

EnerArk2.0 Series

30~100kW/125~215kWh

PCS + Battery Cabinet



Integrated Plug-and-Play Battery Energy Storage System

EnerArk-2.0 is a compact and Plug-and-Play battery energy storage system with easy to be transported, installed and maintained. It is an All-in-One system comprises of PCS, batteries, BMS, EMS, MPPT, automatic fire control system and temperature control system.

High-performance EV grade LiFePo4 batteries ensures high safety and reliability with four layers of safety protection with intelligent BMS design. The synergy of the system components and unique design enable to achieve effective charging and discharging for various applications with high energy density and maximized battery life time to provide the lower LCOS. It supports AC Coupling and DC coupling applications with its ease in integration and suitable for all ranges of C&I energy storage projects.



CE (IEC 61000, IEC62619, IEC62477),
UL, G99, CEI 0-21, CEI 0-16, UN3480, UN38.3.



5 layers Safety Design
Much safer & More reliable



Response <100ms
Applied for grid auxiliar service



Multi Energy Accessing
Solar, diesel generator, wind turbine, etc



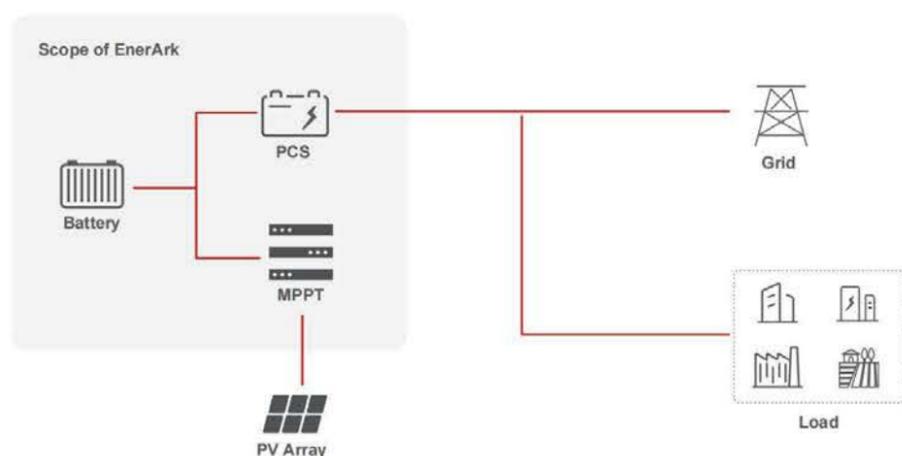
More Availability
Modular design + O&M cloud platform

- Plug-and-Play for ready to use
- All-in-One integrated modular design
- Parallel operation of multiple cabinets
- Global installation and application
- Supporting DC coupling with solar
- CE certificates for the whole system



System Structure

EnerArk-2.0 adopts an integrated design, consolidating all key components into a compact and seamless system. At the core of the system lies the Power Conversion System (PCS), responsible for efficiently managing energy conversion between the battery and external sources. The system also includes high-performance LiFePo4 batteries, meticulously designed Battery Management System (BMS), Energy Management System (EMS), Maximum Power Point Tracking (MPPT) technology, as well as automatic fire control and temperature control systems.



Factory, Office Park, Hotel, Farm

TOM arbitrage, peak power shaving

EV Charging Station

Power extension, solar benefit maximization

Microgrid

Multi-energy integration with solar, generator, wind turbine, etc.

Distribution Network Operator (DNO)

Auxiliary grid service, VPP

Battery Parameters	EnerArk2.0-NBN-P30	EnerArk2.0-NBN-P50	EnerArk2.0-NBN-P100
Cell type & capacity	LFP-280Ah		
Battery module type	IP20S		
System capacity range (kWh)	125 ~ 215	125 ~ 215	215

AC Side On-grid Parameters

Grid type	3P4W		
Charging / discharging power (kW)	30	50	100
Rated grid voltage	AC 400V±15%		
Frequency range (Hz)	50(±5)		
Rated AC output current (A)	43	72	144
Power factor	0.8 (Leading) ~ 0.8 (Lagging)		
Harmonics	≤3% (at rated power)		

AC Side Off-grid Parameters

Load type	3P4W		
Rated output power (kW)	30	50	100
Rated output voltage	AC 400V±1%		
Rated output frequency (Hz)	50		
Frequency accuracy (Hz)	43	0.2	144
Rated current (A)	72		

General Parameters

Dimensions (mm) (W*H*D)	1686*2093*1354		
Max. weight (kg)	2500		
Ingress protection	IP55 (Battery Cabinet) IP54 (Electrical Cabinet)		
Cooling method	HVAC (Battery compartment) & Forced air cooling (Electrical compartment)		
Fire fighting system	Combustible gas detection + Novec1230 + water fire suppression		
Anti-corrosion grade	C3		
Relative humidity	0-95% (non-condensing)		
Operating temperature (°C)*	-20~50		
Operating altitude (m)**	< 2000		
Noise emission (dB)	≤75		
Communication interface & protocol	Rs485, Ethernet; Modbus RTU, Modbus TCP/IP		
Display	HMI		
Warranty	5 years, (can be extended to 10 years)		

PV Side Parameters (Optional)

Max. PV input power (kW)	30/36	30/36/90/100	30/36/90/100
MPPT voltage range (V)	200~850	200~850	200~850
Number of MPPT	1/1	1/1/2/2	1/1/2/2
Number of PV inputs	1/1	1/1/2/2	1/1/2/2
Max. input current (A)	100/200	100/200/300/400	100/200/300/400

Certifications	System: CE(IEC61000, IEC62477), IEC62619, UN3480, CEI021 (on going), CEI016 (on going), VDE2510 (on going)		
	Converter: G99, VDE4105, EN50549, AS/NZS 4777, CE(IEC61000, IEC62477), IEC62109, NC RfG, NRS097, VDE4110 (on going)		
	Cell: IEC62619, UL1973, UL1642, UL9540A		

* The system will be derated when the ambient temperature exceeds 45°C.
 ** The system will be derated when the altitude is between 2000 and 3000m.