

Industrial and Commercial Energy Storage System



Product Overview

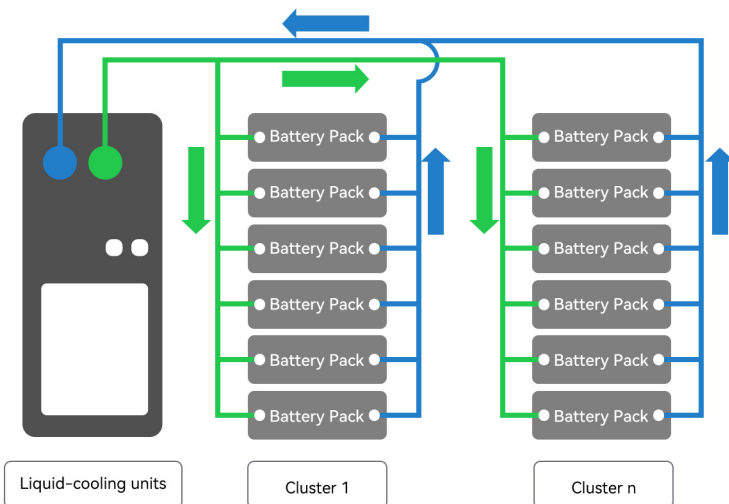
From standardized battery boxes to configurable modular energy storage systems, achieving a dual-platforms and multi-series product system, to meet the whole scenario energy storage application on the user side, grid side, and power generation side for commerce and industry.

Product Features

- High Security:** Three-dimensional security system, aviation-level extreme security
- Ultra-high Yield:** 3-5 years payback
- Long Life:** 15 years super long life
- Intelligent and Friendly:** Independent control of the cloud platform, simplified operation and maintenance
- Super High Efficiency:** Charge and discharge efficiency 92.5%, discharge depth 100%
- Strong and Durable:** 10,000 cycles
- Super Low Cost:** LCOS is reduced by 40%, and operation and maintenance costs are extremely low

Core Advantages

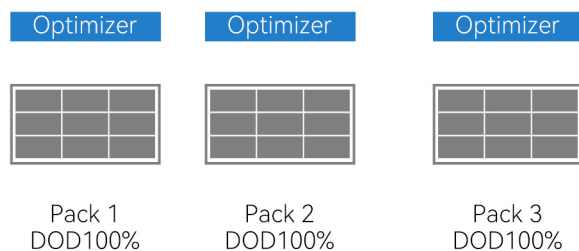
Liquid cooling temperature control system



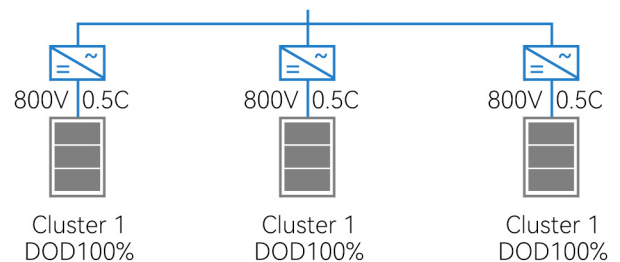
- Area energy density ↑ **50%**
- Thermal management efficiency ↑ **30%**
- Depth of discharge ↑ **10%**
- Charge and discharge efficiency ↑ **3%**
- Cycle life ↑ **11%**

Compared with traditional air cooling, the intelligent liquid cooling temperature control can avoid the "barrel effect" and improve the system performance. The smaller the temperature difference between the cells in the cluster, the better the consistency of the cell performance.

Intelligent string architecture



One Optimizer to One battery, battery packs integrated optimizers. Eliminate series mismatches, and all packs reach 100% DOD, increasing usable capacity.



One PCS to One battery cluster, and the battery cluster is connected in series and parallel with the PCS respectively. Reduce the imbalance between clusters, and the total battery cluster reaches 100% DOD, improving usability.



Battery Pack CNESS-K43



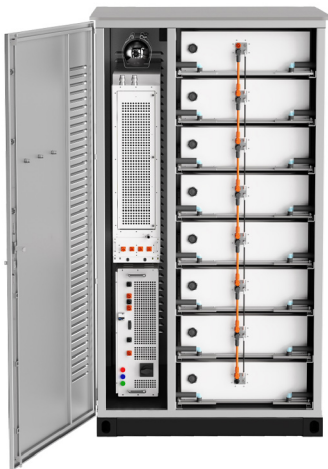
Battery Pack CNESS-K47

- Aluminum alloy die-casting box for vehicle, reliable strength
- Vehicle CTP design, highly integrated, high energy density
- Full-time balance and good consistency
- Standard fast plug design, flexible configuration

Product model	CNESS-K43	CNESS-K47
Cell type	LFP cell special for energy storage	
Group mode	IP48S	IP52S
Nominal energy	154	166
Working voltage	120~175	130~190
Rated energy(kWh)	43.0	46.6
Rated charge/ discharge ratio	0.5P	
Working temperature(°C)	-30~55	
Protection grade	IP67	
Cooling mode	Liquid cooling	
Size(mm)	766*1050*254	766*1125*254
Weight(kg)	310	335



CNESS CUBE Mini
ESS1-100/215-0.4-L
(1000V platform outdoor cabinet)



CNESS CUBE Mini
ESS1-187/372-0.7-L
(1500V platform outdoor cabinet)

Product model	ESS1-100/215-0.4-L	ESS1-187/372-0.7-L
DC side parameters		
Cell type	LFP cell special for energy storage	
Group mode	IP240S	IP416S
Nominal energy	215kWh	372kWh
Working voltage	600V~876V	1040V~1518V
Rated charge/ discharge ratio	0.5P	
AC side parameters		
AC rated power	100kW	187kW
AC maximum power	120kW	224kW
Rated grid voltage	380V	690V
Rated grid frequency	50HZ	50HZ
System parameters		
System efficiency	≥92.0%	≥92.5%
Discharge depth	100%	
Number of cycles	≥10000	
Protection grade	IP54 (PACK IP67)	
Operating temperature	-30°C~55°C	
Cooling mode	Liquid cooling	
Fire protection system	Perfluoro+ Active early warning	
Size	900*1300*2200(mm)	1300*1300*2400(mm)
Weight	2000kg	3200kg



DC side prefabricated cabin

AC side prefabricated cabin

Product Name	CNESS CUBE Mega 1000V platform (Energy configurable 0.4~2MWh)	CNESS CUBE Mega 1500V platform (Energy configurable 0.7~4MWh)
Model	ESS1-500/1075-0.4-L (DC plus AC)	ESS1-935/1860-0.7-L (DC plus AC)
DC side parameters		
Cell type	LFP cell special for energy storage	
Group mode	5*IP240S	IP416S*5
Nominal energy	1075kWh	1860kWh
Working voltage	600V~876V	1040V~1518V
Rated charge/discharge ratio	0.5P	
AC side parameters		
AC rated power	500kW	935kW
Rated grid voltage	380V	690V
Rated grid frequency	50HZ	
System parameters		
System efficiency	≥92.0%	≥92.5%
Discharge depth	100%	
Number of cycles	≥10000	
Operating temperature	-30°C~55°C	
Cooling mode	Liquid cooling	
Fire protection system	Perfluoro+ Active early warning	
Size	DC side: 6058*1300*2000(mm) AC side: 1300*1300*2200(mm)	DC side: 6058*1300*2896(mm) AC side: 1300*1300*2400(mm)
Weight	11500kg	16500kg