

# MEGAWATT ENERGY STORAGE SYSTEM

Haidi's megawatt scale containerized energy storage systems for grids and renewable energy sources provide invaluable flexibility. The containerized energy storage system smooths the intermittent generation and ramp rates inherent in renewable power sources, making it ideal for medium to large-scale, on-grid solar and wind power schemes. Haidi energy storage system is also used in medium and low voltage grids to provide grid support functions such as peak management or voltage support.



## Features

Peak load shifting, remote dispatching, demand control, mini grid management

### Safety

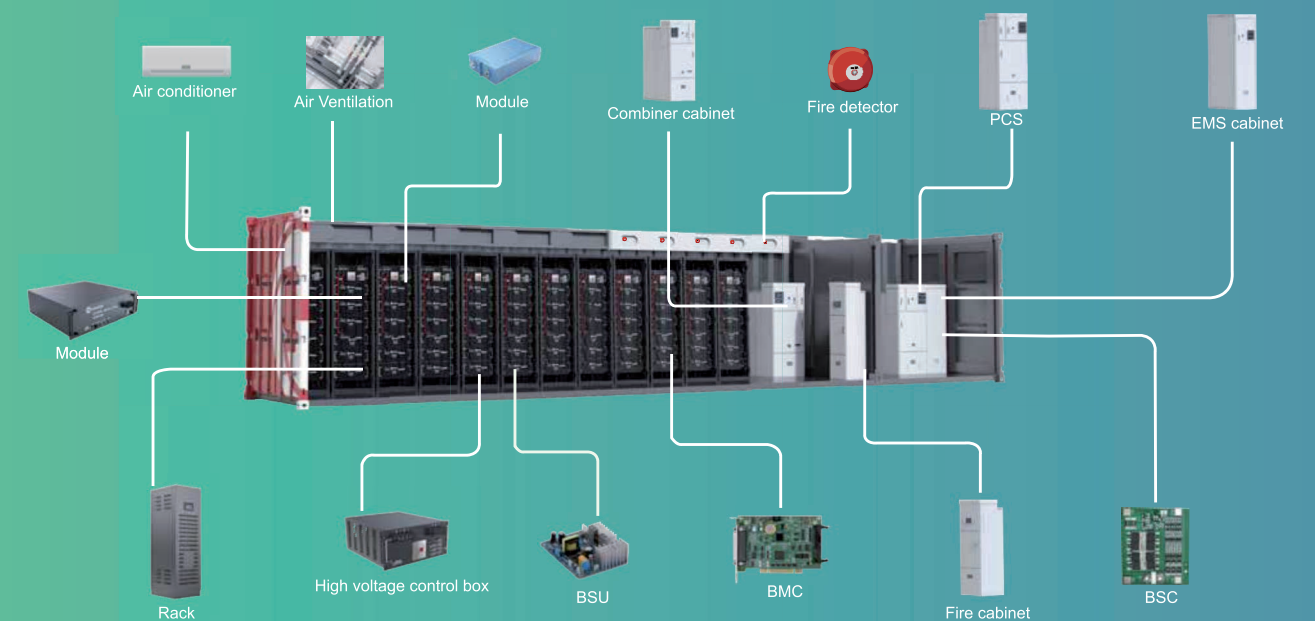
1. Battery centered design;
2. Three-dimensional protection;
3. Haidi Lithium technology

### Stability

1. SoC precision <math>< 2\%</math>;
2. Multiple network structure;
3. Life long period fault and data recording;

### High efficiency

1. Battery usable capacity increased by 5%;
2. System efficiency optimization > 1%;
3. Standby consumption decreased over 2.5%;
4. On-site test and commission reduced by 70%;





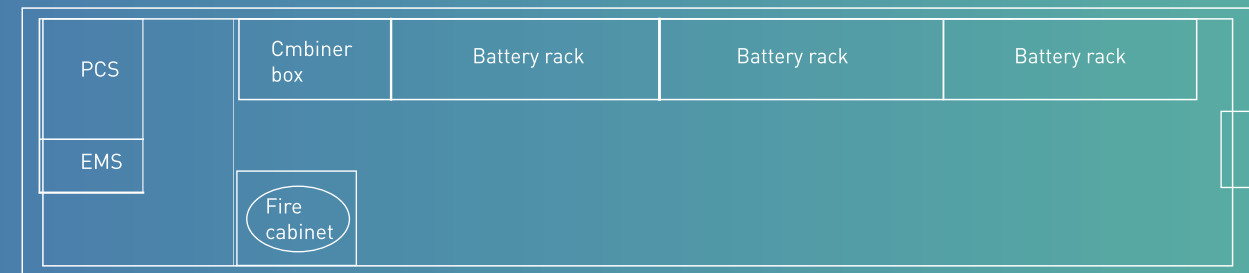
# ENERGY STORAGE SYSTEM MODULE DESIGN

- ★ Easy capacity expansion
- ★ Quick and easy installation
- ★ Adaptation of the energy storage to an increased capacity demand

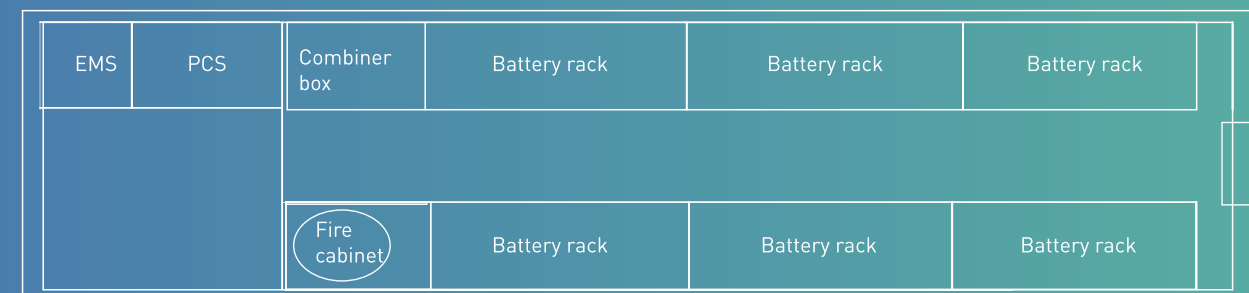
Part Number				
Battery Type	LiFeP04			
Model No	ESS-4850	ESS-4860	ESS-48100	ESS-48150
Battery Pack	48V50AH	48V60AH	48V100AH	48V150AH
Approx Weight	22kgs	26kgs	42kgs	62kgs
Dimensions	480*400*133mm	480*460*133mm	480*460*133mm	480*460*133mm
Water Dust Resistance	IP20			
Energy Capacity	2.4KWh	2.8KWh	4.8KWh	7.2KWh
Usable Capacity	2.4KWh	2.8KWh	4.8KWh	7.2KWh
Cycle Life	≥4000 cycles @100% DOD, ≥6000 cycles @80% DOD, ≥10000 cycles @50% DOD			
Internal Resistance	≤50 mΩ			
Designed Lifespan	≥20 Years, 25 C			
Nominal Voltage	48V			
Rated Capacity	50Ah	60Ah	100Ah	150Ah
Discharge Current	50Ah	60Ah	50Ah	50Ah
Charge Current	≤25A	≤30A	≤50A	≤75A
Discharge Cut-off Volt	37.5V [Can be set]			
Charge Voltage	54V [Can be set]			
Charge Mode	CC/CV			
Working Temperature	-40°C~+ 65°C			
Humidity	5% ≤ RH ≤ 95%			
Communication	RS232 / RS485 / CAN / Ethernet			
Certification	UL1642, TUV, IEC62133 & UN38.3			



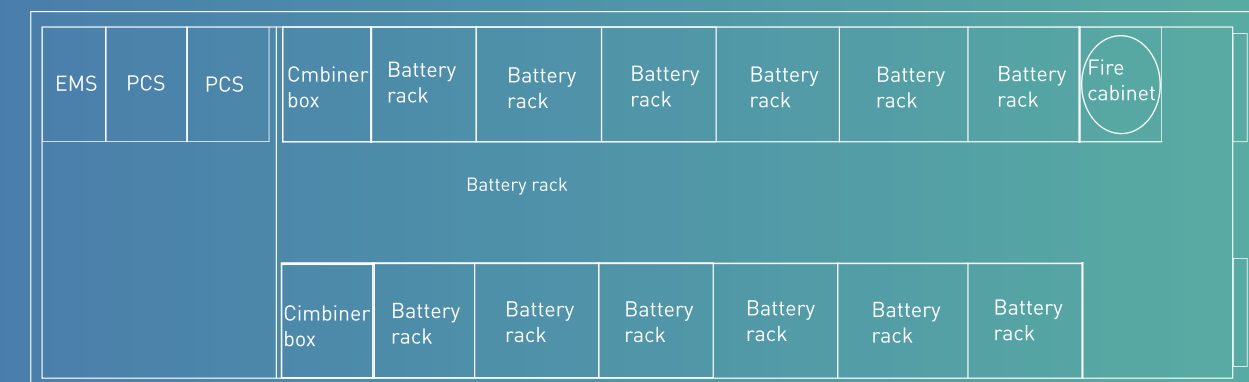
PERFORMANCE		
Nominal capacity	770kWh	2000kWh
Rated ratio(C)	0.5C	0.5C
AC output voltage	400Vac	400Vac
AC output frequency	50/60Hz	50/60Hz
Rated power	500kW	500kW
Work mode	On grid & off grid	On grid & off grid
Cycles	≥ 5000 times	≥ 5000 times
Ambient temperature	-40°C~+50°C	-40°C~+50°C
Battery work temperature	15°C~+35°C	15°C~+35°C
Altitude	<3000m	<3000m
Container	20 feet	40 feet
Fire protection grade	IP65	IP65



500KW/770KWh Container ESS Layout



1000KW/1800KWh Container ESS Layout



500KW/2000KWh Container ESS Layout