



1,380kWh

CONTAINERIZED ENERGY STORAGE SOLUTION



HIGH SECURITY

Compliant with international safety regulations



MADE IN TAIWAN

High quality one-stop product design and production.



HIGH EFFICIENCY

Up to 98.6% AC/DC conversion rate.



FULL CUSTOMIZATION

We provide tailored solutions to meet the needs of clients



SCALABILITY

Can be connected in parallel to a larger scale

NO ENERGY LEFT TO WASTE

ADAPTABLE AND SCALABLE TO EACH PROJECT'S NEEDS

This 23ft Energy Storage Battery Container System is complete with 1380kWh lithium-ion battery stacks, EMS control box, power conversion system, environmental control system, Stat-X Aerosol fire suppression system, monitoring system, and lighting.

In addition to providing grid reliability and stability, our Energy Storage System creates optimal commercial and industrial value.

It is ideal for various applications of managing renewable energy as well as power grid loads such as AFC regulation and frequency response service, peak load shaving, and power smoothing.

23FT CONTAINERIZED SYSTEM SPECIFICATION (6PCS STACK)

ITEM	SPECIFICATION		REMARKS
Electrical			
	System	6 Stacks in parallel	1,380 kWh
	Stack	11 Packs + Control Management Unit	230 kWh
Configuration	Pack	3 Modules + Battery Monitoring Unit	21.5 kWh
	Module	8 Cells	7.2 kWh
	Cell	LFP Power Battery	280 Ah
Installed Energy		1,380 kWh	
Usable Energy (@ 90% DoD)		1,242 kWh	@1C discharge
Nominal Voltage		844.8 Vdc	
Operating Voltage Range		739.2 ~ 937.2 Vdc	
Charging	Power	1,419 kW	
	Current	1,680 Ah	@1C
Discharging	Power	1,419 kW	
	Current	1,680 Ah	@1C
Mechanical			
Dimension		7(L) X 2.6(W) X 2.9(H) m	
Weight		Approx. 19 ton	±10%
IP Grade		56	
Surface Coating System		Corrosivity Category: C2	
Operating Condition			
Operating Temperature	Charging	0°C ~ 55°C	@0.5C
	Discharging	-20°C ~ 55°C	@0.5C
Environment			
Ambient Temperature		25±2°C	
Storage Humidity		15 ~ 85% RH	
Storage Temperature	1 year	-20°C ~ 45°C	
	1 month	0°C ~ 35°C	
Safety			
Thermal	Container	HVAC	
Fire	Container	Stat-X Aerosol Units	
Protective	Container	Fuse, Switch Disconnecter, Contactor	
	Stack	Fuse, Switch Disconnecter, Contactor	

23FT CONTAINERIZED SYSTEM SPECIFICATION (6PCS STACK)

ITEM	SPECIFICATION	REMARKS
Communication		
Communication Interface	Ethernet	
Monitoring	Battery Management System	Cloud platform & mobile APP
Electrical Performance		
Cycle Life @ 25°C	≥6,000 cycle	@25±2°C, 0.5C/0.5C, 80% DoD
Cycle Life @ 45°C	≥2,500 cycle	@45±2°C, 0.5C/0.5C, 80% DoD
Certification		
Certification	IEC 60730	@ Container Level
	IEC 62619, UL 1973	@ Stack Level
	IEC 62619, UL 1973	@ Pack level

*C: Current-rate

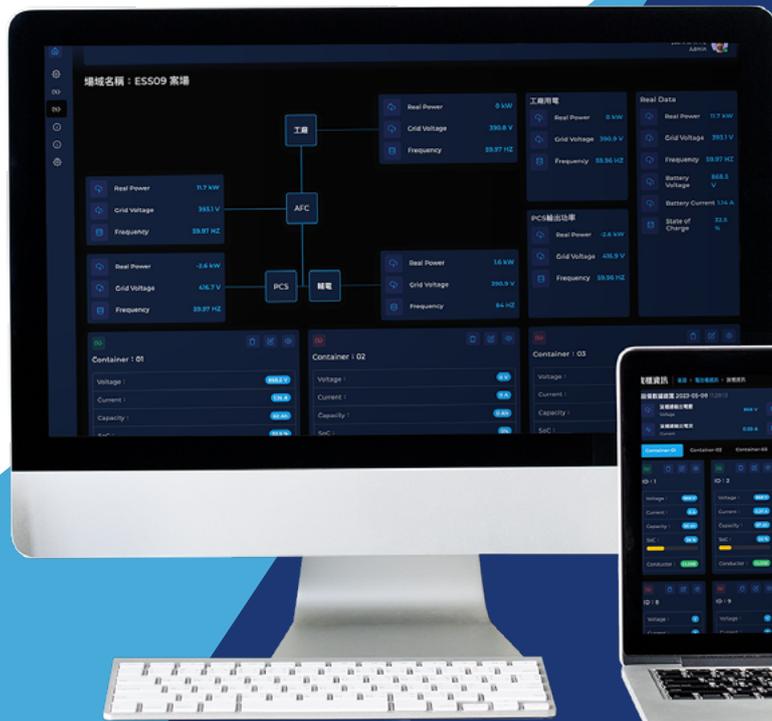
1. The usable energy may change depending on the calendar life of the battery cells
2. Daily cycling is possible at rated power/current condition. For optimal performance, the user shall rest the battery until the cell temperature returns to 25±2°C.
3. After max. charging or discharging, it is recommended to rest the battery system until the cell temperature returns to 25±2°C.
4. Operatig temperature is based on cell temperature.
5. When resting the battery system after an opration longer than 1 month, the user shall ensure that the SOC is between 30% ~ 50%. The ambient temperature is controlled at 0°C ~ 35°C when resting the battery system. During storage, the temperature and SOC conditions should always be adhered to. The battery system should be charged and discharged every 6 months.
6. Depending on the load profile, the warranty condition may differ.

BATTERY STACK SPECIFICATION

ITEM	SPECIFICATION	REMARKS
Electrical		
Installed Energy	230 kWh	@1C discharge
Nominal Voltage	844.8 Vdc	
Operating Voltage Range	739.2 ~ 937.2 Vdc	
Charging	Power	237 kW
	Current	280 Ah
Discharging	Power	237 kW
	Current	280 Ah
Mechanical		
Dimension	1,320 (L) X 970 (W) X 1,950 (H) mm	
Weight	Approx. 2.3 ton	
Operating Condition		
Charging	0°C ~ 55°C	@0.5C
Discharging	-20°C ~ 55°C	@0.5C
Environment		
Storage Temperature	0°C ~ 35°C	1 Year
Communication		
Communication Interface	Ethernet	
Monitoring	Control Management Unit	Pre-tested & integrated

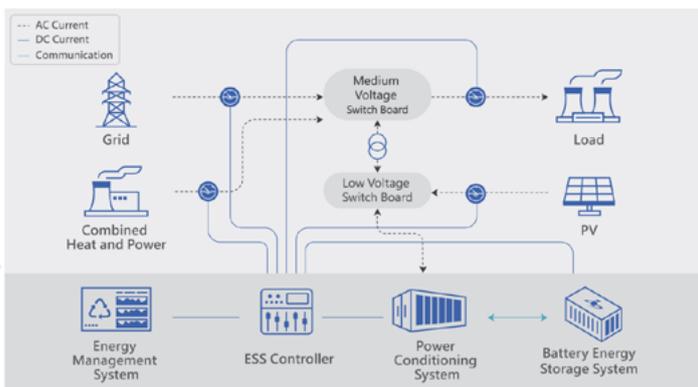
CONTROL MANAGEMENT UNIT SPECIFICATION

ITEM	SPECIFICATION	REMARKS
Electrical		
Operating Voltage	220V	AC
Voltage Sampling	System Voltage Detection Range	0 ~ 1,000V
	System Voltage Detection Accuracy	±5V
	System Voltage Sample Period	≤2s
Mechanical		
Dimension	660 (L) X 765(W) X 279 (H) mm	
Weight	45 KG	



EMS

REAL-TIME REMOTE ENERGY MANAGEMENT SYSTEM



IN COMPLETE CONTROL COMPREHENSIVE MONITORING SYSTEM OF POWER GRID AND ESS OPERATION

EMS displays live status of the on-site ESS working conditions and the power grid.

It allows users to adjust and set the parameters of energy storage system, monitor PCS, HVAC and environmental systems as well as access data analysis and consumption forecasts. In addition, it possess remote stop function for any emergency events.

This cloud-based platform features grid monitoring, switchboards, and electric meters that will provide you with the ability to take total control of energy management, optimize system performance and ultimately achieve energy efficiency.

EASY TO MANAGE

Cloud platform and mobile app for monitoring and operating



OPTIMIZED ENERGY TRADING

Compelling opportunity for energy efficiency and financial gain

INSTANT REMOTE CONTROL

Live report and adjustment of ESS and AFC performance



ENVIRONMENTAL CONTROL SYSTEM

Each containerized energy storage system is equipped with and strictly monitored by a high quality Environmental Control System (ECS) that will ensure the best working condition. ECS is designed to monitor and detect carbon monoxide, carbon dioxide, hydrogen, temperature, humidity, water leaks, and intrusions. Any abnormality would trigger the alarm and send alerts via EMS to the management team.

ITEM	QUANTITY
Liquid Detection Sensor	2
Carbon Monoxide Detector	2
Carbon Dioxide Detector	2
Temperature/Humidity Sensor	2
Hydrogen Gas Detector	2
Door Contact Sensor	8

FIRE PROTECTION SYSTEM

The fire protection system installed in the container can be activated automatically or manually when a fire occurs. Stat-X fire suppressors are then deployed to release aerosol extinguishing agent to rapidly suppress the fire.

ITEM	QUANTITY
Photoelectric Smoke Detector	1
Fixed Temperature Heat Detector	1
Fire Alarm Strobe	2
Manual Activation Switch	1
Emergency Stop Device	1
Auto-manual Switch	1
Stat-X Aerosol 1500E	2
Stat-X Aerosol 2500E	1

ENTERPRISE MONITORING SYSTEM

The cameras are set to monitor activities in the ESS control room, individuals entering and exiting the facility, and the movements outside the container. This will make certain of the operational security and safety onsite.

ITEM	QUANTITY
Bullet Network Camera	4 (2 @ exterior; 2 @ interior)
Embedded PoE NVR	1
Digital Input/Output Expander	1

STAT-X AEROSOL FIRE SUPPRESSOR

YOUR SAFETY IS OUR PRIORITY



TOTAL AEROSOL PROTECTION FOR YOU AND YOUR PROPERTY

NOT ONLY ARE WE PARTICULAR ABOUT PRODUCT QUALITY, WE HAVE YOUR SAFETY IN MIND

Stat-X fire extinguishing generators are integrated with fire alarm systems and are triggered electrically. The extinguishing agent poses no harm to humans, equipment or the environment.

When triggered, the agent remains suspended

for several minutes to prevent reflash. It has proven to be a highly effective fire preventive protection.

We care about providing great products and service, but your safety always comes first.

STAT-X FIRE SUPPRESSION SYSTEM SPECIFICATION

ITEM	SPECIFICATION	
Model	1500E	2500E
Weight	8.6KG	11.3KG
Length	233mm	292mm
Diameter	203mm	203mm
Activation Mechanism	Electric, Thermal	
Current Intensity to Be Tested	Maximum 0.005 amp	
Operation Discharge Time	23s	36s
Discharge Length	488mm	500mm
Fire Class	A, B, C	

Disclaimer



3,220kWh

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This 40ft Energy Storage Battery Container System is complete with 3220kWh lithium-ion battery stacks, EMS control box, power conversion system, environmental control system, Stat-X Aerosol fire suppression system, monitoring system, and lighting.

In addition to providing grid reliability and stability, our Energy Storage System creates optimal commercial and industrial value.

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40FT CONTAINERIZED SYSTEM SPECIFICATION (14PCS STACK)

ITEM		SPECIFICATION	REMARKS
Electrical			
	System	14 Stacks in parallel	3,220 kWh
	Stack	11 Packs + Control Management Unit	230 kWh
Configuration	Pack	3 Modules + Battery Monitoring Unit	21.5 kWh
	Module	8 Cells	7.2 kWh
	Cell	LFP Power Battery	280 Ah
Installed Energy		3,220 kWh	
Usable Energy (@ 90% DoD)		2,898 kWh	@1C discharge
Nominal Voltage		844.8 Vdc	
Operating Voltage Range		739.2 ~ 937.2 Vdc	
Charging	Power	3,311 kW	
	Current	3,920 Ah	@1C
Discharging	Power	3,311 kW	
	Current	3,920 Ah	@1C
Mechanical			
Dimension		12.2(L) X 2.4(W) X 2.9(H) m	
Weight		Approx. 42 ton	±10%
IP Grade		56	
Surface Coating System		Corrosivity Category: C2	
Operating Condition			
Operating Temperature	Charging	0°C ~ 55°C	@0.5C
	Discharging	-20°C ~ 55°C	@0.5C
Environment			
Ambient Temperature		25±2°C	
Storage Humidity		15 ~ 85% RH	
Storage Temperature	1 year	-20°C ~ 45°C	
	1 month	0°C ~ 35°C	
Safety			
Thermal	Container	HVAC	
Fire	Container	Stat-X Aerosol Units	
Protective	Container	Fuse, Switch Disconnecter, Contactor	
	Stack	Fuse, Switch Disconnecter, Contactor	

40FT CONTAINERIZED SYSTEM SPECIFICATION (14PCS STACK)

ITEM	SPECIFICATION	REMARKS
Communication		
Communication Interface	Ethernet	
Monitoring	Battery Management System	Cloud platform & mobile APP
Electrical Performance		
Cycle Life @ 25°C	≥6,000 cycle	@25±2°C, 0.5C/0.5C, 80% DoD
Cycle Life @ 45°C	≥2,500 cycle	@45±2°C, 0.5C/0.5C, 80% DoD
Certification		
Certification	IEC 60730	@ Container Level
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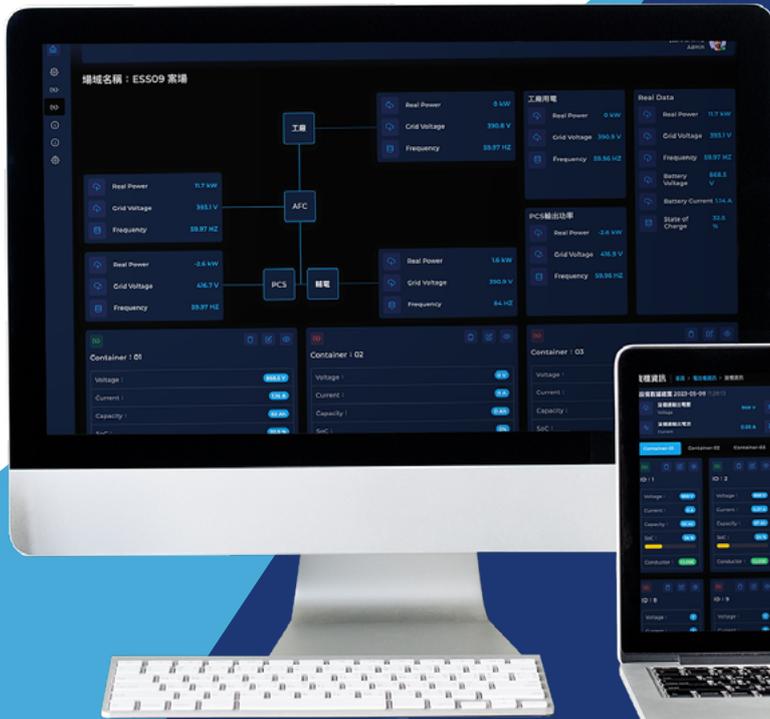
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3. After max. charging or discharging, it is recommended to rest the battery system until the cell temperature returns to 25±2°C.
4. Operating temperature is based on cell temperature.
5. When resting the battery system after an operation longer than 1 month, the user shall ensure that the SOC is between 30% ~ 50%. The ambient temperature is controlled at 0°C ~ 35°C when resting the battery system. During storage, the temperature and SOC conditions should always be adhered to. The battery system should be charged and discharged every 6 months.
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BATTERY STACK SPECIFICATION

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Electrical		
Installed Energy	230 kWh	@1C discharge
Nominal Voltage	844.8 Vdc	
Operating Voltage Range	739.2 ~ 937.2 Vdc	
Charging	Power	237 kW
	Current	280 Ah
Discharging	Power	237 kW
	Current	280 Ah
Mechanical		
Dimension	1,320 (L) X 970 (W) X 1,950 (H) mm	
Weight	Approx. 2.3 ton	
Operating Condition		
Charging	0°C ~ 55°C	@0.5C
Discharging	-20°C ~ 55°C	@0.5C
Environment		
Storage Temperature	0°C ~ 35°C	1 Year
Communication		
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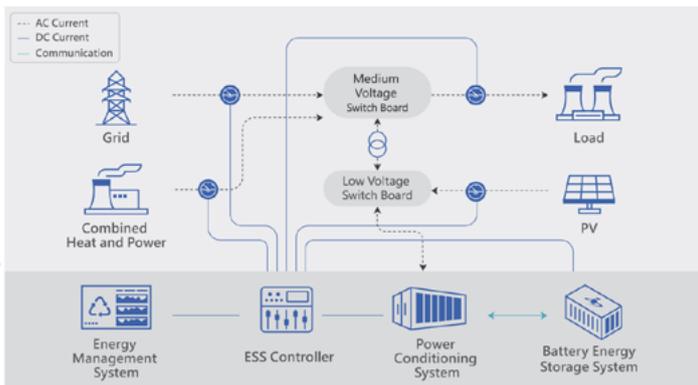
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Door Contact Sensor	8

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Fixed Temperature Heat Detector	2
Fire Alarm Strobe	2
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Emergency Stop Device	1
Auto-manual Switch	1
Stat-X Aerosol 1500E	2
Stat-X Aerosol 2500E	2

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Diameter	203mm	203mm
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Current Intensity to Be Tested	Maximum 0.005 amp	
Operation Discharge Time	23s	36s
Discharge Length	488mm	500mm
Fire Class	A, B, C	

Disclaimer