UNLEASH INNOVATION POTENTIALS
CREATE ENDLESS POSSIBILITIES

HEXON ESS

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Hexon

COMPANY PROFILE

HEXON ENERGY
Your Turnkey Storage-Centric Solution Provider

HEXON ENERGY CO. LTD is a leading provider of energy storage systems and solutions. The company is dedicated to delivering safe, reliable, and high-performance battery energy storage systems (BESS) through technological innovation. Hexon Energy International (HK) Limited is the global investment center of the group.

Hexon Energy specializes in the global development of advanced products, technologies, and integrated services. It has established 3 major service and manufacturing hubs:
Guangzhou : R&D and production base for industrial, commercial, and residential BESS.
Lianyungang : Large-scale manufacturing center for utility-scale energy storage systems.
Bordeaux, France : The European operations headquarters, incorporating an after-sales and technical service center.

Hexon Energy has delivered over **3 GWh** of BESS across more than 60 projects, all of which comply with ISO-certified quality management systems. Looking ahead, Hexon Energy continues to strengthen its core competencies through independent innovation, contributing to the global transition towards a low-carbon future. Leveraging industry-leading user-side BESS solutions, the company aims to support the transformation of global energy infrastructure through technology-driven development.

Guangzhou

Lianyungang

HongKong

Bordeaux, France

TECHNICAL STRENGTH

PV and BESS Power Plant Design

We have rich experience in the design of PV and BESS power plants and is able to develop optimal design solutions according to customer needs and project characteristics.
We adopt advanced design concepts and technical tools to ensure the efficient operation of PV power plants and long-term stable power generation.

Construction Capacity

With professional construction team and advanced construction equipment, we have strong construction capacity.
During the construction of the project, we strictly control the quality to ensure that the construction progress and project quality meet the requirements.

O&M Capability

It has established a perfect operation and maintenance management system, equipped with professional operation and maintenance personnel and advanced operation and maintenance equipment.
Through the intelligent management system, it realises real-time monitoring and data analysis of PV power stations, finds and solves problems in time, and guarantees stable operation of power stations.




FINANCE AND SUPPLY CHAIN CAPACITY

Financial Strength

The company is well-funded, with a registered capital of RMB 45 million, and is able to provide adequate financial support for the project.

Supply Chain

We have established a perfect supply chain management system, and have established long-term and stable cooperative relationships with many high-quality suppliers.

Cost Control

Focus on cost control and reduce procurement costs, construction costs and operation and maintenance costs through refined management.

ENTERPRISE QUALIFICATION

- National High-tech Enterprise
- National Science and Technology-based Small and Medium Enterprise
- Grade II & III Power Engineering General Contractor
- Grade IV Power Installation, Maintenance & Testing License
- Grade III/Foundation Engineering Specialist Contractor
- Grade III Mechanical & Electrical Installation Specialist Contractor

Commercial and Industrial ESS Solution

EOS-261 All-in-One C&I Energy Storage System

EOS-418 All-in-One C&I Energy Storage System

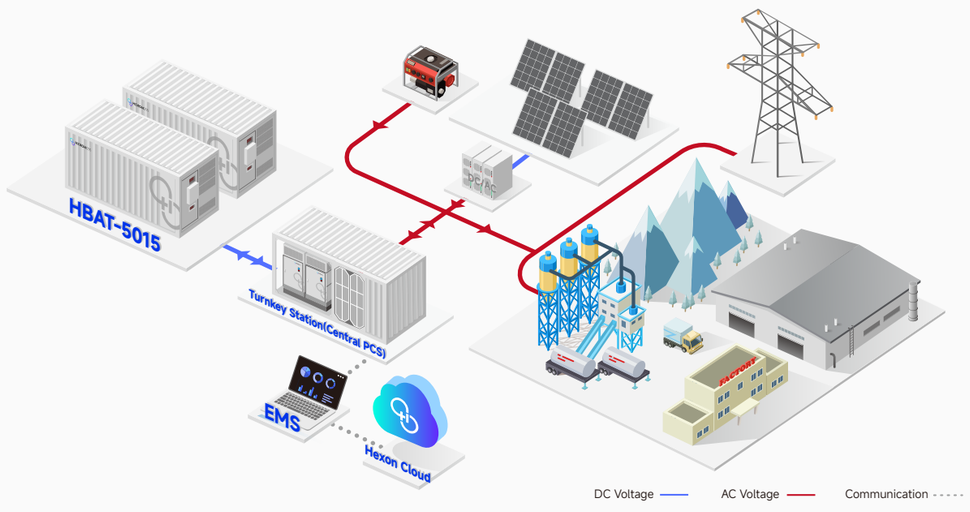
Large Utilities ESS Solution

HEMERA Containerized Liquid Cooling Battery System

Multi-Energy Integration Solution for Microgrids

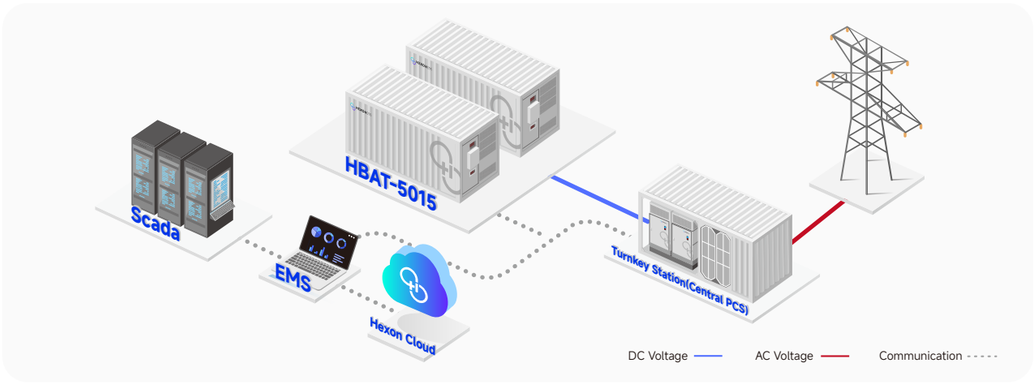
In complementary power supply systems that incorporate multiple energy sources—such as solar, diesel generators, and the grid—integrated energy storage serves as the cornerstone of microgrids. It balances power output and ensures stable system operation. These solutions are ideal for remote locations like mines, islands, and mountainous areas, or any region with an unstable power supply. They are equally effective for optimizing energy use in new zero-carbon campuses.

Large-Scale Microgrid Solution



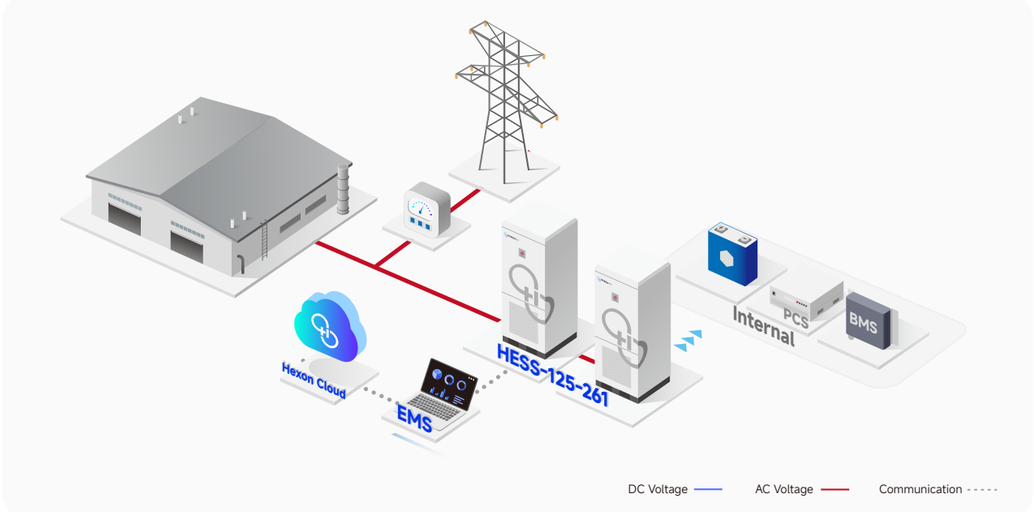
Large-Scale Ground-Mounted ESS Solution (FCR, aFRR)

Our system features fully liquid-cooled thermal management and is directly integrated into the high-voltage AC side. It provides millisecond-level precision response, participating in grid frequency regulation to enhance power quality and improve grid supply stability.



Commercial and Industrial Energy Storage Solution

For commercial and industrial facilities with high power demand, our energy storage systems enable optimized energy management, which reduces electricity costs and increases capacity. In the event of a grid failure, the system provides backup power to ensure continuous operation of critical loads.



EOS-261

All-in-One C&I Energy Storage System

HESS-125-261　(125kW/261kWh)

Comprehensive Safety

Proactive Alert Cell-level monitoring, early warning
Multi-Level Protection Pack, cluster, cabin isolation
Fire & Explosion Prevention Triple fire protection, vent design

High Efficiency

High Conversion System efficiency ≥87%
AI-Powered Scheduling Optimized energy dispatch
Maximized ROI Peak shaving & other revenue streams

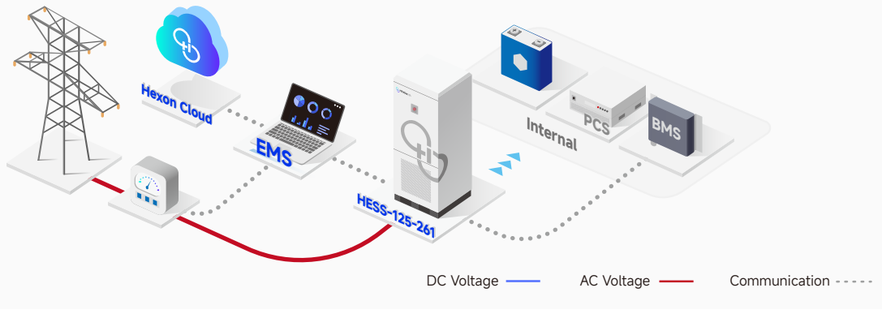
Simple O&M

Cloud Diagnosis Fault identification in seconds
Remote Management Cloud-based monitoring & control
24/7 Guardian Expert team always on watch

Easy Deployment

Plug & Play Pre-installed, powered on arrival
Time Saving Drastically reduces installation time
Scalable Design Modular expansion as needed

System schematic diagram



Model	HESS-125-261
DC side parameters	
Battery capacity	261kWh
System Configuration	1P52S
Battery Pack Configuration	52.25kWh
Cell type	LFP 314Ah
Battery voltage range	728~936V
PACK protection level	IP66
AC side parameters	
AC rated power	125kW
Total current waveform distortion rate	⩽3% (at rated power)
DC component of current	⩽0.5% (at rated power)
Rated grid voltage	400V
Grid voltage deviation	-15%~+15%
AC overload capacity	1.1times long-term
AC wiring method	3P+N+PE
Rated grid frequency	50Hz/60Hz±2.5Hz
Power Factor	0.99/-1～1
AC protection	Circuit breaker + AC lightning protection
System parameters	
Maximum system efficiency	87%
Battery cell cooling method	Liquid Cooling
Remote Monitoring	Cloud Platform
Noise	⩽75dB@1m
Communication interface	Ethernet、RS485
Communication Protocol	MODBUS-TCP/MODBUS-RTU
Maintenance method	Double-sided maintenance
Installation location	Outdoor
Outlet method	Down in and out
Operating temperature range	-25°C~55°C
Maximum operating altitude	3000m
Operating humidity range	5%~95%RH，no condensation
Corrosion resistance level	C3-M(standard)/C4/C5
Protection level	Battery compartment IP55 + electrical compartment IP54
Fire protection system	PACK -level aerosol + cabin-level aerosol + water firefighting (optional)
Product dimensions (W*D*H)	1100(W)*1320(D)*2560(H)mm
Equipment weight	2600kg
Certifications	GB/T 36276，UN38.3，IEC62619，IEC62477，IEC61000

EOS-418

All-in-One C&I Energy Storage System

HESS-215-418 （215kW/418kWh）

Supports AC800V direct coupled photovoltaics without the need for transformers

This product is specifically optimized for photovoltaic-storage integrated applications, enabling direct parallel coupling with AC800V-compatible photovoltaic inverters to achieve transformer-free integration, significantly reducing system costs and losses.

Comprehensive Safety

- **Proactive Alert** Cell-level monitoring, early warning
- **Multi-Level Protection** Pack, cluster, cabin isolation
- **Fire & Explosion Prevention** Triple fire protection, vent design

High Efficiency

- **High Conversion** System efficiency ≥87%
- **AI-Powered Scheduling** Optimized energy dispatch
- **Maximized ROI** Peak shaving & other revenue streams

Simple O&M

- **Cloud Diagnosis** Fault identification in seconds
- **Remote Management** Cloud-based monitoring & control
- **24/7 Guardian** Expert team always on watch

Easy Deployment

- **Plug & Play** Pre-installed, powered on arrival
- **Time Saving** Drastically reduces installation time
- **Scalable Design** Modular expansion as needed

Peak Shaving

Arbitrage

Backup Power

Grid Services

Model	HESS-215-418
Basic Parameters	
Rated Power	215 kW
Battery Capacity	418 kWh
dimensions (W*D* H)	1420 (W)*1350 (D)*2350(H)mm
Weight	3.8 T
DC Side Parameters	
Cell Type	LFP 3.2 V / 314 Ah
System Pack Configuration	1P52S * 8
Battery Voltage Range	1165-1497 VDC
AC Side Parameters	
Rated output voltage	690/800 (-15% ~ 15%) Vac
Rated mains frequency	50/60 Hz
Charge-discharge conversion time	<100 ms
System Parameters	
Cycle count	8000 ~ 10000 cycle
Full cabinet energy conversion efficiency	Maximum 90%
Protection rating	IP66 (battery Pack)/IP54 (equipment compartment)/PCS(IP66)
Operating temperature	-30°C ~ +55°C
Corrosion resistance rating	C4(C5Customisable)
Fire suppression system	PACK-level precision fire suppression + compartment-level fire suppression (aerosol) + water fire suppression
Overload capacity	110% load, 10 minutes; 120% load, 1 minute
Permissible ambient humidity	0~100% RH
Cooling method	Intelligent liquid cooling

HEMERA

Containerized Liquid Cooling Battery System

HBAT-5015/4180/3762/3344-104S
(5015/4180/3762/3344kWh)

HBAT-5160
(5160kWh)

Comprehensive Safety

- Highly stable LFP battery cells
- Multi-level fire protection and explosion-proof design
- Intelligent monitoring, second-level response

Stable Operation

- Liquid cooling, cell temperature difference < 3°C
- Cluster-level management, eliminating the barrel effect
- Wide voltage adaptation, weak grid support

Ultimate Energy Efficiency

- High energy density, reduced footprint
- DC efficiency ≥ 94%
- AI strategy for maximizing revenue

Easy Deployment

- Flexible configuration, adaptable to multiple scenarios
- Plug and play, deployment cycle shortened by 40%
- Cloud-based O&M, efficiency improved by 50%

Model	HBAT-5015-104S	HBAT-4180-104S	HBAT-3762-104S	HBAT-3344-104S
Battery Parameters				
Cell Type	LFP-3.2V-314Ah			
Nominal Capacity	5015kWh	4180kWh	3762kWh	3344kWh
Nominal DC Voltage	1331.2V			
DC Voltage Range	1165V～1497V			
Charge/Discharge Rate(C-rate)	≤0.5CP			
Maximum Charge	2500kW			
Operating Temperature	Charging: 0°C～60°C; Discharging: -30°C～60°C			
Recommended Ambient Temperature	25±10			
Cycle Life	≥6000 cycles (25±10°C , 100%DOD, 80%EOL)			
Cooling Method	liquid cooling			
System Parameters				
Auxiliary Power Parameters	38kW-400V/50Hz, 3N+PE			
Fire Protection System	Aerosol + water fire fighting			
Corrosion Protection Level	C4 (C5 optional)			
Lightning Protection Level	Level II			
Ingress Protection (IP) Rating	IP54			
Operating Temperature Range	-20°C to +50°C, derated at >45°C			
Storage Temperature	-20°C～ +35°C, <6 months			
Operating Humidity Range	0~95%RH, no condensation			
Installation Method	outdoor installation			
Operating Conditions	2 charge, 2 discharge			
System Communication Interface	CAN/Ethernet/RS485			
External System Communication Protocol	Modbus TCP/IEC61850			
Altitude	≤3000m			
Dimensions(W*D*H)	6058(W)*2438(D)*2896(H)mm			
Weight	42T	36T	33T	30T
Certifications	IEC62619/IEC61000/IEC62477/UN38.3			

Model	HBAT-5160
Cell Type	LFP-350Ah
Cycle Life	≥6000 cycles (25±10°C , 100%DOD, 80%EOL)
Dimensions(W*D*H)	6058(W)*2438(D)*3100(H)mm
Weight	43T
Cell Configuration	1P384S*12
Energy Output(Max.)	5160kWh
Nominal Voltage	1228.80
Charge/Discharge Rate	≤0.5P
Protection Level	IP55
Corrosion Resistance Level	C4/C5
Pollution Resistance Level	II
Operating Altitude	<3000m(derated at 4000m)
Temperature Range	-30°C~55°C
Humidity Range	0~95%, no condensation
Certifications	IEC/GB/UN38.3

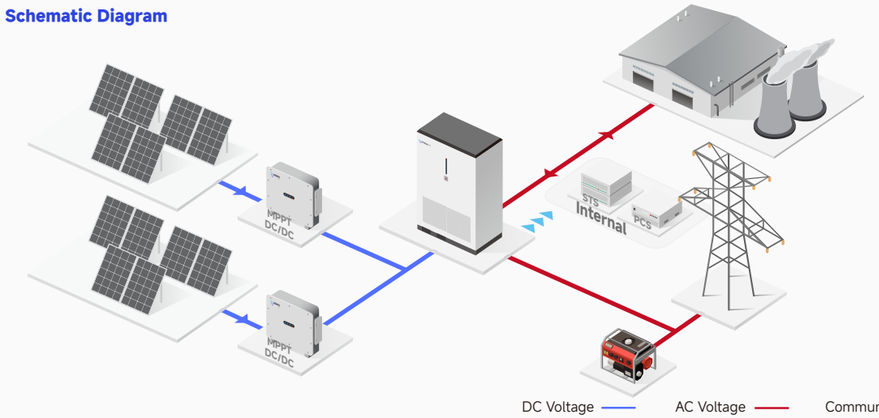
Medium-sized Hybrid ESS Solution

DC-coupled Hybrid Energy Storage System
Integrated PV-ESS-Diesel Generator Microgrid System
Medium-sized Hybrid Energy Storage Inverter
PV MPPT Controller
Battery Energy Storage System(Outdoor cabinet)
Containerized Battery Energy Storage System

DC-coupled Hybrid Energy Storage System

- Supply continuous power even under power outage condition, realizing the seamless switching between on-grid and off-grid.
- Photovoltaic DC coupling makes higher charging efficiency of energy storage batteries.
- Outdoor PV MPPT controller offers more flexible configuration and simpler installation.

System Schematic Diagram




APP Monitoring


Cost Effective


Safe Reliable


Flexible Design

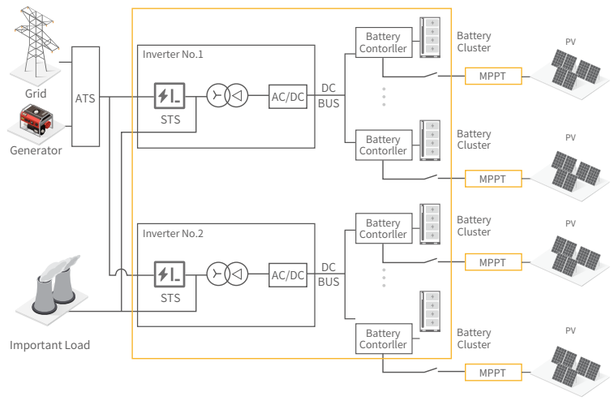
Reference for System Configuration and Selection

Applicable total power range of user's load	Recommended model	Max PV capacity for access	
Load≤30kW	30kW/72kWh Hybrid Energy Storage System (with built-in PV MPPT controller)	38.4kW	Villas, villages, shopping malls, schools, banks, hospitals, sports venues, hotels, restaurants, office buildings
30kW < Load≤60kW	64kW/128kWh Hybrid energy storage system + PV MPPT controller	120kW	
60kW < Load≤120kW	125kW/225kWh Hybrid energy storage system + PV MPPT controller	240kW	
120kW < Load≤200kW	250kW Hybrid energy storage inverter +2-4 sets of 225kWh battery energy storage systems+PV MPPT controller	480~960kW	Small factories, supermarkets, hotels, farms, and livestock farms
200kW < Load≤450kW	500kW Hybrid energy storage inverter+4-6 sets of 225kWh Battery energy storage systems/1543kWh Containerized battery energy storage system+PV MPPT controller	2960~1440kW	
450kW<Load≤1200kW	2-3 sets of 500kW Hybrid energy storage inverters+1-2 units of 2058kWh/2570kWh Containerized batteryenergy storage system + PV MPPT controller	1920~4800kW	Medium-sized factories, mining areas

Medium-sized Hybrid Energy Storage Inverter

- Advantages: Up to 4 units of 250kW/500kW hybrid energy storage inverters can be paralleled; 400V AC output is widely applied in large-scale mining areas and factories.

System block diagram



HEXP250TS-400-A

Model	HEXP250TS-400-A
Rated output power	250kW
Max.output power	275kW
Output voltage	400V
Max.efficiency	97.5%
Operating temperature	-30~55°C
IP grade	(Integrated machine)IP21
Cooling concept	Smart air cooling
Communication	BMS(CAN)/EMS(TCP/IP)
Weight	1600kg
Dimensions(W*D*H)	1200(W)*800(D)*2050(H)mm

Containerized Battery Energy Storage System

- Advantages: Well-known brand battery cells with standard equipped with photovoltaic access ports, which is safe and reliable.

HEX2570-400-A

Model	HEX2570-400-A
Cell type	LFP314Ah
Total capacity	2570kWh
Cycle index	8000cls(0.5P,25+2°C,@70%SOH)
Rated voltage	819.2V
IP grade	Container (IP54)
Cooling concept	Smart air cooling
Operating temperature	-30~55°C
Weight	<26t
Dimensions(W*D*H)	6058(W)*2438(D)*2896(H)mm

HEXP500TS-400-A

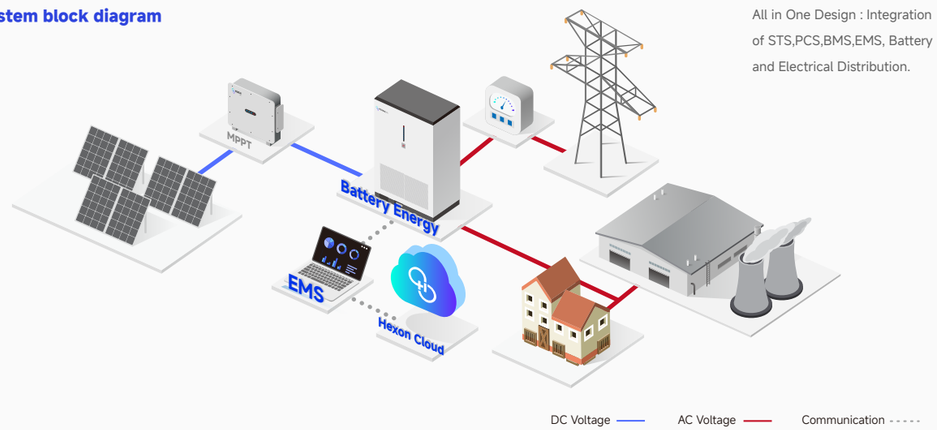
Model	HEXP500TS-400-A
Rated output power	500kW
Max.output power	550kW
Output voltage	400V
Max.efficiency	97.5%
Operating temperature	-30~55°C
IP grade	(Integrated machine) IP21
Cooling concept	Smart air cooling
Communication	BMS(CAN)/EMS(TCP/IP
Weight	2700kg
Dimensions(W*D*H)	1600(W)*1050(D)*2050(H)mm

Integrated PV-ESS-Diesel Generator Microgrid System

- Advantages: High integration of photovoltaic and energy storage designed in one cabinet with DC-coupled. High efficiency and small size, which is easy for installation and maintenance; It has seamless switching between grid-connected and off-grid modes within 20ms and multi-mode operation functions. It also can supports peak shaving and valley filling, bringing strong single-phase load capacity. It can be expanded in 1+1 parallel mode.

System block diagram

All in One Design : Integration of STS,PCS,BMS,EMS, Battery and Electrical Distribution.



PV MPPT Controller

HEXMPPT-6 / HEXMPPT-12

Smart Power Tracking Technology

Real-Time Dynamic Optimization: Continuously monitors the solar panel's voltage and current, automatically locking onto the Maximum Power Point (MPP) for peak performance.
Adaptive Algorithm: Intelligently adjusts the operating point in response to varying light intensity and temperature, increasing energy harvest by 15-30%.

Precise Charging Management

Charging Precision: Utilizes voltage threshold control and a dynamic MPP tracking algorithm for accuracy.
Battery Protection: Safeguards against overcharge and over-discharge, with an optimized three-stage charging curve (Bulk, Absorption, Float).
Temperature Compensation: Features baseline compensation with adaptive adjustment across the entire operating temperature range.

High-Efficiency DC Coupled System

Direct Charging Architecture: Solar panels charge the battery directly, minimizing AC-DC conversion losses (efficiency loss <3%).
Flexible Array Configuration: Supports hybrid connection of panels with different orientations and tilt angles, ideal for complex installation environments.

Scenario Adaptability & Reliability

Robust Performance in Complex Environments: Rapidly tracks MPP fluctuations on cloudy days and operates reliably across a wide temperature range of -25°C to 60°C.
Scalable System Design: A modular architecture allows for the parallel connection of multiple controllers for expanded capacity.

Model	HEXMPPT-6	HEXMPPT-12
Input		
Maximum photo voltaic array voltage	No more than 900V and no more than the maximum withstand voltage ofthe rear cell	
MPPT voltage range	200V-900V	
Full-load MPPT voltage range	560V-900V	
Maximum branch current	20A	
Enter the number of PV branches	6	12
MPPT quantity	2	4
Each MPPT current	55A	
Output		
Voltage range	600-950V	
Rated voltage	Default 71 6.8v, adjustable	
Rated output current	84A	168A
Rated output power	60kW	120kW
Maximum output current	120A	240A
System		
European efficiency	99.4%	
IP grade	IP65	
Cooling method	Air-cooling	
Dimensions	610(W)*480(D)*257(H)mm	
Weight	25kg	30kg
Operating temperature	-30~55°C	
Power supply mode	Self-powered (no power consumption atnight)	
Communication interface	RS485	

Outdoor Cabinet Battery Energy Storage System

HEX225-400-A

Intelligent Synergistic Energy Management Platform

Multi-Functional Integration: Enables coordinated control for diverse applications including grid peak shaving, renewable energy consumption, and backup power.
Adaptive Control: Automatically switches operating modes based on grid demands and load variations, improving energy utilization efficiency by over 30%.

High-Precision Battery Management System

Cell-Level: Utilizes 314Ah high-capacity cells in series, increasing energy density by 15%.
Pack-Level: Intelligent balancing of 16 cells, maintaining voltage deviation <0.1V.
System-Level: Dual management with BMU+BCMU, real-time monitoring of 2000+ cell parameters.

Comprehensive Safety Protection System

Thermal Management Guarantee: Liquid cooling system maintains ≤3°C temperature difference between cells, extending cycle life to 6000 cycles.
Triple-Layer Fire Protection: Detection layer – multi-sensor fused early warning; Control layer – millisecond-level fault isolation; Execution layer – targeted Novec 1230 suppression.

Smart O&M & Reliable Power Supply

Dual Power Input: Seamless switching between 220VAC/24-VDC auxiliary power ensures uninterrupted control system operation.
Remote Connectivity: WiFi/4G dual-mode communication supports cloud diagnostics, reducing maintenance response time to 15 minutes.
Modular Scalability: 14-pack series architecture enables flexible capacity configuration (50kWh-1MWh).

Model	HEX225-400-A
DC Battery	
Cell type LFP	LFP 314Ah
Battery Pack capacity and configuration	16.077kWh/1P16S
Battery capacity and number of packs	225kWh/14
Charge and discharge ratio	≤0.5C
Depth of discharge	100%
Cycle index	8000cls（0.5P，25±2°C，@70%SOH）
Temperature detection points	112
Inverter DC	
Rated current 200A	200A
Rated power 143.4kW	143.4kW
PV DC Side	
Maximum number of input branches	2-way (optional 2 PV MPPT controllers)
Rated current of each channel	168Ax2
Rated power of each channel	120kWx2
System	
Factory-set SOC value	30%-50%
Battery voltage range	627V~806V
Rated voltage	716.8V
Operating temperature	-30~55°C
Relative humidity	0~95%RH，non-condensing
Dimensions	1050×1050×2350mm
Weight	2100kG
IP grade	(Complete machine)IP54
Noise	< 70dB
Cooling concept	Forced air cooling
Related certificates	CE/UN38.3/MSDS/Sea Transportation Certificate/Land Transportation Certificate/Danger Identification Report

PV-Storage-Genset Microgrid All-in-One Integrated Unit

HEXSTS64-128kWh-400-A

Outdoor Integrated Design

Fully Integrated System: MPPT controllers are directly mounted onto PV mounting structures, eliminating separate enclosures.

Environmental Resilience: Outdoor-rated protection (IP65), operational in temperatures from -25°C to 60°C.

Easy Installation: Integrated mounting reduces cabling, cutting installation costs by 30%.

Precise DC-Side Monitoring & Control

String Voltage/Current Monitoring: Module-level fault identification, isolating abnormal strings within 15 minutes.

Real-Time Generation Power: Limited power regulation, flexible output control to meet grid dispatch requirements.

Equipment Operating Status: Predictive maintenance with fault warnings based on temperature/impedance changes.

Dual-Line Converged Communication

Power Transmission: DC cables handle energy transfer with >97% conversion efficiency.

Data Exchange: Big data analysis of module performance, remote parameter configuration & firmware updates, second-level response to grid dispatch commands.

System-Level Safety Protection

Electrical Safety: DC-side insulation monitoring + reverse power flow protection.

Communication Security: RS485 opto-isolation + encrypted data transmission.

Operational Safety: Automatic isolation of faulty strings without impacting overall system operation.

Peak Shaving

Arbitrage

Backup Power

Grid Services

Model	HEXSTS64-128kWh-400-A
DC Battery	
Cell Type	LFP 314 Ah
Battery Pack Capacity and configuration	16.077kWh/1P16S
Battery capacity/Pack quantity	128kWh / 8, optional 112 kWh / 7
Battery voltage range	359V～461V
Rated charge and discharge rate and current	0.5C, 157A
Cycle index	8000cls (0.5P, 25±2°C, @70%SOH)
Temperature monitoring number	64
Low voltage side voltage range	150V~1000V
The DC/DC Module	
Low voltage side full power minimum voltage	340V
Rated current	180A
Rated power	64kW
Maximum input power	100kW
PV DC side	
Maximum input power	160A
Voltage range/System bus voltage	650V～800V
Input switch	250A/1000Vdc/2P, one PV MPPT controller can be connected
AC rated power	64kW
AC side(Grid-connected)	
AC maximum power	70.4kW
Rated current	92A
THDi	<3%
DC Component	<0.5%Ipn
System Voltage Configuration	3W+N+PE
Voltage Range	360VAC~440VAC
Frequency Range	45~55Hz/55~65 Hz
Power Factor	-1~1
Rated Output Powe	64kW
AC side (Off-grid)	
Maximum single-phase output power	30kW
Rated Output Voltage	400V
Rated Output Frequency	50/60 Hz
THDu	<3%
Overload Capability	110% overload for 10 min
Bypass Maintenance Switch	125A/400Vac
Distribution and switching time	
Load Switch	125A/400Vac
Grid Switch	50A/400Vac
STS Switch	144A/100kW
Switching Time	<20ms
Factory SOC set value	30%-50%
Maximum System Efficiency	⩾90%
System	
Cooling Concept	Intelligent air cooling
Operating Temperature	-30~55°C (derating use over 40 °C)
Relative Humidity	0 ~ 95% RH, non-condensing
Dimensions	1050(W)*1050(D)*2050(H)mm
Weight	1450kg
IP Grade	(Complete machine) IP54
Noise	<70dB
Networking Methods	4G / Wifi / Ethernet TCP / IP
Fire Protection	Aerosol
Display Screen	LCD touch
Diesel generator connection	
Grid feedback input	220Vac
Diesel engine drive output	Dry node
Other parameters	
Related certificates of integrated machine	CE/UN38.3/MSDS/Sea and Land Transportation Certificate/Dangerous Goods Identification Report

PV-Storage-Genset Microgrid All-in-One Integrated Unit

HEXSTS125-225kWh-400-A

Outdoor Integrated Design

Fully Integrated System: MPPT controllers are directly mounted onto PV mounting structures, eliminating separate enclosures.

Environmental Resilience: Outdoor-rated protection (IP65), operational in temperatures from -25°C to 60°C.

Easy Installation: Integrated mounting reduces cabling, cutting installation costs by 30%.

Precise DC-Side Monitoring & Control

String Voltage/Current Monitoring: Module-level fault identification, isolating abnormal strings within 15 minutes.

Real-Time Generation Power: Limited power regulation, flexible output control to meet grid dispatch requirements.

Equipment Operating Status: Predictive maintenance with fault warnings based on temperature/impedance changes.

Dual-Line Converged Communication

Power Transmission: DC cables handle energy transfer with >97% conversion efficiency.

Data Exchange: Big data analysis of module performance, remote parameter configuration & firmware updates, second-level response to grid dispatch commands.

System-Level Safety Protection

Electrical Safety: DC-side insulation monitoring + reverse power flow protection.

Communication Security: RS485 opto-isolation + encrypted data transmission.

Operational Safety: Automatic isolation of faulty strings without impacting overall system operation.

Model	HEXSTS125-225kWh-400-A
DC Battery	
Cell type	LFP 314 Ah
Battery Pack capacity and configuration	16.077kWh/1P16S
Battery capacity /Pack quantity	225kWh/ 14
Battery voltage range	627V - 806V
Rated charge/discharge rate and current	0.5C, 157A
Cycle index	8000cls (0.5P, 25±2 ° C, @70%SOH)
Number of temperature monitorings	112
PV DC Side	
Maximum Input Power	200V
Maximum Input Power	320V
Voltage Range/System Bus Voltage	650V~800V
Input Switch	Two 250A/1000Vdc/2P, one PV MPPT controllers can be connected
AC side(Grid-connected)	
AC rated power	125kW
AC maximum power	137.5kW
Rated Current	180A
THDi	<3%
DC component	< 0.5% LPN
System Voltage Configuration	3W+N+PE
Voltage range	360VAC~440VAC
Frequency range	45~55Hz/55~65Hz
Power factor	-1~1
AC side (Off-grid)	
Rated Output Power	125kW
Maximum Single-phase Output Power	60kW
Rated Output Voltage	400V
Rated Output Frequency	50/60 Hz
THDu	<3%
Overload Capability	110% overload for 10 min
Distribution and switching time	
Bypass Maintenance Switch	250A/400Vac
Load Switch	250A/400Vac
Grid Switch	400A/400Vac
STS Switch	289A/200kW
Switching Time	<20ms
System	
Factory SOC Set Value	30%-50%
Maximum System Efficiency	≥90%
Operating Temperature	-30~55°C (Derating use over 40 °C)
Relative Humidity	0 ~ 95% RH,non-condensing
Dimensions	1600×1050×2050mm
Weight	2400kG
IP Grade	Complete machine（IP54）
Noise	<70dB
Networking Methods	4G / Wifi / Ethernet
Fire Protection	Aerosol
Display Screen	LCD Touch Screen
Diesel generator connection	
Grid feedback input	220Vac
Diesel engine drive output	Dry node
Other parameters	
Related Certificates of Integrated Machine	CE/UN38.3/MSDS/Sea and Land Transportation Certificate/Dangerous Goods Identification Report

Large Hybrid ESS Solution

500kW Hybrid Energy Storage Inverter
2058kWh/2570kWh Containerized BESS
2500kW/4000kW Transformer and Power Converter System
500kW/1028kWh Hybrid ESS 500kW/1543kWh Hybrid ESS
1000kW/1543kWh Hybrid ESS 1000kW/2058kWh Hybrid ESS


APP Monitoring

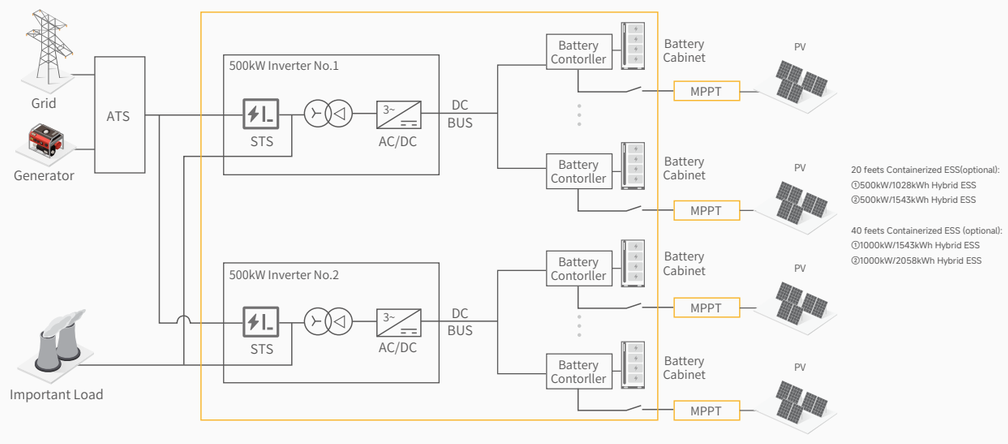

Cost Effective


Safe Reliable


Flexible Design

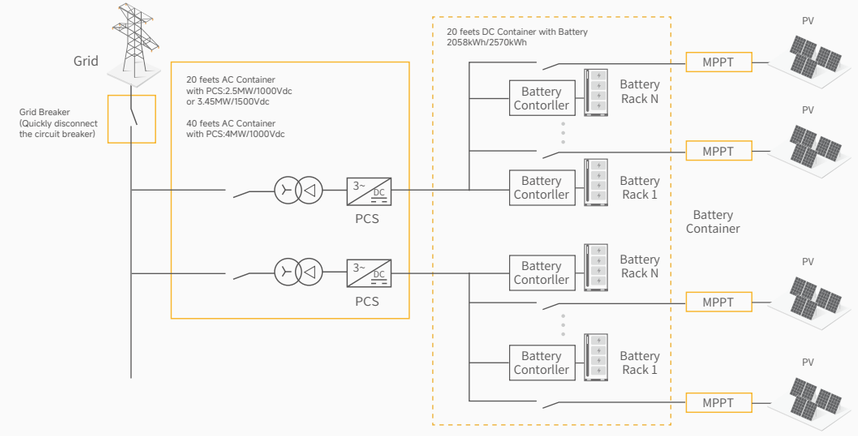
MW Containerized ESS

The containerized hybrid energy storage system is an integrated energy solution that highly integrates the battery system, PCS (power converter), energy management system (EMS), and temperature control and fire protection system into a standard container. It supports dual-mode operation of on-grid and off-grid, and which is suitable for industrial and commercial energy storage, microgrids, and off-grid power supply scenarios. It features the integration of three electrical systems and AC/DC integration, with simple on-site installation and wiring.



Hybrid Energy Storage System(Power station type)

The power station type hybrid energy storage system divides the power station energy storage system into two parts: the AC side transformer and converter system and the DC battery system, namely the AC power source side container and the DC battery side container. The grid and load are connected to the output of the AC power source side container, and the output of the DC battery side is connected to the input of the AC power source side container on site.



500kW Hybrid Energy Storage Inverter

- The equipment supports multiple units being used in parallel.
- It has the functions of grid-connected charging and discharging, and off-grid independent inverter.
- Standard equipped with STS module, supporting automatic switching between on-grid and off-grid modes.
- Standard isolated transformer is equipped, with strong shock resistance.

	Model	500kW
DC side	Voltage range	500-850V
	Max current	1128A
AC side	Rated voltag	400V
	Rated current	722A
	Rated frequenc	50/60Hz
	Rated power	500kW
	Capacity of transformel	500kVA
	Connection method	3W+N+PE
	Hybrid switching timee	<20ms
AC side (On-grid)	THDi	<3%
	Power factor	>0.99
AC side (off-grid)	THDu	<3%(Linear load)
System	Max. efficiency	97.5%
	Weight	2700kg
	Dimensions(WxDxH)	1600(W)*1050(D)*2050(H)mm
	Operating temperature	-30~55°C (Derating use over 40°C)
	IP grade	IP21
	Cooling concept	BMS(CAN)/EMS(TCP/IP)

2058kWh/2570kWh Containerized BESS (Battery DC side)

- Refined thermal management results in small temperature differences between battery cells and longer lifespan.
- Adopting photovoltaic DC coupling and external MPPT for higher charging efficiency of battery.
- Integrated design of photovoltaic access ports and high-voltage boxes leads to a superior system.

Model	2058kWh	2570kWh
Cell type	LFP 314Ah	
Pack capacity and configuration	16.077kWh/1P16S	
Battery capacity and Pack quantity	2058kWh/ 8x16	2570kWh/10x16
Charge and discharge C-rate	<0.5C	
Depth of discharge	95% DOD	
Cycle index	>8000	
Rated voltage	819.2V	
Max. PV input power	16*120kW	20*120kW
Dimensions(W*D*H)	6058(W)*2438(D)*2896(H)mm	
IP grade	IP54	
Cooling concept	Smart air cooling	
Weight	<26T	

2500kW/4000kW Transformer and Power Converter System (Battery AC side)

- Four-quadrant operation, with battery charge and discharge management function and operation modes such as VSG, VF, PQ, etc.
- Parallel operation of hundreds of MW off-grid and independent participation in black start of power grid.
- Interacting with BMS and EMS supports multiple protection of system.
- It is equipped with primary frequency modulation and rapid dispatching functions for power sources, grids and loads, and supports rapid power response.
- Integrated design of converter and transformer, which is easy and convenient to install.

	Model	2500kW	4000kW
DC side	Input branches	2	4
	Max. input current	2*1935A	4*1935A
	Input voltage range	700~950V	
AC side	Rated voltage	400V	
	Rated frequency	50/60Hz	
	Rated power	2500kW	4000kW
	Rated current	3609A	5774A
	Transformer Turns ratio	400/480	
	Vector groupDesignation	DyN1 1	
AC side (On-grid)	THDi	<3%	
	Power factor	>0.99	
AC side (off-grid)	THDu	<3%(Linear load)	
System	Dimensions(W*D*H)	6058(W)*2438(D)*2896(H)mm	12192(W)*x2438(D)*x2896(H)mm
	Weight	<15t	<26t
	Operating temperature	-30~55℃ (Derating use over 40℃)	
	IP grade	IP54	
	Cooling concept	Smart air cooling	

500kW/1028kWh Hybrid ESS 500kW/1543kWh Hybrid ESS

- Standard 20-foot high-cube container.
- The on-site wiring is simple: integrating the AC side and the DC side, three-electricity integration, intelligent storage in one, and it can be used by simply connecting to the power grid and the load on site.
- Standard configuration with intelligent switch of on-grid and off-grid modes and isolated transformer.
- The integrated PV DC input interface is connected to the external MPPT.

	Model	500kW/1028kWh	500kW/1543kWh
DC side	Cell type	LFP314Ah	
	Charge/Discharge C-rate	<0.5C	
	Pack capacity and configuration	16.077kWh/1P16S	
	Battery capacity and Pack quantity	1028kWh/4*16	1543kWh/6*16
	Max. PV input power	8*120kW	12*120kW
AC side	Rated voltage	400V	
	Rated frequency	50/60HZ	
	Rated power	500kW	
	Rated current	722A	
	Hybrid switching time	<20ms	
AC side (On-grid)	THDi	<3%	
	Power factor	>0.99	
AC side (off-grid)	THDu	<3%(Linear load)	
System	Weight	<15t	<20t
	Dimensions(W*D*H)	6058(W)*2438(D)*2896(H)mm	
	Operating temperature	-30~55°C(Derating use over 40°C)	
	IP grade	IP54	
	Cooling concept	Smart air cooling	

1000kW/1543kWh Hybrid ESS 1000kW/2058kWh Hybrid ESS

- Standard 40-foot high-cube container.
- The on-site wiring is simple: integrating the AC side and the DC side, three-electricity integration, intelligent storage in one, and it can be used by simply connecting to the power grid and the load on site.
- Standard configuration with intelligent switch of on-grid and off-grid modes and isolated transformer.
- The integrated PV DC input interface is connected to the external MPPT.

	Model	1000kW/1543kWh	1000kW/2058kWh
DC side	Cell type	LFP314Ah	
	Charge/Discharge C-rate	<0.5C	
	Pack capacity and configuration	16.077kWh/1P16S	
	Battery capacity and Pack quantity	1543kWh/6*16	2058kWh/8*16
	Max. PV input power	12*120kW	16*120kWV
AC side	Rated voltage	400V	
	Rated frequency	50/60HZ	
	Rated power	1000kW	
	Rated current	1444A	
	Hybrid switching time	<20ms	
AC side (On-grid)	THDi	<3%	
	Power factor	>0.99	
AC side (off-grid)	THDu	<3%(Linear load)	
System	Weight	<21t	<26t
	Dimensions(W*D*H)	12192(W)*2438(D)*2896(H)*mm	
	Operating temperature	-30~55°C(Derating use over 40°C)	
	IP grade	IP54	
	Cooling concept	Smart air cooling	

APPLICATION CASES

Lianyungang Energy Group Independent and Shared New Energy Storage Project
Location: Jiangsu Province, China
Scale: 150MW/300MWh

Shangchu Energy Independent shared Energy Storage PowerStation
Location: Ningxia, China
Scale:100MW/200MWh

Ganyu District 50MW/100MWh Independent New Energy Storage Power Station
Location: Jiangsu Province, China
Scale:50MW/100MWh

267.84kW Photovoltaic + 250kW/400kWh Energy Storage Project in the Philippines
Location: Philippines
Scale: 250kW/400kWh

Lianyungang Donghai 50MW/100MWh Energy Storage Power Station Project
Location: Jiangsu Province, China
Scale: 50MW/100MWh

125kW/225kWh Energy Storage Project in Guinea
Location: Guinea
Scale：125kW/225kWh

Ziyang Virtual Power Plant Green Demonstration Application Project
Location: Ziyang, Sichuan Province
Scale: 25MW/50MWh

China Electric Power Construction Group Jilin Institute invests in the (Ningxia) Chiyang Yanchi County 100MW/200MWh Energy Storage Power Station
Location：Ningxia, China
Scale: 100MW/200MWh

Jurong Huayang 100MW/200MWh Shared Energy Storage Power Station
Location: Jiangsu, China
Scale: 100MW/200MWh

Jiangsu Shenyuan Group 10MW/20MWh Energy Storage Statio
Location : Taizhou, Jiangsu
Scale: 10MW/20MWh

Zhejiang Yiwu Zhuopin Energy Storage System Project
Location: Yiwu City, Zhejiang Province
Scale: 200kW/400kWh

Hangzhou Fuyang Huilong Environmental Technology Co., Ltd. Energy Storage Project
Location: Hangzhou, Zhejiang Province
Scale: 400kW/800kWh

Delong Manufacturing Tech Park Project
Location: Guangdong Province, China
Scale: 480kW/930kW

Dongguan Zhongchuang Zhibang Industrial Park User-Side Energy Storage Power Station Project
Location: Guangdong Province, China
Scale: 1.118MW 2.236MWh

BUSINESS PARTNER