

- ※ Thanks for selecting the EPEVER RTU 4G HE01 wireless remote terminal unit. Please read this manual carefully before using.
- ※ This product is not waterproof or dustproof. Do not use it in humid, high salt spray, corrosion, greasy, flammable, explosive, dust accumulative, or other severe environments.

USER MANUAL

EPEVER RTU 4G HE01



1. Overview

EPEVER RTU 4G HE01 is a new wireless remote terminal unit based on the 4G network. With the SIM card, the solar controllers, inverters, or inverter/chargers connected to the module can easily access the EPEVER cloud server (Solar Guardian). It helps realize remote, wireless, and networked communication among devices quickly.

Features:

- Automatic restore after disconnection
- 4G network with low latency, wide coverage, and flexible networking
- Support PC software, serial port command, SMS command
- Support RS485 communication
- Support TCP/UDP protocol
- Support PC or phone APP to monitor status and program parameters

2. Characteristics



①	DATA indicator	⑦	RS485 terminals ⁽¹⁾
②	LINK indicator	⑧	Antenna connector
③	NET indicator	⑨	Upgrade port
④	WORK indicator	⑩	SIM card slot
⑤	Power indicator	⑪	DC power connector
⑥	DC power terminals ⁽¹⁾	⑫	SIM card slot push-out button ⁽²⁾

(1) Terminal Definition

DC power terminals ⑥	9-72V		5.08-2 2P	1-GND
	GND	VCC		2-VCC
RS485 terminals ⑦	RS485			1-A
	A	B	G	2-B
	1	2	3	3-GND

- (2) Installing the SIM card: Press the yellow button ⑫, and the SIM card slot ⑩ is pushed out. Put the SIM card on it, and push it into the module.

3. Accessories

Type	Picture	Name	Function
Included		4G antenna	Connect to the antenna connector ⑧ for data sending or receiving.
		3 Pin connector (5.08-3P)	Connect to the RS485 terminals ⑦ for data transmission (Alternate terminal).

		2 Pin connector (5.08-2P)	Connect to the DC power terminals ⑥ for power supplying (Alternate terminal).
		RJ45 to 5.08 communication cable(CC-RJ45-3P5.0 8-150)	Connect the RS485 terminal ⑦ on the module to the RJ45 communication port on the controller, inverter, or fusioncube for device communication.
Optional		Red and black parallel wire 20AWG-5.08-2P-tinned connection wire	Connect the power supply terminal of the module ⑥ The tinned end can be connected to the device battery for power supply.

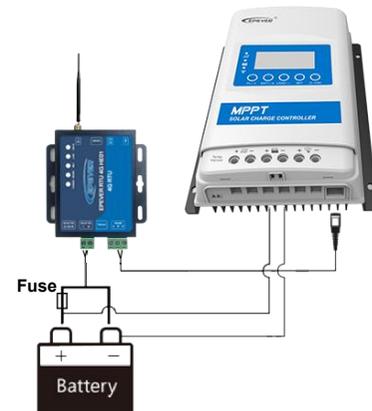
4. Indicator Instruction

Indicator	Status	Instruction
DATA	Flashing (green)	Serial port data interaction indication
	OFF	Serial port data is not interacting
LINK	Always on (green)	Socket A connection successfully
	OFF	Socket A Connection failed
NET	Slow flashing (green) Flash 4 stops 1/cycle	Connect to 4G network successfully
	OFF	Failed to register
WORK	Flashing (green)	Work normal
	OFF	Module exception
POWER	On Solid(Red)	Power on normal
	OFF	Power supply exception

5. Installation

Install the EPEVER RTU 4G HE01 by the sequence following:

- ① **Communication Part:** Connect the SIM card, antenna, and communication cables.
- ② **Power Part:** Power on the EPEVER RTU 4G HE01 by connecting a battery.



- ⚠ When using battery power, it is necessary to add a fast-acting fuse according to the battery capacity to prevent the battery from short-circuiting.

6. Specifications

Parameter	Model	EPEVER RTU 4G HE01
Input Voltage		9~72VDC
Power Consumption		Communication: <600mA/12V; Idle: <100mA/12V
Working Frequency		About the operating frequency band ^①
Configuration Methods		Cloud server, PC software, serial port command, SMS command
Communication Method		RS485
Communication Standard		The male head standard in "Communication Interface Standard V-1.1"
Baud Rate		1200bps ~ 115200bps, 8N1
Antenna Connector		50Ω SMA (female head)
Antenna Gain		2.5dBi ~ 5dBi
Work Temperature Range		-40°C~ 85°C
Enclosure		IP30
Relative Humidity		5 ~ 95% (N.C.)
Dimension (Length x Width x Height)		99mm x 86mm x 25mm (Including terminals and installation handles)
Mounting Hole Size		75mm / Φ4 / Φ3

- ① For each country, the working band is different. If you want to know the working band in your country, please contact EPEVER technical support.

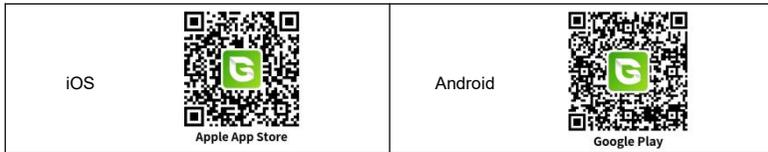
7. APP Monitoring

Connect the EPEVER RTU 4G HE01 with the device as chapter 5, *Installation*.

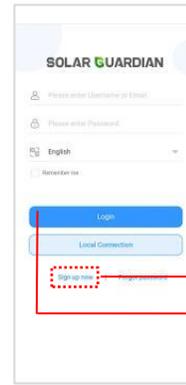
The 4G module only supports the Solar Guardian and cannot be connected to other servers.

Add the 4G module and the connected device to the cloud server by website (<https://hncloud.epsoarpy.com>) or APP. Then you will be able to monitor the device and set parameters by PC or APP (the following takes APP as an example).

1. Scan the code to download the APP



2. Register & Login



1 Register Download the APP and open it, click the "Sign up now" icon. Input the user name, email or phone number, verification code, and password. Enter the password again for verification. Tick to agree with the privacy agreement and click the "Sign Up."

2 Login After registering, return to the APP. Input the user name and password, select the current country, tick the "Remember me" to log in quickly next time, and click the "Login" button to enter the APP.

3. Add 4G module and device to the APP



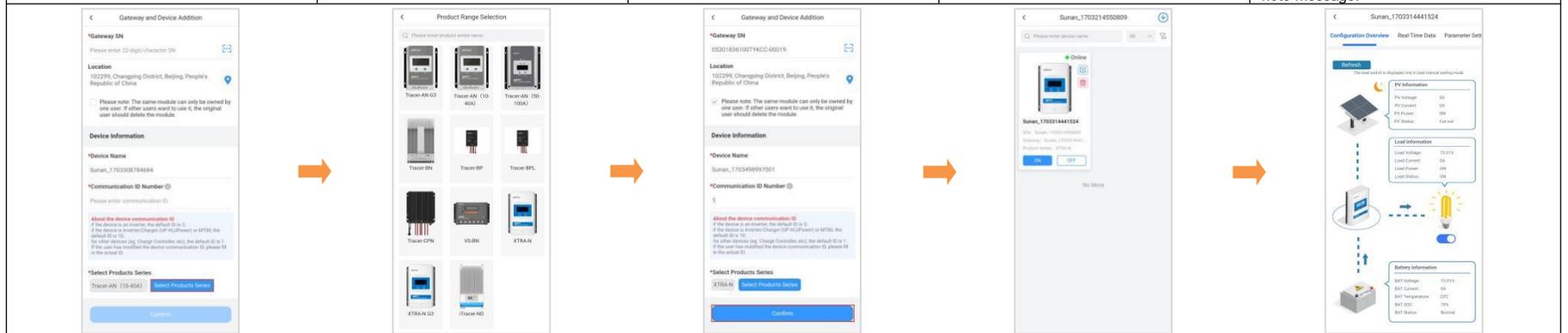
Step 1: Log in to the APP, enter the "Site," and click "Add" to jump to the "Add New Site" page.

Step 2: Input the power station name (or use the APP default name), and completing the filling of other power station information (not required). Click "Save" to add the power station successfully.

Step 3: Log in to the APP and click the "One Click Add" button in the "Site" page to add a new gateway quickly.

Step 4: Enter the "Gateway and Device Addition" page, input the gateway name (or keep the default name), and click the "Access Method" to enter the gateway selection page.

Step 5: Select EPEVER RTU 4G HE01 to back to the "Gateway and Device Addition" page. Scan the QR code on the gateway sticker^① or input the 22-digit SN manually. Select the location (Optional) and tick the note message.



Step 6: On the "Gateway and Device Addition" page, input the device name (or keep the default name), input the communication ID^②, and click the "Select Products Series" to enter the device selection page.

Step 7: Select the connected device to back to the "Gateway and Device Addition" page. If the "Confirm" button is grayed out, please check if the data filled is correct or if the required fields have been completed.

Step 8: After filling in all the information, click "Confirm" to add the gateway and device successfully to the APP. With a normal SIM card, you can monitor the work status and set parameters.

Step 8: After the device is added, the device page is displayed. Click the device to view the real-time data.

Step 10: Click the device to view the real-time data. The "Configuration Overview" page is displayed by default.

① Authorize the phone camera when adding the gateway via scanning QR code. Scan the QR code on the gateway sticker, the system will automatically verify the gateway SN. Only the gateway added to the production management system can be added to the cloud platform. If the APP prompts "Gateway already exists," please contact technical support.

② About the device communication ID: if the device is an inverter, the default ID is 3; if the device is inverter/charger (UP HI, UPower) or MT80, the default ID is 10; for other devices (eg. Charge Controller, etc), the default ID is 1. If the user has modified the device communication ID, please fill in the actual ID.

8. Troubleshooting

Faults	Solutions
Power indicator off	<ol style="list-style-type: none"> 1. Check whether to supply power to the module. 2. Check whether the indicators are damaged. 3. If powered, check whether the positive and negative poles of the power supply are connected inversely. The input terminal of the EPEVER RTU 4G HE01 is equipped with anti-reverse protection. The reverse connection shall not cause fatal damage to the product. However, it affects the normal running before the correct connection is restored.
WORK indicator off	If the WORK indicator does not light up, please contact the after-sales service.
The product emits smoke with a pungent smell.	The actual input voltage exceeds the rated voltage of the EPEVER RTU 4G HE01, causing the internal components to burn out. Don't hesitate to contact the supplier in time and send it to the manufacturer.
NET light is not on The device failed to register with the	<ol style="list-style-type: none"> 1. Check whether the SIM card is inserted properly. 2. Check whether 4G LTE service is enabled on the SIM card. 3. Check whether the input power is insufficient. The input power

network	supply ranges from 9VDC to 72VDC. 12V/1A is recommended.
The LINK indicator is not on The device failed to connect	The SIM card is overdue. Check whether the EPEVER cloud server is running properly.
Parameters can't be configured	<ol style="list-style-type: none"> 1. Check whether the connection to the PC is correct. 2. Check whether the serial port's selection is correct.

9. Disclaimers

The warranty does not apply to the following conditions:

- Damage caused by improper use or inappropriate environment.
- The parameter setting exceeds the module's limit.
- Damage caused by working temperature exceeds the rated range.
- Unauthorized dismantling or attempted repair.
- Damage caused by force majeure.
- Damage occurred during transportation or handling.