



Energy Storage System Solutions

4S Full-Stack Integration, Smart-Storage Synergy

East Energy Storage Technology Co., Ltd.

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*If there are any changes to the product size and parameters, the latest information shall prevail without further notice.

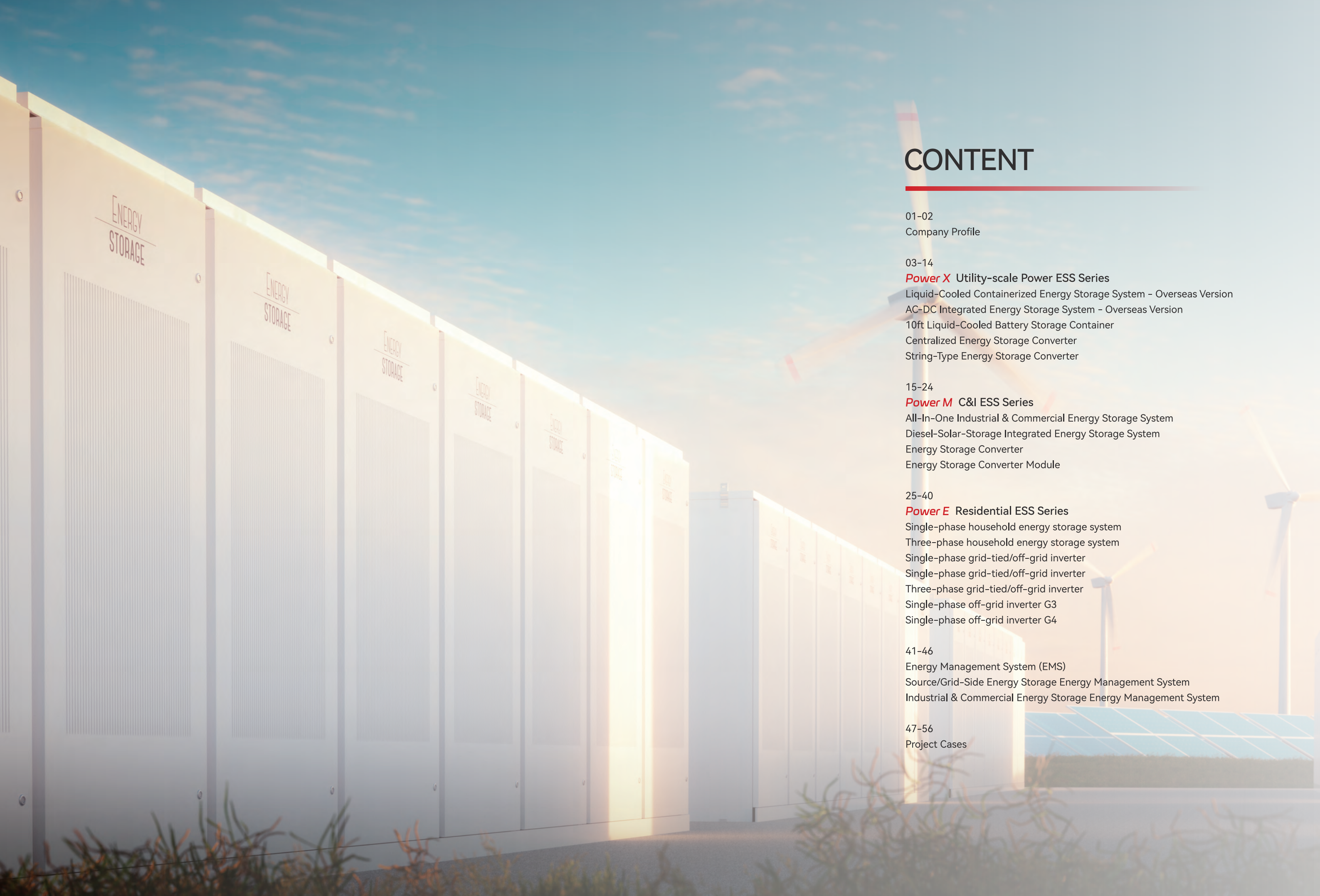


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Single-phase grid-tied/off-grid inverter

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Company Profile

East Group (stock code: 300376) was founded in 1989 and successfully listed on the Shenzhen Stock Exchange in 2014. It was once a subsidiary of Schneider Electric, a Fortune 500 company. The headquarters of the group is located in the Songshan Lake National High-Tech Development Zone in Dongguan, and it has multiple research and development centers around the world. The group is mainly engaged in smart power supply, data center, and smart energy businesses. It has 268 customer centers worldwide, with marketing and service networks covering over 100 countries and regions globally.

East Energy Storage Technology Co., Ltd. is a wholly-owned subsidiary of East Group. By converging cutting-edge technologies in the power sector, the company focuses on the R&D, manufacturing, and sales of core equipment and system integration, including energy storage systems, PV inverters, EV charging stations, and AI energy management. It serves as a technological innovator, delivering efficient and intelligent products and solutions for sustainable development in comprehensive energy applications.

Building upon 37 years of expertise in power electronics and energy efficiency management, EAST's energy storage system solutions stand out in the industry. These solutions feature full-stack self-developed core components, including PCS (Power Conversion System), BMS (Battery Management System), EMS (Energy Management System), PMS (Power Management System), and battery PACK. This vertical integration ensures superior system compatibility and performance optimization.

East Energy Storage has been applied to new energy, independent energy storage, and industrial and commercial energy storage for key energy customers in China and other countries and regions around the world, with an installed capacity of over 10GWh.

37 Years

Technologies in Power Electronics
Energy Efficiency Management Technologies

800+

Professional R&D Engineers
65% with 10+ years of experience

Tier 1

Bloomberg's Energy Storage
Tier 1 list

10GWh+

Energy Storage Systems Deployed

10GWh+

Annual Production Capacity for Energy
Storage Systems and Core Products

Power X Utility-scale Power ESS Series

For energy storage application scenarios on the power generation side and grid side, East Energy Storage has achieved a full range of liquid-cooled 1500V string-type / centralized energy storage systems ranging from 5MWh to 26.8MWh, and has iteratively launched the world's first semi-immersed liquid-cooled energy storage system.

Application Scenarios

- Energy storage configuration for large-scale wind and solar power stations
- Grid-side independent energy storage power stations
- Utility-scale user-side energy storage
- Large microgrid systems
- Thermal energy storage for frequency regulation

Power Tiger 1.0

Centralized Liquid-Cooled Container ESS
2.5MW/5MWh-2h | 2.5MW/10MWh-4h

Flagship

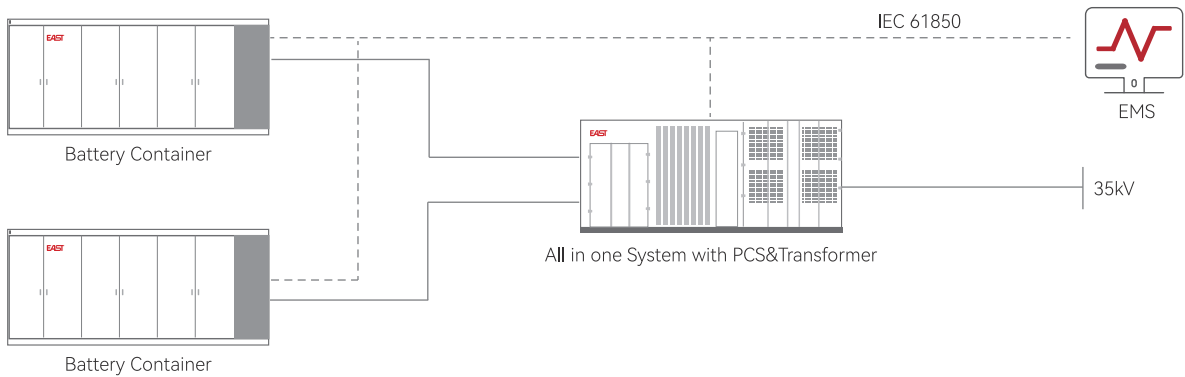
Product Advantages

- PACK 1P104S Design, 20-foot Standard Container
- 314Ah Large-capacity Battery Cells, reduces LCOE by 16%+
- Supports side-by-side and back-to-back arrangement, saving the project's footprint by 40%
- Protection level of PACK is IP67. Protection level of Container is IP54. The anti-corrosion level C5 can withstand the challenges of harsh environments.
- Three-level Topology Structure, Maximum Efficiency ≥99%, Superior Electrical Energy Quality

Applicable Scenarios

- Energy Storage Allocated by New Energy
- Frequency Modulation Service
- Independent Energy Storage
- C&I

Topology



Specification	2.5MW/5MWh		2.5MW/10MWh	
DC-side				
Cell type	3.2V/314Ah			
System Battery Configuration	12P416S		12P416S×2	
Battery Rated Capacity	5015.9616kWh		10031.92kWh	
Battery Voltage Range	1081.6V~1497.6V			
Certification	IEC62619、IEC62477、IEC61000-6-2、IEC61000-6-4、IEC63056、IEC62933、UN38.3			
The AC-side PCS parameters				
Rated AC Output Power	2500kVA			
Number of DC Input	2			
AC Current Distortion Rate	<3%			
Rated Output Voltage	AC690V			
Voltage Range	586.5V~759V			
Power Factor	>0.99			
Adjustable Reactive Power Range	-105%~105%			
AC Grid Frequency	50Hz(46.5Hz~51.5Hz)			
Isolation Method	Transformer			
Certification	IEC62477、IEC61000、IEC62109			
Transformer Parameters				
Rated Power	2750kVA			
Voltage Range	37±2×2.5%/0.69kV			
Transformer Connection Group	Dy11			
Certification	IEC60076、IEC62271			
System Parameters				
PCS&Transformer Dimensions (W x H x D)	9125×2896×2438mm			
Battery Container Dimensions (W x H x D)	6058×2896×2438mm		6058×2896×2438mm(×2)	
PCS&Transformer Weight	20T			
Battery Container Weight	≤44T		≤44T×2	
IP Level	IP54			
Corrosion-proof Grade	C5			
Operating Temperature Range	-30℃~60℃ (>45℃ Derating)			
Operating Humidity Range	5%~95%(No Condensation)			
Max. Operating Altitude	4000m			
Cooling Method	Liquid Cooling(DC)and Smart Air Cooling(AC)			
Fire Protection System	Aerosol + Water Fire + Explosion-Proof Fan			
System Communication Interface	CAN、RS485、LAN			
External System Communication Protocol	Modbus TCP、IEC61850			

Power Vision 2.0

Integrated AC and DC Energy Storage System 2.5MW/5MWh-2h



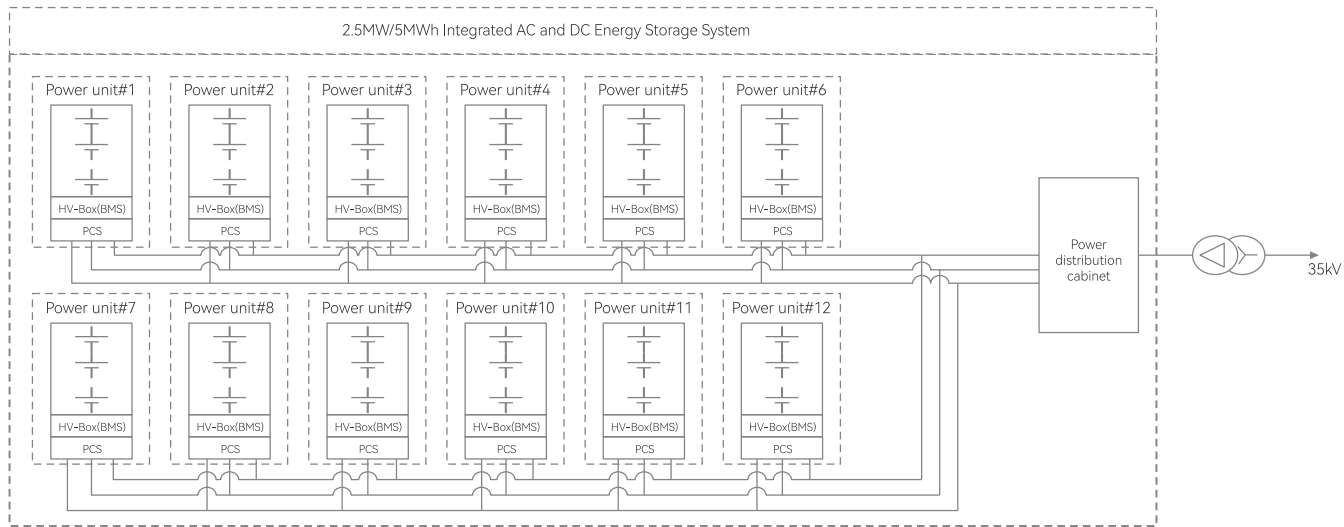
Product Advantages

- The modular PCS solves the circulating current between battery racks
- The discharge amount of the whole life cycle is increased by 6~8% , LCOE reduced by 3%~5%
- 20' standard container
- It increases energy density by 18%
- It reduces the footprint by 30%
- It reduces O&M time by 20%

Applicable Scenarios

- Energy Storage Allocated by New Energy
- Frequency Modulation Service
- Independent Energy Storage
- C&I

Topology



Product Name	2.5MW/5MWh Integrated AC and DC Energy Storage System
AC-side	
Rated Power	2500kVA
Maximum Power	2750kVA
Max. Output Current	2510A
Number of AC Input	12
Rated Output Voltage	690V
Grid Type	3P+PE
AC Grid Frequency	50Hz(45Hz~55Hz)
Grid Voltage Range	586.5V~759V
Power Factor	>0.99(Rated Power)
Adjustable Reactive Power Factor Range	-1~+1
AC Current Distortion Rate	<3%(Rated Power)
Isolation Method	Non-isolated
DC-side	
Cell	LFP 3.2V/314Ah
System Battery Configuration	12P416S
Battery Rated Capacity	5015.96kWh
Battery Voltage Range	1081.6V~1497.6V
System Parameters	
Dimensions (W x H x D)	6058×2896×2438mm
Weight	≤48T
IP Level	IP54
Corrosion-proof Grade	C5
Operating Temperature Range	-30℃~60℃
Operating Humidity Range	0%~95%(No Condensation)
Max. Operating Altitude	4000m
Cooling Method	Liquid Cooling
Fire Protection System	Flammable Gas Detection + Active Ventilation + PACK-Level Fire Protection (optional) + Water Firefighting
System Communication Interface	LAN
External System Communication Protocol	ModbusTCP、IEC61850
Certification	GB/T-34120、GB/T-44026、UL9540A、IEC62619-2022、IEC63056-2020、IEC/EN62477-1-2023、IEC62933-1-2024、UL1973-2022、UN38.3、IEC61000-6-2、IEC61000-6-4、EN50549-2

Power **Lite** 2.0

2.5MWh 10ft Liquid-Cooled Containerized BESS



Portable & Easy Transport

- 40% smaller footprint via high integration
- 24-ton lightweight 10ft high-cube container for global logistics & fast deployment



Safe & Reliable

- Advanced pressure differential balancing ensures full-lifecycle smart operation
- 3-tier fire protection & IP54 rating suit 4000m high-altitude scenarios



High Cycle Efficiency

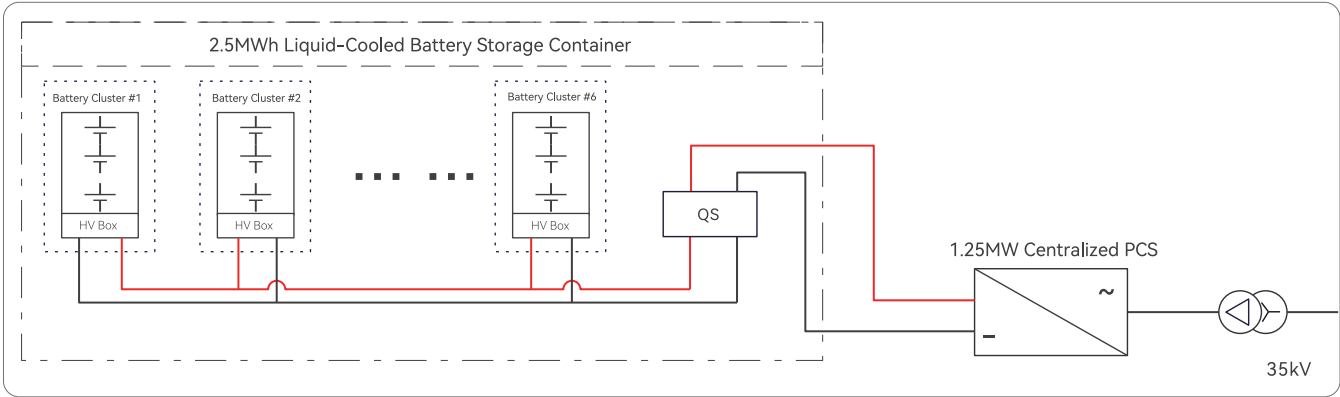
- Intelligent liquid cooling maintains the cell temperature difference within 3°C while reducing energy consumption
- The system delivers a cycle life of over 8000 cycles, ensuring high efficiency, long service life, and low O&M cost



Premium & Stable Configuration

- 6-string 314Ah cells feature strong output, mature tech and stable supply
- 3-tier BMS & triple fire protection realize full safety coverage

Topology



Product Name	Power Lite 2.0
Battery Type	LFP
Cell Specification	3.2V/314Ah
System Configuration	6P416S
System Rated Voltage	1331.2V
System Voltage Range	1081.6V~1497.6V
Charge & Discharge Rate	0.5C
Cycle Life	8000
System Nominal Capacity	2508kWh
Communication Interface	CAN/RS485/ETH
Communication Protocol	CAN2.0/Modbus
Fire Protection Solution	Smoke & Gas Detection, Aerosol Fire Suppression, Sprinkler
Cooling Method	Liquid Cooling
IP Rating	IP54
Anti-corrosion Grade	C4M (C5-M Optional)
Operating Temperature Range	-30°C~50°C
Humidity	5% ~ 95% (Noncondensing)
Maximum Altitude	≤4000m (Derating above 3000m)
Container Dimensions	2896 × 2438 × 2991 (H × D × W, mm)
Container Weight	≤24T
Compliance Standards	UN 38.3 、 IEC 62619、 IEC 63056 、 IEC 61000-6-2、 IEC 61000-6-4

Power C-Turbo 2.0

Centralized Energy Storage Converter
2.5MW Energy Storage Converter



High-Efficiency Conversion

- Adopts a three-level topology with an efficiency of up to 99%
- Intelligent air cooling, no derating at 40°C

Safe and Reliable

- IP65 protection rating, C5 corrosion resistance and stronger environmental adaptability
- Supports intelligent detection of multiple system faults as well as temperature failure detection and protection

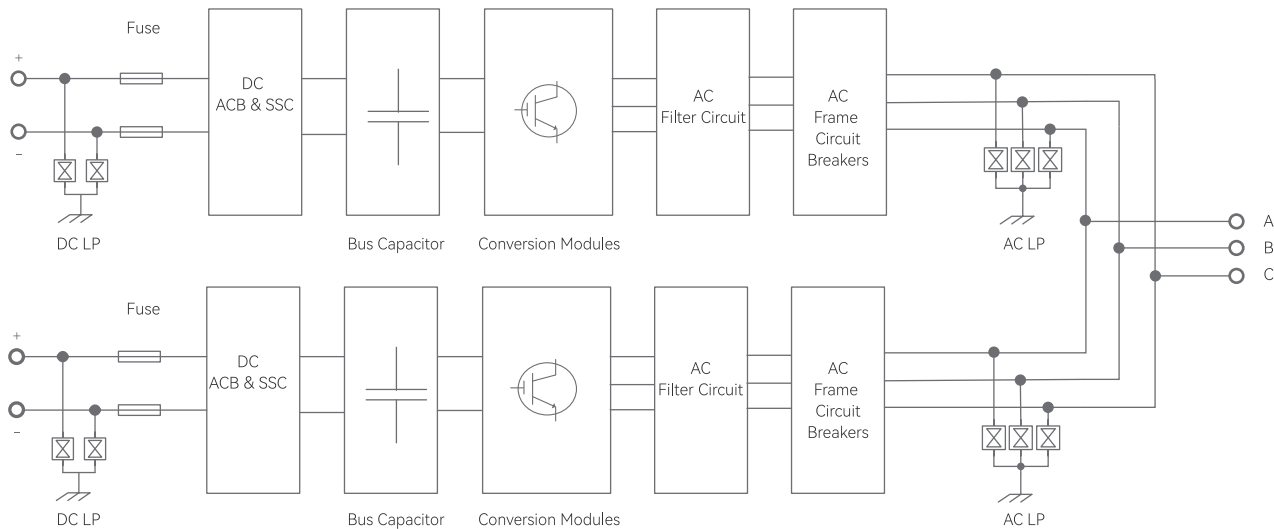
Flexible Application

- Multiple units can be paralleled and assembled in a modular manner to meet different power requirements
- Modular design for easier installation, operation and maintenance

Grid-Friendly

- Equipped with functions such as PQ, VF, SVG and VSG, supporting high/low voltage ride-through
- Rapid power dispatching, off-grid operation and "black start"

Circuit Block Diagram



Product Specifications	EAPCS2500KHV	
DC Side		
Rated Power DC Voltage Operating Range	1000V~1500V	
Maximum DC Operating Current		2806A
Number of DC Input Channels	2	
AC Side (Grid-Connected)		
Rated Power	2500kW	
Maximum Power	2750kW	
Maximum AC Current	2301A	
Rated AC Voltage	AC690V	
AC Voltage Range	586.5V~759V	
Rated Grid Frequency / Grid Frequency Range	50Hz/45Hz~55Hz	
AC Current Harmonics	<3% (rated power)	
Power Factor	>0.99 (rated power)	
Adjustable Range of Reactive Power	-105%~105%	
Efficiency		
Maximum Efficiency	99%	
Protection		
DC Input Protection	Load Switch + Fuse	
AC Output Protection	Framework Circuit Breaker	
Surge Protection	Possess	
Grid Monitoring / Ground Fault Monitoring	Possess	
Insulation Detection	Possess	
Overheat Protection	Possess	
General Parameters		
Dimensions (W×H×D)	720×2320×1400mm (×2)	
Weight	2T	
Isolation Type	Non-isolated	
Protection Class	IP65/C5	
Operating Temperature Range	-35℃~60℃ (>45℃ Derating)	
Relative Humidity Range	0%~95% (No Condensation)	
Cooling Method	Intelligent Air Cooling	
Maximum Operating Altitude	5000m (>4000m Derating)	
Communication	RS485, CAN	
Compliance Standards	IEC62477、IEC61000、IEC62109	
Grid Support	L/HVRT , Active Power , Reactive Power Control, Power Slope Control	

Power S-Turbo 2.0

215kW Liquid-Cooled String Energy Storage Converter



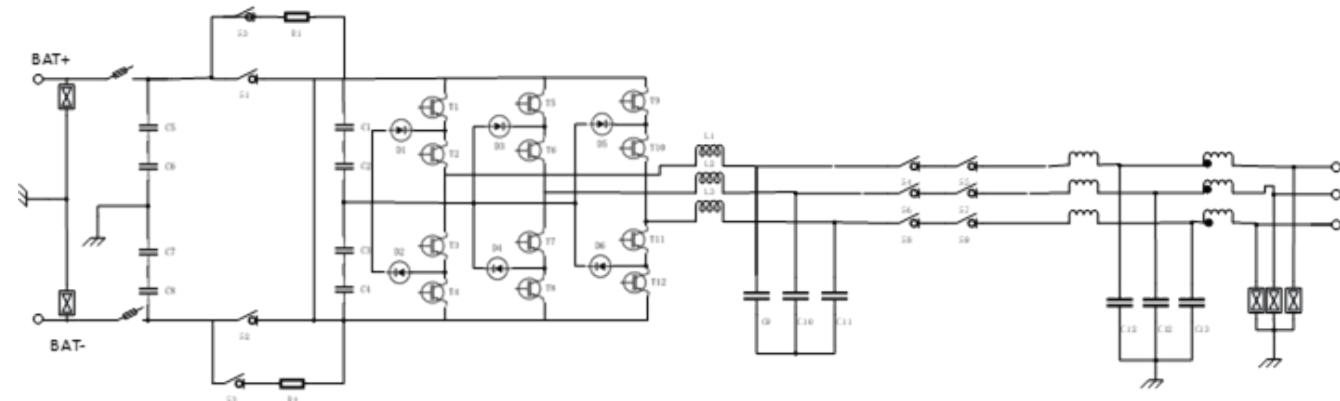
Product Overview

EAST's brand-new liquid-cooled string PCS features a modular design concept. It can be paralleled to build a 5MW AC-DC integrated energy storage system applicable to generation-side, grid-side and large-scale industrial and commercial energy storage scenarios.

Product Features

- Full liquid-cooled thermal solution, low-noise design, maximum efficiency up to 99%
- Ultra-thin structure: module height 155 mm, weight 1,120 kg for convenient installation and maintenance
- The module features an IP66 protection rating and high corrosion protection class, suitable for various harsh environment applications.
- It supports off-grid operation function.

Product Topology Diagram



Product Specifications	EAMPCS215KHV
DC Side	
Maximum DC Voltage	1500V
Minimum DC Voltage	1000V
Operating Voltage Range	1000V~1500V
Maximum DC Current	241A
Number of Input Channels	1
AC Side	
Rated Power	215kW
Maximum Power	235kW
Rated Grid Voltage	690V
AC Wiring System	3P+PE
Grid Voltage Range	-15% ~ +10%
Rated AC Current	180A@50°C
Maximum AC Current	198A@45°C
Rated Grid Frequency	50Hz
Permissible Grid Frequency	45~55Hz
Total Current THD	< 3 %
Power Factor	>0.99
Adjustable Range of Reactive Power	-105% ~ +105%
Safety Functions	
Protection	DC Input Protection, AC Side Output Protection, Surge Protection, Grid Short-Circuit/Earth Fault, Insulation Impedance, Over-Temperature Fault Protection, LVRT, HVRT, Anti-Islanding Protection AC Overcurrent/Short-Circuit Protection, DC Overcurrent/Short-Circuit Protection DC Polarity Reverse Protection, Power Module Fault Protection (IGBT)
System Parameters	
Maximum Efficiency	0.99
IP Rating	IP66
Anti-Corrosion Grade	C3 (Optional C5)
Standby Power Consumption	<0.5%Pn
External Communication Interfaces	RS485 / CAN
Communication Protocol	Modbus-RTU / CAN2.0
Noise	<70dB
Cooling Method	Intelligent Liquid Cooling
Dimensions (W×H×D)	780mm*155mm*1300mm (Excluding Mounting Lugs)
Operating Altitude	4000m (3000m Derating)
Compliant with Standards	GB/T34120, GB/T34133, IEC62477

Power M C&I ESS Series

Application Scenarios

- Industrial Parks
- Large Commercial Complexes
- Data Centers and 5G Base Stations
- Expressway Charging Stations and Service Areas
- Microgrids



Power Meta 3.0

Liquid-Cooled Energy Storage All-in-One Machine
135kW/261kWh | 135kW/522kWh



High Integration

- All-in-one cabinet design with highly integrated components, minimal footprint, and easy relocation
- Integrated PCS, BMS, EMS, thermal management, and fire protection systems within the cabinet, reducing losses by 1%

Ultimate Safety

- Independent fire protection per cabinet, with physical isolation to prevent fault propagation
- Utilizes a three-level fire protection AI algorithm, ensuring zero incident occurrence

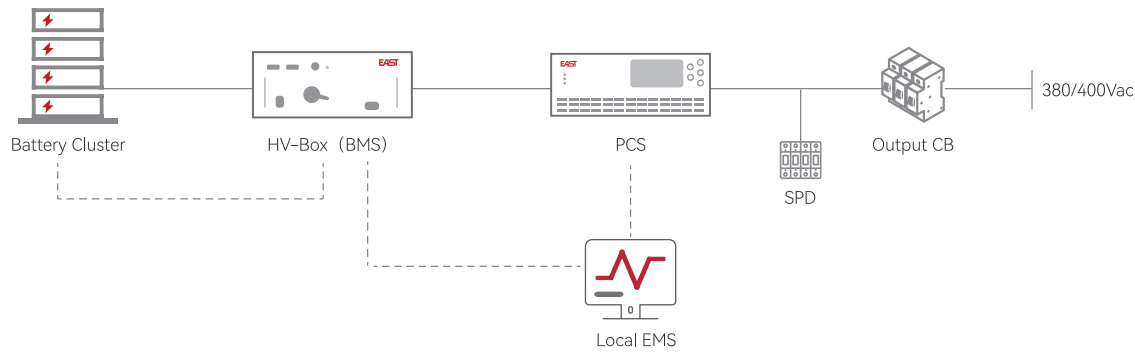
Exceptional Adaptability

- IP54 protection and C5 anti-corrosion design, suitable for harsh environments
- Flexible parallel cabinet expansion based on capacity needs, with easy multi-cluster management

System-Friendly

- Customizable charging and discharging strategies, enabling station-level monitoring and maintenance
- Intelligent monitoring and remote operation and maintenance capabilities

Topology



Product Specifications	EAESS135K-261kWh	EAESS135K-522kWh
DC-side		
Cell type	3.2V/314Ah	
System Battery Configuration	1P260S	2P260S
Battery Rated Capacity	261.248kWh	522.496kWh
Battery Voltage Range	676V ~ 949V	
The AC-side PCS parameters		
AC-Side Rated Power	135kW	
AC-Side Voltage Distortion Rate	3%	
DC Component	≤0.5%	
AC-Side Rated Voltage	AC400V	
Grid Voltage Range	340V~440V	
Power Factor	>0.99（Rated Power）	
Reactive Power Adjustable Range	-105%~105%	
Rated Grid Frequency	50Hz	
Grid Frequency Range	45Hz~55Hz	
Isolation Method	Non-isolated	
System Parameters		
Dimensions (W x H x D)	1000×2000×1500mm	1950×2000×1510mm
Weight	2350kg	4350kg
IP Level / Corrosion-proof Grade	IP54/C3（C5 Optional）	
Operating Temperature Range	-25℃~55℃	
Operating Humidity Range	0%~95%（Non-condensing）	
Max. Operating Altitude	4000m	
Battery Cooling Method	Liquid Cooling	
Converter Cooling Method	Liquid Cooling	
Fire Protection System	Aerosol + Water + Active Ventilation	
System Communication Interface	LAN	
External System Communication Protocol	IEC61850、MODBUS-TCP	

Power Air 1.0

125kW/261kWh-2h
Liquid-Cooled Industrial & Commercial Energy Storage All-in-One System



High Efficiency and Benefits

- Intelligent string architecture, one management per cluster
- PCS three-level topology, overall energy conversion efficiency > 90%
- Liquid cooling temperature control, battery temperature difference < 3°C
- Auxiliary power consumption reduced by 30%, system service life extended by 2 years

Safe and Reliable

- Long-life LFP battery cells with cycle count > 8000 times
- Explosion vent design + perfluorohexanone fire protection
- Multiple safety safeguards support off-grid operation with load, providing backup power for critical loads

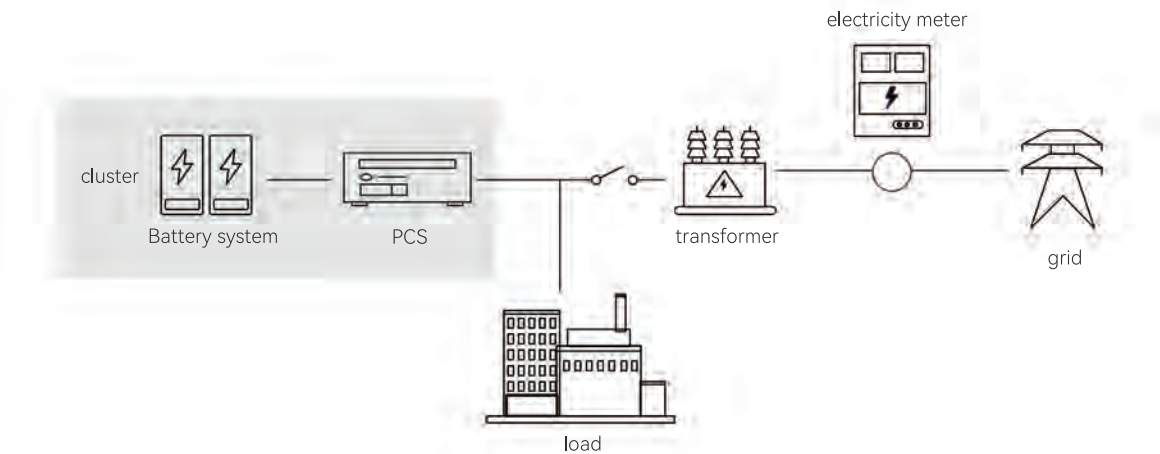
Flexible configuration

- All-in-one design, ready for grid connection upon deployment, commissioning-free
- Building block-style expansion, supporting parallel operation of up to 8 units
- High energy density cells, reducing system footprint

Intelligent Management

- Online monitoring via cloud platform, real-time alerts for system failures
- Supports remote and local upgrade of key equipment for intelligent operation and maintenance
- Equipped with high-precision BMS, precise calibration, and on-site maintenance-free

Topology



Product Specifications	EAESS125k-261kWh-C
Battery parameters	
Cell type	3.2V/314Ah
System battery configuration	260S1P
Rated battery capacity	261kWh
Battery voltage range	650V ~ 936V
Rated voltage	832Vdc
Grid-connected AC side parameters	
Rated power	125kW
Rated voltage	400Vac
Rated frequency	50/60Hz
Voltage range	400Vac(-20%~+15%)
Frequency range	50/60Hz(-5Hz~+5Hz)
Total Voltage Harmonic Distortion	<3%
Power factor	±1.0
Overload capacity	110%
Off-grid AC side parameters	
Rated power	125kW
Rated voltage	400Vac
Rated frequency	50/60Hz
Voltage harmonics	≤3%
System parameters	
AC connection mode	three-phase four-wire
System efficiency	≥90%
Cooling method	liquid cooling
Charge-discharge rate	0.5P
Number of cycles	≥8000@25°C
Fire protection system	Perfluorohexanone (PACK grade) + active monitoring + water fire protection
Operating temperature	-30~55°C
Relative humidity	0~95%RH, No condensation
Altitude	3000m(> 3000m Derated)
Communication method	LAN,RS485,TCP/IP ICE61850
IP rating	Battery protection level @IP67, PCS protection level @IP66, system protection level @IP54
Weight	≤2500kg
Cabinet Size (Width x Depth x Height)	1000x1350x2350mm

Power Mega 1.0

EAPVESS130K261KWH-C Diesel-PV-ESS All-in-one



High-Grade Protection

- Cabinet: IP54, C4 Anti-Corrosion; Inverter: IP66; Battery PACK: IP67. Suitable for harsh scenarios.



Intelligent Monitoring

- Real-time power balance, energy scheduling, information monitoring and early warning. Safe and reliable.



High Conversion Efficiency

- SiC-based optical-storage inverter with maximum efficiency up to 98.2%, lowering LCOE



Modular Design

- Composed of battery cabinet, distribution cabinet & EMS module. Flexible configuration.



Three-Level Fire Protection

- Level 1: Power-off shutdown;
- Level 2: Perfluorohexanone activation;
- Level 3: Water spray anti-reignition.



Multi-Scenario Application

- Commercial and industrial energy storage, emergency backup power, diesel-solar-storage microgrid, etc.

System Expansion



130kW/261-1044kWh



130kW/261kWh*4

Product Specifications	EAPVESS130K261KWH-C
Battery Parameters	
Cell Type	314Ah
System Battery Configuration	260S1P
Rated Battery Capacity	261kWh
Nominal Voltage	832Vdc
Battery Voltage Range	728V ~ 943V
Max. Expandable Units	4
PV Parameters	
Maximum Input Power	260kW
Maximum Input Voltage	950Vdc
Rated Input Voltage	810Vdc
Start-up Voltage	220Vdc
Max. Input / Short-Circuit Current	52/65A
Number of MPPT Channels	6
Max. Strings per MPPT	3
Grid Parameters	
Rated Input / Output Power	260/130kW
Voltage Range	380/400Vac(-20%~20%), 3/N/PE
Rated Input Current	394A/376.8A
Rated Output Current	197A/188.4A
Power Factor	>0.99(0.8 lead~0.8 lag)
Current THDi	<3%@rated power
Diesel Generator Parameters	
Rated Power	130kW
Voltage Range	380/400Vac(-20%~20%), 3/N/PE
Rated Current	197A/188.4A
Backup Parameters	
Rated Power	130kW
Nominal Voltage	380/400Vac, 3/N/PE
Rated Frequency	50/60Hz
Rated Current	197A/188.4A
Voltage THDu	<3%@linear rated power
General System Parameters	
Grid-Tied / Off-Grid Switching Time	<4ms
IP Rating	Battery Cabinet (IP54), Battery Pack (IP67), Distribution Cabinet (IP20), Solar-Storage Inverter (IP66), Distribution Box (IP55)
Operating Temperature	-30~60°C(>45°C Derating)
Maximum Conversion Efficiency	99%
European MPPT Efficiency	98.2%/99.9%
Relative Humidity	<95%RH(non-condensing)
Cooling Method	Battery Cabinet: Liquid Cooling; Solar-Storage Inverter: Air Cooling
Operating Altitude	<4000m(> 2000m Derating)
Wired / Wireless Communication	Ethernet (1 channel Modbus-TCP), RS485 (1 channel Modbus-RTU) / 4G/Wi-Fi
HMI (Human-Machine Interface)	LED,APP,Web
Compliant Standards	IEC62109-1/2,IEC62619,IEC62477-1,UN38.3, UL9540A, UL1973,IEC62933-5-2, IEC61439-2 GB/T34120,GB/T34133,EN50549,IEC61000-6-1,2,3,4
Product Dimensions (W × H × D)	Battery Cabinet: 1000 × 2250 × 1350 mm; Distribution Cabinet: 800 × 2250 × 1350 mm
Product Weight	Battery Cabinet: ≤ 2000 kg; Distribution Cabinet: ≤ 1000 kg
Noise Level	<65dB
Fire Suppression Method	Cell-level & cabinet-level fire protection (Perfluorohexanone) / Aerosol + Water Spraying Fire Suppression

Power **B-Turbo** 1.0

135kW PCS module



High Efficiency Conversion

- Three-level design with efficiency up to 98.8%
- Intelligent Liquid cooling, no derating at 50°C

Safe and Reliable

- IP66 high protection rating, strong environmental adaptability
- Multiple protection measures, fault self-diagnosis

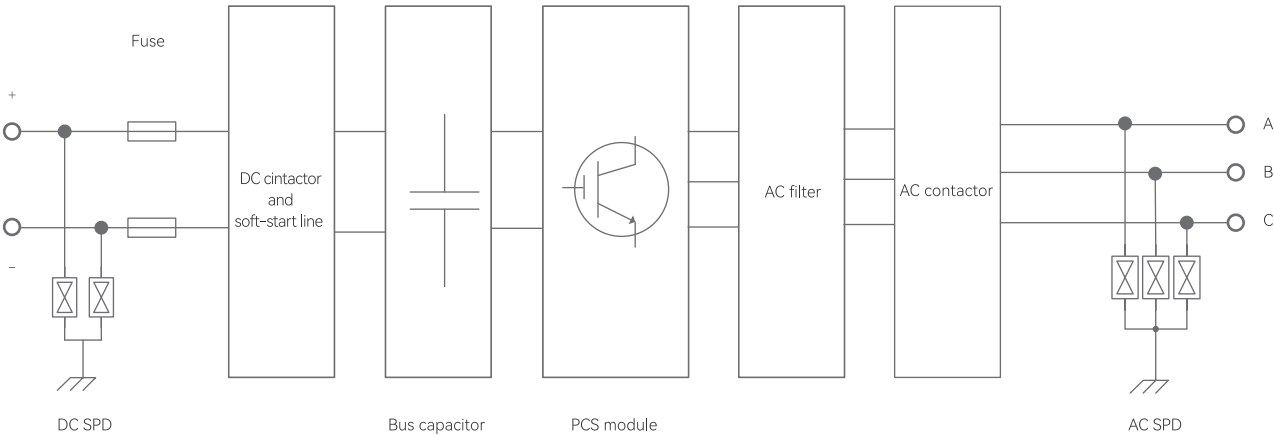
Flexible application

- Capable of multi-machine parallel connection and modular assembly to meet different power requirements
- Modular design for easier installation, operation and maintenance

Grid-friendly

- Capable of independent local management for peak shaving and valley filling
- Supports various fault ride-through and weak power grid applications with excellent grid adaptability
- Off-grid operation and unbalanced load carrying, greatly enhancing the product's load adaptability

Topology



Product Specifications	EAMPCS135K
DC side	
Rated power DC voltage operating range	650V~950V
Maximum DC operating current	233A
DC input channels	1
AC side (grid connection)	
Rated output power	135kW
Maximum output power	148.5kW
Maximum alternating current	215A
Rated AC voltage	AC400V
AC voltage range	340V~440V
Rated grid frequency / Grid frequency range	50Hz/45Hz~55Hz
Alternating current harmonics	<3% (Rated power)
Power factor	>0.99 (Rated power)
Adjustable range of reactive power	-105%~105%
AC side (off-grid)	
Rated output voltage	400/230V
Three-phase unbalance capability	100%
Seamless on-grid and off-grid switching time	≤20ms (Grid-Connected and Off-Grid Switch Cabinet)
Seamless switching for circuit breaker control	≤2s
Off-grid overload capacity	Pos≤1.1Pn long-term 1.1Pn < Pos≤1.2Pn 1 min
Efficiency	
Maximum efficiency	99%
Protect	
DC input protection	Possess
AC output protection	Possess
Surge protection	Possess
Power Grid Monitoring / Grounding Fault Monitoring	Possess
Insulation detection	Possess
Overheat protection	Possess
General parameters	
Dimensions (Width × Height × Depth)	770×155×1140mm
Weigh	≤105kg
Isolation type	Non-isolated
Protection class	IP66
Operating temperature range	-30°C~60°C (>50°C derated)
Relative humidity range	0%~100% (No condensation)
Cooling method	Liquid cooling
Maximum operating altitude	4000m (> 2000m Derated)
External Communication Interfaces	RS485 / CAN
Communication Protocol	Modbus-RTU / CAN2.0
Standrad	GB/T34120, GB/T34133

Power E Residential ESS Series

Single-phase household energy storage system

Three-phase household energy storage system

Single-phase grid-tied/off-grid inverter : EAHI-3000-SL / EAHI-3600-SL / EAHI-5000-SL / EAHI-6000-SL

Single-phase grid-tied/off-grid inverter: EAHI10KSL / EAHI12KSL

Three-phase grid-tied/off-grid inverter: EAHI10KTH / EAHI15KTH / EAHI20KTH

Single-phase off-grid inverter G3: GF3K24H / GF3K24L / GF5K48H / GF5K48L

Single-phase off-grid inverter G4: IGF3K24H/GF5K48H



Power E 5kWh

All-in-one machine
Single-phase household energy storage system



- 

Integrated streamlined case design with elegant appearance
- 

IP66 stainless steel enclosure, waterproof and dustproof
- 

Flexible expansion of battery capacity
- 

Module plug-and-play, automatic recognition
- 

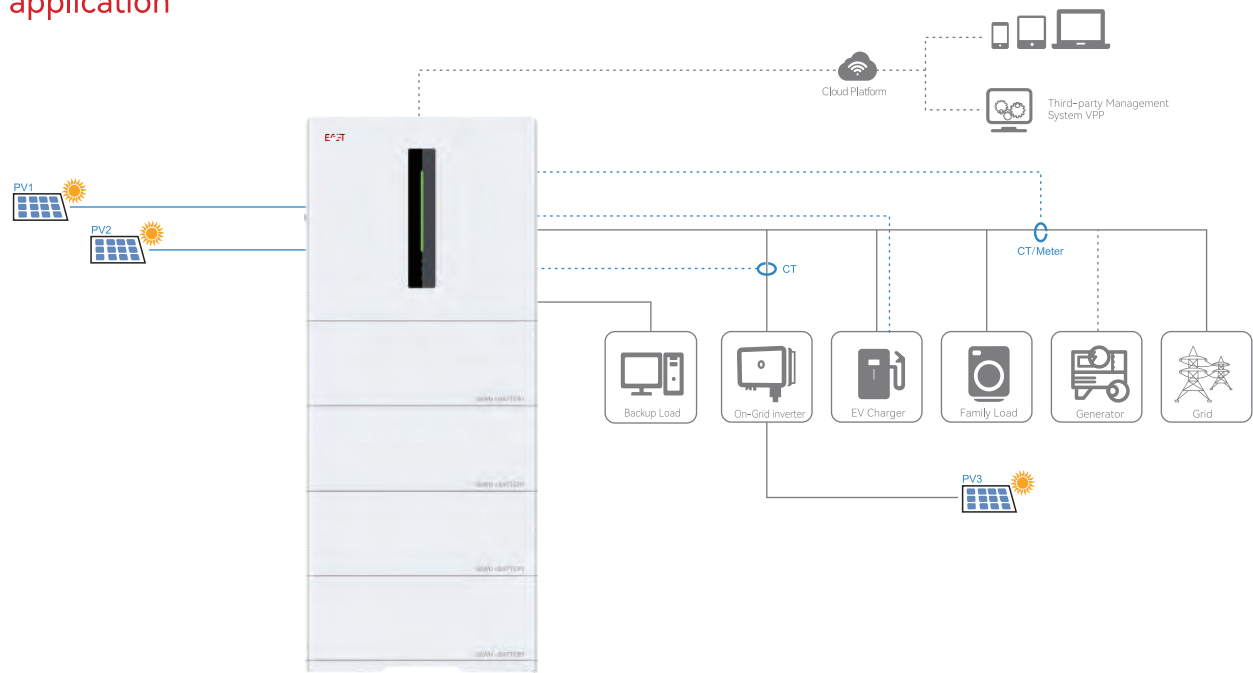
Stacking design for easy installation
- 

Security and stability, 24-hour intelligent monitoring
- 

Seamless switching of emergency mode to ensure that loads do not power down
- 

Flexible setting of multiple working modes according to preferences

Typical application



Hybrid inverter specification

Model	EAHI-6000-SL-S
PV input parameter	
PV maximum input power	8000W
PV maximum input voltage	550Vdc
Starting voltage	150Vdc
PV maximum input current	16/16A
Short circuit current	24/24A
Number of input strings per MPPT	1+1
AC input/output parameter(grid side)	
Input voltage range	184~276Vac
Input frequency range	50±5Hz/60±5Hz
Maximum input current	40A
Rated output power	6000W
Maximum apparent output power	6000VA
Grid system mode	1/N/PE
Rated output voltage&frequency	220Vac/230Vac&50Hz/60Hz
Rated output current	27.3A/26.1A
Power factor	>0.99(0.8 lead~0.8 lag)
AC output parameter(back-up side)	
Rated output power	6000VA/6000W
Grid system mode	1/N/PE
Rated output voltage&frequency	230Vac(208/220/240Vac settable)&50Hz/60Hz
Rated output current	27.3A/26.1A
Voltage harmonic	≤3%(linear load)
Switching time	≤10ms
Efficiency	
Maximum efficiency	97.8%
MPPT efficiency	99.9%
Protection	
Comprehensive	Grid over-voltage protection, grid over-frequency protection, grid overload protection, over-temperature protection, anti-islanding protection, insulation resistance detection, residual current monitoring unit, output over-current protection, output short-circuit protection, surge protection
Surge protection	DC Type II/AC Type III
Inverter standard	
LVD	IEC/EN 62109-1/-2, AS62109
EMC	EN 61000-6-1/-2/-3/-4
Grid-tied	CEI 0-21, DIN VDE V 0124-100:2020, VDE-AR-N 4105:2018, NRS097-2-1, EN 50549-1G99/1-9:2022, ETSI EN303645+PSTI, C10/11:2021, XP C 15-712-3:2019, ELOT EN 50549-1:2019, PEA
Inverter other parameter	
Dimensions(WxHxD)	600×530×305mm
Weight	36.4kg

Battery specification

Model	5KWH
Cell technology	LiFePO4
Battery voltage	51.2Vdc
Maximum expandable number	6
Energy capacity	5.12kWh
Cell type	105Ah
Scalable capacity range	5.12kWh~30.72kWh
DOD	Max. 100% DOD(settable)
Maximum charging power	3.84kW@1module, 5.7kW@>1 module
Maximum discharging power	5.02kW@1module, 6kW@>1 module
Max. charging current	75A@1module, 100A@>1 module
Max. discharge current	98A@1module, 120A@>1module
Communication interface	485 and CAN
Dimensions(WxHxD)	600×220×305mm
Weight	50kg
Certification	IEC 62619, IEC 60730, UN 38.3, IEC 62040-1, ROHS2.0, VDE 2510-50
Base parameter	
Dimensions(WxHxD)	600×30×305mm
Weight	6kg

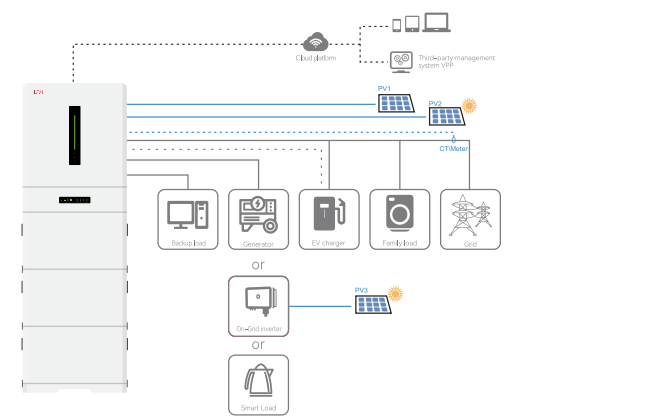
PowerE 5.12kWh

All-in-one machine
Three-phase household energy storage system

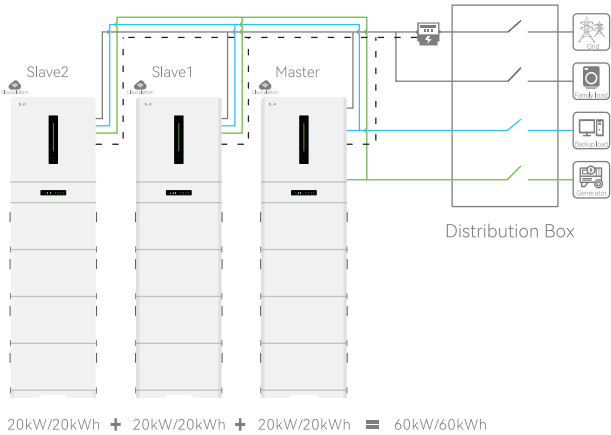


- Lithium iron phosphate battery, IP66 outdoor protection rating, built-in fire protection module and high-efficiency DCDC module
- Each cluster supports 5-20 kWh stacking, with a maximum of 3 clusters available for on-demand usage and flexible expansion.
- Modular battery design, stacked plug-in installation, plug and play
- Real-time application monitoring is supported, along with online remote OTA upgrades, and operation and maintenance are simple.

Typical application



Parallel application



System composition



Hybrid inverter specification

Model	EAH10KTH-S		EAH15KTH-S		EAH20KTH-S	
PV input parameter						
Max. input power	20kW		30kW		30kW	
Max. input voltage			1000Vdc			
MPPT voltage range			160~950Vdc			
Max. input current per MPPT	16A/16A				16A/32A	
Max. short circuit current per MPPT	24A/24A				24A/48A	
Number of input strings per MPPT	1/1				1/2	
Battery input parameter						
Battery type			Lithium battery			
Voltage range			650~980Vdc			
Max. charge/discharge current	15.4A/15.4A		23.1A/23.1A		30.8A/30.8A	
AC input and output(grid)						
Max. apparent power of grid	15kVA		22.5kVA		30kVA	
Max. input current	21.7A		32.6A		40A	
Input voltage range			320~480Vac			
Input frequency range			50±5Hz/60±5Hz			
Rated output power	10kW		15kW		20kW	
Power factor			>0.99(0.8 leading~0.8 lagging)			
THDI			≤3%(@rated power)			
Generator input						
Max. input power	10kW		15kW		20kW	
Max. input current	15.2A		22.8A		30.4A	
AC output parameter(back-up load)						
Rated output power	10kW		15kW		20kW	
Rated output voltage			3/N/PE, 380Vac/400Vac			
Rated output frequency			50Hz/60Hz			
Rated output current			22.8A/21.7A			
THDV			≤3%(linear load)			
Switching time			≤10ms			
Efficiency						
Max. efficiency			98.2%			
MPPT efficiency			99.9%			
Others						
Surge protection			DC Type II/AC Type III			
Dimensions(WxHxD)(mm)			650x640x270mm			
Net weight(kg)			45			
Parallel operation			Supports 6 units in parallel connection			
Topology			Non-isolated			
IP rating			IP66			
Operating temperature			-25°C~+60°C			
Cooling mode	Natural cooling				Smart cooling	
Altitude			3000m			
Noise level at 1m	≤25dB		≤45dB		≤50dB	
Standards	NC RFG+PTPIREE , VDE 0126, EN50549- 1/10, DIN VDE V 0124-100:2020, VDE-AR-N 4105:2018, PPDS , CEI 0-21 IEC/EN 62109-1/-2,IEC62040-1, IEC62477, IEC62619:2022 , EN 61000-6-1/-2/-3/-4					

Battery distribution box specification

Model	PDU-GU-Y/F
Maximum current	60A
Voltage range	550~1000Vdc
Dimensions(WxHxD)(mm)	650x150x270
Net weight(kg)	12
IP rating	IP66
Fixed base size(WxHxD)(mm)	650x80x270

Battery specification

Model	EHBS-P5-TH
Battery type	LiFePO4
Module capacity	5.12kWh
Rated voltage	750Vdc
Voltage range	600~1000Vdc
Max. charge/discharge current	3.4A/5.5A
Communication interfaces	CAN/RS485
Dimensions(WxHxD)(mm)	650x370x270
Net weight	59
Topology	High frequency isolation
IP rating	IP66
Operating temperature	-25°C~55°C
Cooling mode/Heating mode	Natural cooling/PTC heating
Altitude	3000m
Standards	IEC/EN 62619 2022, ISO 13849, IEC/EN 62040-1, IEC/EN 62477, IEC62109-1/2, IEC 61000-6-1, EN/IEC 61000-6-3, UN 38.3

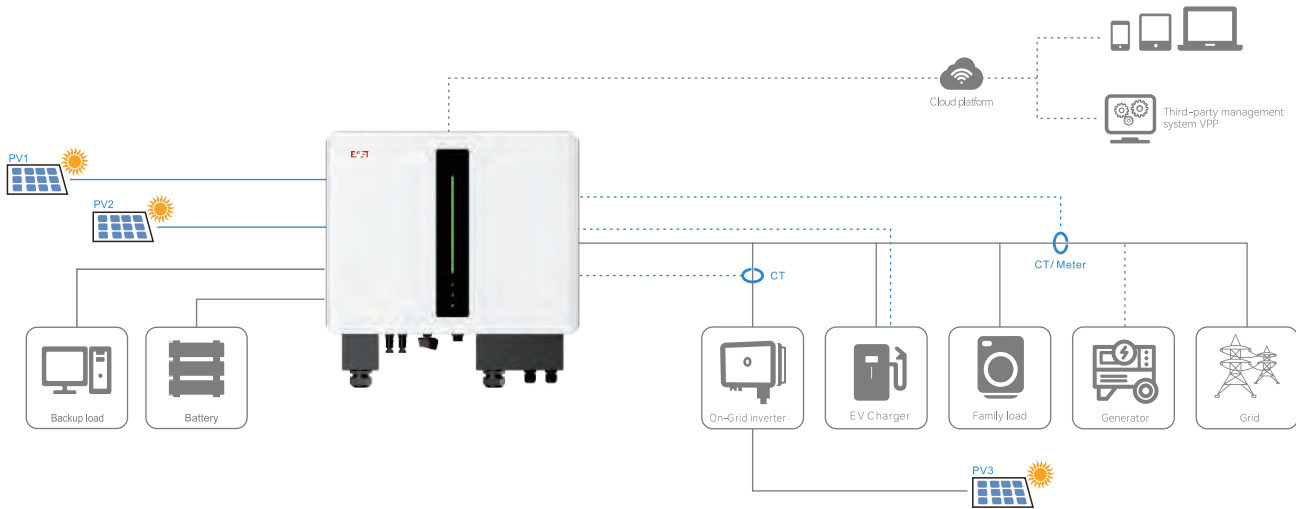
Power E3K-6K

Single-phase grid-tied/off-grid inverter
EAHI-3000-SL / EAHI-3600-SL / EAHI-5000-SL / EAHI-6000-SL



- It adopts an all-aluminum chassis with an IP66 protection rating, making it suitable for outdoor environments.
- It features high charge-discharge efficiency and is compatible with both lithium batteries and lead-acid batteries.
- Charging and discharging periods and power can be flexibly set, supporting peak shaving and valley filling.
- Real-time APP monitoring for easy maintenance

Typical application



Hybrid inverter specification

Model	EAHI-3000-SL		EAHI-3600-SL		EAHI-5000-SL		EAHI-6000-SL	
PV input parameter								
Max. input power	4680W				6500W		7800W	
Max. input voltage					550Vdc			
Rated input voltage					360Vdc			
Start-up voltage					150Vdc			
Min. operating voltage					100Vdc			
MPPT voltage range					100~540Vdc			
Max. input current per MPPT	16A						16A/16A	
Max. short-circuit current per MPPT	24A						24A/24A	
Number of MPPT	1						2	
Number of input strings per MPPT	1						1/1	
Battery input parameter								
Battery type	Li-ion, Lead-acid battery							
Voltage range	42~58Vdc							
Max. charge current	66A		75A		100A		100A	
Max. discharge current	66A		75A		100A		120A	
Charging curve	3 Stages/Equalization							
Lithium battery charging strategy	BMS self-adaption							
AC input parameter(grid)								
Grid type	Single phase(L/N/PE)							
Input voltage range	184~276Vac							
Input frequency range	50±5Hz/60±5Hz							
Max. input current	21.8A		26.2A		36.5A		40A	
AC outputparameter(grid)								
Rated output power	3000W		3600W		5000W		6000W	
Max. apparent output power	3000VA		3600VA		5000VA		6000VA	
Grid system mode	Single phase(L+N+PE)							
Rated output voltage	220Vac/230Vac							
Rated output frequency	50Hz/60Hz							
Rated output current	13.6A/13.0A		16.4A/15.7A		22.7A/21.8A		27.3A/26.1A	
Max. output current	13.6A		16.4A		22.7A		27.3A	
Power factor	>0.99(0.8 leading~0.8 lagging)							
THDI	≤3%(@Rated Power)							
AC outputparameter(back-up)								
Rated output power	3000W		3600W		5000W		6000W	
Max. apparent power	3000VA		3600VA		5000VA		6000W	
Output system mode	Single phase(L+N+PE)							
Rated output voltage	230Vac(208/220/240Vac settable)							
Rated output frequency	50Hz/60Hz							
Rated output current	13.0A		15.7A		21.8A		26.1A	
Max. output current	14.4A		17.3A		24.0A		28.8A	
THDV	≤3%(linear load)							
Transfer time	≤10ms							
Efficiency								
Max. efficiency					97.8%			
MPPT efficiency					99.9%			
Protections								
Protections	Over/under voltage, over/under-frequencyover load, output short-circuit, over temperature, residual current monitoring unit, output over-current, insulation resistance, anti islanding, surge protection							
Output overvoltage protection	DC Type II/AC Type III							
Others								
Communications	RS485, WIFI							
Dimensions(WxHxD)(mm)	548x440x197							
Net weight(kg)	21.4				24.8			
Topology	High frequency isolation(for battery)							
IP rating	IP66							
Operating temperature	-25°C~+60°C(>45°C derating)							
Cooling mode	Natural cooling							
Altitude	4000m							
Noise level at 1 m	≤25dB							
Installation mode	Wall-mounted							
Standards								
Safety regulation	IEC/EN 62109-1/-2, AS62109							
EMC	EN 61000-6-1/-2/-3/-4							
Grid connection	CEI 0-21, DIN VDE V 0124-100:2020, VDE-AR-N 4105:2018, AS4777.2, NRS097-2-1, EN 50549-1							

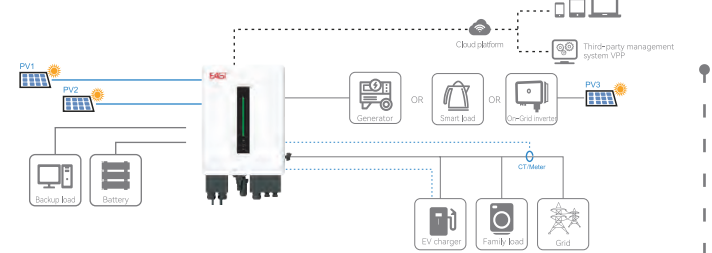
PowerE 10/12K

Single-phase grid-tied/off-grid inverter
EAHI10KSL / EAHI12KSL

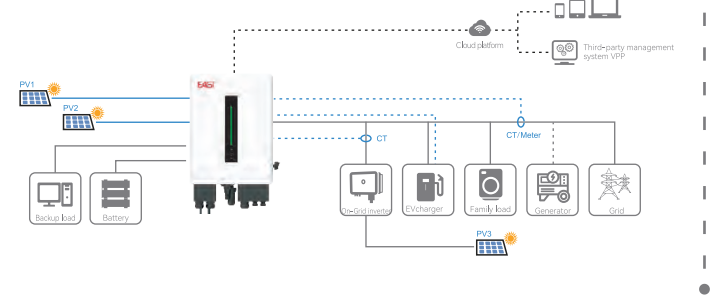


- Supports input from photovoltaic inverters, generators and microgrids, suitable for new and upgraded photovoltaic and microgrid systems
- Supports optional configurations of RSD and AFC, providing more secure protection for the system
- Supports multiple inverters to achieve EPS output in parallel mode and can be extended to small industrial and commercial applications
- The power input from the power grid and photovoltaics is over-provisioned at a ratio of 1.5, making the system operation more stable.

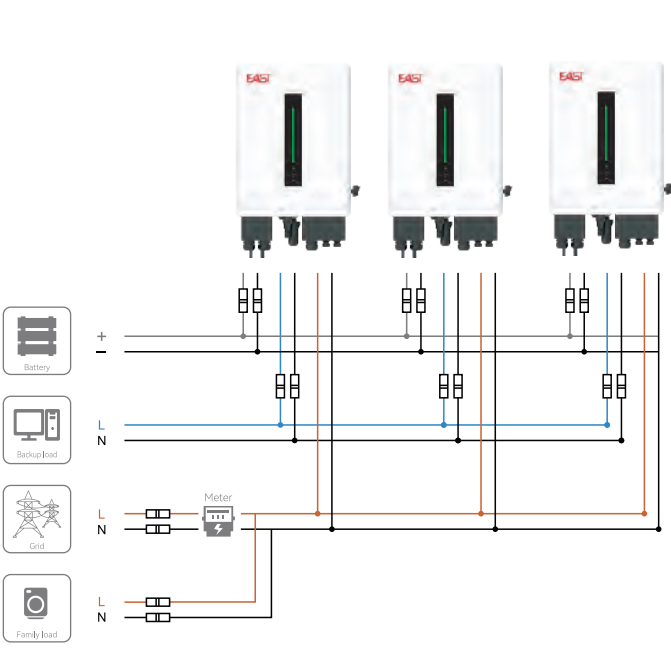
Typical application 1



Typical application 2



Parallel application



Hybrid inverter specification

Model	EAHI10KSL		EAHI12KSL
PV input parameter			
Max. input power	18kW		18kW
Max. open-circuit voltage	550Vdc		
Rated input voltage	360Vdc		
Start-up voltage	150Vdc		
Min. operating voltage	100Vdc		
MPPT voltage range	100~540Vdc		
Full power MPPT voltage range	300~500V		
Max. input current per MPPT	30A/30A		
Max. short-circuit current per MPPT	40A/40A		
MPPT quantity	2		
Number of input strings per MPPT	2/2		
Battery input parameter			
Battery type	Li-ion battery/Lead acid battery		
Voltage range	42~58Vdc		
Max. charge/discharge current	180A/180A		250A/250A
AC input and output parameter(grid)			
Max. apparent power of grid	15kVA		18kVA
Max. input current	68.2A		81.8A
Input voltage range	184~276Vac		
Input frequency range	50±5Hz / 60±5Hz		
Rated output power	10kW		12kW
Max. output apparent power	10kVA		12kVA
Rated output voltage	1/N/PE, 220Vac/230Vac		
Rated output frequency	50 / 60Hz		
Rated output current	45.5A/43.5A		54.5A/52.2A
Max. output current	45.5A		54.5A
Power factor	>0.99(0.8 leading~0.8 lagging)		
THDI	≤3%(@ rated power)		
Generator input			
Max. input power	10kW		12kW
Max. input current	45.5A		54.5A
AC output parameter(back-up)			
Rated output power	10kW		12kW
Max. apparent power	10kVA		12kVA
Rated output voltage	1/N/PE, 220Vac/230Vac		
Rated output frequency	50Hz		
Rated output current	45.5A/43.5A		54.5A/52.2A
Max. output current	45.5A		54.5A
THDV	≤3%(linear load)		
Switching time	≤20ms		
Efficiency			
Maximum efficiency	97.8%		
MPPT efficiency	99.9%		
Protections			
Protections	Over/under voltage, over/under-frequency,overload, output short-circuit, over temperature, residual current monitoring unit, output over-current, insulation resistance detection, anti-islanding, surge protection		
Surge protection	DC Type II/AC Type III		
Others			
Dimensions(WxHxD) (mm)	450x600x270		
Weight(kg)	45		
Topology	High frequency isolation(for battery)		
IP rating	IP66		
Operating temperature	-25℃ ~+60℃		
Cooling mode	Smart cooling		
Altitude	3000m		
Noise level(1m)	≤55dB		
Installation method	Wall-mounted		
Standards			
Safety regulation	IEC/EN 62109-1/-2, AS62109		
EMC	EN 61000-6-1/-2/-3/-4		
Grid connection	NRS097-2-1:2017		

Power E 10/15/20K

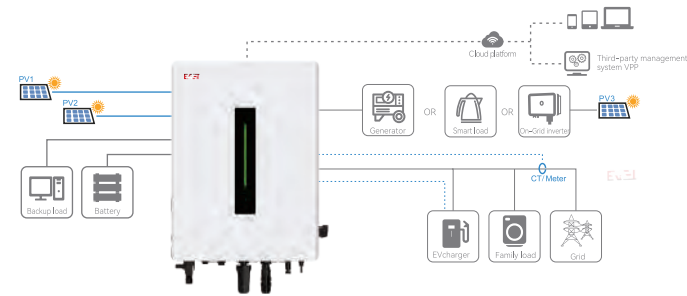
Three-phase grid-tied/off-grid inverter
EAHI10KTH / EAHI15KTH / EAHI20KTH



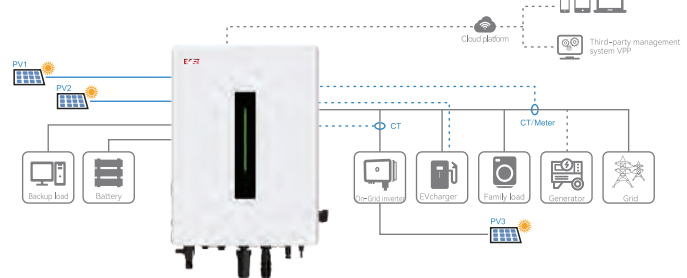
- Supports PV, generator, and microgrid inputs, suitable for both new and retrofitted photovoltaic and microgrid systems.
- It features real-time application monitoring, supports online remote OTA upgrades, and is simple to operate and maintain.

- The mains and PV input power are over-provisioned by 1.5 to 2 times, making the system operate more stably.
- Supports optional RSD and AFCI configurations, providing safer protection for the system.

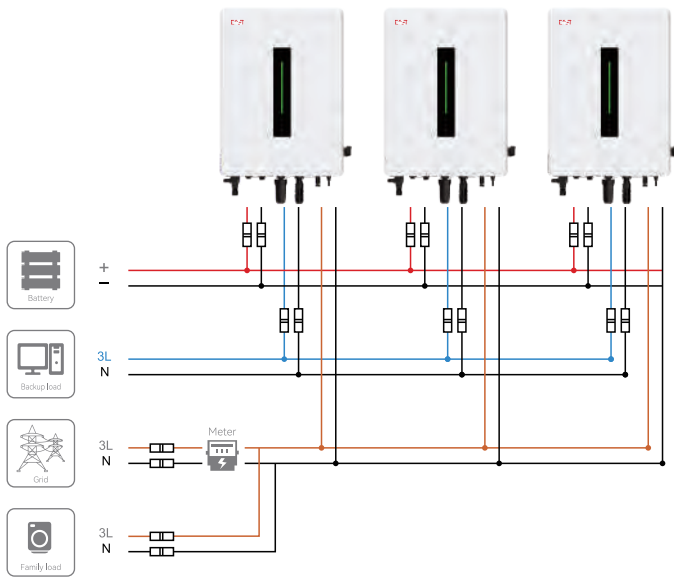
Typical application 1



Typical application 2



Parallel application



Hybrid inverter specification

Model	EAHI10KTH		EAHI15KTH		EAHI20KTH	
PV input parameter						
Max. input power	20kW		30kW		30kW	
Max. input voltage			1000Vdc			
Rated input voltage			650Vdc			
Start-up voltage			180Vdc			
Min. operating voltage			160Vdc			
MPPT voltage range			160~950Vdc			
Full power MPPT voltage range			625~800V			
Max. input current per MPPT	16A/16A				16A/32A	
Max. short-circuit current per MPPT	24A/24A				24A/48A	
Number of MPPTs			2			
Number of input strings per MPPT	1/1				1/2	
Battery input parameter						
Battery type			Lithium battery			
Voltage range			150~600Vdc			
Max. charge/discharge current	25A		37.5A		50A	
AC input and output parameter(grid)						
Max. apparent power of grid	15kVA		22.5kVA		30kVA	
Max. input current	22.8A		34.2A		40.0A	
Input voltage range			320~480Vac			
Input frequency range			50±5Hz/60±5Hz			
Rated output power	10kW		15kW		20kW	
Max. output apparent power	11kVA		16.5kVA		22kVA	
Rated output voltage			3/N/PE, 380Vac/400Vac			
Rated output frequency			50 Hz/60Hz			
Rated output current	15.2A/14.5A		22.8A/21.7A		30.4A/29.0A	
Max. output current	16.7A/15.8A		25.1A/23.8A		33.5A/31.8A	
Power factor			>0.99(0.8 leading~0.8 lagging)			
THDI			≤3%(@ rated power)			
Generator input						
Max. input power	10kW		15kW		20kW	
Max. input current	15.2A		22.8A		30.4A	
AC output parameter(back-up)						
Rated output power	10kW		15kW		20kW	
Max. apparent power	10kVA		15kVA		20kVA	
Rated output voltage			3/N/PE, 380Vac/400Vac			
Rated output frequency			50Hz/60Hz			
Rated output current	15.2A/14.5A		22.8A/21.7A		30.4A/29.0A	
Max. output current	15.2A		22.8A		30.4A	
THDV			≤3%(linear load)			
Switching time			≤10ms			
Efficiency						
Maximum efficiency			98.2%			
MPPT efficiency			99.9%			
Protections						
Protections	Over/under voltage, over/under frequency, overload, output short-circuit, over-temperature, residual current monitoring unit, output overcurrent, insulation resistance detection, anti-islanding, surge protection					
Surge protection	DC Type II/AC Type III					
Others						
Dimensions(WxHxD)(mm)	500x680x270					
Packaged dimensions(WxHxD)(mm)	615x885x370					
Net weight(kg)	41					
Gross weight(kg)	47					
Parallel operation	Supports 6 units in parallel connection					
Topology	Non-isolated					
IP rating	IP66					
Operating temperature	-25℃ ~+60℃					
Cooling mode	Natural cooling		Smart cooling			
Altitude	3000m					
Noise level(1m)	≤25dB		≤45dB		≤50dB	
Installation method	Wall-mounted					
Standards						
Grid connection	VDE 0126, EN50549, DIN VDE V 0124-100:2020, VDE-AR-N 4105:2018					
Safety regulation	IEC/EN 62109-1/-2					
EMC	EN 61000-6-1/-2/-3/-4					

PowerE GF-G3

Single-phase off-grid inverter G3
GF3K24H / GF3K24L / GF5K48H / GF5K48L



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Flexibly set multiple operation modes according to preferences
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The system can be remotely monitored and maintained in real time via the WiFi module.
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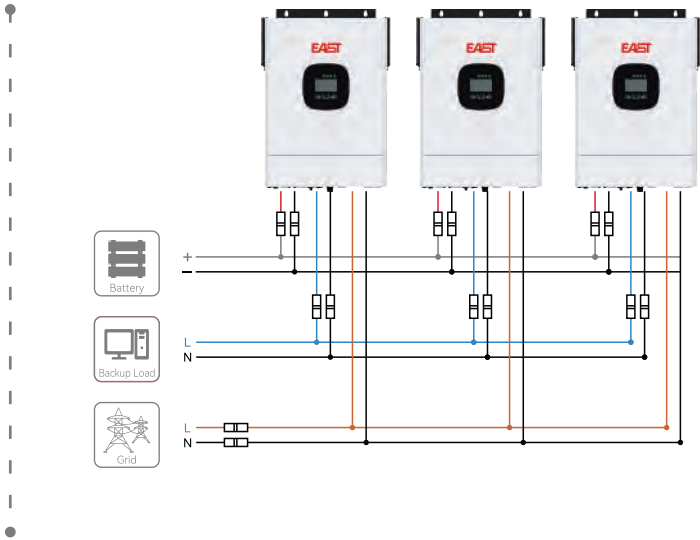
LCD and button design with a user-friendly operation interface
- 

High charge and discharge efficiency, compatible with lithium batteries and lead-acid batteries

Typical application



Parallel application



Inverter specification

Model	GF3K24H	GF3K24L	GF5K48H	GF5K48L
Rated power	3000VA/3000W		5000VA/5000W	
Parallel fancement	No		Yes, 6 units max	
AC input				
Rated input voltage	230VAC	120VAC	230VAC	120VAC
Input voltage range	170~280VAC PC 90~280VAC home application	90~140VAC	170~280VAC PC 90~280VAC home application	90~140VAC
Rated input frequency	50/60Hz self-adapting			
Input frequency range	40~65Hz			
Rated input current	20A	36A	32A	61.33A
Max. input current	30A	40A	40A	80A
AC output				
Rated AC output voltage	230VAC	120VAC	230VAC	120VAC
Output settable voltage	220V/230V/240V	100V/110V/120V	220V/230V/240V	100V/110V/120V
Output settable frequency	50Hz/60Hz			
Rated AC output current	13.05A	25.00A	21.70A	41.67A
Overload capacity	Inverter output: 10s@110%~150% rated load; 5s@≥150% rated load; 100ms@≥200% rated load Power grid output: 5s@≥150% rated load; 100ms@≥200% rated Load			
THDU	<5%, linear load; <10%, non-linear load			
Efficiency(peak value)	93%			
Surge power	6000VA, 5 cycles		10000VA, 5 cycles	
Switching time	10ms(Typical)			20ms
Battery				
Battery type	Lead-acid battery/lithium battery			
Rated voltage	24VDC		48VDC	
Charging voltage	27VDC(default), 24~29.2VDC settable		54VDC(default), 48~58.4VDC settable	
Overcharge protection voltage	30.2VDC		60.5VDC	
Rated discharge current	130A		113.7A	
PV/AC charging				
PV charging	MPPT			
Max. PV plate power	4000W		6000W	
Max. PV plate open circuit voltage	450VDC			
MPPT operation range voltage	120~430VDC			
Max. PV input current	18A		27A	
Max. PV charging current	100A			
Max. AC charging current	100A			
Max. battery charging current	100A			
Others				
Dimension(WxDxH)(mm)	322x122x390		342x122x471	332x142x420
Net weight(kg)	9		11	12
Operating environment	-10℃ ~50℃			
IP rating	IP20			
Protections	Input over/under voltage protection, input over/under frequency protection, output overload, output short-circuit, radiator over-temperature protection, fan fault detection etc.			
Communication interfaces	USB/RS485, dry contact, WiFi(optional)		USB/RS232/RS485, dry contact, WiFiWiFi(optional)	USB/RS485, dry contact, WiFi(optional)

PowerE GF-G4

Single-phase off-grid inverter G4
GF3K24H/GF5K48H



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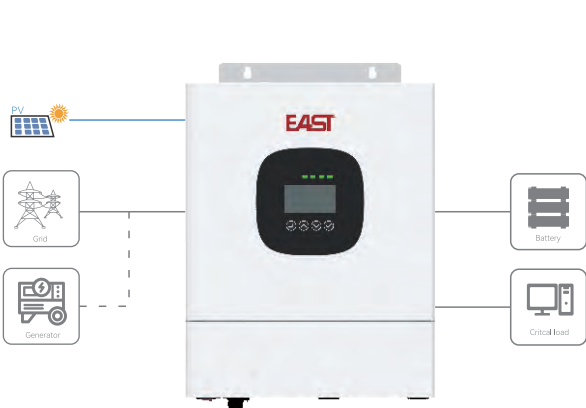
Flexibly set multiple operation modes according to preferences
- 

The system can be remotely monitored and maintained in real time via the WiFi module.
- 

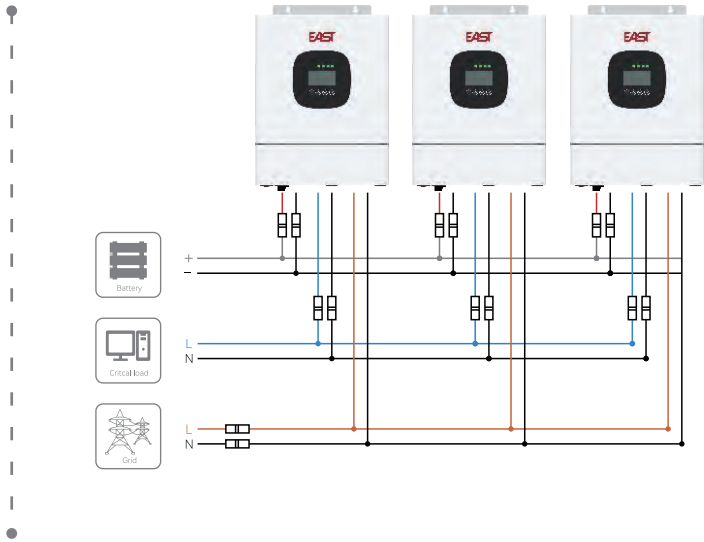
LCD and button design with a user-friendly operation interface
- 

High charge and discharge efficiency, compatible with lithium batteries and lead-acid batteries

Classic application



Parallel operation application

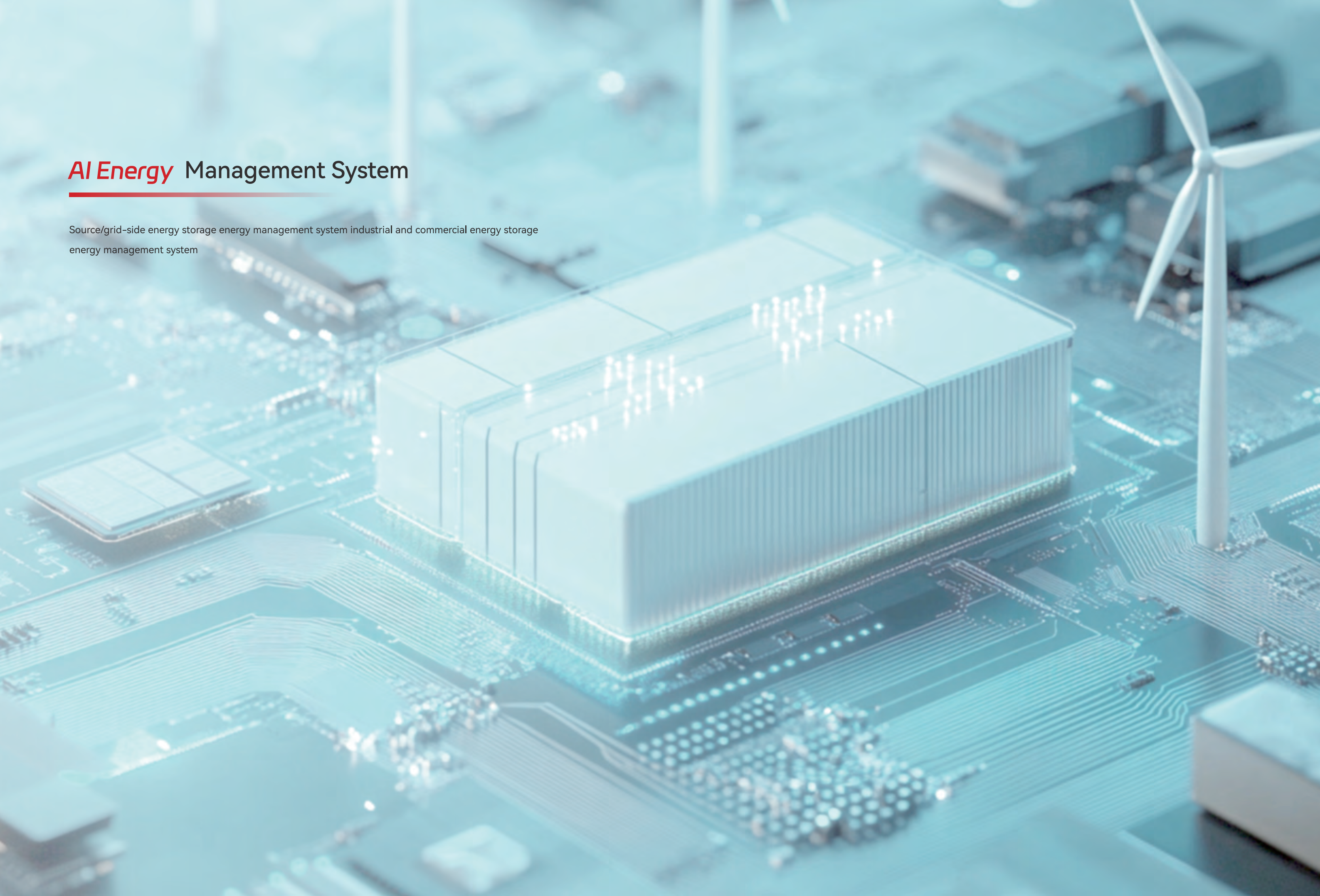


Inverter specification

Model	GF3K24H	GF5K48H
Rated power	3000VA/3000W	5000VA/5000W
Parallel operation function	Not supported	Supported, with a maximum of 6 units connected in parallel
AC input		
Rated input voltage	230VAC	230VAC
Input voltage range	170~280VAC （Personal Computer Load Mode） 90~280VAC （Household Load Mode）	
Rated input frequency	50/60Hz adaptive	
Input frequency range	40~65Hz	
Rated input current	17.4A	32A
Maximum input current	20A	40A
AC output		
Rated output voltage	230VAC	230VAC
Adjustable output voltage	220V/230V/240V	220V/230V/240V
Output configurable frequency	50Hz/60Hz	
Rated output current	13.05A	21.70A
Overload capacity	105%~110% load for 30s, 110%~130% load for 10s, 130%~150% load for 3s, 150%~200% load for 0.5s, ≥200% load for 0.2s	
Harmonic content of inverter voltage	< 5%, linear load, < 10%, non-linear load	
Efficiency (Peak)	93%	
Surge power	6000VA, 10 cycles	10000VA, 10 cycles
Switch time	10ms(typical value)	
Battery		
Battery type	Lead-acid battery / Lithium battery	
Rated voltage	24VDC	48VDC
Charging voltage	27VDC (default value), adjustable range 24~29.2VDC	54VDC (default value), adjustable range 48~58.4VDC
Overvoltage protection value	30.2VDC	60.5VDC
Rated discharge current	130A	113.7A
PV/AC charging		
PV charging type	MPPT	
Maximum PV power	5000W	6000W
Maximum PV open-circuit voltage	500VDC	
MPPT operating voltage range	120~450VDC	
Maximum PV input current	18A	27A
Maximum PV charging current	100A	
Maximum AC charging current	100A	
Maximum battery charging current	100A	
Other		
Dimensions (WxDxH) (mm)	300x115x380	345x115x375
Weight (kg)	6.6	9.2
Operating temperature range	-10°C~50°C	
IP rating	IP20	
Protect	Input overvoltage and undervoltage protection, input overfrequency and underfrequency protection, output overload protection, output short-circuit protection, over-temperature protection, fan fault protection, etc.	
Communication interface	USB/RS485, dry contact,WiFi (Optional)	

AI Energy Management System

Source/grid-side energy storage energy management system industrial and commercial energy storage
energy management system



Energy Management System (EMS)

Generation/Grid-side Energy Storage Management System



- Fast Response**

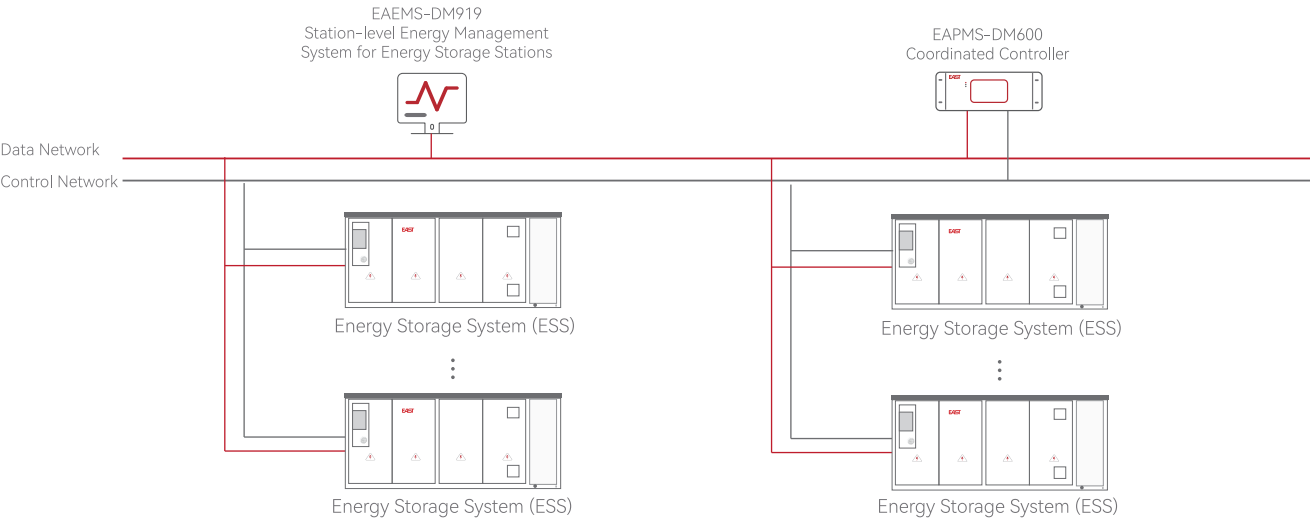
 - Primary Frequency Regulation Response Time < 20ms
 - Panoramic Data Second-Level Monitoring
- Panoramic Coverage**

 - Rich Strategy Portfolio: Includes primary frequency response, inertia support, damping control, and solar-storage synergy.
 - Wide-Ranging Scenarios: Covers storage paired with renewables, standalone ESS, and fossil-fuel plant frequency regulation support.
- Safe and Reliable**

 - Intelligent Fault Warning and Life Prediction
 - Four-Layer Network Architecture with Secure and Reliable Communication
- Intelligent and Efficient**

 - Smart SOC Balancing to Reduce Battery Capacity Loss
 - Real-Time Fault Notification with Precise Localization

System Block Diagram



EMS Software	EAEMS-DM919
Maximum Access Capacity	1GWh
Historical Data Storage Time	≥ 2 years (5-minute data interval)
Annual Availability of Dual-Server System	≥99.9%
Service Life	≥ 10 years
Backup Requirements	Dual-server, dual-network redundancy; mirror backup for critical files and databases
Operational Strategies	Primary frequency regulation, dynamic reactive power/voltage regulation, inertia support, precise load shedding, dispatch operation, schedule curve following, fluctuation smoothing, PV-storage synergy
Communication Protocols	IEC104, IEC61850, Modbus TCP
Coordinated Controller	
System Specifications	
Voltage/Current Sampling Points	6 grid connection points
Digital Input (DI)	16
Digital Output (DO)	8
Analog Input (DC)	8
Max. Connectable PCS Units	128
Display	7-inch touch color LCD screen
Protection Rating	IP20
Product Dimensions (W×H×D)	482.7×177.6×340mm
Performance Parameters	
Primary Frequency Regulation Response Time	≤20ms
Frequency Measurement Error	≤0.001Hz
Monitoring Screen	
Monitoring System	
Server	Industrial PC / Server (optional)
Monitoring Software	eDome
System Specifications	
Fiber Optic Interfaces (optional)	4 / 8 / 16 / 24 optical ports
Network Interfaces (optional)	8 / 16 / 24 electrical ports
Optional Accessories	Firewall, isolation device, encryption device
Power Supply	
Supply Voltage / Frequency	AC 220V/50Hz
Power Consumption	≤2500W
Environmental Parameters	
Cooling Method	Natural air cooling
Operating Temp. & Humidity	5°C ~ 45°C, 5% ~ 95% RH (non-condensing)
Cabinet Parameters	
Protection Rating	IP20
Single Cabinet Dimensions (W×H×D)	800×2260×1000mm

Energy Management System (EMS)

Commercial and Industrial Energy Storage Energy Management System



Intelligent O&M

- Supports intelligent power station analysis, fault self-diagnosis, and related functions.
- Supports intelligent work order dispatch and one-click maintenance operations.
- Enables one-click matching of personnel and status.

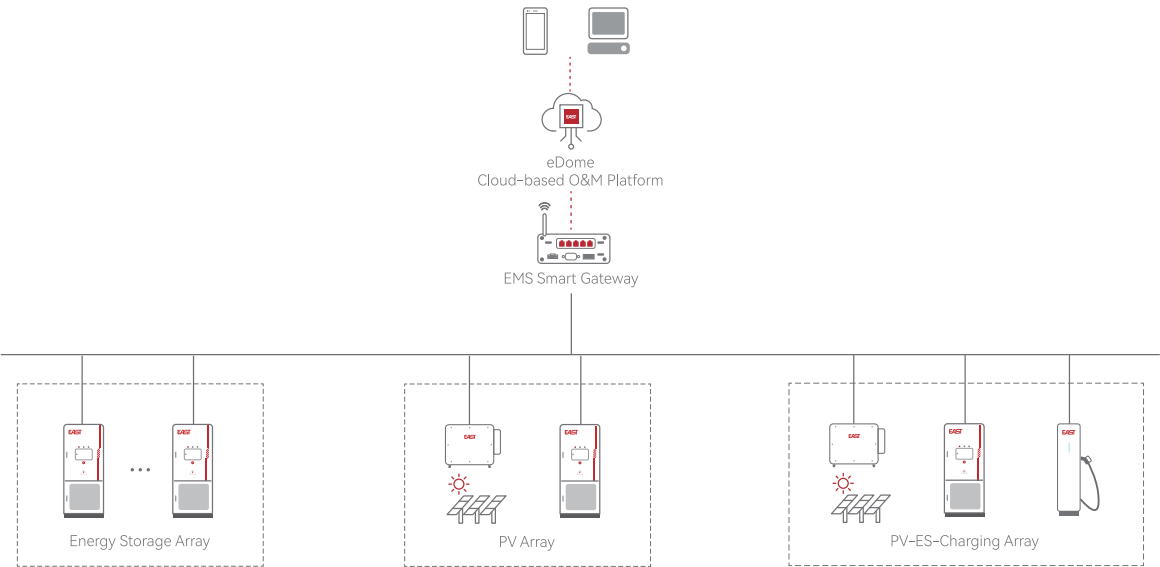
Economical and Efficient

- Multi-Energy Complementarity for Economical and Efficient Operational Strategies
- Web + APP for More Efficient Management

Quick and Easy Deployment

- Debugging and station setup can be completed via a mobile APP.
- Devices are fully auto-identified and connected to the system.
- One-click deployment for multiple sites with identical configurations.

System Block Diagram



eDome Cloud Operations and Maintenance Platform	
Basic Composition	
Integrated Energy Control System	eDome Galaxy
Electricity Trading Assistant System	eDome Trade
Big Data AI Computing Center	eDome AI-Analytics
Functions	
Basic Functions	Centralized monitoring, operation and maintenance management, auxiliary trading, and deep data mining.
Supported Access	Integrated access for commercial & industrial PV, energy storage, and charging piles.
Access Methods	Supports access via mobile app and web interface.
EMS Smart Gateway	EAuEMS-DM206
Product Parameters	
Processor	Quad-core ARM Cortex-A55
Memory	2 GB DDR4
Storage	16 GB eMMC
Operating System	RT-Linux System
Interface Parameters	
Ethernet Ports	4 ports (Fast Ethernet & Gigabit Ethernet, RJ45)
HDMI	1 port (HDMI 2.0A)
USB	2 ports (USB 2.0)
RS485	6 ports (Baud rate: 1200~115200 bps)
CAN	3 ports (CAN 2.0, Baud rate up to 1000 kbit/s)
DI/DO	8 DI + 8 DO (Dry Contact)
Environmental Parameters	
Operating Temperature & Humidity	-30°C~70°C, 0%~95%RH (non-condensing)
Storage Temperature & Humidity	-30°C~70°C, 0%~95%RH (non-condensing)

Project Cases

10GWh+

Application performance



Lukuni 14MWh Photovoltaic and Energy Storage Power Station in Kolwezi, Democratic Republic of the Congo:
Supporting industry for Huayou Cobalt's cobalt, lithium and copper resource development projects in Africa
Main power supply loads include sulfuric acid plants and extraction plantsIt is necessary to ensure the stable operation of relevant equipment under weak power grid and off-grid conditions

3.5MW/10MWh (Grid-Forming)
HuaYou Cobalt Lukuni 10MWh Energy Storage Project, DRC



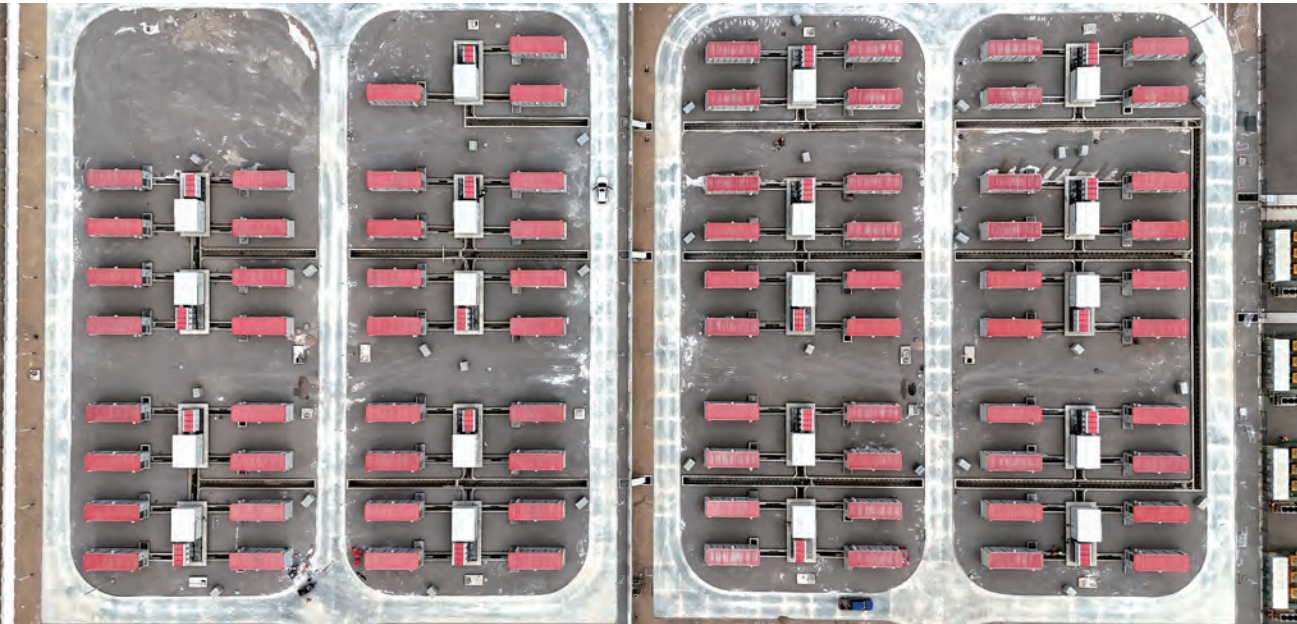
East has adopted a large-capacity energy storage system (ESS) and grid-forming converter technology, providing the project with a centralized grid-forming energy storage system with a total capacity of 3.55MW/14MWh. During photovoltaic power generation, the photovoltaic system supplies power to the equipment. When the photovoltaic system is not generating power, the energy storage system (or diesel generator) discharges to power the equipment. The system can flexibly adapt to different operating conditions such as grid-connected and off-grid modes. The project is scheduled to be installed, commissioned and put into operation in March 2025.

Power Supply Side Project Cases

Application scenarios: photovoltaic energy storage configuration, wind power energy storage configuration, thermal power frequency regulation and peak shaving



300MW/1200MWh
Xinjiang Huadian North Tianshan Foothill Base 6.1 GW New Energy Project



125MW/500MWh
CNNC Xinyuan Xinjiang 1,000,000 kW Wind Power Source-Grid-Load-Storage Integration Project



40MW/80MWh
Energy Storage Supporting the 100MW Photovoltaic Sand Control Project in Dengkou County, Inner Mongolia, SPIC



15MW/60MWh
100MW Photovoltaic Power Generation Project with Energy Storage in Dongle North Beach, Shandan County



60MW/120MWh
Energy Storage Matching for the 400,000-kilowatt Wind-Solar-Storage Integration Base Project of CNNC in Xianghuang Banner



12MW/24MWh
Guoneng Electric Power Gaomi Jiaohu Ecological Development Zone Agricultural-Solar Complementary Project with Energy Storage Configuration



10MW/20MWh
Energy Storage Matching for the 100MW Wind Power Project at Sishigejingzi, Mulei, by Changji State-owned Investment Xinneng



15MW/60MWh
Zhangye Linze Banqiao North BeachPhase I 100MW Wind Power Project with Energy Storage



10MW/20MWh
Energy Storage Supporting the 100MW Photovoltaic Power Generation Project of Trina Solar in Yuli County, Bazhou



5MW/5MWh
100MW Energy Storage Supporting Project of the Kangbao Smart Microgrid Demonstration Project

Grid Side Project Cases

Application Scenarios: Standalone/Shared Energy Storage Power Stations



350MW/1400MWh
Xinjiang Huadian Urumqi Photovoltaic Base 1000MW/4000MWh Independent Energy Storage



200MW/800MWh
Limin Xinfeng County Independent Energy Storage Project



100MW/200MWh
CNNC Huineng Chongqing Xiyong Comprehensive Bonded Zone Energy Storage Power Station



155MW/369.52MWh
East Qidong Energy Storage Power Station



50MW/100MWh
Shared Energy Storage Power Station in Hubin District, Sanmenxia City



103MW/206MWh
Sanxia Water Resources Pingguo Shared Energy Storage Power Station, Guangxi

User side Project cases

Application scenarios: industrial parks, large commercial complexes, data centers and 5G base stations, highway charging stations and service areas, microgrids



4.95MW/10.07MWh
Zhejiang Sanmei Chemical User-Side Energy Storage Project



10MW/20MWh
Chiku New Energy Tangshan User-Side Energy Storage Project



3.5MW/10MWh
Huayou Cobalt's Grid-Forming Energy Storage Project
at the Lukuni Plant in the Democratic Republic of the Congo



540kW/1044kWh
Wuyi County Jintong Heavy Truck Fast Charging
Station Energy Storage Project



3MW/6.99MWh
Zhejiang Yuhuan Suqiangge Industrial and
Commercial Energy Storage Project



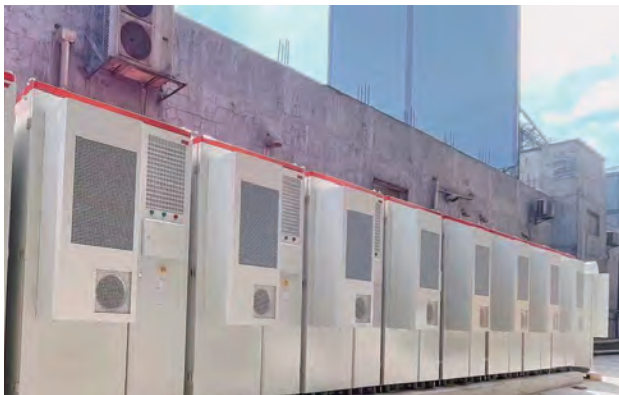
675kW/1305kWh
Green Power Renovation Project of
the Terminal of Shuangqiao (Guangzhou) Co., Ltd.



540kW/1044kWh
Dongguan Energy - Dongling New Building Materials
Energy Storage Project



675kW/2088kWh
Jiangxi Lesheng Synthetic New Materials Energy Storage Project



1.4MW/3.01MWh
User-side energy storage of Yiquan
Science and Technology Park



700kW/1505kWh
Commercial and Industrial Energy Storage Project of
Guangzhou Yuekang Biopharmaceutical Co., Ltd.



2.9MW/6.23MWh
Xinjiang Yining Optical Storage, Charging,
Swapping and Discharging Integrated Project



675kW/1305kWh
Suqian Yike Xuyang Feed Energy Storage Project

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*There are many energy storage project cases, and only some of them are listed here.