Mint Smart Home Energy Storage System

Technical Specification

2022.06

Revision process table

No.	Rev	Reviser	Date	Description
1	Rev.1	Product Department	2022.05	First edition
2	Rev.1.1	Product Department	2022.06	Parameter modification

Contents

1. Product Overview and Technical Requirements

1.1. Product Description

Mint series residential energy storage system, including Mint-JKE10, Mint-JKE15, Mint-JKE20 a total of 3 models of products. The integrated battery control unit, battery unit and other important devices are designed to provide users with sustainable power solutions.

The modular structure has the characteristics of easy installation, flexible expansion, and reduced initial investment for customers. The minimalist and elegant exterior design perfectly blends into modern homes and also demonstrates its unique aesthetic charm. The stylish product appearance highlights the user's personalized taste.

1.2. Product Function

Mint series residential energy storage system is mainly used for home energy storage scenarios, the direct current generated by the photovoltaic(PV) strings is effectively stored in the battery, providing power for the house when the grid power is interrupted, reducing the adverse impact of power outage on normal life. It can also directly supply the load, improve the self-sufficiency of the house power supply, and reduce the dependence on traditional energy sources.

Introduction and description of main functions:

Basic function:

1.Storage energy: Matched with the inverter, charge the battery under the control of the inverter, and store electric energy;

2.UPS function: The system can supply power to the whole house when the power grid is cut off;

3.Voltage and frequency stabilization: Utilizing an internal controller to ensure the

stability of voltage and frequency during residential power usage, protecting the safety of residential appliances.

4.On-grid function: When allowed by local regulations, the surplus electricity can be fed back into the grid, generating potential revenue based on the requirements of the local power grid.

Special Function:

1. Intelligent operation: Work with the inverter through the inverter APP can remotely view the operating status of the system, control the system charge and discharge; The display panel can control the battery to start and stop with one key;

2. Easy installation: Battery modular design, a single person can complete the installation operation;

3. Flexible expansion: Support battery module expansion and battery capacity expansion, up to 4 battery units.

4.OTA remote upgrade function: The WiFi module can help the device to remotely upgrade the firmware, improve the performance and function of the battery.

2. System Specification

2.1. System technical parameters

Table1：System battery technical parameter

No.	Item	Mint-JKE5	Mint-JKE10	Mint-JKE15	Mint-JKE20
1	Battery type	LiFePo4（LFP）			
2	Battery module quantity	1	2	3	4
3	Nominal voltage(V)	102.4	204.8	307.2	409.6
4	Nominal capacity(Ah)	50			
5	Nominal total energy(kWh)	5.12	10.24	15.36	20.48
6	Usable energy capacity(kWh)	5.12	10.24	15.36	20.48
7	Standard continuous charge/discharge current (A)	25			
8	Max. continuous charge/discharge current (A)	50			
9	Rated DC power(kW)	5.12	10.24	15.36	20.48
10	Net weight (±2.0 kg)	73	126	180	233
11	Dimension(W*D*H,±2.0 mm)	758*228*617	758*228*945	758*228*1273	758*228*1601
12	Depth of discharge	100%			
13	IP rating	IP65			

14	Cooling method	Nature cooling
15	Fire protection	Aerosols fire extinguishing device
16	Environment temperature(℃)	Charge:0~55, Discharge:-20~60； Storage:-10~45
17	Operation humidity	5~95%，RH
18	Altitude(m)	< 2000
19	Mounting type	Floor-mounted
20	Design life	> 10 year
21	Communication method	WiFi
22	Country of manufacture	Made in China
23	Certification	IEC/EN62619, IEC/EN63056, IEC/UL60730, IEC/EN62040, UN38.3, UN3480 , IEC/EN62477, IEC/EN62040, IEC/EN61000, EN 50549-1, RfG:2016.NC, RfG:2018, PTPIREE:2021, VDE-AR-N 4105, DIN VDE V 0124-100
24	Available sales areas	DC side: All countries System level: Poland, Germany; Sweden (synchronized with master certificate)

2.2. Packing Method

The packing method for the product is to individually package each pack and package the battery control unit and base together separately.

2.2.1. PACK packing, stacking and loading method

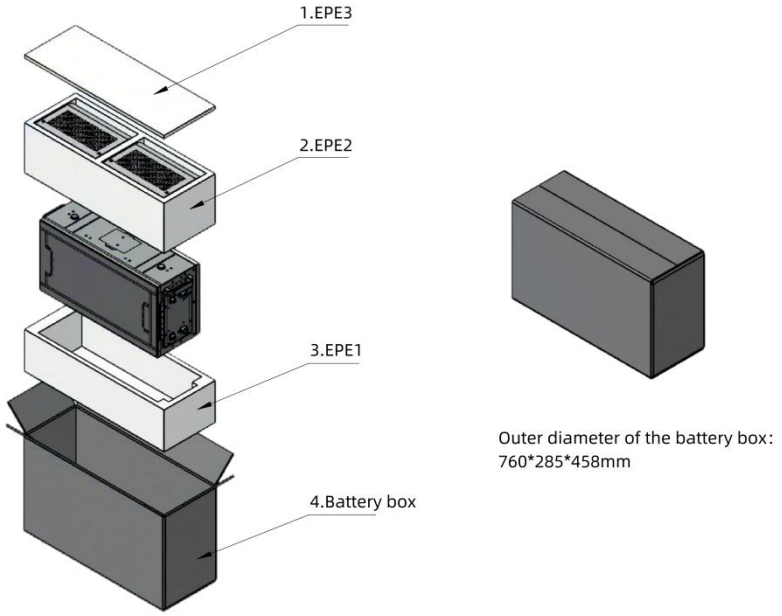

Figure2: Single PACK packing method

40GP and 20GP stacking method: 1 layer pallet, stacking 4 layers, 4 boxes in 1 layer, 16 boxes/pallet

40HQ stacking method: 1 layer pallet, stacking 5 layers, 4 boxes in 1 layer, 20 boxes/pallet

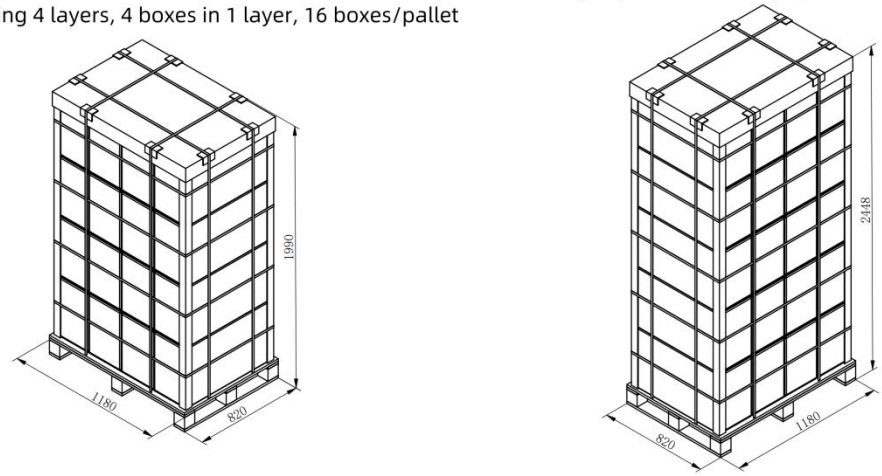

Figure3: 20GP/40GP and 40HQ stacking method

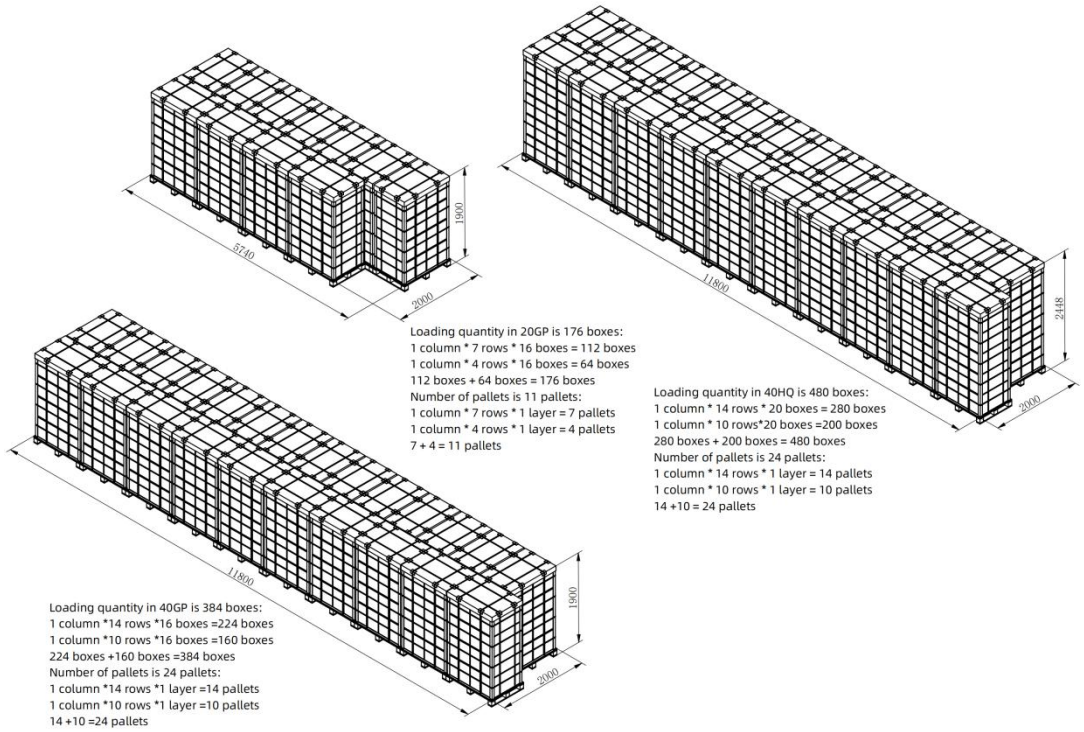

Figure4: 20GP/40GP and 40HQ loading method

Table3: PACK packaging and loading parameters

No.	Item		Parameter	Weight
1	PACK	Net weight	51.5kg	/
2		Gross weight	60kg	/
3		Dimensions before packing (W*D*H)	758*229*334mm	/
4		Dimensions after packing (without pallet) (W*D*H)	760*285*458mm	/
5	20GP	Loading quantity	176 boxes	<11t
6	40GP	Loading quantity	384 boxes	<24t
7	40HQ	Loading quantity	480 boxes	<30t

2.2.2. Battery control unit and base packing, stacking and loading method

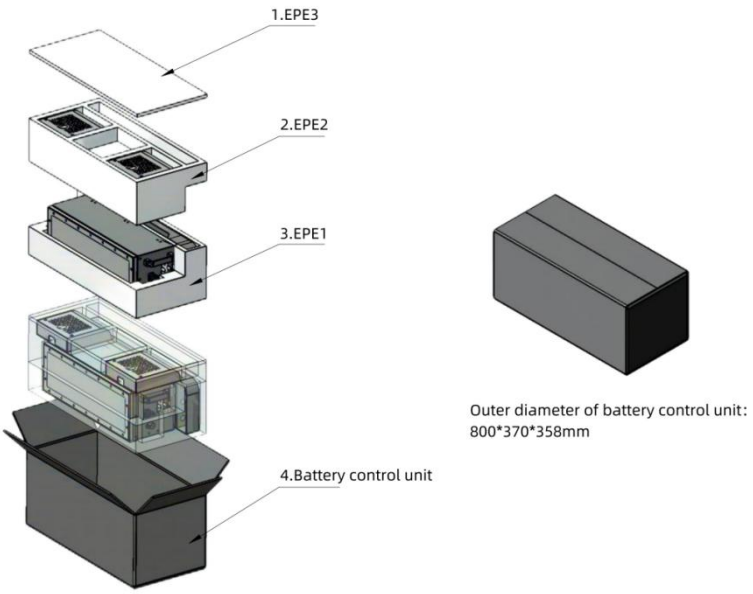

Figure5: Single battery control unit packing method

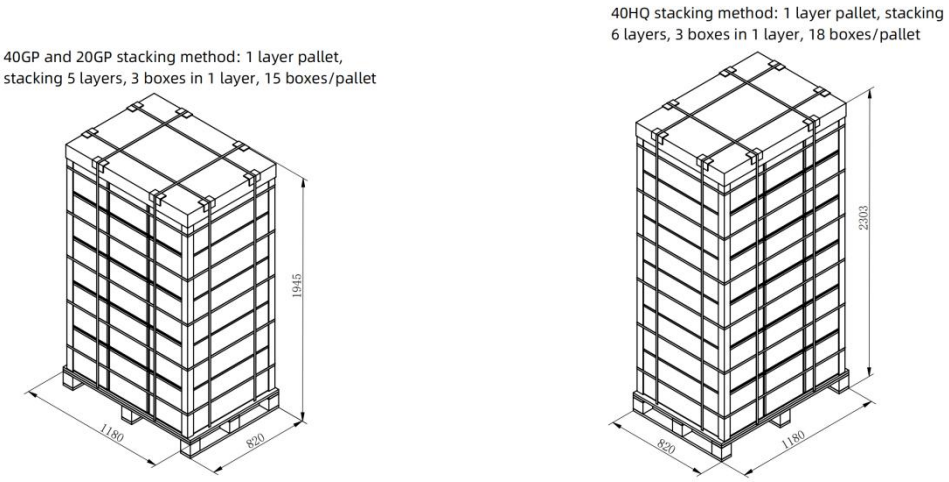

Figure6: 20GP/40GP and 40HQ stacking method

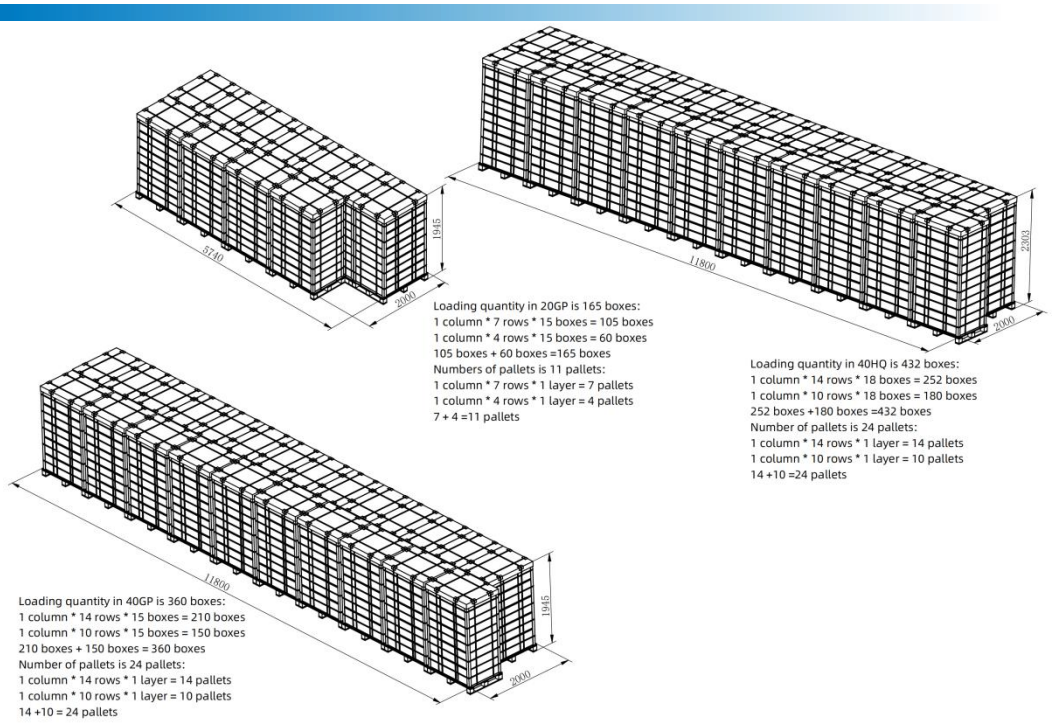

Figure7: 20GP/40GP and 40HQ loading method

Table4: Battery control unit and base packaging and loading parameter

No.	Item		Parameter	Weight
1	Battery control unit and base	Net weight	12.5kg	/
2		Gross weight	29kg	/
3		Dimensions before packing (W*D*H)	758*229*223mm	/
4		Dimensions after packing (without pallet) (W*D*H)	800*370*358mm	/
5	20GP	Loading quantity	165 boxes	<0.6t
6	40GP	Loading quantity	360 boxes	<11t
7	40HQ	Loading quantity	432 boxes	<14t