VOLTCRAVE POWER
优创科技能源





Solar Energy & Storage System Product Manual

Guangdong VoltCrave Technology Energy Co., Ltd

voltcravepower.com

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Customer Service

Pre Sales Service:

We can provide pre-sale technical consultation for customers, and introduce the working principle and technical performance of the products in detail.

On Sale Service:

After signing the contract, timely inform the customer of the production and transportation conditions,and deliver the products safely as soon as possible.

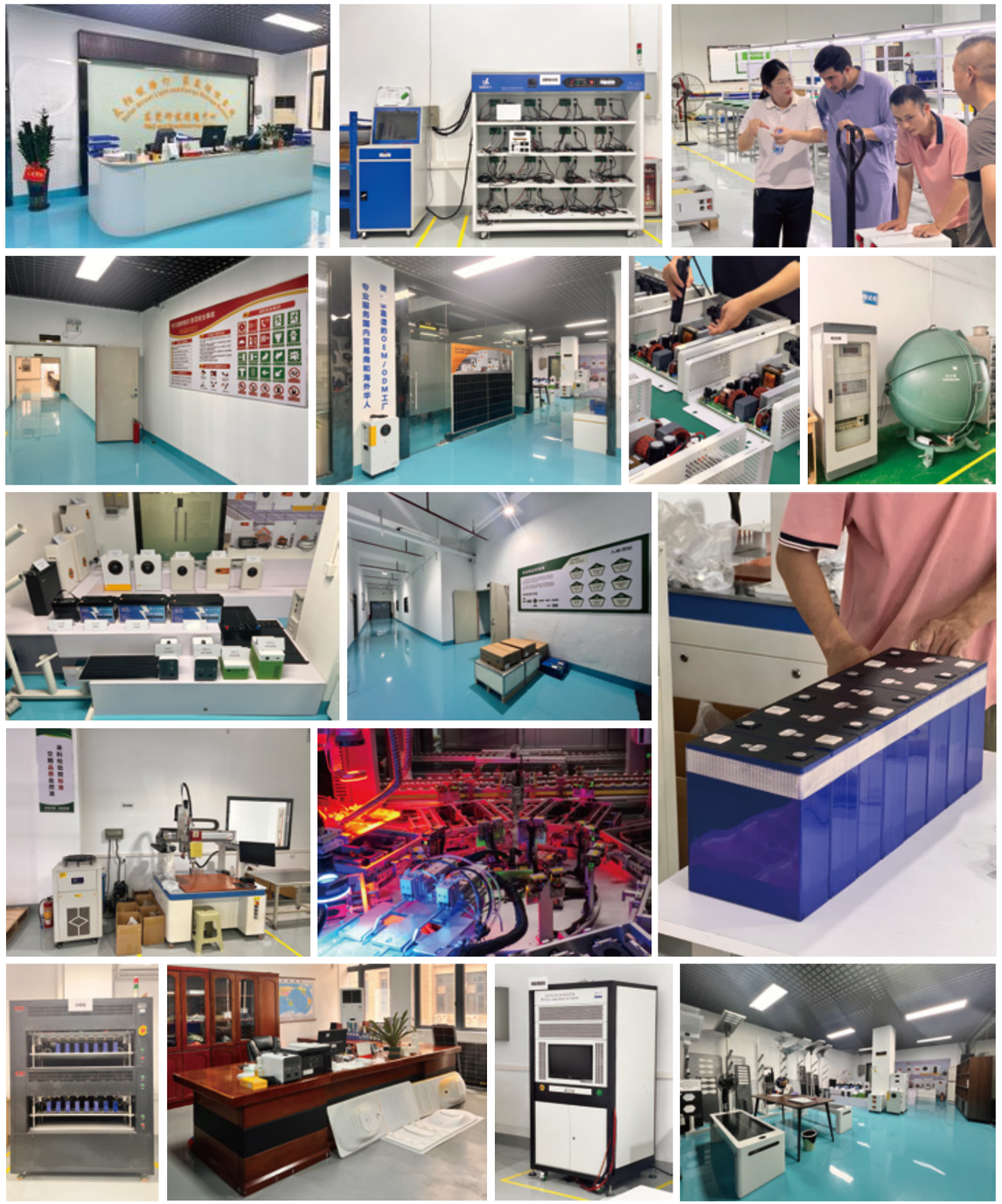
After Sale Service:

(1) All products are quaranteed for 3 years.
(2) It can carry out daily maintenance training for user maintenance personnel.
(3) After the goods are delivered to the user, the company will provide commissioning and opening services according to the specific conditions of the project to ensure thenormal operation of the equipment as scheduled.
(4) Carry out telephone return visit and irregular on-site visit, timely understand theequipment operation and solve problems for customers.



VoltCrave Profile

Guangdong VoltCrave Technology Energy Co., Ltd. was established in 2011, with two main product lines: integrated solar street lights and home energy storage. It is amanufacturing enterprise that integrates research and development, production, and sales. Our main services include OEM/ODM for traders in the Pearl River Delta and Yangtze River Delta regions, as well as overseas Chinese and brand merchants in Asia, Africa, and Latin America. Currently, we have more than 300 personnel, including an engineering team of 8 people, a production site of 50000 square meters, and complete production and testing equipment. We are a national high-tech enterprise with over 30 patents for the invention and use of solar street lights and energy storage related products. We have served more than 50 clients in Asia, Africa, and Latin America, as well as 500 domestic trading clients. The company is determined to become a high-quality partner and OEM in the field of off grid systems in the Belt and Road countries,and contribute to the popularization of new energy and global energy conservation and emission reduction.



COMPANY ACHIEVEMENTS

10+
Industry Experience

50+
Employees

5000+
Square Meters Workshop

20+
Partner Company





















Milestore

2025 — **Revenue exceeded 50 million**

Thanks to the hard work of all Alishine employees, orders for solar street lights and household storage systems have surged, and we are more confident that Alishine will become a well-known global new energy brand.

2024 — **Home Solar Storage launched**

With the globalization of carbon neutrality, in order to meet customer needs, our solar household storage system has been tested and demonstrated for a year, and 5kw-60kw is fully online, and has received good feedback in the Philippines, Nigeria, and Pakistan.

2023 — **Strength improvement**

Officially joining Xinhuiyuan Group, the company's hard power has been improved to ensure more and greater customer needs.

2022 — **Accumulate steadily**

We have established the enterprise development strategy of "innovation, brand and capital", made a breakthrough in sales, and become a leading enterprise in the industry.

2021 — **Keep up with the market**

The company established an energy storage division to enrich product lines, keep up with market hot spots, and meet more customer needs.

2020 — **Team to oversea**

Establish overseas markets and overseas sales teams to deeply cultivate and serve the localized market.

2019 — **Brands to overseas**

Sign contracts to develop agents, distributors, and engineering contractors with stable output under the Alihine brand.

2017 — **Advance bravely**

New factory relocation, expansion of production scale, and the establishment of an R&D center, to further meet customer demand.

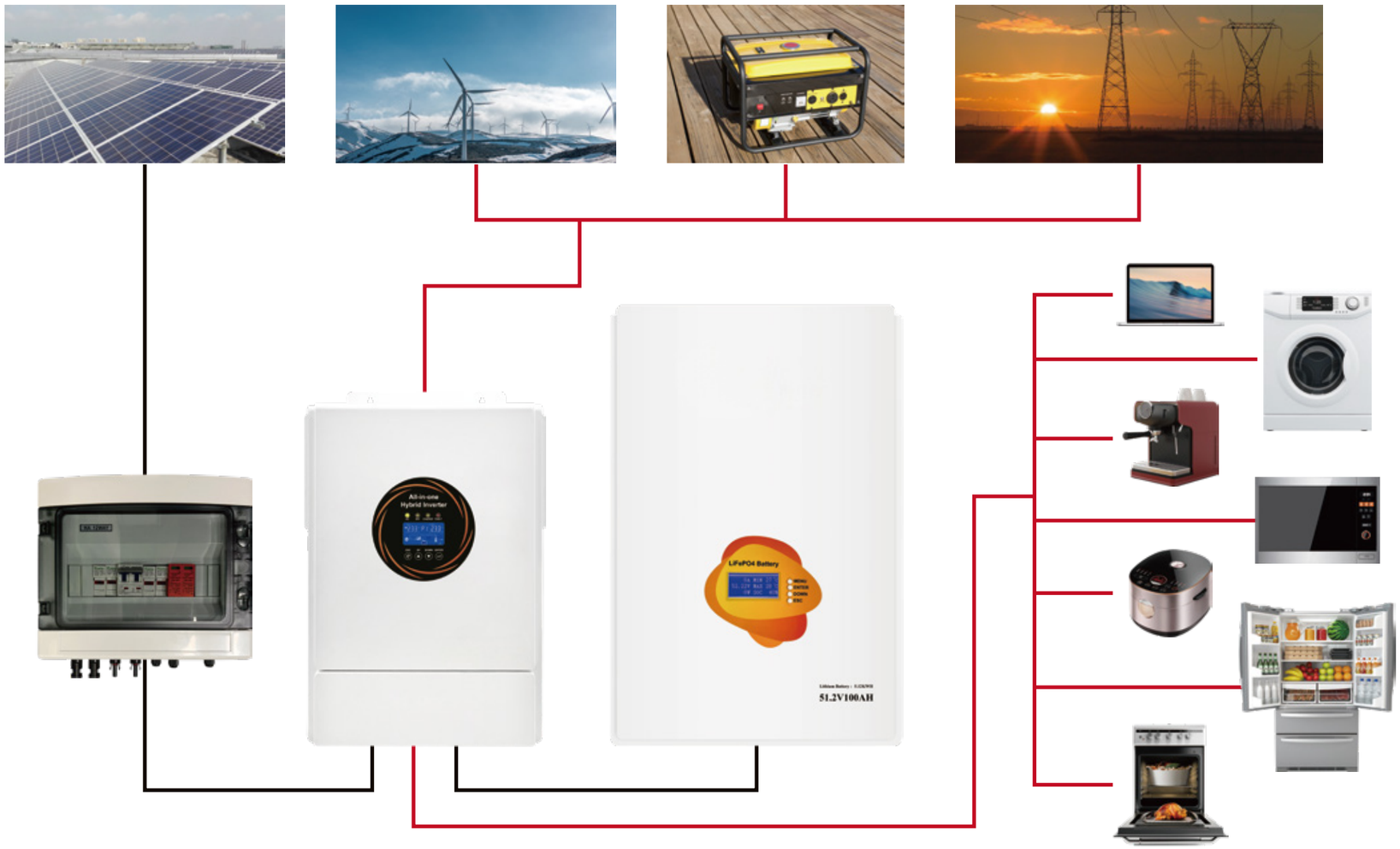
2016 — **Based on the market**

The company mainly engaged in export business and has established long-term cooperative relationships with many domestic listed companies.

2011 — **Dream set sail**

The company is one of the earliest companies in the industry to produce integrated solar street lights. Alishine is determined to become the company with the strongest responsibility and the best products in the industry.

VoltCrave Solar Energy System











Safe

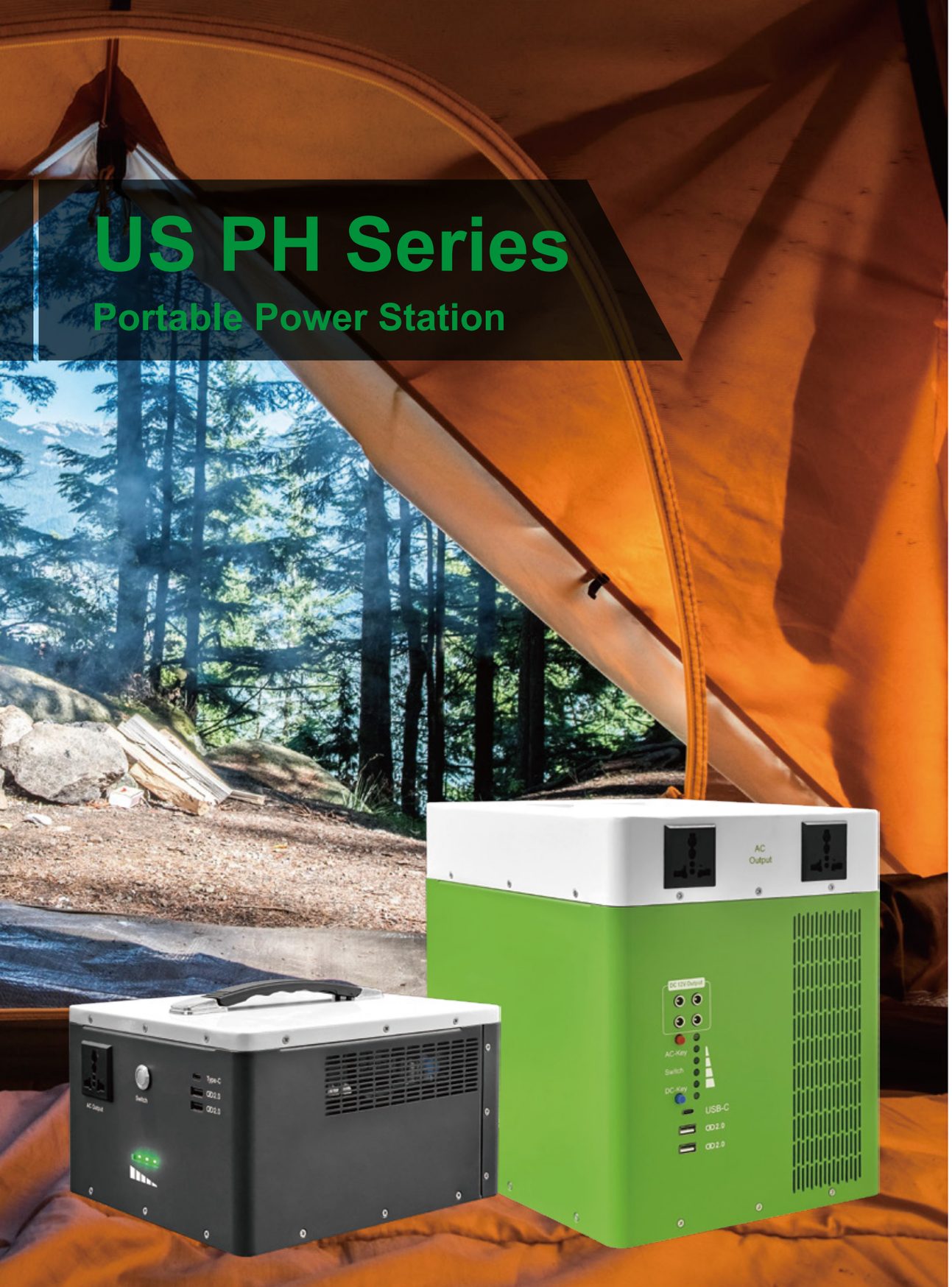
Plug & Play

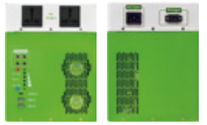
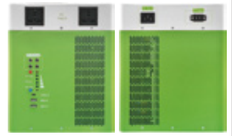
Uninterrupted

PV Charging

Efficiency

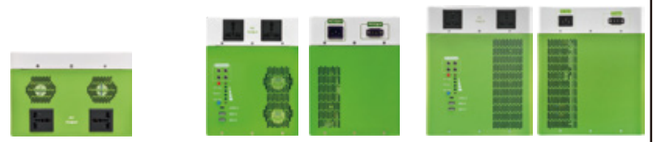
Solar energy is volatile and does not match the daily peak of electricity consumption, so we need Solar Energy Storage System to regulate the energy distribution and convert solar energy into stable AC energy.



Model	AL-US PH 300	AL-US PH 500	AL-US PH 1000
• Bidirectional Inversion • High Cost Perfomance • LiFePO4 Battery • Metal Housing • Safe and reliable			
AC Input (Generator/Grid)			
Input Voltage	85-135V		
Frequency	60Hz		
Mains Charging Effciency	>95%		
AC Output			
Output Voltage	100-120V		
Output Voltage Waveform	Pure Sine Wave		
Rated Output Voltage	110Vac±5Vac		
Rated Output Power	300W	500W	1000W
Output Frequency Range(Hz)	60Hz±0.5%		
Maximum Effciency	>86%		
Core Parameters			
Battery Materials	LiFePO4		
Rated Capacity	650Wh	1000Wh	2000Wh
Cell Life	≥10000 times		
USB	2.0 Charging port*2		
Type-C	PD 20W Fast charge		
EPS	UPS		
EPS Time	<50ms		
General Parameters			
Crafts	Metal Spraying		
PV Input Voltage Range	12-60V		
PV Maximum Charging Power	250W	300W	550W
Inverter Output	110VAC		
Charging Mode	AC / PV Charger		
AC Outlet	Global Specification		
AC Charging Power	300W	500W	1000W
Battery Indicator	4 LEDs	6 LEDs	
Dimension(mm)	250*230*175	275*190*246	280*230*285
Carton(mm)	300*280*215	325*240*310	330*280*350
Net Weight(kg)	10	12.05	18.5
Gross Weight(kg)	10.8	13	20.1
Working Environment			
Operating Noise	<50dB		
Operating Temperature	-10~40 ℃		
Operating Humidity	20~95%RH		
Storage Temperature	-15~60℃		
Storage Humidity	5-95%RH		



- Bidirectional Inversion
- High Cost Perfomance
- LiFePO4 Battery
- Metal Housing
- Safe and reliable



Model	AL-EU PH 300	AL-EU PH 500	AL-EU PH 1000
AC Input (Generator/Grid)			
Input Voltage	90-280V		
Frequency	60Hz		
Mains Charging Effciency	>95%		
AC Output			
Output Voltage	220-240V		
Output Voltage Waveform	Pure Sine Wave		
Rated Output Voltage	220Vac±5Vac		
Rated Output Power	300W	500W	1000W
Output Frequency Range(Hz)	60Hz±0.5%		
Maximum Effciency	>86%		
Core Parameters			
Battery Materials	LiFePO4		
Rated Capacity	650Wh	1000Wh	2000Wh
Cell Life	≥10000 times		
USB	2.0 Charging port		
Type-C	PD 20W Fast charge		
EPS	UPS		
EPS Time	<50ms		
General Parameters			
Crafts	Metal Spraying		
PV Input Voltage Range	12-60V		
PV Maximum Charging Power	250W	300W	550W
Inverter Output	220VAC		
Charging Mode	AC / PV Charger		
AC Outlet	Global Specification		
AC Charging Power	300W	500W	1000W
Battery Indicator	5 LEDs	6 LEDs	
Dimension(mm)	250*230*175	275*190*246	280*230*285
Carton(mm)	300*280*215	325*240*310	330*280*350
Net Weight(kg)	8.45	12.05	18.5
Gross Weight(kg)	9.55	13	20.1
Working Environment			
Operating Noise	<50dB		
Operating Temperature	-10~40 ℃		
Operating Humidity	20~95%RH		
Storage Temperature	-15~60℃		
Storage Humidity	5-95%RH		

All-In-One Solar ESS



Inverter Parameters	AL-INV 3600	AL-INV 6000
Power	**3.6KVA /3.6KW**	**6KVA /6KW**
Maximum photovoltaic input power	3.6KW	9KW
Two AC outputs	Yes	
Maximum one-way AC output power	3.6KVA / 3.6KW	6KVA / 6KW
Maximum two-channel AC output power	3.6KVA / 3.6KW	6KVA / 6KW
Maximum AC total output power	3.6KVA / 3.6KW	6KVA / 6KW
Parallel machine function	NO	
Lithium-ion communication	NO	RS232 / RS485 / Dry Contact
Lithium battery activation	Yes (photovoltaic or mains)	
Input		
Rated voltage	230VAC	
Voltage range	170-280VAC (computer application); 90-280VAC (household appliances)	
Frequency	50 / 60 Hz (automatic detection)	
Output		
Rated voltage	220/230VAC±5%	220/240VAC±5%
Instantaneous power	5400VA	9000VA
Frequency	50 / 60 Hz	
Output waveform	Pure Sine Wave	
Switching time	10ms (computer application); 20ms (household appliances)	
Peak efficiency (PV to INV)	96%	
Peak power (Battery to INV)	93%	
Overpower protection	5s@＞=140% load; 10s@100%~140% load	
Peak coefficient	3:1	
Power factor	0.6~1 (capacitive or inductive)	
Grid connection mode	Not support	
PV Charging & AC Charging		
Charge mode	MPPT	
Maximum photovoltaic input power	5000W	9000W
Maximum photovoltaic open circuit voltage	500VDC	
MPPT voltage range	40VDC~450VDC	60VDC~450VDC
Maximum photovoltaic input current	18A	27A
Maximum photovoltaic charging current	100A	120A
Maximum mains charging current	100A	120A
Maximum charging current	100A	120A

Battery Parameters		AL-BAT 256300	AL-BAT 512314	Remarks
General				
Nominal Capacity		300Ah	314Ah	0.5C / 0.3C charging, 1C discharging, 25 ℃
Rated Voltage		25.6V	51.2V	8S / 16S
Discharge Cut-off Voltage		22V	44V	
Charging Cut-off Voltage		26.6V	56.4V	
Float charging voltage		27V	56V	
Continuous charging maximum current		100A	160A	
Maximum current for continuous discharge		150A		
Battery Energy		7680Wh	16000Wh	
Rated Output Power		3600W	6000W	
Communication Interface		NO	RS232 / RS485 / Dry Contact	
Discharge working temperature		-15℃～50℃		
Charging working temperature		0℃～50℃		
Relative Humidity		5～90%		
Altitude		≤4000m		
Protection Grade		IP21		
Storage Time		Keep charging at least once every 3 months		
Number of cycles		6000 times, DOD≥90% ; 10000 times, DOD≥80%		75% DOD 25℃
Main Parameters For BMS				
Overcharge Protection	Overcharge detection voltage (V)	Monomer 3.65 ± 0.05		
	Overcharge protection delay (S)	0.5		
Over Discharge Protection	Overdischarge detection voltage (V)	Monomer 2.7 ± 0.05		
	Overdischarge detection delay (S)	0.5		
Overcurrent Protection	Greater than rated current	1.1%		
Overcurrent Recovery	Disconnect Load	/		
Self Consumption Power	Working Current (mA)	≤10		
	Sleep Current (uA)	≤50		
Physical Property				
Product Size, length x width x height (mm)		740*400*240	1050*460*240	
Package Size, length x width x height (mm)		765*465*400	1085*520*300	
Net Weight (Kgs)		65.75	122	
Gross Weight (Kgs)		77.75	124	
LCD		Yes		
Application Environment				
Operating temperature range		-10°C to 55°C		
Storage temperature range		-15°C~ 60°C		
Humidity		5% to 95% relative humidity (no frost)		

12KW Horizontal Stacked Solar Storage System

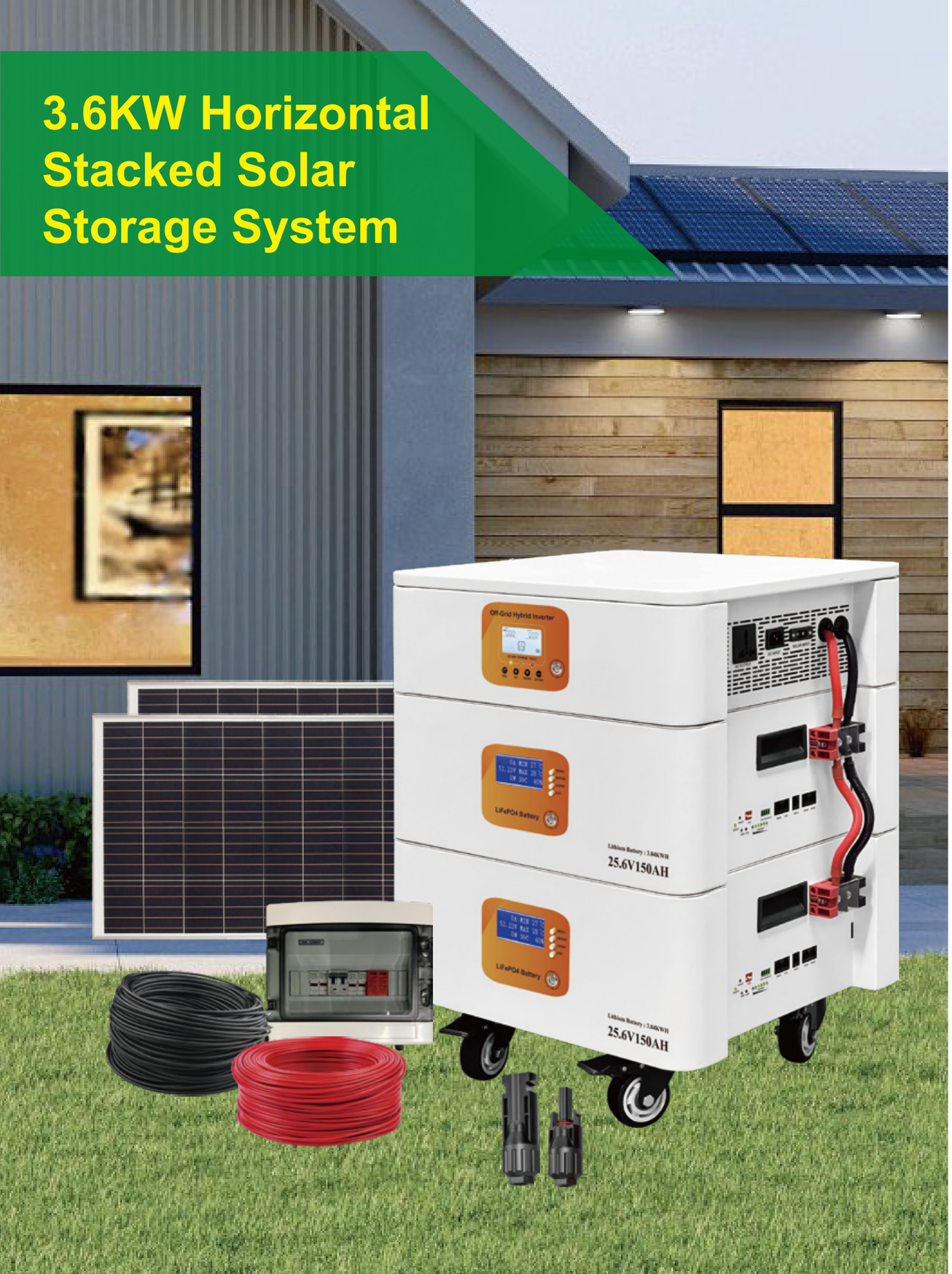
- Focus On Industrial Design
- Modular Design
- Free Stacking to increase the battery pack
- High Safety
- Long Cycle Life
- Brand new and grade A LiFePO4 cell



Battery Parameters		AL-BAT 512300	AL-BAT 512600	AL-BAT 512900	AL-BAT 5121200	Remarks
General						
Nominal Capacity		300AH	600AH	900AH	1200AH	0.3C charging,1C discharging, 25 ℃
Rated Voltage		51.2V				16S
Discharge Cut-off Voltage		44V				
Charging Cut-off Voltage		58.4V				
Float charging voltage		56V				
Continuous charging maximum current		100A				
Maximum current for continuous discharge		200A				
Battery Energy		15360Wh	30720Wh	46080Wh	61440Wh	
Rated Output Power		10000W				
Communication Interface		RS232/RS485/CAN				
Discharge working temperature		-15℃～50℃				
Charging working temperature		0℃～50℃				
Relative Humidity		5～90%				
Altitude		≤4000m				
Protection Grade		IP21				
Storage Time		Keep charging at least once every 3 months				
Battery Dimensions(mm)		750*450*260(Middle);750*450*350(Bottom)				
Carton Dimensions(mm)		815*425*520(Middle);815*520*520(Bottom)				
Net Weight(kgs)		105.5(Middle)； 110(Bottom)				
Gross Weight(kgs)		121(Middle)； 127(Bottom)				
Number of cycles		6000 times, DOD≥90% ; 10000 times, DOD≥80%				75% DOD 25℃
Main Parameters For BMS						
Overcharge Protection	Overcharge detection voltage (V)	Monomer 3.65 ± 0.05				
	Overcharge protection delay (S)	0.5				
Over Discharge Protection	Overdischarge detection voltage (V)	Monomer 2.7 ± 0.05				
	Overdischarge detection delay (S)	0.5				
Overcurrent Protection	Greater than rated current	1.1%				
Overcurrent Recovery	Disconnect Load	/				
Self Consumption Power	Working Current (mA)	≤10				
	Sleep Current (uA)	≤50				

Inverter Parameters	AL-INV 12000
Power	**12KVA / 12KW**
Maximum photovoltaic input power	12KW
Two AC outputs	Yes
Maximum one-way AC output power	12KVA / 12KW
Maximum two-channel AC output power	6KVA / 6KW
Maximum AC total output power	12KVA / 12KW
Parallel machine function	Yes, channel 6
Lithium-ion communication	Yes
Lithium battery activation	Yes (photovoltaic or mains)
Input	
Rated voltage	230VAC
Voltage range	170-280VAC (computer application); 90-280VAC (household appliances)
Frequency	50 / 60 Hz (automatic detection)
Output	
Rated voltage	220/230VAC±5%
Instantaneous power	22000VA
Frequency	50/60 Hz
Output waveform	Pure Sine Wave
Switching time	10ms (computer application); 20ms (household appliances)
Peak efficiency (PV to INV)	96%
Peak power (Battery to INV)	93%
Overpower protection	5s@＞=140% load; 10s@100%~140% load
Peak coefficient	3:1
Power factor	0.6~1 (capacitive or inductive)
Grid connection mode	Not support
PV Charging & AC Charging	
Charge mode	MPPT
Maximum photovoltaic input power	5000W*2
Maximum photovoltaic open circuit voltage	500VDC
MPPT voltage range	60VDC~500VDC
Maximum photovoltaic input current	18A*2
Maximum photovoltaic charging current	160A
Maximum mains charging current	120A
Maximum charging current	160A
Physical Property	
Inverter & Carton Dimensions(mm)	750*450*180(Inverter)； 825*530*260(Carton)
Weight(kgs)	25.3(Net Weight)； 28(Gross Weight)
Communication interface	RS232/RS485/CAN
LCD	Yes
Application Environment	
Operating temperature range	-10°C to 55°C
Storage temperature range	-15°C~ 60°C
Humidity	5% to 95% relative humidity (no frost)

3.6KW Horizontal Stacked Solar Storage System



Battery Parameters		AL-BAT 256150	AL-BAT 256300	AL-BAT 256450	AL-BAT 256600	Remarks
General						
Nominal Capacity		150AH	300AH	450AH	600AH	0.5C charging, 1C discharging, 25 ℃
Rated Voltage		25.6V				8S
Discharge Cut-off Voltage		22V				
Charging Cut-off Voltage		26.6V				
Float charging voltage		27V				
Continuous charging maximum current		100A				
Maximum current for continuous discharge		150A				
Battery Energy		3840Wh	7680Wh	11520Wh	15360Wh	
Rated Output Power		3600W				
Communication Interface		RS232/RS485/CAN				
Discharge working temperature		-20 ℃～55 ℃				
Charging working temperature		-0 ℃～45 ℃				
Relative Humidity		5～90%				
Altitude		≤4000m				
Protection Grade		IP22				
Storage Time		Keep charging at least once every 3 months				
Battery Dimensions(mm)		450*420*180(Middle) & 450*420*260(Bottom)				
Carton Dimensions(mm)		485*515*360(Middle) & 485*515*415(Bottom)				
Net Weight(kgs)		33(Middle)； 35(Bottom)				
Gross Weight(kgs)		40.85(Middle);42.85(Bottom)				
Number of cycles		6000 times, DOD≥90% ; 10000 times, DOD≥80%				75% DOD 25 ℃
Main Parameters For BMS						
Overcharge Protection	Overcharge detection voltage (V)	Monomer 3.65 ± 0.05				
	Overcharge protection delay (S)	0.5				
Over Discharge Protection	Overdischarge detection voltage (V)	Monomer 2.7 ± 0.05				
	Overdischarge detection delay (S)	0.5				
Overcurrent Protection	Greater than rated current	1.1%				
Overcurrent Recovery	Disconnect Load	/				
Self Consumption Power	Working Current (mA)	≤10				
	Sleep Current (uA)	≤50				

Inverter Parameters	AL-INV 3600
Power	**3.6KVA /3.6KW**
Maximum photovoltaic input power	3.6KW
Two AC outputs	Yes
Maximum one-way AC output power	3.6KVA / 3.6KW
Maximum two-channel AC output power	3.6KVA / 3.6KW
Maximum AC total output power	3.6KVA / 3.6KW
Parallel machine function	NO
Lithium-ion communication	Yes
Lithium battery activation	Yes (photovoltaic or mains)
Input	
Rated voltage	230VAC
Voltage range	170-280VAC (computer application); 90-280VAC (household appliances)
Frequency	50 / 60 Hz (automatic detection)
Output	
Rated voltage	220/230VAC±5%
Instantaneous power	5400VA
Frequency	50/60 Hz
Output waveform	Pure Sine Wave
Switching time	10ms (computer application); 20ms (household appliances)
Peak efficiency (PV to INV)	96%
Peak power (Battery to INV)	93%
Overpower protection	5s@＞=140% load; 10s@100%~140% load
Peak coefficient	3:1
Power factor	0.6~1 (capacitive or inductive)
Grid connection mode	Not support
PV Charging & AC Charging	
Charge mode	MPPT
Maximum photovoltaic input power	5000W
Maximum photovoltaic open circuit voltage	500VDC
MPPT voltage range	60VDC~500VDC
Maximum photovoltaic input current	18A
Maximum photovoltaic charging current	100A
Maximum mains charging current	100A
Maximum charging current	100A
Physical Property	
Inverter & Carton Dimensions(mm)	450*420*150(Inverter)； 520*500*230(Carton)
Weight(kgs)	12.3(Net Weight)； 13.7(Gross Weight)
Communication interface	RS232/RS485/CAN
LCD	Yes
Application Environment	
Operating temperature range	-10°C to 55°C
Storage temperature range	-15°C~ 60°C
Humidity	5% to 95% relative humidity (no frost)

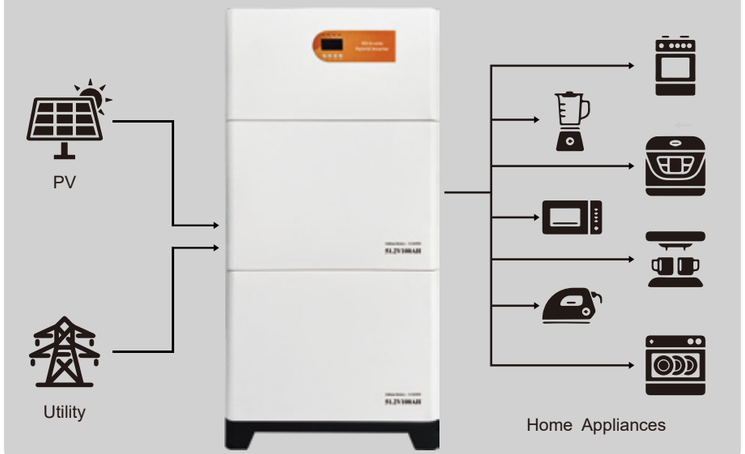
Vertical Stacked

Solar Storage System

- Pure Sine Wave Output
- Built-in BMS
- RS485 / RS232 / CAN
- Battery cycles>10000 times
- Support AC / DC priority output
- Support to expand the battery capacity



System Topology Diagram





Model	AL-Vertical 512100	AL-Vertical 512200
Comprehensive Parameters		
Battery Voltage	40V~58.4V	
Storage Capacity	5120Wh	10240Wh
Net Weight(Kgs)	68.6	120.4
Colour	White	
External Dimension(mm)	Inverter：600*318*210；Battery：600*430*210	
Warranty	Inverter：2 years, Battery：5 years	
Battery Module Parameters		
Type of battery	LiFePO4	
Capacity	100AH	100AH*2
Battery Cycle Life	6000 times, DOD≥90% ; 10000 times, DOD≥80%	
Modular Structure	1P16S	1P16S*2
Overall Characteristic		
Capacity for assembled cell discharging by 0.2C	≥100Ah	
Standard Charge Condition	Charge with 0.5C constant current and 58.4Vconstant voltage, charge to 58.4V,continue charging till current declineto ≤0.01C	
Maximum Charge Current	100A	
Maximum Discharge Current		
Internal Resistance	≤80mΩ Assemblage Impedance	
Cycle Life	≥10000@25℃， 80%EOL	
Recommend Charging Temperature	0℃～50℃	
Recommend Discharging Temperature	-15℃～50℃	
Storage Temperature		
Humidity	0-90%	
Maximum Altitude	3000m	
Functional Configuration		
LED Panel (Light Emitting Diode)	YES	
Communication	RS485,CAN,RS232	
IP Rating	IP21	
Inverter	6KW	
LED Power Display	Traffic Light Display	
BMS Control	Control Battery Performance	
Gross Weight(Kgs)	83.6Kg	147.4Kg
Package Size(mm)	680*510*300(Inverter) ; 685*515*400(Battery)	
Certification		
Safety	IEC62109-1, IEC62109-2,UL1741	
EMC	EN61000-6-1, EN61000-6-3, FCC 15 class B	
RoHS	Yes	

All In One Hybrid Inverter

Output Rated Power: 12KW



Double output | Lithium battery activation function | Double input | Household | PF=1.0 | PV 60-500Vdc | Pure sine wave | RS232 RS485

Model	AL-All 4812000
Capacity	12KVA /12KW
Maximum PV Input Power	12KW
Twin AC Output Function	Yes
Maximum Main Output Power	12KVA /12KW
Maximum Second Output Power	6KVA / 6KW
Maximum Total Output Power	12KVA / 12KW
Parallel Capability	No
Lithium Battery Communication	Yes (RS485)
Lithium Battery Activation	YES(By PV or Utility)
Built-in WIFI	Optional
Input	
Nominal Voltage	220-240VAC
Acceptable Voltage Range	170-280VAC(For personal Computer);90-280VAC(For Home Appliances)
Frequency	50 / 60 Hz (Auto sensing)
Output	
Nominal Voltage	220 / 230 / 240VAC
Surge Power	22000VA
Frequency	50 / 60 Hz
Waveform	Pure Sine Wave
Transfer Time	10ms(For personal Computer);20ms(For Home Appliances)
Peak Efficiency（PV to INV）	96%
Peak Efficiency（Battery to INV）	93%
Overload Protection	5s@＞=140% load; 10s@110%~140% load
Crest Factor	3:1
Admissible Power Factor	0.6~1 (inductive or capacitive)
Battery	
Battery Voltage	40-60VAC
Maximum Discharge Current	220A
Floating Charge Voltage	54VDC
OverCharge Protection	63VDC
Charging Method	CC / CV
Solar Charger & AC Charger	
Solar Charger TYPE	MPPT
Max.PV Array Power	7500W*2
Max. PV Array Open Circuit Voltage	500VDC
PV Array MPPT Voltage Range	60VDC~500VDC
Max. Solar Input Current	22.5A*2
Max. Solar Charge Current	160A
Max. AC Charge Current	120A
Max. Charge Current	160A
Physical	
Dimensions, length x width x height (mm)	500*430*130(Carton）
Net weight (Kgs)	14.5
Communication interface	RS232 / RS485 / Dry Contact
LCD	Yes
Application Environment	
Operating Temperature Range	-10°C to 55°C
Storage temperature	-15°C~ 60°C
Humidity	5% to 95% Relative Humidity (Non-condensing)
Ingress Protection	IP21

ALL Series

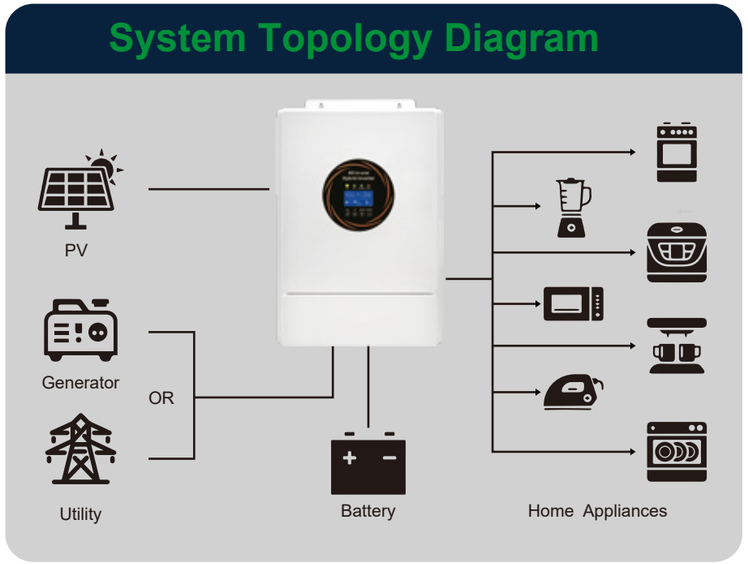
All In One Hybrid Inverter

Output Rated Power: 6KW



- CAN / RS232 / RS485 Communication.
- High energy effciency.
- Maximum support for 6 PCS in parallel.
- Compatible with Multi-brand inverters.
- Long Cycle Life
- Hybrid ON / OFF grid optional.







Model	AL-All 486000Pro
Input	
Single Phase	L+N+PE
Rated Input Voltage	220/230/240VAC
Voltage Range	90-280VAC ± 3V (Normal Mode) 170-280VAC ± 3V
Frequency Range	50Hz/60Hz (Adaptive)
Output	
Rated Output Power	6000W
Output Voltage	220/230/240VAC±5%
Output Frequency	50/60Hz±0.1%
Waveform	Pure Sine Wave
Switch Time	10ms(Typical)
Peak Power	12400VA
Overload Capacity	10.5s@110%~150% Load ; 5.5s@150%~200% Load ; 200ms@>200% Load
Peak Efficiency	>94%
Battery	
Rated Voltage	48Vdc
Constant Voltage Charging Voltage	56.4Vdc
Float Charging Voltage	54Vdc
Charger	
PV Charging Method	MPPT
PV Maximum Input Power	6000W
MPPT Input Voltage Range	120~500Vdc
Optimal working range of Vmp	300~400Vdc
Maximum PV Input Voltage	500Vdc
Maximum PV Input Current	20A
Maximum AC Charging Current	100A
Maximum AC Input Current	80A
Maximum Charging Current	120A
Display	
LCD Interface	Operating / Load / Input / Output....
Communication	
Embedded Interfaces	BMS / RS232 / RS485 / CAN / USB / Dry Contact
Parallel Interface	Yes
General	
Operating Environment Temperature	-10~50℃
Operating Environment Humidity	20%~95% (Without Condensation)
Storage Temperature	-15~60℃
Altitude	The altitude should not exceed 1000m
Noise	≤50db
Dimension(D*W*H)	536*352*135mm
Net Weight(kgs)	10.5

All In One Hybrid Inverter

Output Rated Power: 3.6KW



Double Output | Lithium battery activation function | Double Input | Household | PF=1.0 | PV 60-500Vdc | Pure Sine Wave | RS232 RS485

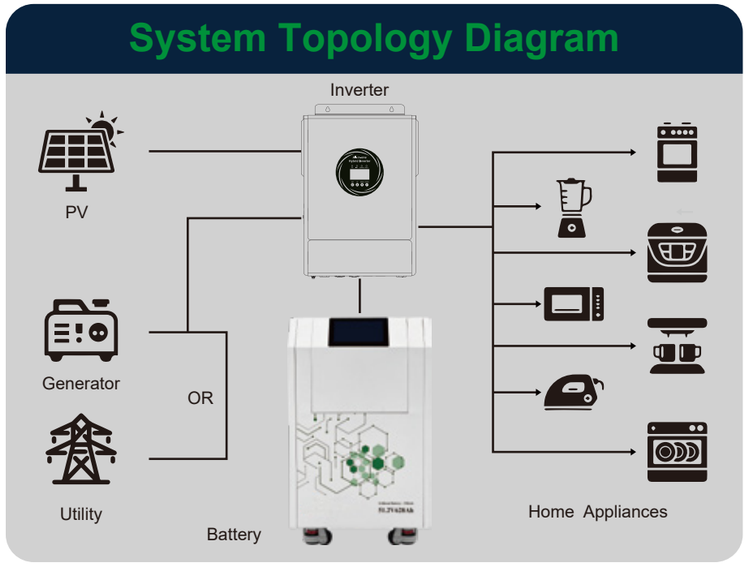
Model	AL-All 243600
Capacity	3.6KVA /3.6KW
Maximum PV Input Power	3.6KW
Twin AC Output Function	Yes
Maximum Main Output Power	3.6KVA / 3.6KW
Maximum Second Output Power	3.6KVA / 3.6KW
Maximum Total Output Power	3.6KVA / 3.6KW
Parallel Capability	Not Supported
Lithium Battery Communication	Yes (RS485)
Lithium Battery Activation	YES(By PV or Utility)
Built-in WIFI	Optional
Input	
Nominal Voltage	230VAC
Acceptable Voltage Range	170-280VAC(For personal Computer);90-280VAC(For Home Appliances)
Frequency	50/60 Hz (Auto sensing)
Output	
Nominal Voltage	220/230VAC±5%
Surge Power	22000VA
Frequency	50/60 Hz
Waveform	Pure Sine wave
Transfer Time	10ms(For personal Computer);20ms(For Home Appliances)
Peak Efficiency（PV to INV）	96%
Peak Efficiency（Battery to INV）	93%
Overload Protection	5s@＞=140% load; 10s@110%~140% load
Crest Factor	3:1
Admissible Power Factor	0.6~1 (inductive or capacitive)
Battery	
Battery Voltage	24VDC
Maximum Discharge Current	220A
Floating Charge Voltage	54VDC
OverCharge Protection	63VDC
Charging Method	CC/CV
Solar Charger & AC Charger	
Solar Charger TYPE	MPPT
Max.PV Array Power	5000W
Max. PV Array Open Circuit Voltage	500VDC
PV Array MPPT Voltage Range	60VDC~500VDC
Max. Solar Input Current	18A
Max. Solar Charge Current	100A
Max. AC Charge Current	100A
Max. Charge Current	100A
Physical	
Dimensions, length x width x height (mm)	456*299*111（Inverter）；485*340*165（Package）
Net weight (Kgs)	5.5
Communication interface	RS232 / RS485 / Dry Contact
LCD	Yes
Application Environment	
Operating Temperature Range	-10°C to 55°C
Storage temperature	-15°C~ 60°C
Humidity	5% to 95% Relative Humidity (Non-condensing)
Ingress Protection	IP21

Movable Lithium Battery Pack

10000 Cycles , 51.2V 628Ah







Item		AL-MB 512628	Remarks
General			
Nominal Capacity		628Ah	0.5C charging, 1C discharging, 25 ℃
Rated Voltage		51.2V	16S
Discharge Cut-off Voltage		44V	
Charging Cut-off Voltage		58.4V	
Float charging voltage		56V	
Continuous charging maximum current		150A	
Maximum current for continuous discharge		200A	
Battery Energy		32000Wh	
Rated Output Power		10000W	
Communication Interface		RS485 RS232 CAN	
Discharge working temperature		-20℃～55℃	
Charging working temperature		-0℃～55℃	
Relative Humidity		5～90%	
Altitude		≤4000m	
Protection Grade		IP22	
Storage Time		Keep charging at least once every 3 months	
Weight（kg）		Net Weight：210；Gross Weight：238.5	
Dimensions（mm）		740*445*745(Product)；830*530*930(UN Wooden)	
Number of cycles		6000 times, DOD≥90% ; 10000 times, DOD≥80%	75% DOD 25℃
Main Parameters For BMS			
Overcharge Protection	Overcharge detection voltage (V)	Monomer 3.65 ± 0.05	
	Overcharge protection delay (S)	0.5	
Over Discharge Protection	Overdischarge detection voltage (V)	Monomer 2.7 ± 0.05	
	Overdischarge detection delay (S)	0.5	
Overcurrent Protection	Greater than rated current	1.1%	
Overcurrent Recovery	Disconnect Load	/	
Self Consumption Power	Working Current (mA)	≤10	
	Sleep Current (uA)	≤50	

Movable
Lithium Battery Pack

- Touch LCD Display.
- Built in intelligent BMS.
- RS485 / RS232 / CAN.
- Maximum support for 6 PCS in parallel.
- Compatible with Multi-brand inverters.
- Designed for a lifespan of 15 years, with a maximum of 10000 cycles.

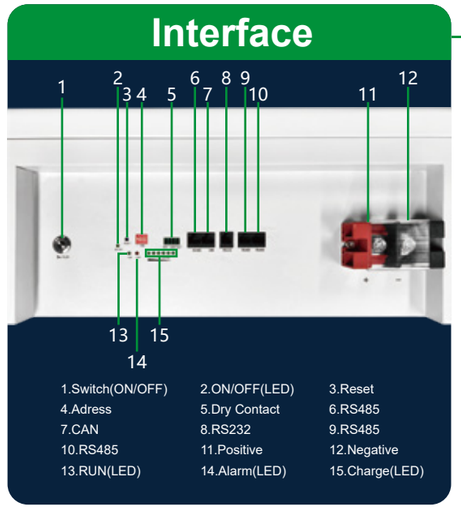


Scope

This product is suitable for 51.2V product applications and can be used in conjunction with photovoltaics and inverters to supply power to household televisions, air conditioners, lighting fixtures, etc. This product has voltage, current, and temperature protection functions.

Item		AL-MB 512519	Remarks
General			
Nominal Capacity		519Ah	0.3C charging, 1C discharging, 25 ℃
Rated Voltage		51.2V	16S
Discharge Cut-off Voltage		44V	
Charging Cut-off Voltage		58.4V	
Float charging voltage		56V	
Continuous charging maximum current		150A	
Maximum current for continuous discharge		200A	
Battery Energy		26000Wh	
Rated Output Power		10000W	
Communication Interface		RS485 RS232 CAN	
Discharge working temperature		-20 ℃ ~ 55 ℃	
Charging working temperature		-0 ℃ ~ 55 ℃	
Relative Humidity		5 ~ 90%	
Altitude		≤4000m	
Protection Grade		IP22	
Storage Time		Keep charging at least once every 3 months	
Net Weight		175kgs	
Number of cycles		6000 times, DOD≥90% ; 10000 times, DOD≥80%	75% DOD 25 ℃
Main Parameters For BMS			
Overcharge Protection	Overcharge detection voltage (V)	Monomer 3.65 ± 0.05	
	Overcharge protection delay (S)	0.5	
Over Discharge Protection	Overdischarge detection voltage (V)	Monomer 2.7 ± 0.05	
	Overdischarge detection delay (S)	0.5	
Overcurrent Protection	Greater than rated current	1.1%	
Overcurrent Recovery	Disconnect Load	/	
Self Consumption Power	Working Current (mA)	≤10	
	Sleep Current (uA)	≤50	

Interface





Movable
Lithium Battery Pack

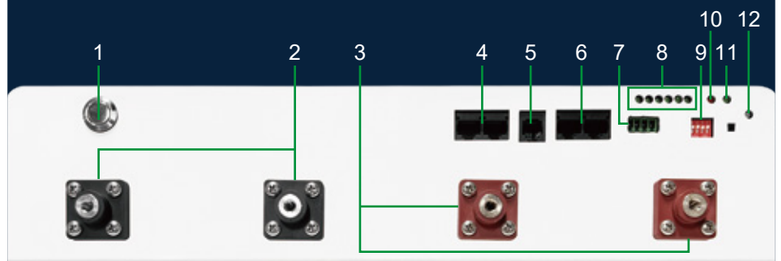
- Touch LCD Display.
- Built in intelligent BMS.
- RS485 / RS232 / CAN.
- Maximum support for 6 PCS in parallel.
- Compatible with Multi-brand inverters.
- Designed for a lifespan of 15 years, with a maximum of 10000 cycles.



Item		AL-MB 512300	AL-MB 512346	Remarks
General				
Nominal Capacity		300Ah	346Ah	0.3C charging, 1C discharging, 25 ℃
Rated Voltage		51.2V		16S
Discharge Cut-off Voltage		44V		
Charging Cut-off Voltage		58.4V		
Float charging voltage		56V		
Continuous charging maximum current		150A		
Maximum current for continuous discharge		200A		
Battery Energy		15000Wh	18000Wh	
Rated Output Power		10000W		
Communication Interface		RS485 RS232 CAN		
Discharge working temperature		-20℃～55℃		
Charging working temperature		-0℃～55℃		
Relative Humidity		5～90%		
Altitude		≤4000m		
Protection Grade		IP22		
Storage Time		Keep charging at least once every 3 months		
Net Weight		129kgs	163kgs	
Number of cycles		6000 times, DOD≥90% ; 10000 times, DOD≥80%		75% DOD 25℃
Main Parameters For BMS				
Overcharge Protection	Overcharge detection voltage (V)	Monomer 3.65 ± 0.05		
	Overcharge protection delay (S)	0.5		
Over Discharge Protection	Overdischarge detection voltage (V)	Monomer 2.7 ± 0.05		
	Overdischarge detection delay (S)	0.5		
Overcurrent Protection	Greater than rated current	1.1%		
Overcurrent Recovery	Disconnect Load	/		
Self Consumption Power	Working Current (mA)	≤10		
	Sleep Current (uA)	≤50		



Interface

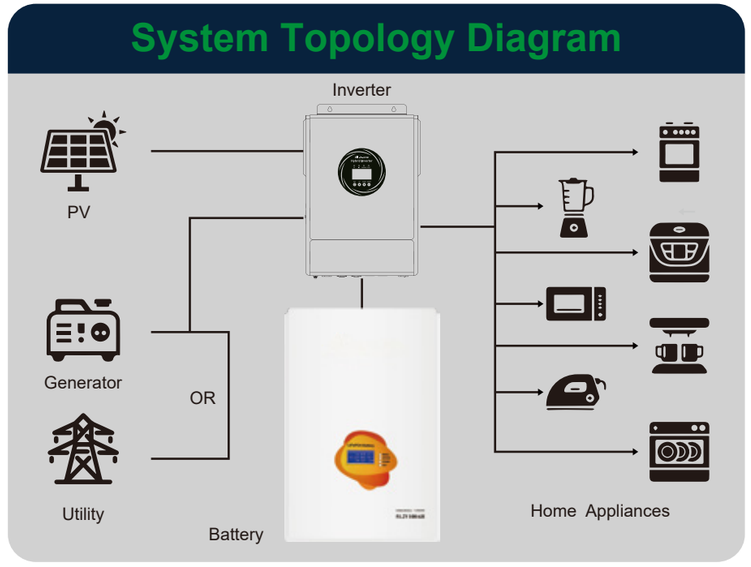


1	ON/OFF(Switch)	2	Negative	3	Positive
4	RS485A(to Inverter)	5	RS232	6	RS485B(Parallel)
7	Dry Contact	8	SOC(LED)	9	Address
10	Alarm(LED)	11	RUN(LED)	12	ON/OFF(LED)

Wall Mounted
Lithium Battery Pack

Brand New and A grade lithium iron phosphate battery, warranty of 5 years, SMART BMS support Bluetooth, RS485/CAN communication, support series and parallel.





Model	AL-WM 512100	AL-WM 512200
COMPREHENSIVE PARAMETERS		
Battery Voltage	40V~58.4V	
Storage Capacity	5120Wh	10240Wh
Weight	45.5KGS	116.1KGS
Colour	White	
External Dimension	601.5*400*155mm	651.5*445*235mm
Warranty	5 Years	
BATTERY MODULE PARAMETERS		
Type of Battery	LiFePO4	
Capacity	102Ah	206Ah
Battery Cycle Life	6000 times, DOD≥90% ; 10000 times, DOD≥80%	
Modular Structure	1P16S	
OVERALL CHARACTERISTIC		
Capacity for assembled cell discharging by 0.2C	≥100Ah	≥200Ah
Standard Charge Condition	Charge with 0.5C constant current and 58.4Vconstant voltage, charge to 58.4V,continue charging till current declineto ≤0.01C	
Maximum Charge Current	100A	200A
Maximum Discharge Current		
Internal Resistance	≤80mΩ Assemblage Impedance	
Cycle Life	≥10000@25℃,80%EOL	
Recommend Charging Temperature	0℃～50℃	
Recommend Discharging Temperature	-15℃～50℃	
Storage Temperature		
Humidity	0-90%	
Maximum Altitude	3000m	
FUNCTIONAL CONFIGURATION		
LED Panel (Light Emitting Diode)	YES	
Communication	RS485,CAN,RS232	
IP Rating	IP21	
Parallel Capability	Up to 6 units	
LED Power Display	Traffic Light Display	
BMS Control	Control Battery Performance	
Package Size	675*515*265mm (Carton) 685*525*280mm (UN Wooden)	725*520*310mm (Carton) 735*530*325mm (UN Wooden)
CERTIFICATION		
Safety	IEC62109-1, IEC62109-2,UL1741	
EMC	EN61000-6-1, EN61000-6-3, FCC 15 class B	
RoHS	Yes	

WM 512200 WM 512100

48V 100AH

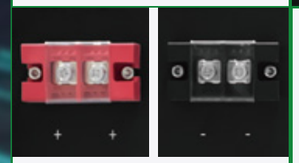
Rack Lithium Battery Pack



- 4.8kW.h Energy.
- 10000 Cycles.
- Calender Life >10 Years.
- Server rack mounting Installation.
- 100AMP Smart BMS with Communication.
- Support RS485 Communication.
- Support connection of 16 PCS in Parallel.
- Free-Maintenance.



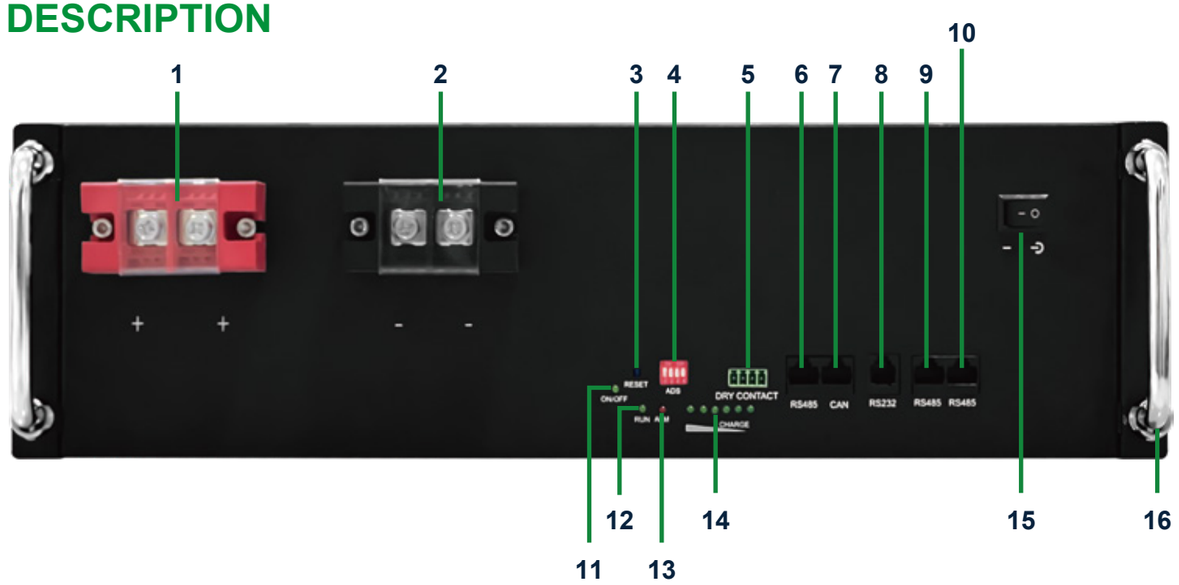








DESCRIPTION



1	Positive	2	Negative	3	Reset	4	Address	5	Dry contact	6	RS485A(to Inverter)
7	CAN	8	RS232	9 10	RS485B(Parallel Operation)			11	ON/OFF(LED)	12	RUN(LED)
13	Alarm(LED)	14	Charge(LED)	15	Main Switch	16	Handle				

MODEL	AL-RT 48100
Electrical Characteristic	
Norminal Votalge	48V
Norminal Capacity	100AH
Norminal Energy	4.8KWH
Internal Resistance	≤50mΩ
Self Discharge Rate	≤3% per month@25°C
Max Connection	16pcs in parallel
Cycle Life	">10000 cycles @1C@50%D0D@25°C"
Working Temperature	-20°C~60°C/-68°F~140°F
Storage Temperature	-20°C~45°C/-68°F~113°F
Mechanical Characteristic	
Battery Cell Type	Prismatic battery cell
Battery Cell Material	Lithium iron phosphate
Battery Cell Capacity	100Ah
Battery Cell Layout	15S1P
Shell Material	Iron
Product Size	480*476*133.5mm
Dimension	510*505*295mm
Protection Level	IP20
Warranty	3 years
Accessory	"1.2m 4AWG positive&negative wire *2pcs User manual*1pcs, lm RJ45 wire *1pcs"
Interface	"M8 connection terminal*2(Positive*1&Negative*1) RS485 terminal*2 Address diat*1/soc indicator*1"
Charging & Discharging Characteristic	
Standard Charge Current	50A
Max Charge Current	100A
Charge Method	CC-CV
Charge Cut-off Voltage	54.75V
Standard Discharge Current	50A
Max Discharge Current	100A
Discharge Cut Off Voltage	39V
BMS Characteristic	
Continuous Discharge Current	100A(MAX)
Overcurrent Protection	110A
Overcurrent Reaction Time	30ms
Overcharge Protection	54.75V
Overdischarge Protection	39V
Communication Function	RS485，CAN，RS232

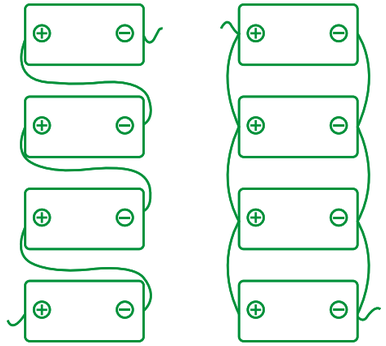
BP Series
Lithium Battery Pack

From 50Ah to 200Ah,1:1 perfect replacement of Lead-acid and Gel batteries.The most cost-effective solution for 12V and 24V home energy storage systems.



BP Series
128050 / 128100 / 128150 / 128200

- UPS
- Solar & Wind Power System
- Golf Cart
- Electric Vehicle, E-bike, E-rickshaw etc
- Lighting





Model	AL-BP 128050	AL-BP 128100	AL-BP 128150	AL-BP 128200
Electrical Characteristics				
Nominal Voltage	12.8V			
Nominal Capacity	50Ah@0.5C	100Ah@0.5C	150Ah@0.5C	200Ah@0.5C
Energy	640Wh	1280Wh	1920Wh	2560Wh
Cycle Life	6000 Cycles @0.5C Charging / Discharging until 80%			
Self Discharge	≤3.5% per month at 25℃			
Standard Charging				
Max. Charging Voltage	14.0~14.6V			
Charging Mode	At 0℃~45℃ temperature,charged to 14.6V at a constant current of 0.5C5A,and then,changed continuously with constant voltage of 14.6V until the current was not more than 0.05C5A.			
Charging Current	10A	20A	30A	40A
Max.Charging Current	25A	50A	75A	100A
Standard Discharging				
Discharging Current	50A	100A	150A	200A
Max. Continuous Current				
Discharging Cut-Off Voltage	10.0			
Operating Condition				
Charge Temperature	0°C to 45°C (32°F to 113°F) @60±25% Relative Humidity			
Discharge Temperature	-20°C to 60°C (-4°F to 140°F) @60±25% Relative Humidity			
Storage Temperature	0°C to 45°C (32°F to 113°F) @60±25% Relative Humidity			
Water Dust Resistance	IP55			
Structure				
Casing	Iron			
Dimension(L*W*H)	230*145*210mm	340*185*220mm	505*185*240mm	525*240*220mm
Net Weight	Approx. 4.5kgs	Approx. 13.15kgs	Approx. 16.2kgs	Approx. 26.8kgs
Gross Weight	Approx. 4.8kgs	Approx. 13.7kgs	Approx. 16.9kgs	Approx. 27.8kgs

Application Area

We are able to provide comprehensive services for industrial, commercial and residential projects.We have rich experience in the operations of roof and ground PV system, and can meet the needs of the different clients, and provide timely and thoughtful services to ensure revenue.



Communication Base Station



Emergency Power Supply



RV & Camper



Yachts & Boats



Household Energy Storage



Fishery / AC / Solar all in one



Commercial Energy Storage



Industrial & Commercial Energy Storage

Case



















Our Factory











