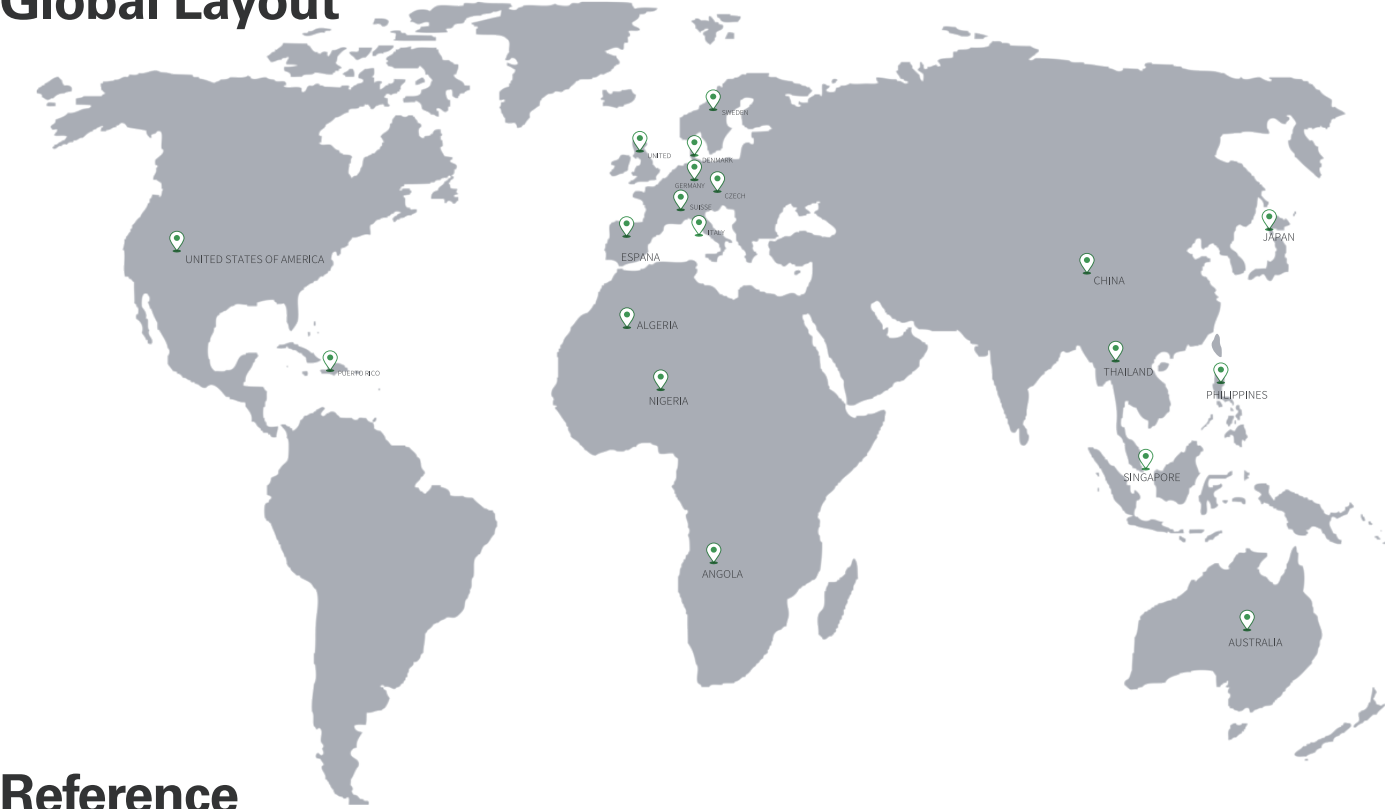


Global Layout



Reference



Switzerland Baden 2MW/2.17MWh Li-ion Battery Energy Storage System



Antarctic Research Station 100kW/160kWh Microgrid Project



Africa 5kW/35kWh Wind/PV/Diesel Energy Storage Microgrid Project



Angola Police Station 1kW/2.4kWh Optical Storage System Project



Angola Backup PV Energy Storage System Project



Africa 2MWh PV Microgrid Project



Hebei Xinhe 120MW Agriculture-Solar Hybrid Power Generation Project



Shanxi 30MW/30MWh optical storage project



National "863 Subject" Campus Smart Microgrid Key Technology Research and Integration Demonstration Project



Key Technology Research and Demonstration Project of Power Distribution System with Multi-user Interaction in Guangzhou Power Supply Bureau Industrial Park



"10MW Lithium Battery Energy Storage System Key Technology and Demonstration" Project of Shanxi Science Institution



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25 years
Focus on new energy industry for 25 years

TOP 10
Top 10 global battery companies

100 countries
1000+ projects in more than 100 countries

40000+
40000+ staff worldwide

Sunwoda Energy Technology Co., Ltd. is a globally leading high-tech enterprise as a subsidiary of Sunwoda Group (SZ300207). With the integration and applied technology of lithium-ion battery energy storage, Sunwoda Energy devotes to portable, residential, commercial and industrial, utility energy storage solutions, network energy, and smart energy.

The company aims to meet the diversified energy needs of customers and provides a variety of comprehensive energy service models including lithium battery energy storage products, multi-scenario integration solutions, and energy investment and operation. In the future, our company will continue to implement the China Double-Carbon Policy and aspire to become an industry-leading energy storage product and system solution service provider.




NoahX


Sunwoda Liquid Cooling Battery Container System


Sunwoda LBCS (liquid-cooling Battery Container System) is a versatile industrial battery system with liquid cooling shipped in a 20-foot container. The standard unit is prefabricated with modular battery cluster, fire suppression system, water chilling unit and local monitoring. LBCS is a ready-to-connect solution for energy storage application such as peak shifting and frequency regulation. Sunwoda battery cluster modular unit consists of standard rack-based battery module (battery pack) and a comprehensive multi-level battery management system (BMS). The team behind LBCS is ready to help you with professional integration support with new or existing solar power, wind power, thermal power and more.





Features


- 

Higher energy density, 20 ft container energy over 2.75MWh.
- 

Innovative liquid cooling technology , battery life extended more than 20%.
- 

Support local / remote monitoring and maintenance through mobile clients(APP).
- 

The total weight of standard 20 ft container is no more than 30,000 kg to ensure smooth shipping.
- 

Extreme safety, five level safety design, dual fire protection, with combustible gas emission and explosion venting design.
- 

Support plug-and-play combination of two containers, flexibly suitable for the application of large energy storage power stations.

Rack level control solution solves the problem of loop current between racks, improves the availability of batteries by 7%, and supports the mixing of old and new batteries and phased deployment, and reduces LCOS by 20% during its lifetime.



Technical parameters NoahX-1500/2752

| Cell | |
|----------------|---------------------------------|
| Chemistry | LFP |
| Specifications | 3.2V/280Ah |
| Rated C-rate | 0.5CP |
| Max C-rate | 1CP |
| Cycle Life | 8000 cycles @25 °C ,0.5CP/0.5CP |
| Calendar Life | 20 years |

| Battery Pack | |
|------------------------|---------------|
| Combination | 1P48S |
| Rated Capacity | 280Ah |
| Rated Voltage | 153.6V |
| Operating Voltage | 134.4 ~172.8V |
| Rated Energy | 43kWh |
| Rated C-rate | 0.5CP |
| Max C-rate | 1CP |
| Temperature Difference | ≤2 °C |

| Battery Rack | |
|-------------------|------------------|
| Rated voltage | 1228.8V |
| Operating Voltage | 1075.2 ~ 1382.4V |
| Rated Energy | 344kWh |
| Rated C-rate | 0.5CP |
| Max C-rate | 1CP |

| Battery Container System | |
|----------------------------------|---|
| Rated Energy | 2752kWh |
| DC Round Trip Efficiency (0.5CP) | > 93% |
| Rated Voltage | 1228.8V |
| Operating Voltage | 1075.2 ~ 1382.4V |
| Rated C-rate | 0.5CP |
| Max. C-rate | 1CP |
| Operating Temperature | -30 °C ~ 55 °C |
| Storage Temperature | -40 °C ~ 60 °C |
| Relative Humidity | 0~100% (no condensation) |
| Altitude | ≤ 3000m (Derating over 3000m) |
| Cooling Mode | Liquid cooling |
| Fire Suppression | Pack level fire protection (Novec 1230) + water fire protection + combustible gas detection+ Exhaust ventilation + Deflagration venting |
| Auxiliary Power Input | 3-phase 400VAC/50Hz, 480VAC/60Hz |
| Battery Management System (BMS) | 3 levels +Passive balance 200mA (Active balance 2A optional) |
| Communication Interface | CAN/RS485/Ethernet |
| Communication Protocol | Modbus-RTU/Modbus-TCP/IEC 61850 |
| Codes &Compliance | NFPA68/69,NFPA855,GB36276,IEC62619,IEC62933,UN38.3 , UN3536,UL1973,UL9540A |
| IP Rating | IP55/NEMA 3R |
| Dimensions (W*D*H,mm) | 6058*2438*2591 (20ft×8ft×8.5ft) |
| Weight | 28,000kg |


NoahX


Liquid cooling solution Outdoor Liquid Cooling Cabinet


Based on intelligent liquid cooling technology, Sunwoda Outdoor Liquid Cooling Cabinet is a compact energy storage system with modular fully integrated. It is designed for easy deployment and configuration to meet various application requirements, including flexible peak shaving, renewable energy integration, frequency/voltage regulation, arbitrage, T&D enhancement, micro-grid function, backup power, etc. To ensure the system run safely, the system adopts LFP (lithium iron phosphate) battery with 4 to 8 battery packs, liquid cooling system, fire suppression system, monitoring system and auxiliary system to provide flexible usage in 500~1500V DC voltage connection. Both IEC and UL standards are applicable to this system. The all-in-one designed outdoor cabinet could be applied in commercial, industrial, and utility scale projects, including centralized or distributed power plants, industrial and commercial parks, intelligent buildings, communities, PV & storage & charging stations, and other scenarios.





Features


- 


Easily configurable and scalable
All-in-one design with liquid cooled battery rack pre-installed and a plug and play interface for auxiliary power supply, communication, and DC connection, which can be installed as a single system or as a system of multiple paralleled cabinets.
- 

High energy density
Modular design with high energy density, compatible with 500V~1500V system. Back-to-back or left and right installation saving a footprint above 50%.
- 

Long service life
Innovation individual rack based liquid cooling technology with cell temperature difference controlled within 2 °C and prolonged life cycle above 20% with minimum service interventions during the life span.
- 

High system safety
High safety LFP battery is selected with UL9540A test. Fire detection and pack level fire suppression system with combustible gas linkage ventilation and explosion panel design on the roof. Multiple electrical protection and highly strength structure design to meet seismic, wind and other load requirement with high protection level and anti-corrosion level.
- 

Less LCOS within life span
Smart battery management system enhancing the cell consistency, supporting mix usage of old battery and new battery and deployment and augmentation in batches. LCOS decreased up to 20% for the entire life.
- 

Smart management
Supports remote and local monitoring and O&M
- 

Shorter deployment time
Fully tested before delivery, easy to transport and less on-site installation.

Technical parameters NoahX-L344

| Cell Parameter | | Module Parameter | |
|--------------------|---------------------------|-----------------------------|---------------------------------------|
| Chemistry | LFP | Configuration | 1P48S |
| Specifications | 3.2V/280Ah | Rated Capacity | 280Ah |
| Rated C-rate | 0.5CP | Rated Voltage | 153.6V |
| Max C-rate | 1CP | Voltage Range | 134.4 ~172.8V |
| Cycle Life | 8000 @25 °C , 0.5CP/0.5CP | Rated Energy | 43kWh |
| Calendar Life | 20 years | Rated C-Rate | 0.5CP |
| Dimensions (W*D*H) | 174.3*71.5*206.8mm | Max. C-Rate | 1CP |
| | | Cooling Method | Liquid cooling (water and glycol mix) |
| | | Cell Temperature Difference | ≤2 °C |
| | | Dimensions (W*D*H) | 1000*862*248mm |
| | | Weight | 315 kg |

| System Parameter | |
|---------------------------|---|
| Rated Energy | 344kWh |
| No. of Modules | 8pcs |
| RTE @DC Side (0.5CP) | >93% |
| Rated Voltage | 1228.8V |
| Voltage Range | 1075.2 ~1382.4V |
| Rated C-rate | 0.5CP |
| Max. C-rate | 1CP |
| Working Temperature | -30 °C ~ 55 °C |
| Storage Temperature | -40 °C ~ 60 °C |
| Working Relative Humidity | 0 ~ 100% (no condensation) |
| Altitude | ≤3000m (derating above 3000m) |
| Cooling Method | Liquid cooling (water and glycol mix) |
| Fire Suppression System | Pack level clean gas agent fire suppression+combustible gas detection and ventilation linkage+deflagration relief panel |
| Auxiliary Power Supply | 220VAC/50Hz ;110VAC/60Hz |
| Communication Interface | CAN/RS485/Ethernet |
| Communication Protocol | Modbus/IEC 61850 |
| Standard @ Compliance | NFPA68/69,NFPA855,GB36276,IEC62619, IEC62933,UN38.3,UN3536,UL1973,UL9540A |
| Protection Rating | IP55 |
| Dimensions (W*D*H) | 1550*1100*2500mm |
| Weight | 3330kg |