

Elecnova

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# ENERGY STORAGE SYSTEM



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## Disclaimers

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[www.elecnova-ess.com](http://www.elecnova-ess.com)



# ABOUT US

As a scientific and technological innovation enterprise, Shanghai Elecnova Energy Storage Co., Ltd. specializes in ESS integration and support capabilities including PACK, PCS, BMS and EMS.

Adhering to the values of products as the core and the quality as the cornerstone, Elecnova is committed to meeting the diversified needs of market segments and customers, dedicated to providing excellent customized solutions and services for various application scenarios on the sides of generation, grid and end users.



## Corporate Vision

- Build Elecnova as a top expert in energy storage solutions



## Enterprise Spirit

- Unity in a concerted effort
- Honesty
- Intelligence, innovation
- Scientific development



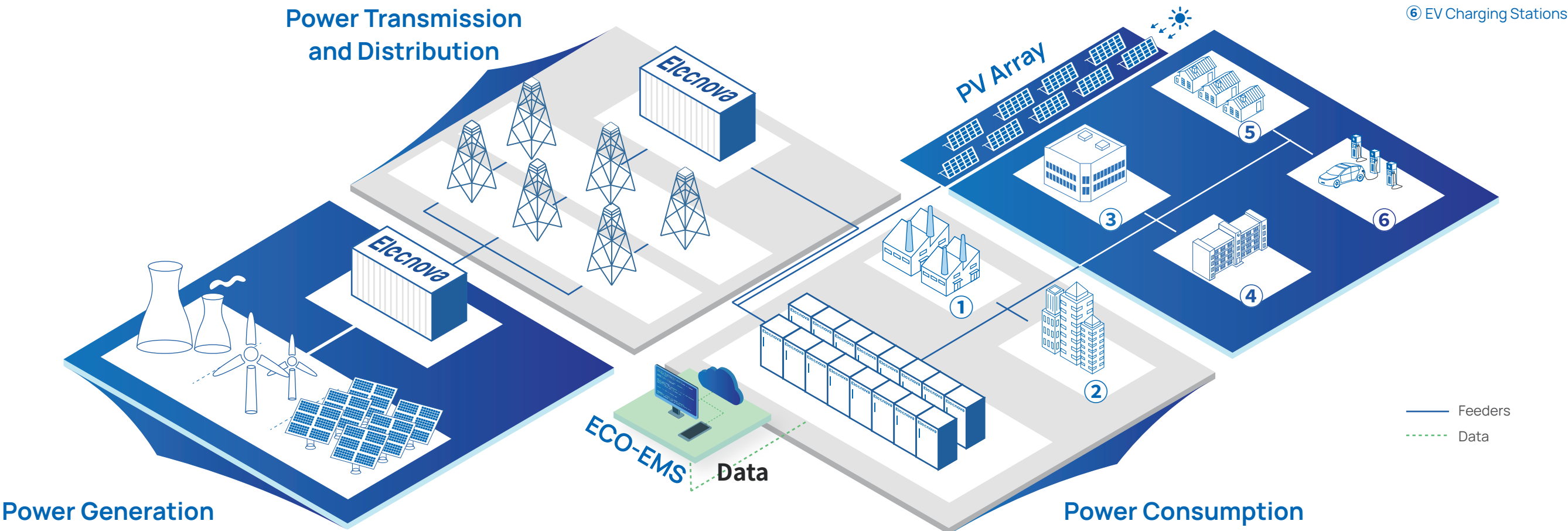
## Core Values

- Create value for customers
- Share value with employees
- Contribute value to community



# ESS Scenarios

Provide one-stop industrial and commercial distributed energy storage battery system solutions with high safety, high reliability, high efficiency and long cycle life.



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- Energy Arbitrage
- Power Quality Optimisation
- Power Market Ancillary Services
- Backup Power Supply
- Microgrid
- VPP

# All-in-one Air-cooled ESS Cabinet

ECO-E215WS

## Brief

The all-in-one air-cooled ESS cabinet integrates long-life battery, efficient balancing BMS, high-performance PCS, active safety system, smart distribution and HVAC into one cabinet, enabling long-term operation with safety, stability and reliability. Through AC side parallel connection, it achieves agile deployment of ESS power station with flexible capacity expansion.



## Features

- Economical and Efficient**

Conversion efficiency over 90%,  
DoD over 95%.
- Safe & Reliable**

IP55 protection level, optimized ventilation design,  
cells temperature difference within 5°C.
- Compact**

1.6m<sup>2</sup> footprint only,  
easy transportation & fast installation.
- Flexible Expansion**

Modular design, simplified parallel expansion,  
fast expansion.

- Self-developed**

Self-developed PACK, PCS, BMS and EMS with good  
product compatibility.
- Smart O&M**

Diversified O&M access, both on APP & Cloud.

## Specifications

DC Side	
Cell Type	LFP 280Ah
PACK	17.92kWh/1P20S
Battery System	215kWh/1P240S
Voltage Range	672~864Vdc
Rated Voltage	768Vdc
AC Side	
Rated Power	100kW
Max. Power	110kW
THDi	≤3%
DC Ratio	<0.5%lpn
Nominal Voltage	400Vac/3P+N+PE
Power Factor	-1 lagging~1 leading
Nominal Frequency	50Hz/60Hz
General	
Efficiency	≥90%
Charge/Discharge Rate	0.5P
DoD	95% (25±2°C)
Cycle Life	≥8,000 times
Switching Time	<100ms
Connectivity	Ethernet /RS485
Ingress Rating	IP55
Cooling	Forced air cooling
Operating Temperature	-25°C~55°C
Humidity	0~95%RH, non-condensing
Noise	80dB
Altitude	≤2,000m (derating above 2,000m)
Fire Safety	Aerosol
Dimensions (W*D*H)	1,250*1,300*2,400 (mm)
Weight	2,500kg
Compliance	UN38.3, IEC62619, UL1973, UL9540 and CE-EMC

# All-in-one Liquid-cooled ESS Cabinet

ECO-E233LS

## Brief

The all-in-one liquid-cooled ESS cabinet adopts advanced cabinet-level liquid cooling and temperature balancing strategy. The cell temperature difference is less than 3°C, which further improves the consistency of cell temperature and extends the battery life. The modular design makes the parallel solution more flexible and has higher energy density, which significantly improves the economy, safety and construction convenience of ESS projects.



## Features

- Compact**  
1.4m<sup>2</sup> footprint only, easy transportation & fast installation.
- High Integration**  
233kWh energy in one cabinet and ensure long-term endurance.
- Efficient Cooling**  
Optimal in-PACK duct design, achieve high-efficient cooling and low energy consumption.
- Long Cycle Life**  
Over 8,000 times cycle life, excellent performance of battery system.

- Flexible Expansion**  
Modular design, simplified parallel expansion.
- Ultimate Safety**  
In-PACK fire warning and protection with NOVEC1230/aerosol, prevent heat diffusion and runaway.

## Specifications

DC Side	
Cell Type	LFP280Ah
PACK	46.592kWh/1P52S
Battery System	233.96kWh/1P260S
Voltage Range	728~936Vdc
PACK Ingress Rating	IP65
AC Side	
Rated Power	100kW
Max. Power	110kW
THDi	≤3%
DC Ratio	<0.5%Ipn
Nominal Voltage	400Vac/3P+N+PE
Power Factor	-1 lagging~1 leading
Nominal Frequency	50Hz/60Hz
General	
System Efficiency	≥90%
Charge/Discharge Rate	0.5P
DoD	95% (25±2°C)
SOC Accuracy	<3%
Cycle Life	≥8,000 times
Switching Time	<100ms
Connectivity	Ethernet /RS485
Ingress Rating	IP55
Cooling	Active liquid cooling
Operating Temperature	-25°C~55°C
Humidity	5~95%RH, non-condensing
Noise	≤75dB
Altitude	≤2,000m (derating above 2,000m)
Fire Safety	NOVEC1230/aerosol
Dimensions (W*D*H)	1,050*1,350*2,400 (mm)
Weight	2500kg
Compliance	UN38.3, IEC62619, UL1973, UL9540 and CE-EMC

# Liquid-cooled Battery Cabinet

ECO-B372LS

## Brief

The liquid-cooled battery cabinet adopts advanced cabinet-level liquid cooling and temperature balancing strategy. The cell temperature difference is less than 3°C, which further improves the consistency of cell temperature and extends the battery life. The modular design makes the parallel solution more flexible and can be combined with the centralized PCS to form an ESS with higher energy density, which significantly improves the economy, safety and construction convenience of ESS projects.



## Features

**Compact**  
1.7m² footprint only, easy transportation & fast installation.

**High Integration**  
Multiple units connected in parallel achieve MV/HV connection with PCS-boost containers.

**Efficient Cooling**  
Optimal in-PACK duct design, achieve high-efficient cooling and low energy consumption

**Long Cycle Life**  
Over 8,000 times cycle life, excellent performance of battery system.

**Flexible Expansion**  
Support seamless cabinets combination and flexible grid access

**Ultimate Safety**  
In-PACK fire warning and protection with PERFLUORO, prevent heat diffusion and runaway

## Specifications

Item	Specification
Configuration	1P416S
Rated Energy	372kWh
Rated Voltage	1331.2Vdc
DC Voltage Range	1165~1498Vdc
PACK Ingress Rating	IP65
Rated Charge/Discharge Rate	0.5C
Operating Temperature	-25°C~55°C
Fire Safety	NOVEC1230/aerosol
Ingress Rating	IP55
Cooling	Liquid cooling
Altitude	≤2,000m (derating above 2,000m)
Dimensions (W*D*H)	1,300*1,300*2,400 (mm)
Compliance	UN38.3, IEC62619, UL1973, UL9540, CE-EMC



# Liquid-cooled Battery Container

ECO-B20FT5015LP



## Brief

The 20-ft liquid-cooled ESS container product integrates PACK, EMS, BMS, HVAC, fire safety system into one container. Compared with the air cooling, the liquid cooling empowers the ESS product with higher power density and ensures the temperature difference between the cells within 3°C, which effectively extends battery service life and improves energy efficiency. The 20-ft liquid-cooled ESS container product can be applied to power generation side, grid side, as well as C&I ESS scenarios which has strict requirements on power and capacity..

## Features



### Higher Energy Density

The 20-foot liquid-cooled energy storage container has a maximum capacity of 5.015MWh, providing higher energy density, and saving costs.



### Lower Local Power Consumption

The variable-frequency compressor adjusts its operating status based on temperature conditions, thus reducing the equipment's power consumption.



### Lower Operating Noise

The product significantly reduces the use of fans, resulting in lower noise compared to air-cooled products.



### Longer Service Life

The temperature consistency of battery cell temperatures extends the service life and enhances the safety of batteries, and increases returns.



### Better Temperature Control

In comparison to air cooling, the liquid cooling scheme reduces the battery cell temperature difference by 200%, keeping the temperature difference within 3°C.



### Higher Protection

The product utilizes the IP55 (PACK IP65) high protection level & C4 protection level and the high/low-temperature design.

## Specifications

Item	Specification
Configuration	12P416S
Rated Energy	5.015MWh
Rated Voltage	1331.2Vdc
Voltage Range	1165-1498Vdc
PACK Ingress Rating	IP65
Rated Charge/Discharge Rate	0.5P
Operating Temperature	-25°C~55°C
Fire Safety	NOVEC1230/aerosol+water
Ingress Rating	IP55
Cooling	Chiller+liquid cooling
Altitude	≤2,000m (derating above 2,000m)
Dimensions (W*D*H)	6,058 mm x 2,550mm x 2,591 mm
Compliance	Cell: IEC 62619、UL9540A、UN38.3、UL1973 System: IEC 62477、IEC 62619、UL1973、IEC 63056、UL9540(A)、UN3536

# Air-cooled Battery Container

ECO-B20FT3404WS



## Brief

The 20-ft air-cooled ESS container product integrates PACK, EMS, BMS, HVAC, fire safety system into one container. It has the advantages of high energy density, easy transportation & installation, and high protection level. The DC output can combine with PCS-boost container to realize AC network connection at medium/high voltage . It can be applied to the generation side, grid side, and ESS applications with high power and energy capacity requirements.

## Features



### Safe & Reliable

High-end and ESS-specific LFP cells to achieve high energy density, long cycle life and non-spontaneous combustion.



### Economical & Efficient

Low system cost, high charge/discharge efficiency, support various ESS applications



### Smart Cooling

Smart cooling ensures temperature difference not over 8°C.



### Smart O&M

Triple-level BMS achieves real-time monitoring and control of core from battery, PCS, HVAC, fire safety etc., EMS achieves remote monitoring and control to reduce cost and improve maintainability.



### String Design

Cooperate with modular PCS to eliminate battery system inconsistency caused by parallel connection of cells



### Precise Temp Control

One-cluster-one-air-conditioning achieves accurate temp control for battery consistency and modular temp strategy.

## Specifications

Item	Specification
Configuration	10P380S
Rated Energy	3.404MWh
Rated Voltage	1216Vdc
Voltage Range	1064~1368Vdc
Nominal Charge/Discharge Rate	0.5P
Operating Temperature	-25°C~55°C
Fire Safety	NOVEC1230/aerosol+water
Ingress Rating	IP55
Cooling	Forced air cooling
Altitude	≤2,000m (derating above 2,000m)
Dimensions (W*D*H)	6,058 mm x 2,438mm x 3,100mm
Compliance	UN38.3



# PCS-Boost Container

ECO-H3200K



## Brief

In order to meet the modular, integrated and convenient design needs of large-scale ESS stations, the all-in-one PCS-Boost container prefabricates the PCS, boost transformer, HV & LV power distribution unit, communication unit, etc. in one container, to achieve the fast construction of ESS stations. It has a virtual synchronization function and can realize the stability and quality of power distribution zone.

## Features



### Fast Delivery

Prefabrication & all-in-one design, high system integration, easy transportation and installation.



### Ultra Bearing

Wide DC voltage range, Full load capacity at DC1500V.



### Multi-level Protection

Supports charge/discharge management, and cooperates with EMS, BMS and other systems to achieve multi-level protection.



### Swift Scheduling

Excellent functions such as fast power scheduling, off-grid operation and black start to improve energy efficiency.



### Ultimate Safety

Whole-unit intelligent forced air cooling & high protection, adaptable to various harsh environments.



### On-demand Customization

On-demand customization according to power and structural requirements to meet customized needs.

## Specifications

Model	Item	ECO-H3200K-G6-35
DC side	Max. Voltage	1500Vdc
	Max. Power	200kW*16
	Max. Current	200A*16
AC Side	Voltage Range	1000-1500Vdc
	Rated Power	3200kW
	Max. Power	3520kW
	Nominal Voltage	6-35kV optional
	Rated Frequency	50Hz/60Hz
	THD	<1.5% @rated power
	Power Factor	-1 lagging~1 leading
General	Isolation	dry/oil transformer
	Max. Efficiency	98%
	Ingress Rating	IP54
	Operating Temperature	-40~60°C
	Altitude	4000m(derating above 4000m))
	Cooling	Smart air cooling
	Connectivity	RS485/CAN/Ethernet
	Dimensions (W*D*H)	6058*2438*2591mm

# Air-Cooled PACK

ECO-P1P20WS



## Brief

The air-cooled PACK consists of LFP cells, grouping in 1P20S. With built-in BMU, HV connectors, fans, and fixed structural components, these accessories enable the PACK module to have protection functions such as overvoltage, undervoltage, overcurrent, insulation, short circuit, and overheat. Combined with PCS, it achieves energy charge and discharge. This PACK is compatible with 1500V platform.

## Features



**Excellent Performance**  
laser welding for excellent cells consistency and superior charging/discharging performance.



**Long Cycle Life**  
Over 8,000 times cycle life and a designated lifespan of up to 10 years



**Safe and Reliable**  
Optimized ventilation system, active thermal management system.



**Flexible Configuration**  
Standard & modular design, on-demand flexible expansion.

## Specifications

ECO-P1P20WS	
Cell Type	LFP
Rated Capacity	280Ah
Grouping	1P20S
Rated Energy	17.92kWh (rated conditions)
Rated Voltage	64Vdc
Recommended Operating Voltage	56-72Vdc
Rated Charge/Discharge Rate	0.5C
Cooling	Air cooling
Cycle Life	≥8,000 times
Storage Environment	0~35℃ , RH<75%(non-condensing)
Operating Temperature	-20℃ ~50℃ (discharging)/0~55℃ (charging)
Ingress Rating	IP20
Dimensions (W*D*H)	470*950*230mm
Weight	143kg
Compliance	UN38.3, IEC62619, UL1973, CE-EMC and UL9540



# Liquid-Cooled PACK

ECO-P1P52LS



## Brief

The liquid-cooled PACK consists of LFP cells, grouping in 1P52S. With built-in BMU, HV connectors, liquid cooling plate module, fixed structural components , these accessories enable the PACK module to have protection functions such as overvoltage, undervoltage, overcurrent, insulation, short circuit, and overheat. Combined with PCS, it achieves energy charge and discharge.

## Features



**Excellent Performance**  
Laser welding for excellent cells consistency and superior charging/discharging performance.



**High Integration**  
High energy density, built-in BMU monitoring the cell status in real-time



**Safe and reliable**  
The cells temperature difference less than 3°C.



**Flexible Configuration**  
Standard & modular design, on-demand flexible expansion.



**Long Cycle Life**  
Over 8,000 times cycle life and a designated lifespan of up to 10 years.



**Advanced Protection**  
IP65 protection level, meeting various scenarios.

## Specifications









ECO-P1P52LSP	
Cell Type	LFP
Rated Capacity	280Ah
Grouping	1P52S
Rated Energy	46.592kWh (rated conditions)
Rated Voltage	166.4Vdc
Recommended Operating Voltage	145.6-187.2Vdc
Rated Charge/Discharge Rate	0.5C
Cooling	Liquid cooling
Cycle Life	≥8,000 times
Storage Environment	0~35℃ , RH<75%(non-condensing)
Operating Temperature	-20℃~50℃(discharging)/0~55℃(charging)
Ingress Rating	IP65
Dimensions (W*D*H)	812*1132*238mm
Weight	342kg
Compliance	UN38.3, IEC62619, UL1973, CE-EMC and UL9540

# Battery Management System (ECO-BMS)

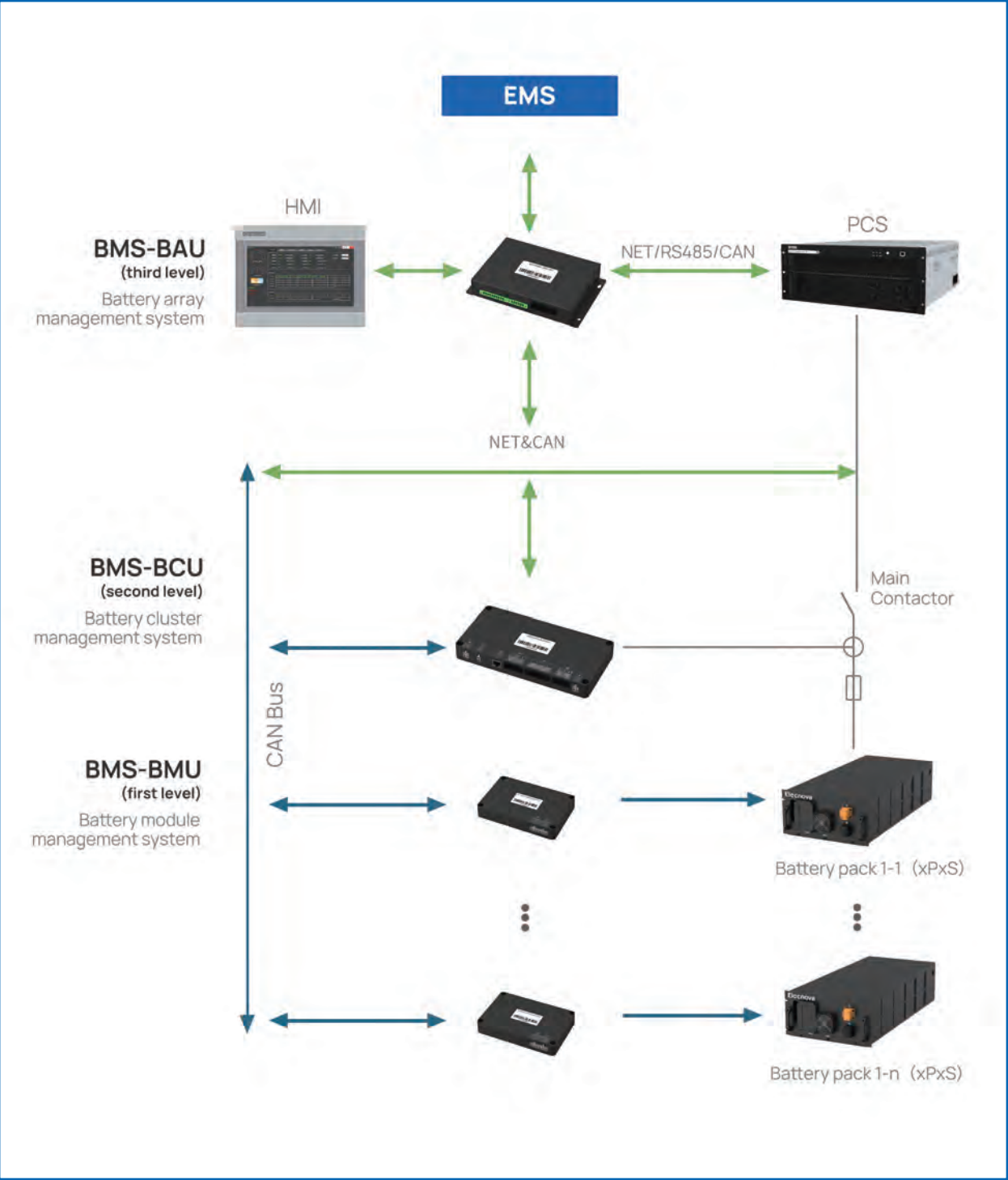
## Brief

BMS supports two architectures: three-level architecture (BMU+BCU+BAU) and two-level architecture (BMU+BCU). BMU, BCU and BAU respectively offer PACK-level, cluster-level and array-level protection against overcharging, over-discharging, overcurrent, overheat and short circuit for battery clusters. Real-time monitoring of battery safety status, fault diagnosis, and warnings are provided. The main control unit within the cluster can accurately estimate SOC/SOH (State of Charge/State of Health) and offers insulation detection function with precision requirements exceeding national standards, ensuring efficient, reliable, and safe operation of the energy storage system.

## Features

- **Complete Architecture**  
Compatible with two-/three-level architectures, support distributed and centralized scenarios.
- **High-Precision Insulation Estimation**  
Flexible insulation diagnosis solution, compatible with two-/three-level architectures with high accuracy.
- **Multiple Interfaces**  
Multiple types of DI/DO interfaces, adaptive to status input and control of various equipment.
- **Various Applications**  
Supports air-/liquid-cooled scenarios.
- **Protocol Compatible**  
Support multiple PCS protocols.
- **SOC Estimation Accuracy**  
Error < 5%
- **Ultra-Low Consumption**  
Flexible power supply and hibernation function.
- **Real-Time Response**  
100ms sampling interval to ensure timeliness of data.

Typical Architecture





Specifications (Battery Module Unit BMU)



BMU-S24PB-A



BMU-S64PB-A

Functions

- Acquisition of Cell Voltage
  - Acquisition of battery temperature
  - Passive balancing execution
- Liquid leakage monitoring
  - Module fan feedback
  - Module fan control

Specifications		Min.	Typical	Max.		Unit
				BMU-S24PB-A	BMU-S64PB-A	
Auxiliary Power Supply	Voltage	9	12, 24	32		V
Operating Environment	Temperature	-25	—	65		°C
	Humidity	5	—	95		%
Cell Voltage	Voltage Range	0	—	5		V
	Sampling channel	—	—	24	64	mV
	Insulation Resistance	—	100	—		MΩ
Voltage Resistance Insulation	Rated Operating Voltage	1500				V
	Voltage Resistance	50Hz 3,000VAC applied between voltage sampling terminal and housing and digital interface terminal for 1 minute without breakdown or flashover				
Temperature Sampling	Temperature Range	-40	—	125		°C
	Sampling Points	—	—	24	64	—
	Sampling Accuracy	—	1	—		°C
Passive Balancing	Current	—	—	100mA		mA
DI/DO	DI	—	—	2		Channel
	DO	—	—	1		Channel
Signal Wiring	Wiring	—	—	Side connection		—

Specifications (Battery Cluster Unit BCU)



Functions

- Total voltage acquisition, main circuit current, insulation resistance and temperature detection
- Control of main circuit contactor and pre-charge relay, as well as status detection of relay
- Communication with sub-control unit for information acquisition of sub-control individual voltage and temperature
- Communication with master control unit to upload battery system information
- Communication with display screen (only for two-level architecture), PCS and EMS to display battery system information
- Passive balancing control algorithm, single cluster SOC/SOH calculation
- Sub-control address allocation control, sub-control fan control, system alarm and protection operations
- System battery data storage
- Multiple digital input/output channels (active/passive)

Main Technical Parameters		Min.	Typical	Max.	Unit
Auxiliary Power Supply	Voltage	9	12, 24	32	V
	Temperature	-25	—	65	°C
Operating Environment	Humidity	5	—	95	%
	Voltage Range	100	—	1500	V
Total Voltage Sampling	Sampling Accuracy	±0.5			%
Shunt Current Sampling	Current Range	-500	—	500	A
Hall Current Sampling	Sensor Power Supply Voltage	5			V
	Current Range	—	80	—	mA
Insulation Resistance	Detection Range	0	—	10	MΩ
	Rated Operating Voltage	1500			V
Voltage Resistance Insulation	Voltage Resistance	50Hz/3,000VAC applied between voltage sampling terminal and housing and digital interface terminal for 1 minute without breakdown or flashover			
AI	Voltage Range	0	—	3.3	V
	Temperature Sampling Accuracy	±1			°C
DI/DO	DI	3			Channel
	DO	8			Channel
SOC	Calculation Error	5			%
CAN		3			Channel
RS485		3			Channel
Ethernet		1			Channel

## Specifications (Battery Array Unit BAU)



### Product Functions

- Three-level architecture system management
- Communication with the main control unit to summarize information from the multi-cluster battery system
- Communication with the display screen, PCS and EMS to display all battery system information
- System alarms and protection operations
- Multiple digital input/output channels (active/passive)

Main Technical Parameters		Min.	Typical	Max.	Unit
Auxiliary Power Supply	Voltage	9	12, 24	32	V
Operating Environment Quantity	Temperature	-25	—	65	°C
	Relative Humidity	5	—	95	%
DI	High-level	4 high-level effective inputs			—
	Low-level	4 low-level effective inputs			—
Passive Dry Contact	Normally Open	12			Channel
	Normally Closed	2			Channel
CAN		3			Channel
RS485		5			Channel
Ethernet		1			Channel

## Specifications (Human-machine Interface BMS-HMI)



Product Model	ECO-BMS-HMI-7	ECO-BMS-HMI-10
LCD Screen	7" TFT	10" TFT
Resolution	800×480	1024×600
Memory	128M	128M
Interface	2 channels serial interface, 2 channels USB Interface	2 channels serial interface, 2 channels USB interface, 1 channel Ethernet interface
Power Supply	24±20%Vdc	24±20%Vdc
Overall Dimensions	226mm×163mm	271mm×213mm
Hole Dimensions	215mm×152mm	260mm×202mm



# Power Conversion System (ECO-PCS)

## Brief

This product is a modular inverter specifically designed for small-scale energy storage systems. It achieves bidirectional energy conversion in ESS and can meet the requirements of various scenarios such as C&I ESS, microgrid energy storage, PV-plus ESS.



## Features

- Ultra-High Efficiency**

GEN7 IGBT, three-level topology and minimal switch loss modulation method, conversion efficiency reaches up to 99%.
- Reliable**

IP65 protection level, ms-level on-/off-grid switching.
- Unique Design**

Adapt to single-/three-phase loads, active/reactive power control capabilities

- Flexible Configuration**

Modular design enables parallel expansion, can directly connect to LV distribution.
- Versatile Applications**

Extra-wide DC voltage input range, suitable for various battery types and scenarios.
- Excellent load-bearing**

100% three-phase unbalanced loads, strong resistance to load fluctuations.

## Specifications

DC Side	ECO-PCS-100/0.4-S	ECO-PCS-100/0.4-T
Voltage Range	615~950Vdc	615~950Vdc
Max. Current	165A	165A
Max. Voltage	1000Vdc	1000Vdc
Max. Power	110kW	110kW
AC Side		
Rated Power	100kW	100kW
Max. Power	110kW	110kW
THDi	<3%	<3%
Wiring	3P3W	3P4W
Nominal Voltage	400Vac	400Vac
Power Factor	>0.99	>0.99
Power Factor Range	-1 lagging~1 leading	-1 lagging~1 leading
Nominal Frequency	50Hz/60Hz	50Hz/60Hz
General		
System Efficiency	≥98.5%	≥98.5%
Switching Time	≤52ms	≤52ms
Connectivity	RS485/CAN	RS485/CAN
Ingress Rating	IP20	IP20
Cooling	Forced air cooling	Forced air cooling
Operating Temperature	-30~55℃	-30~55℃
Humidity	5~95%RH(non-condensing)	5~95%RH(non-condensing)
Dimensions (W*H*D)	484*703*256 (front/back connection) 544*717*271.5 (circular connector)	
Weight	47kg	47kg

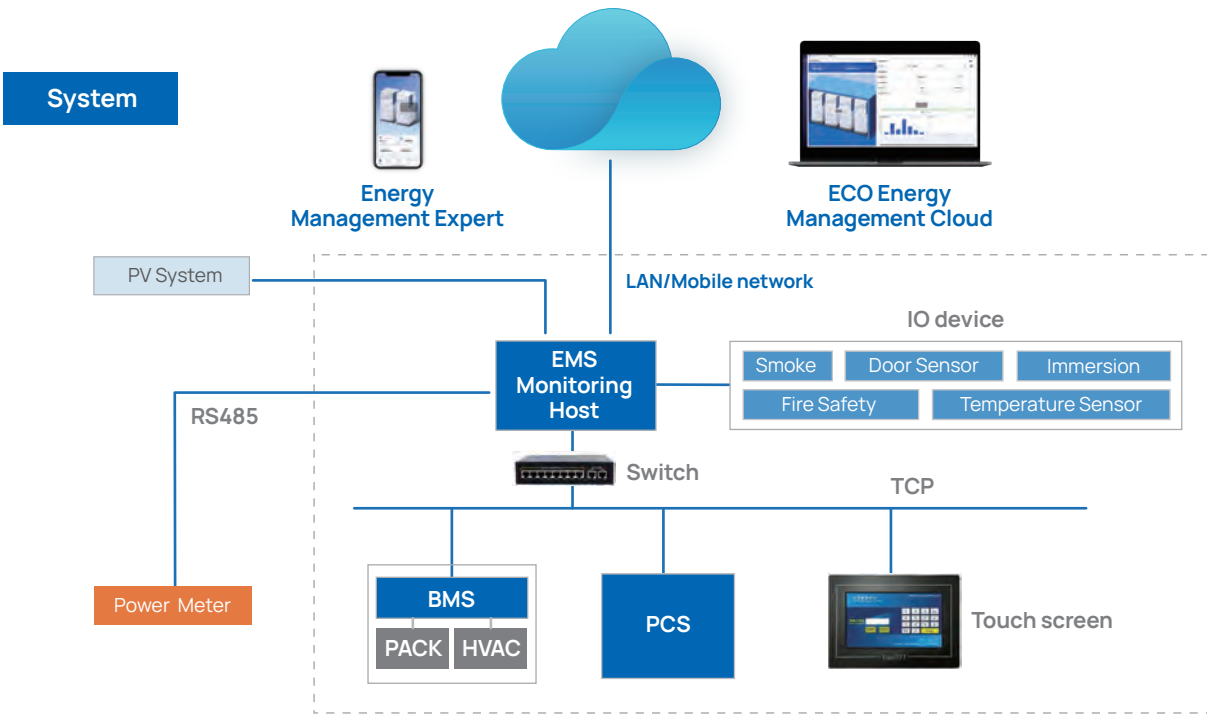
# Energy Storage Management System (ECO-EMS)

## Brief

The ECO-EMS series products are integrated EMS designed for ESS scenarios, enabling real-time monitoring to meet the requirements of comprehensive operation monitoring, ensuring the safe, reliable, and cost-effective operation of ESS. Adopting an integrated architecture design, the system is suitable for user-side ESS, microgrid and PV-plus ESS and more. It ensures that the system operates optimally at all times, maximizing overall benefits and shortening ROI.

## Features

- Smart O&M**  
Support 4G network access to achieve intelligent O&M both on site and cloud.
- Stable and Reliable**  
Bus monitoring and bus wake-up, support the parallel operation of up to 10 integrated units, auto-networking, mutual backup operation between APP and nodes.
- Diverse Integration**  
Support real-time power control, load tracking, demand management, and charge/discharge planning strategies, integrate with distributed power generation equipment, support coordination control of PV-ESS, and distributed consumption and other operation modes.
- Self-adaptive Operation**  
Flexible arrangement of single-/dual-bus during parallel operation, identify the bus operation mode to achieve adaptive operation of multiple units, ensuring the safety of line operation.



## Functions

- System Monitoring**  
Real-time monitoring of the operating status of PCS, BMS, air conditioning, access control, fire protection equipment, smoke sensors, immersion sensors, temperature and humidity sensors, and other devices.
- Intelligent Alarms**  
Various notification methods, help customers quickly address operational abnormalities and ensure reliable system operation.
- Peak Shaving**  
Adapt charge and discharge strategies to achieve energy arbitrage.
- Demand Management**  
Smooth the electricity load through charge and discharge strategies, reduce peak power & maximum demand, and lower the customer's electricity cost.
- Time Shifting**  
Intelligent prediction of new energy generation, maximizing the self-consumption utilisation of PV and reducing customer electricity costs.
- Remote O&M**  
Remote fault diagnosis and maintenance, reducing equipment downtime and safety risks, improving operation efficiency, and reducing maintenance costs, ensuring system stability.
- SOH Analysis**  
Collect data such as cell voltage, total current, SOC, and accurately assesses the battery's health status based on cloud.
- PV-ESS Coordination**  
Accurately predict electricity loads and intelligently control the output of PV generation and ESS, improving power supply reliability.





*Build Elecnova  
as a Top Expert In Energy Storage Solutions.*