HAiKAi

Xiamen HAIKAI New Technology Co., Ltd.

Energy Storage System for **EV-Charging Station**

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About HAIKAI

We are a specialist manufacturer of energy storage systems and backup power solutions for industrial (behind-the-meter), commercial, and residential scenarios. We are capable of design and manufacturing BMS, Pack, integrated energy storage solutions, and customized production.

Based in China, we have more than 10 years of experience in the back-up power industry. With strong R&D, reliable quality, and effective supply chain management, we excel at tackling complex technology challenges and delivering high-quality solutions at scale to help our customers realize greater value.

HAIKAI's OEM and ODM Specialties

- Battery Management System (BMS)
- Customized Battery Pack
- Industrial Energy Storage System (ESS for UPS, DC cabinet, standalone customized systems)
- Energy Storage System for EV Charging Station
- Residential and Commercial Energy Storage System

Our Strengths

HAIKAI has been awarded over 20 patents for our innovation, utility models, software, and more. Our cutting-edge R&D team is led by Ph. D. researchers and globally educated experts from world-class institutions to provide the most professional support for your projects. We have complete equipment such as automatic vision positioning laser welding, programmable temperature & humidity test chamber to support PACK production, cabinet assembly, and comprehensive machine testing. Our manufacturing line follows the standard of ISO 9001 and Six Sigma under fully implemented ERP and MES process control.

We follow rigorous and standardized production management to guarantee the best lead time and product quality, from order generation, production to delivery. We also accept customization to provide flexibility for your projects. Having partnered with multiple well-known companies, we source the most suitable and trusted materials for your projects at the best cost.

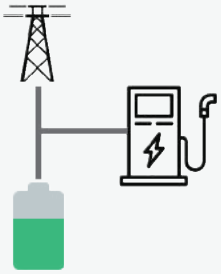
Energy Storage System: **The Perfect Solution for EV-Charging Stations**

As Electric Vehicles advance to accept higher power charging rates to speed up charging, Energy Storage System will play a vital role in significantly reducing costs from demand charge and from needing to maintain the grid. Energy Storage System is the upgrade that every charging station needs that will benefit not only the car owners and station owners, but the community as a whole.

More than 70% of the cost can be saved
Reduce Charging time by 94%*

Enables Rapid Charging (200 kW)

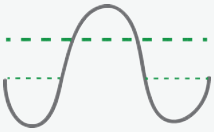
HAKAI's customized battery pack (up to 200 kW continuous discharge rate) can retrofit your current regular charger to enable rapid charging capabilities. Our battery can fully charge a Tesla Model S in 20 minutes compared to 8 hours by a level 2 charger.



Lowers Demand Charge for the Station

If a car charges at a rate of 150 kW for 15 minutes, the peak energy usage is 150 kW. However, if another car arrives to charge during that 15 minutes, the peak energy usage will be 300 kW. This scenario would double the demand charge.

Energy Storage Systems can help stations to balance this load and significantly reduce demand charge which helps cut the costs of a charging station by 70% according to studies. This allows stations to break even much faster.

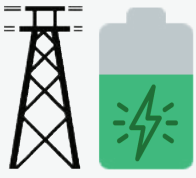


Enables Peak Shaving

During peak hours, cars can be charged from battery storage instead of from the grid. The battery can then be re-charged during off-peak hours. This allows the station to pay lower fees during peak hours and save costs.

Opens Ways for Greener Solutions

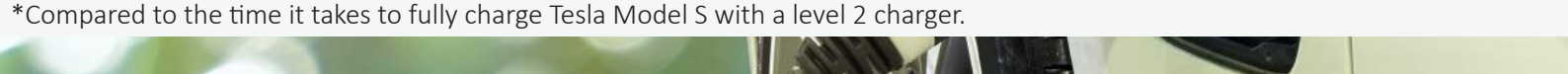
Having an energy storage system means that it can be connected to renewable energy sources such as solar panels. Energy from solar panels can be stored inside the storage system's batteries and used to charge cars when needed. Furthermore, this lowers the cost by using self-generated electricity.



Improves Stability

As station sizes and power rating increase, the distribution grid will need to upgrade to continue providing sufficient power. An energy storage system can take on a vital role by balancing the load and thus mitigate the need for large investments to upgrade the distribution grid.

*Compared to the time it takes to fully charge Tesla Model S with a level 2 charger.



HAIKAI Energy Storage System for EV Charger

HAIKAI allows flexible production and customization. Our Energy Storage System for EV Charger is equipped with our own patented BMS system which can be modified according to the client's request. Furthermore, we use high-quality cells such as CATL, BYD Blade Battery, and other customized high power (up to 8C discharge rate) battery cells.

Solutions:

1. We provide a turnkey energy storage system to upgrade the existing charging station and help lower costs.
2. We can OEM packs and integrate them into your EV charger unit to create an all-in-one charger with a built-in battery system.

Single Cabinet

Complete Set

Specifications

Rated voltage		665.6V
Discharge rate		Up to 8C
Configuration capacity		200Ah(100Ah 2 Parallel)
Power allocation		133.12kWh
Connection form		208S2P
Operating voltage range		582.4V - 728V
Rated discharge current		200A
Maximum allowable discharge current		400A
Rated discharge power		133kW
Maximum allowable discharge power		266kW
Rated charging current		20A
Maximum allowable charging current		50A
Discharge working temperature		-20℃ ~60℃
Charging temperature		0℃ ~ 60℃
Charge discharge cycles		0.5/0.5C ≥ 3500 cycles
Number of cabinets		1 cabinet
Size		Single cabinet (W*D*H)： 486mm x 810mm x 2010mm Complete set (W*D*H)： 600mm x 1060mm x 2300mm
(Without waterproof cover)		Single cabinet: 798kg, complete set: 798kg
Module Parameters	Total number of modules	13PCS
	Nominal voltage	51.2V
	Voltage range	44.8V - 56V
	Module Capacity	200Ah
	Temperature range	-20℃ ~ 150℃
	Cooling mode	Forced air cooling
SOC operating range		5% ~ 100%
SOC estimation accuracy		Less than 5%
Working environment temperature of battery pack		Charging: 0℃ ~ +55℃ Discharging: -20℃ ~ +55℃
Recommended operating temperature		10℃ ~ 45℃
Communication interface		RS485， Dry contact (optional CAN)

*** For Rapid-Charging option, please contact our sales.**

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