SALES MAP

CHINA
Kunshan
Xiamen
Ningbo
Huizhou
Guangzhou
Suzhou
Jinjiang

VIETNAM
Ha Tinh
Renze

TAIWAN
Taipei
Taoyuan
Hsinchu
Taichung
Changhua
Nantou
Yunlin
Tainan
Kaohsiung

JAPAN
Tokyo
Kyoto

INDONESIA

PHILIPPINES

USA
Texas
Louisiana

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FORMOSA SMART ENERGY TECH CORP.

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(2026.08.500.34)

Formosa Smart Energy
Products and Solutions

FORMOSA SMART ENERGY

台塑新智能
FORMOSA SMART ENERGY

From solar, wind, tidal to geothermal, biomass, and hydrogen energy, new energy sources, with their renewable and environmentally friendly characteristics, are widely recognized as a critical pathway toward sustainable development. As the global energy transition accelerates, new energy not only helps mitigate global warming, but also serves as a key tool for reducing supply chain risk. Battery and energy storage technology will become essential infrastructure for the society of tomorrow - providing a more stable and secure source of power in the era of rapid AI advancement.

3,000+
Installations

25+
Deployment Locations Worldwide

15+
Years of Experience

PRODUCTS AND SOLUTIONS OVERVIEW

▶ Trustworthy ▶ Systematic ▶ Safe ▶ Intelligent

台塑新智能
FORMOSA SMART ENERGY

MILESTONES

2008

Formosa Biomedical Technology Corp. (FBC) established "Formosa Lithium Iron Oxide Corporation" to focus on the research, development, production and sales of lithium iron phosphate (LFP) cathode material.

2010

Established the "Formosa Biomedical Battery Team" to continuously develop and sell a variety of LFP battery products in the domestic market.

2014

Began exporting products to the United States, China, Vietnam, the Philippines, and other markets. Both local and foreign companies started adopting LFP batteries to replace their lead-acid batteries.

2018

Started pushing for the production of LFP batteries and modules to be 100% in-house and obtained certifications given out by third-party safety laboratories in compliance with UL, UL Japan, IEC, S-JET, and UN38.3 standards.

2020

Developed MW-scale energy storage systems (ESS) and participated in the Regional Energy Storage Demonstration and Validation Project led by ITRI by deploying a 1.5 MW/1.5 MWh ESS at the Changhua Coastal Industrial Park.

2022

Formosa Smart Energy Tech Corp. (FSE) was established as a joint venture between Formosa Plastics, Nan Ya Plastics, Formosa Petrochemical, Formosa Chemicals & Fibre, and Formosa Biomedical. FSE has since built Taiwan's first 1.2MW/1.3MWh sReg energy storage project at the FBC Changhua Plant.

2024

FSE established an LFP battery module plant and an LFP battery cell plant (Formosa AdvEnergy) at the Changhua Coastal Industrial Park, with annual production capacity of 2.1 GWh.

The first phase of both plants was completed in the second half of 2024, marking the commencement of mass production.

2025

Formosa AdvEnergy's battery cells and modules started steadily supplying the energy storage and EV markets. The production facility has also received Taiwan's EEWH Gold-Level Green Building Certification.

In the same year, FSE commissioned a pilot production line for all-solid-state lithium batteries and, in collaboration with ITRI, successfully developed dry electrode technology. It also commissioned Taiwan's first pilot battery recycling line, establishing a comprehensive value chain spanning battery R&D, manufacturing, recycling, and reuse.

2026

Formosa AdvEnergy commenced Phase II of its Changhua facility expansion, with plans to construct an additional 5 GWh battery cell and module manufacturing facility to further strengthen the domestic energy supply chain.

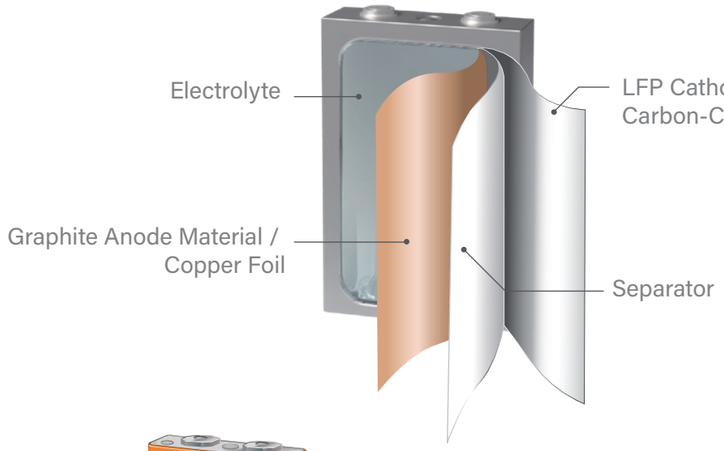
FSE's ESS obtained Taiwan's first CNS Large-Scale Fire Test certification; automotive batteries received UNECE R100.03 E-Mark certification; and algae oil as a SAF feedstock obtained ISCC EU Certification. The company continues to expand its portfolio of domestically produced batteries and sustainable energy solutions, while advancing the integration of its technologies with international markets.

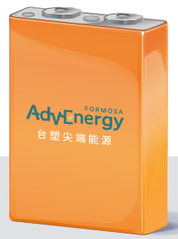
FUTURE

Taiwan's Largest LFP Battery Cell & Module Plant

Formosa AdvEnergy is home to Taiwan's largest LFP battery cell and module manufacturing facility, and has obtained Taiwan's EEWH Gold-Level Green Building Certification. With safety certifications including UL, IEC, and CNS, our products form the foundation of our new energy portfolio and are widely used in EV, energy storage, as well as uninterruptible power supply (UPS) solutions.

LFP BATTERY CELL

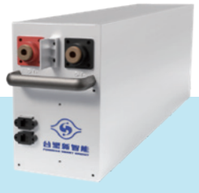




	Energy Cell	Power Cell
	67Ah	50Ah
APPLICATION	C&I, Residential ESS, EV	UPS, Power Tools, High-Power Output Operations
ENERGY DENSITY	175 Wh/kg	128Wh/kg
VOLUMETRIC ENERGY DENSITY	361 Wh/L	264 Wh/L
MAX CHARGE/DISCHARGE C-RATE	2C/2C	3C/10C
25℃ CYCLE LIFE	≥4,000	≥3,000
45℃ CYCLE LIFE	≥2,000	≥1,500
DIMENSION D*W*H (INCLUDING OUTER FILM)	42.9*100*141 mm	42.9*100*141 mm
WEIGHT	1,250 ±37 g	1,250±37 g

- Please refer to the product datasheet for more details.
- Cycle life testing conditions: 100% DOD; 80% SOH.

LFP BATTERY PACK



24V50Ah / 24V67Ah

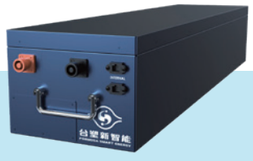
90V50Ah

12V134Ah

Item	UPS			DC Charger
Specification	24V50Ah	24V67Ah	90V50Ah	12V134Ah
Model	LFP-24V050AH-B	LFP-24V067AH-B	LFP-90V050AH-B	LFP-12V134AH-B
DC Voltage	25.6 V	25.6 V	96 V	12.8 V
Capacity	1.28 kWh	1.72 kWh	4.5 kWh	1.72 kWh
MAX Charging Current	150 A (3C)	67 A (1C)	150 A (3C)	100 A (0.7C)
MAX Discharging Current	400 A (8C)	100 A (1.5C)	400 A (8C)	130 A (0.97C)
Configuration	8S1P	8S1P	30S1P	4S2P
Dimension D*W*H	575*130*208 mm	575*130*208 mm	885*280*200 mm	351*221*184 mm
Weight	17 kg	17 kg	64 kg	13.6 kg

- Please refer to the product datasheet for more details.

48V67Ah



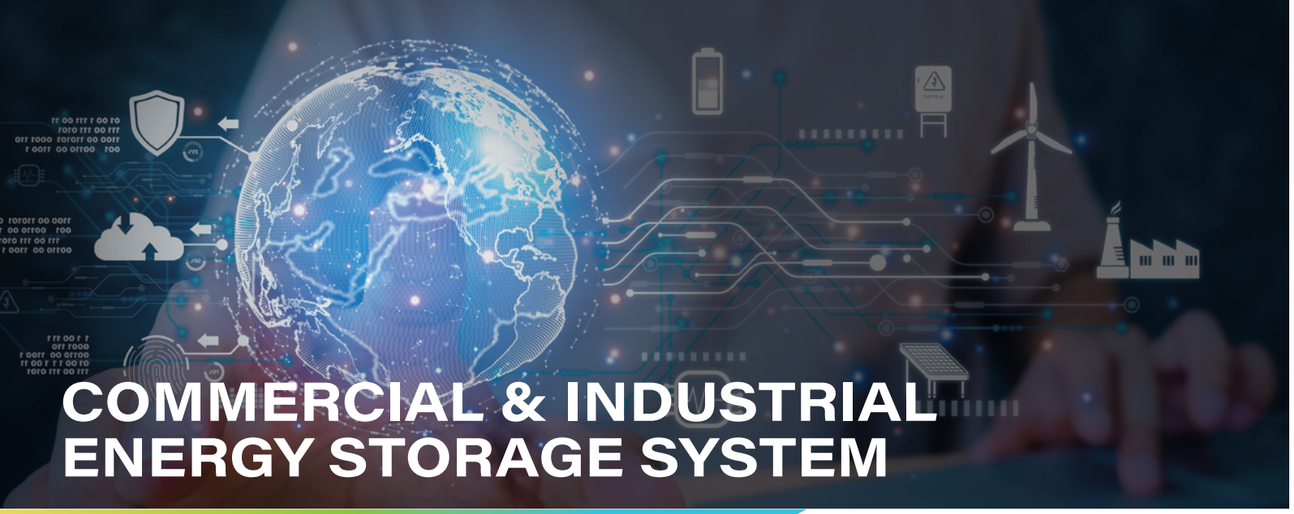
48V134Ah

ESS		
Specification	48V67Ah	48V134Ah
Model	LFP-48V067AH-A	LFP-48V134AH-A
DC Voltage	51.2 V	51.2 V
Capacity	3.43 kWh	6.86 kWh
MAX Charging Current	67 A (1C)	100 A (0.7C)
MAX Discharging Current	100 A (1.5C)	100 A (0.7C)
Configuration	16S1P	16S2P
Dimension D*W*H	612*221*184 mm	950*235*181 mm
Weight	30 kg	55 kg

- Please refer to the product datasheet for more details.

Over 15 Years of Transformation

Guided by Formosa Plastics Group's core values of "Diligence, Perseverance, Frugality and Trustworthiness, Striving for Excellence," all battery modules undergo standardized assembly, at least two charge-discharge cycles for testing and verification, and rigorous cell matching to ensure high-quality and reliable battery systems for our customers.



COMMERCIAL & INDUSTRIAL ENERGY STORAGE SYSTEM

CELL CONSISTENCY

Battery Cell Balancing System

With our battery cell balancing system, subtle electrical differences introduced during the cell manufacturing process can be corrected, and the time decay exacerbated by DC internal resistance can be offset. Not only does our balancing system extend the safe operating lifespan of the battery system, it also helps expand the operational range and enhances the stability of the battery system.

Hierarchical BMS

Smart Balancing System

Redundant Subsystems

Double Protection

BMS FEATURES

Our battery management system passes the IEC/UL60730-1 certification standard

Programmed with smart balancing algorithms and equipped with a two-stage isolation control system, redundant subsystems, a self-reset system, and a remote control system, our BMS allows for high-precision and contact-less ampere-hour measurement calculations.

Cabinet

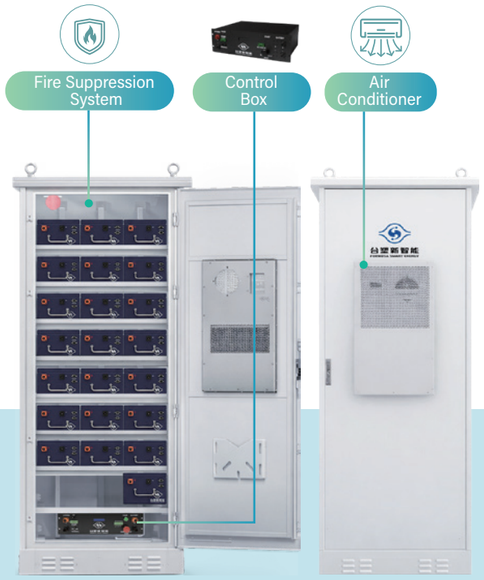
UPS System for Semiconductor Factory Backup

Cabinet

UPS System for Data Center Backup

Item	Factory Backup		Data Center	DC Charger
Specification	480V50Ah	480V67Ah	540V100Ah	108V134Ah
Model	US050-160MMSB	US067-160AMS1	US050-180QMF7	DC134-036BPS1
DC Voltage	512 V	512 V	576 V	115.2 V
Capacity	25.6 kWh	34.3 kWh	57.6 kWh	15.4 kWh
MAX Charging Current	150 A (3C)	67 A (1C)	300 A (3C)	100 A (0.7C)
MAX Discharging Current	400 A (8C)	100 A (1.5C)	400 A (8C)	130 A (0.97C)
Configuration	10S2P	10S2P	6S2P	9S1P
Dimension D*W*H	800*600*2,100 mm		946*668* 2,400 mm	800*650*1,600 mm
Weight	563 kg	563 kg	1,200 kg	278 kg

- Please refer to the product datasheet for more details.



Cabinet

Outdoor Commercial & Industrial (C&I) Energy Storage System

Outdoor ESS			
Specification	768V134Ah	1056V134Ah	768V268Ah
Model	ES134-256CMF2α	ES134 -352GMF1	ES134-256CMF2β
DC Voltage	819.2 V	1,126.4 V	819.2 V
Capacity	109.77 kWh	150.93 kWh	219.4 kWh
MAX Charging Current	100 A (0.7C)	100 A (0.7C)	200 A (0.7C)
MAX Discharging Current	100 A (0.7C)	100 A (0.7C)	200 A (0.7C)
Configuration	16S1P	22S1P	16S2P
Equipment	Air conditioning System, Fire Suppression Sytem, Control Box		Air conditioning System, Fire Suppression Sytem, Control Box, PCS
Dimension D*W*H	1,000*1,250*2,450 mm	1,000*1,250*2,450 mm	1,361*1,435*2,450 mm
Weight	1,325 kg	1,700 kg	3,500 kg

- Please refer to the product datasheet for more details.

Rack
768V134Ah

Rack
1056V134Ah

ESS			
Specification	768V67Ah	768V134Ah	1056V134Ah
Model	BR108-256AMF	ES134-256CMF2	ES134-352GMF1
DC Voltage	819.2 V	819.2 V	1,126.4 V
Capacity	54.88 kWh	109.77 kWh	150.93 kWh
MAX Charging Current	67 A (1C)	100 A (0.7C)	100 A (0.7C)
MAX Discharging Current	100 A (1.5C)	100 A (0.7C)	100 A (0.7C)
Configuration	16S1P	16S1P	22S1P
Dimension D*W*H	667*545*2,001 mm	985*560*2,001 mm	998*554*2,379 mm
Weight	654 kg	1,140 kg	1,470 kg

- Please refer to the product datasheet for more details.

CONTAINERIZED ENERGY STORAGE SYSTEM

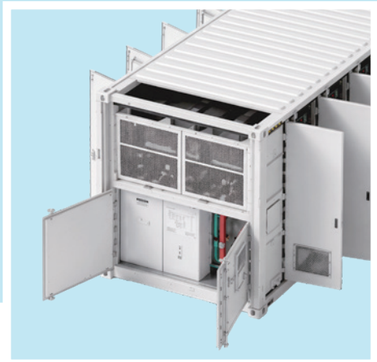
20'CONTAINER TEU

IEC62619 · IEC60730 · UN38.3 · UL9540A · UL1973 · CNS62619 · CNS62933-5-2

Air Cooling

- Utilizes LFP batteries
- Ingress Protection Rating : IP54
- Corrosion Protection Class: ISO 12944 C5

Liquid Cooling



ESS		
Model	FESS 20-134C	FESS 20-134D
Nominal Capacity	3.01 MWh	4.61 MWh
Nominal DC Voltage	1,126.4 V	1,228.8 V
DC Voltage Operating Range	1,020~1,232 Vdc	1,113~1,344 Vdc
Max. Charging Current	1,000 A	1,250 A
Max. Discharging Current	1,000 A	1,250 A
Configuration	1P22S*20 Rack	2P6S*14 Rack
Dimension D*W*H	6,058*2,438*2,896 mm	6,058*2,438*2,896 mm
Weight	38 ton	43 ton
Type	Air Cooling	Liquid Cooling

Equipment

- DC Busbar
- HMI
- Air Cooling System
- Fire Protection System
- Smoke Detectors
- Temperature Sensors
- Gas Detectors
- UPS System
- High-Voltage Fuse
- Residual Current Device
- Surge Arrester
- Liquid Alarm Sensors
- High Current DC Disconnector

*Based On The Actual Application Requirements Of The Project.

- Please refer to the product datasheet for more details.

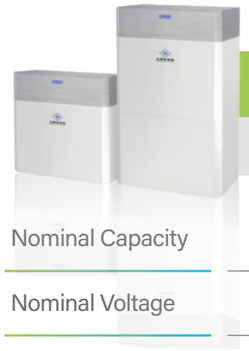
RESIDENTIAL ENERGY STORAGE SYSTEM

The image is for illustrative purposes only.
Actual product may vary.

- STANDARD MODULE
- 10-YEAR WARRANTY
- OVER 3,600 CYCLE LIFE
- SMART BALANCING
- AUTOMATIC POWER-OFF PROTECTION
- FIREPROOF MATERIALS

SMARTER CHOICE FOR POWERING YOUR HOME

RESIDENTIAL ESS



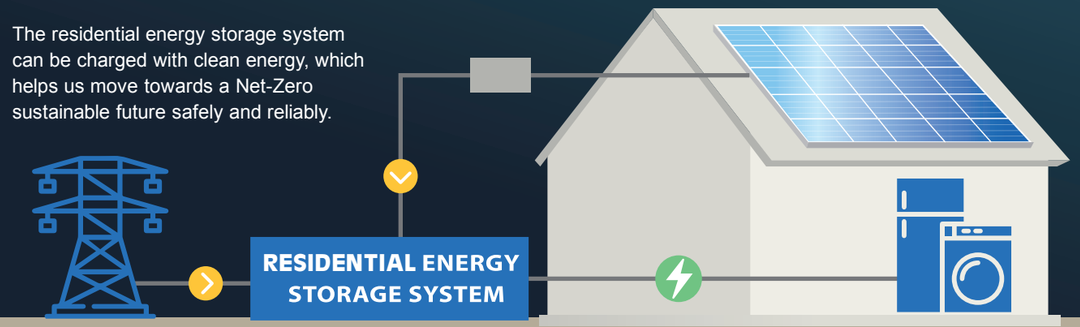
	Residential ESS	
	HB134-016EMF1	HB268-016EME1
Nominal Capacity	134 Ah	268 Ah
Nominal Voltage	51.2 V	51.2 V
Energy	6.86 kWh	13.72 kWh
Dimension L*W*H	580*300*608 mm	580*300*1,058 mm
Weight	77 kg	144 kg

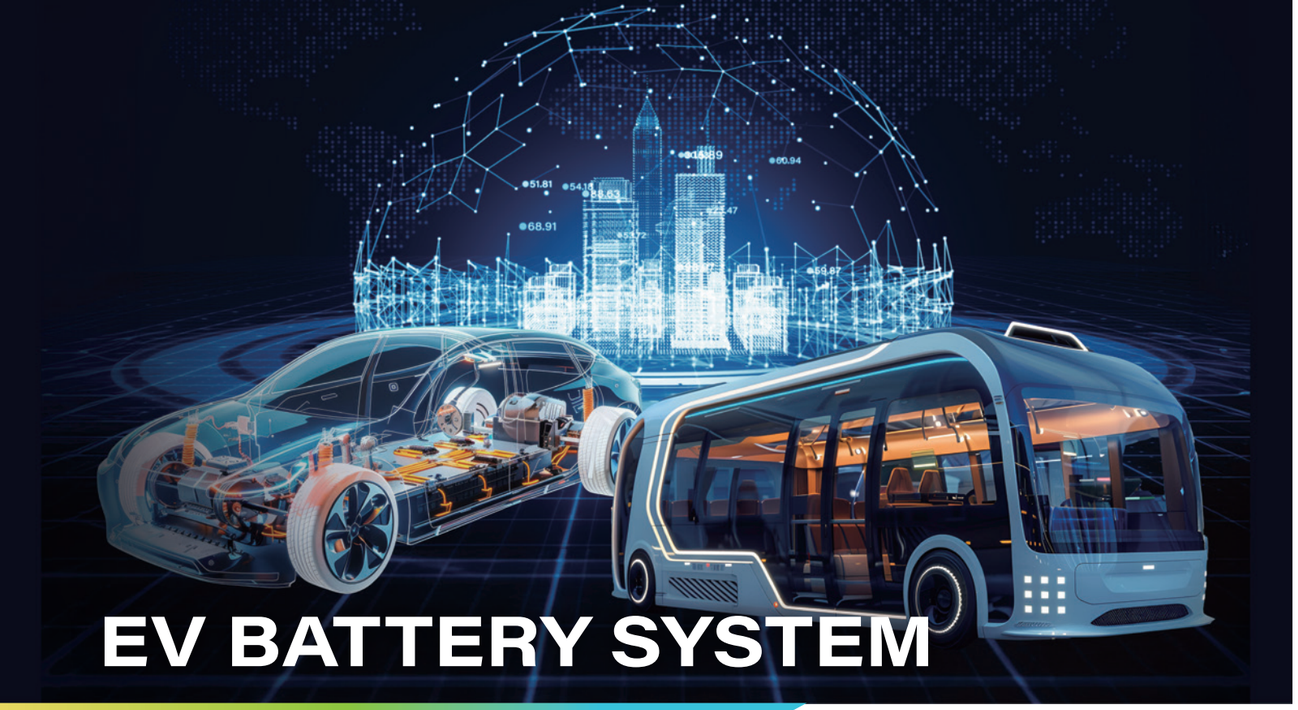
- Please refer to the product datasheet for more details.

	Hybrid PCS
	FSE HESS 6KW
Power	6 kW
Nominal Discharge Current	25 A/phase
Nominal Discharge Voltage	120/208/240 Vac
Nominal Discharge Voltage	48 Vdc
Maximum Charging Current	120 A
Ingress Protection Rating	IP65
Operating temperature range	-20~60 °C
Dimension H*W*D	700*515*215.5 mm
Weight	41 kg

- Can be used as an emergency power supply
- Can be paired with a photovoltaic (PV) system
- Can be stacked to increase energy storage capacity
- Can be used strategically to decrease electricity costs

The residential energy storage system can be charged with clean energy, which helps us move towards a Net-Zero sustainable future safely and reliably.





EV BATTERY SYSTEM

High Safety & High Energy Density Battery System

CNS16160
The Voluntary Product Certification (VPC) for batteries and battery systems used in EVs implemented by the BSMI of the Ministry of Economic Affairs.

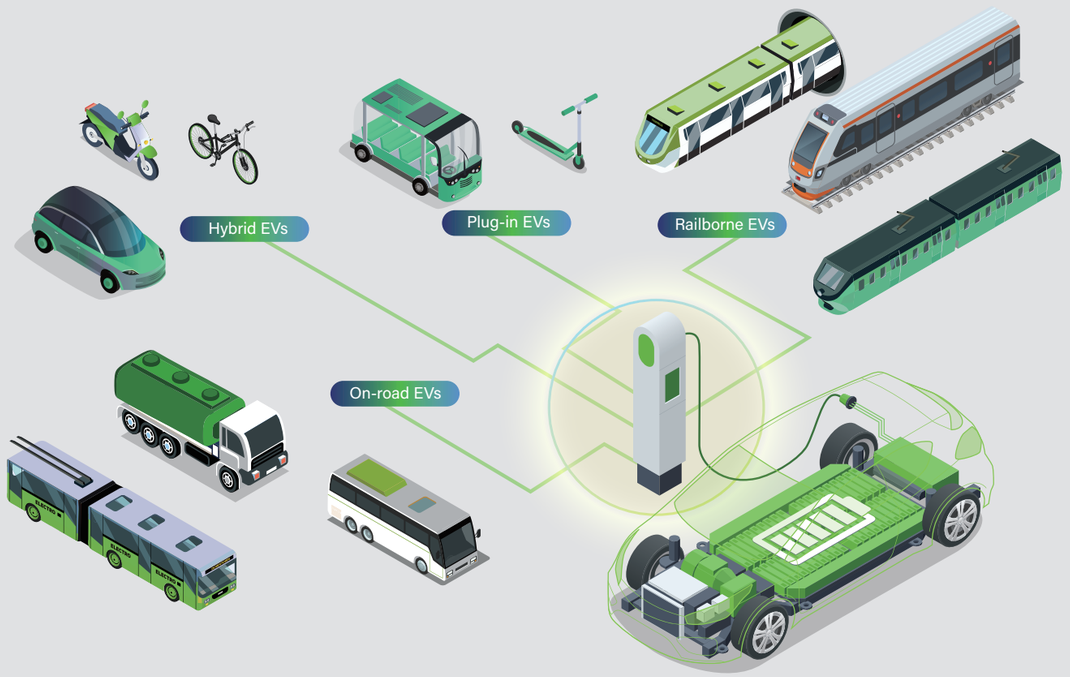
IEC62133 IEC62620
Safety requirements for lithium-ion cells and batteries used in electric road vehicles.

UL1973 UL2580
Safety standards for electric vehicle batteries (modules).

UN38.3
UN safety standard for the transport of lithium-ion batteries.

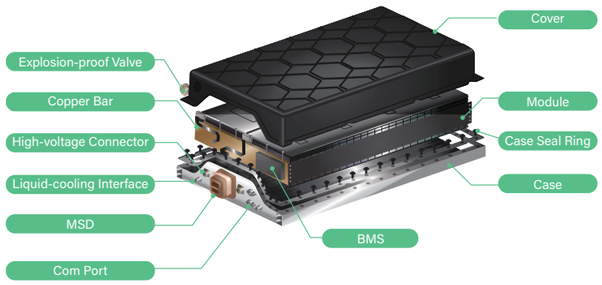
ECE R100.03
EU safety standard for automotive power batteries.

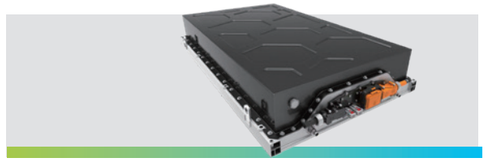
E13
UNECE International Vehicle and Component Type Approval Certificate.



Electric Bus Battery System

FSE independently developed its own power battery systems, combining stable performance with reliable quality. These products have been successfully deployed in electric buses in Taiwan, demonstrating the practical application of domestically developed technology in public transportation.

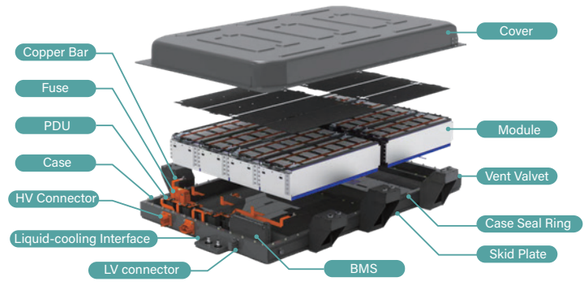


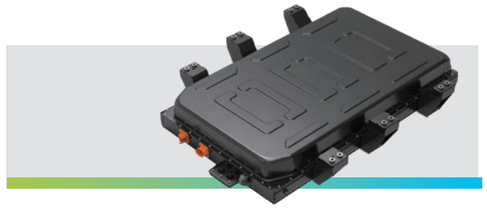


Configuration	3P48S
Nominal Energy	30.87 kWh
Energy Density	≥134 Wh/kg
Nominal Voltage	153.6 V
Operational Temperature	Charging: 0~55 °C Discharging: -30~60 °C
Thermal Management	Liquid Cooling
Ingress Protection Rating	IP67
Dimension D*W*H	1,240*710*192 mm
Weight	230 kg

Electric Commercial Vehicle Battery System

To meet the intensive operating demands of commercial vehicles, Formosa Smart Energy has partnered with domestic automakers to integrate its independently developed power battery systems into newly developed electric logistics vehicles, expanding the application of electrification in logistics and transportation.



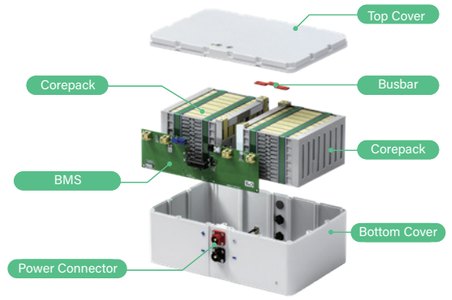


Configuration	2P104S
Nominal Energy	44.5 kWh
Energy Density	>123 Wh/kg
Nominal Voltage	332.8 V
Operational Temperature	Charging: 0~55 °C Discharging: -30~60 °C
Thermal Management	Liquid Cooling
Ingress Protection Rating	IP67
Dimension D*W*H	1,525*906*211 mm
Weight	360 kg

CARRIER BATTERY SYSTEM

Quadruped Robot Battery System

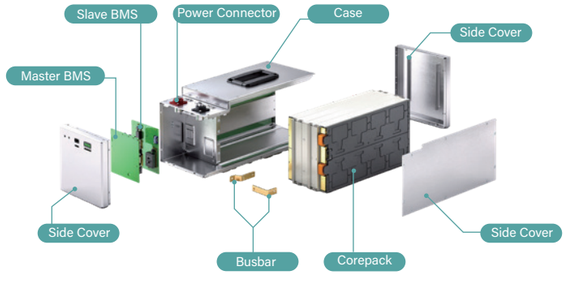
FSE has independently developed a battery system for quadruped robots, featuring long operating endurance, high power output, and intelligent BMS management. The system meets the demands of smart automated operations and provides a stable and reliable power solution.



Specification	51.2V27Ah
Configuration	1P16S
Nominal Energy	1.37 kWh
Energy Density	≥140 Wh/kg
Nominal Voltage	51.2 V
Operational Temperature	Charging:3~40 °C Discharging:0~40 °C
Dimension D*W*H	350*265*133 mm
Weight	16 kg
Thermal Management	Natural cooling
Ingress Protection Rating	IP67
Communication Protocol	CAN2.0A

Rack-Mounted Battery System

FSE has partnered with domestic Automated Guided Vehicle (AGV) and Autonomous Mobile Robot (AMR) system providers to develop power battery systems. These systems can be applied to various mobile platforms, helping replace conventional fuel-powered equipment and manual operations while improving energy efficiency and operational flexibility.



Specification	48V67Ah
Configuration	1P15S
Nominal Energy	3.12 kWh
Energy Density	≥175 Wh/kg
Nominal Voltage	48 V
Operational Temperature	Charging:3~40 °C Discharging:0~40 °C
Dimension D*W*H	504*183*236 mm
Weight	30.5 kg
Thermal Management	Natural cooling
Ingress Protection Rating	IP20
Communication Protocol	RS485
Certification	EMC, UN38.3, IEC60730, IEC62619

TUBULAR PHOTOBIOREACTORS

CH ALGAE CO., LTD. 澄藻科技股份有限公司

- Pipeline Design
- Semi-Automatic Cleaning
- Space-Efficient
- Controlled Environment
- High Carbon-Fixation Efficiency

The official website of CH Algae

Tel: 06-2613366 #614
Mail: nghaochen@fpg.com.tw

Model	50L Tubular System	150L Tubular System	600L Tubular System	5,000L Tubular System
Number of Tubes	10	24	64	352
Volume of Tubes	30 L	70 L	400 L	4,000 L
Tank	20 L	80 L	200 L	1,000 L
Land Area L*W*H	200*100*120 cm	220*100*170 cm	850*150*200 cm	2,500*150*250 cm
Operating Temp.	15~40 °C	15~40 °C	15~40 °C	15~40 °C
Light Source	RGB	RGB	RGB	RGB

台塑綠電
FORMOSA SMART POWER

The Top Choice for Corporate Green Energy

FORMOSA SMART POWER

Let every green power be the starting point
for your business's journey toward sustainable competitiveness

Formosa Plastics Group's Energy Expertise × Professional Green Energy Services

Supporting Businesses on Their Journey Toward

RE100 and a Net-Zero Future

In the face of global net-zero emissions trends, supply chain decarbonization requirements, and the rising tide of ESG and sustainability commitments, renewable energy has become a critical driver of corporate competitiveness.

Formosa Smart Power combines the resources of Formosa Plastics Group with Formosa Smart Energy's new energy product portfolio -- integrating renewable energy, energy storage, and energy management expertise to provide enterprises with stable, compliant, and scalable green power transfer services. This enables customers to increase their renewable energy usage ratio and achieve their sustainability goals.

Technology | Manufacturing | Construction | Healthcare | Educational | Public Sector

10 MW+
Contracted Installed Capacity

190+
Power Supply Sites

Green Energy × Sustainable Future × Corporate Value

GREEN ENERGY TRADING

Backed by Formosa Plastics Group's Energy Ecosystem
We leverage Formosa Plastics Group's energy industry resources to provide a comprehensive green energy service platform.

One-Stop Integration of Green Power and Energy Storage
From renewable energy procurement and RE ratio planning to energy storage applications, we provide comprehensive, end-to-end solutions.

Stable and Scalable Green Power Supply
We integrate diverse renewable energy sources to provide businesses with a stable, long-term supply of renewable energy.

Customized RE100 and ESG Planning
We customize and optimize each renewable energy solution to fit our customer's electricity needs and sustainability goals.

End-to-End Support from a Professional Team
We provide end-to-end service and technical support - from needs assessment and solution planning through to green energy transfer execution.

SERVICE OFFERINGS

- Green Power Wheeling Services
- RE100 Planning Services
- ESG Sustainability Consulting
- Energy Storage Integration and Applications
- Energy Management Planning

SERVICE TRACK RECORD

We provide electricity consumption analysis, renewable energy ratio calculations, green power procurement recommendations, and carbon reduction planning.

Assist enterprises in adopting green power through the most appropriate methods to enhance their sustainable competitiveness.

- RE Ratio Analysis
- Green Power Procurement
- Recommendations
- Carbon Reduction Planning

CONTACT US

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linda_deng@fpg.com.tw