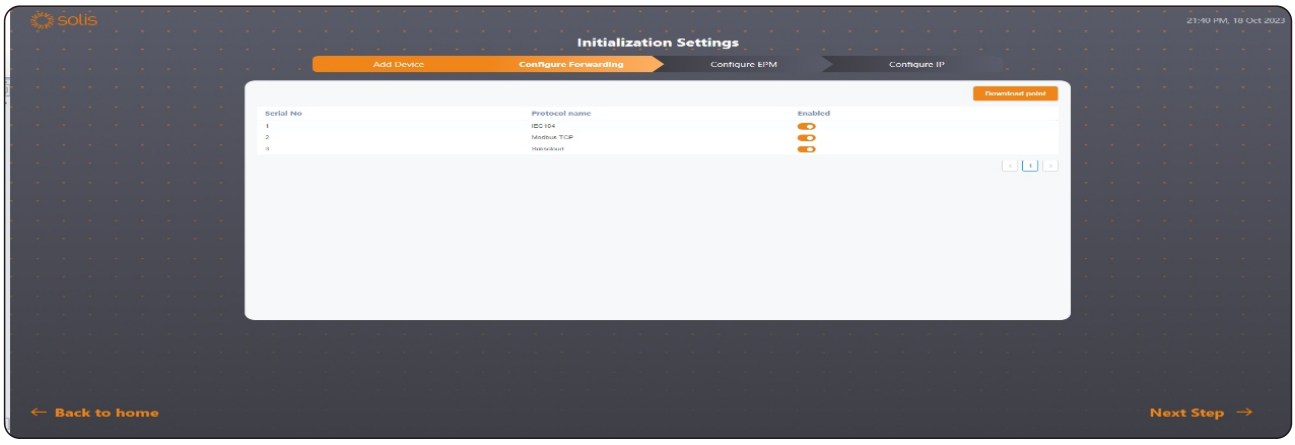



11. Meter page

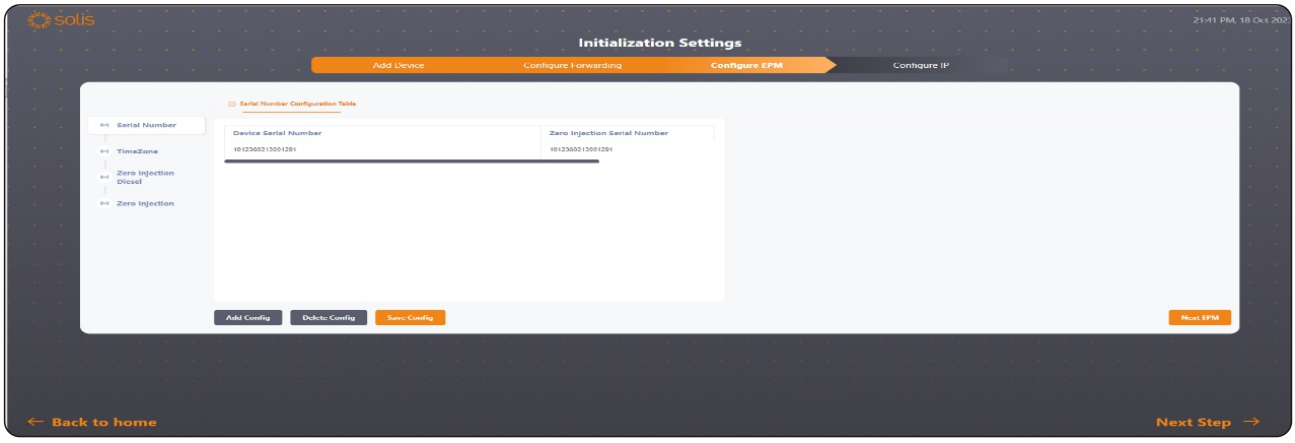


# 7. Configuration

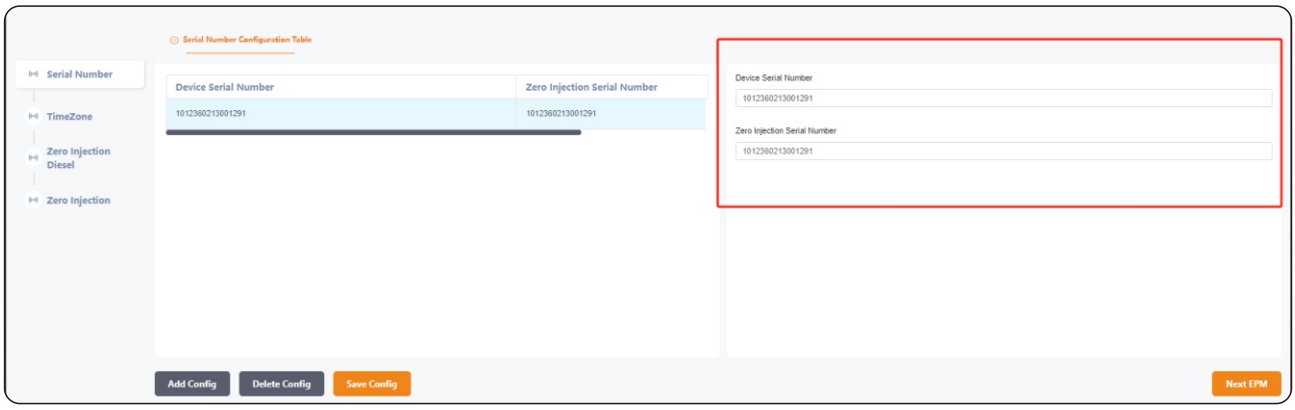
12. Click Next Step to enter forwarding configuration




13. Click Next Step to enter the APP configuration (do not forget to click Save Config to modify any configuration)

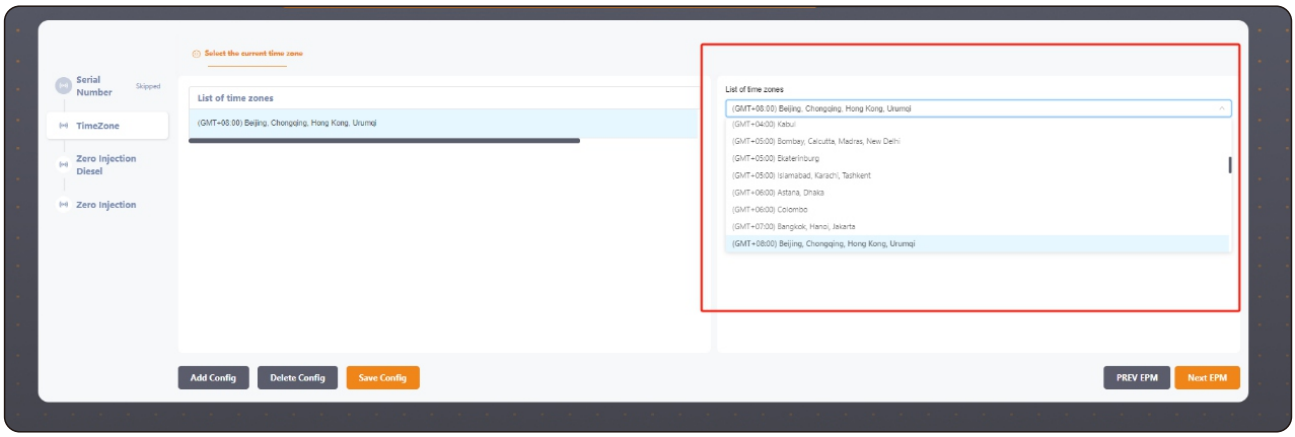



14. Modify the SN of S3 and EPM (default factory filled in)

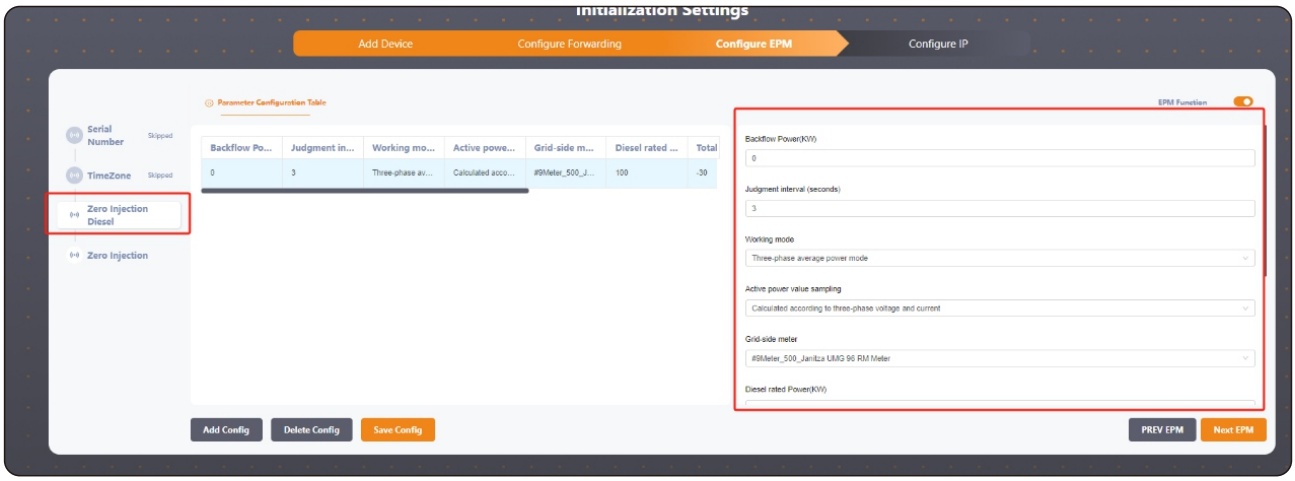


# 7. Configuration

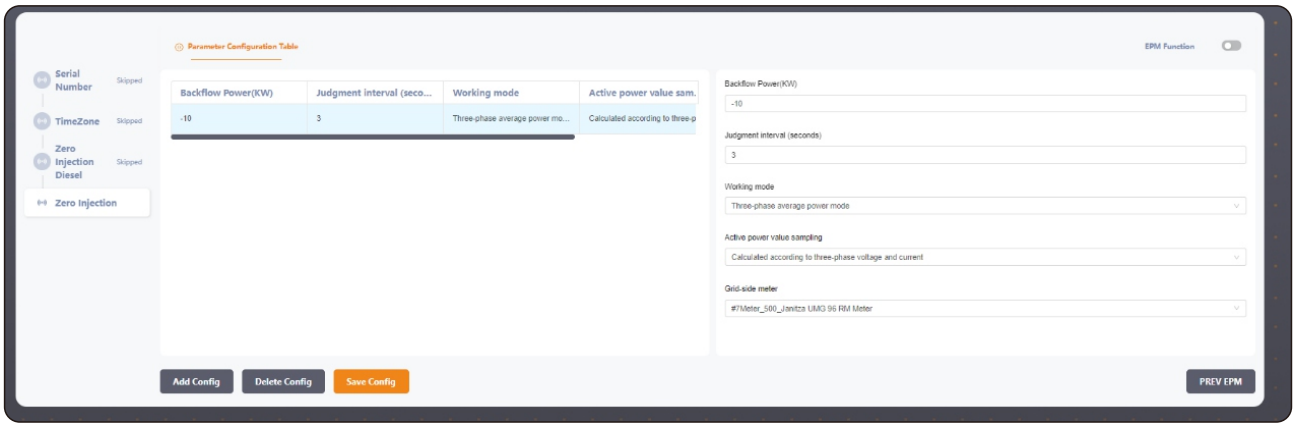
15. Time zone selection (for inverter timing and meteorological instrument zeroing)




16. Zero Injection Diesel config



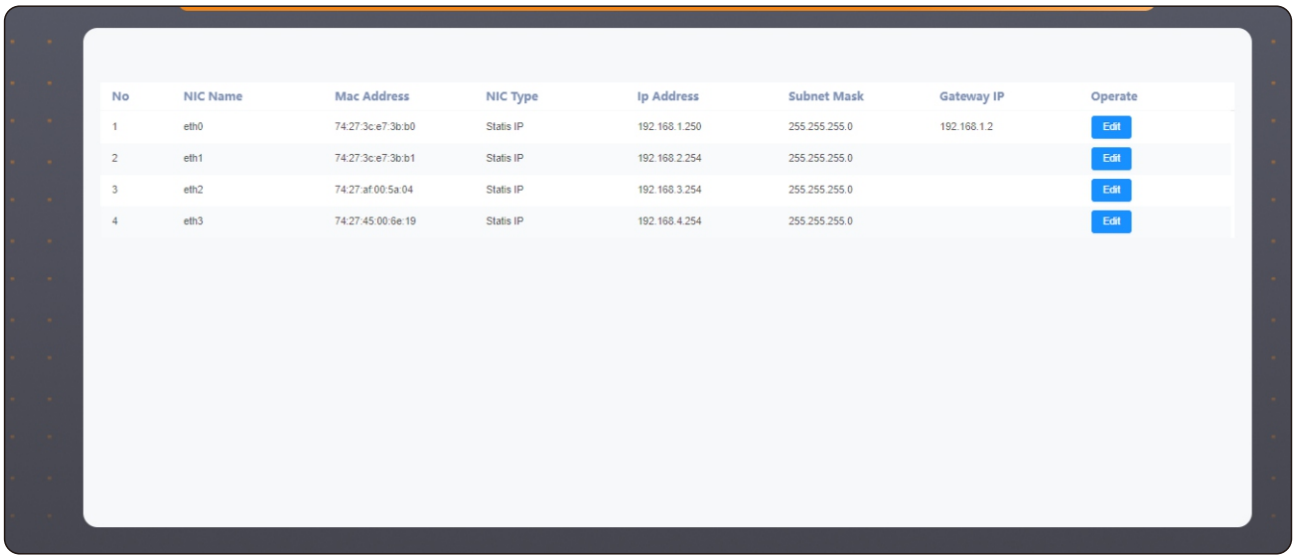

17. Zero Injection config



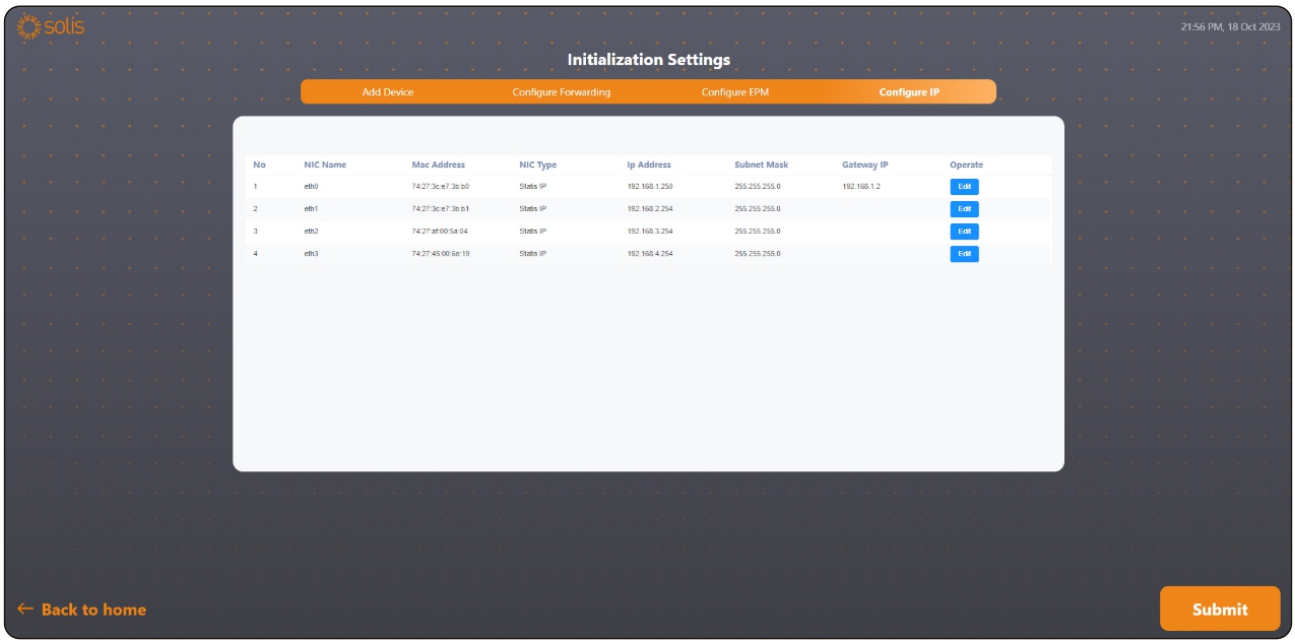

**Note:**
If Zero Injection Diesel or Zero Injection is configured, the EPM Function in the upper rear corner must be selected to be turned on

# 7. Configuration

18. Click Next Step to enter the IP configuration of S3

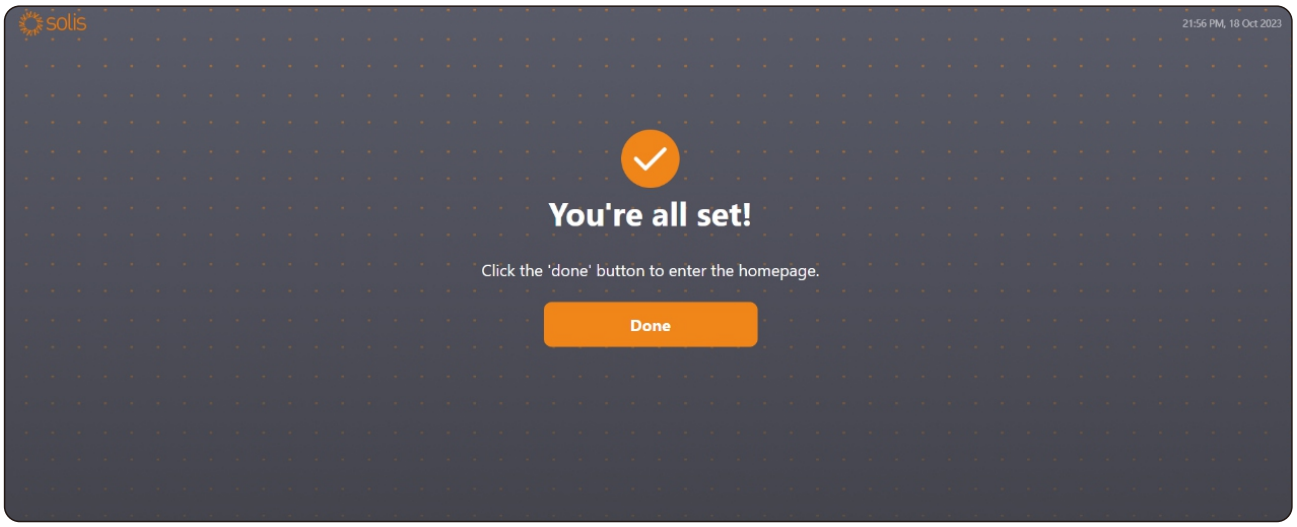



19. The boot configuration is complete, click Submit

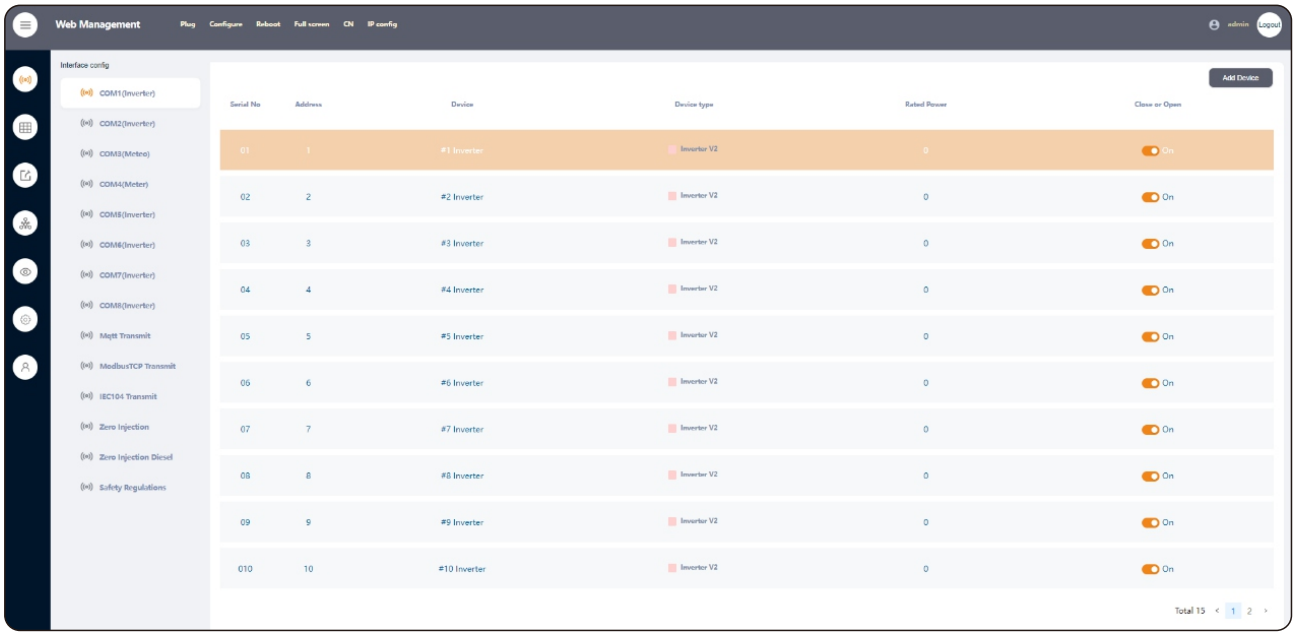


# 7. Configuration

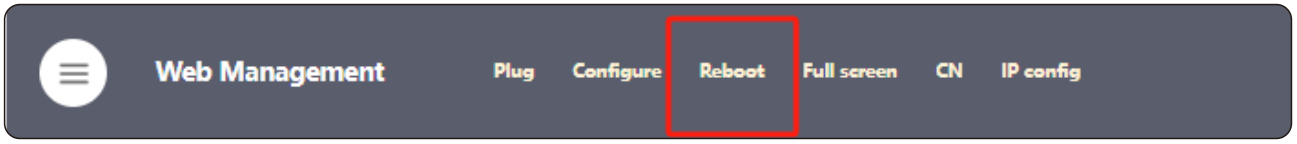
20. Click DONE




21. Jump to the WEB page and check if the configuration is normal




22. There are no issues with the configuration. Click Reboot to restart S3



# 7. Configuration

23. Return to the login page and wait for S3 to restart




24. Function introduction

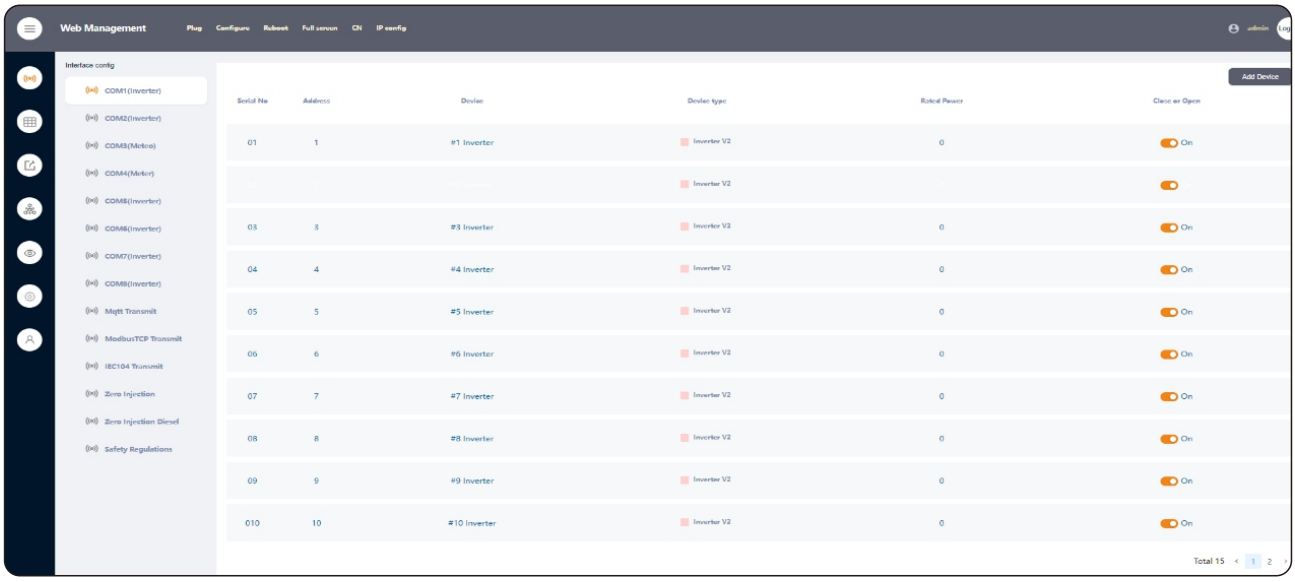
| | |
|---|---|
| Interface config | Used to configure device access |
| Device data | For device view |
| Forwarding service | Used to select forwarding channels |
| Inverter | Inverter address allocation and upgrade |
| Message Monitoring | Message monitoring |
| App Config | Used to configure parameters and select me zone |
| Account password | Used for password change |

# 7. Configuration

| Plug | Configure | Reboot | Full screen | CN | IP config |
|---|---|---|---|---|---|
| Plug-in update | Configuration update | Device restart | Full screen switch | CN/EN switch | IP configuration |
| For software driver update, follow the prompts | For configuration file update, follow the operation prompts | Device soft restart | | | |

25. Interface config

The configuration function of S3-Gateway-DG, you can add inverters, EPM (Solis EPM Device), meteorological meters, meters and other devices through the Add Device. Com1,COM2,COM5, COM6,COM7 and Com8, support inverters and EPM devices, Com3 supports meteorological meters, and Com4 supports meters.



# 7. Configuration

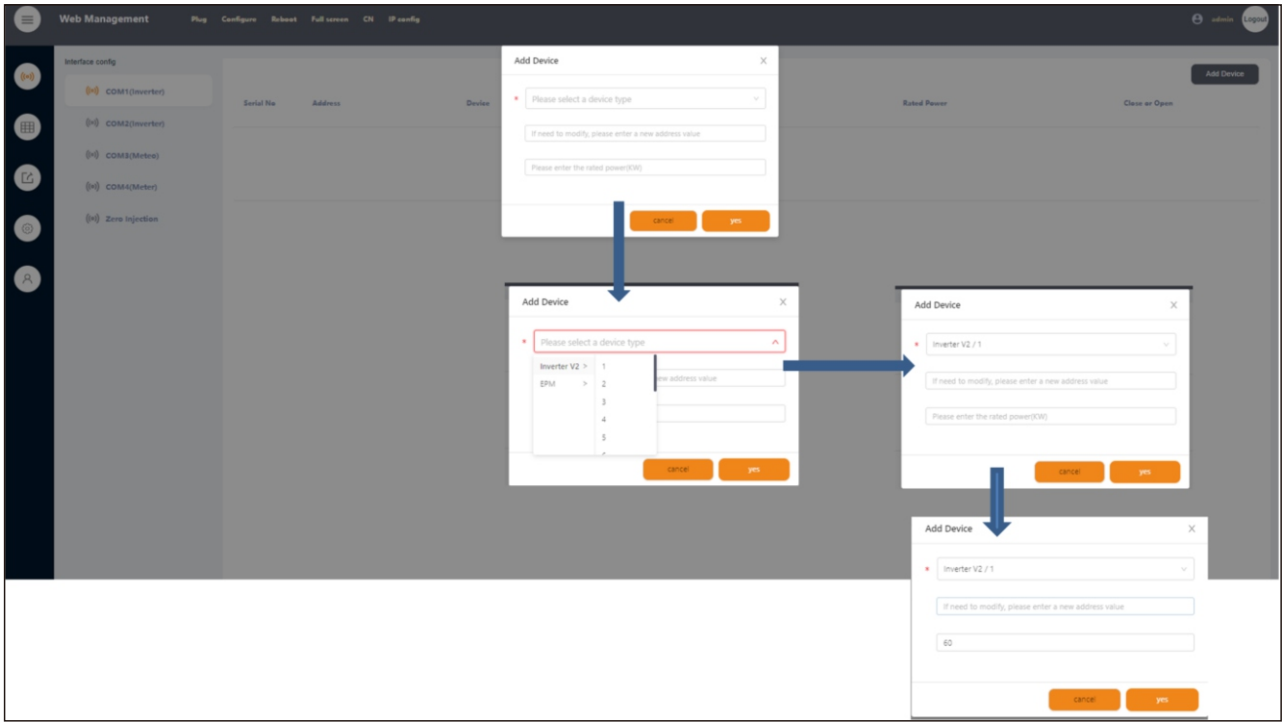
26. Add EPM and inverter to Com1 and Com2.

(1) Click Add Device to select a device type. You can select EPM or inverter

(2) The default device address of the EPM is 1, and the default device address of the inverter is 1-15. If the default value is used, you do not need to consider the second row. The third line is the rated power of the inverter, which must be filled in.

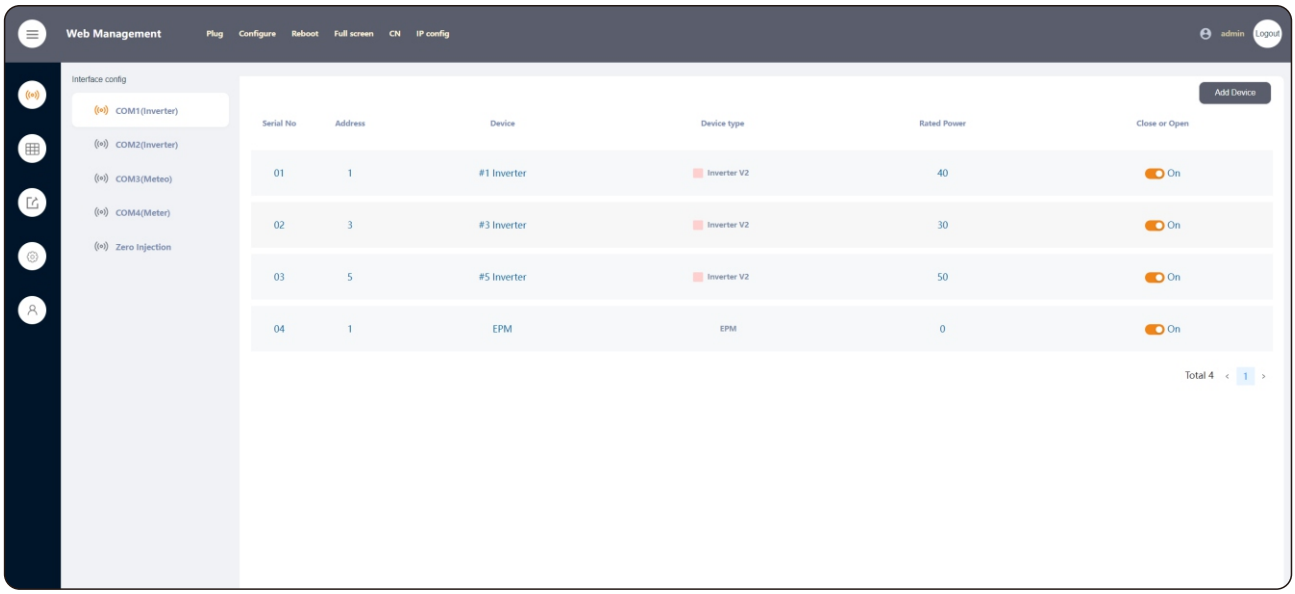
(3) If the inverter address is not in the default setting, click the number from 1 to 15 based on the number of connected devices, and manually enter the inverter address in the second row. Note: The device address entered manually cannot be the same as the default address.

(4) If an error occurs, the configuration content will be confused. You can delete all the configurations (YES or NO) and restart the datalogger to restore the data.

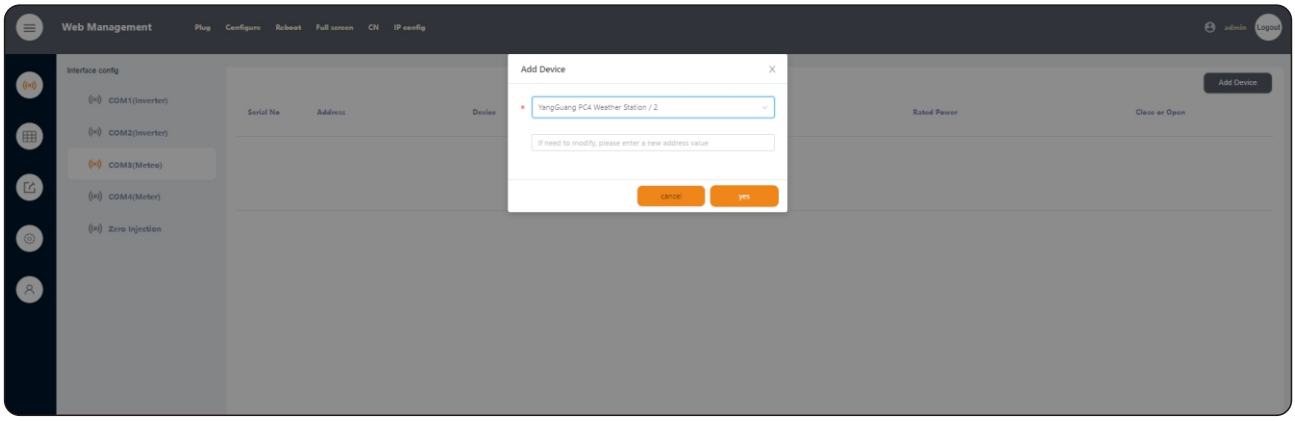


# 7. Configuration

After the configuration is completed, as shown in Figure:

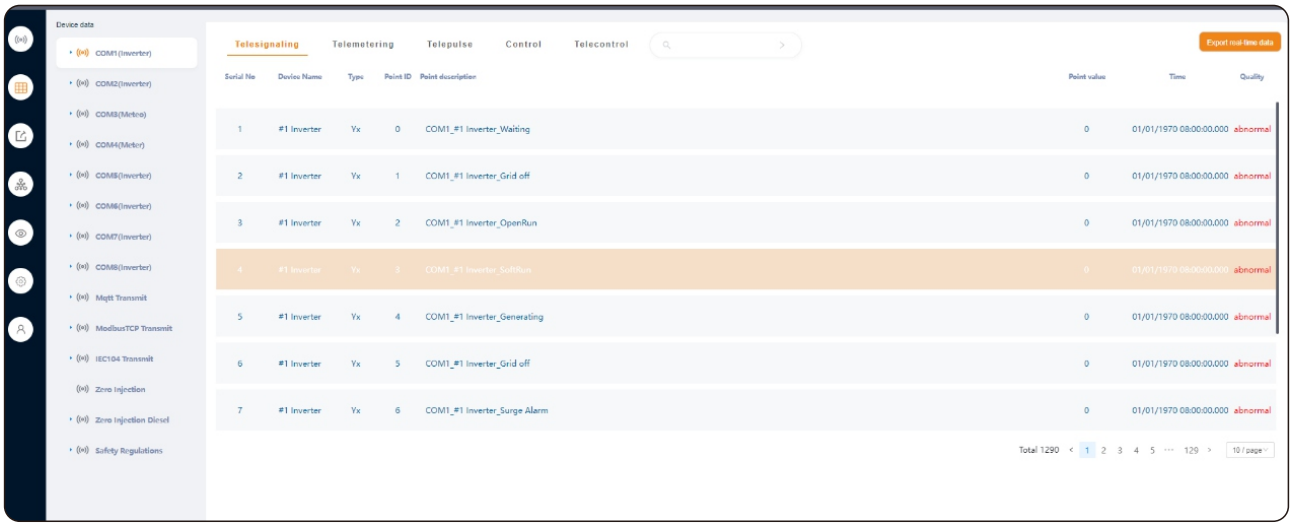



27. Configure meteorological instrument and meter in COM3 and COM4. The default device address is 1-3. If you need other addresses, configure them like the inverters above! Attention: The default communication baud rate for meteorological instruments and electricity meters is 9600bps. When selecting UMG and Acrel JL Meter, please change the baud rate for UMG meters to 38400bps and Acrel JL Meter meters to 19600bps

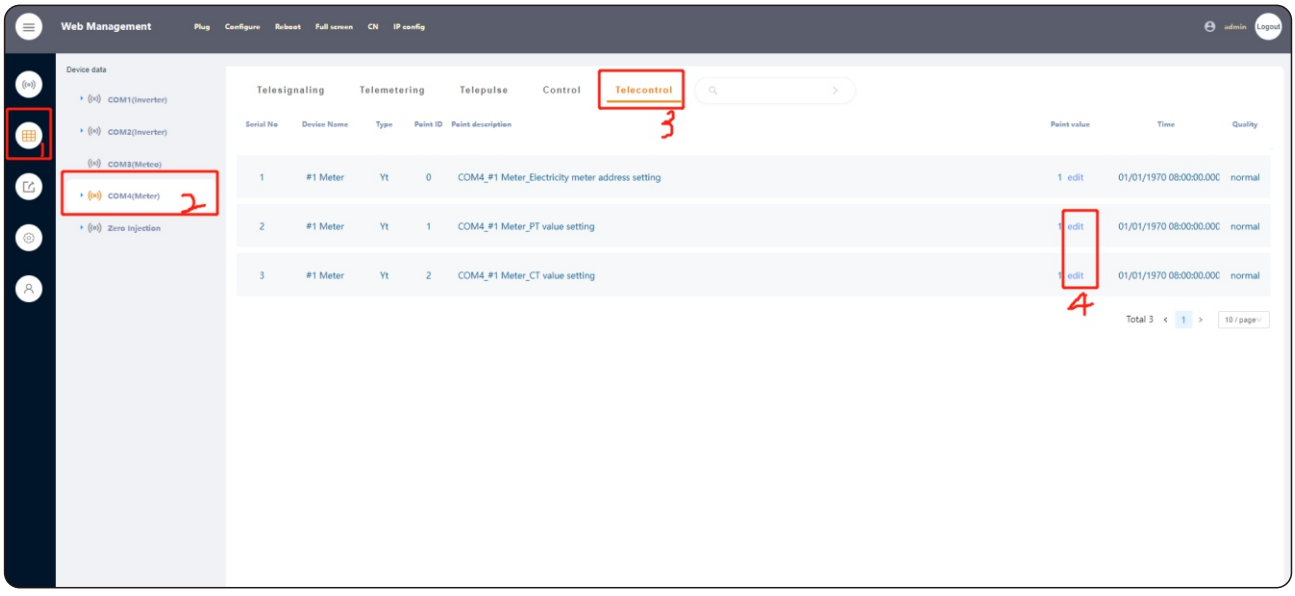


# 7. Configuration

28. "Device data" can view the real-time data of the connected device. At the same time, the inverter can be remotely adjusted and controlled by "Control and Telecontrol".

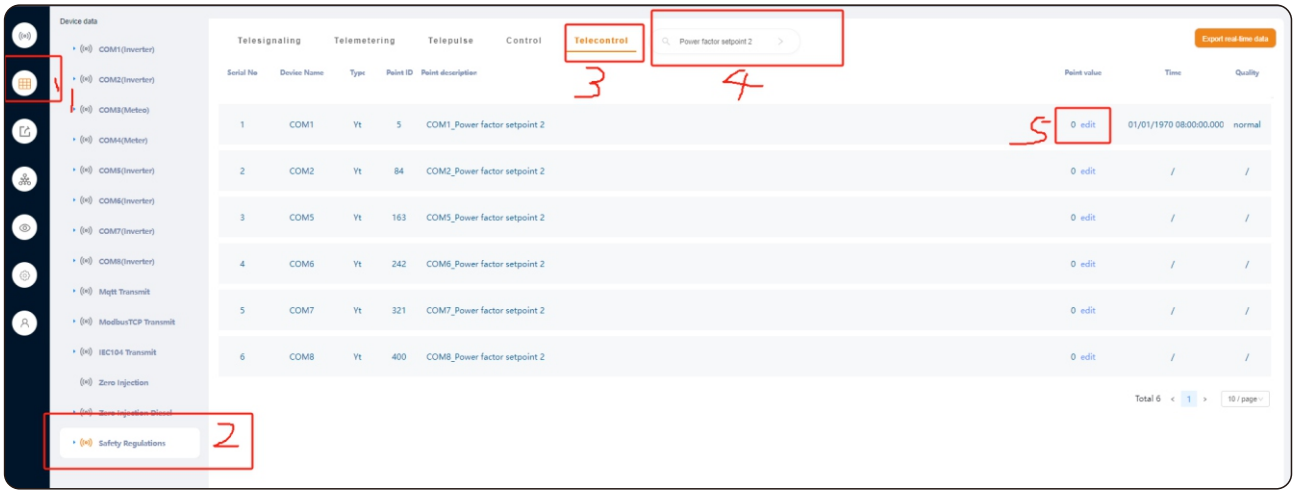



29. Because the meter involves PT/CT ratio and other issues, after adding the meter information in Interface config, you must set the strain ratio parameters in the Device data according to the sequence in below figure. For example, if the PT ratio is 10kv to 100v, 100 needs to be delivered.

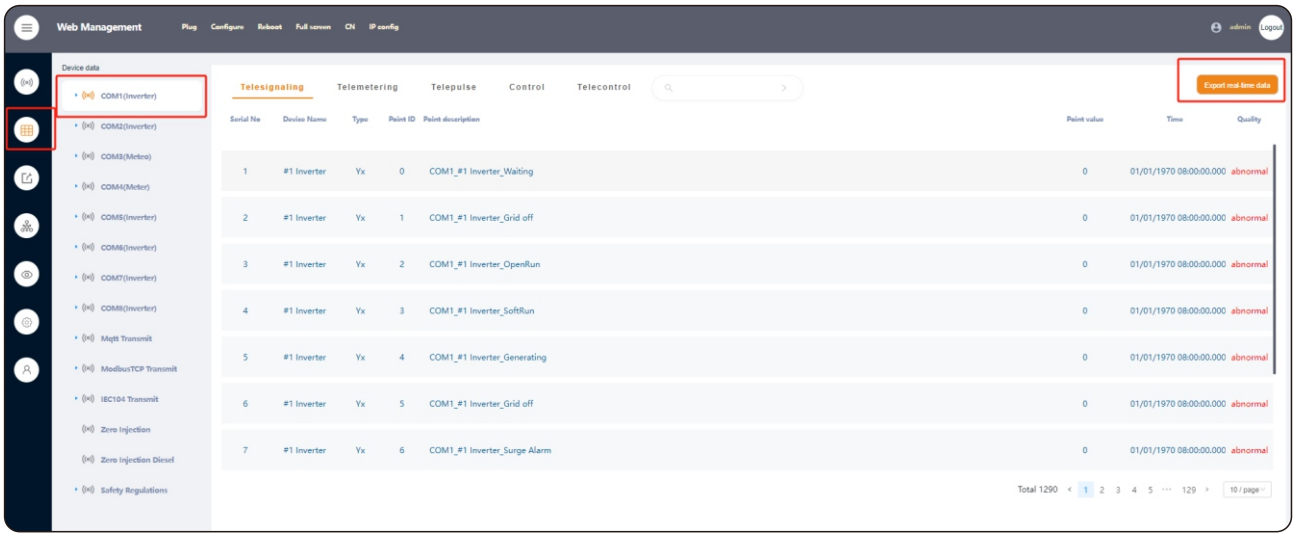


# 7. Configuration

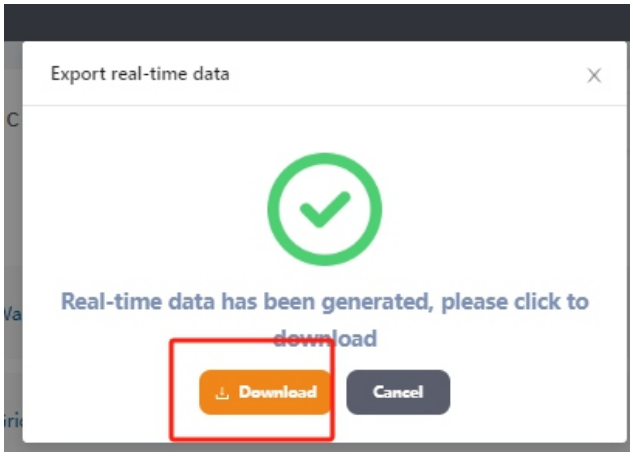
30. If you need to modify the inverter safety configuration, you can search all the inverters that need to be modified by the safety regulations of the unified modification




31. Real-time data export function




Export excel document






| | A | B | C | D |
|---|---|---|---|---|
| 1 | Point ID | Point Name | Value | |
| 2 | 0 | COM1_#1 Inverter_Waiting | 0 | |
| 3 | 1 | COM1_#1 Inverter_Grid off | 0 | |
| 4 | 2 | COM1_#1 Inverter_OpenRun | 0 | |
| 5 | 3 | COM1_#1 Inverter_SoftRun | 0 | |
| 6 | 4 | COM1_#1 Inverter_Generating | 0 | |
| 7 | 5 | COM1_#1 Inverter_Grid off | 0 | |
| 8 | 6 | COM1_#1 Inverter_Surge Alarm | 0 | |
| 9 | 7 | COM1_#1 Inverter_Fan Alarm | 0 | |
| 10 | 8 | COM1_#1 Inverter_VgSpdFail | 0 | |
| 11 | 9 | COM1_#1 Inverter_DcSpdFail | 0 | |
| 12 | 10 | COM1_#1 Inverter_Fan_H Alarm | 0 | |
| 13 | 11 | COM1_#1 Inverter_FuseFail | 0 | |
| 14 | 12 | COM1_#1 Inverter_LAPE FAIL | 0 | |
| 15 | 13 | COM1_#1 Inverter_OV-G-V | 0 | |
| 16 | 14 | COM1_#1 Inverter_UN-G-V | 0 | |
| 17 | 15 | COM1_#1 Inverter_OV-G-F | 0 | |
| 18 | 16 | COM1_#1 Inverter_UN-G-F | 0 | |
| 19 | 17 | COM1_#1 Inverter_Backfeed_Iac | 0 | |
| 20 | 18 | COM1_#1 Inverter_NO-Grid | 0 | |
| 21 | 19 | COM1_#1 Inverter_G-PHASE | 0 | |
| 22 | 20 | COM1_#1 Inverter_G-F-PLU | 0 | |
| 23 | 21 | COM1_#1 Inverter_OV-G-I | 0 | |
| 24 | 22 | COM1_#1 Inverter_IGFOL-F | 0 | |
| 25 | 23 | COM1_#1 Inverter_PHASE-FAULT | 0 | |
| 26 | 24 | COM1_#1 Inverter_WORD1_B09 | 0 | |
| 27 | 25 | COM1_#1 Inverter_IGBTSift-Pro | 0 | |
| 28 | 26 | COM1_#1 Inverter_OV-DC | 0 | |
| 29 | 27 | COM1_#1 Inverter_PVGndRun Fau | 0 | |
| 30 | 28 | COM1_#1 Inverter_BoostFail | 0 | |
| 31 | 29 | COM1_#1 Inverter_OV-BUS | 0 | |
| 32 | 30 | COM1_#1 Inverter_UNB-BUS | 0 | |
| 33 | 31 | COM1_#1 Inverter_UN-BUS | 0 | |
| 34 | 32 | COM1_#1 Inverter_UNB2-BUS | 0 | |
| 35 | 33 | COM1_#1 Inverter_OV-DCA-I | 0 | |
| 36 | 34 | COM1_#1 Inverter_OV-DCB-I | 0 | |
| 37 | 35 | COM1_#1 Inverter_DC-INTF | 0 | |
| 38 | 36 | COM1_#1 Inverter_Reve-DC | 0 | |
| 39 | 37 | COM1_#1 Inverter_PvMidIso | 0 | |
| 40 | 38 | COM1_#1 Inverter_Vbus-Sam | 0 | |
| 41 | 39 | COM1_#1 Inverter_GRID-INTF | 0 | |
| 42 | 40 | COM1_#1 Inverter_INI-FAULT | 0 | |
| 43 | 41 | COM1_#1 Inverter_OV-TEM01 | 0 | |
| 44 | 42 | COM1_#1 Inverter_PV ISO-PRO | 0 | |
| 45 | 43 | COM1_#1 Inverter_Ileak-PRO | 0 | |

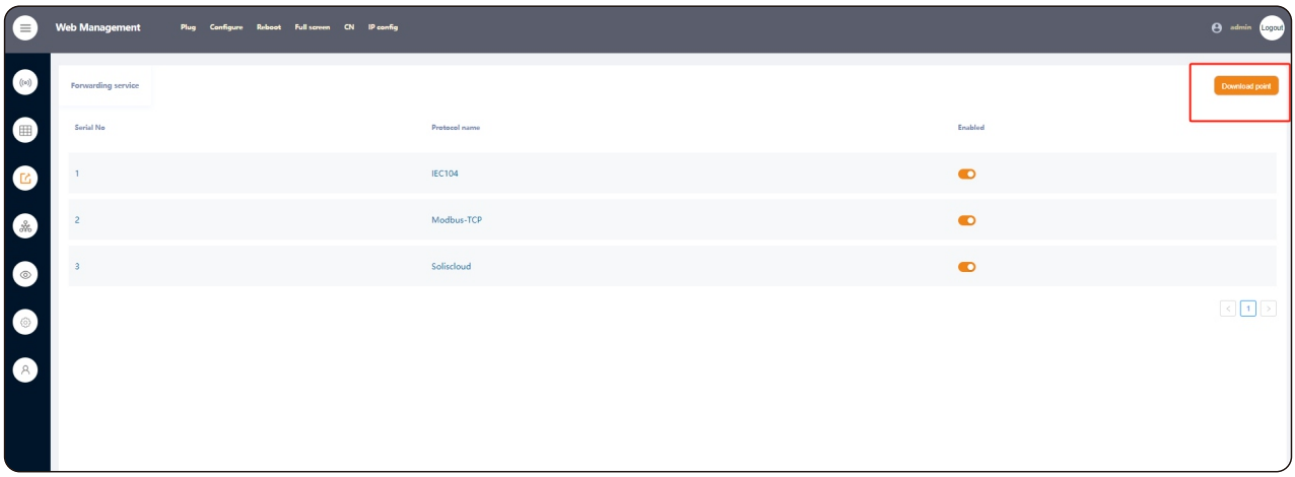
# 7. Configuration

32. ”Forwarding service” allows you to set forwarding information.
Supports IEC104, Modbus-TCP, and Soliscloud forwarding, the backflow power and Zero Injection function can be changed remotely via IEC 104 or Modbus-TCP with Zero Injection function (datalogger + meter).

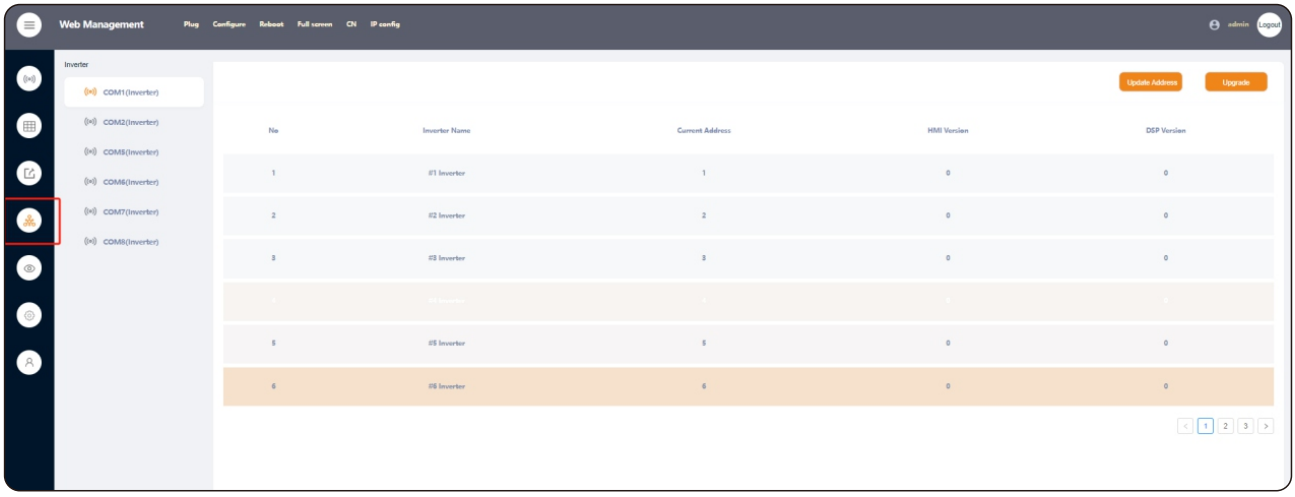
| Protocol | Communication parameter | | |
|---|---|---|---|
| IEC104 | IP address, subnet mask, and gateway | | Same as the device network port |
| | Port | | 2404 |
| Modbus-TCP | IP address, subnet mask, and gateway | | Same as the device network port |
| | Port | | 502 |
| | Tele signaling | Function code | 01 |
| | | Register start address | 0 |
| | Telemetering | Function code | 03 |
| | | Register start address | 0 |
| | | Data type | 32-bit short floating point |
| | | Byte order | HH HL LH LL |
| | Tele pulse | Function code | 04 |
| | | Register start address | 0 |
| | | Data type | |
| | | Byte order | |
| | Control | Function code | 05 |
| | | Register start address | 0 |
| | Tele control | Function code | 06 or 10 |
| | | Data type | 32-bit short floating point |
| | | Byte order | HH HL LH LL |
| Soliscloud | ON | | Upload to Solis Cloud |
| | OFF | | Do not upload to Solis Cloud |

# 7. Configuration

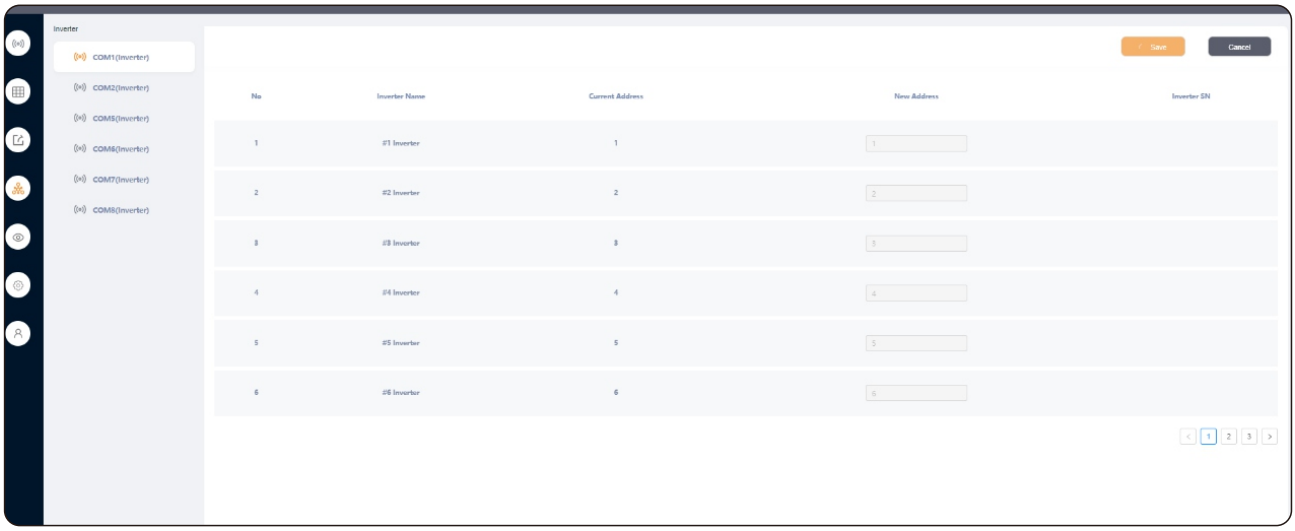
Point Table Export




33. Inverter address allocation and upgrade function: This will list the current slave addresses, HMI version numbers, and DSP version numbers of all connected inverters.

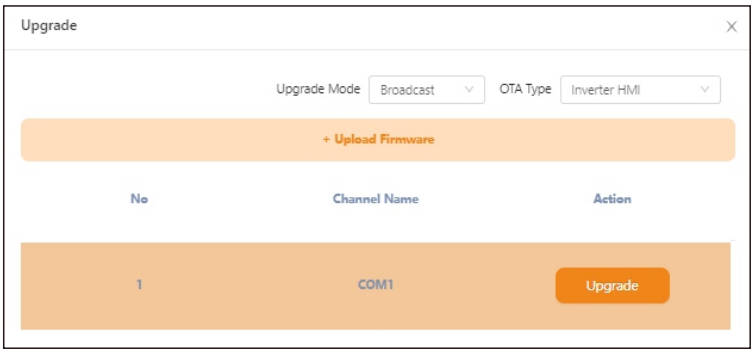



Click "Update Address" It will automatically read the current addresses and SN numbers of all inverters, and input a new address based on the corresponding SN number

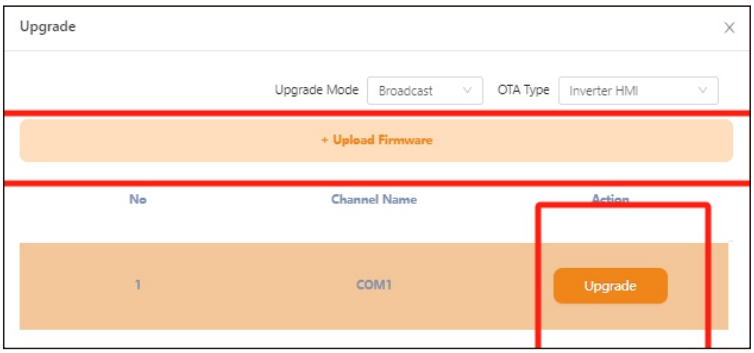


# 7. Configuration

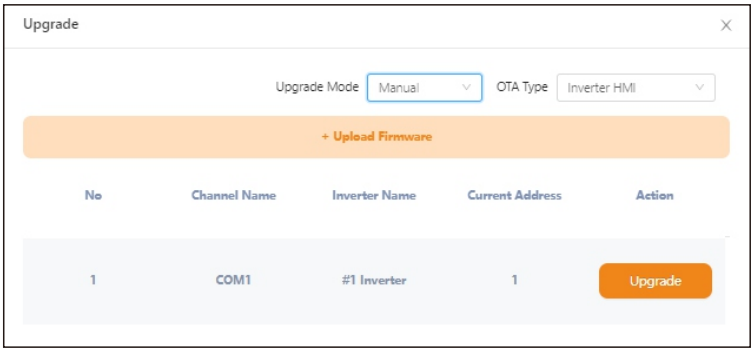
34. Click "Upgrade" Enter the inverter upgrade page, support broadcast or single inverter upgrade, upgrade the inverter HMI and DSP




Load the upgrade software and click Upgrade to upgrade

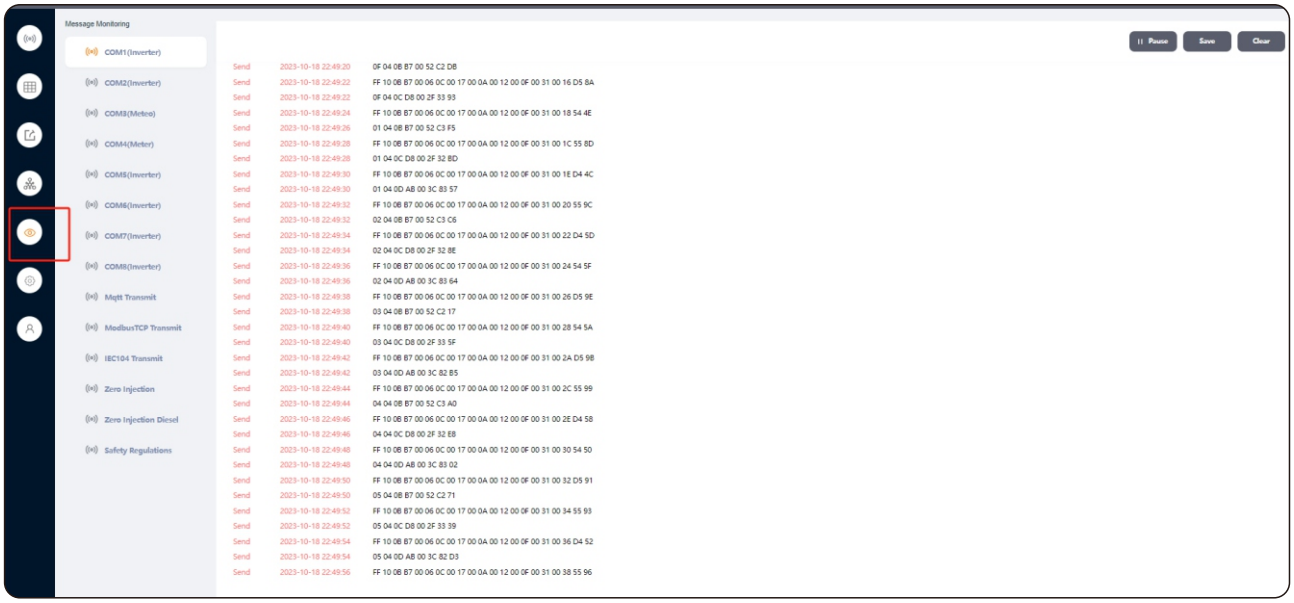



Single inverter upgrade

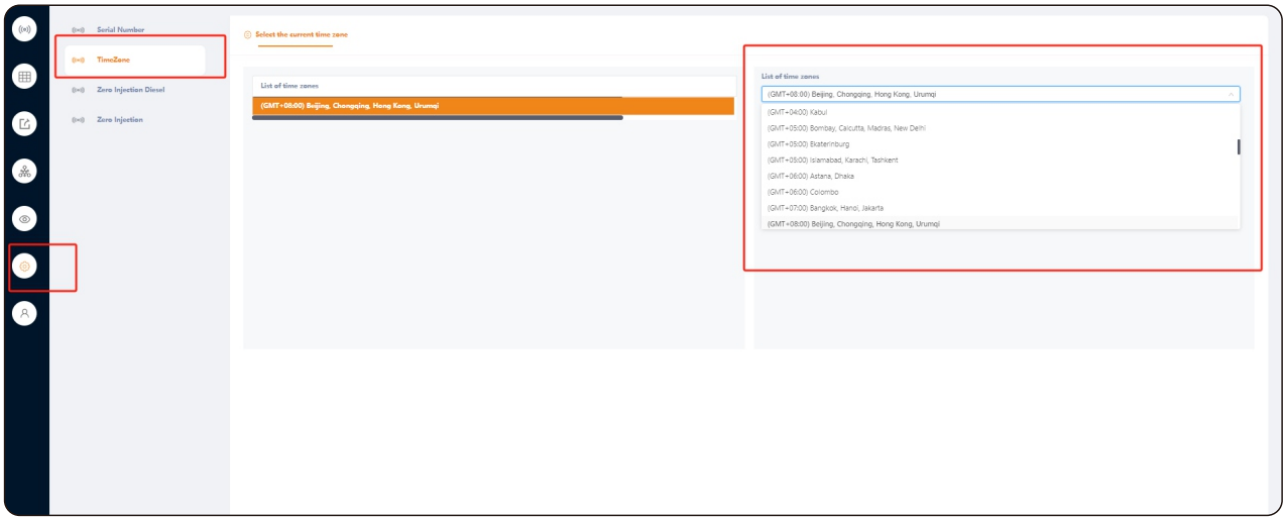


# 7. Configuration

35. The communication status of the inverter can be analyzed through message monitoring, which can view the communication status of the inverter, meteorological instrument, electricity meter, and forwarding Solidcloud, Modbus TCP, IEC104, Zero Injection Diesel

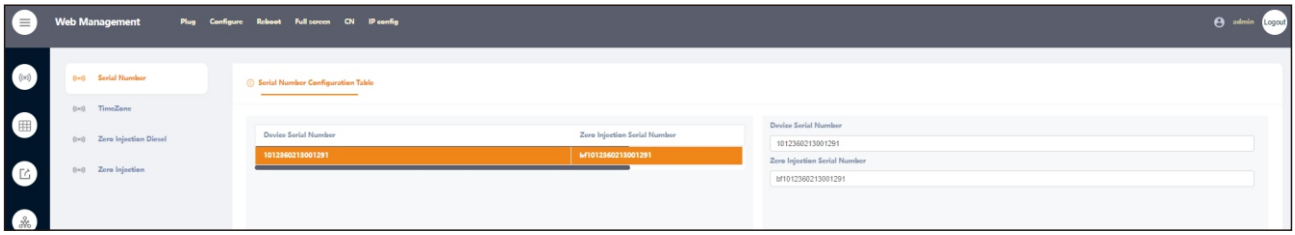



36. Time zone selection, which involves the timing of the inverter and the reset function of the weather meter. Please choose your own time zone according to the diagram. After configuration is complete, click 'Save' and restart the data logger

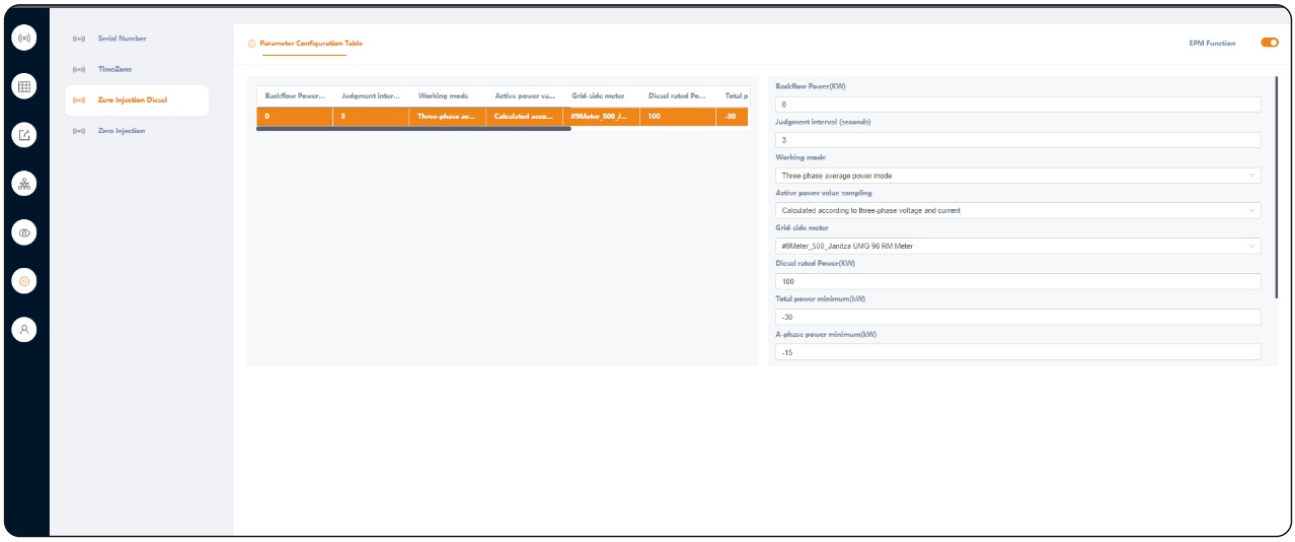


# 7. Configuration

37. Verify and modify the device serial number of Solidcloud and the serial number of the anti backflow device. If shown, add bf to the device serial number before the anti backflow serial number.



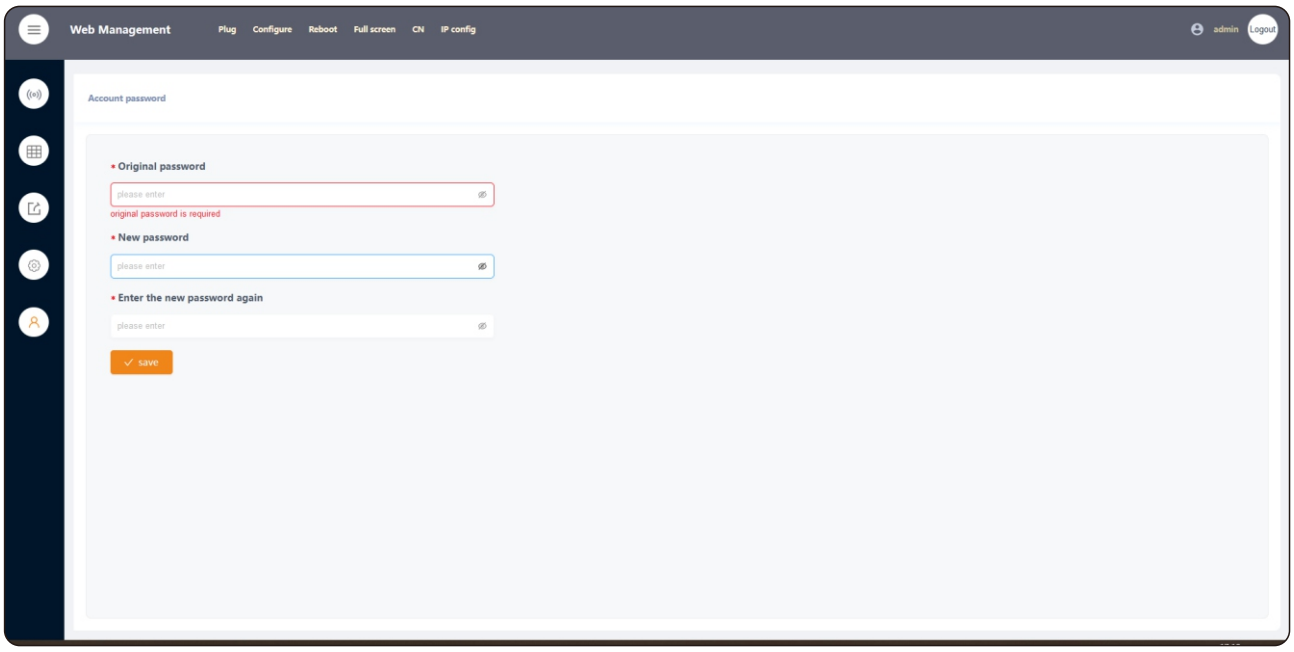

38. Zero Injection Diesel： This feature only supports on-site diesel generators，
Attention: Before turning on this function, make sure that the external EPM function of the inverter has been turned on.



# 7. Configuration

| Name | Meaning |
|---|---|
| Backflow power(KW) | Backflow power setting value |
| Judgment interval (seconds) | Logic judgment time, the default is 3 seconds,<br>Calculate based on the number of inverters * 1.5 seconds |
| Working mode | Three-phase average power mode (default)<br>Three-phase minimum power mode |
| Active power value sampling | Calculated according to three-phase voltage and current (default) Take sampling value |
| Grid-side meter | Select from a list |
| Diesel rated Power(kW) | Diesel rated Power |
| Total power minimum(kW) | Diesel Total power minimum |
| A-phase power minimum(kW) | Select the lowest power among all A phases |
| B-phase power minimum(kW) | Select the lowest power among all B phases |
| C-phase power minimum(kW) | Select the lowest power among all C phases |

39. Datalogger login password change



# 8. Routine Maintenance

| Check | Method |
|---|---|
| Working environment | Check whether there is electrical interference near S3-Gateway-DG |
| | Check for corrosive substances near S3-Gateway-DG |
| | Check if the S3-Gateway-DG ambient temperature is out of range |
| | Check if S3-Gateway-DG is clean |
| Circuit maintenance | Check whether the S3-Gateway-DG power supply is stable and reliable |
| | Check whether the S3-Gateway-DG power supply and communication cables are fastened |
| | Check if S3-Gateway-DG is well grounded |
| Equipment installation and maintenance | Check S3-Gateway-DG for dropping risk |

# 9. FAQ

| No | Problems | Explanation |
|---|---|---|
| 1 | How to deal with the device offline? | Observe the indicator light of the equipment and check item by item according to the instruction manual; |
| 2 | How to deal with the inverter without data? | 1. Debug software to check whether the inverter is normal (excluding inverter hardware problems);<br>2. Measure whether the 485 cable has any abnormal conditions such as interruption and grounding and check whether the shielding layer of the 485 communication cable is effectively grounded;<br>3. Replacement test with other normal equipment (excluding data acquisition hardware problems); |
| 3 | Are there any recommended manufacturers for weather stations and electricity meters? | 1. Recommended weather station manufacturers: Jinzhou Sunshine (http://www.jz322.net/).Jinzhou Licheng (http://www.zn17.com.cn/);<br>2. Recommended meter manufacturer: Acrel (https:llwww.acrel.cn/);<br>3. Other brands: The equipment communication protocol is required to be standard Modbus. and the customer provides the communication protocol for advanced development. It is recommended to be a relatively reliable and well-known local brand. |

# 10.Appendix

Product Datasheet

| Model Name | S3-Gateway-DG |
|---|---|
| Communication | |
| Supported device type | Solis inverter |
| Number of connected inverter | Each RS485 PORT≤ 15 |
| Data collection intervals | 5 minutes |
| Status indicator | System: Power x1,RUN x1<br>LAN:10/100M x2(Link x2 Act x2)<br>Serial: TxD/RxD x8 |
| RS485 | COM x 8,1200-19200 bps, communication distance≤ 1000m |
| Ethernet communication | LAN x 2,10 / 100Mbps adaptive, communication distance≤ 100m |
| Communication Protocol | |
| RS485 | Modbus-RTU,IEC60870-5-103,DLT645 |
| Ethernet | Modbus-TCP,IEC60870-5-104 |
| Electrical | |
| AC power supply | 100~240V, 50Hz/ 60Hz |
| DC power supply | 9~36V |
| Operating power consumption | 8W@12VDC |
| Environment | |
| Operating temperature | -40℃ ~+80℃ |
| Storage temperature | -40℃ ~+80℃ |
| Operating humidity | ≤ 85%,Relative humidity,no condensa |
| Operating altitude | ≤ 4000m |
| Protection degree | IP20 |
| Mechanical | |
| Dimensions(L*W*H) | 200x121x54mm |
| Installation method | Rail Mounting, Desktop installation |

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