500kW/1MWh All-in-one On/off-grid Energy Storage System

HEA-500-1044-10FT

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Engineered for commercial and industrial energy demands, the HEA-1044-10FT is a fully integrated 10-ft containerized energy storage system featuring a 400V rated AC output.Integrated static transfer switch (STS) hardware empowers the unit with outstanding off-grid load bearing performance, alongside glitch-free transition between grid-connected and off-grid modes in under 20ms.Specialized connection ports for diesel generators and photovoltaic inverters are pre-installed to realize coordinated power supply from multiple energy sources.Thanks to its versatile modular design, the system can be flexibly configured to match different operating environments and unique project specifications.

Plug&Play Design

- **10-ft Container** Saves installation space
- **Integrated System** Higher capacity with compact footprint
- **Higher Capacity** Delivers more energy in a smaller footprint

Flexible Switching

- **Built-in STS** Enables seamless power transfer
- **20ms Switching** Fast transition between power modes
- **Reliable Backup** Keeps critical loads running

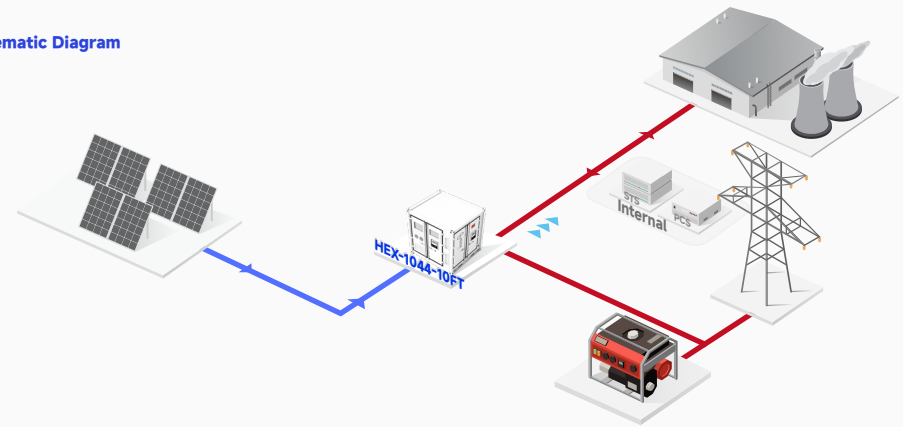
String-Based Architecture

- **Independent Management** Separate management for every battery string
- **Higher Reliability** Reduces fault propagation
- **Better Stability** Ensures smooth system performance

Multiple Power Sources

- **PV Compatible** Works with solar systems
- **Generator Ready** Supports diesel generator integration
- **Flexible Deployment** Adapts to various applications

System Schematic Diagram



Model	HEA-500-1044-10FT
Battery Side	
Cell Type	LFP / 314 Ah
Pack Configuration	52.2 kWh / 1P52S
System Configuration	1044 kWh / 4P260S
Rated DC Voltage	832 V
DC Voltage Range	728 ~ 936 V
Max. Charge/Discharge Rate	0.5 P
Max. Depth Of Discharge	100% (25 ± 2 °C)
Grid Side	
Rated Output Power	500 kW
Max. Apparent Power	550 kVA
Rated AC Voltage	400 V
AC Voltage Range	±15%
Grid Type	3W+N+PE
Rated Frequency	50 Hz / 60 Hz
On/O-Grid Switching Time	<20 ms
Power Factor	0.99/ -1 ~ +1
THDi	⩽3%
DC Ratio	< 0.5% Ipn
Backup Side	
Max. PV Inverter Input Current	800 A
Max. Diesel Generator Input Current	800 A
Max. Backup Load Port Current	800 A
Recommended Max. Backup Load Power*	350 kW (70% of Rated Output Power)
General	
Cycle Life	⩾ 8,000 cycles
Communication	Modbus TCP/IP
Fire Suppression System	Aerosol system(pack level and container level), water spray system
IP Rating	IP54
Cooling Method	Liquid cooling+Forced air cooling
Operating Temperature	-25°C~55°C(Derating after 45°C)
Anticorrosion Rating	C4 (C5 optional)
Humidity	5~95% RH (non-condensing)
Noise	⩽ 80 dB
Altitude	3000m (Derating above 2000m)
Dimensions (W×D×H)	2991×2438×2591 mm
Weight	14 t
Certification	UN38 .3, IEC62477-1, CE/EMC, IEC62619, IEC63056, UL9540A, EN50549

*Note: The value indicated herein is a recommended reference based on PF=0.7. When the load involves motors or other types of impact loads, it is recommended to equip the system with a soft starter. Please contact Hexon Energy for further technical support prior to order placement.

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