

Energy Storage System Renewable Energy Integration

More convenient modular design, assembly and disassembly, subject to the upgrading and expansion

Long-life design, EVE storage battery life of more than 8 years

Redundant design to adapt to a variety of complex application environments

Interactive design, easier maintenance

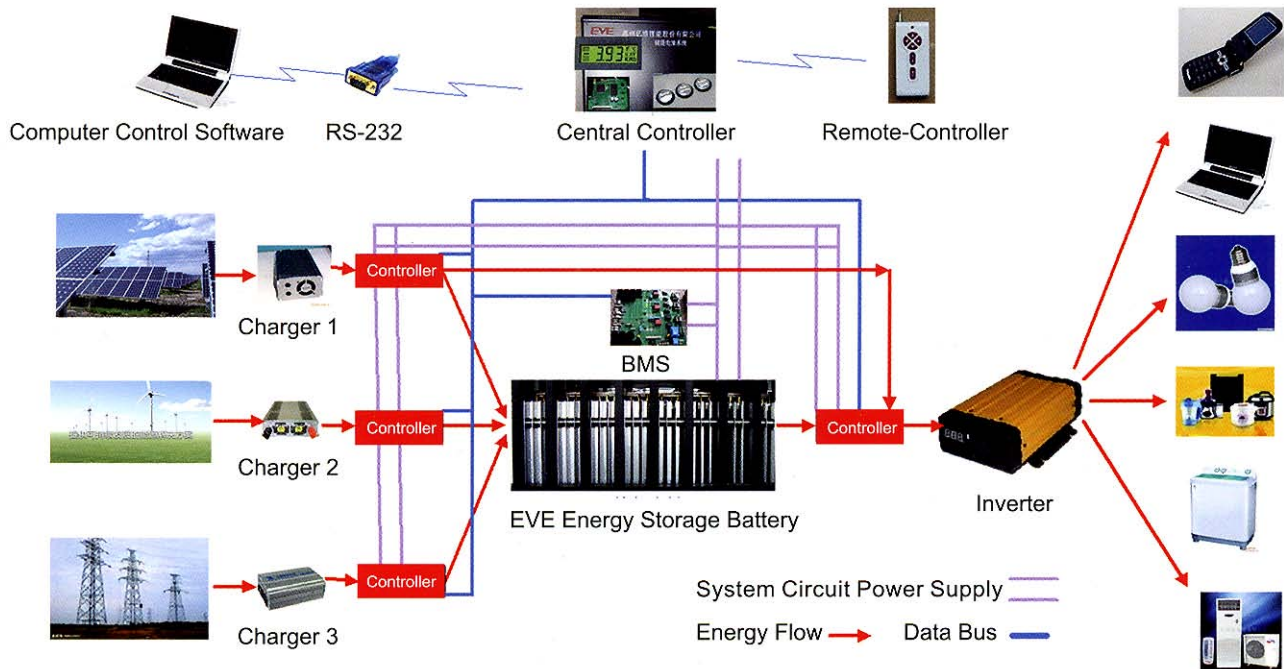
Intelligent design, PC computer software monitoring

A key to start, automatic



From Smart Homes to Smart Grids, Reliable Energy Storage is Vital

With the emergence of wind power, solar power and the other new energy sources, and development of intelligent grid technology as well, large-scale energy storage station is come into being to meet peak power allocation. EVE is developing the environmental-protection lithium-ion energy storage battery with the lightest, fast charge and discharge, and cycle life of over 15,000 times to meet the future demand of energy storage stations and new energy vehicle charging stations. EVE strives to become an advanced enterprise in the field of energy storage battery industry before 2015.



Main Function

New energy generation directly to the household power supply, excess electricity can be stored by the battery.

There are a Number of Ways that EVE Lithium-ion Energy Storage Systems can Facilitate the Increasing Penetration of Renewable Energy into Power Grids:

Support for Large Renewable Generation Plants

Improving the network compatibility of large solar or wind power plant:

- smoothing of intermittent generation and reducing ramp rates
- capacity firming to maintain production within a predictable window
- local dynamic voltage support

Constraint Relief in Distribution Grids

Energy storage can play a key role in highly stressed sections of the grid operating close to their maximum load:

- defer or even eliminate the need for major investments in network infrastructure to handle demand peaks
- dynamic voltage support for the integration of decentralized generation
- optimize power flows within smart grids

Stabilization of Transmission Grids

Grid stability is a growing issue due to the increased penetration of intermittent and unpredictable renewable energy sources.

Provides vital ancillary services:

- instantly available synchronized reserves with no fuel consumption
- frequency and area regulation

Local Energy Management

For distributed installations, such as in residential, CES (Community Energy Storage) and commercial or small industrial systems:

- effective time-shifting. Shifting energy from low-value to high-value periods provides renewable generators with better return on investment
- de-linking supply from demand
- peak demand reduction
- improved power quality and reliability

From Kilowatts to Megawatts

EVE has developed a range of battery systems to meet energy on-grid energy storage need—from local energy management in individual homes to grid stabilization in electricity transmission and distribution networks.

Based on our proven expertise and experience in rechargeable battery technology—including over 10 years in the manufacture of large format Li-ion battery systems—we have developed energy storage solutions to meet power and energy needs measured in everything from kilowatts to megawatts. We have solutions for every part of the electricity value chain: from generation, through transmission and distribution, to the consumers.



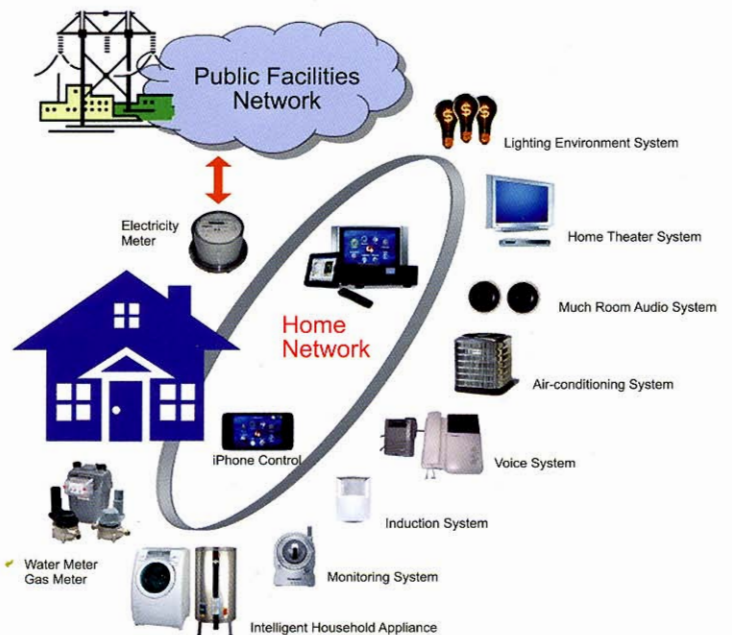
Why Choose Li-ion for Energy Storage

Li-ion battery technology offers many valuable features for energy storage systems:

- High energy density [135Wh/L]
- Very short response time, limited only by power electronics
- Excellent cycling capability
- High round-trip efficiency [better than 95%]
- High charge retention
- Long life [20 years with daily cycles at 60% depth of discharge]
- Maintenance-free and self-diagnostic
- EVE Li-ion technology also has a significantly lower environmental footprint than other technologies, thanks to its high recycling rate.

Local Energy Management Efficient Time-Shifting for Homes and Businesses

- Maximize local consumption of PV production
- Time-shift availability of PV energy to when it is most valuable
- Power critical loads even when the grid is down
- Possibility for peak demand reduction
- Highly modular storage kits fit multiple user configurations



System Integration

EVE is integrating its Li-ion cells and modules into complete energy storage battery systems, optimized for each given application need.

Such systems comprise energy storage, management and safety functions, and are delivered in comprehensive packages ranging from modules to complete containers.

EVE can also provide complete integrated systems with power conversion required.

EVE Energy Storage System							
Moble		CNXT-1000-A1	CNXT-2000-A1	CNXT-6000-A	CNXT-6000-B	CNXT-10000-B	Remark
Battery	Capacity(Wh)	1000	2500	6000	6000	10000	
	Chemical Systems	LiFePO ₄	LiFePO ₄	LiFePO ₄	LiFePO ₄	LiFePO ₄	
	Life	≥8year	≥8year	≥8year	≥8year	≥8year	
Import	Mains voltage (V)	110V/60HZ	110V/60HZ	110V/60HZ	230V/50HZ	230V/50HZ	
	The solar power generation module voltage (V)	DC72V	DC72V	DC144V	DC144V	DC288V	Optional
	Wind turbine components voltage (V)	110V/60HZ	110V/60HZ	110V/60HZ	230V/50HZ	230V/50HZ	Optional
	Rated power (W)	350	350	750	750	1250	
	Rated charging time (h)	3	7.2	8	8	8	
Export	Rated voltage (V)	110V/60HZ	110V/60HZ	110V/60HZ	230V/50HZ	230V/50HZ	
	Rated power (W)	400	1000	1500	1500	2500	
	Rated discharge time (h)	2.5	2	4	4	4	
Power Supply	Operating voltage (V)	24/12/5/3.3	24/12/5/3.3	24/12/5/3.3	24/12/5/3.3	24/12/5/3.3	
	Maximum power consumption (mA)	200	220	280	280	390	
	Maximum standby power consumption (mA)	5	6	10	10	14	
Function	Automatically select the input source	V	V	V	V	V	
	Priority output of green energy (battery, solar, grid Valley Electric)	V	V	V	V	V	
	Automatic battery charge and discharge	CC-CV	CC-CV	CC-CV	CC-CV	CC-CV	
	Connect the PC,	RS-232	RS-232	RS-232	RS-232	Ethernet	Optional
	LCD parameter display			V	V	V	
	LED status indication	V	V	V	V	V	
	Abnormal sound and light alarm	V	V	V	V	V	
Protection	Battery over-voltage protection	V	V	V	V	V	
	Battery overcurrent protection	V	V	V	V	V	
	Battery over-discharge protection	V	V	V	V	V	
	Battery over-temperature protection	V	V	V	V	V	
	Battery short-circuit protection	V	V	V	V	V	
	Shape	Box-type	Box-type	Cabinet-type	Cabinet-type	Cabinet-type	
Exterior	Length (mm)	685	710	600	600	800	
	Width (mm)	225	250	450	450	500	
	Height (mm)	316	546	900	900	1100	
Weight	Machine weight (KG)	≤16	≤30	≤90	≤90	≤170	

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