DONGGUAN HEADQUARTER | WUHAN MARKETING CENTER | NANJING R&D CENTER
SHENZHEN | SOUTH AFRICA | GERMANY | UNITED STATES | HUNGARY

Lithium Valley technology

宗申动力 ZONSEN POWER

Stock code:(001696.SZ)

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One-stop Energy Storage System Integration Supplier

Dongguan Lithium Valley Energy Co.,Ltd.

Contents

3U Rack Battery
LV-BAT-R5.12Aa

Wall-mounted Home Energy Storage
LV-BAT-W5.12Ac
LV-BAT-W10.24Ac
LV-BAT-W15.36Ac

Stackable Home Energy Storage
LV-BAT-L2.56Ba
LV-BAT-L5.12Aa
LV-BAT-H2.56Aa
LV-BAT-H5.12Aa

All-in-one Stackable ESS
LV-AST-1L10K5.12Aa
LV-AST-1L6K5.12Aa
LV-AST-3H12K5.32Aa

Small-scale Industrial & Commercial ESS
30kW/60kWh 50kW/100kWh 100kW/200kWh

Medium-sized Industrial & Commercial ESS
250kW/500kWh 500kW/1MWh 1MW/2MWh

Making the world a green valley!

ABOUT
Lithium Valley

Dongguan Lithium Valley Energy Co., Ltd., a subsidiary of Zongshen Power (001696.SZ), was founded in 2013. With the vision of "Making the world a green valley", Lithium Valley specializes in providing customized energy storage products and comprehensive one-stop energy storage solutions for residential and commercial applications. Our products have obtained internationally recognized certifications such as CB, CE, UL1973, UL9540A, BIS, ISO9001 & ISO14001, and ISO14064 & ISO14067.

With over 16 years of battery industry experience, our founder leads the company in its pursuit of excellence. Our facilities cover an area of 30,000 square meters, and we employ over 300 professionals in management, research and development, and production roles. We have established a presence in various locations, including our headquarters in Dongguan, marketing centers in Wuhan and Shenzhen, and an R&D center in Nanjing. Additionally, we have branches in Germany, the USA, Hungary, and South Africa.

After more than a decade of industry cultivation, Lithium Valley upholds the principles of high quality, high efficiency, and sustainable development in our production and manufacturing processes. We have established a scientific and stable supply chain system, working closely with top battery cell suppliers to ensure the quality and stability of our systems from the source. These systems are integrated with our self-developed BMS battery management system, EMS energy management system, and cloud platform. Through our self-developed MES system, our quality control team monitors the entire production process rigorously. Each product undergoes a series of stringent tests before leaving the factory, ensuring its reliability and stability.

30000m²
FACTORY AREA

$10 M
REGISTERED CAPITAL

2GWh+
DELIVERED CAPACITY

Powered by
ZONGSHEN POWER(001696.SZ)

Service
LOCAL SERVICE& INVENTORY IN EUROPE

One-stop Energy Storage Integrated Supply Solution

Making Energy Storage Integration More Secure and Worry-free

Lithium Valley technology

2007
The founder entered the lithium battery industry and serve as an executive at a leading nickel and lithium battery company.

2013
Shenzhen Lithium Valley Technology Co., Ltd. was established with a focus on AGV and solar battery.

2018
Dongguan Lithium Valley Energy Co., Ltd. was established as a group company to coordinate and manage its subsidiary factories.

2020
Venture into the energy storage business and also set up a new research and development center in Nanjing.

2022
A marketing center was established in Wuhan to expand our market presence. The establishment of the marketing center has injected new momentum into the company.

2023
We expanded our production scale, improved our overall image, and established a global production and distribution strategic system in Germany, South Africa, and the US to accelerate our overseas expansion. Zongshen Power signed an M&A agreement with us and acquired a 60% equity stake in our company.

Company Culture

Dedication
Maximise initiative and creativity in working towards your goals

Innovative
Good solutions for customers through technological innovation

Cooperation
Taking a long-term view and constantly pursuing excellence in cooperation

Win-Win
Learn from each other, complement each other's strengths and help each other

Authoritative Certification

Lithium Valley products have been certified by multiple global third-party testing organization, with certification coverage spanning over 50 countries and regions worldwide.

Quality Management

ISO 9001

ISO 14001

ISO 14067

ISO 14064

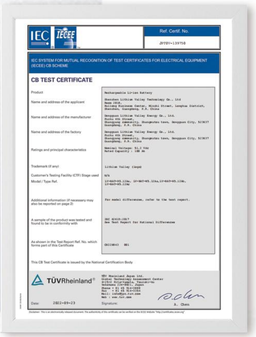
Certifications

Lithium Valley technology

UL 1973

UL 9540A

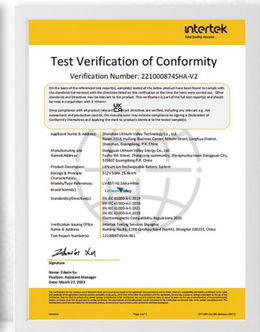
CB



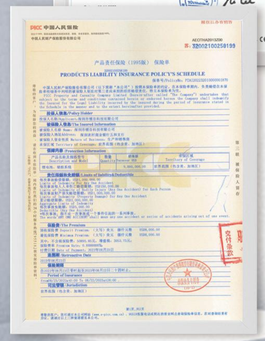
CE-GPSD

CE EMC

UKCA



PICC



UN38.3

MSDS

Residential BESS

Discover the Joys of Eco-Life with Lithium Valley

Imagine a world where you have complete control over your home's energy consumption, reducing your carbon footprint and saving on utility bills. A better life is not merely a dream, but a reality that we can create for you.

Smart Charge/Discharge Control

Allow homeowners to optimize their energy usage and reduce waste by managing peak demand periods.

Advanced Battery Management System

The self-developed BMS constantly monitors the battery's temperature, voltage, and current to prevent overcharging, overheating, and other potential hazards. It also optimizes the battery's charge and discharge cycles to maximize its lifespan and efficiency.

Seamless Integration

With our products, it will be easy to seamlessly integrate with your home's existing solar panels and inverters, making installation quick and easy.

Environmentally Friendly

From reduced carbon emissions to increased energy savings, we've got you covered. It will help reduce your carbon footprint by storing energy from renewable sources like solar power and wind power.

Long-Lasting Performance

Our batteries have a long lifespan (≥ 6000 cycles) and retain their performance even after years of use.

3U RACK BATTERY

Whether installed in a cabinet, stacked, or even mounted on the wall, our 3U energy storage battery provides a flexible and versatile solution.Experience durable and long-lasting energy storage in every unique scenario.

Scalable Design

Flexible Assembly

Real-time Monitoring

Efficient Performance

Safety Features

Compatibility

Cost-Effective

Durability

Model	LV-BAT-R5.12Aa
Nominal Voltage(Vdc)	51.2
Nominal Capacity(Wh)	5120
Working Voltage Range(Vdc)	44.8~56.16
Charge Voltage(Vdc)	58.4
Nominal Charge/Discharge Current(A)	50
Max.Charge/Discharge Current(A)	100
Peak Current(A)	200@3sec
Parallel Connection	≤ 16 pcs
Cycle Life	6000 @ 80% DOD, 25℃ / 0.5C
Structure	
Dimension(mm)	550*440*130
Weight(Kg)	47.2
IP Rating	IP20
Installation	Rack mounted/Wall mounted/Cabinet mounted
Working Environment	
Charge Working Temperature(℃)	0~55
Discharge Working Temperature(℃)	-20~60
Altitude(M)	＜2500
Humidity(RH)	5~95%(w/o condensing)
Communication	
Communication Port	RS485,CAN
Display	SOC status indicator, LED indicator
Certification	
CB, IEC62619, UL1973, UL9540A, UKCA, CE-EMC, CE-GPSD, EN62619 ; UN38.3, MSDS	

WALL-MOUNTED HOME ENERGY STORAGE

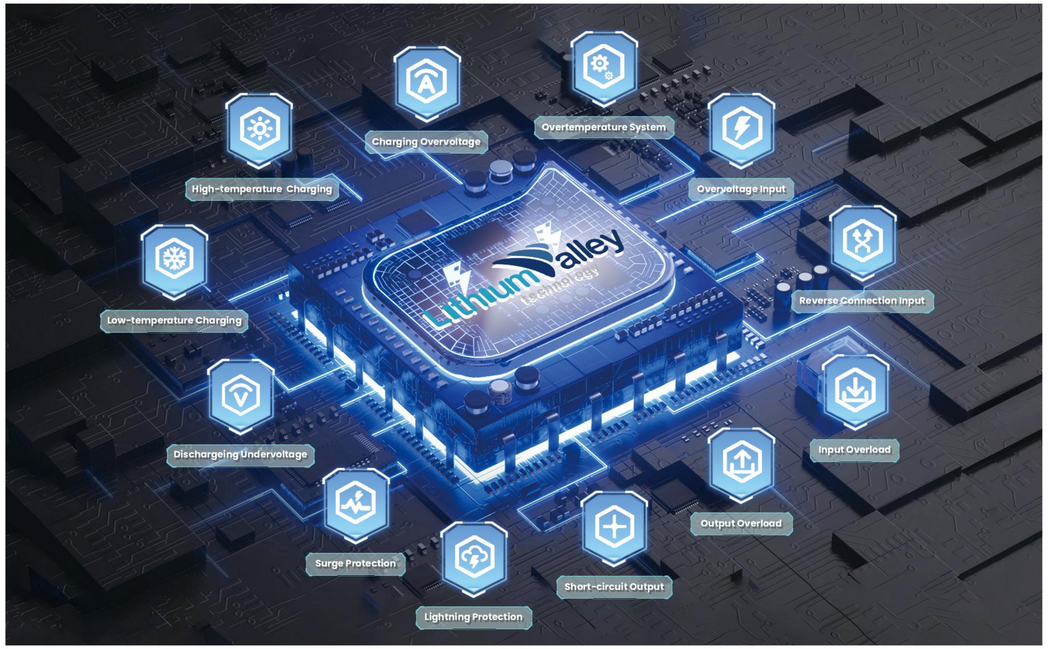
A sleek and space-saving solution for your energy storage needs. With its compact design and easy installation, it seamlessly blends into any environment. Whether in your home, office, or commercial space, our wall-mounted unit provides reliable and efficient energy storage, empowering you to optimize energy usage and reduce waste.

- Space Saving
- Customized Panel
- Efficient Performance
- Safe and Reliable
- Real-time Monitoring
- Durability
- Intelligent BMS
- Cost Effective

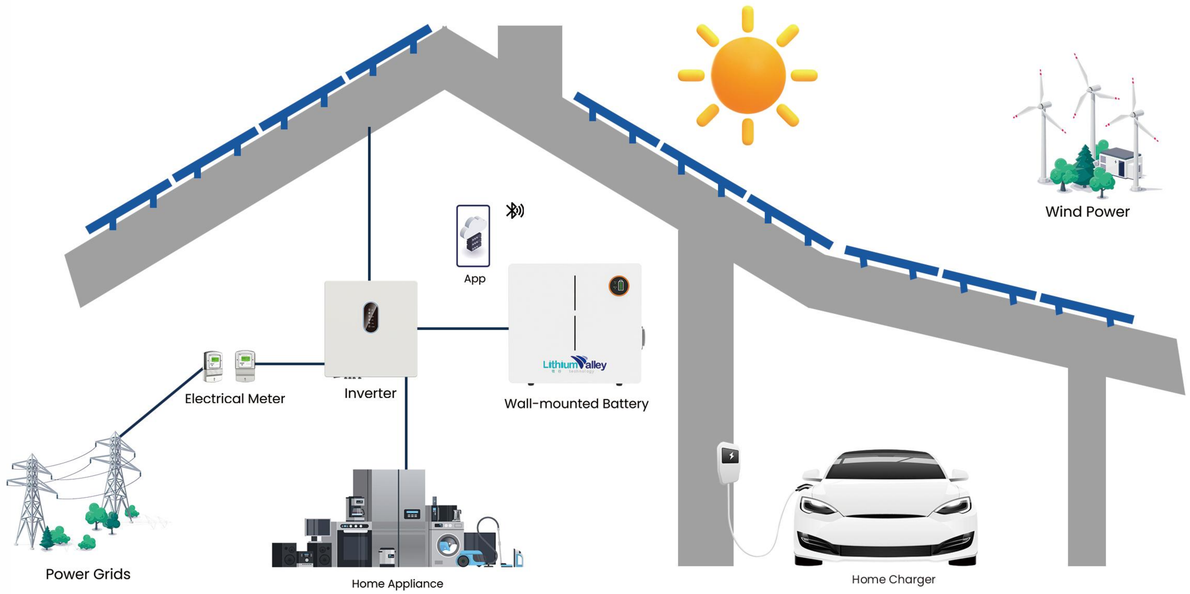
Lithium Valley technology

Model	LV-BAT-W5.12Ac	LV-BAT-W10.24Ac	LV-BAT-W15.36Ac
Nominal Voltage(Vdc)	51.2	51.2	51.2
Nominal Capacity(Wh)	5120	10240	15360
Working Voltage Range(Vdc)	44.8~56.16	44.8~56.16	44.8~56.16
Charge Voltage(Vdc)	58.4	58.4	58.4
Nominal Charge/Discharge Current(A)	50	100	100
Max.Charge/Discharge Current(A)	100	200	200
Peak Current(A)	200@3sec	400@3sec	600@3sec
Parallel Connection	≤ 16 pcs		
Cycle Life	6000 @ 80% DOD, 25℃ / 0.5C		
Structure			
Dimension(mm)	520*470*142	800*590*142	856*820*176
Weight(Kg)	47.2	93.5	140.7
IP Rating	IP65		
Installation	Wall mounted/Floor stand		
Working Environment			
Charge Working Temperature(℃)	0~55		
Discharge Working Temperature(℃)	-20~60		
Altitude(M)	＜2500		
Humidity(RH)	5~95%(w/o condensing)		
Communication			
Communication Port	RS485,CAN		
Display	SOC status indicator, LED indicator		
Certification			
CB, IEC62619, UL1973, UKCA, CE-EMC, CE-GPSD, EN62619 ; UN38.3, MSDS			

Self-developed BMS



Working Mode



STACKABLE HOME ENERGY STORAGE

With its modular design, the Multi-functional Energy Storage System offers endless possibilities. Customize the system to meet your specific needs by easily adding or removing energy storage units. Experience the freedom and control of managing your energy consumption with this state-of-the-art system.

- High Capacity
- Scalable Design
- Efficient Performance
- Safe and Reliable
- Real-time Monitoring
- Durability
- Intelligent BMS
- Seamless Integration

Model	LV-BST-L2.56Ba	LV-BST-L5.12Aa
Nominal Voltage(Vdc)	51.2	51.2
Nominal Capacity(Wh)	2560	5120
Working Voltage Range(Vdc)	44.8~56.16	44.8~56.16
Charge Voltage(Vdc)	58.4	58.4
Nominal Charge/Discharge Current(A)	25	50
Max.Charge/Discharge Current(A)	50	100
Peak Current(A)	100@3sec	200@3sec
Parallel Connection	≤ 10 pcs	≤ 6 pcs
Cycle Life	6000 @ 80% DOD, 25˚C / 0.5C	
Structure		
Dimension(mm)	600*210*180	600*210*300
Weight(Kg)	29	50.5
IP Rating	IP65	
Installation	Stacked	
Working Environment		
Charge Working Temperature(˚C)	0~55	
Discharge Working Temperature(˚C)	-20~60	
Altitude(M)	＜2500	
Humidity(RH)	5~95%(w/o condensing)	
Communication		
Communication Port	RS485,CAN	
Display	SOC status indicator, LED indicator	
Certification		
CB, IEC62619; CE-EMC, CE-GPSD, UKCA; UN38.3, MSDS		

HIGH-VOLTAGE STACKABLE ENERGY STORAGE

Power up your energy storage game with compact size, lightweight design, and effortless installation of standardized modules, leveraging the advantages of high voltage. Effortlessly customize battery combinations to meet your energy storage needs.

High Capacity

Scalable Design

Efficient Performance

Safe and Reliable

Real-time Monitoring

High Voltage

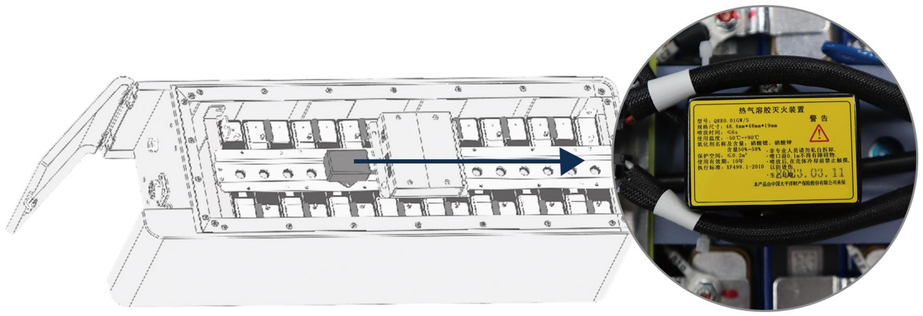
Intelligent BMS

Seamless Integration

Model	LV-BST-H2.56Aa	LV-BST-H5.12Aa
Nominal Voltage(Vdc)	51.2	51.2
Nominal Capacity(Wh)	2560	5120
Working Voltage Range(Vdc)	129.6-516.6	129.6-350.4
Charge Voltage(Vdc)	56.16	56.16
Nominal Charge/Discharge Current(A)	25	50
Max.Charge/Discharge Current(A)	50	100
Peak Current(A)	100@3sec	200@3sec
Series Connection	3-10 pcs	3-6 pcs
Cycle Life	6000 @ 80% DOD, 25℃ / 0.5C	
Structure		
Power Module Dimensions(mm)/Weight(kg)	600*210*250/14	610*225*250/15
Battery Module Dimensions(mm)/Weight(kg)	600*210*160 /27	610*225*250/52
Lampstand Module Dimensions(mm)/Weight(kg)	600*210*90/5	610*225*90/5.5
Top Cap Module Dimensions(mm)/Weight(kg)	600*210*50/2.5	610*225*50/3
IP Rating	IP65	
Installation	Stacked	
Working Environment		
Charge Working Temperature(℃)	0~55	
Discharge Working Temperature(℃)	-20~60	
Altitude(M)	＜2500	
Humidity(RH)	5~95%(w/o condensing)	
Communication		
Communication Port	RS485,CAN	
Display	SOC status indicator, LED indicator	
Certification		
CB, IEC62619, CE-EMC, CE-GPSD, UKCA, UL1973, UL9540A, EN62040, IEC62040; UN38.3, MSDS		

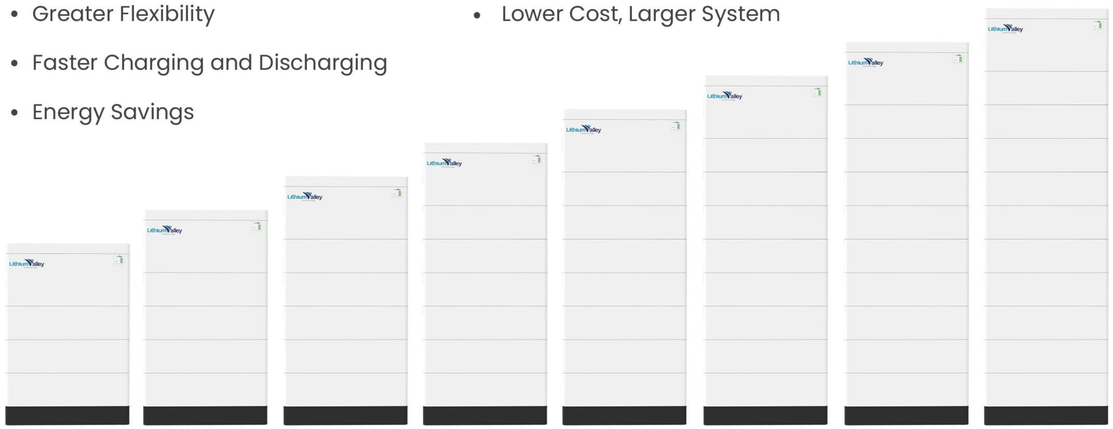
THERMAL AEROSOL FIRE SUPPRESSION DEVICE

The energy storage system is equipped with a breakthrough aerosol fire suppression device, boasting ultra-high efficiency and reliability. Its compact size, rapid response, and eco-friendly features make it ideal for enclosed spaces like battery compartments. Invest in our ESS today for top-of-the-line fire protection technology to ensure the safety of personnel and property.



3-10 Modules Stackable → 153.6V-512V High Voltage

- Higher Conversion Efficiency
- Better Suitable for Peaking Applications
- Greater Flexibility
- Faster Charging and Discharging
- Energy Savings
- Increased Independence from the Grid
- Lower Cost, Larger System



7.68kWh | 10.24kWh | 12.8kWh | 15.36kWh | 17.92kWh | 20.48kWh | 23.04kWh | 25.6kWh

LV-BAT-H2.56Aa

ALL-IN-ONE STACKABLE ESS(US)

An efficient, safe, and intelligent home energy storage solution, featuring a convenient modular battery design and integrated inverter, EMS, and UPS management system. Seamlessly switch between power sources, remotely control your energy needs, and customize intelligent operating plans.

High Capacity

Compact Design

All-In-One Design

Scalable Design

Sustainability

Remote Monitoring

IP65

Enhanced Resilience

Battery Module	LV-AST-1L10K5.12Aa		
	1 layer	2 layers	3 layers
			
Model	51.2V 200Ah	51.2V 300Ah/400Ah	51.2V 500Ah/600Ah
Energy(kWh)	10.24	15.36/20.48	25.6/30.72
Operating Voltage Range(V)	44.8∽56.16		
Cell Technology	Lithium iron phosphate (LiFePO4)		
Life Cycle	6000 @ 80% DOD , 25°C / 0.5C		
Charge/Discharge Current(A)	195		
Dimension(L*W*H)(mm)	653*301.5*1368	653*301.5* 1886	653*301.5*2404
Weight(Kg)	200	260/320	380/440
AC			
Rate AC Output Power(kW)	8~10		
AC Output Voltage	120/240Vac(split phase), 230Vac(single phase)		
AC Output Frequency(Hz)	50/60		
Grid Connection	Split phase, single phase		
General Data			
Display	LCD		
Communication	CAN, RS485, WIFI		
Operating Temperature	-10°C∽55°C		
IP Rating	IP65		
Cooling	Fan cooling		
Certification	UL9540A, UL9540, MSDS, UN38.3		

UL 9540 UL 9540A UN38.3 RoHS

ALL-IN-ONE STACKABLE ESS(EU)

An efficient, safe, and intelligent home energy storage solution, featuring a convenient modular battery design and integrated inverter, EMS, and UPS management system. Seamlessly switch between power sources, remotely control your energy needs, and customize intelligent operating plans.

High Capacity
Compact Design
All-In-One Design
Scalable Design
Sustainability
Remote Monitoring
IP65
Enhanced Resilience

Battery Module	LV-AST-1L6K5.12Aa		
	1 layer	2 layers	3 layers
			
Model	51.2V 200Ah	51.2V 300Ah/400Ah	51.2V 500Ah/600Ah
Energy(kWh)	10.24	15.36/20.48	25.6/30.72
Operating Voltage Range(V)	44.8 ~56.16		
Cell Technology	Lithium iron phosphate (LiFePO4)		
Life Cycle	6000 @ 80% DOD , 25°C / 0.5C		
Charge/Discharge Current(A)	120		
Dimension(L*W*H)(mm)	653*320*1400	653*320* 1950	653*320*2500
Weight(Kg)	200	260/320	380/440
AC Output			
Nominal AC Output Power(kW)	6		
Grid Voltage/Range(V)	220/210-230		
Rated Grid Frequency(Hz)	50/60		
Grid Connecion	Single phase		
General Data			
Display	LCD		
Communication	CAN, RS485, WIFI, Bluetooth		
Operating Temperature	-10°C ~55°C		
IP Rating	IP65		
Cooling	Natural convection		
Certification	IEC62477, IEC62109; UN38.3, MSDS		

HIGH-VOLTAGE ALL-IN-ONE STACKABLE ESS

An efficient, safe, and intelligent home energy storage solution, featuring a convenient modular battery design and integrated inverter, EMS, and UPS management system. Seamlessly switch between power sources, remotely control your energy needs, and customize intelligent operating plans.

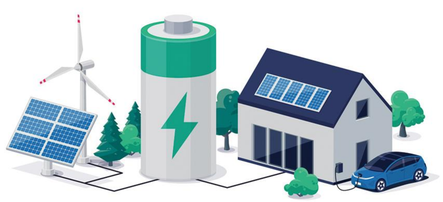
High Capacity
Compact Design
All-In-One Design
Scalable Design
Sustainability
Remote Monitoring
IP65
Enhanced Resilience

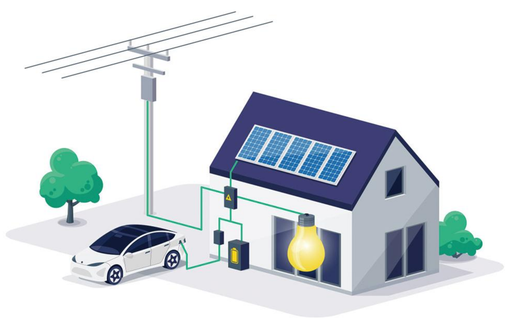
Battery Module	LV-AST-3H12K5.32Aa	
	2 layers	3 layers

Model	410V 52Ah	614V 52Ah
Energy(kWh)	21.30	31.95
Operating Voltage Range(V)	358.4∽449.28	576∽700
Life Cycle	6000 @ 80% DOD , 25°C / 0.5C	
Charge/Discharge Current(A)	50	50
Dimension(L*W*H)(mm)	653*301.5*1846	653*301.5*2364
Weight(Kg)	320	440
AC		
Rate AC Output Power(kW)	12	
Grid Voltage/Range(V)	400 /360~440	
AC Output Frequency(Hz)	50/60	
Grid Connection	3W+N+PE	
General Data		
Display	LCD	
Communication	CAN, RS485, WIFI	
Operating Temperature	-10°C∽55°C	
IP Rating	IP65	
Cooling	Natural Convection	
Certification	IEC62477, IEC62109; UN38.3, MSDS	

How about a peaceful slumber every night, with an uninterrupted supply of abundant electricity?

1. Energy Storage: Lithium Valley residential ESS stores excess energy from solar panels or the grid, which you can use during peak hours when electricity rates are higher. By using stored energy instead of drawing from the grid, you can reduce your electricity bill.

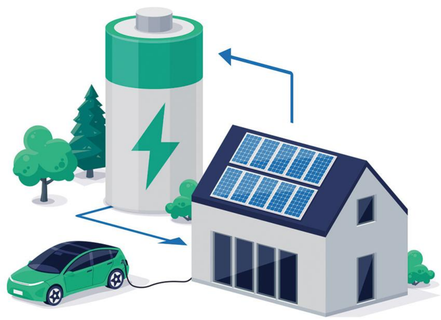


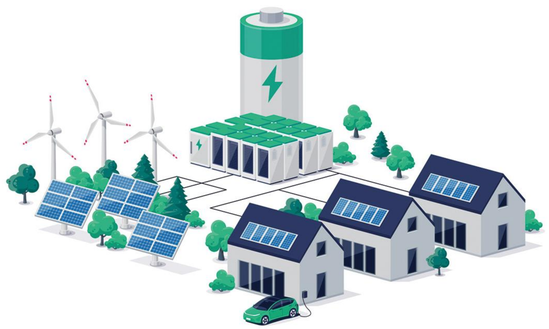


2. Time-of-Use Optimization: Some utility companies offer time-of-use (TOU) pricing, where the cost of electricity varies depending on the time of day. With a Residential ESS, you can store energy during off-peak hours when prices are low and use it during peak hours when prices are high. This way, you can take advantage of TOU pricing and save money on your bills.

There is no need to stress over the cost — simply embrace the future of sustainable living with our innovative residential BESS.

3. Backup Power: During power outages, a Residential ESS can provide backup power to your home. This means that you can continue to use appliances and electronics even when the grid is down. By having a reliable backup power source, you can avoid the costs associated with spoiled food and lost productivity.





4. Virtual Power Plant: A VPP aggregates the power output of multiple residential ESSs and uses them as a single resource. By participating in a VPP program, you can earn money by selling the excess energy stored in your ESS back to the grid or to other customers during periods of high demand.

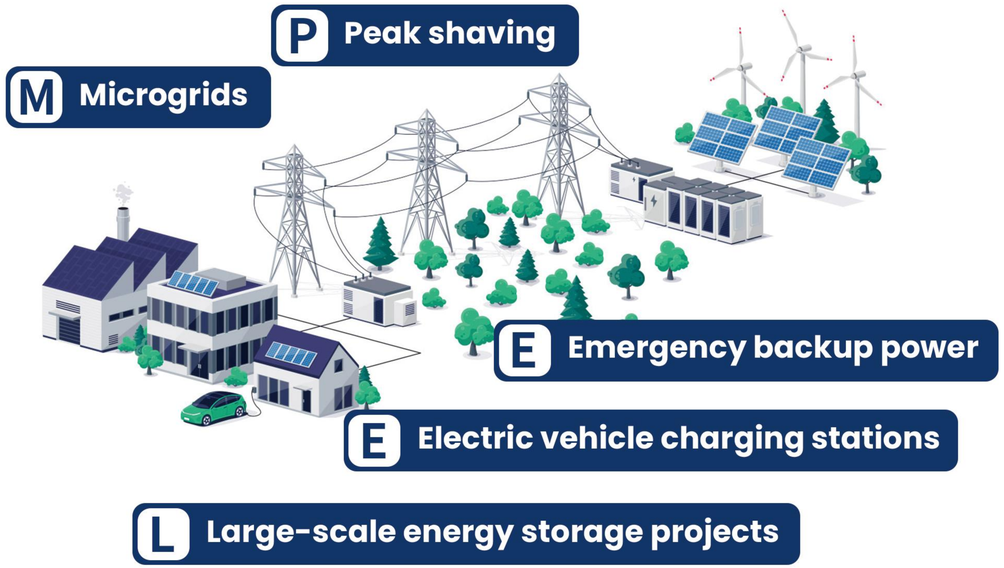
Comprehensive C&I ESS Solutions For All Scenarios

- Keep your business ahead of the curve with our cutting-edge C & I ESS technology. From increased efficiency to reduced costs, the benefits are endless.
- Whether it's for large-scale industrial operations or small commercial settings, Lithium Valley's energy storage solutions offer a flexible and adaptable solution to meet the diverse needs of clients.

Peak Shifting /Multi Purpose

Frequency Integration

Renewable Energy Regulation



Small-scale Commercial & Industrial ESS

Ultimate reliability and servicability:
The system achieves an incredible level of reliability through its fully modular architecture, which enables multiple levels of redundancy;

Unified monitoring and data platform:
It offers unparalleled real-time data in your pocket and on your laptop, enabling you to understand site operations anytime, anywhere;

Obsessively engineered for safety:
Eliminate diesel handling, spills and devastating diesel fires. Lack of moving parts makes the system orders of magnitude safer by design;

Support & Service:
Remotely monitored by Lithium Valley for any issues. Quick and dedicated service team to support you on site.

Model	30kW/60kWh	50kW/100kWh	100kW/200kWh
Installation			
Cabinets(W*D*H)(mm)	2400*1100*2450	2400*1100*2450	2700*1100*2550
Air Conditioning Capacity	1kW	1kW*2	3kW
Battery Part			
Battery Cell(Ah)	102	100	280
PACK	1P16S	2P16S	1P16S
PACK Capacity(kWh)	5.222	10.24	14.336
PACK Size(W*D*H)(mm)	468*550*160	468*650*230	495*700*230
PCS			
Photostamper Size(W*D*H)(mm)	800*800*1900	800*800*1900	1200*800*2050
Single Battery			
Number of Packs Per Cluster	12	10	14
Single-cluster Nominal Voltage (LFP3.2V)	614.4	512	716.8
Single-cluster Voltage Range (Cell Min2.8V~Max3.65V)	537.6~700.8	448~584	627.2~817.6
BMS			
The Number of Battery Clusters	1	1	1
PACK	1P192S*1	2P160S*1	1P224S*1
Number of High Voltage BMS	2	2	2
Battery Capacity(kWh)	62.669	102.4	200.704
Number of Battery Racks (7 layers/rack)	2	2	3
PV			
PV Capacity for Connection(kWp)	60/120	60/120	120/180/240
Actual Access Capacity(kWp)	57.6	115.2	230.4
Number of PV Modules(600Wp)	96	192	384
Combiner Box Model	6 in 1 out	12 in 1 out	24 in 1 out
Number of PV Combiner Boxes	1	1	1

Medium-sized Commercial & Industrial ESS

Friendly and flexible:
- Standardized design, easy for capacity expansion, easy for maintenance;
- Independent air flow design for high reliability.

Safe and reliable:
- Support battery management system and comprehensive thermal management;
- Realize the fault classification protection algorithm.

Intelligent and efficient:
- Support real-time online monitoring of system status;
- Large capacity, long life, high discharge rate.

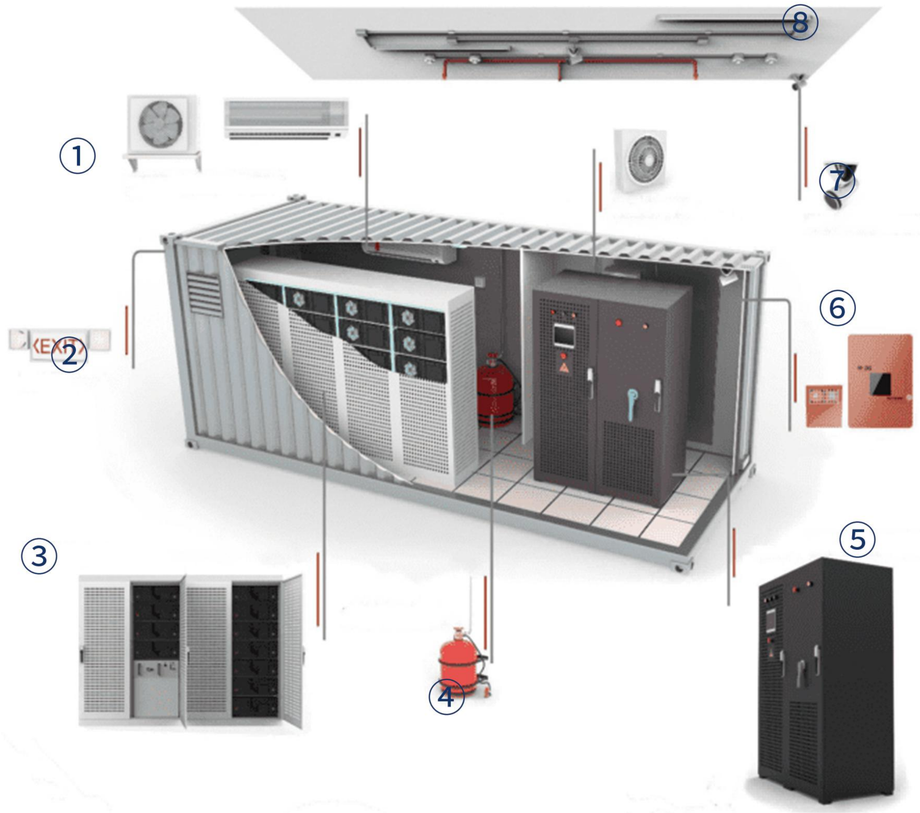
Abundant configuration:
- All kinds of power configuration for different projects;
- Integrated monitoring system.

Model	250kW/500kWh	500kW/1MWh	1MW/2MWh
Installation			
Container	20ft	20ft	40ft
Air Conditioning Capacity	7.5kW	7.5kW*2	15kW*2
Battery Part			
Battery Cell(Ah)	280	280	280
PACK	1P16S	1P16S	1P16S
PACK Capacity(kWh)	14.336	14.336	14.336
PACK Size(W*D*H)(mm)	495*700*230	495*700*230	495*700*230
PCS			
Photostamper Size (W*D*H)(mm)	600*720*2050 +1200*800*2050	(600*720*2050)*2 +1600*1050*2050	(600*720*2050)*3 +1600*1050*2050
Single Battery			
Number of Packs Per Cluster	12	14	14
Single-cluster Nominal Voltage (LFP3.2V)	614.4	716.8	716.8
Single-cluster Voltage Range (2.8V~3.65V)	537.6~700.8	627.2~817.6	627.2~817.6
High Voltage BMS			
Number of Battery Clusters	3	5	10
PACK	1P192S*3	1P224S*5	1P224S*5*2
Number of High Voltage BMS	3	5	10
Battery Capacity(kWh)	516.10	1003.52	2007.04
Number of Battery Racks (7 layers/rack)	6	11	22
PV			
PV Capacity for Connection(kWp)	300/360	600/660/720	1200/1320/1440
Actual Access Capacity(kWp)	345.6	691.2	1238.4
Number of PV Modules(600Wp）	576	1152	2304
Number of Assembly Components/Branches of the Bus Box	16	16	16
Combiner Box Model	18 in 1 out	24 in 1 out	24 in 1 out
Number of PV Combiner Boxes	2	3	6

Dedicated

Commercial & Industrial ESS

- Integrated LFP battery and intelligent fire control temperature regulation
- Convenient transportation with 40-foot container integration
- High reliability of the heat dissipation design system
- Low loss and high safety with temperature control design
- Three-level battery data management with cell data monitoring
- Standard communication interface for easy system management and scheduling
- Strong environmental adaptability with IP65 protection level
- Ability to withstand high and low voltage variations



Container Energy Storage System

① High Performance and Fast Response Cooling system

② Safety Escape Indicator

③ High Safety and Long Life Battery and Protection System

④ High-performance Fire Extinguisher

⑤ Stable and Efficient Power Converter System

⑥ Highly Sensitive and Fast Response Fire Control system

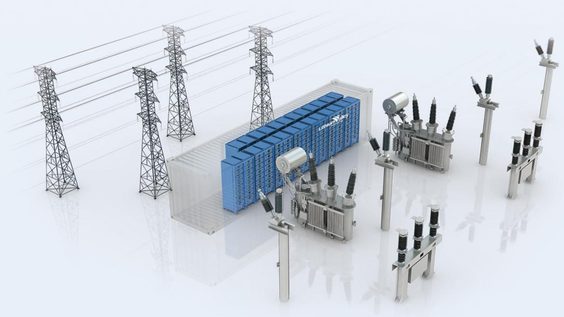
⑦ 24/7 Monitoring

⑧ Low-energy Ventilator

Overview of Energy Storage System Applications

Grid-side/Generation-side/User-side

Grid-side: Energy storage systems balance the load on the power grid, improving its stability and reliability. They store energy during low demand periods to meet high demand during peak periods. By cutting peaks and filling valleys,they can alleviate the contradiction between supply and demand, reduce operating costs, monitor load fluctuations, and quickly respond to grid dispatches to improve frequency stability.

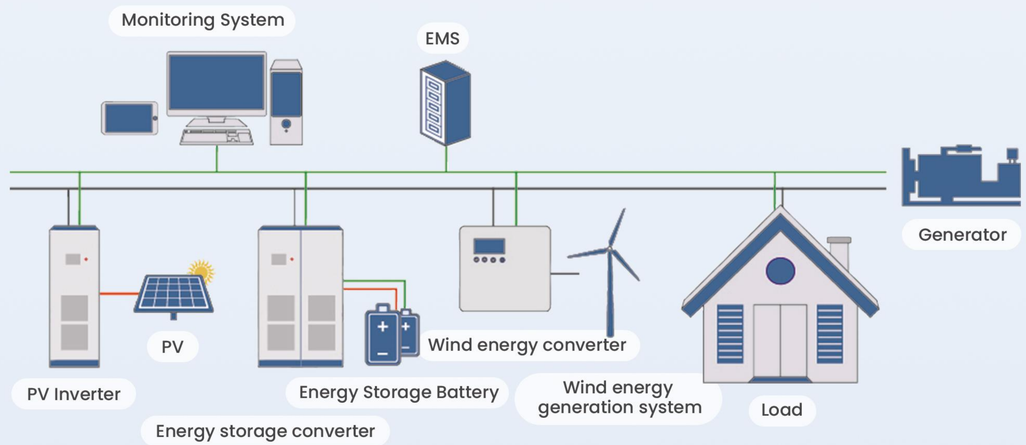


Generation-side: Energy storage systems improve the efficiency of renewable energy utilization and resolve issues of electricity fluctuation and instability. These systems store excess energy and release it when needed to ensure a steady supply of energy. They also improve the stability of new energy output and transient power impacts on the grid, there by enhancing the quality of electric power.

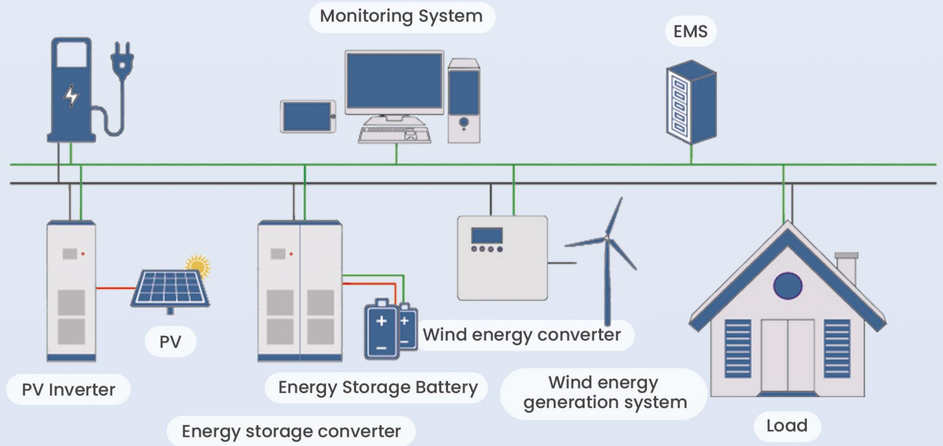
User-side: Energy storage systems improve energy utilization efficiency and save energy consumption. For instance, solar power panels store energy during the day for use at night or during cloudy and rainy days to reduce costs. They also smooth out power delivery, increase capacity utilization, reduce transformer requirements and basic electricity fees, and generate economic benefits based on differences in peak and off-peak electricity prices.

Off-grid/Microgrid Applications

Off-grid: Off-grid system is an independent energy system that does not rely on traditional power grids. Energy storage systems typically work with renewable energy devices (such as solar panels and wind turbines) to provide safe, clean, and reliable electricity to remote or geographically challenging areas while effectively reducing power supply costs.



Microgrid Applications: Microgrid system is a distributed energy system connected to the power grid and operates in collaboration with it in a small area. It can improve autonomous power supply capability, reduce dependence on the grid, and balance loads through energy storage systems. As one of the core equipment of microgrid systems, energy storage systems ensure a smooth and reliable energy supply. Additionally, they optimize scheduling and improve the safety and stability of the grid through intelligent control.



Distributed ESS in Station Area

Features:

①Dynamic capacity increase of transformer in station area;

②The peak valley arbitrage; ③Emergency power supply guarantee;

④Three-phase unbalance treatment; ⑤Reactive power compensation.

Project	Diesel Generator	Flywheel Energy Storage System	Intelligent Flexible Power Supply Protection Source
function	power supply guarantee	power supply guarandee	fully functional, wide aplication
feature	serious environmental and noise pollution	effcient clean energy	effcient clean emnergy
on/off the grid switch	5~30s switch	10ms switch	parallel scheme: 20ms switching series UPS scheme: 0ms switch
operational and maintenance cost	high	medium	low
service life	10~20 years	5~10 years	10~20 years
power advantage	/	/	zero sensing, zero emission, low power consumpion

Energy Storage System - Cloud Platform

Real-time monitoring and second-level response

High-speed data communication, second-level refresh and real-time monitoring of battery data, and visual graphics to display the operating status.

One-click inspection, intelligent operation and maintenance

The platform supports one-click inspection, real-time analysis and diagnosis, smart push of online operation and maintenance strategies and offline maintenance work orders, effectively improving the efficiency of operation and maintenance.

Data aggregation centralized display

All functions are presented as menus, which can be quickly returned or switched on any interface. The operation is simple and convenient, greatly reducing the workload of operation and maintenance.

Integrated design flexible expansion

Following the custom-designed structure, it is highly integrated and advanced, safe, efficient, and highly reliable. It has good structural scalability and is easy to expand and develop.

Virtual Power Plant

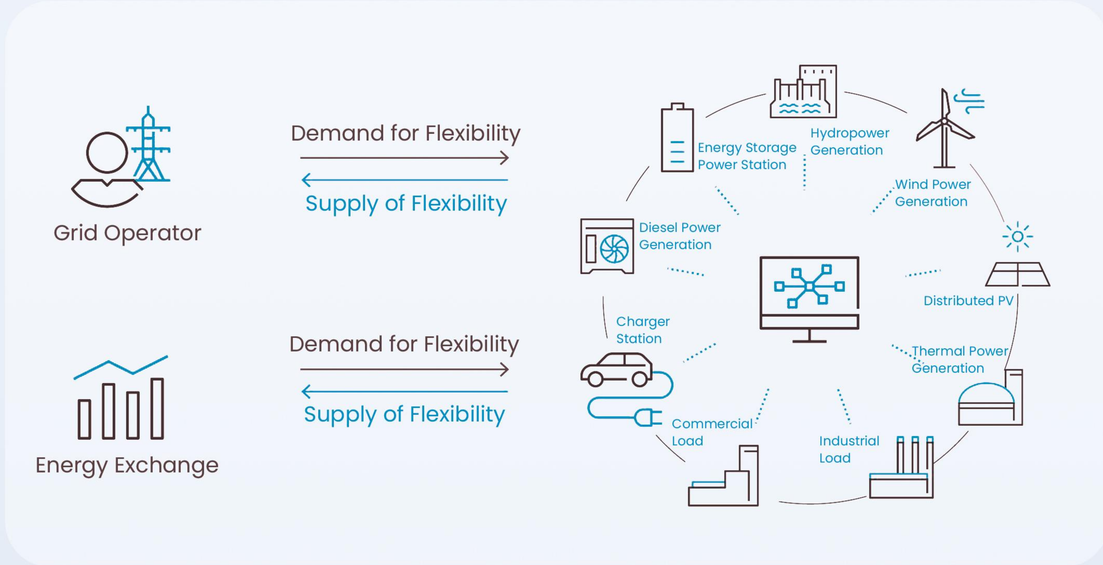
In the field of energy storage, VPP can effectively integrate and optimize various distributed energy storage systems, improving the stability and flexibility of the power grid:

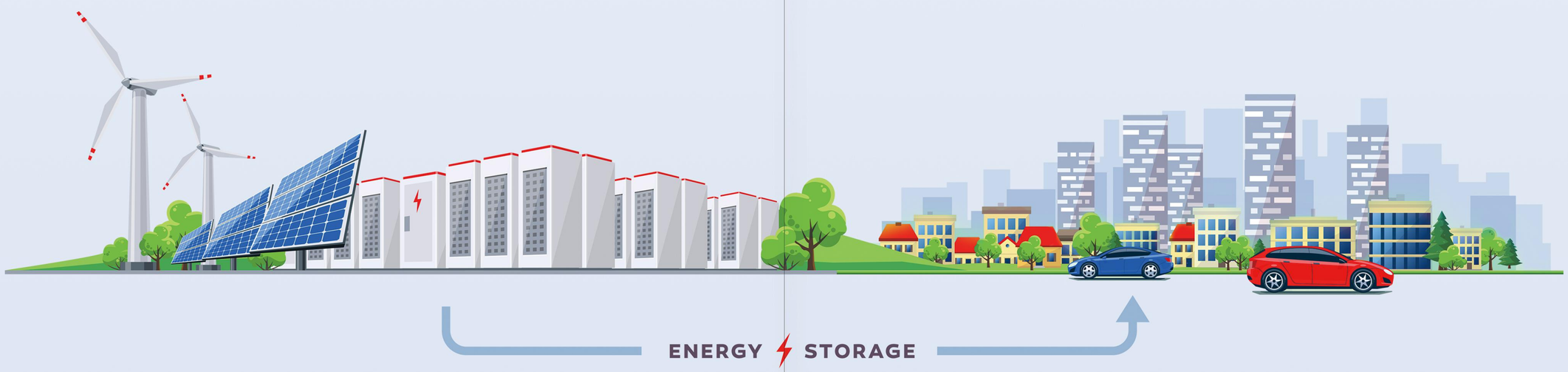
Demand-side management: VPP can smooth power demand fluctuations by controlling the energy storage devices connected to the system, reducing the peak load of the power grid and thus reducing pressure on the grid.

Frequency regulation and voltage support: VPP can use energy storage systems to quickly respond to power grid frequency and voltage fluctuations, helping to maintain stable operation of the power grid.

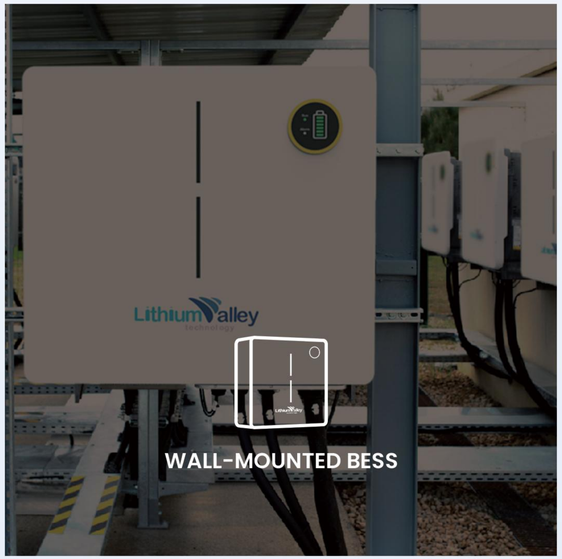
Energy trading and market participation: VPP can integrate distributed energy storage systems into the energy market, participate in power trading, and create revenue for system owners.

Integration of renewable energy: VPP can balance the intermittency and instability of renewable energy through energy storage systems, improving the penetration rate of renewable energy in the power grid.Emergency backup and power supply guarantee: In the event of a power grid failure or emergency, VPP can use energy storage systems to provide emergency backup power for critical loads, ensuring the reliability of power supply.





Project Case



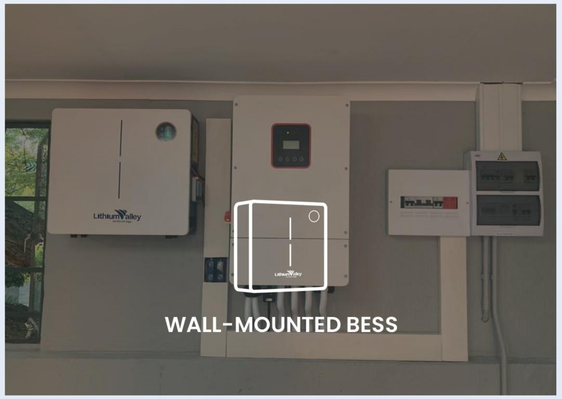
Loiret, France Residential Photovoltaic System

15kW/30kWh+10kwp PV

2022.05

On-Grid | Self-Sufficient

Outdoor Installation



Johannesburg, SA Residential PV System

5kW/5kWh+5kwp PV

2023.03

On-Grid | Self-Sufficient

Indoor Installation

Texas, US Residential PV System

15kW/30kWh+10kwp PV

2021.07

On-Grid | Self-Sufficient

Outdoor Installation

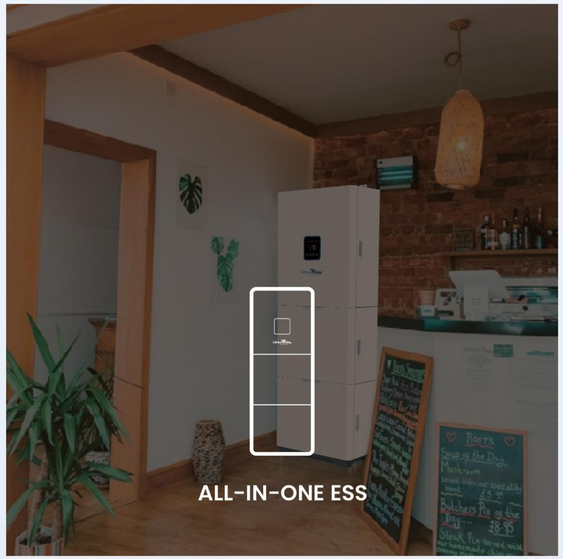
Buenos Aires, Argentina Residential Backup Power System

10kW/20kWh+10kwp PV

2020.07

Off-Grid | Backup Power

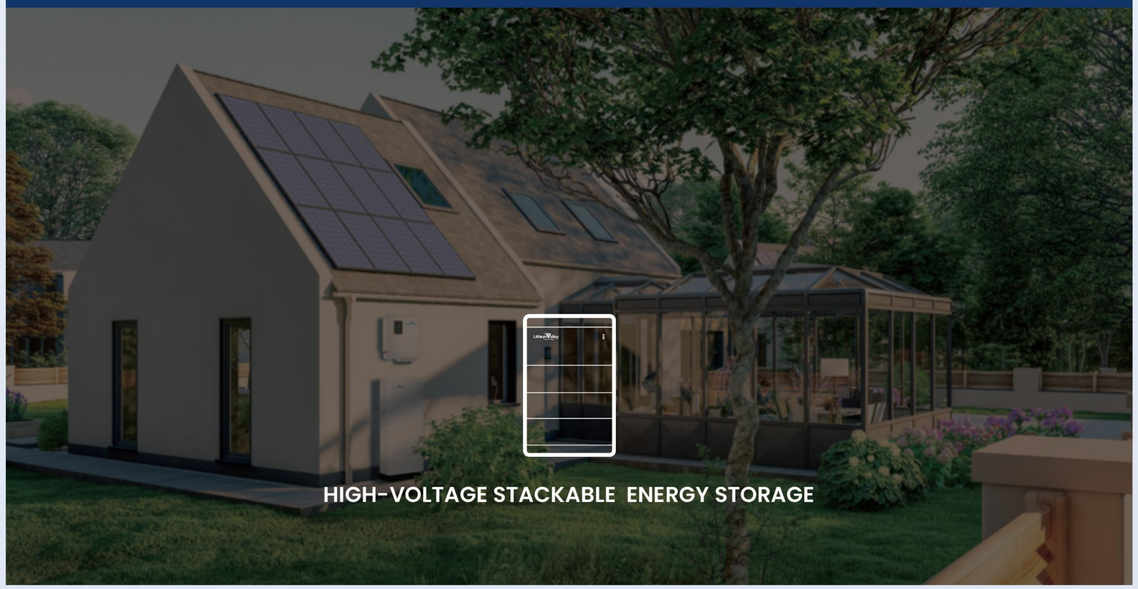
Indoor Installation



Manila, Philippines Residential PV System

15kW/30kWh+10kwp PV 2022.10

On-Grid | Self-Sufficient Outdoor Installation



Project Case

Brandenburg, Germany Outdoor Integrated ESS

25kW/50kWh

2022.06

On-Grid | Self-Sufficient

Outdoor Cabinet

Hunan, China Microgrids

250kW/520kWh+150kwp PV 2021.05

Self-Sufficient | Backup Power Outdoor Container

Liverpool, United Kingdom ESS

500kW/1MWh

2020.10

Peak Shaving&Valley Filling |

Backup Power

Outdoor Container

Johannesburg, South Africa ESS

600kW/1224kWh

2021.05

Self-Sufficient | Backup Power

Outdoor Container

Burriam, Thailand Outdoor Integrated ESS

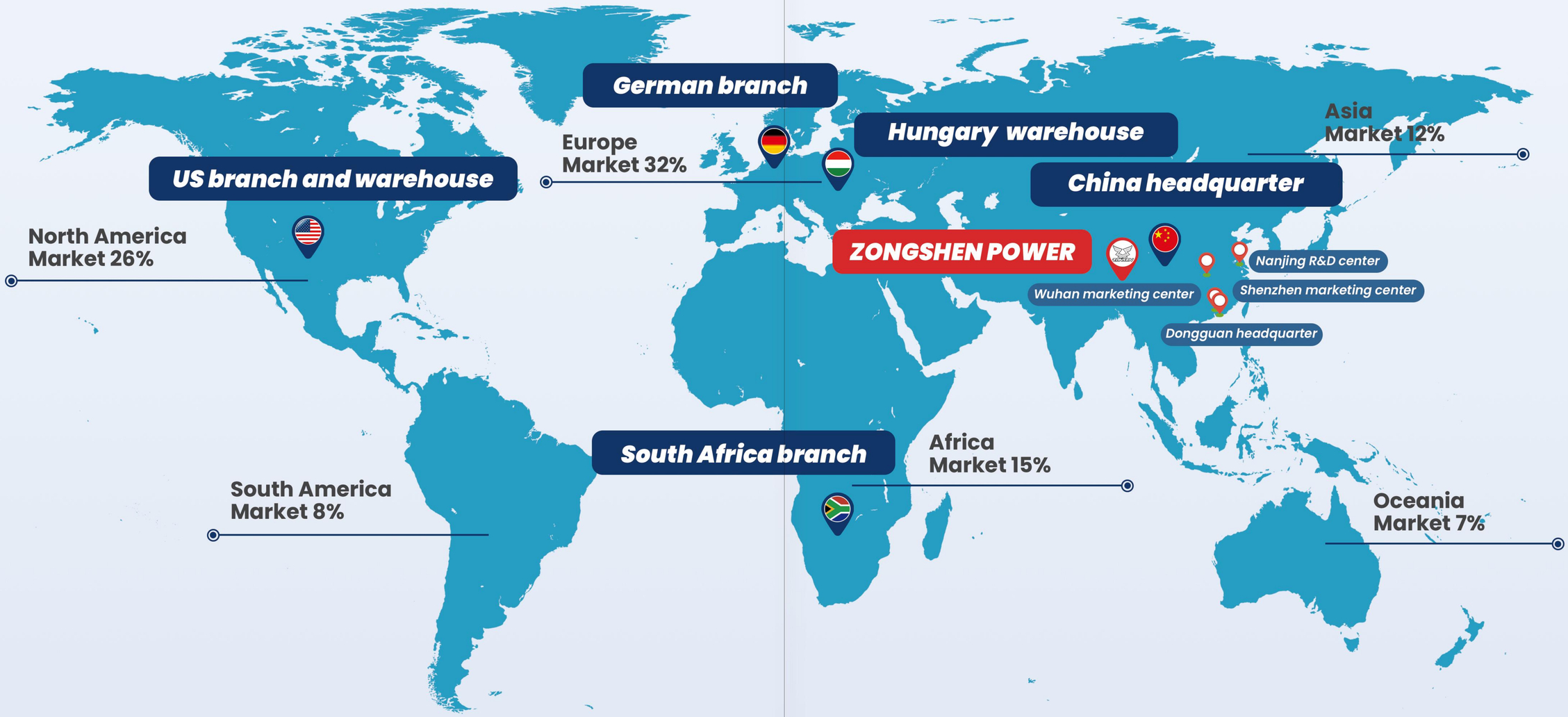
50kW/100kWh

2021.03

On-Grid | Backup Power

Outdoor Cabinet

Global Market



SOFAR · invt · Solplanet · GROWATT

MEGAREVO · victron energy · Senergy · CATL

GOTION · BYD · EVE · REPT

SOLINTEG · PG · SUMEC · Guernet

maxtrack · SUN SYNK · ST Engineering · Sinexcel

SDLG · Continental Battery Systems · TITANS · KK Wind Solutions

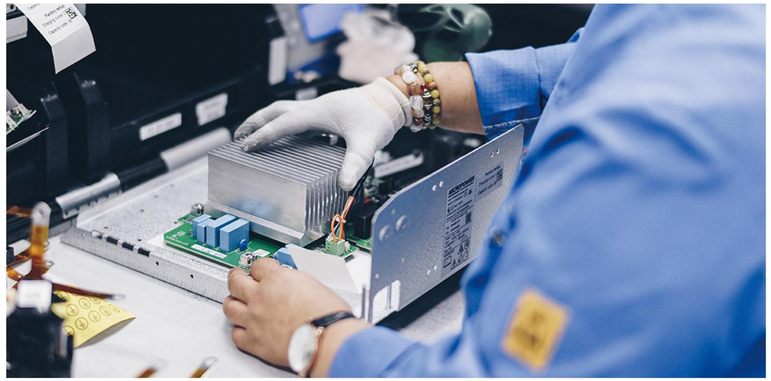
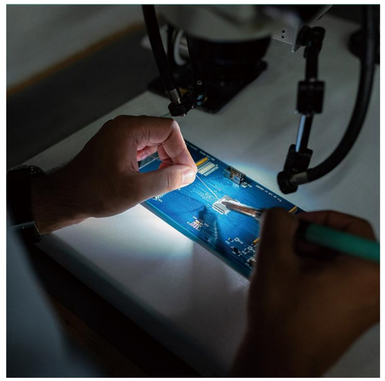
Advanced Technology

- A-Grade LFP Cell
- Self-Developed Smart BMS
- Real-Time Remote Monitoring
  Multi-Mode Operation
- Adaptive Energy Management System
- Enhanced Comprehensive Safety System




Stringent Quality Assurance Process

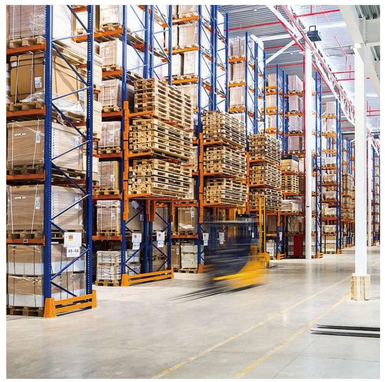
- Ongoing training for our workers
- High-quality materials and components
- Rigorous tests including battery performance testing, safety testing, and environmental adaptability testing


High-Caliber R&D Team

With 50+ R&D technicians, the main R&D staff have more than 10 years of experience in the field of lithium batteries.






Global Supply and Sales System

Our company has a global supply and sales system that allows us to serve customers all over the world. Currently, we are in the process of setting up more overseas branches and warehouses to better serve our customers worldwide.

Global Service System

Trust us to maximize the potential of your energy storage system with professionalism, expertise, and a commitment to excellence. From consultation to upgrades, we've got you covered

Pre-sales service

Free technical consultations:

1. Initial product overview
2. Technical specifications review
3. Customized design consultation
4. Site assessment

Diverse solutions:

Photovoltaic application solutions, including residential and commercial energy storage projects; Design comprehensive solutions; Determine technical solutions;Sign technical agreements.

In-sales service

On-site tracking services throughout the entire process:

Quotation and Contracting: we provide our customers with a detailed quotation outlining the cost of the proposed solution, including all components, delivery, installation, and post-sale services. Once the customer accepts the quotation, we provide a comprehensive contract that outlines all terms and conditions.

Delivery and Installation:

We take care of the entire delivery and installation process, ensuring that the batteries are installed safely and correctly. In some countries, our team of experienced professionals installs the batteries, performs necessary tests, and trains the customer on how to operate and maintain the battery system.

We support on-site inspections and result verification by customers and provide professional suggestions for optimizing solutions.

After-sales service

After-sales consulting and training services:

Professional technical support, maintenance, and repair services for our products;

Remote monitoring services to ensure that the system is operating efficiently and to identify potential issues before they become major problems;

Comprehensive warranties (5-10 years)