SHARING CLEAN ENERGY WITH THE WORLD

aecopower

XIAMEN AECOPOWER TECHNOLOGY CO.,LTD

Company Profile

CNTE is an overseas strategic partner of **Aecopower**.Invested by **CATL**, was fou nded in 2019.We are a technology-based enterprise, integrating R&D, pr oduction, sales and service of lithium battery storage products. With ene rgy storage application technology asthe core, our company provides cli ents with power generation side, grid-side and user-side products and so lutions.

Main Products

- Smart BESS Charging & Testing Station
- Commercial and Industrial ESS
- Residential Energy Storage
- Utility-Scale ESS
- Portable Power Station

Company Culture

SLOGON

Sharing Clean Energy With The World

MISSION

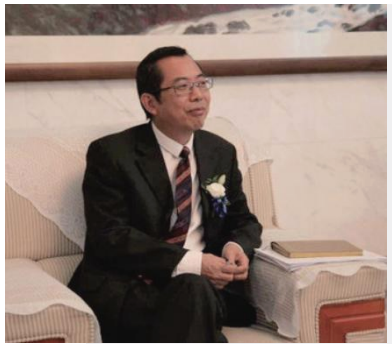
Promoting the Freedom of Clean Energy in the world through Technology

VALUES

Dedication, Innovation, Excellence, Endeavour

Company Shareholder

Jointly Founded by Leading Enterprises, Escorted by the Industry Leader.



Controlling Shareholder
Chairman

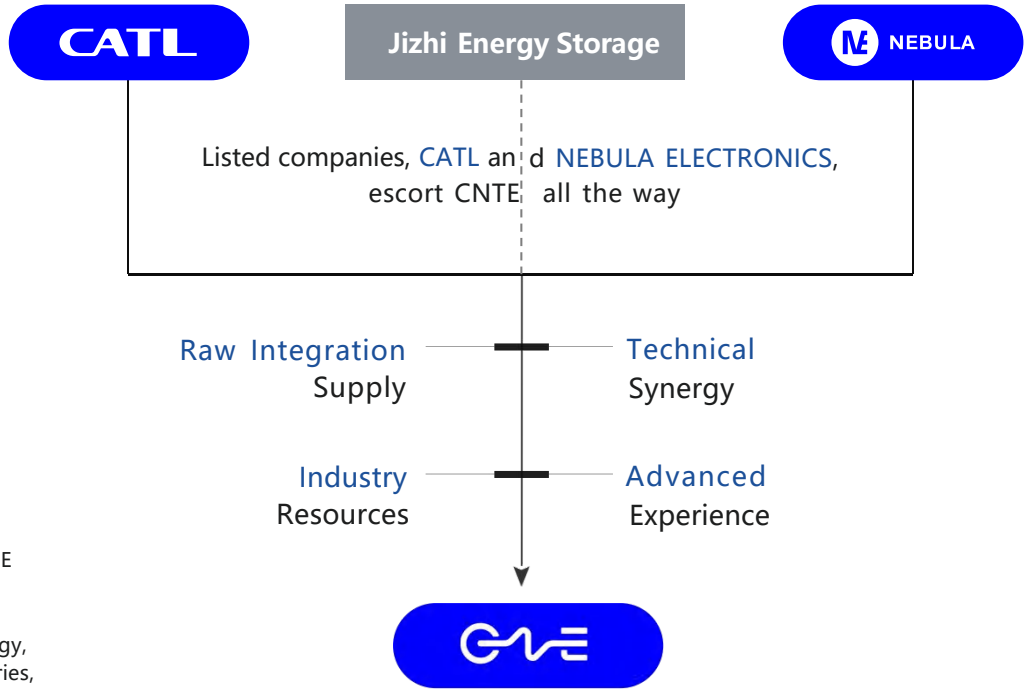
Mr. Huang Shilin

A leading figure in the global new energy industry Integration

Responsible for the company's overall strategic planning and layout

Served as vice chairman and general manager of CATL, current chairman and shareholder of CNTE and executive director of Jizhi Energy Storage

With more than 20 years of R&D and comprehensive management experience in new energy, he led the team to develop and achieve a number of breakthrough achievements in power batteries, which have a shaping influence on global new energy vehicles, energy storage and other industries



Development Course

2019

Feb
Establishment of the company

Aug
The first Smart BESS Charging Station landed at CATL headquarters

2020

Jul
Signed a “New Energy + Energy storage” cooperation agreement with Datong People's Government to drive the development process of "Electric Datong"

Apr
Jinjiang 100MWh frequency modulation energy storage power station achieved on-grid

2021

May
Sanduao demonstration project of Wind PV Storage Micro Grid was launched

Sep
The first C&I ESS landed in Guangdong

Nov
The first smart BESS charging station with off-grid operation landed in Qinghai

2022

Sep
C&I energy storage project, which aims to build a zero carbon factory, officially landed in Shunde, Guangdong.

Mar
The demonstration project of Wind PV Storage Micro Grid has been officially put into operation in Xiyang island of Ningde, Fujian

Feb
Mobile energy storage system applied to the Winter Olympic Games

2023

Jan
Brand Launch of YOSHOPO - Daily life energy storage solution provider

July
C&I ESS projects landed in Europe and Africa, contributing to the global energy green transition

Sep
The largest C&I demonstration project in Southwest China has been connected to the grid and put into operation

Nov
The CNTE Smart Energy Storage Industrial Park has officially commenced operations, boasting a total production capacity of 12 GWh.

Certification

1
Energy Storage Institute

300+
Experienced R&D Experts

3 Systems Certification

ISO9001 2015/GB/T19001-2016 The Quality Management System Requirements

ISO14001: 2015/GB/T24001-2016 The Environmental Management System Requirements

ISO45001: 2018/GB/T45001-2020 The OHS Management System Requirements

153 International Certifications

UL PSE TÜV UN38.3 VDE CE FC ETL RoHS IEC

25%
R&D Expenses

Honours

30+ Awards and Honours

MUSE Design Awards 2022 Gold Winner for YOSHOPO Residential ESS system

Fujian Provincial Enterprise Technology Center

The “Future Unicorn”Innovative Enterprise in the Digital Economy Field of Fujian Province

The National High-tech Enterprise

The Smart BESS Charging Station was recognized as the first set of Major Technical Equipment in Fujian Province

“Benchmark Product Award”of the National Advanced Energy Storage Technology Innovation Challenge

The “Gazelle” Innovative Enterprises iin the Digital Economy Field of Fujian Province

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579

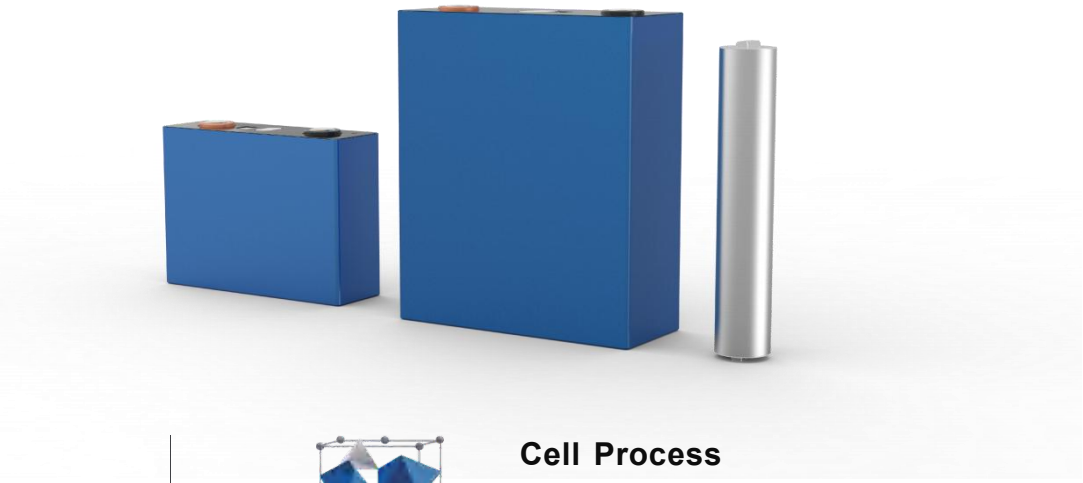
Accumulated patent applications

194

Accumulated innovative patents

Cell Strengths

Equipped with CATL LFP Cells



Electrical Safety

Over-current / external short-circuit protection
Insulation monitoring
Equipontential bonding
Electric shock warning

Chemical Safety

Flameresistant material
Safety requirements of the battery cell
Identification of hazardous substances
Prevent Battery Thermal Runaway

Mechanical Safety

Vibration resistance
Impact resistance
Explosion-proof

Functional Protection

Overvoltage / undervoltage protection
Overtemperature/ low temperature protection
Overcurrent protection
Communication abnormal protection

Cell Process

Electrode sheet winding process is not easy to produce burr, decarbonization and Metal particle, low long-term cycle short circuit risk.

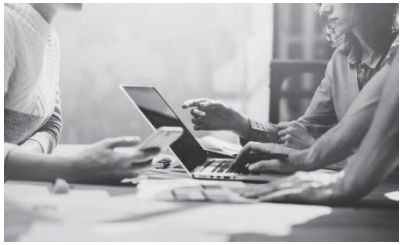
Safety Features

The results of the safety test: no fire, no explosion lithium iron phosphate has high thermal stability, slow heat production rate and less heat production lithium iron phosphate does not release oxygen under overcharge and overdischarge.

Core Advantage - R&D Strength

System Integration

Possess technical competence in system integration of the first smart BESS charging station in China



Team with 50% R&D expertise

Module Design

Design and manufacture of PACK

10 overseas experts

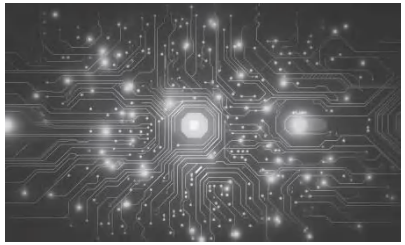
Structural Design

Professional experience in structural design

Establishment of School-Enterprise cooperation

Software & Hardware System

Professional experience in structural design



Awarded the title of IoT Enterprise

Production Strength

The error-proof technology of the electromechanical design of the production line and the real-time collection and verification technology of the process parameters of the MES system ensure the manufacturing quality from both hardware and software, making the product qualification rate greater than 99.6%. (the industry average is currently around 95%)

Lean logistics and lean production line layout, resulting in a 40% increase in the overall efficiency of the manufacturing process.

The EMS system implements a dynamic collection of production data and production reports, and the ERP system dynamically adjusts logisticssupply and delivery according to customer demand. The production linecan reduce the overall operating costs by about 12% through achieving ademand-driven production flow.

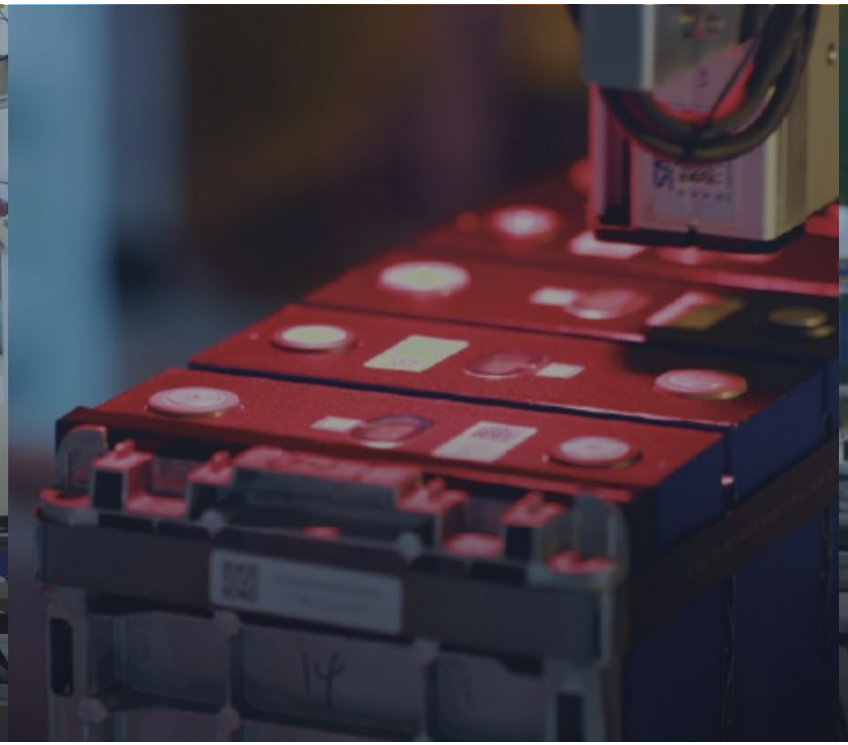
The data docking and sharing between MES system and ERP andPLM systems have increased the design and manufacturing cycleof customized products for customers by 30%.

Production Strength

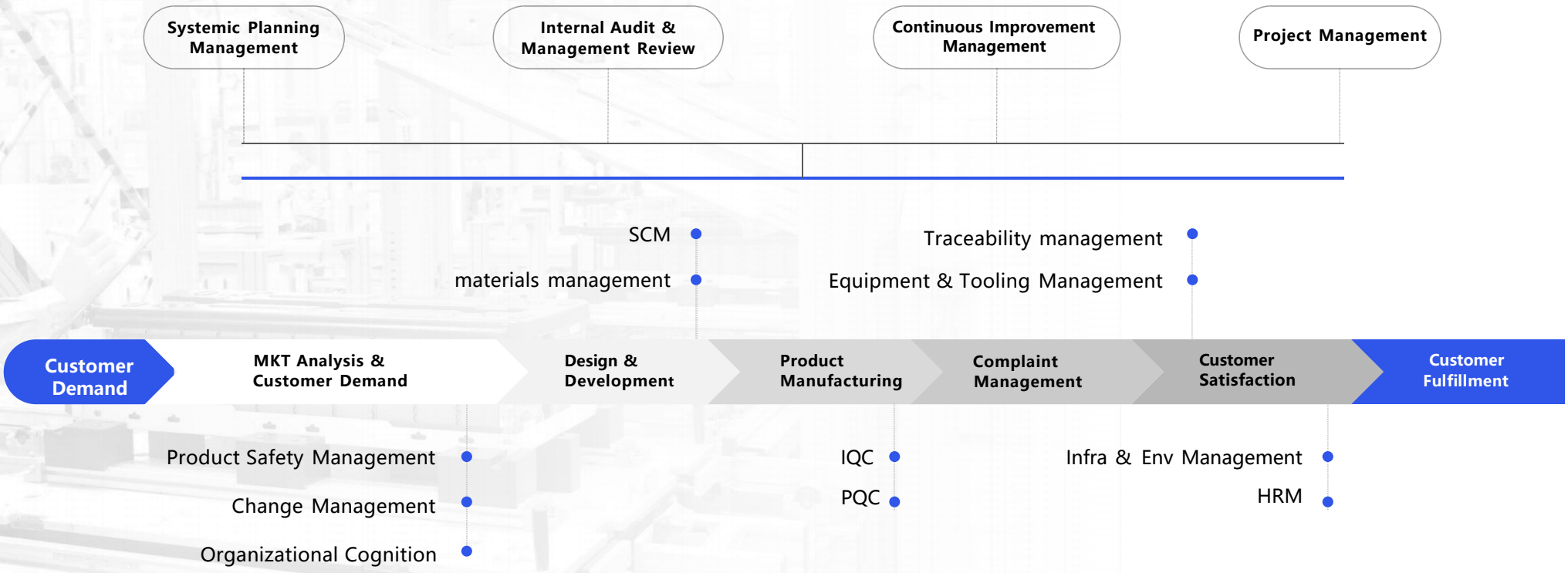
120000㎡ Area of Plant

307 set Number of Equipment

12GWh Total Production



Customized Process and Management System



Strong R & D strength

Build scientific and technological hard power through 5 core technology matrices

CNTE's core technology can promote the comprehensive application of lithium battery energy storage, which enables our company to provide all-scenario solutions for different customers. It enhances customer stickiness and expand market coverage accordingly.

Battery Testing Technology

- The world's first battery testing technology solution
- The detection of parameters such as DCR and capacity retention rate of the power battery system can be completed during the charging process
- High fault identification rate and fast speed

Electronics and Power Technology

- Leading electronic technology
- Continuous optimization of electronic power technology now it has reached 1000V/360kW high-power DC charging and discharging system
- Consistently meet needs of various product

Intelligent data technology

- Industry-leading intelligent data technology
- All products have realized cloud data tracking, and implemented AI algorithms gradually in aspects such as multiple analysis dimensions
- Industry-leading digitization and intelligence

Battery integration technology

- Battery integration core patent technology
- Focus on the safety design of energy storage systems in key technical fields such as grouping, thermal management, fire protection, etc.
- Integrated system with high security

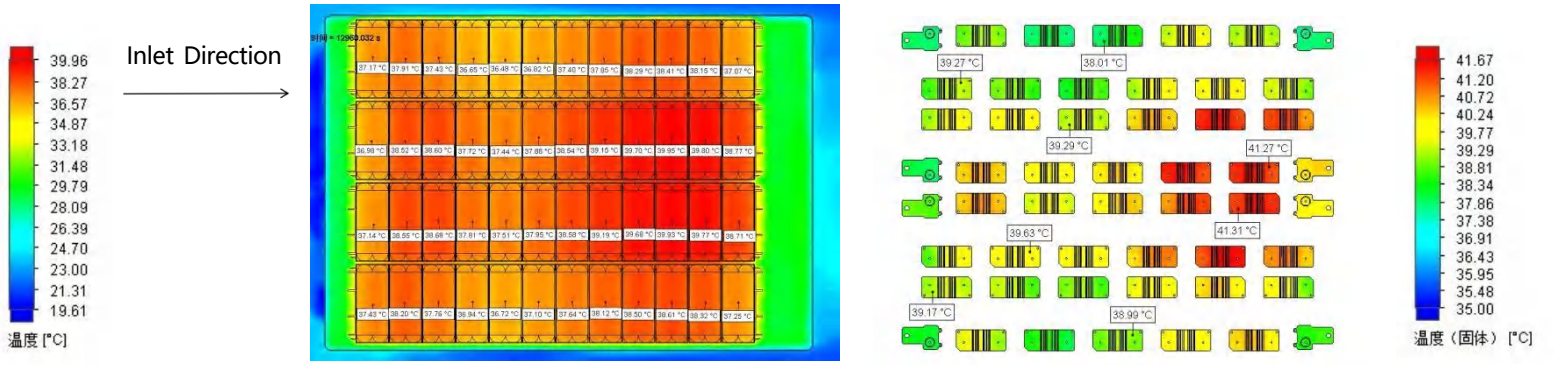
Energy Management Technology

- Based on the AI algorithm, the energy managementfunctions of energy storage such as peak shaving and valley filling, PV forecasting, and load forecasting can be realized
- Accuracy, real-time, and interactivity are at the fore front of the industry

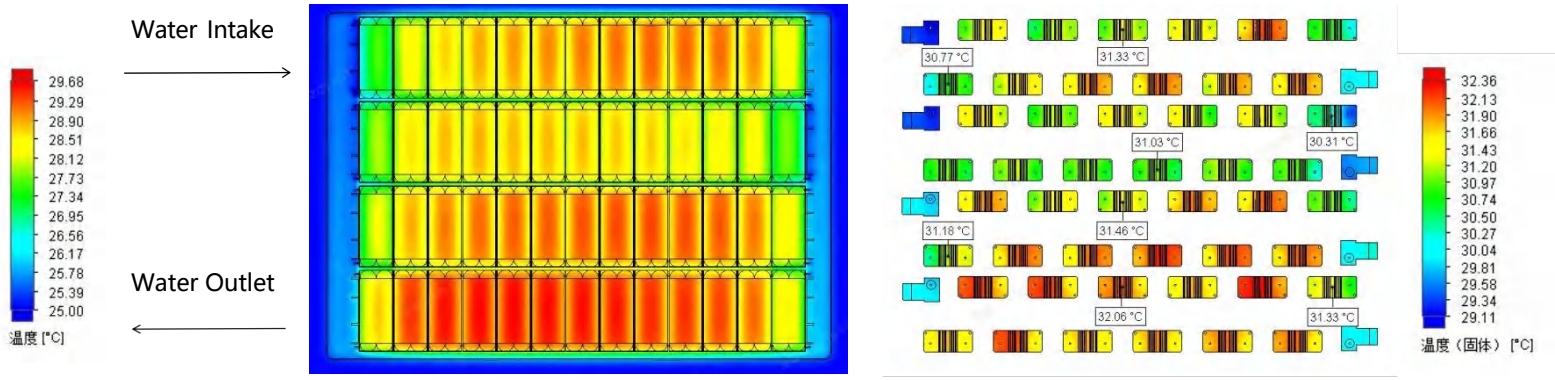
Thermal Management

aecpower

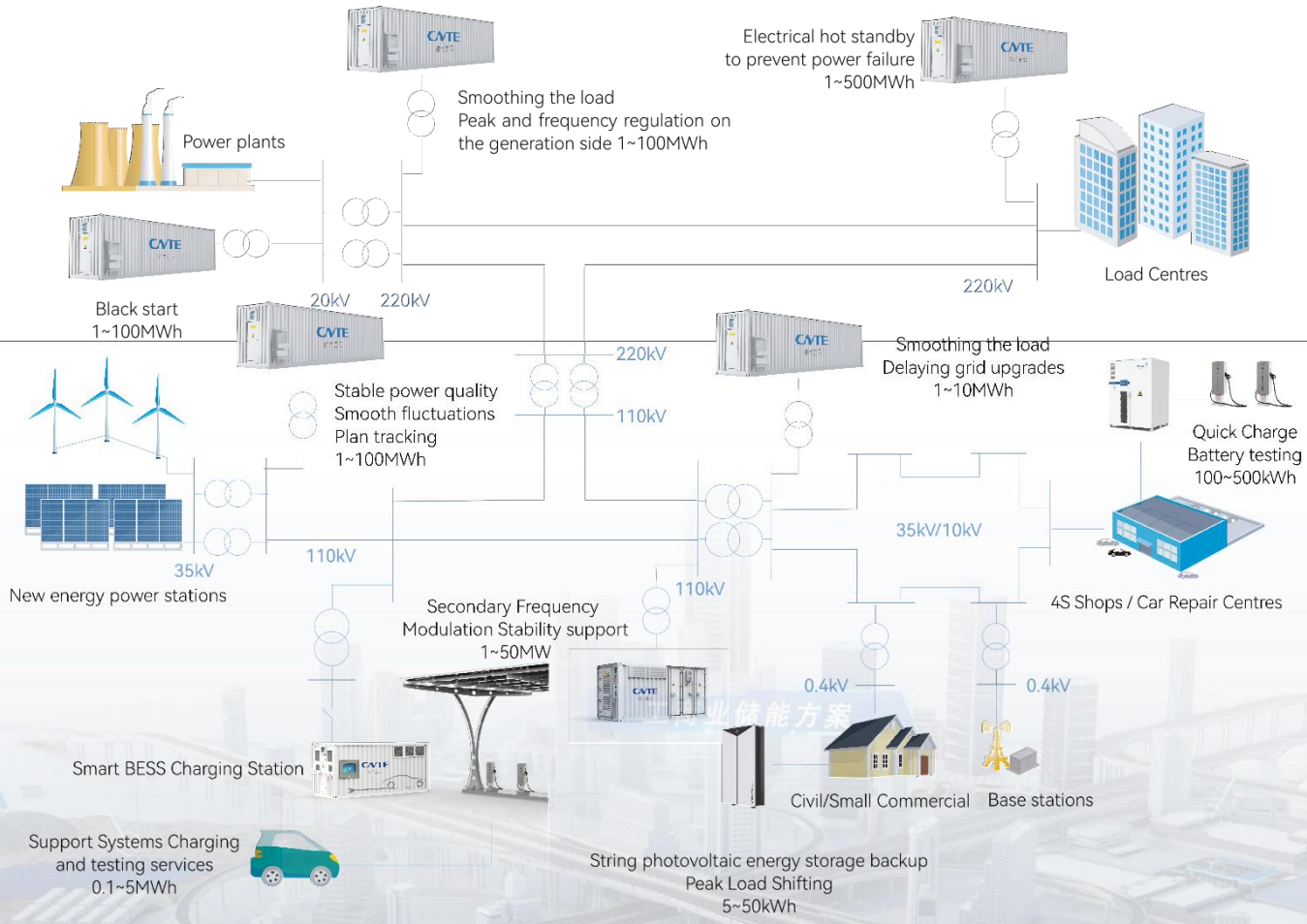
Thermal simulation of air-cooled battery modules



Thermal Simulation of Liquid Cooled Battery Modules



All Scenarios Energy Storage Solution



CNTE Product Matrix

Smart BESS Charging & Testing Station

Clean Energy Storage
Storage of solar energy
Improve the utilisation rate of clean energy

Super Fast Charging
Charge to 80% in 10 minutes

Battery Detection
Battery online detection service available

Fast Construction
Modular design, flexible deployment
Shortened construction period
Remote monitoring, operation convenience

Emergency Power Backup
Backup power supply
Switching between parallel and off gird to ensure stable charging

Increase Revenue
Peak load shifting
Arbitrage from peak and valley

High Security
Lithium iron phosphate battery
High safety, Long life

Capacity Expansion
Virtual capacity expansion
Reducing the burden of power grid

Stabilizing Fluctuation
Improving grid stability

Energy Storage System Products

Smart Grid ESS

- Manage local power supply and demand (peak shaving, valley filling)
- Smooth charging of electric vehicles (EVs)
- Regulate frequency, handle peak loads, operate independently (islanding)
- Increase solar power acceptance, reduce wasted energy
- Provide backup and mobile power
- Reduce need for grid expansion
- Improve power quality for low-voltage users
- Help restore power after grid outages (black start)

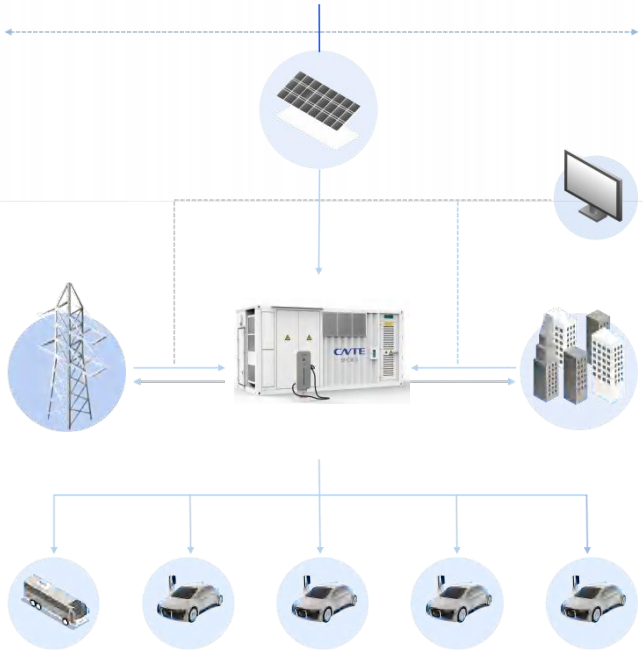
Combination of PV storage, charging & testing, short board complementary, innovative operation mode

- Shorten the construction cycle of charging station
- Enhance the flexibility of configuration
- Improve the convenience of charging
- Improve the fast online inspection service of power battery
- Increase the proportion of clean energy used in EV
- Reduce the impact of high power charging of EV to the power grid

Optimized Application Basis:

Smart BESS Charging & Testing Station

Upgrading the gas station model: professional, convenient, safe and low-cost



Fast Charge Testing Function Charge testing function:

- Provide EV fast charging service
- Provide online battery testing service
- Provide real-time battery maintenance service
- Realize vehicle web interaction: V2G function

3 major ops setup, monitoring, and mgt. platforms

- ESS (including PV) (Database 1)
- EV Charging Operation (Database 2)
- EV Testing (Database 3)

Back-office energy trading platform

Communicate with the 3 major in situ software management platforms and utilize the 3 major databases to realize the management of power trading functions in a unified manner.

Smart BESS Charging & Testing Station

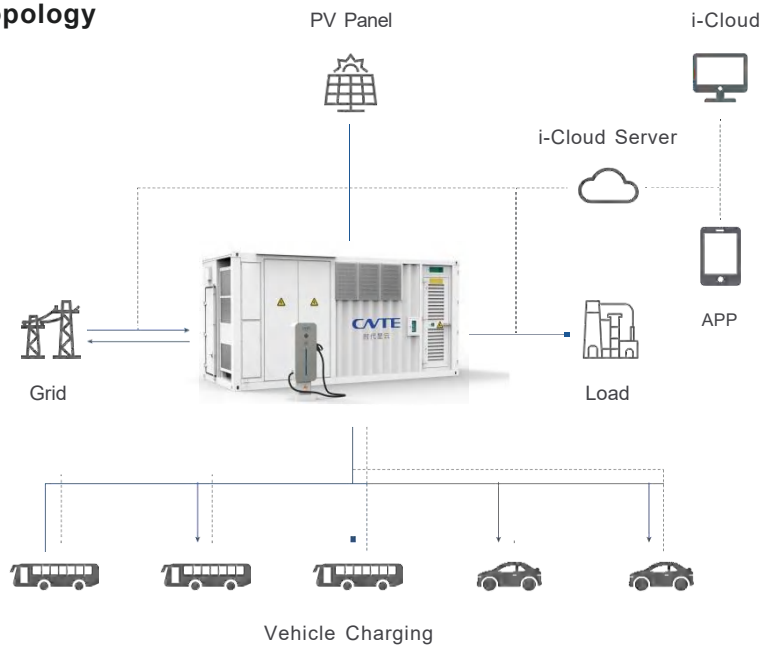
Applications

- Expressway Service Area
- Community Charging Station
- Airport
- Bus Station
- Large Parking Lot
- Taxi Parking

Solution

Smart BESS Container + Charging Piles + EMS/Monitoring Centre + The Smart Remote Management Application

Topology



Micro Smart BESS Charging & Testing Station

Rapid operation

1All-in-one palletized charging station with
1 energy storage cabinet and 4 charging piles.

superfast charging

250A/ 120kW DC fast-charging pile can
be recharged to 80% in as fast as 30 minutes

compatibilization

Virtual expansion, easy to entire station
building only 100kW power

Smart BESS Charging & Testing Station

Big Data Analysis System

Management of Testing Operations

· User registration, vehicle management
· Testing appointments, testing orders, billing, invoicing
· Value added services

Core Technological nnovation Points

1. Trend analysis of vehidle battery pack ageing curves (Algorithmic model).
2. Vehicle battery pack characteristic index dataanalysis (Big data)
3. Vehicle BMS input and output algorithmoptimization (Device intelligence).
4. Integrated pile with cell balancing and repairfunction (Device intelligence).

Vehicle Health File

· Vehice battery pack ageing curveanalysis
· Vehide inspection history, inspection reports
· Repair records, evaluation reports

Management of Testing Standards

· User registration, vehicle management
· Testing appointments, testing orders, billing, invoicing
· Value added services

Battery Pack Ageing Profile Analysis

Smart BESS Charging & Testing Microgrid

Backend energy trading platform:

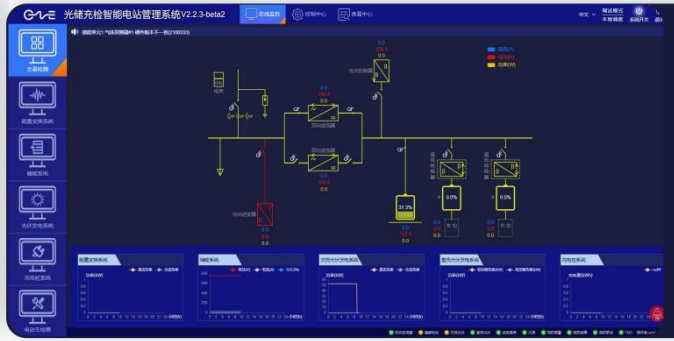
communicates with three local software management platforms and utilizes three databases to realize unified electric energy trading

Big Data Cloud Platform

Big data cloud platform based on IoT, cloud computing, mobile internet and big data technologies

BMS

BMS provides all-around protection for battery charging, discharging and equalization processes, enabling early prevention, detection, process control and degradation of faults.



EMS

Data acquisition and monitoring system

Automatic power generation control and economic dispatch control

Power system state estimation and security analysis

Smart BESS Charging & Testing Station-Micro Version

Micro Smart BESS Charging & Testing Station-Extended Version

2024.3

Smart BESS Charging & Testing Station-Villa Apps

Smart BESS Charging & Testing Station

Datasheet

Max. number of charging piles in parallel	24
INVERTER SPECIFICATIONS	
Rated AC Power	500kW
Rated Grid Voltage	400 Vac
Frequency	50/60Hz
Peak Efficiency	98.3%
ENERGY STORAGE	
Max Energy DC	1030kWh
Voltage Range (Nominal Voltage)	646.8 ~ 831.6VDC (739.2VDC)
Chemistry	LFP
CHARGING PILE	
Max. Output Power	180kW
Output Voltage Range	200~1000Vdc
ENVIRONMENTAL	
Operating Temperature Range / Humidity Range	-20~50 °C (Inverter derating at 45 to 55 °C) / 0 to 95% RH non-condensing
Altitudes	<4000m (derating >2000m)
IP Ratings	Energy Storage IP54, PCS IP54, Control and DC Combiner Cabinet IP54
FEATURES	
Battery Monitoring System	YES – Capable through CNTE monitoring system
Fire Suppression System	Pre-integrated Fire Suppression System with smoke and heat detectors plus aerosols or NVAC1230
COMPLIANCE	
Inverter Related Standards	UL 1741, UL 1741 SB, IEEE 1547:2018
Battery Related Standards	UN 38.3, UN 3481, UL 1973, UL 9540A
DIMENSIONS & WEIGHTS OF KEY COMPONEUTS	
System Dimensions (mm, L x W x H)	1295 X 1500 X 2280 for each Battery Rack 1200 x 800 x 2000 for Control Cabinet
Weight of Key Components (kg)	700 kg for Control Cabinet, 2500 kg per 206 kWh Battery Rack

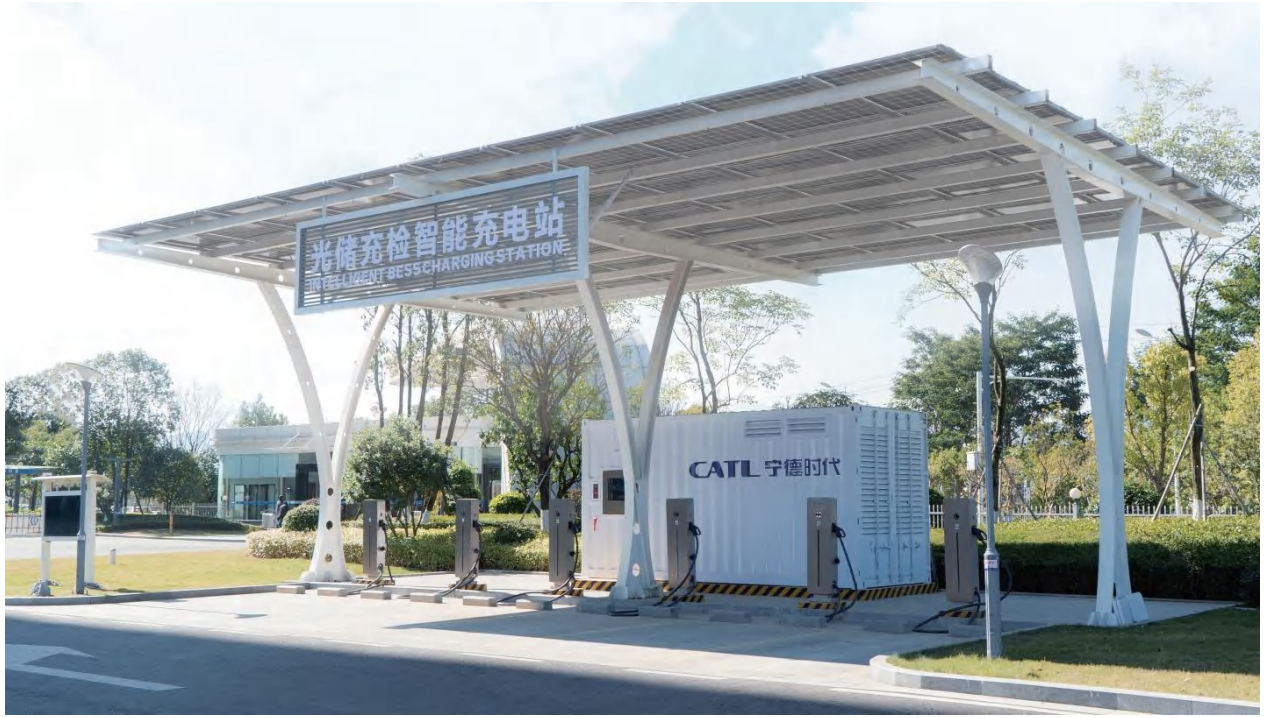
Smart BESS Charging & Testing Station

Projects

World First
Smart BESS Charging & Testing Station

CATL Headquarter, Ningde, Fujian

250kW / 500kWh



Smart BESS Charging & Testing Station

Projects

Fuzhou Mawei Jiangbin Avenue
Smart BESS Charging & Testing Station

Mawei, Fuzhou, Fujian

1260kW / 1236kWh

Projects

Ningde Li-ion Battery Town BESS Charging Station
1030kW/1030kWh Ningde, Fujian

Ningde Exhibition Center BESS Super Charging Station
1030kW/1030kWh Ningde, Fujian

Fuzhou South Railway Station BESS Super Charging Station
1030kW/1030kWh Fuzhou, Fujian

Ningde Li-ion Battery Town BESS Charging Station
1030kW/1030kWh Shanghai

Mawei Bus Terminal Smart BESS Charging Station
250kW/500kWh Fuzhou, Fujian

Xining Off-grid Smart BESS Charging and Testing Station
250kW/500kWh Xining , Qinghai

Utility-Scale ESS

Fast grid connection

Supports access to 380V, 10kV and 35kV power grids to enhance system stability.

Rapid Delivery

Modular design, flexible deployment, shorten the construction cycle flexible configuration of the number of system series and parallel connections

Increase Capacity

Virtual capacity expansion to reduce the burden on the grid

LFP Battery

Up to 1P
Charge/discharge rate
Cycle life ≥ 10000 times

High Safety

LFP Battery, high safety, long battery life

Emergency Power Reserve

Fast access, backup power supply and off-grid switching, guaranteeing stable charging

ODM/OEM

CNTE provides one-stop ODM/OEM services for modules, generators, and ESS, CNTE has highly automated square cell production lines, flexible production lines, cylindrical cell production lines, and high-speed module production lines, each of which can meet the OEM needs of different customers due to their different design concepts and advantages.。

Automation rate of equipment for critical manufacturing processes exceeds **80%**

BUSBAR Welding

Adopt the world's leading fully automated & high power laser welding process. Realize high consistency of product welding quality and meet the requirement of high rate charging and discharging over-current capability.

MES System

MES production system, to achieve fully automated management of man, machine, material, law, environment, effective protection of product production quality, defect management, data traceability.

Compounding Technology

Adopting the world's leading fully-automatic, high-precision metering compounding technology, the uniformity of compounding and the precision of the amount of adhesive applied are at the leading level in the industry, which can effectively guarantee the uniformity of heat conduction of each battery.

Precise Testing to Prevent Leaks

Adopting the world's leading high-precision, feature-rich measuring instruments, we effectively capture and analyze the key parameters of the products, ensure the reliability of the test data, build a comprehensive coverage of the inspection system from component level to system integration, and have the capability of fully automated inspection.

Example Projects

Jinjiang Power Generating and Energy Storage Station

Location: Jinjiang, Fujian
System Specification: 30MW / 108MWh

China Three Gorges Wind Power Generating Station with ESS

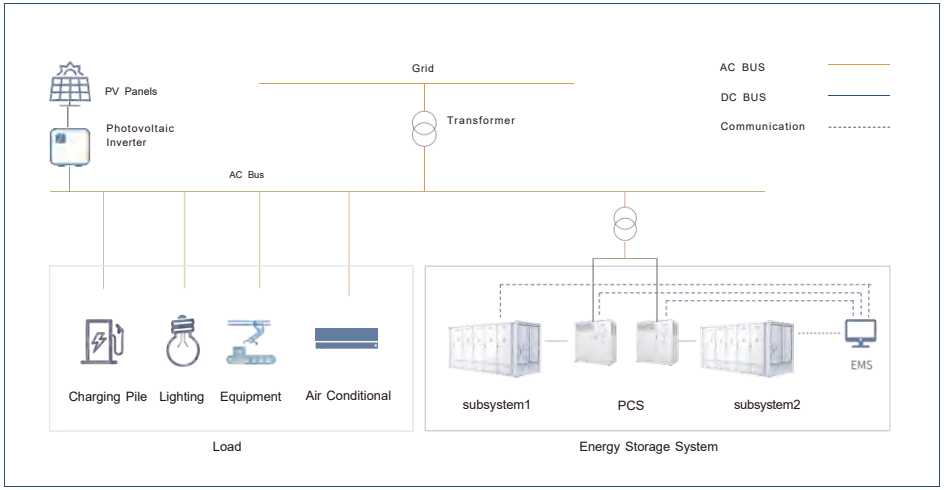
Location: Xitie Mountain, Qinghai
System Specifications: 12MW / 12MWh

Technical Solution of ESS

Utility-Scale (Above 10MWh)

STAR-T Liquid cooling Battery Container

PCS



Max. Number of System in Parallel	2		
PCS SPECIFICATIONS			
Rated AC Power	1000 &1725 kVA / kW		
Rated Grid Voltage	480 / 690 Vac		
Max. AC Current	1672/1448A		
Total Harmonic Distortion	<3%		
Rated Grid Frequency (Range)	50 Hz /60Hz		
Peak Efficiency	98%		
Power Factor	-1 to 1 , continuously adjustable		
ENERGY STORAGE			
Product-Model	STAR-T		Ener C
Rated Energy DC	1896.96kWh~3793.92kWh	2036.73kWh~4073.47kWh	3727.36kWh
P-rate	1P	0.5P	0.5P/1P
Cooling mode	Liquid cooling		
Cell	285Ah	306Ah	280Ah
Voltage Range (Nominal Voltage)	1164.8 ~ 1497.6VDC（1331.2Vdc）		
Chemistry	LFP		
ENVIRONMENTAL			
Operating Temperature Range / Humidity Range	-20~50 °C (PCS derating at 45 to 55 °C) / 0 to 95% RH non-condensing		
Altitudes	<4000m (derating >2000m)		
IP Ratings	Energy Storage IP54, PCS IP54, Control cabinet IP54		
FEATURES			
Battery Monitoring System	YES – Capable through CNTE monitoring system		
Fire Suppression System	Pre-integrated Fire Suppression system with smoke detectors, heat detectors (optional), H2 detectors, aerosol , the dry pipe(optional), the smoke exhaust ventilation system		Pre-integrated Fire Suppression system with smoke and heat detectors plus aerosols
COMPLIANCE			
PCS Related Standards	VDE AR-N 4105/ VDE AR-N 4110 / EN50549/ G99/ IEC 62477 / IEC 61000-6-2, IEC 61000-6-4 /UL 1741/ IEEE1547：2018 / UL1741 SB		
Battery Related Standards	UN 38.3, UL 1973, UL 9540A, IEC 62619, IEC 61000-6-2/-4, IEC 62477-1		
DIMENSIONS & WEIGHTS			
System Dimensions (mm, W x D x H)	2200×1100×2280 for Inverter		
	6058 x 2438 x 2896 for Star-T		6058 x 2468 x 2896 for Ener C
Weight of Key Components (kg)	2600 kg for Inverter, 37000 kg per Battery Container		

Technical Solution of ESS

Energy Management

Peakshaving

Monitoring and indicating status of battery and other equipment.

Easy Expansion

Modular design easy to expansion capacity.

Highly Safety

Liquid cooling system + long life time LFP cell and multiple protection.

Standard Interface

Standard interface for communication and HV connection.

Frequency Regulation

Fast response time and high accuracy to provide regulation service for grid.

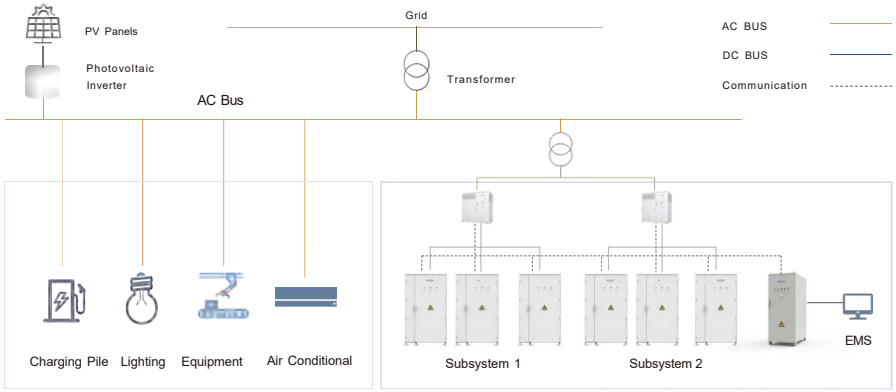
Technical Solution of ESS

Commercial and Industrial (0.2~2MWh)

Ener one Liquid Cooling Battery Cabinet

Control Cabinet

PCS



Max. Number of System in Parallel	2		
PCS SPECIFICATIONS			
Rated AC Power	100&500&1000 kVA / kW	1000&1725 kVA/ kW	
Rated Grid Voltage	400 Vac	480 / 690 Vac	
Max. AC Current		1448A	
Total Harmonic Distortion	<3%		
Rated Grid Frequency (Range)	50 Hz /60Hz		
Peak Efficiency	98%		
Power Factor	-1 to 1 , continuously adjustable		
ENERGY STORAGE			
Product-Model	Ener Mini	Ener One+	
Rated Energy DC	206.97kWh	407.34kWh	379.39kWh
P-rate	1P/0.5P	0.5P	1P
Cooling mode	Liquid cooling		
Cell	280Ah	306Ah	285Ah
Voltage Range (Nominal Voltage)	646.8~831.6VDC(739.2Vdc)	1164.8 ~ 1497.6VDC（1331.2Vdc）	
Chemistry	LFP		
ENVIRONMENTAL			
Operating Temperature Range / Humidity Range	-20~50 °C (PCS derating at 45 to 55 °C) / 0 to 95% RH non-condensing		
Altitudes	<4000m (derating >2000m)		
IP Ratings	Energy Storage IP54, PCS IP54, Control cabinet IP54		
FEATURES			
Battery Monitoring System	YES – Capable through CNTE monitoring system		
Fire Suppression System	Pre-integrated Fire Suppression system with smoke and heat detectors plus aerosols	Pre-integrated Fire Suppression system with smoke detectors, heat detectors, gas detectors(optional), aerosol , the dry pipe(optional), the deflagration panel(optional)	
COMPLIANCE			
PCS Related Standards	VDE AR-N 4105/ VDE AR-N 4110 / EN50549/ G99/ IEC 62477 / IEC 61000-6-2, IEC 61000-6-4 /UL 1741/ IEEE1547：2018 / UL1741 SB		
Battery Related Standards	UN 38.3, UL 1973, UL 9540A, IEC 62619, IEC 61000-6-2/-4, IEC 62477-1		
DIMENSIONS & WEIGHTS			
System Dimensions (mm, W x D x H)	810×275×845 for Inverter 100kW, 1500×1150×2450 for Inverter 500kW, 2200×1100×2280 for Inverter 1000kW	2200×1100×2280 for Inverter	
	1,270 x 1,500 x 2,370 for each Battery Rack	1,300 x 1,300 x 2,280 for each Battery Rack	
Weight of Key Components (kg)	98 kg for Inverter 100kW, 98 kg for Inverter 500kW, 2600 kg for Inverter 1000kW, 3500 kg per 372 kWh Battery Rack	2600 kg for Inverter, 3500 kg per 372 kWh Battery Rack	

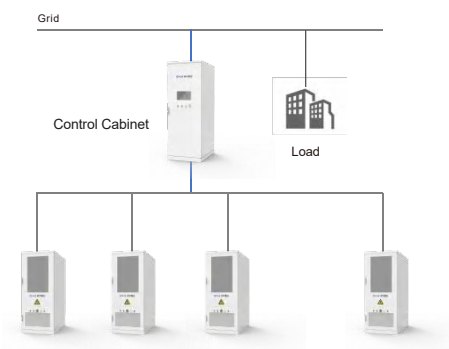
Technical Solution of ESS

Commercial and Industrial (All-in-one)

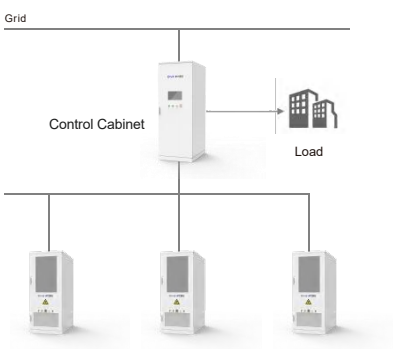
STAR-H

Liquid cooling Battery Container

On / off-grid



Parallel / off-grid

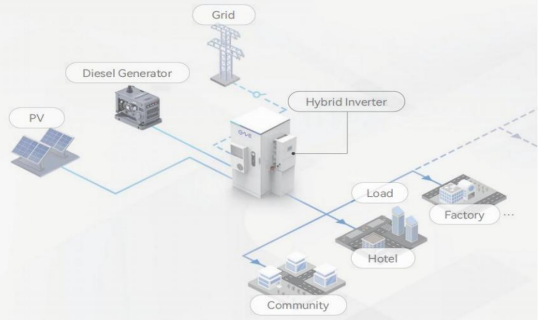


Max. Number of System in Parallel	TBD	
PCS SPECIFICATIONS		
Rated AC Power	200 kVA / kW (Optional 100kW）	125kVA/kW
Rated Grid Voltage	400 VAC	
Max. AC Current	157	TBD
Total Harmonic Distortion	<3%	
Rated Grid Frequency (Range)	50 Hz /60Hz	
Peak Efficiency	98%	
Power Factor	-1 to 1 , continuously adjustable	
ENERGY STORAGE		
Product-Model	Star-H	
Rated Energy DC	237.12kWh	254.59kWh
P-rate	0.84P	0.5P
Cooling mode	Liquid cooling	
Cell	285Ah	306Ah
Voltage Range (Nominal Voltage)	728 ~ 936VDC（832Vdc）	
Chemistry	LFP	
ENVIRONMENTAL		
Operating Temperature Range / Humidity Range	-20~50 °C (PCS derating at 45 to 55 °C) / 0 to 95% RH non-condensing	
Altitudes	<4000m (derating >2000m)	
IP Ratings	IP54	
FEATURES		
Battery Monitoring System	YES – Capable through CNTE monitoring system	
Fire Suppression System	Pre-integrated Fire Suppression system with smoke and heat detectors plus aerosols	
COMPLIANCE		
PCS Related Standards	EN 50549/G99/ IEC 62477 / IEC 61000-6-2, IEC 61000-6-4	
Battery Related Standards	UN 38.3, UL 9540A, IEC 62619, IEC 61000-6-2/-4, IEC 62477-1	
DIMENSIONS & WEIGHTS		
System Dimensions (mm, W x D x H)	TBD	
Weight of Key Components (kg)	TBD	

STAR Q Product Advantages

Seamless On/Off-Grid, **One Cabinet Forms a Micro-Grid**

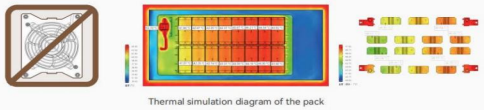
- Pure off-grid, Power **10 families** a day
  *At 10 kWh/d/family (estimated)
- **Adopt the hybrid inverter**
  Supports access of multi-power sources: Diesel generator, PV, Grid…
- **0.02s On/Off-Grid switch**
  Uninterrupted Power, always on



CATL 306Ah LFP Battery Cell | Service Life ≥ **15years**

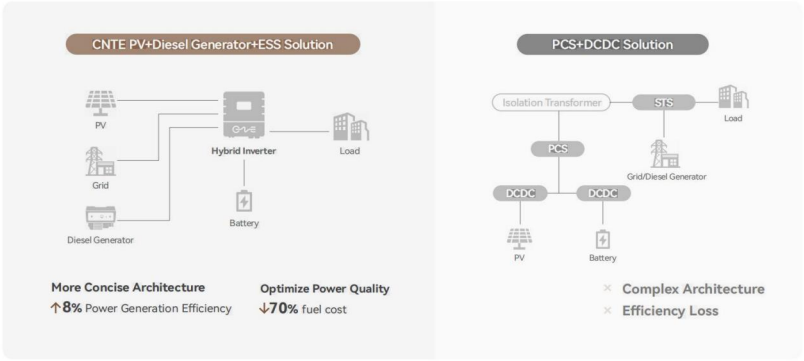
Patented **Self-Cooling Rack**, Lifecycle **Maintenance-Free**

- **Air-fin patent,** even heat spread
- **Fanless,** quieter


Thermal simulation diagram of the pack

- **IP67** Sealed Protection
  Fully isolate condensate water, dust, etc.

Higher Efficiency, ↓70% Fuel Costs

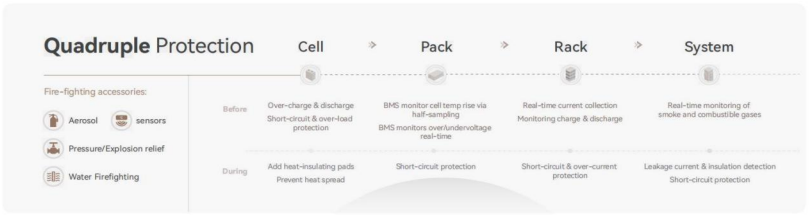


Support **6** AC in Parallel
Up to **10** Cabinets Expandable

All-in-One

Pre-installation/debugging
Ready For Use
Easy Install, Flexible Deployment

Insulation Detection at start up
Leakage Current Detection in operation



STAR Q Product Specifications

PRODUCT MODEL	STAR Q
BATTERY SPECIFICATIONS	
Battery Type	LFP
Battery Model	306Ah
Energy Capacity	109kWh
Cycle Life (@25℃, 0.5P)	≥10000
P-rate	≤0.5P
Battery Compartment Ingress Protection	IP67
COMMUNICATION (ON/OFF-GRID)	
Rated output power	50kW
Rated Input Voltage (3/N/PE)	380/400Vac
Rated Frequency	50/60Hz
THDi	< 3%
THDu	< 3%
PV INPUT	
MPPT Voltage Range	150 ~ 850Vdc
Maximun Input Power of PV	96kW
MPPT channels/Strings per MPPT channel	4/2
Max Input Current	40/40/40/40A
GENERAL SPECIFICATIONS	
On/Off-Grid Switching Time	< 20ms
Cooling Method	Air Cooling
Operating Temperature Range	-25 ~ 55℃
Relative Humidity	0 ~ 95% (Non-condensation)
Operating Altitude	≤4000m (> 2000m derating)
Ingress Protection	IP54
Dimension (W×D×H)	1272×1356.8×2070mm
Weight	≈1.8T
Compliance	EN 50549-1、EN50549-10、VDE-AR-N 4105、NRS 097-2-1、IEC 61000、IEC 62477、IEC 62619、IEC62109、UN38.3

Projects | Utility-Scale

Power Generating and Energy Storage Station
30 MW/ 108 MWh Jinjiang, Fujian

“Lithium Battery+Flywheel” Hybrid Energy Storage solution
6MW/6MWh Shuozhou, Shanxi

Wind and PV Storage Microgrid Demonstration Project
1.26MW/2MWh Xiyang Island, Fujian

Wind Power Generating Station with ESS
12 MW/ 12 MWh Xitie Mountain, Qinghai

Huolin River circular economy project with Lithium battery ESS
2MW/3.517MWh Huolin River, Neimenggu

State Grid Area Power Grid Sharing ESS
200 kW/ 252 kWh Xiamen, Fujian

Projects | Commercial & Industrial

Midea Group Small Appliances and Cleaning Business
1MW/1.7MWh Shunde, Guangdong

Dynanonic
2MW/5.4MWh Shenzhen, Guangdong

Xining Off-grid Smart BESS Charging and Testing Station
1.25MW/2.7MWh Taoyuan, Taiwan

HydroT Tech Zero Carbon Manufacture Solution
500kW/1MWh Hangzhou, Zhejiang

Sieyuan Electric Pudong Logistics Park Zero Carbon
500kW/1MWh Pudong, Shanghai

Kunshan Industrial Park as Zero Carbon Pioneer
1MW/2.099MWh Shenzhen, Guangdong

Residential ESS

Reduce Electricity Bills

Self sufficiency and stability through solar energy
Peak load shifting
Arbitrage from peak and valley

Clean Energy Storage

Storage of solar energy
Improve the utilisation rate of clean energy

Intelligent Management

Remote monitoring, convenient operation
Custoimized home electricity solution

Safety and Security

High safety and long life cycles
Waterproof, moisture-proof
No exposed wires and air vents

Easy Installation

Optional core capacity
Simple installation and convenient maintenance
Compatible with various pv systems and inverters

Emergency Power Backup

Can be supplied by the stored power
Uninterrupted home power supply

Residential Energy Storage

Product Advantages

LV Stacking 5-20 Kwh

Max capacity up to **81.92kWh**

Split Stacking All-in-one cabinet
Optional installation

LV wall hanging 14.3 kwh

Max capacity up to **228.8kWh**

Extra long cycle life of **28,000 (70% SOH)**

HV Stacking 9.4~23.5kWh

175mm ultra-thin body

Space-saving installation

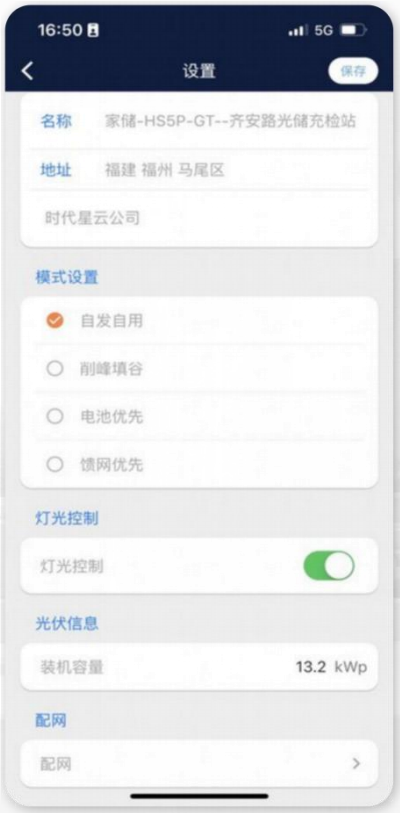
HV All-in-one 9.4~23.5kWh

Integrated Hybrid Inverter + Power Box

Conversion efficiency High
Low standby loss of the total system

Residential Energy Storage

SHISHIJIA APP



Real-time information on household electricity consumption
Visual management of energy to avoid waste

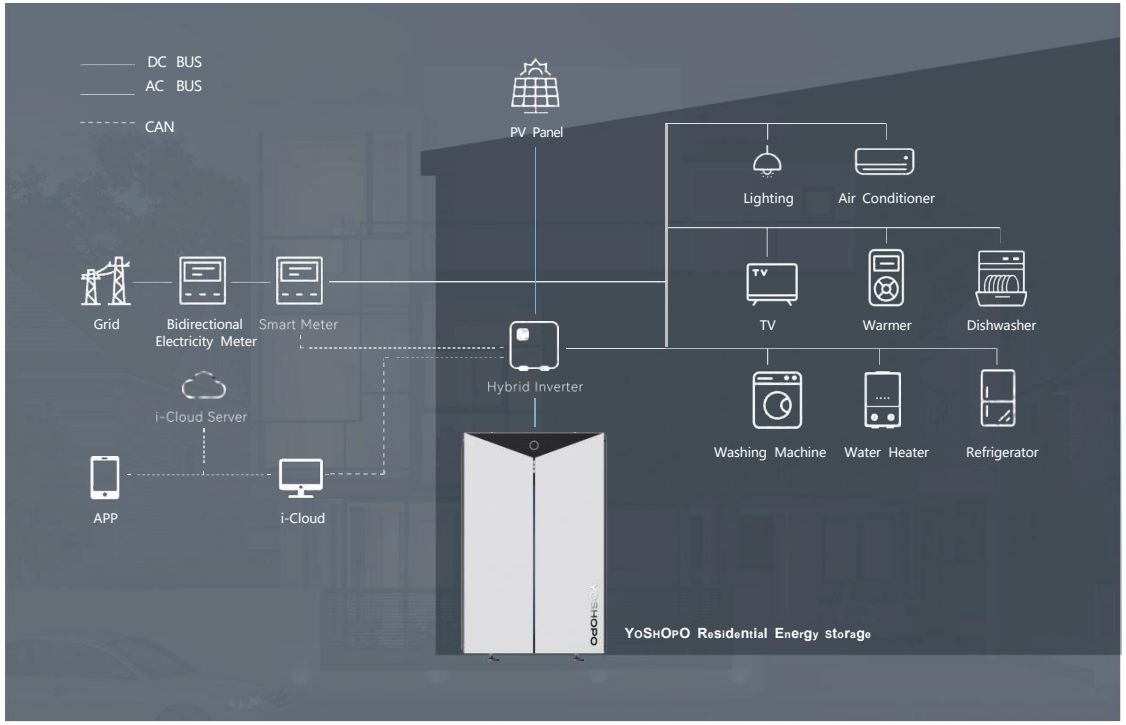
AI control
Saving money on household electricity

OTA Remote Upgrade
Remotely controllable devices for convenience

Receive real-time device alarms
Remote rapid response fixes reduce maintenance costs

Residential Energy Storage

Topology



Product Features

01

Energy self-consumption and self-sufficiency, achieving energy independence and reducing household electricity bills

02

Provide emergency/backup power for house, protect home from outage

03

Household power supply for fishing rafts, boats, remote areas without electricity

Residential Energy Storage

NOVA 1000 Low Voltage | Floor | Indoor

High Flexibility

5kWh battery module Expandable to 40.96kWh Individually controlled individual packs for easy installation.

High Compatibility

110A or 250A high current output options compatible with mainstream inverters on the market.

Long Life Cycle

Cycle life ≥ 6000 cycles (70% SOH)
Battery warranty 10 years.

High Safety

LFP cell are safe and stable

Nova 1000				
System Specifications				
System Model	YLB1-5	YLB1-10	YLB1-15	YLB1-20
Battery Module Model	BB-LFP-100Ah-P			
Number of Battery Modules	1	2	3	4 (up to16 units)
Nominal Capacity (kWh)	5	10	15	20
Rated Voltage Range (V)	44.8 ~57.6			
Rated Charge/Discharge Current (A)	50/100	100/100		
Maximum Charge/Discharge Current (A)	100/100	110/110		
Communication				
Display	SOC Status Indicator/Operational Status			
Communication	RS485/CAN/Ethernet (Remote query and control)			
General Specification				
System Dimension (W×D×H)(mm)	392×591×198	392×591×391	392×591×584	392×591×777
System Weight (kg)	45	93	140	186
Installation Mode	Stacked			
IP Rating	IP22			
Cell Technology	LFP			
DOD (%)	95			
Cycle Life (@25℃)	≥6000			
Standard Inverter	Standard Inverter for Solar Energy Storage with Compatible Communication Protocols			
Environment Parameters				
Operating Temperature (℃)	Charge at 0 ~ 45, Discharge at -20 ~ 45			
Operating Humidity (%)	5 ~ 95 (RH)			
Operating Altitude (m)	< 2000			
Standards Compliance				
Battery System Certifications	UN 38.3, UL9540A, UL1973, FCC, UL60730-1			

Residential Energy Storage

NOVA 2000 Low Voltage | Floor | Indoor

High Capacity

14.3kWh for a Single Box
Maximum capacity expansion to 228.8kWh

Ultra-Thin Size

Thickness of the cabinet is only 217mm to save installation space.

High Cycling Life

Long cycle life ≥ 8000 times (70% SOH)
Battery warranty 10 years, paid extended warranty to 15 years

High Protection Level

IP66 automotive grade waterproof, dustproof and airtight testing technology

	Nova 2000
System Specifications	
System Model	YLB2P-14
Battery Module Model	BB-LFP-280Ah-P
Number of Battery Modules	1 (up to16 units)
Nominal Capacity (kWh)	14
Rated Voltage Range (V)	44.8 ~ 57.6
Rated Charge/Discharge Current (A)	140
Maximum Charge/Discharge Current (A)	200
Communication	
Display	SOC Status Indicator/Operational Status
Communication	RS485/CAN/Ethernet/Wi-Fi (Remote query and control)
General Specification	
System Dimension (W×D×H)(mm)	735×217×1163
System Weight (kg)	170
Installation Mode	Wall-mounted
IP Rating	IP66
Cell Technology	LFP
DOD (%)	95
Cycle Life (@25℃)	≥8000
Standard Inverter	Standard Inverter for Solar Energy Storage with Compatible Communication Protocols
Environment Parameters	
Operating Temperature (℃)	Charge at -10 ~ 45, Discharge at -20 ~ 45
Operating Humidity (%)	5 ~ 95 (RH)
Operating Altitude (m)	< 2000
Standards Compliance	
Battery System Certifications	UL1973, UN38.3, FCC, UL 60730-1, UL9540A

Residential Energy Storage

NOVA 5000 Low Voltage | Floor | Indoor

High Protection Level

IP66 automotive grade waterproof, dustproof and airtight testing technology

Ultra-Thin Size

Thickness of the cabinet is only 165mm to save installation space.

Cold Temperature Available

Dischargeable at -20°C
Rechargeable at -20°C

High Capacity

4.7kWh for a single box
maximum capacity expansion to 23.5kWh

Nova 5000				
System Specifications				
System Model	YHB2P-9.4	YHB2P-14	YHB2P-18.8	YHB2P-23.5
Main Control Box	CB-LFP-46Ah-S			
Battery Module Model	BB-LFP-46Ah-S			
Number of Battery Modules	2	3	4	5
Nominal Capacity (kWh)	9.4	14.1	18.8	23.5
Rated Voltage Range (V)	172.8 ~ 230.4	259.2 ~ 345.6	345.6 ~ 460.8	432 ~ 576
Rated Charge/Discharge Current (A)	23/40			
Maximum Charge/Discharge Current (A)	50/50			
Communication				
Display	Operational Status			
Communication	RS485/CAN/Ethernet/Wi-Fi (Remote query and control)			
General Specification				
System Dimension (W×D×H)(mm)	668×175×1351	668×175×1861	1657×175×1351	1657×175×1861
System Weight (kg)	114	163	212	261
Installation Mode	Wall-mounted			
IP Rating	IP66			
Cell Technology	LFP			
DOD (%)	95			
Cycle Life (@25℃)	≥6000			
Standard Inverter	Standard Inverter for Solar Energy Storage with Compatible Communication Protocols			
Environment Parameters				
Operating Temperature (℃)	-20~45			
Operating Humidity (%)	5 ~ 95 (RH)			
Operating Altitude (m)	< 2000			
Standards Compliance				
Battery System Certifications	IEC62619, UN38.3, CE-EMC, IEC 60730-1, VDE2510-50			

Residential Energy Storage

MIX II All-in-One Cabinet

High Voltage | Wall | Outdoor

High Protection Level

IP66 automotive grade waterproof, dustproof and airtight testing technology

Cold Temperature Available

Dischargeable at -20°C
Rechargeable at -20°C

APP Live Monitoring

Keeping track of system status

High Flexibility

Extremely thin design, reduced footprint Modular design for easy maintenance and installation

Clouds Platform Remote Maintenance

Remote after-sales service to resolve issues

High conversion efficiency

The system adopts single-stage lift voltage technology with high conversion efficiency and low standby loss of the overall system

MIX II (M2T-6kW)			
System Specifications			
System Model	M2T-6-9.4	M2T-6-18.8	M2T-6-23.5
Inverter Module Model	Y1-H3P6K-H		
Maximum Output Power (kW)	6		
Grid-to-Off-Grid Switching Time (ms)	< 20		
Battery Module Model	BB-LFP-46Ah-S-B		
Number of Battery Modules	2	4	5
Nominal Capacity (kWh)	9.4	18.8	23.5
Communication			
Display	SOC Status Indicator, Operational status, APP		
Communication	Ethernet, Wi-Fi, Bluetooth (for connecting to the APP)		
General Specification			
Inverter Module Dimension (W×D×H)(mm)	669×210×570		
Inverter Module Weight (kg)	42		
Battery Module Dimension (W×D×H)(mm)	669×210×510		
Battery Module Weight (kg)	53		
System Dimension (W×D×H)(mm)	684×210×1923	1603×210×1923	1603×210×1923
System Weight (kg)	165	279	332
Installation Mode	Stacked		
IP Rating	IP66		
Cell Technology	LFP		
AC Input			
Rated Input Voltage (Vac)	3/N/PE，230/400		
Maximum Input Current (A)	18.2		
Rated AC Frequency (Hz)	50/60		
Maximum Bypass Input Power (kW)	12		
PV Input			
MPPT Voltage Range (Vdc)	180 ~ 960		
Maximun Input Power of PV (kW)	9		
PV String Quantity	2		
Number of MPPT	2		
Maximum Input Current (A)	18/18		
Maximum Input Short Circuit Current (A)	23		
AC Output			
Rated Output Voltage (Vac)	3/N/PE, 230/400		
Rated Output Current (A)	9.1		
Rated AC Frequency (Hz)	50/60		
Rated Output Power (kW)	6		
Power Factor	0.8		
Overload Capacity			
101%≤ Load ≤120% (min)	10		
121%≤ Load ≤150% (s)	60		
Load > 150% (ms)	100		
Environment Parameters			
Operating Temperature (℃)	-20 ~ 45		
Operating Humidity (%)	5 ~ 95 (RH)		
Operating Altitude (m)	< 2000		
Standards Compliance			
Safety Certifications	IEC 62109-1, IEC 62109-2, IEC 61000-6-1, IEC 61000-6-3		
Grid Certifications	VDE-AR-N 4105, EN 50549-1, VDE 0126, POLAND PN-EN 50549-1:2019, EN 50549-1:2019 with Deviations for Czechia, TORErzeugerTypA, OVE-RichtlinieR25		
Battery System Certifications	IEC 62619, UN 38.3, CE-EMC, IEC 60730-1, VDE 2510-50, IEC 62477		

MIX II All-in-One Cabinet

MIX II (M2T-8kW)		
System Specifications		
System Model	M2T-8-18.8	M2T-8-23.5
Inverter Module Model	Y1-H3P8K-H	
Maximum Output Power (kW)	8	
Grid-to-Off-Grid Switching Time (ms)	< 20	
Battery Module Model	BB-LFP-46Ah-S-B	
Number of Battery Modules	4	5
Nominal Capacity (kWh)	18.8	23.5
Communication		
Display	SOC Status Indicator, Operational status, APP	
Communication	Ethernet, Wi-Fi, Bluetooth (for connecting to the APP)	
General Specification		
Inverter Module Dimension (W×D×H)(mm)	669×210×570	
Inverter Module Weight (kg)	42	
Battery Module Dimension (W×D×H)(mm)	669×210×510	
Battery Module Weight (kg)	53	
System Dimension (W×D×H)(mm)	1603×210×1923	1603×210×1923
System Weight (kg)	279	332
Installation Mode	Stacked	
IP Rating	IP66	
Cell Technology	LFP	
AC Input		
Rated Input Voltage (Vac)	3/N/PE，230/400	
Maximum Input Current (A)	24.3	
Rated AC Frequency (Hz)	50/60	
Maximum Bypass Input Power (kW)	16	
PV Input		
MPPT Voltage Range (Vdc)	180 ~ 960	
Maximun Input Power of PV (kW)	12	
PV String Quantity	2	
Number of MPPT	2	
Maximum Input Current (A)	18/18	
Maximum Input Short Circuit Current (A)	23	
AC Output		
Rated Output Voltage (Vac)	3/N/PE，230/400	
Rated Output Current (A)	12.2	
Rated AC Frequency (Hz)	50/60	
Rated Output Power (kW)	8	
Power Factor	0.8	
Overload Capacity		
101%≤ Load ≤120% (min)	10	
121%≤ Load ≤150% (s)	60	
Load > 150% (ms)	100	
Environment Parameters		
Operating Temperature (℃)	-20 ~ 45	
Operating Humidity (%)	5 ~ 95 (RH)	
Operating Altitude (m)	< 2000	
Standards Compliance		
Safety Certifications	IEC 62109-1, IEC 62109-2, IEC 61000-6-1, IEC 61000-6-3	
Grid Certifications	VDE-AR-N 4105, EN 50549-1, VDE 0126, POLAND PN-EN 50549-1:2019, EN 50549-1:2019 with Deviations for Czechia, TORErzeugerTypA, OVE-RichtlinieR25	
Battery System Certifications	IEC 62619, UN 38.3, CE-EMC, IEC 60730-1, VDE 2510-50, IEC 62477	

MIX II (M2T-10kW)	
System Specifications	
System Model	M2T-10-23.5
Inverter Module Model	Y1-H3P10K-H
Maximum Output Power (kW)	10
Grid-to-Off-Grid Switching Time (ms)	< 20
Battery Module Model	BB-LFP-46Ah-S-B
Number of Battery Modules	5
Nominal Capacity (kWh)	23.5
Communication	
Display	SOC Status Indicator, Operational status, APP
Communication	Ethernet, Wi-Fi, Bluetooth (for connecting to the APP)
General Specification	
Inverter Module Dimension (W×D×H)(mm)	669×210×570
Inverter Module Weight (kg)	42
Battery Module Dimension (W×D×H)(mm)	669×210×510
Battery Module Weight (kg)	53
System Dimension (W×D×H)(mm)	1603×210×1923
System Weight (kg)	332
Installation Mode	Stacked
IP Rating	IP66
Cell Technology	LFP
AC Input	
Rated Input Voltage (Vac)	3/N/PE，230/400
Maximum Input Current (A)	30.4
Rated AC Frequency (Hz)	50/60
Maximum Bypass Input Power (kW)	20
PV Input	
MPPT Voltage Range (Vdc)	180 ~ 960
Maximun Input Power of PV (kW)	15
PV String Quantity	2
Number of MPPT	2
Maximum Input Current (A)	18/18
Maximum Input Short Circuit Current (A)	23
AC Output	
Rated Output Voltage (Vac)	3/N/PE，230/400
Rated Output Current (A)	15.2
Rated AC Frequency (Hz)	50/60
Rated Output Power (kW)	10
Power Factor	0.8
Overload Capacity	
101%≤ Load ≤120% (min)	10
121%≤ Load ≤150% (s)	60
Load > 150% (ms)	100
Environment Parameters	
Operating Temperature (℃)	-20 ~ 45
Operating Humidity (%)	5 ~ 95 (RH)
Operating Altitude (m)	< 2000
Standards Compliance	
Safety Certifications	IEC 62109-1, IEC 62109-2, IEC 61000-6-1, IEC 61000-6-3
Grid Certifications	VDE-AR-N 4105, EN 50549-1, VDE 0126, POLAND PN-EN 50549-1:2019, EN 50549-1:2019 with Deviations for Czechia, TORErzeugerTypA, OVE-RichtlinieR25
Battery System Certifications	IEC 62619, UN 38.3, CE-EMC, IEC 60730-1, VDE 2510-50, IEC 62477

MIX II All-in-One Cabinet

MIX II (M2TP-8kW)			
System Specifications			
System Model	M2TP-8-9.4	M2TP-8-18.8	M2TP-8-23.5
Inverter Module Model	Y2-H3P8K-H		
Maximum Output Power (kW)	8		
Grid-to-Off-Grid Switching Time (ms)	< 10		
Battery Module Model	BB-LFP-46Ah-S-B		
Number of Battery Modules	2	4	5
Nominal Capacity (kWh)	9.4	18.8	23.5
Communication			
Display	SOC Status Indicator, Operational status, APP		
Communication	Ethernet, Wi-Fi, Bluetooth (for connecting to the APP)		
General Specification			
Inverter Module Dimension (W×D×H)(mm)	669×267×600		
Inverter Module Weight (kg)	49.5		
Battery Module Dimension (W×D×H)(mm)	669×267×510		
Battery Module Weight (kg)	53		
System Dimension (W×D×H)(mm)	692×267×1953	1603×267×1953	1603×267×1953
System Weight (kg)	172	286	339
Installation Mode	Stacked		
IP Rating	IP66		
Cell Technology	LFP		
AC Input			
Rated Input Voltage (Vac)	3/N/PE，230/400		
Maximum Input Current (A)	18.2		
Rated AC Frequency (Hz)	50/60		
Maximum Bypass Input Power (kW)	12		
PV Input			
MPPT Voltage Range (Vdc)	200 ~ 850		
Maximun Input Power of PV (kW)	12.8		
PV String Quantity	4		
Number of MPPT	4		
Maximum Input Current (A)	16/16/16/16		
Maximum Input Short Circuit Current (A)	24		
AC Output			
Rated Output Voltage (Vac)	3/N/PE，230/400		
Rated Output Current (A)	12.2		
Rated AC Frequency (Hz)	50/60		
Rated Output Power (kW)	8		
Power Factor	0.8		
Overload Capacity			
101%≤ Load ≤120% (min)	10		
121%≤ Load ≤150% (s)	60		
Load > 150% (ms)	100		
Environment Parameters			
Operating Temperature (℃)	-20 ~ 45		
Operating Humidity (%)	5 ~ 95 (RH)		
Operating Altitude (m)	< 2000		
Standards Compliance			
Safety Certifications	IEC 62109-1, IEC 62109-2, IEC 61000-6-1, IEC 61000-6-3		
Grid Certifications	VDE-AR-N 4105, EN 50549-1, TORErzeugerTypA, OVE-RichtlinieR25		
Battery System Certifications	IEC 62619, UN 38.3, CE-EMC, IEC 60730-1, VDE 2510-50, IEC 62477		

MIX II (M2TP-10kW)			
System Specifications			
System Model	M2TP-10-9.4	M2TP-10-18.8	M2TP-10-23.5
Inverter Module Model	Y2-H3P10K-H		
Maximum Output Power (kW)	10		
Grid-to-Off-Grid Switching Time (ms)	< 10		
Battery Module Model	BB-LFP-46Ah-S-B		
Number of Battery Modules	2	4	5
Nominal Capacity (kWh)	9.4	18.8	23.5
Communication			
Display	SOC Status Indicator, Operational status, APP		
Communication	Ethernet, Wi-Fi, Bluetooth (for connecting to the APP)		
General Specification			
Inverter Module Dimension (W×D×H)(mm)	669×267×600		
Inverter Module Weight (kg)	49.5		
Battery Module Dimension (W×D×H)(mm)	669×267×510		
Battery Module Weight (kg)	53		
System Dimension (W×D×H)(mm)	692×267×1953	1603×267×1953	1603×267×1953
System Weight (kg)	172	286	339
Installation Mode	Stacked		
IP Rating	IP66		
Cell Technology	LFP		
AC Input			
Rated Input Voltage (Vac)	3/N/PE，230/400		
Maximum Input Current (A)	22.8		
Rated AC Frequency (Hz)	50/60		
Maximum Bypass Input Power (kW)	15		
PV Input			
MPPT Voltage Range (Vdc)	200 ~ 850		
Maximun Input Power of PV (kW)	16		
PV String Quantity	4		
Number of MPPT	4		
Maximum Input Current (A)	16/16/16/16		
Maximum Input Short Circuit Current (A)	24		
AC Output			
Rated Output Voltage (Vac)	3/N/PE，230/400		
Rated Output Current (A)	15.2		
Rated AC Frequency (Hz)	50/60		
Rated Output Power (kW)	10		
Power Factor	0.8		
Overload Capacity			
101%≤ Load ≤120% (min)	10		
121%≤ Load ≤150% (s)	60		
Load > 150% (ms)	100		
Environment Parameters			
Operating Temperature (℃)	-20 ~ 45		
Operating Humidity (%)	5 ~ 95 (RH)		
Operating Altitude (m)	< 2000		
Standards Compliance			
Safety Certifications	IEC 62109-1, IEC 62109-2, IEC 61000-6-1, IEC 61000-6-3		
Grid Certifications	VDE-AR-N 4105, EN 50549-1, TORErzeugerTypA, OVE-RichtlinieR25		
Battery System Certifications	IEC 62619, UN 38.3, CE-EMC, IEC 60730-1, VDE 2510-50, IEC 62477		

Portable Power Station

Fast Charging

1.5 hours to 80% recharge

Eco-friendly & Energy-saving

Stores PV energy and is eco-clean

High Capacity & High Power

3000W high power output
2.3kWh large energy storage capacity
Compatible with over 99% of common appliances

Safety and Durability

Automotive grade LFP cells
Up to 10 years of battery life

Split Design

Portable, Chargeable & Exchangeable

Portable Power Station

Appliances - Y3000

E-Camping

Available to to run multiple devices simultaneously

Outdoor Work

supportoutdoorhigh-powered appliances electric tools work

Support High Power Electric Appliance

- Heater(2200w) **1.1h**
- Air Conditioner(1600w) **1.4h**
- Hair dryer(1600w) **1.5h**
- Induction cooker(1300w) **1.8h**
- Electric oven(1200w) **1.9h**
- Washing machine(1100w) **2.1h**
- Percussion drill (1080w) **2.2h**
- Electric kettle(1000w) **2.3h**
- Electric rice cooker(1000w) **2.3h**

Support Low Power Electric Appliance

- Projector(100w) **23h**
- Drone(90w) **25.6h**
- TV(60w) **38.3h**
- Laptop(60w) **38.3h**
- Car refrigerator(60w) **38.3h**
- Speaker(50w) **46h**
- Cellphone(15w) **153.3h**
- Camera(14w) **164.3h**
- Light(4w) **575h**

Residential Energy Storage

Portable Power APP

Key data at a glance

Power, voltage, current, all the key information is here to keep users informed of the status of the power supply at all times

Remote control

Remote control of the power switch, convenient to start or shut down the power supply at any time when needed, saving equipment power

Predict power

Intelligently predicts the remaining usage time of the power supply based on load demand and reminds the user to recharge when the power is low

Portable Power Station

Datasheet

Y3000	
General Specification	
Capacity (Wh)	2355
Rated Output Power (W)	3000 Sine Wave, MAX 6000 (1s)
Charging Temperature	-10～45℃
Discharging Temperature	-20～45℃
Cycle Life (@25℃)	≥6,000
Shell Material	PC+ABS, UL94-V0
Input	
AC Input	220-240V～10A 2200W 50Hz
Car Charge Input	12V⎓ 10A 120W
Solar Charge Input	12-60V⎓ 10A 600W
Output	
USB-A Output (×2)	5/9/12V⎓ 18W MAX, Support QC3.0
USB-C Output (×1)	5/9/12/15V⎓ 3A，20V⎓ 5A, Support PD3.0
Car Charger Output (Cigarette Lighter)	13V⎓ 10A 130W
AC Output (×2)	3000W (Peak 6000W), 230V～10A 50Hz for each socket
Standards Compliance	
Size-Control Box (W×D×H)(mm)	400×280×191
Size-Battery Box (W×D×H)(mm)	400×280×305
Weight-Control Box (kg)	≈8.7
Weight-Battery Box (kg)	≈20.4

Y1600	
General Specification	
Capacity (Wh)	1030
Rated Output Power (W)	1600W Sine Wave/MAX3200W(1s)
Charging Temperature	-10~45℃
Discharging Temperature	-20~45℃
Cycle Life (@25℃)	≥6,000
Shell Material	Aluminum alloy
Input	
AC Input	220-240V～3.5A 800W 50Hz
Car Charge Input	12V⎓ 10A 120W
Solar Charge Input	12-75V⎓ 12A 400W
Output	
USB-A Output (×3)	5/9/12V⎓ 18W MAX, Support QC3.0
USB-C Output (60W×1)	5/9/12/15V⎓ 3A Support PD3.0
USB-C Output (100W×1)	5/9/12/15V⎓ 3A，20V⎓ 5A, Support PD3.0
Car Charger Output (Cigarette Lighter)	13V⎓ 10A 130W
AC Output (×2)	1600W (Peak 3200W), 230V~7A 50Hz for each socket
Standards Compliance	
Head lamp	Lighting, SOS
Size-Battery Box (W×D×H)(mm)	380×200×240
Weight-Battery Box (kg)	≈13.5kg

Y3600	
General Specification	
Capacity (Wh)	3584
Rated Output Power (W)	1000W（持续）正弦波/峰值 2000W(1s)
Charging Temperature	0~45℃
Discharging Temperature	-20~45℃
Cycle Life (@25℃)	≥8,000
Shell Material	铝合金
Input	
AC Input	220-240V～3.7A 800W 50Hz
Car Charge Input	12V⎓ 10A 120W
Solar Charge Input	12-75V⎓ 20A 500W
Output	
USB-A Output (×3)	5/9/12V⎓ 18W最大，支持QC3.0
USB-C Output (×1)	5/9/12/15V⎓ 3A，20V⎓ 5A，支持PD3.0
Car Charger Output (Cigarette Lighter)	13V⎓ 10A 130W
AC Output (×2)	1000W (峰值 2000W) 单口输出220V~4.6A 50Hz
Standards Compliance	
Size-Battery Box (W×D×H)(mm)	450×226×315
Weight-Battery Box (kg)	≈34kg

Pre / After-Sales Service

Pre-Sales Services

01 Demand analysis

In-depth and meticulous research and analysis, accurate understanding of the client's and the project's function, performance, reliability and other specific requirements. We will convert the client's requirements into a complete and clear definition of requirements.

02 Profitability measurement

We develop profitability models for our clients and measure the return on investment.

03 Technical solutions

We system atically propose approaches, responses and countermeasures that are tailored to the client's needs.

After-Sales Services

01 Standardisation of services

Workflow stand ardisation, operation standardisation, policy harmonisation

02 Tangible service

Promoting the Freedom of Clean Energy in the world through Technology

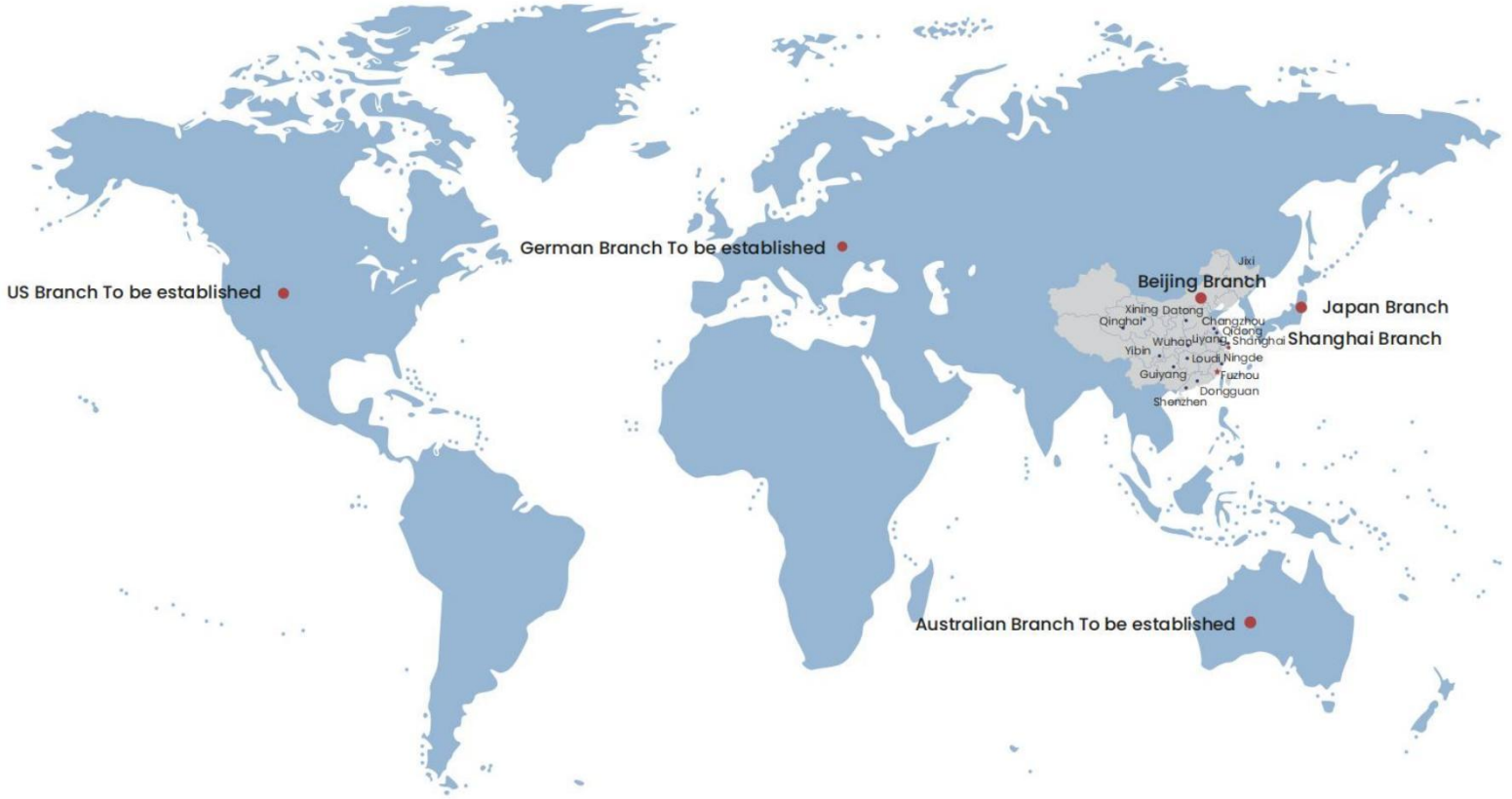
03 Value-added services

Value creation, win-win cooperation

04 Quick-response services

8 hours for general faults,72 hours for difficult faults

Global Outlook



- HEADQUARTERS
- DIVISION
- CHARGING STATION

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Other Product Showcase

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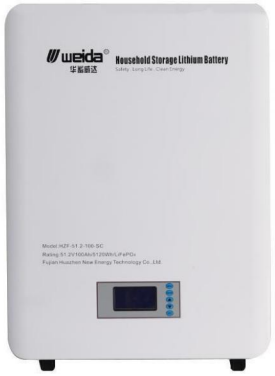
NEW ENERGY STORAGE SYSTEM

CONTAINER STORAGE SYSTEM

LITHIUM BATTERY ENERGY STORAGE CABINET

STACKED HOME ENERGY STORAGE SYSTEM

RACK MOUNTED HOME ENERGY STORAGE UNIT



WALL-MOUNTED HOME ENERGY STORAGE UNIT

Application Fields

Industrial and commercial demand management peak cutting and valley filling

User side backup power supply

Wind and photovoltaic energy storage adjust peak and frequency

Microgrid system

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NEW ENERGY BATTERY

MOTORCYCLE BATTERY

INTELLIGENT POWER FORKLIFT BATTERY

SOLAR STREET LAMP BATTERY

MOTORCYCLE STARTING BATTERY

12V UPS BATTERY

Application Fields

- COMMUNICATION EQUIPMENT
- MARINE EQUIPMENT
- MEDICAL EQUIPMENT
- ELECTRIC TOOL
- ENGINE START
- SOLAR ENERGY
- POWER STATION
- COMPUTER BACKUP POWER

- CONTROL SYSTEM
- FIRE&SECURITY ALARM SYSTEM
- CABLE TV
- NUCLEAR POWER PLANT
- ELECTRIC POWER SYSTEM
- WIND SYSTEM
- TELECOM SYSTEM
- BACKUP & STANDBY POWER
- UNINTERRUPTED POWER SUPPLY [UPS]
- ELECTRIC TOYS
- EMERGENCY LIGHTING SYSTEM
- PEAK LOAD COMPENSATION ENERGY STORAGE DEVICE
- GENERATING STATION

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CONVENTIONAL ENERGY BATTERY

SMALL SEALED SERIES

LARGE SEALED SERIES

DRY LOAD SERIES

EV SERIES

MOTORCYCLE SERIES

FT SERIES

OPZS SERIES

OPZV SERIES

CONTAINER ENERGY STORAGE

- Container type energy storage, large capacity.
- High adaptability of installation environment.
- IP65, intelligent fire protection device.
- Hot and cold air conditioner + fan cooling device, intelligent adjustment of internal temperature.
- Intelligent BMS management, EMS intelligent monitoring.
- Support OEM/ODM.
- Excellent service life, 5 years warranty.

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CONTAINER ENERGY STORAGE

Model	510kWh	1mWh
Main Parameter		
Cell Chemistry	LiFePO4	
Module Energy	10.24 kWh	
Module Nominal Voltage	51.2V	
Module Capacity	200Ah	
Module Dimension	383*605*240(W/D/H,mm)	
Module Weight Approximate	77kg	
Battery Module Qty In Series	10*5(Optional)	10*10(Optional)
System Nominal Voltage	512V	512V
System Operating Voltage	464~576V	464~576V
System Energy	512kWh	1024kWh
System Usable Energy	460.8kWh (90%DOD)	921.6kWh (90%DOD)
Charge/Discharge Current	Recommend：80A Max：100A	
Working Temperature	-30~60°C	
Cooling Mode	Air Conditioner	
Communication Port	CAN/RS485/Ethernet	
Humidity	5%~95%RH	
Altitude	≤3000m	
IP Rating of Enclosure	IP65	
Dimension	4991*2691*2591(W/D/H,mm)	4991*（2691*2）*2591(W/D/H,mm)
Weight Approximate	4200kg	8400kg
Installation Location	Integrated cabinet Installation	
Storage Temperature	0~35°C	
Recommend Depth of Discharge	0.9	
Cycle Life	≥6000 times	
Warranty	5+5 years	
Certification	UN38.3,MSDS	
The current is affected by temperature and SOC		

HV51.2V 200Ah

- Compact structure, save more space.
- Built-in air conditioning temperature control system.
- BCU & BMU total secondary BMS intelligent management.
- Built-in protection off switch.
- Inverter optional,become Integrated systems.
- The Integrated system supports up to ten sets in parallel.
- Support OEM/ ODM.

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HV51.2V 200Ah

Model	HV51.2V200Ah					
Main Parameter						
Cell Chemistry	LiFePO4					
Module Energy	10.2kWh					
Module Nominal Voltage	51.2V					
Module Capacity	200Ah					
Module Dimension	605*383*240(W/D/H,mm)					
Module Weight Approximate	77kg					
Battery Module Qty In Series	6(Optional)	7(Optional)	8(Optional)	9(Optional)	10(Optional)	11(Optional)
System Nominal Voltage	307.2V	358.4V	409.6V	460.8V	512V	563.2V
System Operating Voltage	278.4-345.6V	324.8-403.2V	371.2-460.8V	417.6-518.4V	464-576V	510.4-633.6V
System Energy	61.44kWh	71.68kWh	81.92kWh	92.16kWh	102.4kWh	112.64kWh
System Usable Energy	55.3kWh	64.51kWh	73.73kWh	82.94kWh	92.16kWh	101.38kWh
Charge/Discharge Current	Recommend：50A Max：100A					
Working Temperature	-20~60°C					
Cooling Mode	Air Conditioner					
Communication Port	CAN/RS485					
Humidity	5%~85%RH					
Altitude	<2000m					
IP Rating of Enclosure	IP65					
Dimension	1394*1015**2164.5(W/D/H,mm)					
Weight Approximate	868kg					
Installation Location	Integrated cabinet Installation					
Storage Temperature	0~35°C					
Recommend Depth of Discharge	0.9					
Cycle Life	≥6000 times					
Warranty	5+5 years					
Certification	UN38.3,MSDS,CE,ROHS,IEC62619					
The current is affected by temperature and SOC						

NSTLV 10.2K

- Wall-mounted or ground installation.
- Support OEM/ ODM.
- Intelligent BMS management, WIFI module optional.
- Built-in display for easy monitor.
- All-in-one home style, easy to install.
- Excellent service life, 5 years warranty.

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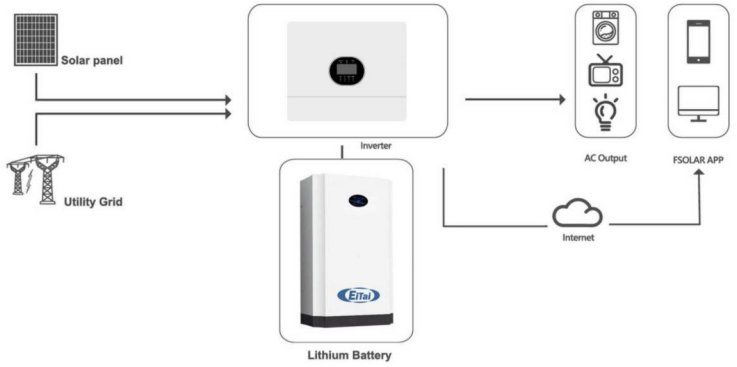
NSTLV-10.2K

Model	NSTLV-10.2K
Main Parameter	
Battery Chemistry	LiFePO4
Nominal Capacity (Ah)	200
Nominal Voltage (V)	51.2V
Operating Voltage(V)	46.4~57.6
Nominal Energy (kWh)	10.24
Usable Energy (kWh)	9.22 (90%DOD)
Scalability	Max.15 pcs pack in parallel
Rated DC Power(kW)	4.1
Max DC Power(kW)	6.14
Charge/Discharge Current (A)	Recommend:80
	Max:120
Other Parameter	
Recommend Depth of Discharge	90%
Dimension (W/D/H,mm)	519*204*712
Weight Approximate(kg)	95
IP Rating of Enclosure	IP54
Operating Temperature	0℃~60℃
Storage Temperature	0℃~35℃
Humidity	5%~85%
Altitude	≤2000m
Cycle Life	≥6000 times
Installation	Wall-Mounted, Floor-Mounted
Cooling Mode	Natural Cooling
Communication Port	CAN,RS485，RS232
Warranty Period	5+5 years
Certification	UN38.3, CE, ROHS, IEC62619
The current is affected by temperature and SOC	



NSTLV 14.3/16K

- Ground installation.
- Support OEM/ ODM.
- Intelligent BMS management, WIFI module optional.
- Built-in display for easy monitor.
- All-in-one home style, easy to install.
- Excellent service life, 5 years warranty.

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NSTLV-14.3/16K

Model	NSTLV-14.3K	NSTLV-16K
Main Parameter		
Battery Chemistry	LiFePO4	LiFePO4
Nominal Capacity (Ah)	280	314
Nominal Voltage (V)	51.2	51.2
Operating Voltage(V)	46.4~57.6	46.4~57.6
Nominal Energy (kWh)	14.34	16.08
Usable Energy (kWh)	12.90 (90%DOD)	14.47 (90%DOD)
Scalability	Max. 15 pcs pack in parallel	Max. 15 pcs pack in parallel
Rated DC Power(kW)	7.17	7.17
Max DC Power(kW)	10.24	10.24
Charge/Discharge Current (A)	Recommend:140	Recommend:140
	Max:200	Max:200
Other Parameter		
Recommend Depth of Discharge	90%	90%
Dimension (W/D/H,mm)	519*204*854	519*204*854
Weight Approximate(kg)	125.3	127.3
IP Rating of Enclosure	IP54	IP54
Operating Temperature	0℃~60℃	0℃~60℃
Storage Temperature	0℃~35℃	0℃~35℃
Humidity	5%~85%	5%~85%
Altitude	≤2000m	≤2000m
Cycle Life	≥10000 times	≥11000 times
Installation	Floor-Mounted	Floor-Mounted
Cooling Mode	Natural Cooling	Natural Cooling
Communication Port	CAN,RS485，RS232	CAN,RS485，RS232
Warranty Period	5+5 years	5+5 years
Certification	UN38.3, CE, ROHS	UN38.3, CE, ROHS, IEC62619

The current is affected by temperature and SOC

51.2V 100Ah,200Ah, 280Ah,314Ah

- Lower cost, flexible capacity options.
- Support OEM/ ODM.
- Built-in protection off switch.
- Intelligent BMS management.
- Flexible stack, save space.
- Excellent service life, 5 years warranty.

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51.2V 100Ah,200Ah,280Ah,300Ah

Model	51.2V100Ah-LV	51.2V200Ah-LV	51.2V280Ah-LV	51.2V314Ah-LV
Main Parameter				
Battery Chemistry	LiFePO4	LiFePO4	LiFePO4	LiFePO4
Nominal Capacity (Ah)	100	200	280	314
Nominal Voltage (V)	51.2V	51.2V	51.2V	51.2V
Operating Voltage(V)	46.4~57.6	46.4~57.6	46.4~57.6	46.4~57.6
Nominal Energy (kWh)	5.12	10.24	14.34	16.08
Usable Energy (kWh)	4.61 (90%DOD)	9.22 (90%DOD)	12.9 (90%DOD)	14.47 (90%DOD)
Scalability	Max. 15 pcs pack in parallel			
Rated DC Power(kW)	2.56	4.1	7.17	7.17
Max DC Power(kW)	4.1	6.14	10.24	10.24
Charge/Discharge Current (A)	Recommend:50	Recommend:80	Recommend:140	Recommend:140
	Max:80	Max:120	Max:200	Max:200
Other Parameter				
Recommend Depth of Discharge	0.9	0.9	0.9	0.9
Dimension (W/D/H,mm)	355*567*150	383*605*240	387*745*240	387*745*240
Weight Approximate(kg)	42.5	77	102.2	105.4
IP Rating of Enclosure	IP20	IP20	IP20	IP20
Operating Temperature	0℃~60℃	0℃~60℃	0℃~60℃	0℃~60℃
Storage Temperature	0℃~35℃	0℃~35℃	0℃~35℃	0℃~35℃
Humidity	5%~85%	5%~85%	5%~85%	5%~85%
Altitude	≤2000m	≤2000m	≤2000m	≤2000m
Cycle Life	≥6000 times	≥6000 times	≥10000 times	≥11000 times
Installation	Stack Mounting，Iron Frame Mounting			
Cooling Mode	Natural Cooling			
Communication Port	CAN,RS485，RS232			
Warranty Period	5+5 years			
Certification	UN38.3,MSDS,CE,ROHS	UN38.3,MSDS,CE,ROHS,IEC62619		

The current is affected by temperature and SOC

51.2V 100Ah-HV

- Compact structure, save more space.
- Flexible layout, easy installation, operation and maintenance.
- BCU & BMU total secondary BMS intelligent management.
- Built-in protection off switch.
- Standard color display and WIFI module.
- Support 4 sets in parallel.
- Support OEM/ ODM.

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51.2V 100Ah-HV

Model	51.2V100Ah-HV						
Main Parameter							
Cell Chemistry	LiFePO4						
Module Energy	5.12kWh						
Module Nominal Voltage	51.2V						
Module Capacity	100Ah						
Module Dimension	355*567*150(W/D/H,mm)						
Module Weight Approximate	42.5kg						
Battery Module Qty In Series	4(Optional)	5(Optional)	6(Optional)	7(Optional)	8(Optional)	9(Optional)	10(Optional)
System Nominal Voltage	204.8V	256V	307.2V	358.4V	409.6V	460.8V	512V
System Operating Voltage	185.6~230.4V	232~288V	278.4~345.6V	324.8~403.2V	371.2~460.8V	417.6~518.4V	464~576V
System Energy	20.48kWh	25.6kWh	30.72kWh	35.84kWh	40.96kWh	46.08kWh	51.2kWh
System Usable Energy	18.43 (90%DOD)	23.04 (90%DOD)	27.65 (90%DOD)	32.26 (90%DOD)	36.86 (90%DOD)	41.47 (90%DOD)	46.08 (90%DOD)
Charge/Discharge Current	Recommend：50A Max：50A						
Working Temperature	0~60°C						
Cooling Mode	Natural Cooling						
Communication Port	CAN/RS485						
Humidity	5%~85%RH						
Altitude	≤2000m						
IP Rating of Enclosure	IP21						
Dimension	355*567*830 (W/D/H,mm)						
Weight Approximate	185kg						
Iron Frame Dimension	355*567*1370(W/D/H,mm)						
Iron Frame Weight Approximate	45kg						
Installation Location	Stack Mounting，Iron Frame Mounting						
Storage Temperature	0~35°C						
Recommend Depth of Discharge	0.9						
Cycle Life	≥6000 times						
Warranty	5+5 years						
Certification	UN38.3,MSDS,CE,ROHS						
The current is affected by temperature and SOC							

51.2V 200Ah-HV

- Compact structure, save more space.
- Flexible layout, easy installation, operation and maintenance.
- BCU & BMU total secondary BMS intelligent management.
- Built-in protection off switch.
- Standard color display and WIFI module.
- Support 4 sets in parallel.
- Support OEM/ ODM.

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51.2V 200Ah-HV

Model	51.2V200Ah-HV						
Main Parameter							
Cell Chemistry	LiFePO4						
Module Energy	10.24kWh						
Module Nominal Voltage	51.2V						
Module Capacity	200Ah						
Module Dimension	383*605*240(W/D/H,mm)						
Module Weight Approximate	77kg						
Battery Module Qty In Series	4(Optional)	5(Optional)	6(Optional)	7(Optional)	8(Optional)	9(Optional)	10(Optional)
System Nominal Voltage	204.8V	256V	307.2V	358.4V	409.6V	460.8V	512V
System Operating Voltage	185.6~230.4V	232~288V	278.4~345.6V	324.8~403.2V	371.2~460.8V	417.6~518.4V	464~576V
System Energy	40.96KW.h	51.2KW.h	61.44KW.h	71.68KW.h	81.92KW.h	92.16KW.h	102.4KW.h
System Usable Energy	36.86kWh (90%DOD)	46.08kWh (90%DOD)	55.3kWh (90%DOD)	64.51kWh (90%DOD)	73.73kWh (90%DOD)	82.94kWh (90%DOD)	92.16kWh (90%DOD)
Charge/Discharge Current	Recommend：80A Max：100A						
Working Temperature	0~60 °C						
Cooling Mode	Natural Cooling						
Communication Port	CAN/RS485						
Humidity	5%~85%RH						
Altitude	≤2000m						
IP Rating of Enclosure	IP21						
Dimension	383*605*1190 (W/D/H,mm)						
Weight Approximate	323Kg						
Iron Frame Dimension	383*605*1880(W/D/H,mm)						
Iron Frame Weight Approximate	64kg						
Installation Location	Stack Mounting，Iron Frame Mounting						
Storage Temperature	0~35 °C						
Recommend Depth of Discharge	0.9						
Cycle Life	≥6000 times						
Warranty	5+5 years						
Certification	UN38.3,MSDS,CE,ROHS,IEC62619						
The current is affected by temperature and SOC							

51.2V280Ah-HV

- Compact structure, save more space.
- Flexible layout, easy installation, operation and maintenance.
- BCU & BMU total secondary BMS intelligent management.
- Built-in protection off switch.
- The cooling fan plus the porous heat dissipation structure can effectively reduce the temperature.
- Standard color display and WIFI module.
- Support 4 sets in parallel.
- Support OEM/ ODM.

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51.2V280Ah-HV

Model	51.2V280Ah-HV									
Main Parameter										
Cell Chemistry	LiFePO4									
Module Energy	14.34kWh									
Module Nominal Voltage	51.2V									
Module Capacity	280Ah									
Module Dimension	498*798*227(W/D/H,mm)									
Module Weight Approximate	116kg									
Battery Module Qty In Series	8(Optional)	9(Optional)	10(Optional)	11(Optional)	12(Optional)	13(Optional)	14(Optional)	15(Optional)	16(Optional)	17(Optional)
System Nominal Voltage	409.6V	460.8V	512V	563.2V	614.4V	665.6V	716.8V	768V	819.2V	870.4V
System Operating Voltage	371.2~460.8V	417.6~518.4V	464~576V	510.4~633.6V	556.8~691.2V	603.2~748.8V	649.6~806.4V	696~864V	742.4~921.6V	788.8~979.2V
System Energy	114.69 kWh	129.02 kWh	143.36 kWh	157.7 kWh	172.03 kWh	186.37 kWh	200.7 kWh	215.04 kWh	229.38 kWh	243.71 kWh
System Usable Energy	103.22 (90%DOD)kWh	116.12 (90%DOD)kWh	129.02 (90%DOD)kWh	141.93 (90%DOD)kWh	154.83 (90%DOD)kWh	167.73 (90%DOD)kWh	180.63 (90%DOD)kWh	193.54 (90%DOD)kWh	206.44 (90%DOD)kWh	219.34 (90%DOD)kWh
Charge/Discharge Current	Recommend：140A Max：170A									
Working Temperature	-10~55°C									
Cooling Mode	Fan Cooling									
Communication Port	CAN/RS485									
Humidity	5%~95%RH									
Altitude	≤2000m									
IP Rating of Enclosure	IP20									
Dimension (W/D/H,mm)	1048*831*1281	1048*831*1281	1048*831*1531	1048*831*1531	1048*831*1781	1048*831*1781	1048*831*2031	1048*831*2031	572*831*1531	1572*831*1531
Weight Approximate	1188kg	1304kg	1420kg	1536kg	1652kg	1768kg	1884kg	2000kg	2126kg	2242kg
Installation Location	Iron Frame Mounting									
Storage Temperature	0~35°C									
Recommend Depth of Discharge	0.9									
Cycle Life	≥8000 times									
Warranty	5+5 years									
Certification	UN38.3,MSDS					UN38.3,MSDS,CE			UN38.3,MSDS	
The current is affected by temperature and SOC										

INTEGRATED CONTAINER ENERGY STORAGE SYSTEM (CESS)

The integrated container energy storage system consists of battery cluster, bidirectional power conversion system (PCS), battery management system (BMS), energy management system (EMS), fire control system, lighting system, dynamic ring control system, access control system, isolation transformer (optional), etc. System status multiple monitoring and hierarchical linkage constitute a comprehensive protection system integrating electrical safety and functional safety.
1.2MW-2.58MWh Container system can be configured, standardized and prefabricated design, reduce the user's customization time and construction costs, and reduce safety risks caused by local installation differences and management risks. It can meet the application requirements of regional power grid such as peak regulation, frequency regulation, voltage regulation, emergency response and new energy consumption, and ensure the normal operation of the power system.

System composition

Lithium battery cluster
The system is mainly composed of safe, efficient and long-life lithium iron phosphate cells connected in series and parallel to form a battery module, several modules connected in series to form a battery cluster.

Battery management system
It's the core component of the system, which can effectively protect the battery from overcharge, overdischarge, overcurrent, and carried out balanced management of the single cell to ensure the safe, reliable and efficient operation of the whole system.

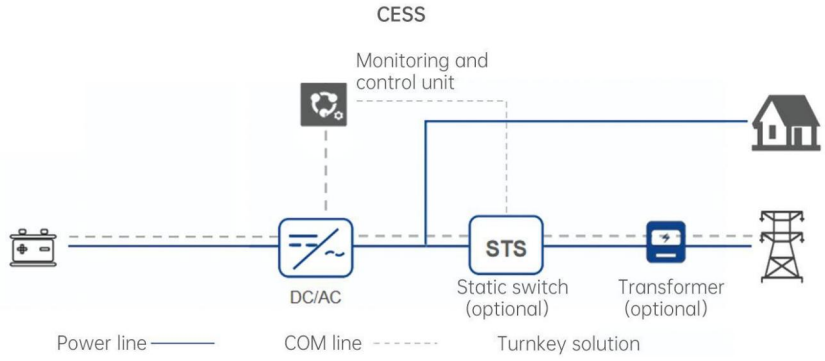
Monitoring system
System operation data monitoring, operation strategy management, historical data record, system status record, etc.

Power conversion system (PCS)
The PCS can realize the bidirectional conversion from DC to AC and from AC to DC. It can convert alternating current into direct current to charge batteries, and convert direct current into alternating current to supply power to loads or feed back to the grid.

Air conditioning system
The battery compartment is integrated with 1200W industrial air conditioning to meet the stable operation of the system in different environments and extend the service life of the system.

IP54
The whole system adopts IP54 design.

System topology



System parameter

Integrated container energy storage system		
Ac grid connection parameters	Rated output power (KW)	500
	Maximum output power (KW)	550
	Rated grid voltage (v)	3W+N+PE，380/400V
	Grid voltage range	-15%~+10%
	Rated grid frequency (Hz)	50/60
	Grid frequency range (Hz)	±2
	Output current harmonics	⩽3%(Rated power)
	DC component	<0.5%In
	Power factor	-0.9~+0.9
	Overload capacity	(105%): Continuous running (105%-120%):10mins, (120%): Shut down
AC off-grid parameters	Rated output power (KW)	500
	Maximum output power (KW)	550
	Rated output voltage (v)	3W+N+PE，380/400V
	Output voltage harmonics	3%(Linear full load)
	Rated frequency (Hz)	50/60
	Overload capacity	(105%): Continuous running (105%-120%):10mins, (120%): Shut down
Battery parameters	Cell type	Lithium iron phosphate
	Power of single battery cabinet (kwh)	215.04
	Number of battery cabinets	5
	Battery system power (kwh)	1075.2
	Rated operating time (h)	2(The number of battery modules can be changed)
	Battery life	25°C 0.5C/0.5C 100%DOD EOL80% ⩾6000times
	Maximum power	93%
Protection	AC switch	Be equipped with
	Power grid monitoring	Be equipped with
	Surge protection	Be equipped with
Basic parameters	Dimensions (W * D * H)(mm)	6058*2438*2591
	Weight (kg)	16000
	Isolation mode	System built-in isolation transformer
	Off-grid switching device	STS
	Protection class	Outdoor type IP54
	Operating temperature range	-20~55°C(>45°C derating)
	Relative humidity (no condensation)	0~95%
	Temperature control	Air conditioner
	Maximum working altitude (m)	4000 (>2000°C derating)
	Display	Touch screen
	Communication interface	RS485、CAN、LAN
	Communication protocol	Modbus-RTU、Modbus-TCP、CAN2.0B

System features

Safe and reliable

★ Preferred LFP route, strict safety test

★ From cell to container, hierarchical temperature control strategy, industrial temperature control system

★ Full electrical protection: high and low voltage separation, insulation detection, grounding protection, lightning protection design

★ Design of 6mm thermal isolation and insulation bracket between cells

★ Container intelligent warehouse level fire protection, hierarchical linkage, multi-layer protection

★ Serial connection between battery pack and PCS group, eliminate circulation, higher safety

Intelligent and efficient

★ High efficiency, digital, intelligent EMS system architecture design

★ 0.5C charging and discharging ratio

★ Fault prediction, identification and rapid location

Multi-dimensional integration

★ Easy to transport, installation and maintenance

★ Modular design, convenient maintenance, management, expansion

System application

Industrial and commercial demand management peak cutting and valley filling

User side backup power supply

Wind and photovoltaic energy storage adjust peak and frequency

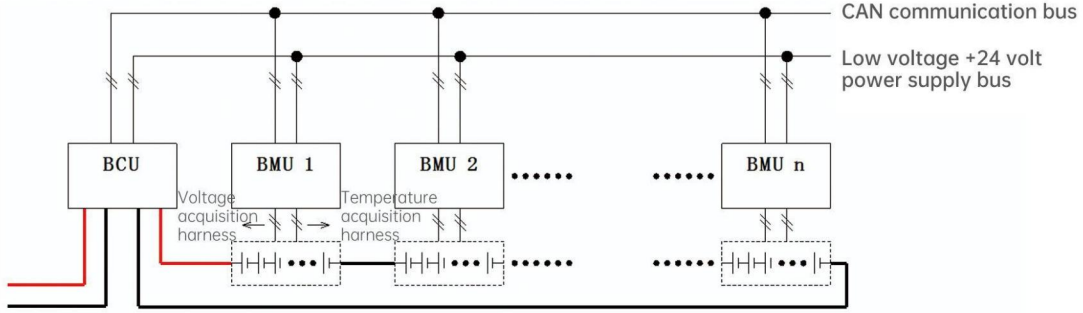
Microgrid system

LITHIUM BATTERY ENERGY STORAGE CABINET (BESS)

The lithium battery system is mainly composed of batteries, power conversion system (PCS) , energy management systems (EMS), battery management systems (BMS) and other electrical equipment.

Two-level BMS design, multiple monitoring of system status, hierarchical linkage. Relays, fuses, circuit breakers and BMS constitute a comprehensive protection system that integrates electrical and functional safety.

System topology



System composition

Lithium battery cluster
The system is mainly composed of safe, efficient and long-life lithium iron phosphate cells connected in series and parallel to form a battery module, several modules connected in series to form a battery cluster.

Battery management system
It's the core component of the system, which can effectively protect the battery from overcharge, overdischarge, overcurrent, and carried out balanced management of the single cell to ensure the safe, reliable and efficient operation of the whole system.

Monitoring system
System operation data monitoring, operation strategy management, historical data record, system status record, etc.

System specification

Energy storage system		
Basic parameters	Type	100KW/215KWh
	Energy storage capacity	215KWh
	Energy storage configuration	One 768V280AH lithium battery energy storage system
	System voltage	768V
	Operating voltage range	DC672V ~ DC876V (2.8V ~ 3.65V)
	Cell type	LFP
	Cycle life	> 6000times (100%DOD, Remaining:80%, 0.5C)
	Remaining capacity at the end of 10 years	>150kWh (70%)
DC side parameters	Voltage range	DC650V ~ DC900V
	Direct current channel	1
	Single channel rated current	175A
AC grid connection parameters	Output line system	3W+PE
	Rated power	100KW
	Rated voltage	AC 380V
	Rated current	151A
	Voltage range	-15% ~ +10%
	Rated frequency	50Hz/60Hz
	Frequency range	±2Hz
	Power factor	1
	Output harmonics rate	⩽3%
	AC current distortion rate	< 3% (At rated power)
Protection	Input anti-reverse connection	Yes
	Output overcurrent	Yes
	Output overvoltage	Yes
	Anti-islanding	Yes
	Insulation resistance detection	Yes
Kinetic energy	Comprehensive efficiency of charge and discharge	⩾87%
	Data acquisition frequency	⩽30s/times
	Remote detection recovery	Yes
Environment	Operating temperature	-20℃~55℃(Above 45℃ derating)
	Storage temperature	-20℃ ~ 60℃
	Relative humidity	0%RH ~ 95%RH, non-condensing
	Working altitude	At 45℃, 2000m; 2000m~4000m derated use
	Noise	< 70dB
Life	The whole life cycle of the device	10 years (based on 2 charge and 2 discharge/day, 300 days/year)
Other	Communication interface	CAN/RS485
	Isolation mode	None
	Protection rating	IP54
	Cooling method	Air conditioner
	Fire fighting	Heptafluoropropane (default) Perfluorohexone fire extinguisher
	Dimensions [W*D*H] (mm)	1500*1288*2500mm(W*D*H)
	Weight	2850kg

System features

Safe and reliable

★ LFP cells from first-tier manufacturers.

★ Intelligent air cooling design, long system life, stable operation.

★ Module and battery cluster two-level BMS design, multiple status monitoring, hierarchical linkage, fully ensure the safety of the battery system

★ Relay, fuse, circuit breaker three electrical protection system.

Efficient and convenient

★ High energy density, stable and reliable performance and long service life.

★ Modular design, convenient maintenance, management, expansion.

Active equalization

★ 3A BMS actively equalizes current to overcome the influence of single cell capacity on system capacity.

★ The balancing accuracy is less than 2%, and the balancing capacity can reach 10% of the rated output.

Cost optimization

★ Small size, light weight, save space and installation cost.

★ Long cycle life, low failure rate, reduce operation and maintenance investment.

System application

Industrial and commercial demand management peak cutting and valley filling

User side backup power supply

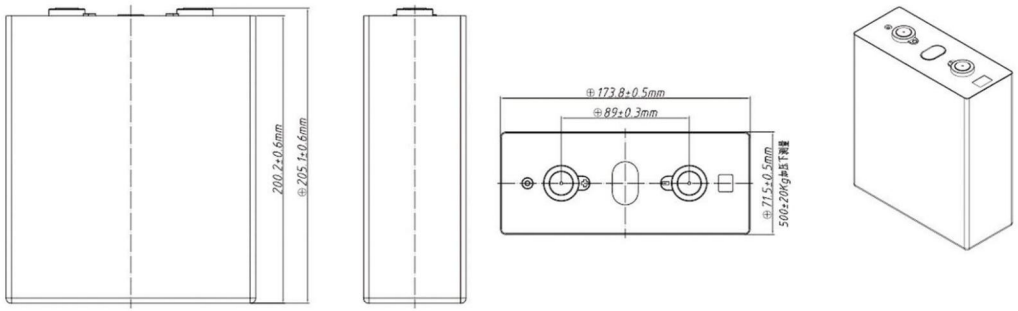
Wind and photovoltaic energy storage adjust peak and frequency

Microgrid system

Cell

The lithium battery system adopts 3.2V 280Ah high energy lithium iron phosphate cell with square aluminum shell design, which reduces the possibility of internal damage caused by mechanical damage to the surface of the cell and improves the safety performance of the product. The battery is equipped with a thin-film explosion-proof valve to ensure that in any extreme circumstances (such as internal short circuit, battery overcharge and overdischarge, etc.), a large amount of gas rapidly gathered in the battery can be discharged through the anti-riot valve to improve safety.

Parameter List		
Battery type	LiFePO4	
Nominal battery energy☆	280.0Ah	0.5C @ 25℃
Nominal voltage ☆	3.20V	
Operating voltage range	2.5 ~ 3.65V	
AC internal resistance ☆	≤0.18mΩ	
Net weight	≤5500g	
Max charge current	0.5C / 1C	continuous50%SOC, 30s
Max discharge current	1C / 2C	continuous50%SOC, 30s
Max operating temperature range	-20℃/ + 60℃	
Charge temperature	0℃ ~ 45℃	
Discharge temperature	-20℃ ~ 60℃	
Optimum operating temperature range	15℃ ~ 35℃	
Storage temperature	-40℃/ + 60℃	Within 1 mont -40℃~45℃, within 6 mont-20℃~35℃



Module

The battery module consists of 3.2V 280Ah*16 lithium iron phosphate cells, connected in 1 parallel and 16 series (16S1P) to form a 51.2V 280Ah battery module. The built-in BMU system collects the voltage and temperature of the single cell, manages the cell balance, and ensures the normal operation of the whole module safely and efficiently.

Parameter List	
Capacity	280Ah
Connection	1P16S
Rated voltage	51.2V
Rated battery energy	14.336kWh
Max continuous charging current	140A (0.5C)
Max continuous discharge current	140A (0.5C)
Operating voltage range	44.8 ~ 58.4V
Operating ambient temperature	-20℃ ~ 55℃
Weight	≤116kg
Dimension (W*D*H)	420mm*863mm*226mm
Communication	CAN
Cooling method	Intelligent air cooling

OUTDOOR LIQUID-COOLING LITHIUM BATTERY ENERGY STORAGE SYSTEM

System features

Safe and reliable

★ LFP cells from first-tier manufacturers
★ 2 level BMS design, multi-monitoring of status
★ Unique and safe liquid-cooling PACK design
★ PACK-grade fire protection design
★ Hierarchical linkage, ensuring the safety of the battery system
★ 3 level electrical protection system of relays, fuses and circuit breakers
★ Outdoor cabinet corrosion protection rating C4/C5

Rapid deployment

★ Side-by-side multiple cabinets for rapid deployment
★ Fast access to string-type power conversion system (PCS) or inverter-booster cabin

High efficiency and convenient

★ High energy density, stable and reliable performance, and long service life
★ Modularized design, convenient for maintenance, management and capacity expansion
★ Quick cable connection, saving installation time on site

Active equalization

★ 2A active equalization, overcoming the impact of single cell capacity on system capacity
★ Equalization accuracy < 2%, equalization capacity up to 10% of rated output

Cost optimization

★ Small and light, saving space and installation cost
★ Long cycle life and low failure rate, reducing O&M investment

System parameter

Parameter list	
Cell type	LFP 3.2V314Ah
Battery pack configuration	52.25kWh / 1P52S
Battery system configuration	1P416S (1P52S*8)
Rated voltage	1331.2V
Voltage range	1164.8V ~ 1497.6V
Rated energy	418kWh
DOD (max/recommended)	100% / 90%
Discharge cut-off voltage	1164.8V or any cell in battery cluster reaches 2.8V (T > 0℃)
Charge cut-off voltage	1497.6V or any cell in battery cluster reaches 3.65V
Rated charge/discharge current	157A
Charge & Discharge rate	⩽0.5P
Cycle life	6000
Protection rating	IP54
Overvoltage protection	YES
Thermal management	Liquid cooling
Liquid-cooling capacity	5kW
Cooling medium	50% glycol aqueous solution
Fire protection system	Heptafluoropropane/Aerosol/Perfluorohexanone/Water firefighting (optional)
Working temperature	-20 ~ 50℃(discharge) 0 ~ 50℃(charge)
Working humidity	0 ~ 95% (Condensation-free)
Storage temperature	-20 ~ 50℃
Altitude	⩽3000m (derated use above 2000m)
Noise	⩽75dB
Weight	3500kg
Dimension (W*D*H)	1300*1350*2300 mm
Inlet method	Down in and out
Communication interface	RS485 / Ethernet / CAN

Battery module

Adopting 3.2V314Ah*52 LFP cells, connected in 52 series and 1 parallel (52S1P) to form a 166.4V314Ah battery module; Module built-in BMU systems, collect single cell's voltage and temperature, and manage equalization of cells, ensuring the safe and efficient operation of the whole module.

Product features

★Adopting square LFP 314Ah high-energy battery cell, with high energy density, stable and reliable performance and long service life.
★PACK includes MSD (built-in fast fuse), high-voltage waterproof snap-in connector
★Liquid-cooling heat dissipation, reserving liquid cooling channels, and adopting snap-in liquid cooling tube connectors.
★High-accuracy BMU, collecting the temperature and voltage of each cell, ensuring the safe and stable operation of the equipment.
★PACK-grade fire protection: each PACK is equipped with composite detector (built-in), PACK-grade spray head, and single-zone puncture valve.

Parameter list	
Cell type	LFP 3.2V314Ah
Component part	52Cells，BMU
Rated energy	52.25kWh
Connection mode	52S1P
Nominal voltage	166.4V
Working voltage	145.6V ~ 189.8V
Rated charge & discharge rate	⩽0.5P
Terminal output	High voltage waterproof snap-in connector
Thermal management	Liquid cooling
Cooling medium	50% glycol aqueous solution
Working temperature	-20 ~ 50℃ (discharge) 0 ~ 50℃ (charge)
Working humidity	0 ~ 95% (Condensation-free)
Storage temperature	-20 ~ 50℃
Protection rating	IP65
Communication method	CAN
Dimension (W*D*H)	786.5*1139*246mm
Weight	340kg

PHOTOVOLTAIC GENERATION SYSTEM

System Design Principles

Key considerations of system design

1) According to the installation site and installation conditions to select the appropriate battery components, installation and fixing methods and the best installation tilangle design;

2) According to the meteorological data of the installation site, design the series and parallel connection of PV array;

3) Lightning protection design for PV array;

4) Design of PV array DC converging line;

5) According to the capacity and installation characteristics of each PV array, select and combine inverter;

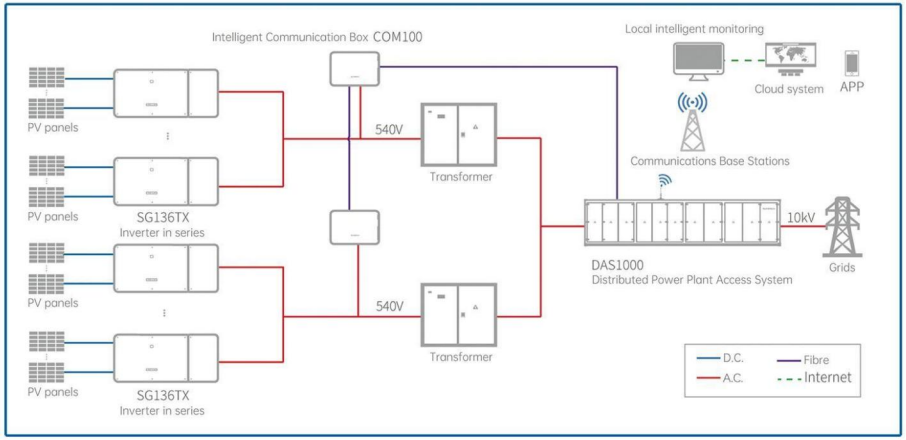
6) PV grid-connected system access design, including grid-connected switchgear, measurement, monitoring and backflow protection system design;

7) Monitoring, communication and data transmission design of grid-connected power generation system;

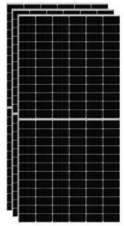
8) System electrical cable selection and laying design;

System Operation Diagram

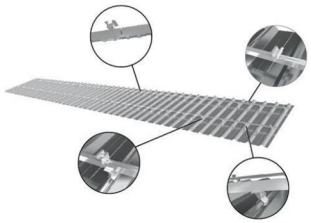
The whole system mainly consists of solar modules, grid-connected boxes, cables, inverters, brackets and so on.



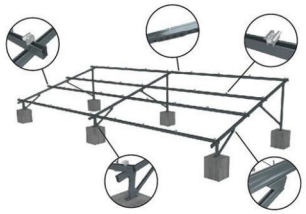
Photovoltaic Panels And Roof Brackets



Solar Panel



Concrete Roof Bracket



Concrete Roof Bracket

CASE SHARING

Project Size：800kWp

The project power station adopts the world's leading PV modules with high efficiency from Trina to maximize power generation efficiency. The power station generates about 960,000 kWh of electricity per year, saving about 314 tons of standard coal, reducing carbon dioxide emissions by about 960 tons, sulphur dioxide by about 28.8 tons and carbon dust by about 261.1 tons.

Project Size：2MWp

The 2MWp distributed photovoltaic project was connected to the grid on 7 December 2020 and is expected to generate 2.6 million kWh of electricity annually. It will save about 850.4 tons of standard coal, reduce carbon dioxide emissions by about 2,600 tons, sulphur dioxide by about 78 tons and carbon dust by about 707 tons per year.

Project Size：1.5MWP

A large-scale distributed rooftop power station project built by the factory for its own use, with a roof use area of about 6,000 square metres. After the completion of the power station, the annual power generation will be about 1.89 million kWh, saving about 605 tons of standard coal, reducing carbon dioxide emissions by about 1,803 tons, sulphur dioxide by about 51 tons and carbon dust by about 490 tons.

Project Size：3MWP

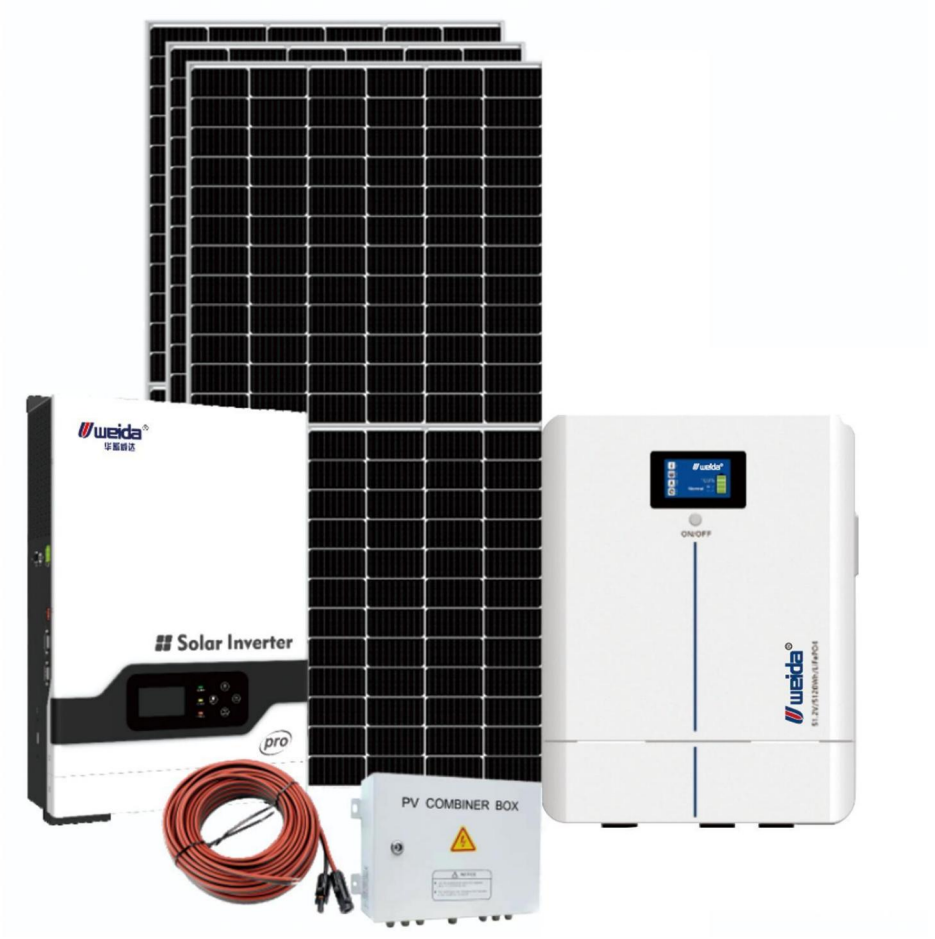
The power station uses 6,000 pieces of 500-watt Trina monocrystalline silicon PV modules. The annual power generation is about 3.8 million kWh, reducing carbon dioxide emissions by about 3,788 tons, sulphur dioxide by about 114 tons and carbon dust by about 1,050 tons. The electricity generated is for use in Green Energy Building, which helps the Green Energy Building to achieve zero energy consumption.

5KW HYBRID SOLAR SYSTEM

HZF-51.2-100-SB

System parameter

Parameter list	
Model	Hybrid 5KW system
Brand name	Weida
Warranty	25 Years output power guarantee
Application	Indoors
Output voltage range	230VAC±5%
Battery type	LiFePO4
Solar panel	Monocrystalline silicon/polysilicon optional
Inverter	Single phase 230VAC±5% 50Hz/60Hz(Automatic detection) L/N/PE
Monitoring	Wifi device (optional)
PV Cable	4mm²/6mm²/10mm² Optional
Mounting brackets	Roof/ground installation



Product introduction

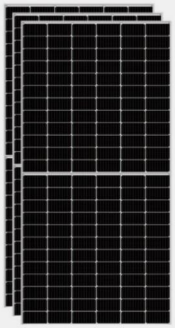
This system adopts lithium batteries to store solar energy. It can be connected with the grid and select grid power optionally. The system preferentially uses photovoltaic power supply, and the insufficient power is provided by batteries. When the battery is low due to poor lighting or excessive loads, the system can automatically switch to grid power supply.

aecpower

Technical specification

01 Solar panels

- Optional mono/Poly blue/black
- Multi-master grid technology for better current collection and light utilization
- Excellent low light power generation performance
- Effectively cope with rain, snow, hail and other bad days to prevent internal cell from damage.



02 Solar battery

- 48V 100Ah/ 51.2V 100Ah battery optional
- Safe and high-performance battery cells
- Equipped with an independent BMS system
- LiFePO4
- Wall mounted installation

03 DC cable & MC4 connector

- Cable selection: 4mm², 6mm² 10mm², 16mm², 25mm², optional
- Voltage:1000VDC
- Colors: black / red optional.
- Lifetime:more than 25 years

04 Hybrid off grid Inverter

- Intelligent cloud monitoring, real-time data viewing from APP
- Single phase AC output, can be used for various loads
- Cold start function support USB/RS485 monitoring
- Built-in 80A MPPT solar charger

05 PV array combiner box

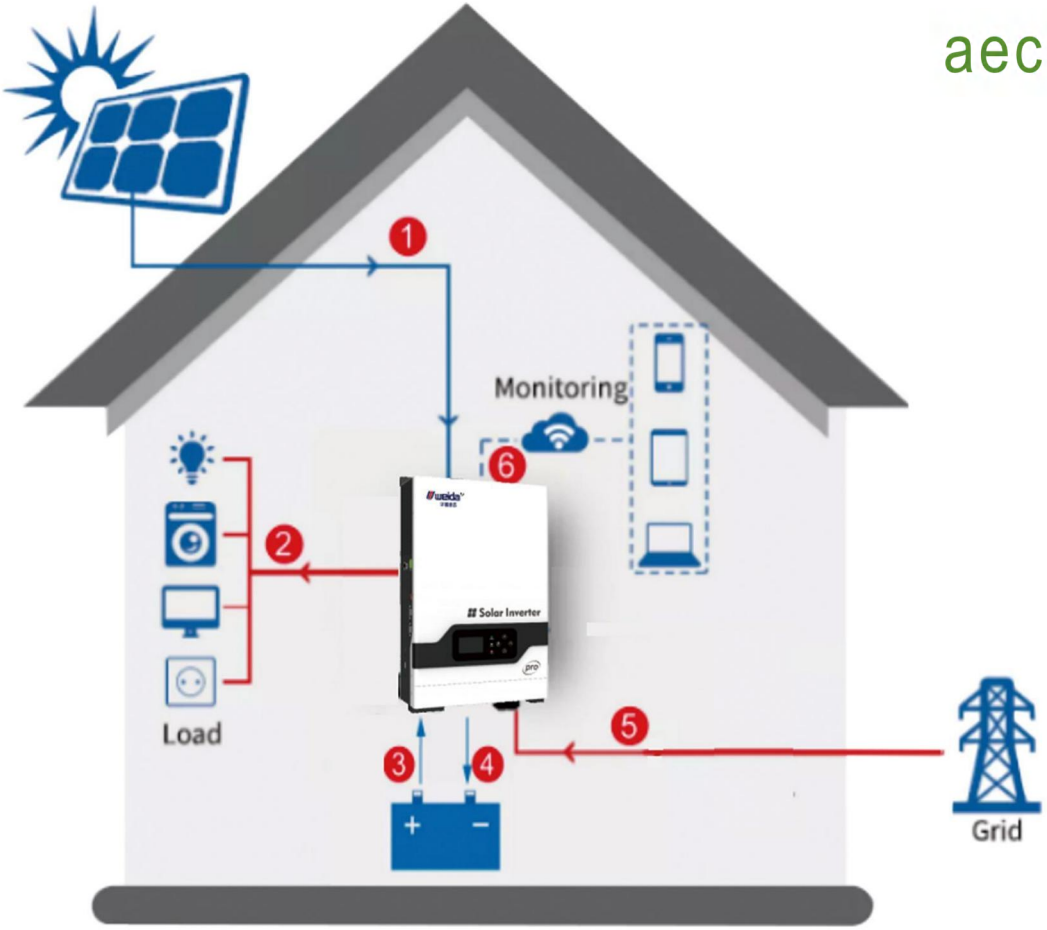
- Customized PV combiner box for solarpanels connection
- Anti-reverse diode/DC breaker/DC fuse
- IP56 protection rate applicable for outdoor PV systems

06 Mouting brackets

- Tile/color steel roof tile/ground installation
- Support customized design
- Complete set of bracket accessories

Solar system connection

1. PV input
2. Inverter supplies power to AC loads
3. Powering loads with lithium batteries
4. Power stored in batteries
5. Charge batteries or power loads through the grid
6. Real time monitoring



System configuration

Item	Specifications	Quantity
PV panels	Mono/Poly optional	14 PCS
Hybrid off grid inverter	Rated power: 5KW	1 PC
Lithium battery	LiFePO4 wall-mounted battery (48V100Ah/51.2V100Ah optional)	1 PC
PV Combiner box	(4 channels/8 channels) optional	1 PC
PV Cable	4mm², 6mm², 10mm², optional	1 Set
Battery cable	4mm², 6mm², 10mm², 16mm², 25mm², optional	1 Set
MC4 PV connector	Rated current: 30A	14 PCS
PV brackets	Roof/Ground	1 Set

HIGH VOLTAGE HOME ENERGY STORAGE SOLUTIONS (STACKED)

Intelligent

★Support emergency power support three-phase unbalanced and seamless off-grid switching

★Flexible communication mode, support WIFI/RS485

Good battery scalability

★The battery module can be stacked and expanded by 4-6 units, which can be flexibly adjusted

★Stacked installation, saving installation time and cost.

Efficient power generation

★Extremely low battery self consumption in sleep mode.

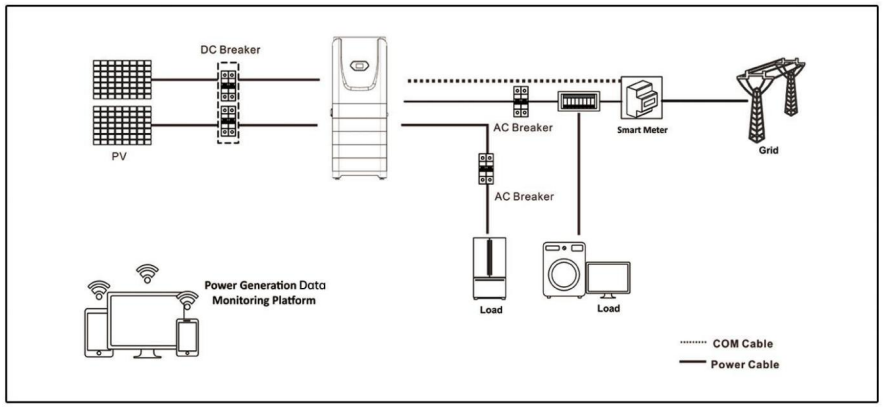
★Maximum efficiency 98.2%, intelligent MPPT algorithm, tracking efficiency up to 99%.

Safe

★Adopting lithium iron phosphate battery with high safety performance

★High power quality, no interference with electrical equipment, ultra-low radiation.

System connection diagram



Performance specifications

HZ-TH-10KW-14.7KWh-H / HZ-TH-10KW-18.4KWh-H / HZ-TH-10KW-22KWh-H		
PV input	Max.Input Power	15000W
	Max. Input Voltage	1000V
	MPPT Operating Voltage	180V - 900V
	Start-up Voltage	120V
	Number of MPPT input strings per channel	1/1
	Max. Input Current	15A/15A
	Max. Short Circuit Current	18A/18A
	Number Of MPPT	2
Battery Pack	Model	HZF-51.2-72-SA
	Operating Voltage	180-550V
	Stacking Quantity	4-6 (The number of battery modules optional)
	Battery Capacity	3686Wh
	Storage Capacity	14-22kWh
	Max. Charge/Discharge Current	25A/30A
	Max. Charge/Discharge Power	10000W/10000W
AC Output Parameter (On-grid)	Rated Output Power	10000W
	Max.Apparent Power	10000W
	Rated Output Voltage	380V/400V,3L/N/PE
	Rated Output Frequency	50Hz/60Hz
	Max.Output Current	15A
	Power Factor Range	~1 (0.8 leading to 0.8 lagging)
	Total Harmonic Distortion	<3%
AC Output Parameter (Off-grid)	Rated Output Power	10000W
	Maximum Apparent Power	10000W
	Rated Output Voltage	380V/400V,3L/N/PE
	Rated Output Frequency	50/60Hz
	Max. Output Current	15A
Efficiency	Max. Efficiency	98.2%
	European Efficiency	97.3%
	MPPT Efficiency	99%
Protection	Insulation Protection	Integrated
	Residual Current Detection Protection	Integrated
	Grounding Fault Protection	Integrated
	Anti-islanding Protection	Integrated
	Grid Monitoring And Protection	Integrated
	DC Surge Protection	Integrated
	AC Surge Protection	Integrated
General Parameter	Operating Temperature	10℃~45℃ (cannot be charged below 0℃)
	Altitude	≤4000m
	Topology	Transformerless isolation
	Cooling	Natural convection
	Protection Rating	IP65
	Relative Humidity	0-90%
	Display	LCD
	Communication	WIFI/RS485
	Communication With Meter	RS485
	Dimension (W*D*H)mm	636*330*155(Battery module)
	Weight (Kg)	<38kg (Battery module)

*If there are any changes in product dimensions and parameters, the latest information from our company Shall prevail without prior notice.

LITHIUM IRON PHOSPHATE BATTERY STACKED ENERGY STORAGE SYSTEM

HZF-51.2-100-SF

Intelligent

★ Each module is equipped with an independent BMS system.

Safe

★ The system uses high quality lithium iron phosphate power cell to bring better product performance and reliability.

★ Professional pack R&D design and production team.

Intelligent management

★ HZF-51.2-100-SF is equipped with intelligent BMS for each battery module to effectively manage the normal and stable operation of the module.

★ Compared with traditional modules, HZF-51.2-100-SF can meet the requirements of large storage capacity and greatly increase the cycle life.

Features

★ **Battery module:**Modular stacked design, the number of modules can be selected as required, rapid expansion, easy installation

★ **System base:**Mobile base.Equipped with heavy universal brake wheel and directional adjustment wheel. It can move flexibly. Universal brake wheel can be fixed temporarily, directional adjusting wheel can adjust screws and be fixed better.

★ **Inverter:**This equipment integrates inverter, MPPT solar charger, battery charger. With a wide PV input range; The solar inverter controller has other advantages such as high power density, small size, simple operation, high efficiency of the whole machine, and small no-load loss.

Application

★ **Inverter:**HZF-51.2-100-SF is widely used in residential energy storage systems, stores, offices and other application scenarios.

Specification

Battery module	Model: HZF-51.2-100-SF
Battery type	LiFePO4
Rated energy	5.12KWh
Rated capacity	100Ah
Nominal voltage	51.2V
Operating voltage range	44.8V~58.4V
Max continuous charge current	50A
Max continuous discharge current	100A
Net weight	48.5Kg
Dimension [L*W*H] (mm)	680*460*175
Operating temperature range	charge:0~45℃; discharge:-20~50℃
[1] Cycle life	5000 Cycles
Communication	CAN/RS485
Warranty	5 Years

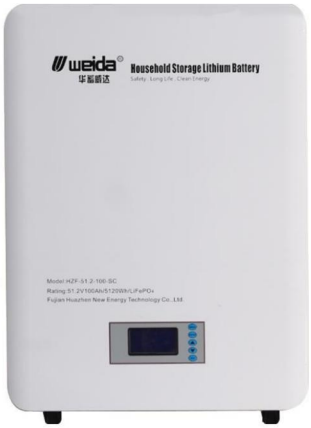
System base	Model: HZF-51.2-100-DZ
Net weight	11.8Kg
Dimension[L*W*H](mm)	680*460*150

Inverter(optional)		Model: HZPV18-5248 PRO	
Inverter output	Rated power	5200VA/5200W	
	Instantaneous power	10400W	
AC input	Voltage	230VAC±5%	
	Selectable voltage range	170~280VAC(UPS) /90~280VAC(APL)/ 184~253VAC(VED4105)	
	Frequency range	50Hz/60Hz(Auto sensing)	
Solar charge & AC charge	Max PV open circuit voltage	450VDC	
	Charging algorithm	3-step (lead acid battery), 4-step (Li battery)	
	Max PV array power	5000W 6000W	
	PV array MPPT voltage range	150~430 VDC	
	Max solar charge current	80A	100A
	Max AC charge current	60A	80A
	Max charge current	80A	100A
Net weight		27.5Kg	
Dimension[L*W*H](mm)		680*460*175	

[1]Test conditions:0.2C Charging/Discharging,@25C, 60%DOD

WALL-MOUNTED HOME ENERGY STORAGE UNIT

HZF51.2V SERIES(5KWH-15KWH)



Introduction

The battery system primarily store power for the home solar system, and it can optimize the use of power and ensure the efficient operation of the complete home energy storage system. The comprehensive LCD information display and easy-to-operate buttons make it easy for users to manage the battery system.

Features

★ Adopts lithium iron phosphate power cell, bringing better product performance and reliability

★ Each battery module unit is equipped with a high-performance BMS system for scientific cell management

★ The LCD screen displays various battery status

★ Battery module units can be connected in parallel for expansion

★ Supports communication matching of various inverters

★ Adopts wall mounted design, easy to install

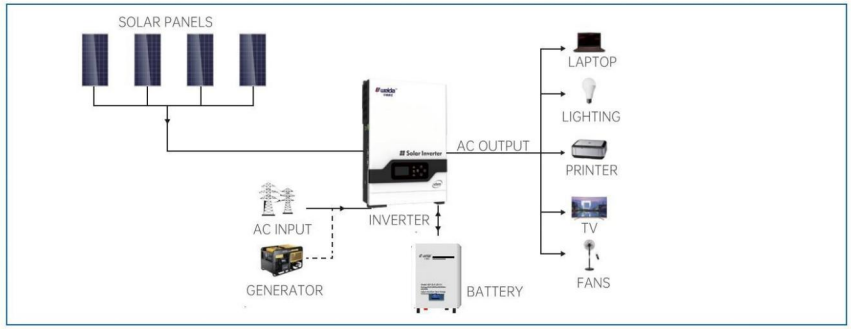
★ Widely used in various application scenarios, such as home, store and office

Specification

Product model	HZF -51.2-100-S C	HZF -51.2-200-S D	HZF -51.2-300-S E
Battery type	LiFePO4		
Nominal voltage	51.2V		
Rated power	5.12KWh	10.24KWh	15.36KWh
Rated capacity	100Ah	200Ah	300Ah
Charging voltage	58.4V		
Discharging cut-off voltage	42V		
Max continuous charge	50A		
Max continuous discharge	100A		
Net weight	about 57Kg	about 121Kg	about 182Kg
Dimension(mm)[W*T*H]	W450*T212*H633	W450*T212*H892	W645*T212*H950
Charging temp.range	0~45℃		
Discharging temp.range	-20~50℃		
Cycle life [1]	5000 cycles		
Protection rating	IP20		
Communication	CAN/RS 485		
Warranty	5 Years		

[1]Test conditions:0.2C charging/discharging,@25C，60%DOD

Solar system connection



Function description

1. LCD Display
2. Function buttons
3. Handle1
4. Handle2
5. Wall mounted fixing
6. Battery positive +
7. Communication port RS485
8. Communication port CAN
9. Battery address setting
10. Operating status indicator
11. Alarm indicator
12. SOC indicator
13. Power on/off switch
14. Battery negative -

RACK MOUNTED HOME ENERGY STORAGE UNIT

HZF-51.2-100-SA

Introduction

The battery system provides power storage for solar energy systems in homes, stores and offices. At the same time, the battery system can optimize the use of electricity and ensure the efficient operation of the entire energy storage system.

Features

★ The system uses high-quality lithium iron phosphate power cell, bringing better product performance and reliability

★ Each battery module unit is equipped with a separate high-performance BMS system for scientific cell management

★ Battery module units can be connected in parallel for expansion

★ Supports communication matching of multiple inverters

★ The battery energy storage module has a standard 19-inch rack design for easy installation

★ Widely used in various application scenarios, such as home, store, and office

Function description

1.**SOC** Indicate battery capacity status

2.**ALM** Indicate the fault state, indicated by a red light, when there is a fault, it will be on.

3.**RUN** Indicates the operating status of the equipment

4.**ADD** Set the battery address

5.**CAN** CAN communication interface

6.**RS-485** RS-485 communication interface

7.**RESTART SWITCH** Reset switch

8.**BATTERY OUTPUT** Connector + and -

9.**CIRCUIT BREAKER** Circuit breaker

10.**GROUNDING POINT** Contact point

11.**HANDLE** Handle for handling and installation of equipment

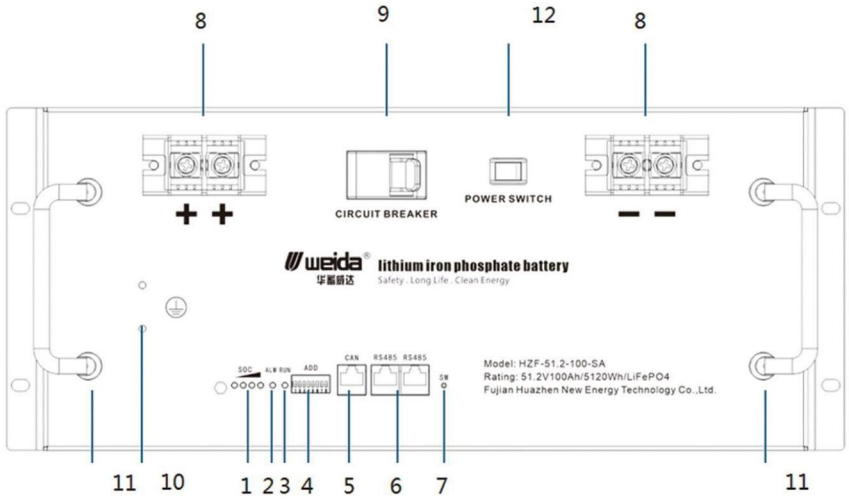
12.**POWER SWITCH** Power switch

Specification

No.	Content	Specification	Remarks
1	Total capacity	100.0Ah	rated discharge(1) rated charge (2)
2	Minimum capacity	98.0Ah	
3	Nominal voltage	51.2V	configuration: 16 cells in series voltage of single cell is 3.2V.
4	Min discharge voltage	42.0V	
5	Max charge voltage	58.4V	At 25±3℃
7	Max continuous charge current	50A	At 25 ± 3℃
8	Max continuous discharge current	100A	At 25 ± 3℃
9	Operation temperature range	charge 0 ~ 50℃ discharge -20 ~ 60℃	
10	Humidity	10% ~ 85% RH 5% ~ 85% RH	operation storage
11	Storage temperature range	0 ~ 50℃	Max. 6 months
12	Weight	⩽58kg	
13	Dimension(mm)[W*T*H]	482*420*197	
14	Cycle life	⩾2000	@0.2C 80%DOD

(1) Rated discharge : Constant current discharge(0.2CA) till the discharge end voltage (42.0V) at 25±3℃.

(2) Rated charge : After constant current charging (20A, 0.2C) to battery voltage 58.4V, turn to constant voltage 58.4V charging, when the charging current is less than 5A (0.05C), stop charging.



HIGH FREQUENCY OFF-GRID INVERTER CONTROL SYSTEM

HZPV1800 PRO SERIES (2KW-5.5KW)

Introduction

HZPV1800PRO is a pure sine wave high frequency solar inverter control all-in-one machine, with wide PV input range. It can be used without battery when there is enough energy, with advantages such as high power density, small size, easy operation, high efficiency, small no-loads loss. It is widely used in residential system, communication base station, monitoring system, pastoral areas, 5G auxiliary power supply.

Features

★ Pure sine wave output, can meet the use of various types of loads

★ Maximum PV open circuit voltage 450V, when the energy is enough, can be loaded without battery

★ Grid charging up to 60A, charging current and charging voltage can be set through the LCD screen

★ With multi-mode setting function, you can choose to set the priority level of photovoltaic, grid and battery through the LCD screen

★ It has a wide range of grid input voltage, which can be selected by LCD to meet different electricity needs

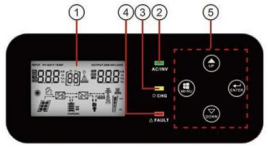
★ With battery overdischarge, overload protection, overtemperature protection, short circuit protection and other protection functions

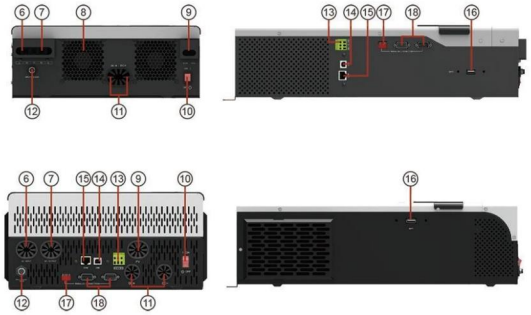
★ After the battery is discharged and the inverter is shut down, the inverter will automatically turn on when the photovoltaic or grid power is restored

★ With cold start function, USB and RS485 monitoring functions

★WIFI intelligent monitoring function, support mobile APP to view the data (optional)

Function description





1. LCD Display
2. Status indicator
3. Charging indicator
4. Fault indicator
5. Function buttons
6. AC Input
7. AC Output
8. FAN
9. PV input
10. Power on/Off switch
11. Battery input
12. Circuit breaker
13. Dry contact
14. USB
15. RS-485 Communication port
16. WIFI port
17. Parallel switch
18. Parallel communication port

Specification

Model		HZPV18-3024 PRO	HZPV18-3524 PRO	HZPV18-5248 PRO	HZPV18-5548 PRO
Rated battery voltage		24VDC		48VDC	
Inverter output	Rated power	3000W / 3000W	3500W / 3500W	5200W / 5200W	5500W / 5500W
	Instantaneous power	6000W	7000W	10400W	11000W
	Waveform	Pure sine wave			
	AC voltage (battery mode)	230VAC±5% (Setting)			
	Inverter efficiency(peak)	90%			
	Switching time	10ms (UPS、VDE4105); 20ms (APL)			
AC input	voltage	230VAC±5%			
	Selectable voltage range	170~280VAC (UPS) 90~280VAC (APL) 184~253VAC(VED4105)			
	Frequency range	50Hz / 60Hz(Auto detection)			
Battery	Voltage	24VDC		48VDC	
	Floating charge voltage	27.4VDC		54.8VDC	
	Overcharge protection	30VDC		60VDC	
Solar charge & AC charge	Max PV array open circuit voltage	450VDC			
	Charging algorithm	3-step (lead acid battery), 4-step (Li battery)			
	Max PV array power	4000W	4000W	5000W/6000W	6000W
	PV array MPPT voltage range	150~430 VDC			
	Max solar charge current	80A/100A	100A	80A/100A	120A
	Max AC charge current	60A/80A	80A	60A/80A	100A
	Max charge current	80A/100A	100A	80A/100A	120A
Machine specifications	Machine dimensions (W*H*D)(mm)	322*486*134	322*486*134	309*505*147	309*505*147
	Package dimensions (W*H*D)(mm)	426*560*260.5	426*560*260.5	375*655*269	375*655*269
	Net weight(kg)	8	10	14	14.4
	Gross weight(kg)	9.5	11.5	16.4	16.8
Other	Humidity	5% to 95% Relative humidity (Non-condensing)			
	Operating temperature	0℃ ~50℃			
	Storage temperature	-15℃ ~60℃			

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INTELLIGENT LITHIUM BATTERY FOR FORKLIFT TRUCKS

- Automotive-grade cell
- Automotive-grade portfolio production
- Battery background management
- Battery management strategy cloud upgrade
- LCD screen control

System features

★Longer service life without regular maintenance

★Stable discharge voltage，low temperature rise in use

★Allows fast charging with charging heating function for versatility

★Well-established security and protection mechanisms

★Better heat dissipation, vibration resistance, temperature control

★4000+ cycles，high-rate performance

Battery model	HZF-48-560-PA
Cell material	LiFePO4
Nominal voltage	48V
Nominal capacity	560Ah
Energy	26880Wh
Cycle life	4000 times
Charge limit voltage	54.75V
Standard charge current	112A
Max charge current	200A
Discharge cut-off voltage	37.5V
Standard discharge current	112A
Max discharge current	200A
Storage temperature	0℃~45℃
Storage humidity	60±25%RH
Charge temperature	0℃~45℃
Discharge temperature	-20℃~55℃
Case material	Sheet metal
Dimension(L*W*H)	970*665*500 mm
Weight	800kg

Battery model	HZF-48-420-PA
Cell material	LiFePO4
Nominal voltage	48V
Nominal capacity	420Ah
Energy	20160Wh
Cycle life	4000 times
Charge limit voltage	54.75V
Standard charge current	84A
Max charge current	150A
Discharge cut-off voltage	37.5V
Standard discharge current	60A
Max discharge current	100A
Storage temperature	0℃~45℃
Storage humidity	60±25%RH
Charge temperature	0℃~45℃
Discharge temperature	-20℃~55℃
Case material	Sheet metal
Dimension(L*W*H)	1030*250*785 mm
Weight	300kg

Battery model	HZF-80-560-FA
Cell material	LiFePO4
Nominal voltage	80V
Nominal capacity	560Ah
Energy	44800Wh
Cycle life	4000 times
Charge limit voltage	91.25V
Standard charge current	112A
Max charge current	200A
Discharge cut-off voltage	65V
Standard discharge current	112A
Max discharge current	200A
Storage temperature	0℃~45℃
Storage humidity	60±25%RH
Charge temperature	0℃~45℃
Discharge temperature	-20℃~55℃
Case material	Sheet metal
Dimension(L*W*H)	1020*845*440 mm(No counterweight included)
Weight	490kg（No counterweight included）

Battery model	HZN-48-10-PA
Cell material	Ternary lithium(NMC)
Nominal voltage	48V
Nominal capacity	10Ah
Energy	480Wh
Cycle life	4000 times
Charge limit voltage	54.6V
Standard charge current	2A
Max charge current	5A
Discharge cut-off voltage	35.75V
Standard discharge current	5A
Max discharge current	20A
Storage temperature	0℃~45℃
Storage humidity	60±25%RH
Charge temperature	0℃~45℃
Discharge temperature	-10℃~55℃
Case material	Sheet metal
Dimension(L*W*H)	211*86*175 mm
Weight	4.5kg

Battery model	HZF-80-405-FA
Cell material	LiFePO4
Nominal voltage	80V
Nominal capacity	405Ah
Energy	32400Wh
Cycle life	4000 times
Charge limit voltage	91.25V
Standard charge current	81A
Max charge current	200A
Discharge cut-off voltage	65V
Standard discharge current	81A
Max discharge current	200A
Storage temperature	0℃~45℃
Storage humidity	60±25%RH
Charge temperature	0℃~45℃
Discharge temperature	-20℃~55℃
Case material	Sheet metal
Dimension(L*W*H)	1028*710*820 mm
Weight	1320kg

Battery model	HZN-48-15-PA
Cell material	Ternary lithium(NMC)
Nominal voltage	48V
Nominal capacity	15Ah
Energy	720Wh
Cycle life	4000 times
Charge limit voltage	54.6V
Standard charge current	3A
Max charge current	7.5A
Discharge cut-off voltage	35.75V
Standard discharge current	7.5A
Max discharge current	20A
Storage temperature	0℃~45℃
Storage humidity	60±25%RH
Charge temperature	0℃~45℃
Discharge temperature	-10℃~55℃
Case material	Sheet metal
Dimension(L*W*H)	211*86*175 mm
Weight	5.5kg

LIFEPO4 GOLF CART BATTERY

- Automotive-grade accessories
- High performance long runtime durable and more stable
- Maintenance free Opportunity charging
- 8 months storage on a full charge

System features

★High energy density
★4000cycles
★5-year warranty
★Fast charging
★Strong power, durable endurance
★Life design up to 10 years
★IP66
★Customized on demand

Battery model	HZF-51.2-120-EA
Cell material	LiFePO4
Nominal voltage	51.2V
Nominal capacity	120Ah
Energy	6144Wh
Cycle life	4000 times
Charge limit voltage	58.4V
Standard charge current	24A
Max charge current	60A
Discharge cut-off voltage	41.6V
Standard discharge current	100A
Max discharge current	200A
Storage temperature	0℃~45℃
Storage humidity	60±25%RH
Charge temperature	0℃~45℃
Discharge temperature	-20℃~55℃
Case material	Sheet metal
Dimension(L*W*H)	574*330*255mm
Weight	62kg

Battery model	HZF-48-120-EA
Cell material	LiFePO4
Nominal voltage	48V
Nominal capacity	120Ah
Energy	5760Wh
Cycle life	4000 times
Charge limit voltage	54.75V
Standard charge current	24A
Max charge current	60A
Discharge cut-off voltage	39V
Standard discharge current	100A
Max discharge current	200A
Storage temperature	0℃~45℃
Storage humidity	60±25%RH
Charge temperature	0℃~45℃
Discharge temperature	-20℃~55℃
Case material	Sheet metal
Dimension(L*W*H)	574*330*255 mm
Weight	58kg

Battery model	HZF-48-105-EA
Cell material	LiFePO4
Nominal voltage	48V
Nominal capacity	105Ah
Energy	5040Wh
Cycle life	4000 times
Charge limit voltage	54.75V
Standard charge current	21A
Max charge current	52.5A
Discharge cut-off voltage	39V
Standard discharge current	100A
Max discharge current	200A
Storage temperature	0℃~45℃
Storage humidity	60±25%RH
Charge temperature	0℃~45℃
Discharge temperature	-20℃~55℃
Case material	Sheet metal
Dimension(L*W*H)	433*333*232mm
Weight	49kg

Battery model	HZF-48-160-EA
Cell material	LiFePO4
Nominal voltage	48V
Nominal capacity	160Ah
Energy	7680Wh
Cycle life	4000 times
Charge limit voltage	54.75V
Standard charge current	32A
Max charge current	80A
Discharge cut-off voltage	39V
Standard discharge current	100A
Max discharge current	200A
Storage temperature	0℃~45℃
Storage humidity	60±25%RH
Charge temperature	0℃~45℃
Discharge temperature	-20℃~55℃
Case material	Sheet metal
Dimension(L*W*H)	800*360*232 mm
Weight	72kg

Battery model	HZF-51.2-105-EA
Cell material	LiFePO4
Nominal voltage	51.2V
Nominal capacity	105Ah
Energy	5376Wh
Cycle life	4000 times
Charge limit voltage	58.4V
Standard charge current	21A
Max charge current	52.5A
Discharge cut-off voltage	41.6V
Standard discharge current	100A
Max discharge current	200A
Storage temperature	0℃~45℃
Storage humidity	60±25%RH
Charge temperature	0℃~45℃
Discharge temperature	-20℃~55℃
Case material	Sheet metal
Dimension(L*W*H)	433*333*232 mm
Weight	52kg

Battery model	HZF-51.2-160-EA
Cell material	LiFePO4
Nominal voltage	51.2V
Nominal capacity	160Ah
Energy	8192Wh
Cycle life	4000 times
Charge limit voltage	58.4V
Standard charge current	32A
Max charge current	80A
Discharge cut-off voltage	41.6V
Standard discharge current	100A
Max discharge current	200A
Storage temperature	0℃~45℃
Storage humidity	60±25%RH
Charge temperature	0℃~45℃
Discharge temperature	-20℃~55℃
Case material	Sheet metal
Dimension(L*W*H)	800*360*232 mm
Weight	75kg


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