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ZWAYN

Lithium Battery Overall Solution Supplier

ZWAYN



Website



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BETTER POWER ZWAYN ENERGY

ZWAYN

- Dongguan ZWAYN New Energy Co.,Ltd is specialized in 12V lifepo4 series, 48V HESS series and 192V, 384V high voltage series lithium batteries.
- Our company has very professional BMS developing team, Mechanical design team and ISO complied with manufacturer team. we accept the OEM and ODM services.

• Zwayn Energy, adheres to the strategy of internationalization and participates in the exhibition with its new energy products. at the exhibition, we showed the power supply equipment of wind and solar energy storage,energy storage equipment of communication base station, module design and application scheme, etc. sunnew attracted wide attention from many international guests, they stopped at the booth to understand and negotiate in depth.

• Zwayn Energy will, always, maintain high-quality products, increase the ability of independent innovation, and develop more lithium products eenergy storage system suitable for the market. under the background of economic globalization, let the high-level "Zwayn Energy manufacturing" represent "made in china" go abroad, move towards the world, and win respect and praise in the fierce international market



About Zwayn Energy

Dongguan ZWAYN New Energy Co.,Ltd formerly known as the lithinm battery business division of ZWAYN International (Hong Kong)group, which was established in 2006. with more than 10 years of supply chain accumulation, a modern enterprise integrating the design, research and development, production and sales of lithium battery products was established in Changping, Dongguan in 2011.

Zwayn Energy insists on innovating the craftsman spirit of enabling products to provide customers with professional lithium battery solutions.The company adopts modern production management system and quality management system, has experienced R & D team and efficient and collaborative management team, and has obtained a number of quality certification of import and export certificates at home and abroad.

Top BMS (Battery Management System) development team. Zwayn Energy team have our own BMS design team. We have a complete development process from the selection of BMS electronic components to circuit design and verification. Our BMS design team has deep cooperation with Switzerland Studer and German SMA inverters.

After more than 12 years of precipitation, we start from the battery cell. Zwayn Energy adheres to the concept of using new energy technology to benefit mankind, committed to making new energy more reliable, safe and intelligent, and practicing the common goal of sustainable development of all mankind. In the future, Zwayn Energy will strive to become the most influential lithium battery brand in the world based on domestic and global development policies. Zwayn sincerely looks forward to cooperating with you for mutual development and realizing win-win future.



Production base



Production Lines



BMS Engineering



Mechanical Design

Rack Mounted Energy Storage Battery



Low Voltage-2.5kWh Rack Mounted Storage Battery

ESS-2560



Parameters

Product model	ESS-2560
Product specification	51.2V 50Ah
Nominal voltage	51.2V
Nominal capacity	50Ah
Cell type	(LFP)
Standard charge voltage	58.4V(adjustable)
Max charge current	50A
Discharge cut-off voltage	40V(adjustable)
Max discharge current	50A
Display	LCD(Optional)
Communication interface	RS485、RS232、CAN(Optional)
Cycle life*	≥6000 Cycles (80%DOD)
Charge temperature range	0~65°C
Discharge temperature range	-20~65°C
Parallels function	Support 10 Units In Parallels
Dimensions	442X400X133MM
Weight	26Kg
Installation method	(Cabinet type)

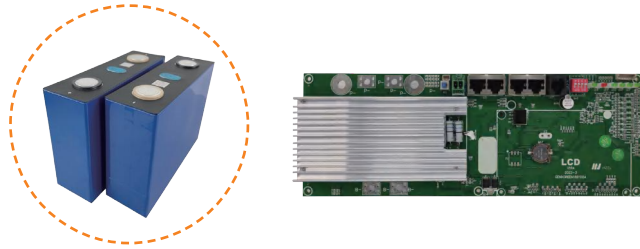
*Test conditions: 80% DOD, 0.2C charge & discharge @25°C



- Higher specific energy
- Easy to install
- Support parallel operation
- Long cycle life
- Support deep customization
- Environmental protection and no pollution

Low Voltage-5kWh Rack Mounted Storage Battery

ESS-5120



Parameters

Product model	ESS-2560
Product specification	51.2V 100Ah
Nominal voltage	51.2V
Nominal capacity	100Ah
Cell type	(LFP)
Standard charge voltage	58.4V(adjustable)
Max charge current	100A
Discharge cut-off voltage	40V(adjustable)
Max discharge current	100A
Display	LCD(Optional)
Communication interface	RS485、RS232、CAN(Optional)
Cycle life*	≥6000 Cycles (80%DOD)
Charge temperature range	0~65°C
Discharge temperature range	-20~65°C
Parallels function	Support 15 Units In Parallels
Dimensions	440X440X132MM(3U)
Weight	47.5Kg
Installation method	Rack mounted

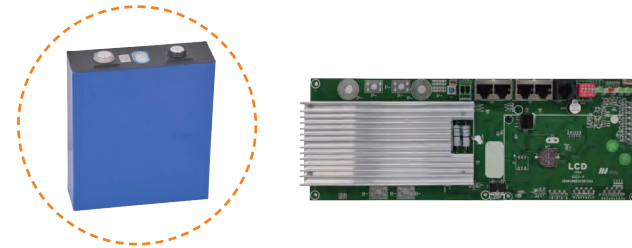
*Test conditions: 80% DOD, 0.2C charge & discharge @25°C



- Higher specific energy
- Easy to install
- Support parallel operation
- Long cycle life
- Support deep customization
- Environmental protection and no pollution

Low Voltage-10kWh Rack Mounted Storage Battery

ESS-10240



Parameters

Product model	ESS-10240
Product specification	51.2V 200Ah
Nominal voltage	51.2V
Nominal capacity	200Ah
Cell type	(LFP)
Standard charge voltage	58.4V(adjustable)
Max charge current	80A
Discharge cut-off voltage	40V(adjustable)
Max discharge current	150A
Display	LCD(Optional)
Communication interface	RS485、RS232、CAN(Optional)
Cycle life*	≥6000 Cycles (80%DOD)
Charge temperature range	0~65°C
Discharge temperature range	-20~65°C
Parallels function	Support 15 Units In Parallels
Dimensions	442X520X320MM
Weight	82Kg
Installation method	(Cabinet type)

*Test conditions: 80% DOD, 0.2C charge & discharge @25°C



- Higher specific energy
- Easy to install
- Support parallel operation
- Long cycle life
- Support deep customization
- Environmental protection and no pollution

High Voltage- Energy Storage System



High Voltage-384V 10kWh Floor Stand Battery Solution

HV-BOX2-384



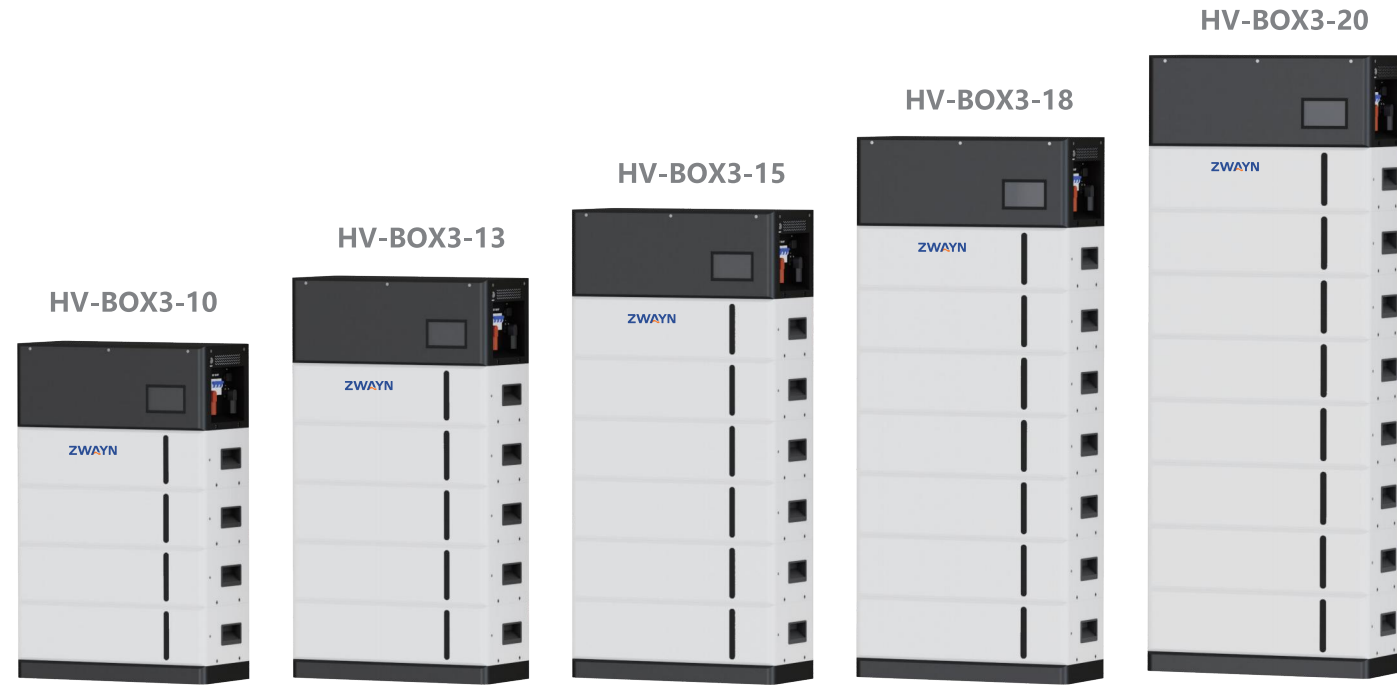
Parameters

Product Model	HV-BOX2-384
Product Specification	384V 10kWh
Nominal Voltage	384V
Nominal Capacity	27Ah
Cell Type	(LFP)
Standard Charge Voltage	438V
Max Charge Current	1C
Discharge Cut-Off Voltage	300V
Max Discharge Current	1C
Protection level	4 levels Battery Management Protection
Communication Interface	CAN
Cycle Life *	≥6000 Cycles (80%DOD)
Charge Temperature Range	0~65°C
Discharge Temperature Range	-20~65°C
Parallels Function	Support 10 Units In Parallels
Dimensions	980*520*200MM
Weight	92Kg
Installation Method	(Floor Mounted Type)

*Test Condition: 80% DOD, 0.2C charge & discharge @25°C



- Higher specific energy
- Easy to install
- Support parallel operation
- Long cycle life
- Support deep customization
- Environmental protection and no pollution



High Voltage Stackable Battery- Flexible Combination

Parameters

Product Model	HV-BOX3-10	HV-BOX3-13	HV-BOX3-15	HV-BOX3-18	HV-BOX3-20
Nominal Energy	10.24kWh	12.8kWh	15.36kWh	17.92kWh	20.48kWh
Nominal Voltage	204.8V	256V	307.2V	358.4V	409.6V
Nominal Capacity	50Ah				
Series No. of Battery Module	4*51.2V 50Ah	5*51.2V 50Ah	6*51.2V 50Ah	7*51.2V 50Ah	8*51.2V 50Ah
Standard Charge Voltage	227.2V	284V	340.8V	397.6V	454.4V
Max Charge Current	1C (50A)				
Discharge Cut-Off Voltage	179.2V	224V	268.8V	313.6V	358.4V
Max Discharge Current	1C (50A)				
Protection level	2 levels Battery Management Protection				
Monitoring System-	Wifi cloud monitoring + remote OTA				
Communication Interface	CAN&RS485				
Cycle Life *	≥6000 cycles (@80%DOD)				
Parallels Function	Support 10 clusters in parallel connection, without external control module.				
Dimensions (H*L*W)	920*600*260mm	1080*600*260mm	1240*600*260mm	1400*600*260mm	1560*600*260mm
Weight	137KG	165KG	193KG	221KG	249KG
Installation Method	Stackable standing				

Solar Energy Storage System Plug and Play AC Output Socket

All In One Energy BOX
5KWH+3KW/5KW

Home All-in-one ESS



All In One Energy BOX (5kWh+3kW/5kW)

ES-BOX1



Parameters

Electrical

Parameters	Powerstation- 5kWh
Nominal Voltage	51.2V
Nominal Capacity	100Ah
Nominal Energy	5.12kWh
Operating Voltage Range	40~58.4V
Standard Charging Current	100A
Standard Discharging Current	100A
Max. Continues Output power	5kW

Protection

Over Charge	✓
Over Discharge	✓
Over Current	✓
Reverse Connection	✓
Short Circuit	✓
Temperature	✓

Physical

Physical	Physical
Dimensions	W710*D300*H670mm
Weight	≈80kg

Inverter

Power	3200W(Pure Sine wave)
Solar Panel Input Spec.	120V~450VDC, ≤2500W
Charging Temperature	0°C~55°C
Discharging Temperature	-20°C~55
AC Output	110VAC/230VAV
Cycle Life*	≥6000 Cycles (80%DOD)
Transfer time	≤10ms typical (UPS); 20ms typical (Appliances)
Monitor	LCD display screen, APP Monitoring(Optional)

*Test Condition: 80% DOD, 0.2C charge & discharge @25°C



Higher specific energy



Stable frequency constant voltage AC output



Long cycle life



Easy to move



Support deep customization



Environmental protection and no pollution

All-in-one 5kW Inverter module + 5kWh LFP Battery Module Flexible Combination



Inverter Parameter – (Optional)

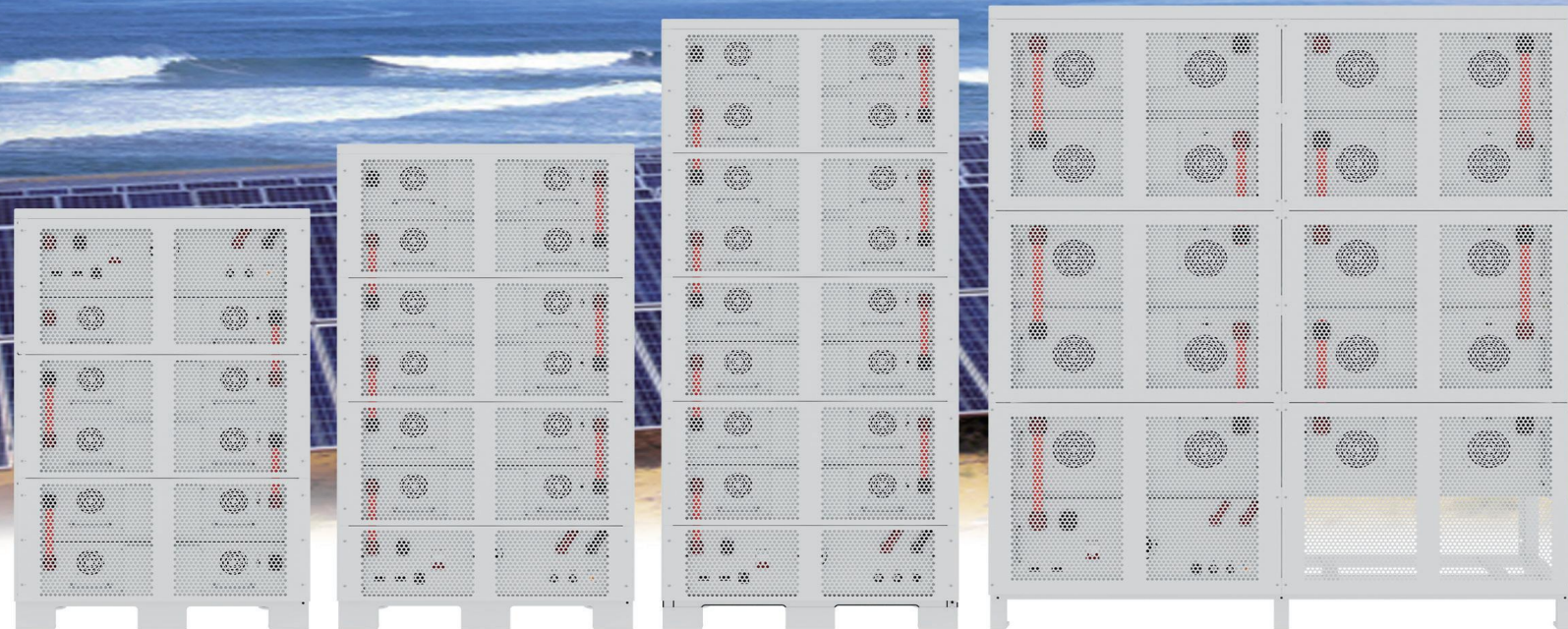
Inverter Power	5000W	5000W
Rated AC Input & Output Voltage	220/230Vac	110/120Vac
AC Output Frequency Range	50Hz ± 0.3Hz / 60Hz ± 0.3Hz	
AC Output Socket	3*AC Output (International universal socket)	
(UPS)/Transfer Time (UPS)	10ms (Typical Value)	
Efficiency	>92%	
On-load Motor Capacity	4HP	2HP
PV Charge	145Vdc (60-145Vdc); MC4 Terminal (T4+,T4-)	
Max. PV Power	4400W (Maximum PV Input Current:50A)	
Dimension	L*W*H 530*485*150mm (body), 530*485*190mm (with stand) [22mm space between modules]	
Weight	30kg	

All-in-one 5kW Inverter module + 5kWh LFP Battery Module Flexible Combination

LiFePO4 Battery Module – Flexible Stacked Installation (6 modules max.)

Product Model	M-BOX1 (1)	M-BOX1 (2)	M-BOX1 (3)	M-BOX1 (4)	M-BOX1 (5)	M-BOX1 (6)
Nominal Voltage	51.2V					
Nominal Capacity	100Ah	200Ah	300Ah	400Ah	500Ah	600Ah
Nominal Energy	5kWh	10kWh	15kWh	20kWh	25kWh	30kWh
Voltage Working Range	40V~57.6V					
Standard Charge Current	0.2C/module					
Max. Charge Current	80A/module					
Max. Continuous Discharge Current	100A/module					
Maximum load power	4KW	8KW	12KW	16KW	20KW	24KW
Cycle Life*	≥6000 cycles (*Test Condition: 80% DOD, 0.2C current @25°C)					
Cell Equalizer Current	1~5A max.					
Communication Interface	RS232: Upper software communication port RS485 & CAN: Inverter communication port Double RS485 Battery parallel communication port					
BMS Protection	Overcharge, Overdischarge, Overcurrent, Shortcircuit, Over temperature protections, Cell balance					
Warranty	5 Years Warranty(Battery); 15 years design service life					
Dimension: (With inverter) L*W*H	530*485*362mm	530*485*514mm	530*485*686mm	530*485*858mm	530*485*1030mm	530*485*1202mm
Weight	45kg	90kg	135kg	180kg	225kg	270kg
Enclosure Protection	IP20					
Operating Temperature	Charge: 0°C~45°C; Discharge: -10°C~55°C; Storage: -10°C~45°C					
Humidity	≤95%					
Certificates	Cell: UL1973/IEC62619/CE/UN38.3; Battery: UN38.3/MSDS					
Flexible Function	Battery system only, can be compatible with other inverter brands, like SMA, Growatt, DEYE, Victron, etc.					

High Voltage Battery Clusters



HV-384V100AH

HV-460V100AH

HV-614V100AH

HV-768V280AH

High Voltage Battery Energy Storage Solution 384V / 460V / 614V / 768V

HV-384V100AH



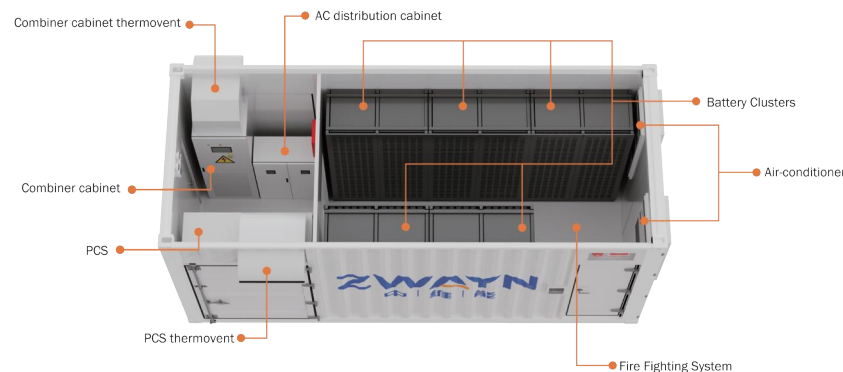
Model	HV-384V100AH	HV-460V100AH	HV-614V100AH	HV-768V280AH
Rated voltage	384V	460.8V	614.4V	768V
Rated capacity	100Ah (0.5C)			280Ah (0.5C)
Rated energy	38.4kWh	46kWh	61.4kWh	215.04kWh
Configuration	120S1P	144S1P	192S1P	240S1P
Charge voltage	432VDC	518VDC	691VDC	864VDC
Discharge voltage	336VDC	403VDC	537VDC	672VDC
Rated working current	50A (0.5C)			140A (0.5C)
Max. working current	100A			140A
Rated power	19.2kW	23kW	30kW	107kW
Max. output power	38.4kW (adjustable)	46kW (adjustable)	61kW (adjustable)	107kW (adjustable)
Recommended DoD	90%			
Range of working temp	-10~50 °C			
Working humidity range	5-85%RH			
Communication method	CAN2.0/RS485			
Compatible inverter brands	DEYE, Solis, Growatt, ATESS, Goodwe, Hoymiles, Afore, Megarevo, Invt, Pylontech, ThinkPower, Inhenery			
Working indicator	Blue:Power; Green:Run; Red:Alarm			
Cycle life	25±2 °C, 0.2C/0.2C, EOL70%≥6000			
Display method	10 inch (LCD) / PC Software			
Protection Voltage protection	Over charge and over discharge			
Protection Temp. protection	Over temperature range protection			
Protection Current protection	YES			
Protection Leakage protection	YES			
Dielectric withstand voltage	1000VDC(not less than 2GΩ)	1000VDC(not less than 2GΩ)	2500VDC(not less than 2GΩ)	2500VDC(not less than 2GΩ)
Dimension	776*600*1250M	776*600*1400MM	776*600*1800MM	1545*800*1800MM
Weight	400-500KG	450-550KG	600-700KG	2.2-2.4T
Protection level	IP 20			

Compatible With Inverter Brands

Zwayn's battery BMS is compatible with multiple inverter brands

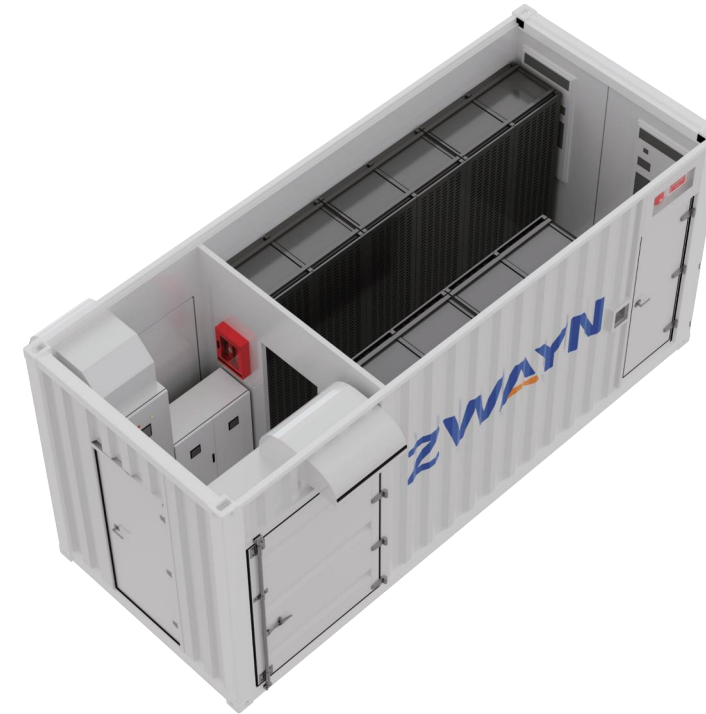


Battery Energy Storage System Container for C&I



645kWh HV Energy Storage System 20 Feet Commercial & Industrial BESS

HV-645kWh+250kW-PCS



Battery System Side		
Model	HV-768V280AH*3P	
Rated voltage	768V	
Rated capacity	840ah (0.2C)	
Charge voltage	852VDC (adjustable)	
Discharge voltage	672VDC	
Rated working current	300A (0.35C)	
Max. working current	420A (0.5C)	
Rated power	252KW	
Max. output power	322KW	
Recommended DoD	90%	
Range of working temp.	-10~50°C	
Working humidity range	5-85%RH	
Communication method	two way CAN2.0/RS485	
Working indicator	Blue:Power; Green:Running; Red:Alarm protection	
Cycle life	25±2°C, 0.2C/0.2C,EOL70% ≥ 6000	
Display method	10 inch (LCD)/PC Software	
Protective function	Voltage protection	Over charge and over discharge
	Temperature protection	Over temperature range protection
	Current / Leakage protec	YES
	Dielectric withstand volta	1000VDC(not less than 1GΩ)
Dimension	20 feet container	
Protection level	IP 65	
Product packaging	Container	

PCS DC Input Side	
Voltage	420-850VDC(768V)
Max. charge power	
Max. discharge current	250KW

PCS—PV Input side	
Max. photovoltaic power	360KW
Max. photovoltaic voltage	1000V
Starting voltage	150V
MPPT range	250-850VDC
Full load DC voltage	450-850VDC
Rated DC input	600V
PV input current	single way 36A
PV input channels	10 ways
communication method	two way CAN2.0/RS485

PCS —AC output side (Off-grid)	
Rated AC power	275KVA
Active power	250KW
Rated voltage	400VAC
Rated current	361A
THDU	< 2% linear
Rated frequency	50/60Hz
Overload capacity	110% long-term

PCS—AC side (On-grid)	
Rated AC power	275KVA
Active power	100KW
Rated voltage	250KW
rated current	361A
voltage range	320-460VAC
rated frequency	50/60Hz
THDU	< 3% linear
power factor	Standard: 1.0; lead 0.8 /lag 0.8
AC Phase	Three- phase four- wire + ground wire (3W+N+PE)
isolation transformer	0.68%
Grid certification	TUV,CE
Working temp. range	-40~60°C, >45°C Power down
Communication method	RS485/CAN

High Efficiency 97.6%
With cooling system ensures higher efficiency and longer battery cycle life

Various Application Solutions
Variety of applications are supported such as peak-shift, peak-cut, frequency regulation, etc.

Easy Installation
Highly integrated ESS for easy transportation and O&M
All pre-assembled, no battery module handling on site

Safety and Reliable
Multi level battery protection layers formed by discreet standalone systems offer impeccable safety

122kWh HV Energy Storage System Commercial & Industrial BESS

HV-122kWh+50kW-PCS



Battery System Side		
Model	HV-614.4V 100AH*2P	
Rated voltage	614.4V	
Rated capacity	200ah (0.2C)	
Charge voltage	681.6VDC (adjustable)	
Discharge voltage	537.6VDC	
Rated working current	100A (0.5C)	
Max. working current	160A (0.8C)	
Rated power	61KW	
Max. output power	100KW	
Recommended DoD	90%	
Range of working temp.	-10~50°C	
Working humidity range	5-85%RH	
Communication method	two way CAN2.0/RS485	
Working indicator	Blue:Power; Green:Running; Red:Alarm protection	
Cycle life	25±2°C, 0.2C/0.2C, EOL70% ≥ 6000	
Display method	10 inch (LCD)/PC Software	
Protective function	Voltage protection	Over charge and over discharge
	Temperature protection	Over temperature range protection
	Current / Leakage protec	YES
	Dielectric withstand volta	1000VDC(not less than 1GΩ)
Dimension	2000*2500*2500MM	
Protection level	IP 65	
Product packaging	Container	

PCS DC Input Side	
Voltage	150-800VDC(614.4V)
Max. charge power	
Max. discharge current	50+50A

PCS—PV Input side	
Max. photovoltaic power	65000W
Max. photovoltaic voltage	1000V
Starting voltage	150V
MPPT range	200-850VDC
Full load DC voltage	450-850VDC
Rated DC input	600V
PV input current	36A+36A+36A+36A
PV input channels	4 ways
communication method	two way CAN2.0/RS485

PCS—AC output side	
Rated AC power	50KW
Max. output power	55KW
Output rated current	75.8A
Max. output current	83.3A
off-grid peak power	1.5 times the rated power, 10S
Generator input/smart load/AC coupling current (A)	75.8A
	150A
	75.8A
power factor	0.8 lead/0.8 lag
Output Frequency/Voltage	50/60Hz; 3L/N/PE 220/380, 230/400Vac
AC Phase	Three Phase
Highest efficiency	97.6%
Rated efficiency	97%
MPPT efficiency	99.9%

Protective function	PV input lightning protection, anti-islanding protection, PV string input reverse polarity protection, insulation resistance detection, residual current monitoring device, output overcurrent protection, output short circuit protection, surge protection
Output voltage protection	DC Type II/AC Type III
Grid certification	CEI 0-21, VDE-AR-N 4105, NRS 097, IEC 62116, IEC 61727, G99, G98, VDE 0126-1-1, RD 1699, C10-11
Safety certificate	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2
Working temp. range	-40~60°C, >45°C Power down
Communication method	RS485/CAN



High Efficiency 97.6%
With cooling system ensures higher efficiency and longer battery cycle life

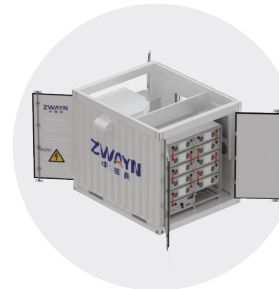
Various Application Solutions
Variety of applications are supported such as peak-shift, peak-cut, frequency regulation, etc.

Easy Installation
Highly integrated ESS for easy transportation and O&M
All pre-assembled, no battery module handling on site

Safety and Reliable
Multi level battery protection layers formed by discreet standalone systems offer impeccable safety

215kWh HV Energy Storage System Commercial & Industrial BESS

HV-215kWh+100kW-PCS



High Efficiency 97.6%
With cooling system ensures higher efficiency and longer battery cycle life

Easy Installation
Highly integrated ESS for easy transportation and O&M
All pre-assembled, no battery module handling on site

Various Application Solutions
Variety of applications are supported such as peak-shift, peak-cut, frequency regulation, etc.

Safety and Reliable
Multi level battery protection layers formed by discreet standalone systems offer impeccable safety

Battery System Side		
Model	HV-768V280AH	
Rated voltage	768V	
Rated capacity	280ah (0.2C)	
Charge voltage	852VDC (adjustable)	
Discharge voltage	672VDC	
Rated working current	100A (0.35C)	
Max. working current	140A (0.5C)	
Rated power	78KW	
Max. output power	100KW	
Recommended DoD	90%	
Range of working temp.	-10~50°C	
Working humidity range	5-85%RH	
Communication method	two way CAN2.0/RS485	
Working indicator	Blue:Power; Green:Running; Red:Alarm protection	
Cycle life	25±2°C, 0.2C/0.2C, EOL70% ≥ 6000	
Display method	10 inch (LCD)/PC Software	
Protective function	Voltage protection	Over charge and over discharge
	Temperature protection	Over temperature range protection
	Current / Leakage protec	YES
	Dielectric withstand volta	1000VDC(not less than 1GΩ)
Dimension	2981*2500*2550MM	
Protection level	IP 65	
Product packaging	Container	






PCS DC Input Side	
Voltage	420-850VDC(768V)
Max. charge power	
Max. discharge current	120KW

PCS—PV Input side	
Max. photovoltaic power	120000W
Max. photovoltaic voltage	1000V
Starting voltage	150V
MPPT range	250-850VDC
Full load DC voltage	450-850VDC
Rated DC input	600V
PV input current	36A+36A+36A+36A
PV input channels	4 ways
communication method	two way CAN2.0/RS485




PCS—AC output side (Off-grid)	
Rated AC power	110KVA
Active power	100KW
Rated voltage	400VAC
Rated current	144A
THDU	< 2% linear
Rated frequency	50/60Hz
Overload capacity	110% long-term

PCS—AC side (On-grid)	
Rated AC power	110KVA
Active power	100KW
Rated voltage	400VAC
rated current	144A
voltage range	320-460VAC
rated frequency	50/60Hz
THDU	< 3% linear
power factor	Standard: 1.0; lead 0.8 /lag 0.8
AC Phase	Three- phase four- wire + ground wire (3W+N+PE)
isolation transformer	0.68%
Grid certification	TUV,CE
Working temp. range	-40~60°C, >45°C Power down
Communication method	RS485/CAN

DEEP CYCLE LITHIUM 12V LiFePO4

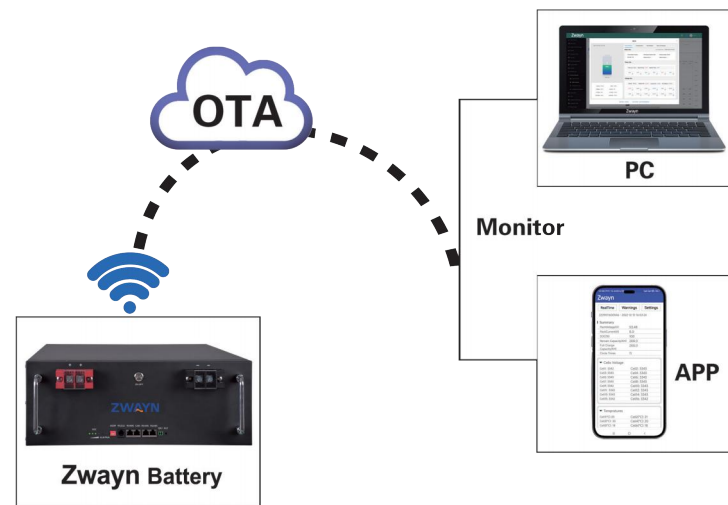
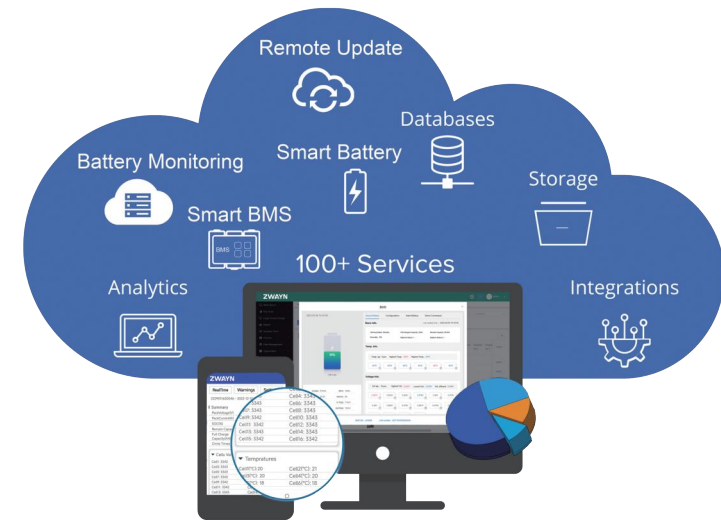
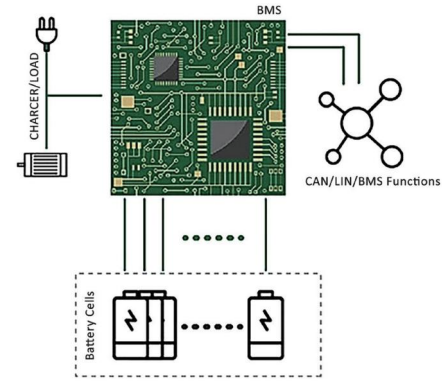
Product Model	ZWN-1207FP	ZWN-1212FP	ZWN-1250FP	ZWN-12100FP	ZWN-12200FP
Picture					
Nominal Voltage	12.8V				
Nominal Capacity @25°C	7AH	12AH	50AH	100AH	200AH
Nominal Energy @25°C	89.6WH	153.6WH	640WH	1280WH	2560WH
Battery Cell Type	Cylinder		Prismatic 50Ah	Prismatic 100Ah	Prismatic 100Ah
Configuration (*S*P)	4S1P	4S2P	4S1P	4S1P	4S2P
Max. Continuous Charge Current @25°C	7A	12A	50A	100A	100A
Max. Continuous Discharge Current @25°C	7A	12A	50A	100A	100A
DC Resistance	≤10mΩ				
Full Charged Voltage	14.6V				
Discharge Cut-off Voltage	10V				
Operate Temperature Range	Charge: 0°C~55°C;		Discharge: -20°C~60°C;	Storage: -20°C~45°C	
Dimension (mm)	152*65*94mm	152*99.5*100mm	229*138*208mm	326*171*215mm	522*240*218mm
Weight (KG)	1.1KG	1.7KG	7KG	12.5KG	25KG
Terminal Type	F1 terminal		Screw terminal		
Cover Sealing type	Screw / gel sealing optional				
Waterproof	IP65				
Cycle life	100% DOD Cycles @ 25°C, 1C/1C: >2000 times 80% DOD Cycles @ 25°C, 1C/1C: >3000 times 50% DOD Cycles @ 25°C, 1C/1C: >5000 times				
LCD Screen Display	Optional (Show voltage V, Power %)				
Bluetooth	Optional (Bluetooth with mobile APP)				
Series and Parallels Function	Available to make in series and parallels to get 24V, 36V, 48V				
Heating Function	Optional, Suitable for cold area application				

DEEP CYCLE LITHIUM 24V LiFePO4

Product Model	ZWN-2450FP	ZWN-24100FP	ZWN-24120FP
Picture			
Nominal Voltage	25.6V		
Nominal Capacity @25°C	50AH	100AH	120AH
Nominal Energy @25°C	1280WH	2560WH	3072WH
Battery Cell Type	Prismatic 50Ah	Prismatic 100Ah	Prismatic 120Ah
Configuration (*S*P)	8S1P	8S1P	8S2P
Max. Continuous Charge Current @25°C	50A	100A	100A
Max. Continuous Discharge Current @25°C	50A	100A	100A
DC Resistance	≤10mΩ		
Full Charged Voltage	29.2V		
Discharge Cut-off Voltage	20V		
Operate Temperature Range	Charge: 0°C~55°C ;	Discharge: -20°C~60°C ;	Storage: -20°C~45°C
Dimension (mm)	326*171*215mm	522*240*218mm	522*240*218mm
Weight (KG)	12.5KG	25KG	28KG
Terminal Type	Screw terminal		
Cover Sealing type	Screw/ gel sealing optional		
Waterproof	IP65		
Cycle life	100% DOD Cycles @ 25°C, 1C/1C: >2000 times 80% DOD Cycles @ 25°C, 1C/1C: >3000 times 50% DOD Cycles @ 25°C, 1C/1C: >5000 times		
LCD Screen Display	Optional (Show voltage V, Power %)		
Bluetooth	Optional (Bluetooth with mobile APP)		
Series and Parallels Function	Available to make in series and parallels to get 48V		
Heating Function	Optional(Heating function for application in cold area)		

● **Integrated PACK design of battery pack**

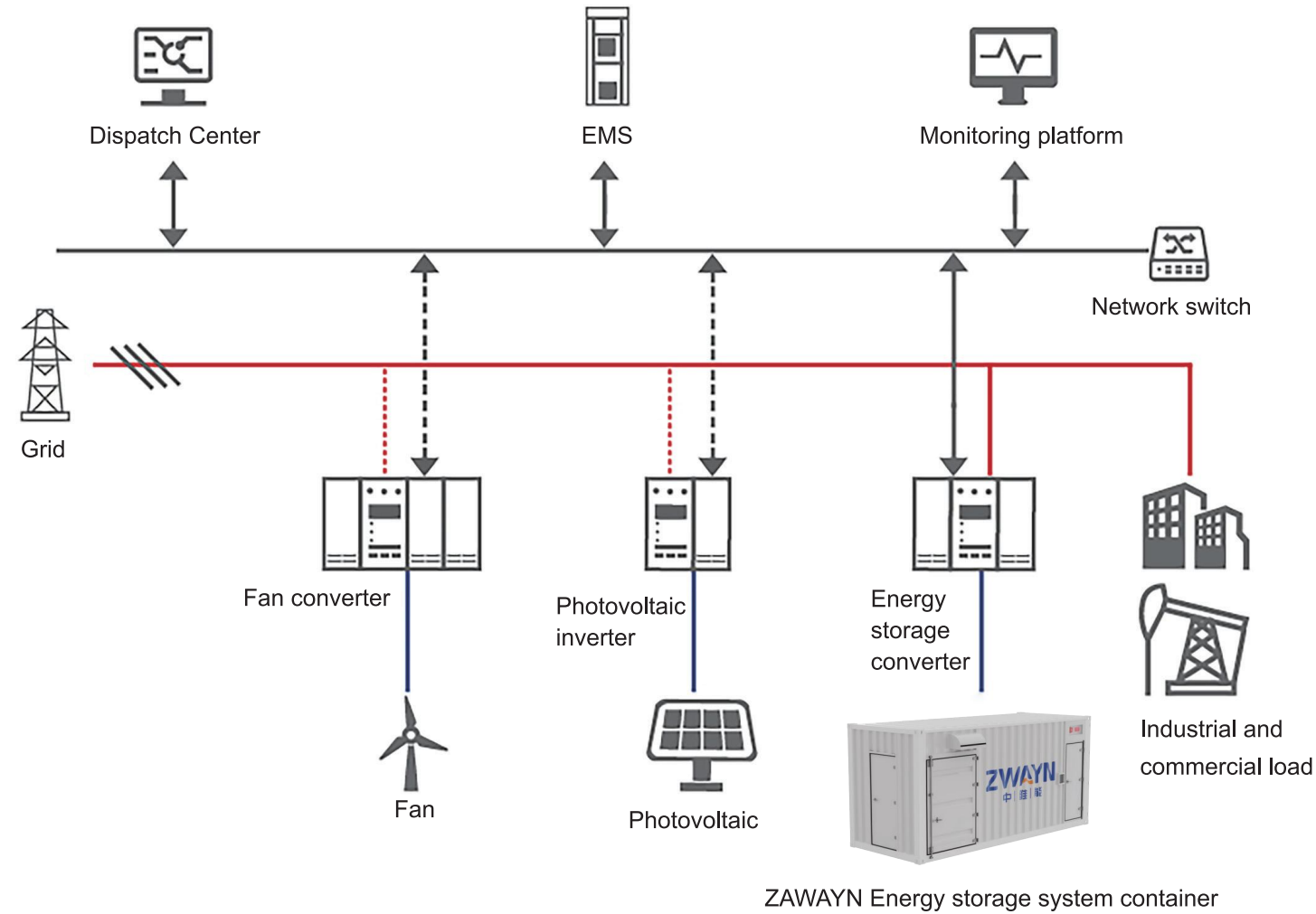
- Cell module design
- Electrical scheme design
- Battery structure design
- External dimension design
- BMS module custom design
- Design of battery temperature management system
- Battery waterproof and dustproof protection design



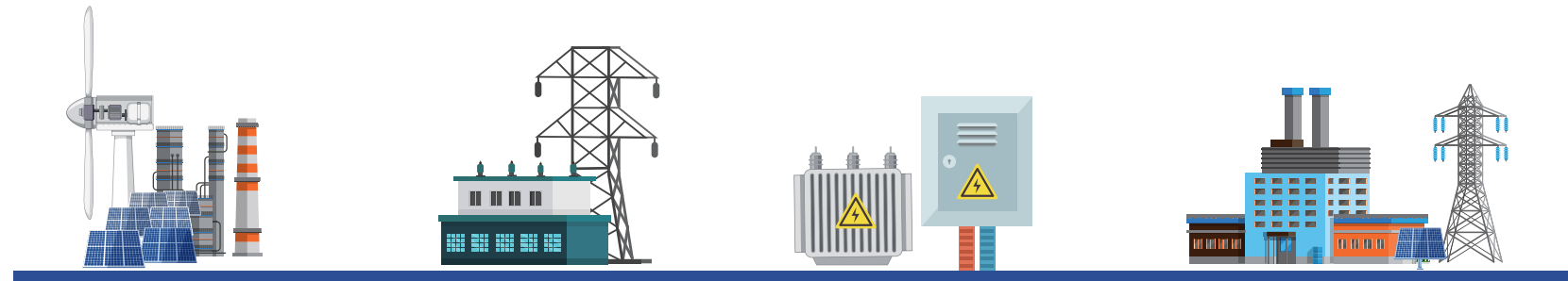
● **BMS Advantage**

- Better structural design**
 Better structural design with double heat sink design, anti-collision design
- Optimize interface**
 The interface is more concise, and the split board can be done with one interface
- Upgrade interface**
 USB interface for debugging, more versatile and faster
- Increase parallel capability to 32**
 Support a large increase in the number of parallel machines, (1+32)
- OTA upgrade**
 OTA upgrade is faster, and if the upgrade fails, the old software can be automatically restored
- Extended DIP function**
 Added DIP switch to select the protocol function;
- Increase current limiting capacity**
 Current limiting module 20A, up to 40A
- WIFI Remote Monitoring**
 Wifi module, cloud platform service, control at any time through mobile phone, virtual meter, remote operation (the cloud platform has many functions)
- Cloud Management and Monitoring**
 The BMS firmware can be upgraded OTA on the cloud, the BMS can be configured on the cloud, and the communication data packets between the BMS and the inverter can be remotely captured
- Optimize MOS temperature rise**
 MOS in TOLL package, lower temperature rise under high current operation
- Higher precision calculation**
 Higher precision current sampling (1%), higher precision SOC algorithm
- More compact BMS design**
 The 100A motherboard provides a narrower version of 80MM*240MM, suitable for 2U models
- Additional interface design**
 With heating, heat dissipation, secondary protection interface
- Large capacity memory**
 Large capacity memory, can record more than 24000 records

BESS System Diagram



BESS Application



Electricity Generation

- Black Start
- Long-cycle peak adjustment
- Frequency modulation
- Smooth output curve

Electricity Transmission

- Optimizing power output
- Frequency modulation
- Reactive power support

Power Distribution

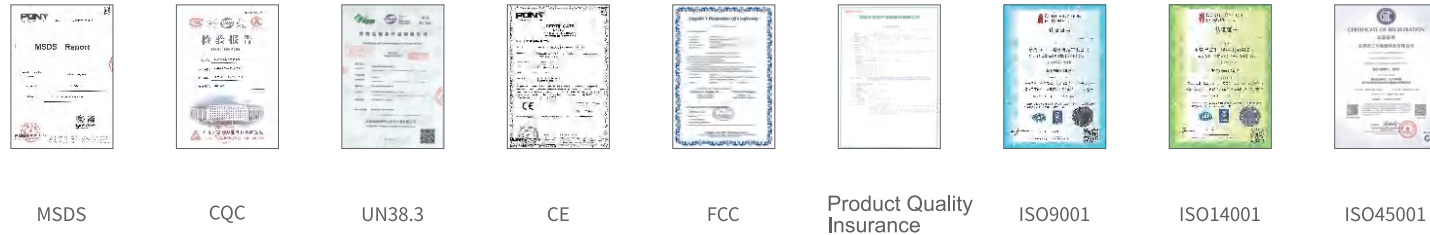
- Short-cycle peak adjustment
- Transformer capacity reduction
- Peak reduction and valley filling
- Reactive power support

Electricity Consumption

- Electricity demand response
- Smoothing load curve
- Emergency power

65+ More than 65 quality certifications at home and abroad

Zwayn Energy has obtained many third-party authoritative qualification certification for the products according to the qualification requirements of product quality, import and export license at home and abroad , and provides solid guarantee for product quality and import and export license.



36+ Domestic and foreign quality certification

Zwayn Energy always adheres to the concept of science and technology innovation and enterprise development , and has obtained more than 36 trademarks and patent certificates.



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Better Power, ZWAYN Energy



We are advancing hand in hand with new business opportunities

We will work together for win-win cooperation

We look forward to working with you!