CROSTORION

ENERGY

125kW / 261 kWh LiFePO4 Battery
Industry leading Energy Storage System

Safety · Stable · Smart

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Due to product version upgrades or other reasons, the content of this manual may be periodically updated or revised, and some discrepancies or errors with the actual product may occur. This manual serves solely as user guidance. The statements, information, and suggestions herein do not constitute any express or implied warranties.

The images depicted in this manual are for reference only; the actual product shall prevail.

Terms

1) **BMU:** Battery Management Unit;
2) **BCU:** Battery Control Unit;
3) **ESMU:** Energy Storage Management Unit;
4) **PCS:** Power Conversion System， ;
5) **EMS:** Energy Management System， ;
6) **SOC:** State-Of-Charge;
7) **SOP:** State-Of-Power;
8) **SOE:** State-Of-Energy;
9) **SOH:** State-Of-Health;

Main Technical Parameters

CROSTORION ENERGY

Supply List					
No	Equipment name	specifications	Unit	quantity	Notes
1	Energy storage cabinet	SPCC/SGCC	set	1	Includes: running indicator lights, emergency stop switch
2	PCS	125kW	set	1	on-grid and off-grid use YUNT
3	Pack	52.2kWh	pcs	5	
4	BMU	Passive equilibrium	set	1	
5	EMS	AI Driven Smart System	set	1	CROSTORION
6	High voltage box	1000V	set	1	
7	Fire protection system	Thermal aerosol	set	1	
8	Liquid cooling machine	5kW	set	1	Including cooling pipe

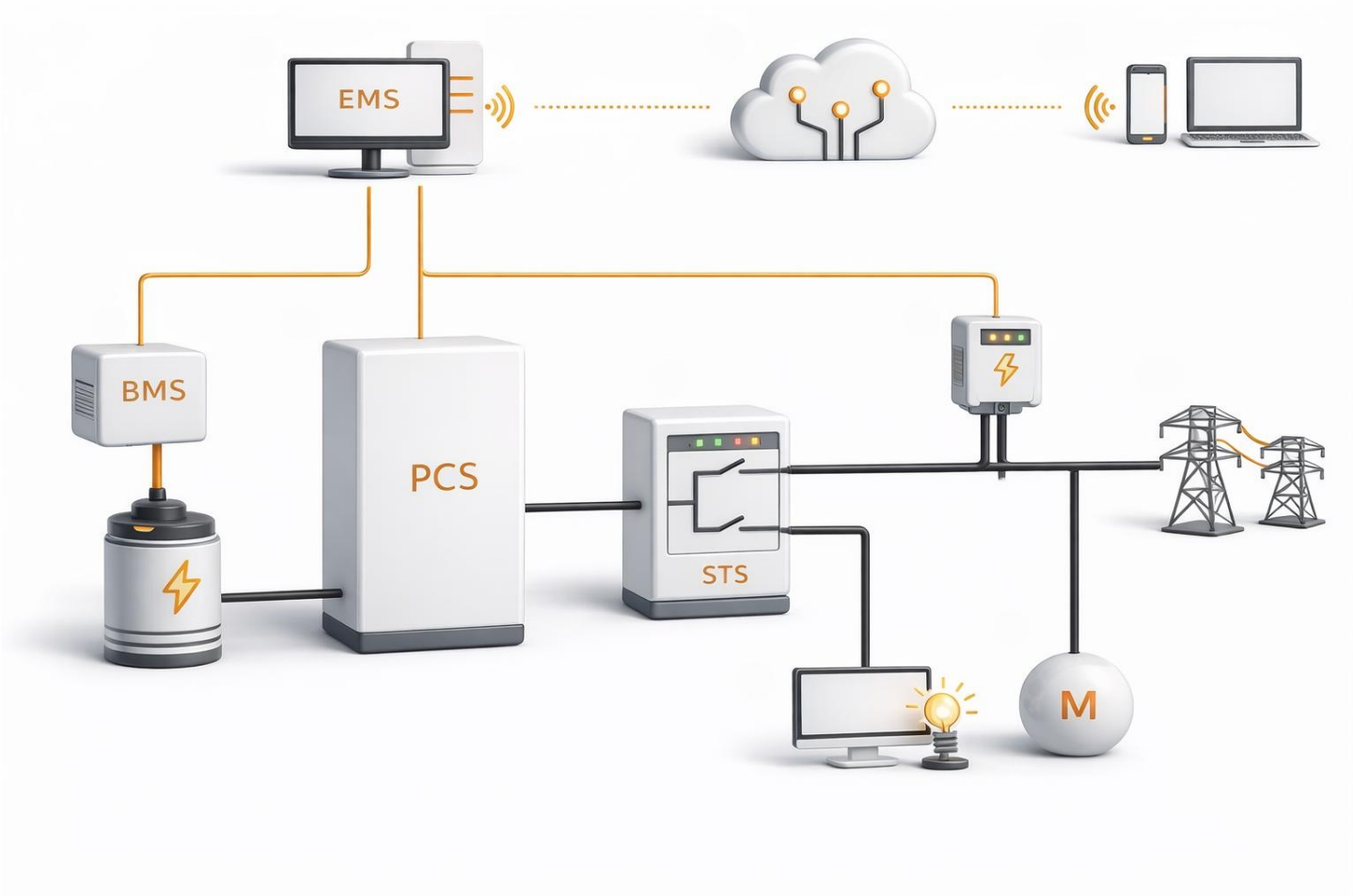
Product Overview

The ESS uses LFP batteries, the operation mode is "spontaneous self use, peak valley arbitrage". The energy storage system can meet the requirements of 2 charges and 2 discharges per day or 1 charge and 1 discharge per day, and the grid connected voltage level is 0.4kV.

Liquid cooled outdoor energy storage cabinet (abbreviation energy storage cabinet) is an energy storage device based on lithium-ion batteries, which uses lithium-ion batteries as energy storage components inside. It has the characteristics of high energy density, high charging and discharging power, and long cycle life.

This product adopts module design, integrating battery cells, BMU, PCS, fire protection system, power distribution system, thermal management system, and energy management system into standardized outdoor cabinets, forming an integrated plug and play one-stop integrated product suitable for independent energy storage power stations, industrial and commercial user sides, micro-grids and other application scenarios.

The energy storage cabinet adopts a modular design, with a clear hierarchy of energy storage battery cells, battery modules, battery racks, and battery systems, including a complete battery plug-in box, battery management system (BMU), temperature control system, fire detection and automatic fire extinguishing system. The energy storage system has comprehensive protection functions, including but not limited to battery body protection, battery overcurrent and overvoltage protection, and grid connection protection(The figure below is for reference).



Main Technical Parameters

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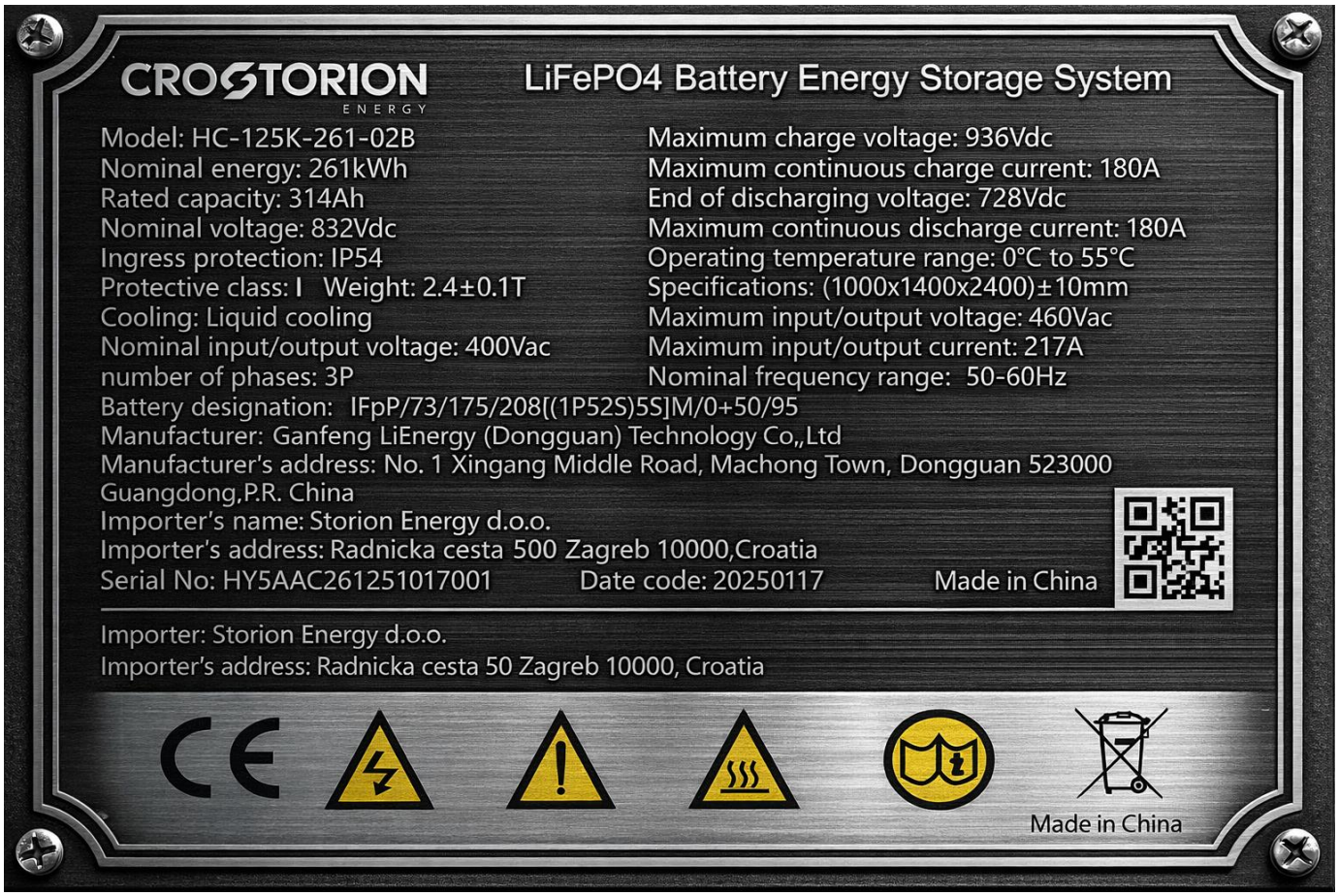
No.	Items	Specification	Notes
1	Rated charging/ Discharging power	125kW	
2	Rated energy	261kWh	
3	Composition method	1P260S	
4	Battery type	LFP	314Ah
5	Rated voltage	832V	DC side
6	Working voltage range	728V~936V	
7	Cycle	8000(Discharge rate 0.5C EOL70%)	
8	Dimensions	1400*1000*2399	Including rings
9	IP Grade	IP54	
10	Anti corrosion grade	C3	
11	Altitude	≤3000m	Reduce the rating for distances exceeding 2000m
12	Weight	2.4T	±100kg
13	Fire type	Thermal aerosol	
14	Min operating distance in front and behind the cabinet	Front the cabinet≥ 1200mm ; Behind the cabinet ≥ 800mm	
15	Communication	Supports IEC104, modbus RTU, DL/T645, etc	
16	Calendar Life	Ten years	25℃, 0.5C, 90%DOD, EOL≥70%

Compliance & Standards

The equipment shall comply with **the latest applicable versions of all relevant EU directives, harmonized standards, and industry norms**, and shall in no case be limited to the standards explicitly listed herein. The energy storage system is designed and manufactured to meet **mainstream European technical, safety, EMC, grid-connection, and environmental requirements**, ensuring high reliability, safety, and long-term operational stability.

Where referenced standards are dated, **only the specified edition applies**. For any undated reference standard, **the latest valid version, including all amendments and modification orders, shall apply**. The equipment is developed following a **"latest-version-first" compliance principle**, guaranteeing continuous alignment with evolving EU regulatory requirements.

In addition to EU and IEC standards, the system design, materials, manufacturing process, and safety philosophy are aligned with **recognized Classification Society requirements** (such as marine and industrial-grade safety concepts), ensuring **robust structural integrity, electrical safety, and operational reliability** comparable to **class-approved equipment**.



Standards Num.	Standards Name
EN 50549-1	《Requirements for generating plants to be connected in parallel with distribution networks - Part 1: Connection to a LV distribution network》
EN IEC 61000-6-2	《Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments》
EN IEC 61000-6-4	《Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments》
2014/35/EU	《Low Voltage Directive (LVD)》
2014/30/EU	《Electromagnetic Compatibility Directive (EMC)》
IEC/EN 62619	《Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for industrial applications》
IEC/EN 62477-1	《Safety requirements for power electronic converter systems and equipment - Part 1: General》
UN 38.3	《UN Manual of Tests and Criteria, Part III, subsection 38.3》

System Communication, Protection and Safety Coordination

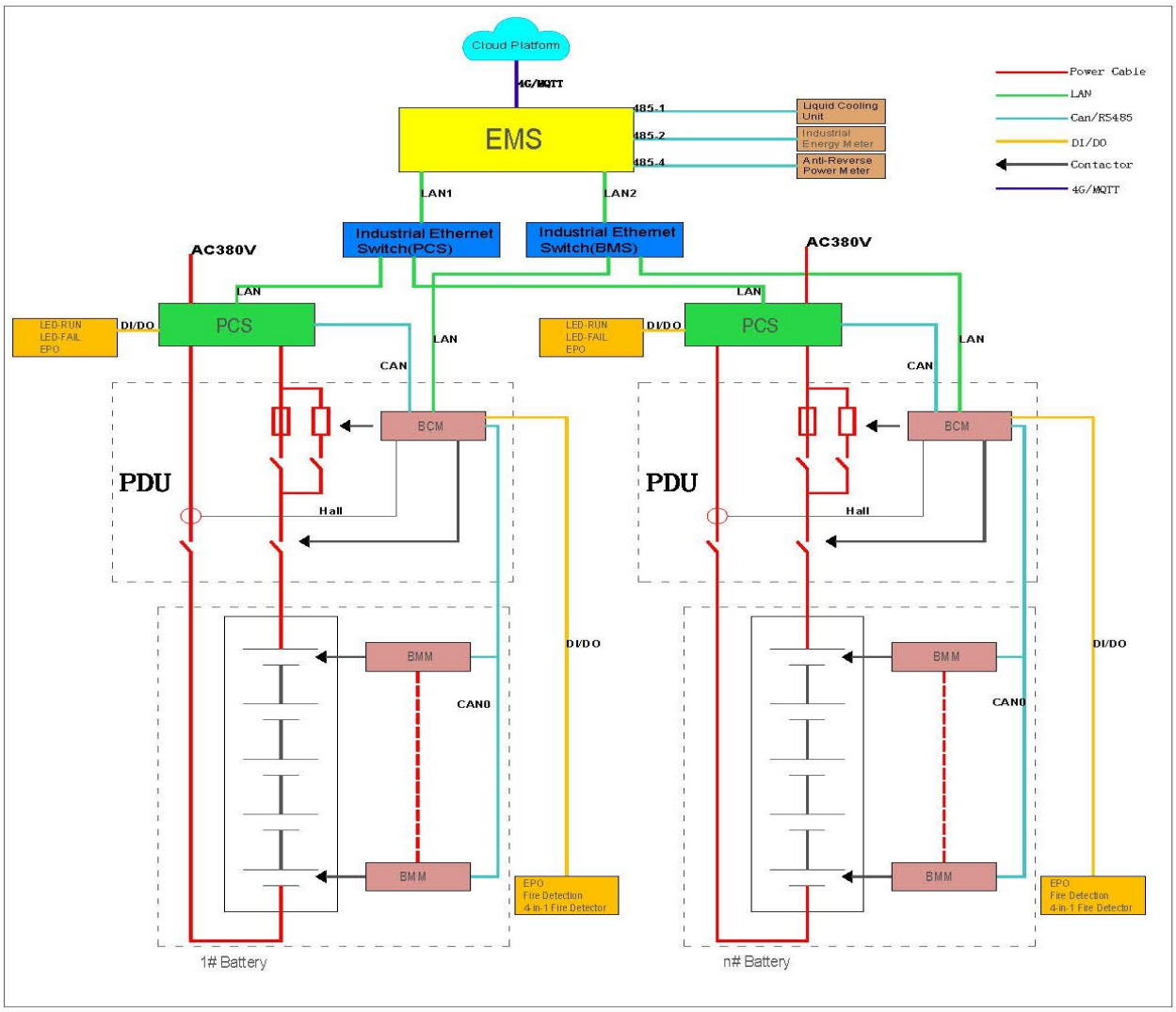
The monitoring and control system shall ensure **stable and real-time communication** with all key subsystems, including but not limited to:

- Battery Management System (BMS / BMU)
- Power Conversion System (PCS)
- Relay protection and electrical protection devices
- Safety automatic devices
- Fire detection and fire suppression system
- Heating, Ventilation and Air Conditioning (HVAC) system

The system shall support and ensure normal operation of **telemetry, remote signaling, remote control, and remote parameter adjustment functions**, forming a **complete and reliable electrical and logical interlock system**.

Once any abnormal condition or fault is detected, the system shall **automatically and promptly isolate the affected battery equipment**, preventing fault propagation and ensuring personnel and equipment safety.

System Overview



This system diagram illustrates the **overall architecture of a modular battery energy storage system**, including **energy flow paths**, **control logic**, and **data and communication links** between the various subsystems. The design aims to ensure **safe, reliable, and scalable operation** for **commercial and industrial applications**.

At the top level, the **Energy Management System (EMS)** operates as the **central control and coordination platform**. The EMS is responsible for supervising the overall operation of the energy storage system, monitoring operating conditions, and implementing charging and discharging strategies. The EMS connects to the cloud platform via **4G/5G/MQTT communication**, enabling **remote monitoring**, **real-time data acquisition**, **historical data analysis**, as well as **remote control and intervention**.

The EMS communicates with the **PCS units** and the **BMS subsystem** via an **industrial Ethernet network**, using dedicated **industrial Ethernet switches** to ensure **communication stability and redundancy**. Through an **RS485 interface**, the EMS communicates with the **liquid cooling unit**, the **industrial power meter**, and the **anti-reverse power (export limitation) meter**, enabling precise control of power flow and compliance with grid requirements.

At the middle level are the **PCS units**, which perform **bidirectional power conversion** between the battery DC side and the AC grid. The PCS units are connected to the grid at a **0.4 kV AC voltage level** and communicate with the EMS via a **LAN connection**. **Operational status signals** and **emergency power-off (EPO) functions** are connected to the PCS units through **DI/DO signals**, ensuring **fast and safe system shutdown** under abnormal conditions.

At the bottom level are the **battery subsystems**, consisting of one or more **battery racks**. Each battery system is equipped with its own **PDU (Power Distribution Unit)**, which contains the **main power switching and protection components**. The **BCM (Battery Cluster Manager)** and **BMM (Battery Module Manager)** communicate via the **CAN bus** and continuously monitor battery **voltage, current, temperature, and status**. **Hall sensors** provide accurate current measurement, while **multi-stage protection mechanisms** enable rapid fault detection and isolation.

The system also includes a **fire detection and automatic fire suppression system**, which is integrated into the control logic via **DI/DO signals**. In the event of a fire or abnormal temperature rise, the system automatically executes the required protective actions, including **battery isolation** and **PCS shutdown**.

Overall, the presented architecture represents a **fully integrated, modular, and expandable energy storage solution** that meets modern industrial energy storage requirements and is suitable for **peak and valley energy management**, as well as for both **grid-connected** and **behind-the-meter** applications.

Battery Cells Specifications

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赣锋锂业
GanfengLithium

Largest Lithium Hydroxide Producer **in the world**

The CROSTORION 125 kW / 261 kWh C&I energy storage cabinet is powered by battery cells supplied by **Ganfeng Lithium**, the world's largest lithium hydroxide producer. With direct control over upstream lithium resources, Ganfeng ensures long-term raw-material security and cost stability—this structural advantage allows CROSTORION to consistently deliver highly competitive system pricing without compromising quality. More importantly, Ganfeng's vertically integrated supply chain guarantees stable cell specifications, batch consistency, and full traceability throughout the product lifecycle.

Ganfeng's power battery cells are fully self-developed and manufactured in-house, designed with a strong focus on safety, performance, and durability. Backed by a battery R&D team with over 20 years of lithium-ion expertise and technology derived from Chinese Academy of Sciences research commercialization, the cells have successfully passed stringent international abuse tests including nail penetration, extrusion, high-temperature exposure, and ballistic testing. Advanced cell design, intelligent manufacturing (MES-based), and comprehensive simulation-driven PACK validation together ensure excellent thermal stability, wide operating temperature capability (-20 °C to +60 °C), and long-term reliability—making these cells an ideal foundation for high-performance, bankable C&I energy storage systems.

Battery Cell Specification Parameters			
No	Items	Parameters	Notes
1	cell type	LFP	Ganfeng Lithium
2	Nominal capacity	314Ah	
3	Nominal voltage	3.2V	
4	Resistance	≤0.1mΩ	5% SOC
5	Max continuous discharge rate	0.5C	
6	Max pulse discharge rate	1C	
7	Rate discharge capacity ratio	≥90%	
8	25℃ Cycle life	**≥8000**	70%SOH

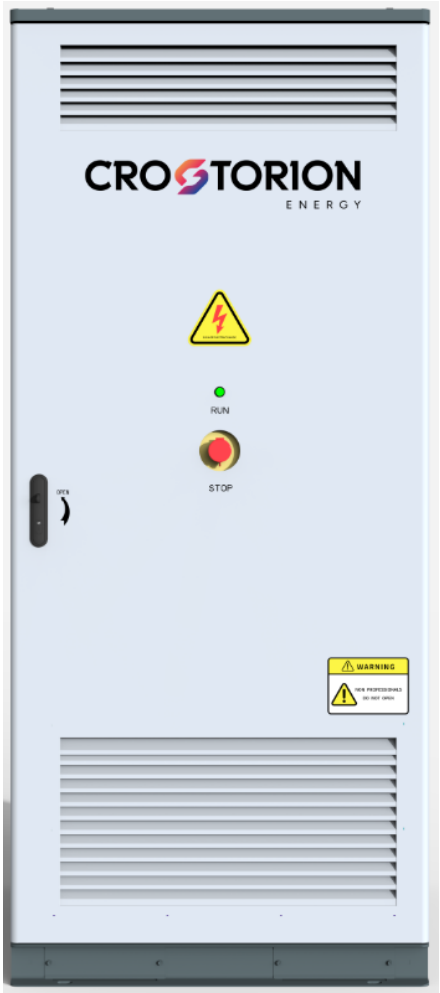
Battery Pack Specifications

The battery pack consists of five battery modules connected in series. Each individual battery module is configured as **1P13S**, resulting in a complete battery plug-in box configuration of **1P52S**. Each battery box is equipped with an independent **BMU (Battery Management Unit)**, which continuously monitors and collects key operational parameters, including individual cell voltage and cell temperature, ensuring accurate real-time status detection and reliable safety control at the module level.

The battery plug-in box adopts an advanced **liquid-cooling thermal management system**, featuring an integrated liquid cooling plate to ensure uniform heat dissipation and stable temperature distribution across all cells. In addition, the system is equipped with a **hot aerosol fire suppression interface**, an **MSD (Maintenance Service Disconnect) switch** for safe servicing, an **explosion-proof relief valve** for pressure release under abnormal conditions, and a dedicated **communication terminal** for seamless integration with the upper-level BMS and EMS. The reference image below is provided for illustrative purposes only and is subject to the final delivered product configuration.

Battery Pack Specification Parameters			
No	Items	Parameters	Notes
1	Connection method	52S1P	
2	Nominal capacity	314Ah	
3	Nominal voltage	166.4V	
4	Nominal voltage	52.25kWh	
5	Max continuous discharge rate	0.5C	
6	Max pulse discharge rate	1C	
7	Fire protection system	40g Thermal aerosol	
8	Dimensions	1172*808*240mm	Tolerance: ±5mm
9	Weight	~320kg	Tolerance: ±15kg
10	IP Grade	IP65	
11	Best operating temperature	10℃ ~ 35℃	
12	Storage temperature	-30℃ ~ 55℃	
13	Storage humidity	5%RH ~ 95%RH	No condensation

Battery Cluster Specifications



Overview of DC side system						
N	Items	Sketch Map	Rated voltage (V)	Rated capacity (Ah)	Energy (kWh)	Notes
1	Cell		3.2	314	1.0048	LFP cell
2	Pack (including BMU)		166.4	314	52.25	1P52S

Battery cluster Specification Parameters			
No	Items	Parameters	Notes
1	Nominal capacity	314Ah	
2	Nominal voltage	832V	
3	Voltage range	728~936V	
4	Nominal energy	261.25kWh	

The battery cluster is composed of **five battery packs connected in series**, forming the complete **DC battery system**. All packs are mounted on a dedicated battery rack and electrically connected to the **main control box (BCU)** via **high-voltage EV-grade DC power cables**, while control and status signals are transmitted through **daisy-chain communication lines**, ensuring reliable coordination and centralized management of the entire cluster.

In parallel, each battery pack is connected to the **liquid cooling circuit** through dedicated cooling pipes, which are then integrated with the external **liquid cooling unit**. Together, the electrical DC interconnection, communication network, and liquid thermal management system form a fully integrated battery system, providing stable DC output, efficient heat dissipation, and safe, continuous operation under various load and environmental conditions.

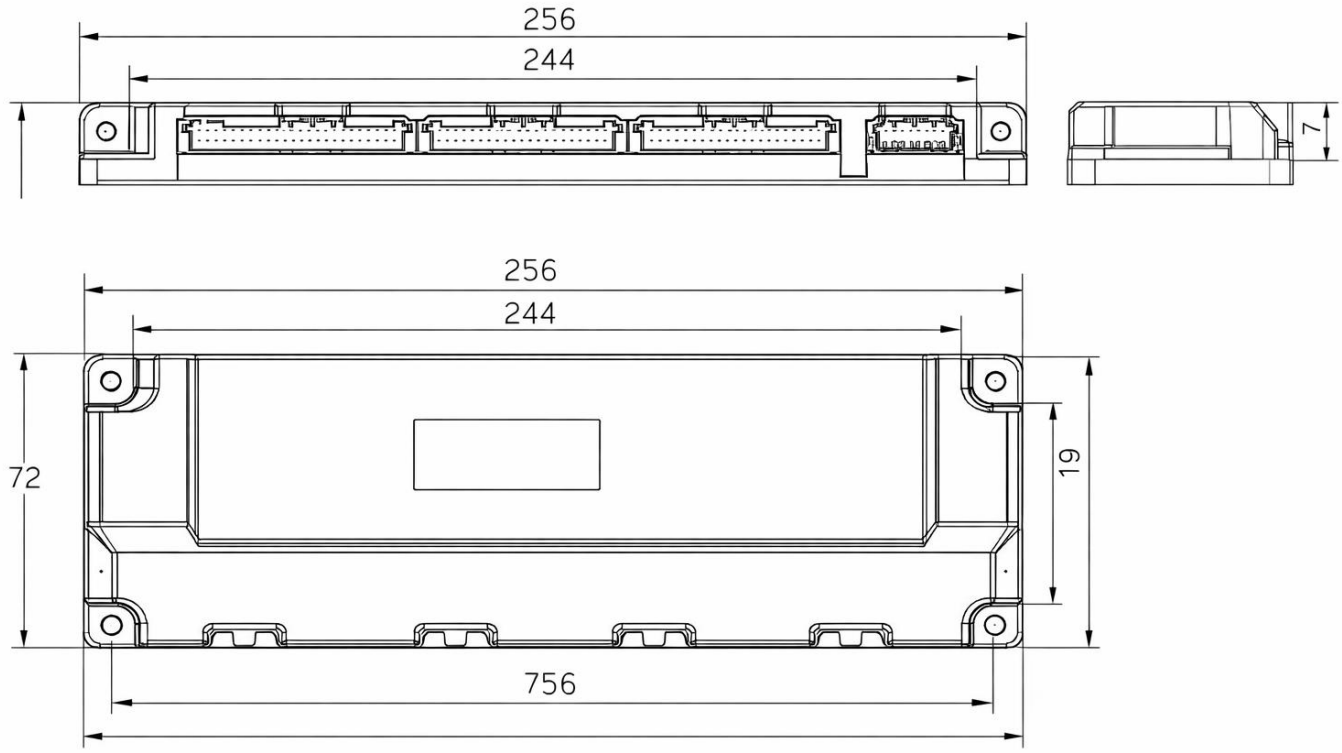
Battery Management System Architecture

The Battery Management System adopts a **two-level architecture**. Each battery plug-in box is independently managed by a **Battery Management Unit (BMU)**, with each BMU responsible for monitoring and managing **52 series-connected cells (1P52S)**. The BMU performs core battery management functions, including **individual cell voltage and temperature acquisition, cell balancing, status monitoring, and protection logic**. Communication between BMUs is based on the **CAN bus protocol**, enabling reliable data transmission of detailed battery information such as **cell voltage, cell temperature, cell-level SOC, SOH, and balancing status**.

At the cluster level, each battery cluster is equipped with a **Battery Cluster Control Unit (BCM)**. The BCM is responsible for **collecting total cluster voltage and current**, **controlling high-voltage contactors**, and managing **daisy-chain communication** with the upper-level control system (such as PCS or EMS). The BCM serves as the central control and protection unit for the entire battery cluster, ensuring coordinated operation and system-level safety.

The system is further equipped with a **Battery Management System Human–Machine Interface (ESBMU)**. The ESBMU processes and visualizes battery data uploaded by the BCM and provides comprehensive functions including **real-time status display, parameter configuration, fault and alarm indication, and historical data recording**, supporting both commissioning and long-term operation.

No	Items	Conditions	Parameters	Notes
1	environment	Working temperature	-20~+55℃	
		Operating humidity	<90%	
		Altitude	<3000m	
2	Balanced management	Battery balancing method	Active Balance	
		Balanced current	100mA	average current
3	Temperature collection	Temperature collection range	-40~125℃	
		Temperature acquisition accuracy	±1℃	±1℃@-25℃~65℃ ±2℃@-40℃~-25℃ or 65℃~125℃



The BMU provides **real-time monitoring** of individual cell voltage and temperature and supports **thermal management coordination** and **active cell balancing**. Through cascade communication with the main control unit (BCM), the BMU enables the formation of a **highly scalable and flexible battery management system architecture** suitable for large-capacity energy storage applications.

The BMU supports **active balancing based on energy dissipation technology**, allowing multiple cells within the battery pack to be discharged simultaneously. The balancing current is **100 mA**, and the balancing energy of individual cells can be accurately calculated and recorded. In addition, the BMU supports comprehensive **alarm and protection functions**, including but not limited to:

- ❖ Power supply faults
- ❖ Cell overvoltage and undervoltage protection
- ❖ Overtemperature protection
- ❖ Communication fault detection
- ❖ Balancing fault detection

These features ensure **high safety, consistency, and long-term reliability** of the battery system.

High voltage box

High-Voltage Box Overview

The **high-voltage box** integrates the **BCM (Battery Cluster Control Module)** and associated electrical components. It serves as the **central control, protection, and interface unit** for the entire battery cluster, ensuring safe, stable, and reliable operation of the DC battery system.

The high-voltage box is responsible for power distribution, signal acquisition, protection logic execution, and communication with upper-level systems. A **size reference diagram is provided for illustrative purposes only and is subject to the actual delivered product**.

Functional Description

•Supports power supply for the **Energy Storage Battery Management Unit (ESBMU)**. The power supply capacity can be flexibly configured according to the number of ESBMU modules installed.

Provides **battery cluster terminal monitoring**, including:

- Total voltage detection
- Current detection
- Insulation resistance status detection

Designed with **IP54 protection rating**, suitable for industrial energy storage environments.
Supports the following **system operating limits**:

- Maximum battery cluster voltage: **≤ 1000 V DC**
- Maximum battery cluster current: **≤ 250 A**

Main Control Module (BCM) – Specification and Description

The **Battery Cluster Control Module (BCM)** is the core control unit of the energy storage battery management system. It manages one or more battery clusters and is primarily responsible for **data acquisition, system-level calculation, protection logic, and control execution**.

The BCM performs the following key functions:

- Real-time acquisition of **battery cluster voltage and current**
- Aggregation of **cell-level voltage and temperature data** from subordinate BMUs
- Calculation of **battery cluster SOC (State of Charge) and SOH (State of Health)**
- Execution of **balancing strategy evaluation** and **battery fault diagnosis**
- Implementation of **local protection logic**, including contactor and relay control, based on battery fault conditions

The BCM is equipped with an **insulation monitoring function** and supports **independent SOC/SOH calculation** at the cluster level. Multiple redundant communication interfaces are provided, including **CAN**, **RS-485**, and **Ethernet**, enabling reliable communication with external devices such as PCS, EMS, and monitoring systems.

As the **central intelligence and protection core** of the battery management system, the BCM is critical to ensuring the **safety, reliability, efficiency, and long-term stable operation** of the energy storage system.

Items		Parameters	Notes
Voltage acquisition	Voltage range	0~1500V	
	acquisition accuracy	< ±0.2% FS	
Current acquisition	Current range	-500~500A	
	acquisition accuracy	±(0.5% FS+0.5%RD)	
temperature acquisition	Temp range	-40~125℃	
	acquisition accuracy	±1℃	±1℃@-25℃~65℃ ±2℃@-40℃~-25℃ or 65℃~125℃
communication	CAN/LAN/RS485		

PCS Technical Parameters

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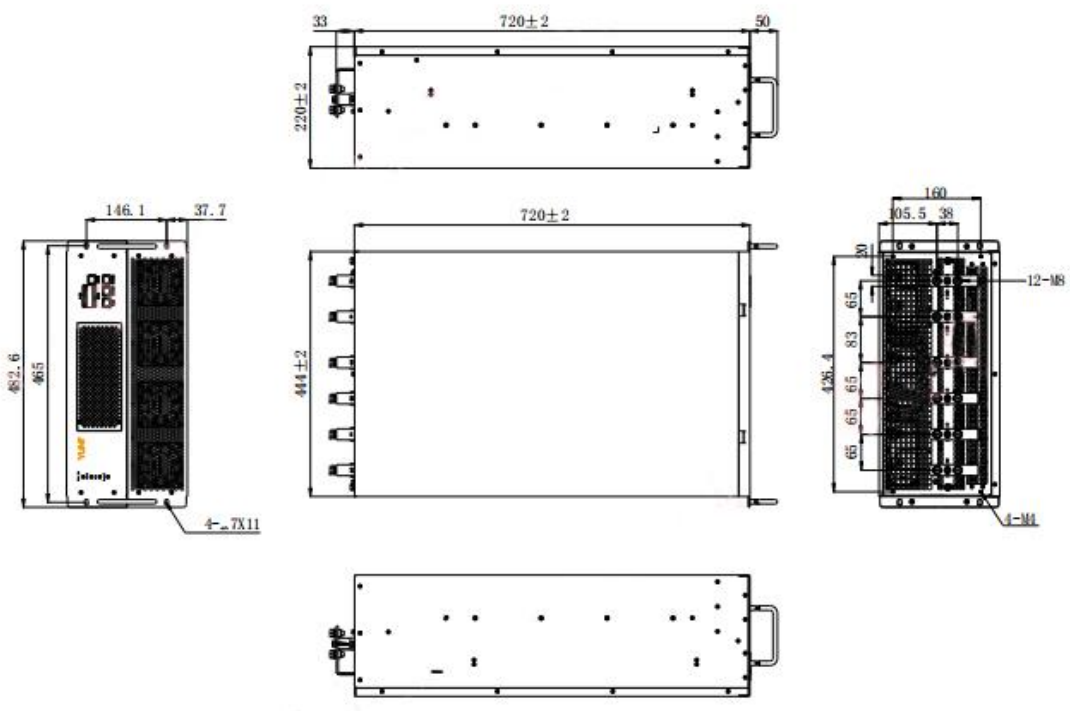
YUNT

Top 5 globally in shipment volume
for 100–125 kW PCS

The **Power Conversion System (PCS)** is a **bidirectional, current-controllable power electronic device** that serves as the interface between the energy storage battery system and the power grid. Its primary function is to enable **efficient, safe, and flexible energy exchange** between the battery and the grid, while precisely controlling and managing the battery charging and discharging processes.

In **grid-connected operation**, the PCS supports a wide range of advanced applications, including **peak shaving and valley filling**, **frequency regulation**, **virtual capacity expansion**, and **off-grid backup** for enhanced grid stability and reliability. The PCS also supports multiple battery charging and discharging modes, such as **constant current (CC)**, **constant voltage (CV)**, and **float charging**, allowing it to adapt to different operating scenarios and battery management strategies.



PCS Technical Parameters

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Items	Parameters	Notes
DC side parameters		
Rated power（kW）	125	
Max current（A）	216	
Working voltage range（V）	580~1000	
AC side parameters (Grid-Connected)		
Rated AC power（kW）	125	
Max output power（kW）	150	
Max current（A）	216	
AC access method		
Isolation method	No isolation	
Power factor	> 0.99	
Adjustable range of power factor	-1~+1	
AC side grid connected operation parameters		
Rated voltage（Vac）	AC 400	
Allow the voltage range of the power grid	-10%~10%	
Rated grid frequency（Hz）	50/60	
Voltage total harmonic distortion rate (THD)	<3%（Rated power）	
Off grid operation parameters on the AC side		
Rated output voltage	AC400	
AC voltage harmonics	<3%（Linear load）	
Rated output frequency（Hz）	50/60	
Main protective features		
Main protective features	AC overcurrent protection, AC overvoltage protection, AC surge protection, AC short circuit protection, anti islanding protection, DC reverse connection protection, DC surge protection	
Overall parameters		
AC phase number	Three phase four wire	Compatible with three-phase three wire
Overload	110%(long-term)	
Max discharge efficiency	98.9%	
communication interface	CAN/RS485	
Normal environmental conditions for use		
IP grade	IP20	
Working environment temperature	-25℃ ~ +55℃（>50℃ Derated operation）	
Relative humidity	0% ~ 95%	
Altitude	≤3000m	Reduce the rating for distances exceeding 2000m

Fire protection system

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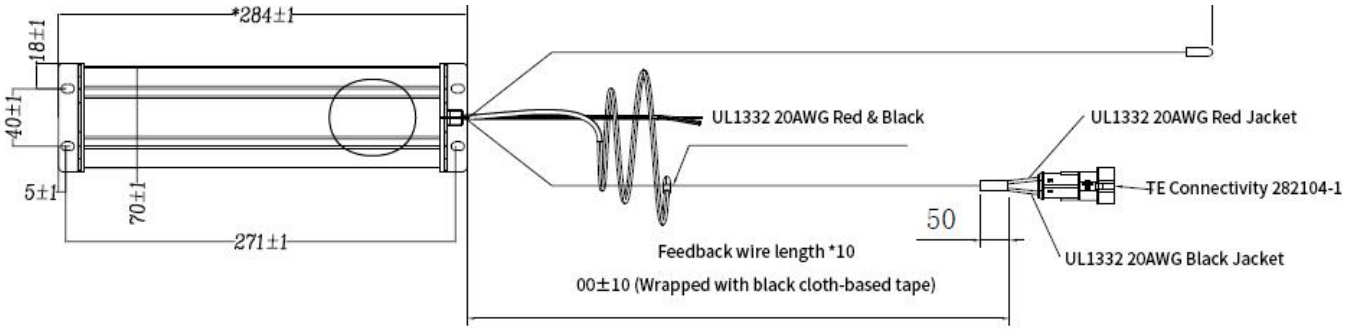
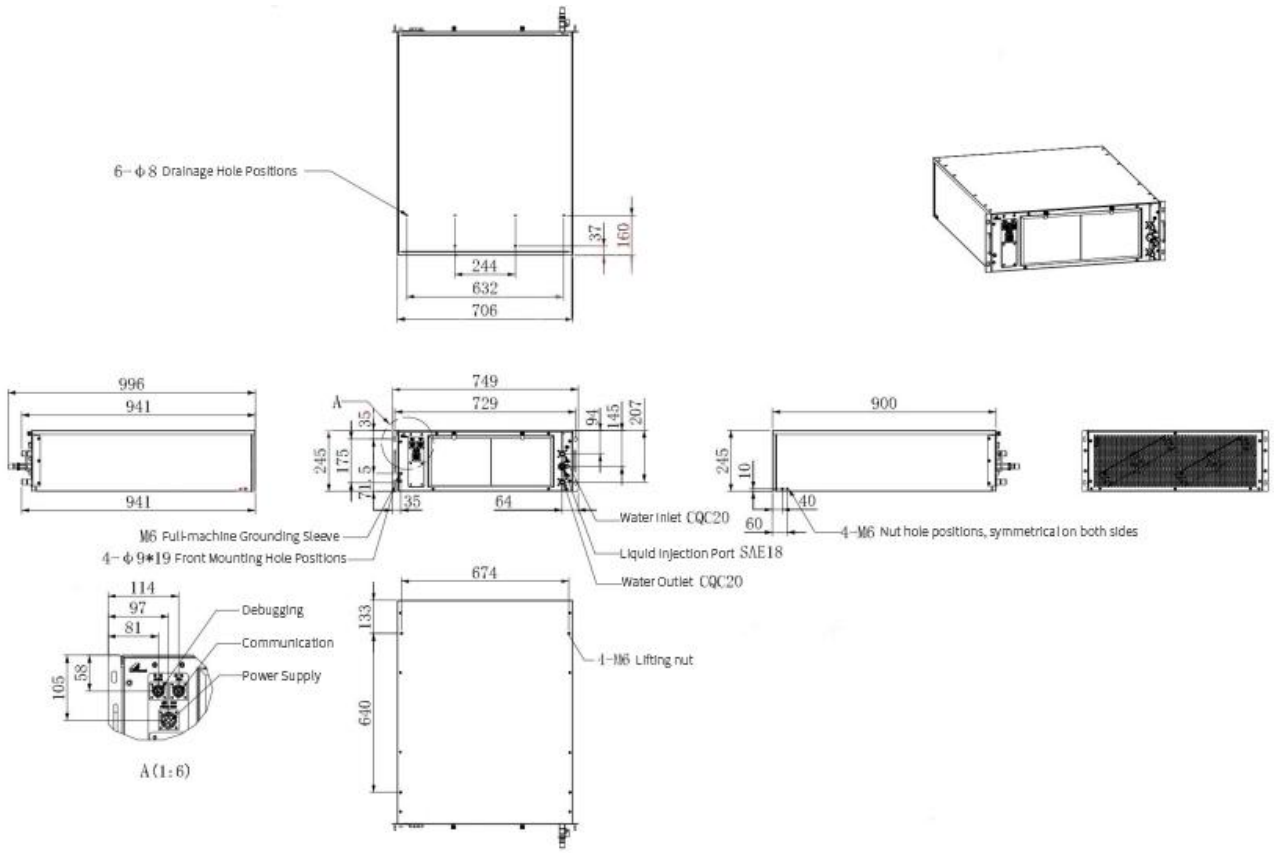
The Pack adopts a thermal aerosol fire extinguishing system, and the cabin level adopts a thermal aerosol fire extinguishing system, which has high fire extinguishing efficiency, low fire extinguishing concentration, Capable of extinguishing initial fires in Class A, B, and electrical cables. It is non-conductive. It can be used to protect valuable devices and storage places, and its use does not cause any damage to equipment and items.



Items	Parameters
Range of environmental temperature for use	− 40℃ ~ + 85℃
Dimensions	284mm×75mm
Relative humidity of the usage environment	≤95％RH
Startup method	Electric Start
Electrical start conditions	DC24V 1.0A
Temperature start-up conditions	180±15℃
Drug weight	0.45kg
Name of fire extinguishing agent	Aerosol
Protecting space	4.5m³
term of validity	Six years

Liquid cooling system

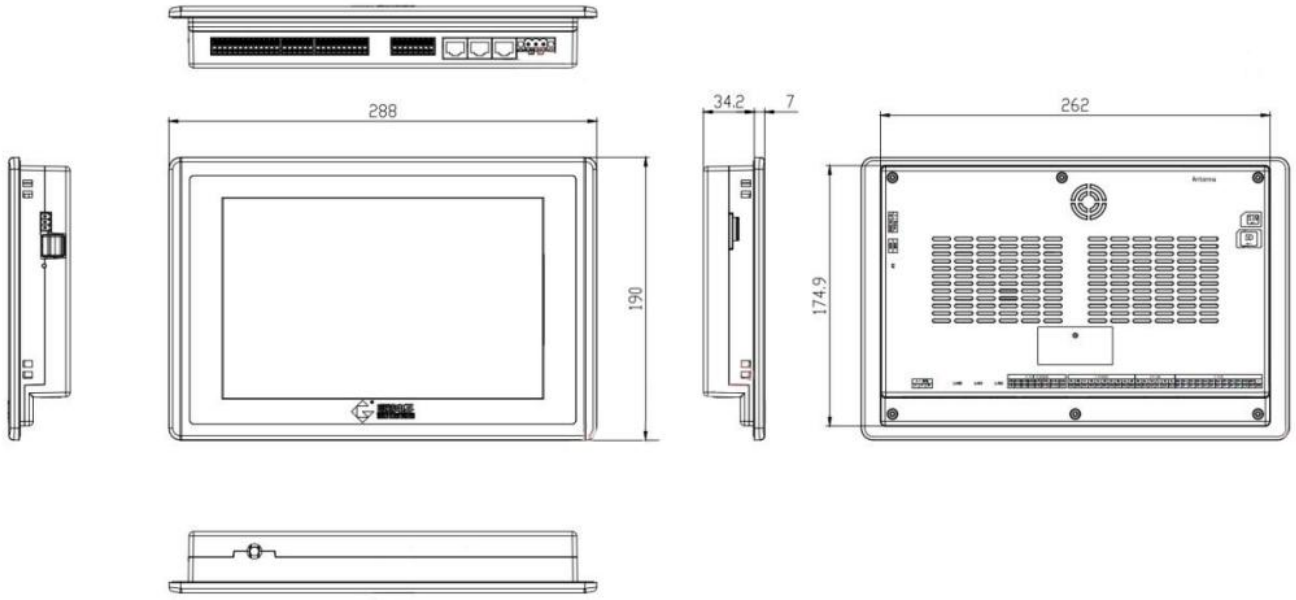
Capable of achieving both cooling and heating functions With infusion pump Automatically replenish fluids. Cooling function: It can effectively solve the problems of slow charging and discharging speed, reduced lifespan, and safety hazards caused by high temperature during battery charging and discharging. Heating mode: It can effectively solve the problem of battery failure to start and performance degradation in low-temperature environments, ensuring that the battery operates efficiently within the appropriate temperature range.



Items	Unit	Parameters
Work temp	℃	-30~+55
Storage humidity range	RH	5%~95%
IP grade	/	IPX5
cryogen	/	R513A
cooling medium	/	50% ethylene glycol aqueous solution
Cooling/Heating Capacity		
Cooling capacity @ 45/W18	kW	5.0
Heating capacity @ T=10	kW	2.0
Power supply form and communication		
Rated AC input power supply	V/Hz	220~240V ,50/60Hz
Max operating current	A	19.2
communication	/	RS485,CAN

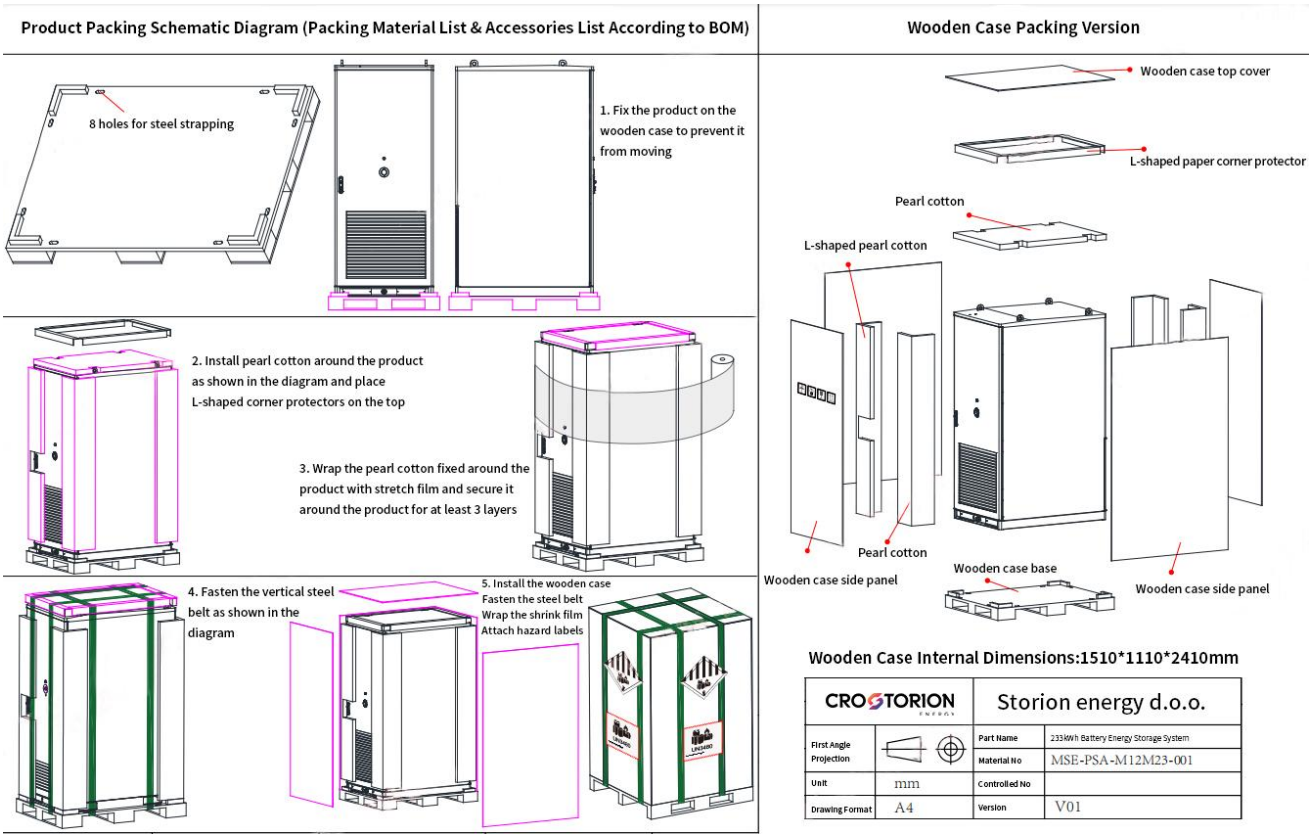
ESMU Technical Specifications

ESMU, also known as Level 3 BMU, is a control and management host suitable for energy storage battery management systems. It performs numerical calculations, performance analysis, alarm processing, and record storage of real-time battery data uploaded by BCM (Level 2 BMU) and ESBMU (Level 1 BMU). In addition, it can also achieve linkage control with PCS host, energy storage management system (EMS), etc. It optimizes load control strategies based on output power requirements and SOC status of each cluster of batteries, ensuring the safe, stable, and efficient operation of the battery system.



Items	Parameters
Processor	ARM platform, quad core, with a maximum clock frequency of 2.0GHz
Storage	16GB
LCD screen	10.1-inch true color LCD screen (optional)
Alarm method	Sound and light alarm, display the alarm content, and close the fault node output
Communication	LAN/CAN/RS485/USB
Work environment	Environmental temperature: -10~+60℃ Relative humidity:<95% (no condensation) Environmental magnetic field:<400A/m, no corrosive, flammable or explosive gases are allowed in the surrounding area

Packaging and transportation



All goods comply with the regulations of the national regulatory authorities and have sturdy packaging suitable for long-distance transportation and loading and unloading. The packaging should be ensured to be intact and undamaged during transportation, loading and unloading, and have measures to reduce vibration, impact and wear.

Bare goods should be labeled with relevant information on the metal tag and equipped with sufficient cargo supports or packaging pads.

Special tools (if any) are packaged separately and attached with the above content.

The battery cabinet should be packaged before transportation, with a capacity of no more than 30%. During transportation, it should be protected from severe vibration, impact, or compression, as well as exposure to sunlight and rain. During loading, unloading, and transportation, significant external impact should be avoided, and throwing, rolling, inversion, compression, and stacking are prohibited.

Disclaimer

All battery product delivery projects must complete the **product installation confirmation procedure**, and our company assumes **warranty responsibility only for battery products** that have completed the installation confirmation procedure.

Our company **shall not be responsible** for any losses or accidents caused by **improper use by users**, or identified under the following circumstances:

1) **Unauthorized replacement of the BMU system** during battery pack operation, or conducting charge and discharge tests on the battery system, resulting in **partial or complete overcharging or over-discharging** of the battery;
2) The installation process **was not carried out in accordance with the operation manual**, resulting in collision damage and rendering the battery pack unusable;
3) **Unauthorized disassembly or structural modification** of the battery pack;
4) Due to **incorrect self-connection**, the battery was charged with **reverse polarity**, causing premature scrapping of part or all of the battery pack;
5) Failure to **effectively control battery charging**, resulting in partial or complete **overcharging** of the battery pack;
6) Failure to **effectively control battery discharging**, resulting in partial or complete **over-discharging** of the battery pack;
7) **Improper specification selection of electrical components** (such as cables, connectors, and terminal blocks) in electrical circuits, leading to **major safety accidents**, including fires caused by overheating or **spontaneous combustion**;
8) The **main power circuit is not equipped with appropriate high-voltage safety protection devices**, resulting in short circuits in the battery system or damage to onboard equipment due to aging, damage, or other reasons;
9) Adoption of a **connection method that affects battery charge balance** (such as drawing power separately from individual batteries to supply low-voltage electrical appliances), resulting in **over-discharging of certain batteries**;
10) **Poor reliability of connections** between main power circuit cable terminals, conductive busbars, and battery terminals, where **loose bolts** cause severe overheating at connection points, leading to reduced battery life or **safety accidents**;
11) Failure to perform **regular inspection and maintenance**, or failure to promptly identify and eliminate **potential safety hazards**, ultimately resulting in accidents;
12) **Unauthorized replacement of key components** (such as **PCS**, liquid cooling units, etc.), resulting in battery system damage or safety incidents.
13) Product damage or malfunction caused by **force majeure events**, including **natural disasters or human-caused damage**, **is not covered by the warranty**.

CROSTORION ENERGY

Born in European Union

R&D center in Croatia

Focus on Eastern Europe

Storion Energy is a pioneer of new energy innovative technologies, committed to providing premier solutions and services for new energy applications in eastern Europe.

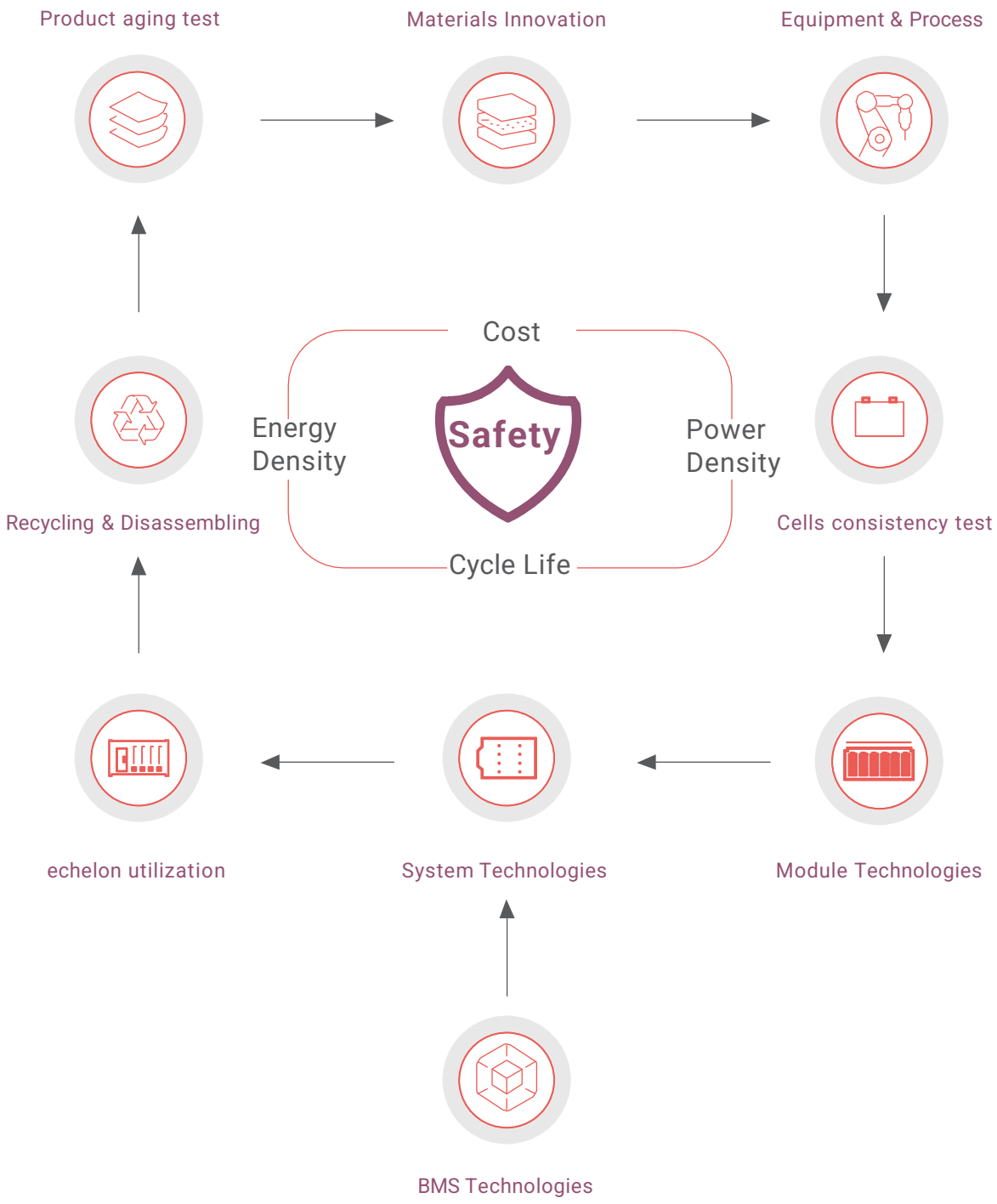
Quality Policy

Providing clients with the perfect quality beyond expectations is our unremitting pursuit.

IATF16949

ISO9001

CROSTORION ENERGY



CROSTORION ENERGY

5 Technology Highlights

Substantial Safety

Aircraft-grade safety and reliability

Storion Energy ensures safety and reliability in real scenarios with well selected and designed raw materials, multi-level protective structures, automated manufacturing processes, comprehensive testing and verification, 24-h monitoring, and big data-based early warning.

Long Service Life

Life up to 12,000 cycles

Storion Energy has upgraded key components such as the cathodes, anodes, electrolytes, and pole pieces of the battery to slow down the battery capacity loss, extend the battery life, and reduce LCOS throughout the battery life cycle.

CROSTORION ENERGY

Smarter Decisions

Based on AI and quantitative trading technology

Storion Energy has developed an Energy Management System that analyzes weather patterns, social events, and power generation data to predict hourly energy prices. This allows their energy storage solutions to deliver up to 30% higher returns compared to industry peers by optimizing energy cost savings.

Intelligent Temperature Control

Automatic temperature adjustment to cope with cold and heat

The intelligent thermal management system effectively avoids the bucket effect caused by the series connection of cells, guarantees the attenuation of life consistent of each cell to the greatest extent, ensures a temperature difference of cells in the container within 5℃, and improves the discharge capacity of the battery system. The integrated liquid-cooled units selected are featured in adaptive adjustment of the operating state, reducing the auxiliary loss by 30%.

Intelligent Management

24/7 protection

The BMS monitors the battery health status and identifies unhealthy batteries in advance. Intelligent internal short-circuit detection with early warning of battery fire hazards can reduce the probability of relevant fires by more than 90%. The online early warning system ensures the safe operation of battery throughout the life cycle.

Storion Energy d.o.o. | Radnička cesta 50, 10000, Zagreb, Croatia | info@crostorion.com
www.crostorion.com