

SPECIFICATION SHEET

TERRA A SERIES ESS WITH INVERTER

1

PRODUCT DETAILS

2

PRODUCT OVERVIEW

The GeePower Home Energy Storage System (ESS) is a modular residential battery solution designed to help households reduce electricity costs by intelligently managing when energy is stored and used.

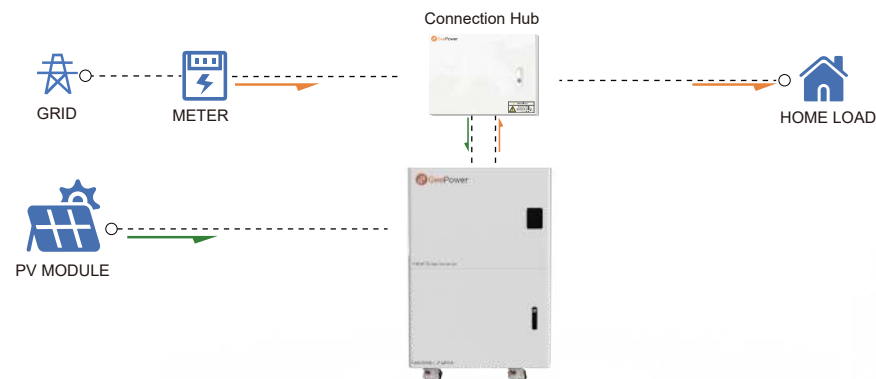
Built with high-quality LiFePO₄ battery modules, an integrated inverter, and a smart battery management and protection system, the ESS continuously monitors battery performance, temperature, and operating conditions to ensure safe, stable, and long-term operation.

Rather than relying solely on solar generation, the system is optimised for time-of-use electricity tariffs, allowing users to charge the battery during low-cost off-peak periods and discharge during high-tariff peak hours. This peak shaving and load shifting capability enables households to take advantage of price differences within the electricity grid and significantly reduce energy bills.

The modular design allows the system to grow alongside your household's energy needs, while remote monitoring and smart scheduling make it easy to track, manage, and optimise energy usage.

WORKING DIAGRAM

The ESS is designed for seamless integration into standard domestic electrical installations. The diagrams illustrate typical operation under:

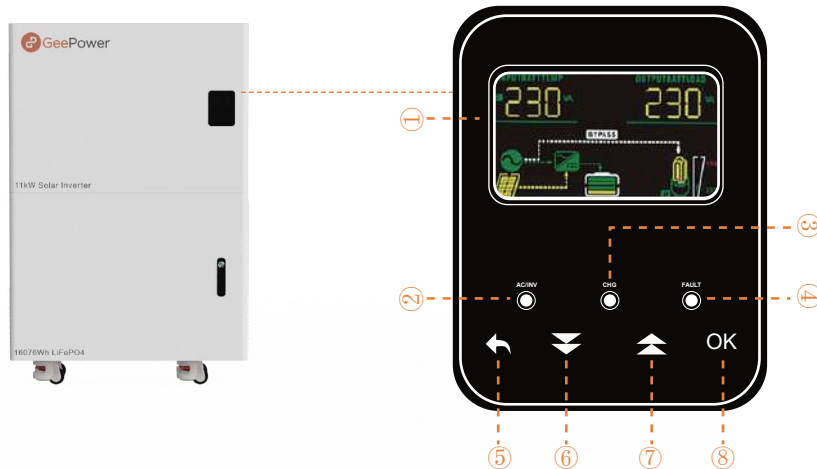


PRODUCT FEATURES

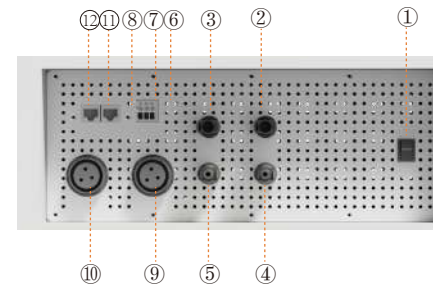
- **Grid-Charged for Residential Use**
Designed to charge energy from the utility grid during low-tariff periods and supply power internally to household loads, without exporting electricity back to the grid.
- **Modular Stackable Battery Design**
The modular design allows flexible capacity expansion as energy needs increase, with no system rewiring required.
- **Integrated Inverter with Dual MPPT**
The high-efficiency inverter features dual MPPT channels, allowing optimal use of solar energy to power household loads, even when the system is primarily grid-charged.
- **Stable RS485 Communication**
The inverter and battery modules exchange data via RS485. The inverter adjusts charging and discharging strategies based on battery status, ensuring long-term stable and reliable system operation.
- **User-Defined Off-Peak Charging & Peak Usage**
Supports user-defined charging and discharging schedules, allowing energy to be charged from the grid when electricity prices are lower and used during higher-cost periods.
- **Long-Life LiFePO₄ Battery**
Thermally stable, low-maintenance LiFePO₄ battery offers reliable performance for up to 15 years.
- **Built-in Fire Suppression Module**
Installed inside the battery module, this system adds a secondary safety layer to respond rapidly to rare fire events, enhancing homeowner peace of mind.
- **Pure Sine Wave Output with SPWM Technology**
Delivers clean and stable pure sine wave output to protect household appliances and sensitive electronics.



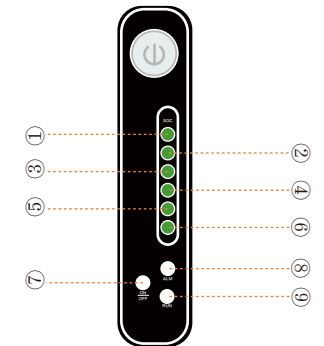
Inverter Front Panel



Side Panel Interfaces



Battery LED Indicators



NO.	Name	Instruction
①	LCD Screen	Display system operation data
②	Status Indicator	Always on: grid mode, output from AC Flash: battery mode, output from battery or PY
③	Charging Indicator capacity	Always on: Battery fully charged Flash: battery charging
④	Fault Indicator	Always on: Inverter failure Flash: Inverter warning
⑤	ESC	ESC Mode
⑥	DOWN	Turn to next option
⑦	UP	Back to last option
⑧	Confirm	Confirm a selection in setup mode or enter setup mode

NO.	Interface Instruction
①	Inverter Switch
②	PV1-
③	PV2-
④	PV1+
⑤	PV2+
⑥	Dry contact NO, normally open contact
⑦	Dry contact C, common contact
⑧	Dry contact NC, normally closed contact
⑨	AC OUT
⑩	AC IN
⑪	BMS communication port RS485
⑫	BMS communication port RS232

No.	Indicator Status
①	83%-100% Capacity
②	66%-83% Capacity
③	50%-66% Capacity
④	33%-50% Capacity
⑤	16%-33% Capacity
⑥	0% -16% Capacity
⑦	Warning Indicator
⑧	Power ON/OFF Indicator
⑨	System Running Indicator

TECHNICAL SPECIFICATIONS

5

PACKING DETAILS

6

Inverter

Model	GPTE-C-51.2-300	GPTE-C-51.2-600
Rated Power	11KW	
AC Rated Voltage	230VAC	
Efficiency	50Hz	
Rated Frequency	>94%	
Transfer Time	10ms	
Waveform	Pure sinusoidal wave	
Battery Overvoltage	58.4V	
Battery Undervoltage Alarm	45V	
Constant Voltage Charge	58.4V	
Float Voltage	56V	
Max Charging Current	100A	
Communication Interface	RS232(Inverter)/RS485(BMS)	
Dimension	71*50*24.5cm	

AC Input

Nominal Voltage	230VAC
Voltage Range	90-280VAC
Rated Frequency	50Hz
Frequency Range	40-70Hz
Rated Current	30A
Max AC Current	60A

PV Input

Max Voltage	500V
Optimum Voltage	300-400V
Voltage Range	120V-500V
Max Power	5500W

Battery

Rated Capacity	5120WH (100Ah)	10240WH (200Ah)	15360WH (300Ah)	20480WH (400Ah)	25600WH (500Ah)	30720WH (600Ah)
Nominal Voltage	51.2V					
Discharge Voltage Range	43.2V-58.4V					
Standard Charging Current	50A					
Max Charging Current	200A					
Max Discharging Current	200A					
Depth of Discharge	90%					
Communication Interface	CAN / RS485					
Cycle Life	≥6000, 25±2 C, 0.5C, EOL80%					
Working Temperature Range	Charge: 0 C-50 C; Discharge: -10 C-60 C					
Storage Temperature	-20 C-60 C					
Dimension	71*50*24.5cm					

PRODUCT DIMENSION

T-C: w-24.5 cm



ACCESSORIES



Inverter*1



Storage Battery*1



AC aviation plug



Tyre



MC4 Plug*2