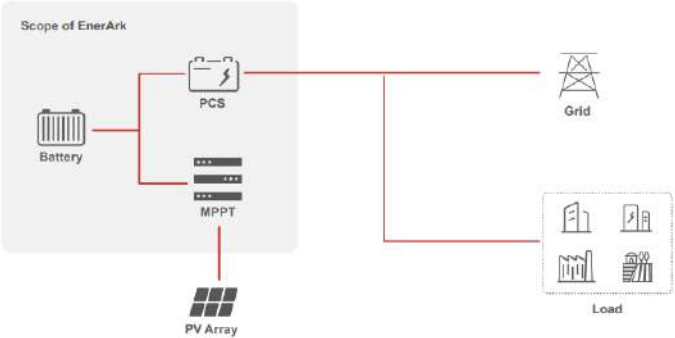


System Structure

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

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

EV Charging Station
Power extension, solar benefit maximization

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 (℃)*	-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 gong), CEI016(on gong), VDE2510(on gong)		
	Converter: G99, VDE4105, EN50549, AS/NZS 4777, CE(IEC61000, IEC62477), IEC62109, NC RfG, NRS097, VDE4110(on gong)		
	Cell: IEC62619, UL1973, UL1642, UL9540A		

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