EPEVER

HUIZHOU EPEVER TECHNOLOGY CO., LTD

TEL: +86-752-3889706

※ Thanks for selecting the EPEVER RTU 4G HE01 wireless remote terminal unit. Please read this manual carefully before using.

X 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.



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 moudule 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



0	DATA indicator	1	RS485 terminals ⁽¹⁾
0	LINK indicator	8	Antenna connector
6	NET indicator	9	Upgrade port
4	WORK indicator	0	SIM card slot
6	Power indicator	0	DC power connector
6	DC power terminals ⁽¹⁾	Ð	SIM card slot push-out button ⁽²⁾

(1) Terminal Definition

	9~72V				
DC nower terminals	GNE)	VCC	5 08-2 2P	1-GND
	1		2	J.00-2 2F	2-VCC
		RS485			1-A
RS485 terminals	A	В	G	5.08-3P	2-B
	1	2	3		3-GND

(2) **Installing the SIM card:** Press the yellow button **(2)**, and the SIM card slot **(0)** is pushed out. Put the SIM card on it, and push it into the module.

3. Accessories

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

1

	See.	2 Pin connector (5.08-2P)	Connect to the DC power terminals for power supplying (Alternate terminal).
	Ó	RJ45 to 5.08 communication cable(CC-RJ45-3P5.0 8-150)	Connect the RS485 terminal (2) on the module to the RJ45 communication port on the controller, inverter, or fusioncube for device communication.
Optional	0	Red and black parallel wire 20AWG-5.08-2P- tinned connection wire	Connect the power supply terminal of the module 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
DATA	OFF	Serial port data is not interacting
	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	Connect to 4G network successfully Failed to register
	Flashing (green)	Work normal
WORK	OFF	Module exception
DOWED	On Solid(Red)	Power on normal
POWER	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

Model Parameter	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.

EPEVER HUIZH	HOU EPEVER TECHNOLOGY CO., LTD	TEL: +86	-752-3889706	Website: www.epever.com
7. APP Monitoring		2. Register & Lo	gin	
Connect the EPEVER RTU 4G HE01 with the	e device as chapter <u>5, <i>Installation</i></u> .			
The 4G module only supports the Solar Gua	ardian and cannot be connected to other serv	ers. SOLAR GUARDI/	Download the APP and op 1 Register Input the user name, em	pen it, click the "Sign up now" icon. nail or phone number, verification
Add the 4G module and the connected device	to the cloud server by website (https://hncloud.	epsolarpv.com) or	code, and password. verification. Tick to agree w	Enter the password again for vith the privacy agreement and click
APP. Then you will be able to monitor the device	e and set parameters by PC or APP (the following	g takes APP as an	the "Sign Up."	
example).				
1. Scan the code to download the APP		Local Convector		
iOS	Android		After registering, return to a password, select the current to log in quickly next time, a the APP.	the APP. Input the user name and nt country, tick the "Remember me" and click the "Login" button to enter
3. Add 4G module and device to the APP	2 Add Mary Sign	Start line	Z Datases and Desize Addition	
	Häte Name Gunnu,170011860778 Hörpantaation Surian ≥	Proze entre de serve forme, C20212177115 forme, C2021217 forme, C20212 forme, C20212 forme, C2021 forme, C2021 forme, C2021 forme, C2021 forme, C202 forme, C202	Gateway Information "Gateway Name Gateway Name Gateway 20200542746 "Access Mended Tracking Standard Tr	Enternet Galeway Select: Trans admit is inserve gamma; 40 Fore ray eas
son Add	bate assoption Please state to describen User None Please and a state of some Please index of some Please Noneber	Descent Terrer Control (1997)	Cateway IN Private inter 22 digit/character IN Catelon Katzine (catelon) (Catelon) Katzine (catelon) (Catelon) Katzine (catelon) (Catelon) Katzine (catelon) (Catelon)	
	Please etting glove number. Conguy Plase etting company State image.	•	Prese instit: The same module case only to owned by one case. The owner works were the argument owner should depend on module. Device Information	POINTULA
	end attention for the state state state state state.		Venice Name Starting, 173000542748 Name "Communication Di Number (f) Name Plaze entri communication Di D	
22 Comman 60 Bits 2 A Bits	Eree	22 Contraction (Contraction)	Allocate increases assumed and the second se	
Step 1: Log in to the APP, enter the "Site,"	Step 2: Input the power station name (or	Step 3: Log in to the APP and click the	Step 4: Enter the "Gateway and Device	Step 5: Select EPEVER RTU 4G HE01 to
and click "Add" to jump to the "Add New	use the APP default name), and completing	"One Click Add" button in the "Site" page to	Addition" page, input the gateway name (or	back to the "Gateway and Device Addition"
Site" page.	(not required). Click "Save" to add the	add a new gateway quickly.	"Access Method" to enter the gateway	sticker ^① or input the 22-digit SN manually.
	power station successfully.		selection page.	Select the location (Optional) and tick the
C Gateway and Device Addition	Product Range Selection	C Gateway and Device Addition	< Suran_1703214550809	note message.
*Gateway SN Please enter 22-digibilitheranter SN EG	Prese interpretation terms	*Gateway SN ostorsterootyvicic-ootra	Q: Promo entre Alt - Tai	Configuration Downlow Real-Time Data Parameter Set
Location 102299, Changping District, Beijing, People's Republic of Chino		Lecation 102299, Changping District, Beijing, People's Republic of China		Refersh The load sends indigligits only initial result setting noils PV information
Please state The same module can only be covered by one user. If other users wont to use it, the original user should define the module.		Posse note: The same module can only be overal by one user! If other users in the anglest user should delete the module.	Duran, 17033441134	Pri Valage Pri Corretti BA Pri Prometti BA Pri Prometti BA Pri Prometti BA
Device Information		Device Information "Device Name	tai ang taon ang tao a	Load information Load Voltage 13 01V Lond Connet: 66
Sunan, 170300794694 Communication ID Namber () Please enter communication ID		Sunan, 170349997201 *Communication ID Number ()	Ne More	Loof Brins 04
Also at the device exemutation (0) If the device as an invertice, the default (0) is χ : If the device as invertice, Charge (10) HULSHower) or ATTR, the related to is χ .		About the device communication ID If the decises as interview the default 20 is 3, If the decise is transformed Target (2P HL/Param) or MTHL the relieful ID is 10.		
for other thermany is Charge Consolider and the other (Const.) If the auxiliary is sublicible the dense control other is please for in the scolar ID *Select Products Series		the anter advoca any charge contrastic and prime and an or a 1 in the action modelling the anteract communication (2) places (3) in the action (3) *Select Products Series		flattery information
Thourself (10.840) Seren Publish Seren Confilm	VIDAN 63 Disco 90	STRAN Select Housen Select		
Step 6: On the "Gateway and Device	Step 7: Select the connected device to	Step 8: After filling in all the information,	Step 8: After the device is added, the	Step 10: Click the device to view the
Addition" page, input the device name (or keep the default name) input the	back to the "Gateway and Device Addition"	click "Confirm" to add the gateway and device successfully to the APP With a	device page is displayed. Click the device	real-time data. The "Configuration
communication $ID^{(2)}$, and click the "Select	please check if the data filled is correct or if	normal SIM card, you can monitor the work	to now the real-time data.	everyiew page is displayed by default.
Products Series" to enter the device	the required fields have been completed.	status and set parameters.		
selection page.				

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	 Check whether to supply power to the module. Check whether the indicators are damaged. 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	 Check whether the SIM card is inserted properly. Check whether 4G LTE service is enabled on the SIM card. 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	 Check whether the connection to the PC is correct. 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.