

- ※ Thanks for selecting the EPEVER-RTU-4G-C GPRS transmission terminal. Please read this manual carefully before using.
- ※ Please keep this manual for future reference.

USER MANUAL

EPEVER-RTU-4G-C



1 Overview

EPEVER-RTU-4G-C is a new wireless data transmission terminal based on the 4G network. Through the GSM/GPRS SIM card, the controllers, inverters, or inverter/chargers connected to the EPEVER-RTU-4G-C can easily access our company's cloud server. It helps realize remote, wireless, and networked communication among devices quickly. It is equipped with complete network coverage, a flexible connection (use immediately after installation), low operating costs (charge according to the network traffic), and convenient operations. EPEVER-RTU-4G-C can be widely used in fields of solar light and emergency backup power, such as road monitoring, communication stations, home solar stations, meteorological and environmental monitoring, and backup power monitoring.

Features:

- High-performance Cortex-M0 embedded processor
- Built-in watchdog ensures no crash and automatic recovery
- Support Unicom and mobile network, universal four frequency bands
- Support PC software setting, serial port command, SMS command
- Wider input voltage(DC8~64V or DC5V), suitable for various applications
- Support controller/inverter designed with RS485 communication mode
- Data transmitted by the fixed IP or dynamic domain name resolution
- Support TCP/UDP protocol
- Support PC or phone APP to monitor status and modify parameters

2 Characteristics



①	LINKB indicator	⑦	RS485 terminals ⁽¹⁾
②	LINKA indicator	⑧	Antenna connector
③	GPRS indicator	⑨	Upgrade port
④	WORK indicator	⑩	SIM card(china Unicom/Mobile) slot

⑤	Power indicator	⑪	DC power connector
⑥	DC power terminals	⑫	SIM card slot push-out button

(1) Terminal Definition

DC power terminals ⑥	8~64V or 5V		5.08-2 2P	1-GND
	GND	VCC		2-VCC
	1	2		
RS485 terminals ⑦	RS485			1-A
	A	B	G	2-B
	1	2	3	3-GND

(2) Press the yellow button ⑫, and the SIM card slot is pushed out.

3 Auxiliary Accessory

Type	Picture	Name	Function
Included		Antenna	Connect to the antenna connector ⑧ for data sending or receiving.
		RJ45 to 5.08 cable(CC-RJ45-5.08-150U) ⁽¹⁾	Connect to the RS485 terminals ⑦ for data transmission.
Optional		3.81 to 5.08 cable(CC-3.81-5.08-100U) ⁽¹⁾	Suitable for iTracer-AD/iTracer-N D/eTracer-BND/eTracer-AD.

(1) Pin definition

Model	CC-RJ45-5.08-150U	CC-3.81-5.08-100U
GND	Black	Black
A	Blue	Green
B	Green	Red

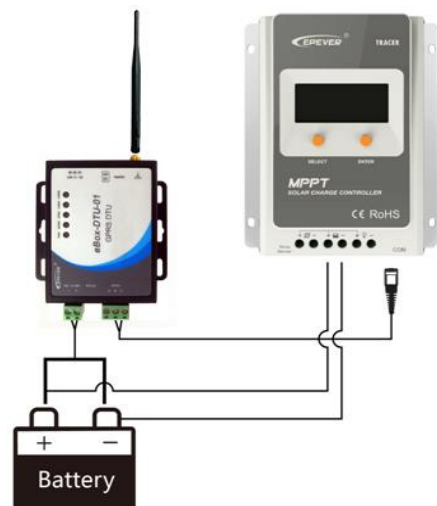
4 Indicator instruction

Indicator	Status	Instruction
LINKB	On Solid	Connect to Socket B
LINKA	On Solid	Connect to Socket A
GPRS	On Solid	Connect to GPRS
WORK	Flashing	Working indicator
POWER	On Solid(Red)	Power on

5 System connection

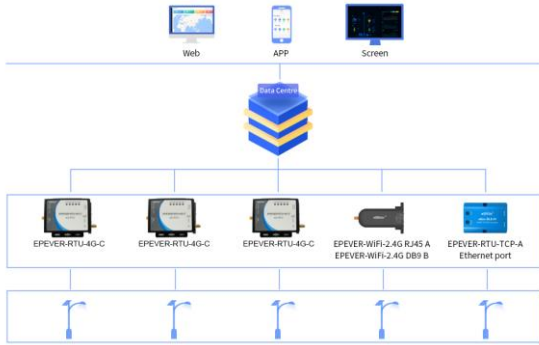
Wiring sequence

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



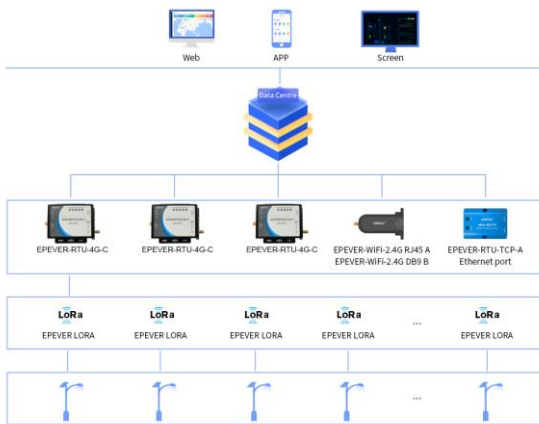
6 Network connection

➤ one to one network connection



➤ one to more network connection

Note: EPEVER-RTU-4G-C is compatible with the short-distance LORA wireless transmission terminals. Up to 100 pcs LORA slave terminals can be connected through one LORA master.



Working principle:

- 1) The controllers, inverters, or inverter/chargers transmit the feedback data to the EPEVER-RTU-4G-C.
- 2) The EPEVER-RTU-4G-C transmits the received data to the cloud server for recording and processing via the 4G and Internet network.
- 3) According to the set timing task and user terminal command, the cloud server continues to transmit the data and commands to EPEVER-RTU-4G-C.
- 4) The EPEVER-RTU-4G-C transmits data and commands to the controllers, inverters, or inverter/chargers for execution. After finished, return to Step 1) for a loop.

7 Troubleshooting

Faults	Solutions
Power indicator off	<ol style="list-style-type: none"> 1. Check whether to supply power to the EPEVER-RTU-4G-C. 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-C 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 on solid	<p>After power is on, the WORK indicator will be on solid in 60 seconds. While it cannot flash after 60 seconds, please check below:</p> <ol style="list-style-type: none"> 1. Check whether the SIM card is inserted correctly. 2. Confirm the SIM card has activated the GPRS service.

	<p>WORK indicator on solid again after running for a period, please check:</p> <ol style="list-style-type: none"> 1. Check whether the cloud server is normally running. 2. Check whether the SIM card is loose or arrear.
The product emits smoke with a pungent smell.	The actual input voltage exceeds the rated voltage of the EPEVER-RTU-4G-C, causing the internal components to burn out. Don't hesitate to contact the supplier in time and send it to the manufacturer.
The device can't register to the network.	<ol style="list-style-type: none"> 1. Check whether the SIM card is inserted correctly. 2. Confirm the SIM card has activated the GPRS service. 3. Check whether the input power is sufficient. The input voltage shall be DC8~64V or DC5V.
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.

8 Specifications

Model	EPEVER-RTU-4G-C
Parameter	
Input voltage	DC8~64V or DC5V(Supply by the battery)
Power consumption	Peak emission voltage: 5V@200mA Idle voltage: 5V@40mA
Working frequency	2.4~2.4835GHz
Configuration methods	Cloud server, PC software, serial port command, SMS command
Transmission protocol	EPEVER IoT communication protocol V1.1
Communication method	RS485
Communication cable	Included: RS485 to 5.08 cable(CC-RJ45-5.08-150U) Optional: 3.81 to 5.08 cable(CC-3.81-5.08-100U)
Communication standard	The male head standard in "Communication Interface Standard V-1.1"
Baud	9600Bps~115200bps, 8N1
Antenna connector	50Ω SMA (female head)
Antenna gain	2.5dBi ~ 5dBi
Working temperature	-40°C ~ 85°C
Enclosure	IP54
Humidity range	5~95%(NC.)
Dimensions	98Mm×86mm×24mm (Include the antenna and handle)
Mounting dimension	75mm / 75×25mm
Mounting Holes	Φ4 / Φ3
Net Weight	198g

9 Disclaimers

The warranty does not apply to the following conditions:

- Damage caused by improper use or inappropriate environment.
- The parameter setting exceeds the terminal'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.