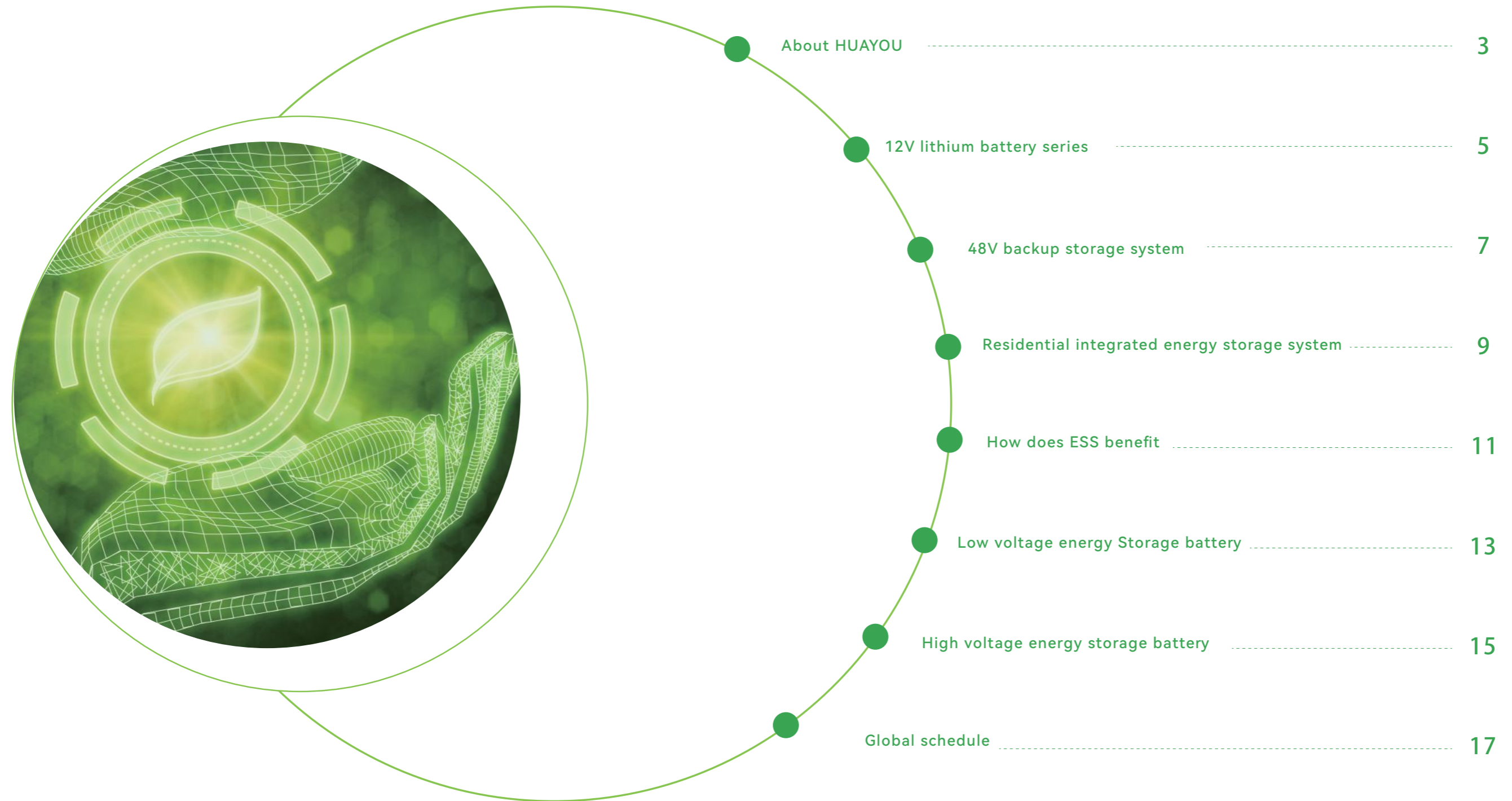




TO PROVIDE CLEAN
STABLE AND SMART ENERGY
FOR EVERY FAMILY
IN THE WORLD



CONTENTS

A decorative graphic on the left side of the page. It features a circular path with green dots at each content item. Inside the path is a circular inset image showing a green leaf with a glowing center, surrounded by a wireframe mesh and circular patterns. The background of the inset is a blurred green forest.

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About HUAYOU

Huayou Cobalt Co., Ltd. was founded in 2002, it is a Hi-tech enterprise mainly engaged in the R&D and manufacturing of new energy Li-ion battery material and cobalt new material.

After almost 20 years of hard working, Huayou established 3 business sectors, which are, resource. Non-ferrous and new energy, and accomplished the layout of headquartered in Tongxiang, resource guaranteed overseas, manufacturing based in China, and marketing all over the world. Huayou has built an industrial integration of Cobalt-Nickel resource, Non-ferrous smelting, Li-ion battery material and the recycling of new energy Li-ion battery material, Huayou has been holding the leading position of global cobalt industry and the forefront of the precursor market.

Jiangsu Huayou Energy Technology Co., Ltd. was established in 2020 as a high-tech technology enterprise jointly sponsored by Zhejiang Huayou Recycling Technology Co., Ltd, a wholly-owned subsidiary of Zhejiang Huayou Cobalt Industry Co., LTD

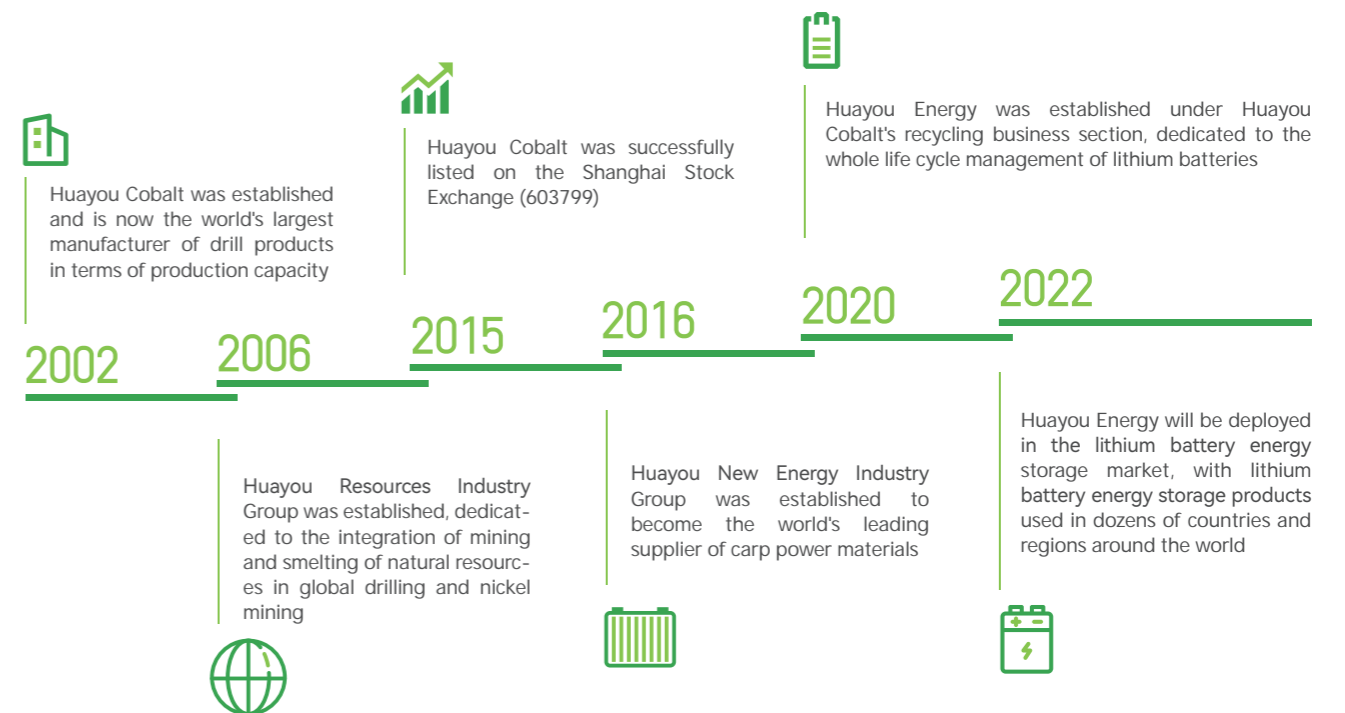
The company's main products are energy storage systems for households, industrial and commercial energy storage systems and power battery systems. Through the cloud platform battery data testing technology development, core energy control system technology and product creation, innovative operation mode practice, energy big data network operation platform construction, the company is committed to become a leading intelligent energy network solution service provider, to ensure clean, safe, economic and efficient energy supply!



Primary service

- 01 **VPP**
Distributed energy management
A stable supply of clean electricity
- 02 **User-side energy management**
Residential ESS
Electric vehicle charging
- 03 **Lead-acid battery alternatives**
Perfect replacement of 12V lead-acid battery
High multiplier and safety
- 04 **Clean energy optimization**
Solar power generation
Wind energy grid connection
- 05 **UPS**
Industrial and commercial emergency power supply

Development history





12V lithium battery series



Compact design

Lead-acid batteries same shape, same operation



Connected in series and parallel

Can be connected in series and parallel



Safe and reliable

IP65 protection, automotive design, waterproof, dustproof and salt spray, especially suitable for marine use



Intelligent

Bluetooth connection, mobile app detection, etc.



Super Balanced Capability

Automatic equalisation of individual cells within a module and between series and parallel modules



International Certification

MSDS/UN38.3



VC12100

Electrical

Nominal Voltage/V	12.8
Nominal Capacity/Ah	100
Rated Energy/Wh	1280
BMS Function	Overcharge, overdischarge, overcurrent and temperature protection
Recommended Charge Voltage/V	14.4-14.6
Discharge Cut-off Voltage/V	10.8
Standard Charge Current/A	50
Max.Charge Current/A	100
Continuous Discharge Current/A	100
Peak Discharge Current/A@5S	300
Voltage Configurations	12,24,36 or 48V
Maximum Configuration	Increase capacity in series or increasing voltage parallel
Maximum Time Between Charges	3 months
Monitoring	Bluetooth

Mechanical

Dimension(L*W*H)/mm	307*169*213
Weight/kg	Approx.11.5
Terminal	M8
Material	ABS

Environment

Working Temperature Range/°C	Charge:0~55Discharge:-20~60
Humidity Range/RH	<95%
Storage temperature/°C	15~35
IP protection level	IP65

VC12150

Electrical

Nominal Voltage/V	12.8
Nominal Capacity/Ah	150
Rated Energy/Wh	1920
BMS Function	Overcharge, overdischarge, overcurrent and temperature protection
Recommended Charge Voltage/V	14.4-14.6
Discharge Cut-off Voltage/V	10.8
Standard Charge Current/A	75
Max.Charge Current/A	100
Continuous Discharge Current/A	100
Peak Discharge Current/A@5S	300
Voltage Configurations	12,24,36 or 48V
Maximum Configuration	Increase capacity in parallel or increasing voltage series
Maximum Time Between Charges	3 months
Monitoring	Bluetooth

Mechanical

Dimension(L*W*H)/mm	340*190*245
Weight/kg	Approx.16.7
Terminal	M8
Material	ABS

Environment

Working Temperature Range/°C	Charge:0~55Discharge:-20~60
Humidity Range/RH	<95%
Storage temperature/°C	15~35
IP protection level	IP65

Application Scenario



Caravan power



Emergency power



Solar street lights



Small vessels



Household energy storage

48V backup storage system



High security

Using LFP cells and intelligent BMS monitoring and management



Easy to install

Module stacking design



Large capacity

Single module 5.12kWh



Wide temperature operating range

Charge: 0°C-55°C
Discharge: -20°C-55°C



Scalability

Max. 8 Modules in Series



High adaptability

Mainstream inverter brand adaptations



LOW VOLTAGE STORAGE SYSTEM

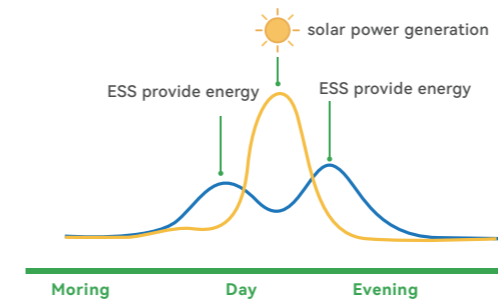
Basic Parameters	/
Battery Module	/
Battery Module Voltage(V)	51.2
Battery Module Capacity(Ah)	100
Battery Module Qty. (Optional)	1~4P
Battery System Capacity(kWh)	5.12
Battery System Voltage (V)	51.2
Dimension (W*D*H mm)	483*500*132
Weight (kg)	42kg
Depth of Discharge	90%
Charge/Discharge Current (A)	(Recommend) 100 (Max) 110
Communication	RS485,CAN
Protection Class	IP21
Working Temperature/°C	0-50
Shelf Temperature/ °C	-20-60
Humidity	5%-95%(no condensing)
Altitude	<2000
Warranty	10 years(25°C)
Cycle Life	>6000,25°C
Certification	UN38.3/IEC62619/CE

Residential integrated energy storage system



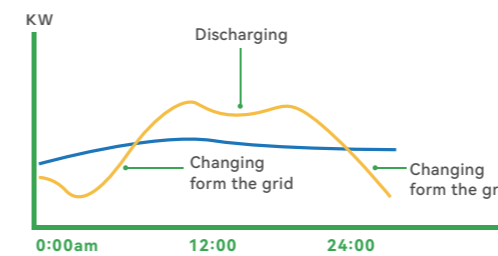
PV Input	
Max,Pv power(W)	6000
Inpur voltage range(V)	125-580
MPPT voltage range(V)	125-550
MPPT string	2
Maximum input current(A)	11/11
Max.lsc(A)	14/14
Grid	
Rated power(W)	5000
Rated Grid voltage(V)	220/230
Rated frequency(Hz)	50/60
Electrical	1/N/PE
Rated AC current(A)	21.7
Max.AC current(A)	22.8
Power factor	-0.8 ~ +0.8
THD(%)	<3
Efficiency	
MPPT efficiency(%)	99.9
European efficiency(%)	97
Max.efficiency(%)	97.6
Charge/discharge efficiency(%)	1/N/PE
Rated AC current(A)	97.6/96
System&protection	
Overvoltage category - PV	II
Overvoltage category - Gird	III
IP grade	Outdoor IP65
Protection level	Class I
Operating temperature	-25°C ~ 60°C(>+45°C downgrade)
battery	
Battery System Voltage (V)	51.2
Battery Module Capacity(Ah)	100
Battery Module Qty. (Optional)	2 3 4
Battery System Capacity(kWh)	10.24 15.36 20.48
Dimension (W*D*H mm)	600*240*1247 600*240*1550 600*240*1855
Weight (kg)	134 186 238
Charge/Discharge Current (A)	(Recommend) 100
	(Max) 110
Communication	RS485,CAN
Protection Class	IP65
Working Temperature/°C	0-50
Shelf Temperature/ °C	-20-60
Humidity	5%-95%(no condensing)
Altitude	<2000
Warranty	10 years(25°C)
Cycle Life	>6000,25°C
Certification	UN38.3/IEC62619/CE

How does ESS benefit



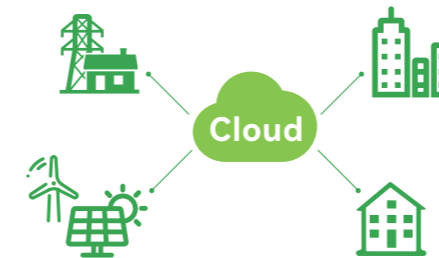
Make full use of solar energy to supplement your home power

Solar power generation reaches its peak at noon and demand for electricity in the morning and evening. The energy storage system can balance the power supply demand.



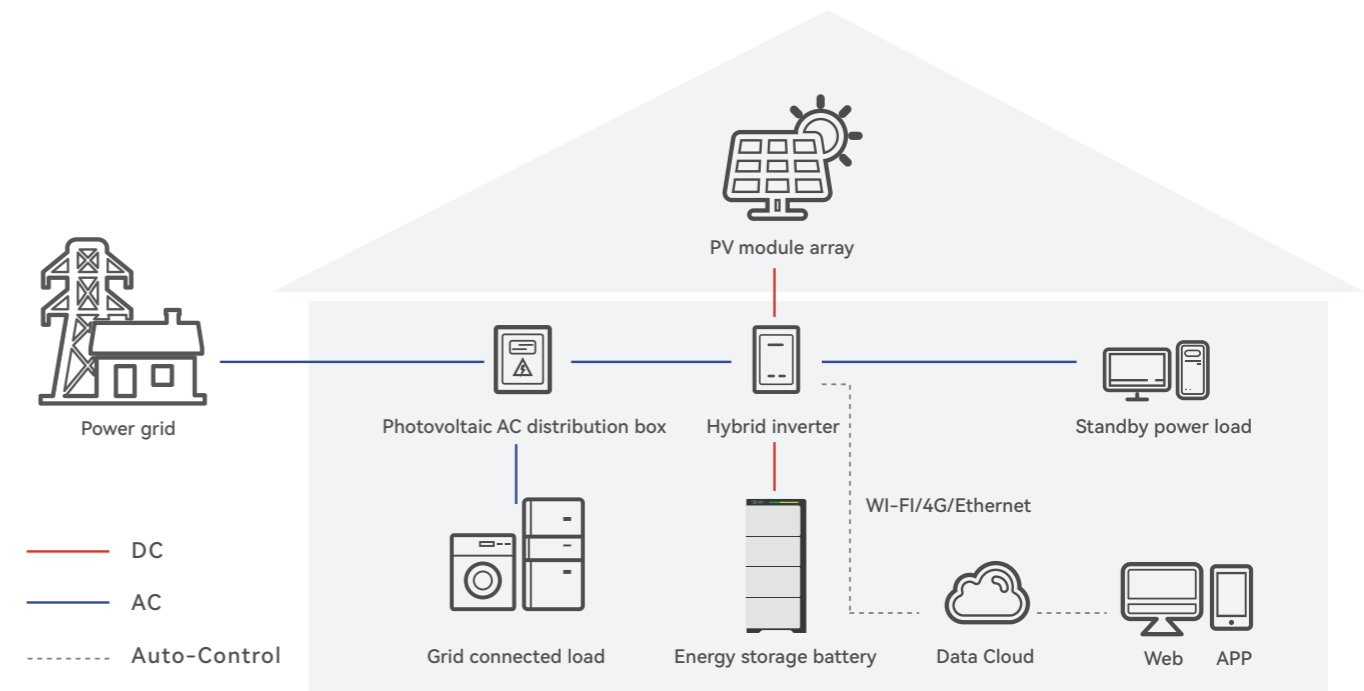
Make full use of peak and valley electricity prices

Energy is stored during low peak hours and released through batteries during peak hours to reduce peak electricity prices. Reduce power supply pressure on the grid.



Virtual power plant

The Internet platform will be highly integrated with diverse clean energy, expand the meaning of smart grid, and ensure a safe, reliable, high-quality and efficient power supply.





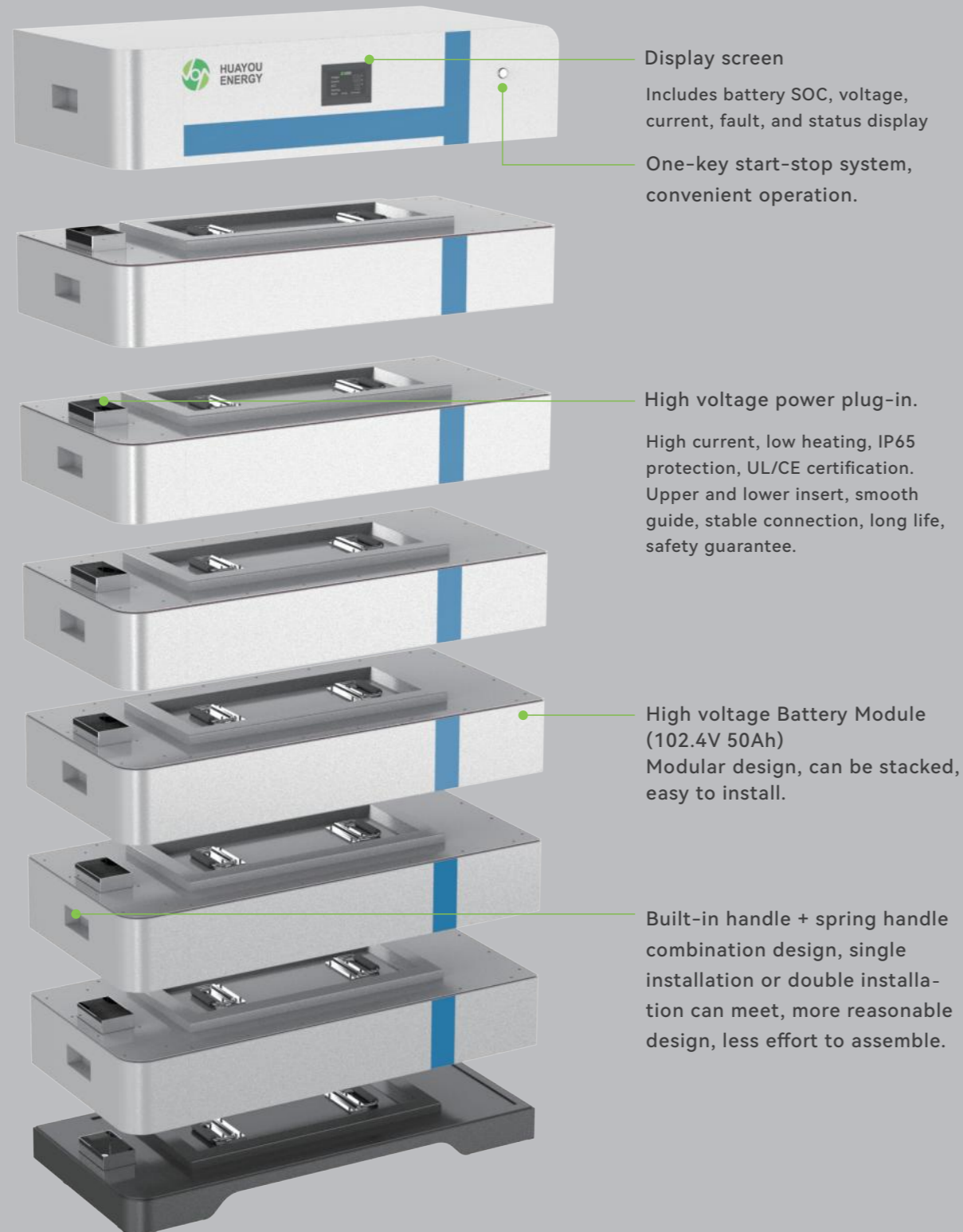
Low voltage energy storage battery



Basic Parameters

Battery Module				
Battery Module Voltage(V)	51.2			
Battery Module Capacity(Ah)	100			
Battery Module Qty. (Optional)	1	2	3	4
Battery System Capacity(kWh)	5.12	10.24	15.36	20.48
Battery System Voltage (V)	51.2			
Dimension (W*D*H mm)	600*240*418	600*240*722	600*240*1025	600*240*1330
Weight (kg)	58	110	162	214
Depth of Discharge	90%			
Charge/Discharge Current (A)	(Recommend)	100		
	(Max)	110		
Communication	RS485,CAN			
Protection Class	IP65			
Working Temperature/°C	0-50			
Shelf Temperature/ °C	-20-60			
Humidity	5%-95%(no condensing)			
Altitude	<2000			
Warranty	10 years(25°C)			
Cycle Life	>6000,25°C			
Certification	UN38.3/IEC62619/CE			

High voltage energy storage battery



Display screen
Includes battery SOC, voltage, current, fault, and status display

One-key start-stop system, convenient operation.

High voltage power plug-in.
High current, low heating, IP65 protection, UL/CE certification. Upper and lower insert, smooth guide, stable connection, long life, safety guarantee.

High voltage Battery Module (102.4V 50Ah)
Modular design, can be stacked, easy to install.

Built-in handle + spring handle combination design, single installation or double installation can meet, more reasonable design, less effort to assemble.



Basic Parameters

Battery Module					
Battery Module Voltage (V)	102.4				
Battery Module Capacity(Ah)	50				
Battery Module Qty. (Optional)	2	3	4	5	6
Battery System Capacity(kWh)	10.24	15.36	20.48	25.60	30.72
Battery System Voltage (V)	204.8	307.2	409.6	512	614.4
Dimension (W*D*H mm)	880*400*570	880*400*715	880*400*860	880*400*1005	880*400*1150
Weight (kg)	125	180	235	290	345
Depth of Discharge	90%				
Charge/Discharge Current (A)	(Recommend)				
	25				
	(Max)				
	50				
Communication	RS485,CAN				
Protection Class	IP65				
Working Temperature/°C	0-50				
Shelf Temperature/ °C	-20-60				
Humidity	5%-95%(no condensing)				
Altitude	<2000				
Warranty	10 years(25°C)				
Cycle Life	>6000,25°C				
Certification	UN38.3/IEC62619/CE				

Global schedule

