



FENGRUI ENERGY

Smart Energy Solutions for Business

Energy on your terms, powered by smart storage



WUXI FENGRUI NEW ENERGY POWER BATTERY CO., LTD.

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Energy On Your Terms



Green energy, better life.

COMPANY PROFILE ABOUT FENGGRUI

Wuxi Fengrui New Energy Power Battery Co., Ltd. (FENGGRUI), founded in 2022 and headquartered in Wuxi, China, is an energy storage technology enterprise that integrates R&D, manufacturing and sales across the entire value chain. Driven by technological innovation, we have established a full-scenario product portfolio that includes residential, industrial & commercial, utility-scale storage, lithium battery packs, and portable power stations. With an annual production capacity of 1GWh and a presence in over 50 global markets, we deliver efficient and reliable integrated energy solutions to customers worldwide.

The company employs nearly 200 staff members, among whom R&D and engineering technical teams account for over 30%, continuously empowering product iteration and system innovation. Covering a total plant area of more than 20,000 square meters, our facility integrates cell assembly, system integration, testing & verification as well as warehousing and logistics, laying a solid foundation for large-scale production and consistent product quality. Benefiting from our self-owned land and factory premises, we can flexibly adjust production capacity schedules, steadily improve delivery efficiency, and further strengthen our long-term service capabilities to serve global markets.

MISSION

To advance clean energy solutions, create long-term value, and grow together with our people.

VISION

To accelerate the transition to clean energy and enable a more efficient and sustainable future.

VALUES

Integrity | Pragmatism | Excellence | Collaboration

Advancing green energy innovation

Empowering customers worldwide



Safety Assured, Quality Built to Last

Stringent extreme environment endurance assessment

82-Day Full-Load Environmental Reliability
Benchmark Test for Residential ESS



High Temperature



Rain Resistance Test



Freezing / Low Temperature Test



EMC Test

Environmental
Reliability Test

Global Authoritative Certifications

Fully tested to CE, RoHs and other international standards, the product delivers stable and reliable performance

6000+

safety cycle
verifications

500+

hours of continuous
durability testing

4,000+

reliability
verifications

1,200+

verification
tests

72+

hours of continuous
full-load operation

2-200Hz

2 hours of 3-axis continuous
vibration

The product has obtained a number of international authoritative certifications including RoHs MARK, CE (LVD/EMC), UN38.3 and EU Battery Regulation, as well as test reports from CNAS/CMA accredited laboratories in China. It complies with both EU and domestic compliance standards, with traceable quality and guaranteed safety.



Testing & Certification

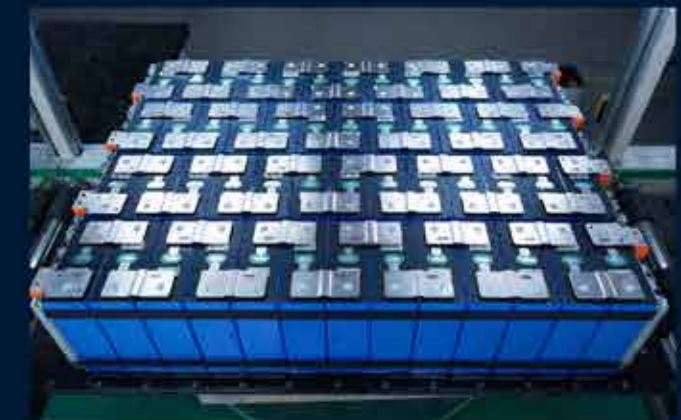
Tested to CE, RoHs and certified for reliable performance.

Focused on Energy Storage

Advanced Manufacturing Base

Fengrui Energy operates a state-of-the-art manufacturing base of over 8,000 m², dedicated to high-performance energy storage production. With standardized production lines and strict quality control, the facility ensures reliable and consistent output aligned with international standards.

Backed by an experienced team, it supports both customized solutions and scalable delivery, driving Fengrui Energy's global growth.



C&I & Utility-Scale Storage Series

Features:

- MWh-Scale Capacity
- Professional Cooling
- Grid Smart
- Efficient Integration (>98%)
- High Power (kW-MW)

Scenarios:

- Grid Services
- Data Center Backup
- Green Microgrid
- Factory Demand Management
- Charging Buffer



Industrial And Commercial Lithium-ion Battery Systems

Model: HB-RM16K
16kWh



- Large per Module: Up to 225kWh, simple integration
- High Voltage Direct: Up to 716.8V, high efficiency
- Standard Rack: Flexible, custom systems。 Long Life & Warranty: ≥ 6500 cycles, 10 years
- High Current: 140A continuous charge/discharge。 Industrial Design: Indoor industrial use

Battery Data					
Model	RM16K-96K	RM16K-112K	RM16K-128K	RM16K-144K	RM16K-160K
Cell Chemistry	LFP/ 314Ah				
Pack Configuration	1P96S	1P112S	1P128S	1P144S	1P160S
Rated Energy (kWh)	96.46kWh	112.53kWh	128.61kWh	144.69kWh	160.76kWh
Rated Voltage (V)	307.2V	358.4V	409.6V	460.8V	512V
Operating Voltage Range	268.8-345.6V	313.6-403.2V	358.4-460.8V	403.2-518.4V	448-576V
Max. Continuous Charge/ Discharge Current	140A				
Dimensions (L*W*H)(mm)	585*784*2,2150		1,170*784*2,150		
Weight	788 KGS	898 KGS	1,083 KGS	1,193 KGS	1,303 KGS
BMS Communication	Modbus RTU				
Model	RM16K-176K	RM16K-192K	RM16K-208K	RM16K-224K	RM16K-240K
Cell Chemistry	LFP/ 314Ah				
Pack Configuration	1P176S	1P192S	1P208S	1P224S	1P240S
Rated Energy (kWh)	176.84kWh	192.92kWh	208.99kWh	225.07kWh	241.15kWh
Rated Voltage (V)	563.2V	614.4V	665.6V	716.8V	768V
Operating Voltage Range	492.8-633.6V	537.6-691.2V	582.4-748.8V	627.2-806.4V	672-864V
Max. Continuous Charge/ Discharge Current	140A				
Dimensions (L*W*H)(mm)	1,170*784*2,150				
Weight	1,413 KGS	1,523 KGS	1,633 KGS	1,743 KGS	1853 KGS
BMS Communication	Modbus RTU				
General Data					
Display	Touch Screen (Optional)				
IP Rating	IP20				
Operating Temperature (°C)	Charge: 0-50°C ; Discharge: -10~50°C				
Relative Humidity	0~95% RH (non-condensing)				
Altitude	≤ 2,000m				
Cycle Life	≥ 6,000 Cycles @25°C 80%DOD				
Safety Protection	Bidirectional Active Balancing, Active Cooling and Heating Management, Over/Under-Voltage Protection, Over/Under-Current Protection, Communication Fault Alarm.				
Installation Method	Floor Standing				
Certifications	UN38.3, IEC62619(CB), CE-EMC				

This is a high-voltage rack-mounted lithium battery with a capacity of 225kWh per cluster. It supports flexible stacking to build customized systems and is an ideal choice for large-scale energy storage projects, off-grid power supply, and energy cabins for heavy machinery.

Integrated PV-Storage-Diesel C&I ESS

Model: FRA-30-96
30kW/ 96kWh



- Highly Integrated: All-in-one cabinet
- PV-Storage: Dual MPPT, 38.4kW PV input
- Smart Climate: Air cooling + AC, -20~50° C。 Multi-Protection: IP55, C3 anti-corrosion
- User-Friendly: Touch screen & multi-comms。 Low Noise: ≤ 70dB, community-friendly

Battery Data	
Cell Type	LFP/ 314Ah
Rated Energy	96kWh
Rated Voltage	307.2V
Battery Voltage Range	250V~ 850V
Cycle Life	8,000 Cycles
Max. charge/discharge rate	0.5P
Pack Configuration	1P96S
PV Input	
Max PV Input Power	19.2kW+19.2kW
Max. PV Input Current	32A+32A (Dual Channels)
PV Voltage Range	250V~ 850V
Number of MPPTs	1
Inputs per MPPT	2
AC Side (Grid-Tied)	
Rated Power	30kVA
Rated Current	43.5A
AC Rated Voltage	400V/ 230V
Wiring Method	3P+N/ 1P
Frequency	50Hz: 47Hz~52Hz/ 60Hz: 57Hz~62Hz
Power Factor	-0.8~0.8
THDi	<5% (at Loads Above 30%)
AC Side (Off-Grid)	
Rated Power	30kW
Rated Current	43.5A
AC Maximum Current	48A
AC Rated Voltage	400V/ 230V
Wiring Method	3P+N/ 1P
Frequency	50/ 60Hz
Unbalanced Load	100%
THDv	<3% (Linear Load)
General Data	
Dimensions (mm)	L700 x W1,235 x H2,135
Weight (kg)	~950kg
Grid Support	L/HVRT, active and reactive power control
Max Efficiency	96%
Operating temperature	-20°C ~50°C (Derating above 45°C)
Operating Humidity	0~95% RH (Non-condensing)
Safety Protection	Automatic Current Balancing in Parallel Operation, AC Overcurrent Protection, AC Short-Circuit Protection, Anti-islanding Protection, DC Reverse Connection Protection.
Ingress Protection	IP55
Anti-Corrosion Grade	C4
Cooling Method	Smart Air Cooling
Air Conditioner Power	2kW (Cooling), 1kW (Heating)
Noise	≤ 70dB
Elevation	3,000m (Derating above 2,000m)
Display	Touch Screen
Fire Protection	Aerosol, Multi-sensor/ Water Ingress Detector, Explosion-Proof Ventilation
Communication	Ethernet/ 4G/ RS485/CAN
Certifications	UN38.3, IEC62619(CB), CE-EMC

An outdoor all-in-one ESS cabinet integrating a 96kWh battery, 30kW inverter, and 38.4kW PV input. It provides a plug-and-play outdoor storage solution for SMEs, shops, or communities, enabling solar self-consumption, peak-valley arbitrage, and backup power.

Commercial & Industrial Battery ESS Cabinet

Model: FRA1-241K
100kW/ 241kWh



Battery Parameters	
Battery Type	LFP / 314 Ah
Rated Energy	241 kWh
Rated Battery Voltage	768 V
PCS Voltage Range	650 ~ 876 V
System Parameters	
Dimensions (W x H x D) (mm)	1200*1315*2195mm
Net Weight (kg)	2,800 kg
Operating Temperature Range (° C)	-30 ~ 50° C (> 45° C derating)
Relative Humidity	0~95% RH (non-condensing)
Relative Humidity	3,000 m
Cooling Concept	Smart air cooling
Safety Protection	Bidirectional Active Balancing, Thermal Management, Real-Time Voltage and Temperature Monitoring.
Ingress Protection	IP55
Certifications	IEC62619, IEC63056, IEC61000, IEC62477-1, IEC62040,UN38.3
Communication Protocol	Modbus TCP
Anti-Corrosion Degree	C4 (C5 optional)
Configuration of Safety	Gas fire suppression + Water-based fire suppression + Ventilation

- Multiple cabinets can be combined for larger C&I or MWh-scale energy storage projects.
- IP55 protection and C4 anti-corrosion design support reliable outdoor operation in industrial environments.
- Integrated BMS monitoring, thermal management, fire suppression, and ventilation enhance cabinet-level safety.
- Flexible matching with different PCS or inverter solutions according to project power and system requirements.

The FRA1-241K is a 241kWh C&I battery ESS cabinet using LFP 314Ah cells and integrated with BMS, safety monitoring, smart air cooling, fire protection, and communication systems. It can be flexibly matched with PCS, PV systems, diesel generators, and EMS, making it suitable for factories, industrial parks, cold chain logistics, charging stations, distributed PV projects, and microgrids.

Liquid Cooling C&I ESS Cabinet

Model: FRL1-125-261
125kW/261kWh



- Top Efficiency: energy saving
- Advanced Liquid Cooling: -30~55° C, quiet
- High Density: 125kW/261kWh compact。 High Voltage: 832V platform, lower loss
- Transformerless: Efficient, lightweight, low cost。 High Overload: 125%/150% overload capable

AC Side (Grid-Tied)	
Rated Output Power	125kW
Max. Output Apparent Power	137.5kVA
Rated AC Voltage	400V/ 230V
Max. Output Current	200A
Rated AC Frequency	50/60Hz
Adjustable Power Factor Range	-1 ~ 1
Total Harmonic Distortion (THDi)	< 2%
AC Side (Off-Grid)	
Rated AC Output Voltage	400V/ 230V
Rated AC Frequency	50 Hz / 60 Hz
THDv	< 3% (linear load)
Unbalance Load Capacity (Off-Grid)	100%
Overloading Capability	1.25/10s, 1.5/0.1s
Battery Parameters	
Battery Type	LFP 314 Ah
Rated Energy	52.24kWh
Rated Battery Voltage	832V
PCS Voltage Range	615V~950V (3W+PE) /650V~950V (3W+N+PE)
Max. Current	203A
System Parameters	
Dimensions	L1,080×D1,586×H2400(mm)
Net Weight	2,800 kg
Operating Temperature Range	-30°C ~55°C
Relative Humidity	0~95% RH (non-condensing)
Max. Operating Altitude	4,000m (Derating above 2,000m)
Cooling Concept	Liquid Cooling
Safety Protection	Bidirectional Active Balancing, Thermal Management, Real-Time Voltage and Temperature Monitoring.
Ingress Protection	IP55
Topology	Non-isolated
Certifications	IEC62619, IEC63056, IEC61000, IEC62477-1, IEC62040, UN38.3
Communication Interfaces	ModbusRTU
Communication Protocol	RS485/CAN
Anti-corrosion Degree	C4
Configuration of Safety	Gas fire suppression + Water fire suppression
Max. Parallel Quantity (Off-Grid)	10 Units

A high-efficiency liquid-cooled storage cabinet with system efficiency ≥ 98.5% and an 832V high-voltage platform. It provides high-power-density, high-quality uninterrupted power and energy buffering for semiconductor production lines, large data centers, or electric bus swapping stations.

All-in-one Liquid-cooled ESS Cabinet

Model: ECO-E261LP-2A
261.24kWh



- 1.4m² footprint only, easy transportation & fast installation.
- 261kWh energy in one cabinet with remarkable endurance.
- Optimal in-PACK duct design, achieve high-efficient cooling and low energy consumption.
- Over 8,000 times cycle life, excellent performance of battery system, Modular design,simplified parallel expansion.



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DC Side

Cell Type	LFP314Ah
PACK	52.248kWh/1P52S
Battery System	261.24kWh/1P260S
Voltage Range	728~936Vdc
PACK Ingress Rating	IP65

AC Side

Rated Power	125kW
Max. Power	137kW
THDi	≤ 3%
DC Ratio	< 0.5% Ipn
Nominal Voltage	400Vac/3P+N+PE
Power Factor	0.98 lagging~0.98 leading
Nominal Frequency	50Hz/60Hz

AC Side

Efficiency	≥ 90%
Charge/Discharge Rate	0.5P
DoD	95% (25±2°C)
SOC Accuracy	< 3%
Cycle Life	≥ 8,000 cycles
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	Aerosol
Dimensions (W*D*H)	1,050*1,350*2,400 (mm)
Weight	2,600kg
Compliance	UN38.3, IEC62477, IEC61000, IEC62619, IEC63056, UL9540A, EN50549

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.

All-in-one Liquid-cooled ESS Cabinet

Model:ECO-E418LP
418kWh



- 2 m² footprint only, easy transportation & fast installation.
- 418kWh energy in one cabinet with remarkable endurance.
- Optimal in-PACK duct design, achieve high-efficient cooling and low energy consumption.
- Over 8,000 times cycle life, excellent performance of battery system.Modular design,simplified parallel expansion.



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DC Side	ECO-E418LP-4A400	ECO-E418LP-3A480	ECO-E418LP-2A690	ECO-E418LP-2A800
Cell Type	LFP / 314 Ah			
Pack Configuration	52.248 kWh / 1P52S			
System Configuration	418 kWh / 1P416S			
Rated DC Voltage	1331.2 V			
DC Voltage Range	1164.8 ~ 1497.6 V			
Max. Charge/Discharge Rate	0.25~0.5 P			
Max. Depth of Discharge	100% (25 ± 2 °C)			
AC Side				
Rated Output Power	125kW*	150kW	215kW	215kW
Max. Apparent Power	137.5kW*	165kW	237kW	237kW
Rated AC Voltage	400V	480V	690V	800V
AC Voltage Range	-15%~+10%			
Grid Type	3P3W			
Rated Frequency	50 Hz / 60 Hz			
Power Factor	0.99/ -1 ~ +1			
THDi	≤ 3%			
DC Ratio	< 0.5% I _{pn}			
General				
Max. Efficiency	≥ 90%			
Cycle Life	≥ 8,000 cycles			
Communication	Modbus TCP/RTU			
Fire Suppression System	Aerosol			
Ingress Rating	IP55			
Cooling	Liquid cooling + Air cooling			
Operating Temperature	-25°C ~55°C (Derating after 45°C)			
Anticorrosion Rating	C4 (C5 optional)			
Humidity	5~95% RH (non-condensing)			
Noise	≤ 80 dB			
Altitude	4000m (Derating above 2000m)			
Dimensions (W*D*H)	1,500*1,350*2,400 mm			
Weight	3,800 kg			
Compliance	UN38.3, IEC62477-1, IEC61000, IEC62619, IEC63056, UL9540A, EN50549			

The ECO -E418LP features advanced pack - level liquid cooling and temperature balancing , maintaining cell temperature difference within 3°C . This enhances cell temperature consistency and extends battery life . Its modular design enables flexible parallel configurations and higher energy density , significantly improving the cost - effectiveness , safety , and installation convenience of ESS projects .