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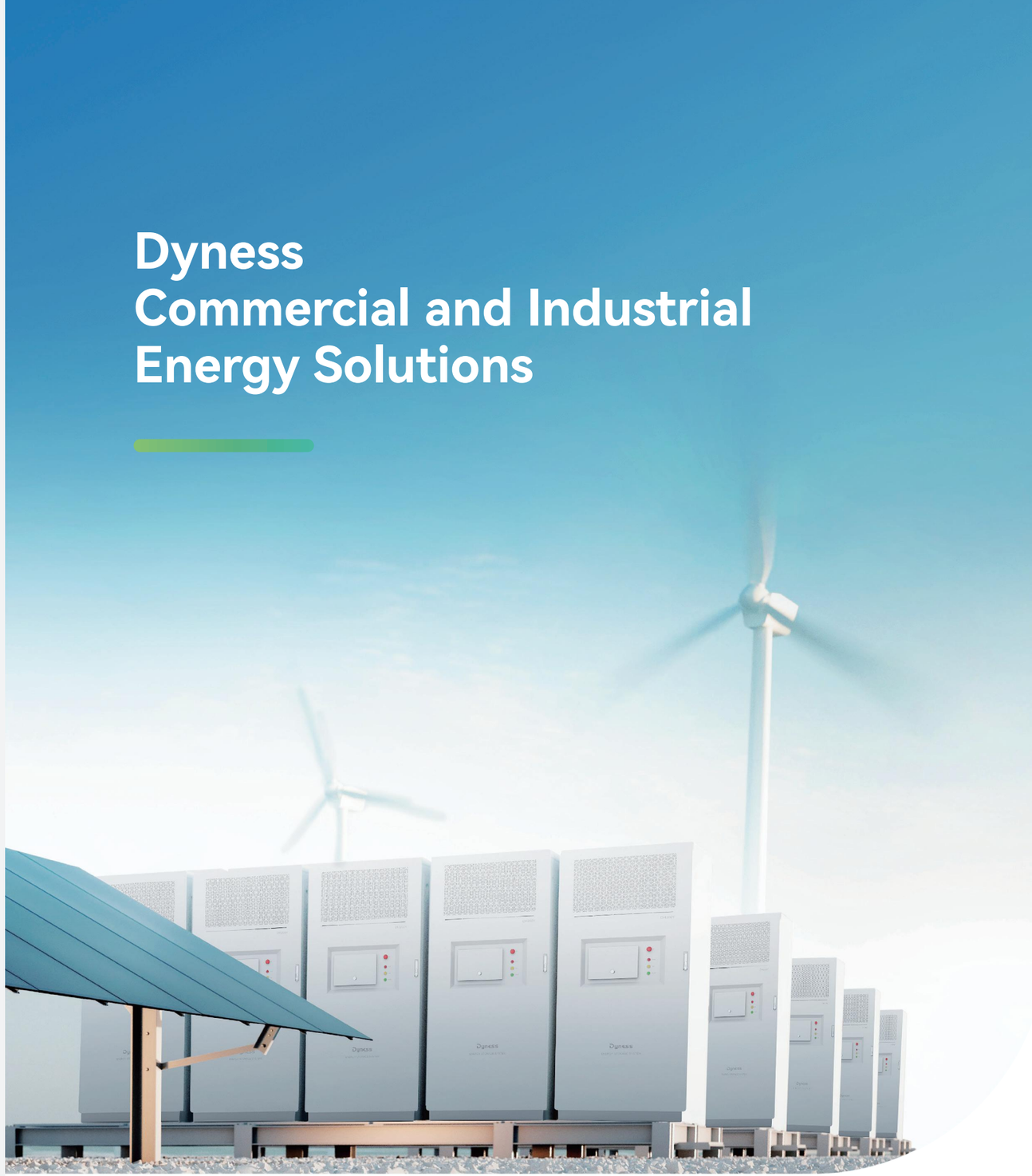
Dyness
Commercial and Industrial Energy Solutions



ABOUT DYNESS

Dyness is located in China, owning three manufacturing centers in Taizhou and Suzhou. We have 550+employees, and a R&D team of 150+ people with more than 10 years experience in this industry, who has deep understanding for energy storage and global carbon neutrality.

Dyness owns more than 110 patents and many international certifications such as TUV, UL, CE, JET, CEC etc. Our products have been delivered to 100+ countries including Europe, America, Australia, Africa etc, serving more than 300,000 households worldwide.

Powered by cutting-edge technology and innovation, Dyness is committed to providing customers with intelligent energy solutions, maximizing the use of green energy and making positive contributions to global carbon neutrality.

300,000+
Served Families

550+
Employess

110+
Patents

150+
R&D Engineers

100+
Global Footprints

3
Production Bases

DH200F All-in-one PV+ESS

Features and Advantages

Full-scenario

All-in-one multifunctional integration, supporting PV access, grid-to-off-grid switching, covering the whole scene of optical storage and diesel.

Highly Efficient and Flexible

It can be equipped with intelligent and efficient STS, and the off-grid switching time is less than 20ms;

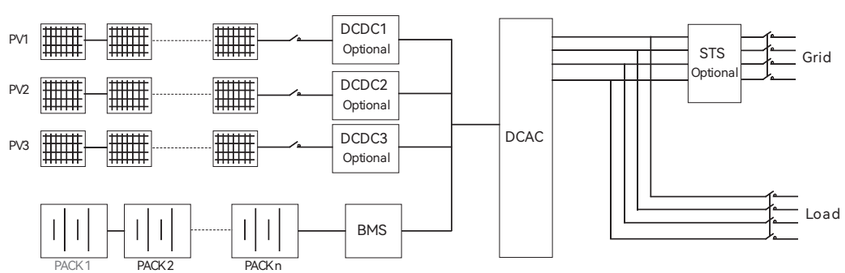
Supports up to 12 units in parallel, expandable to 2.5MWh

Ultimate Security

Preventative fire strategy with three-level detection, multiple extinguishing agents, and intelligent judgment by EMS

NEW

Topology



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Technical Parameters

Battery Technical Specifications	
Battery Type	LFP ($LiFePO_4$)
Cell Capacity	280Ah
Module Configuration	1P16S
PACK quantity	One cluster/15 PACK
Battery Voltage Range	672-864V
System Capacity	215kWh
PV Parameters	
Input Voltage	200-670V
Number of MPPT Trackers	0~3
MPPT Power	50 kW per channel*3
AC Output(On Grid)	
Rated Output Power	100kW
Rated Output Voltage	400Vac
Voltage Range	320 Vac ~460 Vac
Wiring Method	3P4L+PE
Rated output frequency	50Hz/60Hz (Settable)
Grid frequency Range	45-55Hz /55-65Hz (Settable)
THDi	≤3% (Rating power)
AC Output(Off Grid)	
Rated Output Power	100kW
Rated Output Voltage	400Vac
Voltage Range	320 Vac ~460 Vac
Wiring Method	3P4L+PE
Rated output frequency	50Hz/60Hz(Settable)
Grid frequency Range	45-55Hz /55-65Hz(Settable)
Switch Time	≤20ms
System parameters	
Dimensions（W*D*H)	1850*1200*2250mm
Weight	3000kg（TBD）
Operating Temperature Range	-20~50℃
Operating Humidity Range	0~95%
IP Protection	IP55
Anti-corrosion	C3
Noise	≤75dB
Elevation	3000m(>2000m derating)
Cooling Method	Air cooling
Display	Touchscreen
Fire Fighting	Level 3 detection + system level fire protection
Communication Port	Ethernet/4G
Cycle Life	6000 cycles/80% EOL (25℃, 100% DOD, 0.5P)
Standards	GB/T36276、GB/T34131、IEC62619、IEC63056 IEC60730、EN62477、EN61000-6-2/4、IEC 62933

DH200Y All-in-one Liquid Cooling System

Features and Advantages

Safe and Reliable

Pack cell pressure monitoring, triple-level fire suppression, active discharge, and explosion-proof design

High Energy Density

Occupies an area of 1.58 m², energy density up to 147kWh/m²

Intelligent and Efficient

Intelligent Precision Liquid Cooling with Cluster-Level Temperature Difference Under 3℃

High-level Protection

C5 corrosion protection grade, IP65+Pack, and IP65 PCS

Minimalist Operation and Maintenance

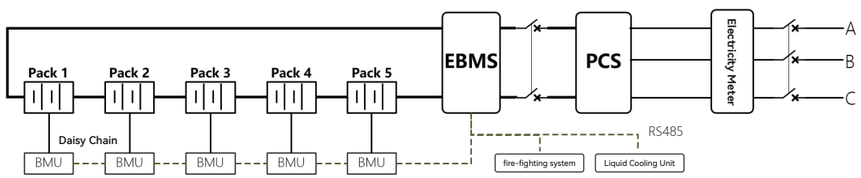
Pre-maintenance plan, fully modular design, minimalist operation and maintenance

Flexible Expansion

Single-unit reserved expansion interface, allowing flexible expansion;

Supports up to 10 units in parallel, expandable to 2.3MWh

Topology



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Technical Parameters

Battery Technical Specifications	
Battery Type	LFP ($LiFePO_4$)
Cell Capacity	280Ah
Module Configuration	1P52S
PACK quantity	One cluster/5 PACK
Battery Voltage Range	728~936V
System Capacity	232kWh
AC Output(On Grid)	
Rated Output Power	100kW
Rated Output Voltage	400Vac
Voltage Range	340 Vac ~440 Vac
Wiring Method	3P3L+PE
Rated output frequency	50Hz/60Hz(Settable)
Grid frequency Range	45-55Hz /55-65Hz(Settable)
THDi	≤3%（Rating power）
System parameters	
Dimensions（W*D*H)	1055*1500*2400mm
Weight	2500kg（TBD）
Operating Temperature Range	-20~55℃
Operating Humidity Range	0~95%
IP Protection	IP65
Anti-corrosion	C5
Noise	≤75dB
Elevation	3000m(>2000m derating)
Cooling Method	Smart Battery Liquid Cooling + PCS Air Cooling
Display	Touchscreen
Fire Fighting	Class 3 fire protection + active venting + explosion protection
Communication Port	Ethernet/4G
Cycle Life	8000 cycles/80%EOL(25℃,100%DOD,0.5P)
DC Expansion Capacity	93-392kWh
Standards	GB/T36276、GB/T34131、IEC62619、IEC63056 IEC60730、EN62477、EN61000-6-2/4、IEC 62933

DH300Y Liquid Cooling Integrated Energy Storage System

Features and Advantages

Safe and Reliable

Pack cell pressure monitoring, triple-level fire suppression, active discharge, and explosion-proof design

Flexible Expansion

Single-unit reserved expansion interface, allowing flexible expansion;

Supports up to 10 units in parallel, expandable to 3.1MWh

Large Capacity

New large cell with 312kWh per cabinet

High-level Protection

C5 corrosion protection grade, IP67+Pack, and IP65 PCS

Intelligent and Efficient

Intelligent precision liquid cooling with cluster-level temperature difference of 3℃;

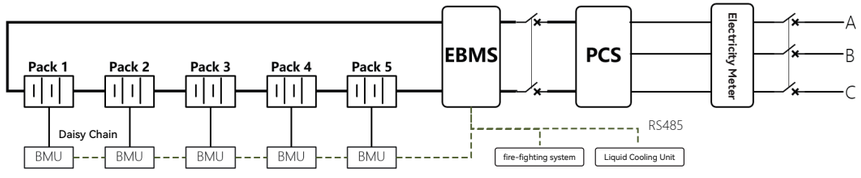
Energy efficiency improved by 2%, saves 6 kWh per day per unit

NEW

Minimalist Operation and Maintenance

Pre-maintenance plan, fully modular design, minimalist operation and maintenance

Topology



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Technical Parameters

Battery Technical Specifications	
Battery Type	LFP ($LiFePO_4$)
Module Configuration	1P52S
PACK quantity	One cluster/5 PACK
Battery Voltage Range	728~936V
System Capacity	312kWh
AC Output(On Grid)	
Rated Output Power	135kW
Rated Output Voltage	400Vac
Voltage Range	340 Vac ~440 Vac
Wiring Method	3P3L+PE
Rated output frequency	50Hz/60Hz (Settable)
Grid frequency Range	45-55Hz /55-65Hz (Settable)
THDi	≤3%（Rating power）
System Parameters	
Dimensions（W*D*H）	1560*1400*2480mm
Weight	3200kg（TBD）
Operating Temperature Range	-20~55℃
Operating Humidity Range	0~95%
IP Protection	IP55
Anti-corrosion	C5
Noise	≤75dB
Elevation	3000m(>2000m derating)
Cooling Method	Smart Battery Liquid Cooling + PCS Air Cooling
Display	Touchscreen
Fire Fighting	Class 3 fire protection + active venting + explosion protection
Communication Port	Ethernet/4G
Cycle Life	8000 cycles/80%EOL(25℃,100%DOD,0.5P)
DC Expansion Capacity	125-498kWh
Standards	GB/T36276、GB/T34131、IEC62619、IEC63056、IEC60730、EN62477、EN61000-6-2/4、IEC 62933

DH5000Y-C20-DC Liquid Cooling Container

Features and Advantages

Ultimate Security

Three-stage fire protection + active venting + explosion-proof design;

Cell pressure detection, three-stage fuse,real-time insulation check

High Energy Density

Large battery, up to 5MWh in a 20ft container

Highly Efficient and Flexible

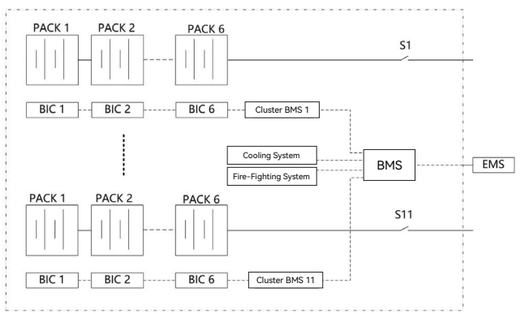
Intelligent Precision Liquid Cooling with Cluster-Level Temperature Difference of 1.5℃;

One cluster, one management string design, zero parallel connection loss

Minimalist Operation and Maintenance

Modular & non-walk-in design, pre-assembled, intelligent minimalist operation and maintenance

Topology



Technical Parameters

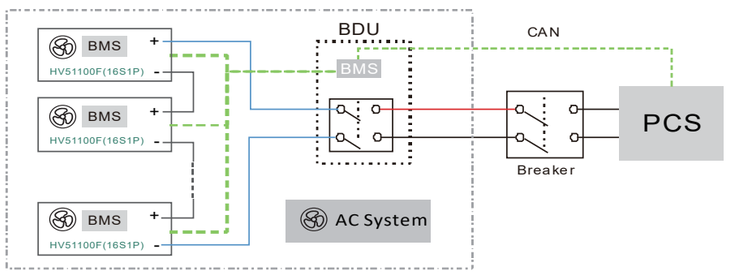
Battery Technical Specifications	
Battery Type	LFP ($LiFePO_4$)
Module Configuration	1P64S
PACK quantity	6 PACK*11 clusters (single cluster management)
Battery Voltage Range	1075.2~1382.4
System Capacity	5MWh
System parameters	
Dimensions（W*D*H)	6058*2438*2896mm
Weight	39t
Operating Temperature Range	-20~55℃
Operating Humidity Range	5%~95%
IP Protection	IP55
Anti-corrosion	C5
Elevation	3000m(>2000m derating)
Cooling Method	Smart Battery Liquid Cooling
Display	Touchscreen
Fire Fighting	Class 3 fire protection + active venting + explosion protection
Communication Port	Ethernet
Standards	GB/T36276、GB/T34131、IEC62619、IEC63056、IEC60730、EN61000-6-2/4、IEC 62933、UL9540A

PowerStone Outdoor Battery Energy Storage Cabinet

Features and Advantages

- 1C Charge & Discharge Rate
- Extendable Up to 1MWh
- Outdoor Use
- Modular Design

Topology



Technical Parameters

Model	PowerStone-15s
Battey Type	Li-ion(LFP)
Nominal Battery System Energy	76.8kWh
Nominal Battery System Voltage	768Vdc
Battery System Working Voltage Range	672~864Vdc
Battery System Weight	1450kg
Battery Cabinet Dimension(W*D*H)	1315*1010*1880mm
Battery Module Type	HV51100F
Battery Module Number	15pcs
Expansion	Max.12 cabinets connected in parallel
Recomended Charge & Discharge C Rate	1
Max.Depth of Discharge	100%
Battery System Protection Level	IP55
Anticorrosion Grade	C5
Altitude	≤2000m
Communication	CAN/RS485
Installation Environment	Outdoor
Cooling Method	Air conditioning cooling
Wiring	Cables enter and exit at the bottom of the cabinet
Humidity range	5%~85%RH(No condensation)
Compliance	UN38.3/IEC62619/1EC63056/IEC6247/EMC
Battery Module Specifications	
Battery Type	Li-ion(LFP)
Nominal Battery Module Voltage	512Vdc
Nominal Battery Module Capacity	100Ah
Nominal Battery Module Energy	5.12kWh
Recommended Charge/Discharge Current	100A
Max.Continuous Charge/Discharge Current	100A
Battery Module Weight	47kg
Dimension(W*D*H)	548*554*152.8mm
Battery Module Protection Level	IP20
Cooling Method	Fan cooling
Charging Temp. Range	0~55℃
Discharging Temp. Range	-10~55℃
BDU Specifications	
BDU model	BDU-100
Max. Continuous Charge/Discharge Current	100A
Max. Continuous Charge/Discharge Power	100kW
Battery System Protection Level	IP20
Dimension(WDH)	560*510*155.5 mm
Weight	13kg

PowerRack HV4 Rack Energy Storage System

Features and Advantages

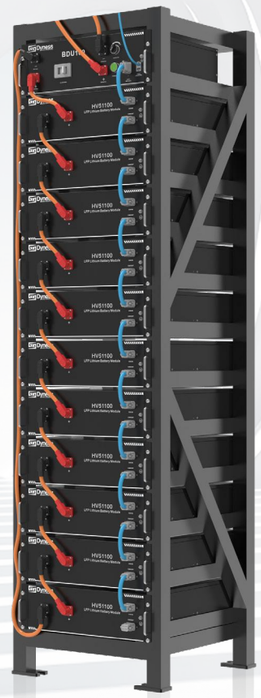
High Safety LFP
LFP & smart BMS

Expandable
Capacity up to 76.8kWh per cluster

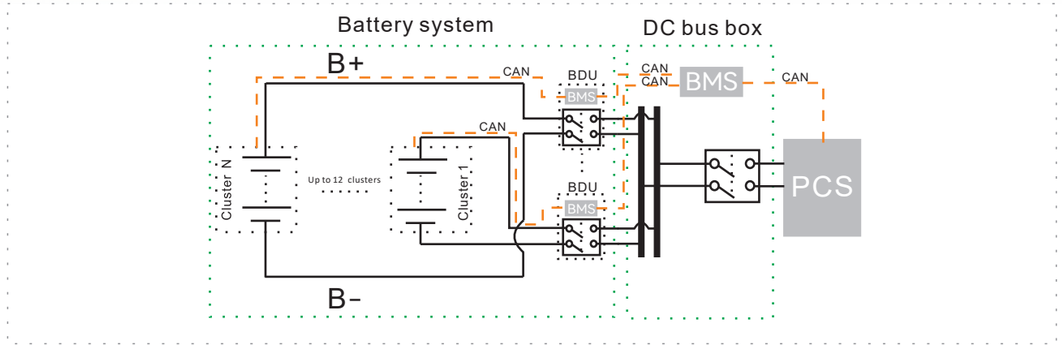
Tailor-made Cabinet
Suitable for multi-module installation

High Voltage
High system effeiciency

Wide Application
Cover all needs in commercial fields



Topology



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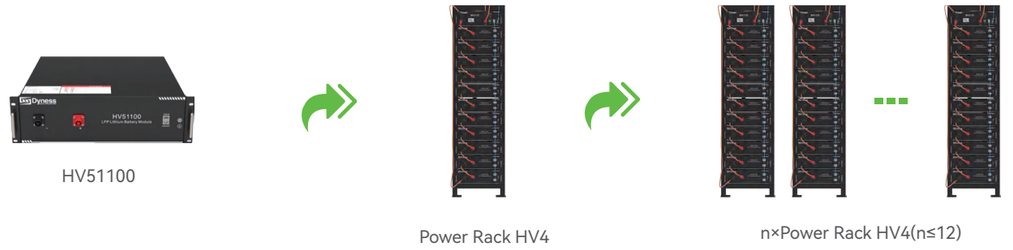
Technical Parameters

Model	HV51100
Battery Type	$LiFePO_4$
Nominal Battery Energy	5.12kWh
Nominal Capacity	100Ah
Nominal Voltage	51.2V
Net Weight	43.5kg
Dimension(W*D*H)	481*535*140mm
Charging Temp. Range	0-55℃
Discharging Temp. Range	-10-55℃
Communication	CAN
Cycle Life[1]	>6000 Cycles
Protection Level	IP20
Expansion	Max. 12 cluster system in parallel
Compatible Inverters	Goodwe/Solis/SAJ/Sinexcel/Hoymiles/Growatt Ecatus/Sermatec/ATESS/Sunways etc.
Certification & Safety Standard	UN38.3/CE-EMCA

[1]Test conditions: 0.2C Charging/Discharging, @25℃, 80% DOD



HV51100

Power Rack HV4

n×Power Rack HV4(n≤12)

Model	PowerRack HV4	
Rack Type	PowerRack HV4-7s	PowerRack HV4-11s
Battery Module Type	HV51100	HV51100
Battery Module Quantity	7 units	11 units
Nominal Battery Energy	35.84kWh	56.32kwh
Nominal Capacity	100Ah	100Ah
Nominal Voltage	358.4V	563.2V
Operating Vol. Range	313.6-403.2V	492.8-633.6V
Nominal Power Output	21.5kW	33.79kw
Max.Power Output	35.84kW	56.32kw
Recommend Charging Current	50A	50A
Recommend Discharging Current	50A	50A
Net Weight	397.5kg	646.5kg
Dimension(W*D*H)	548*568*1412mm	548*568*2012mm
Rack System Control unit Type[2]	BDU100	BDU100
Module Quantity and Configuration	7 Units in series	11 Units in series

[2]HV51100 battery module need to be used with BDU100 control unit

PowerRack HV4F Rack Energy Storage System

Features and Advantages

High Safety LFP
LFP & smart BMS

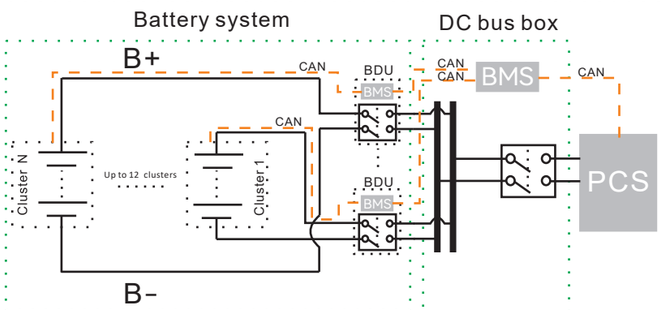
Expandable
Capacity up to 76.8kWh per cluster

Tailor-made Cabinet
Suitable for multi-module installation

High Voltage
High system effeiciency

Wide Application
Cover all needs in commercial fields

Topology



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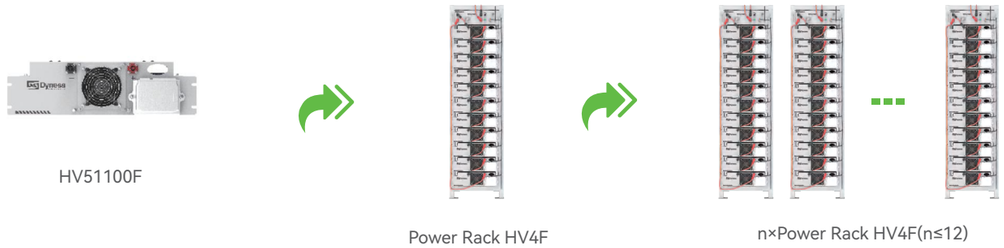
Technical Parameters

Model	HV51100F
Battery Type	$LiFePO_4$
Nominal Battery Energy	5.12kWh
Nominal Capacity	100Ah
Nominal Voltage	51.2V
Net Weight	47kg
Dimension(W*D*H)	548*554*152.8mm
Charging Temp. Range	0-55℃
Discharging Temp. Range	-10-55℃
Communication	CAN/RS485
Cycle Life[1]	>6000 Cycles
Protection Level	IP20
Expansion	Max. 12 cluster system in parallel
Certification & Safety Standard	UN38.3

[1]Test conditions: 0.2C Charging/Discharging, @25℃, 80% DOD



HV51100F

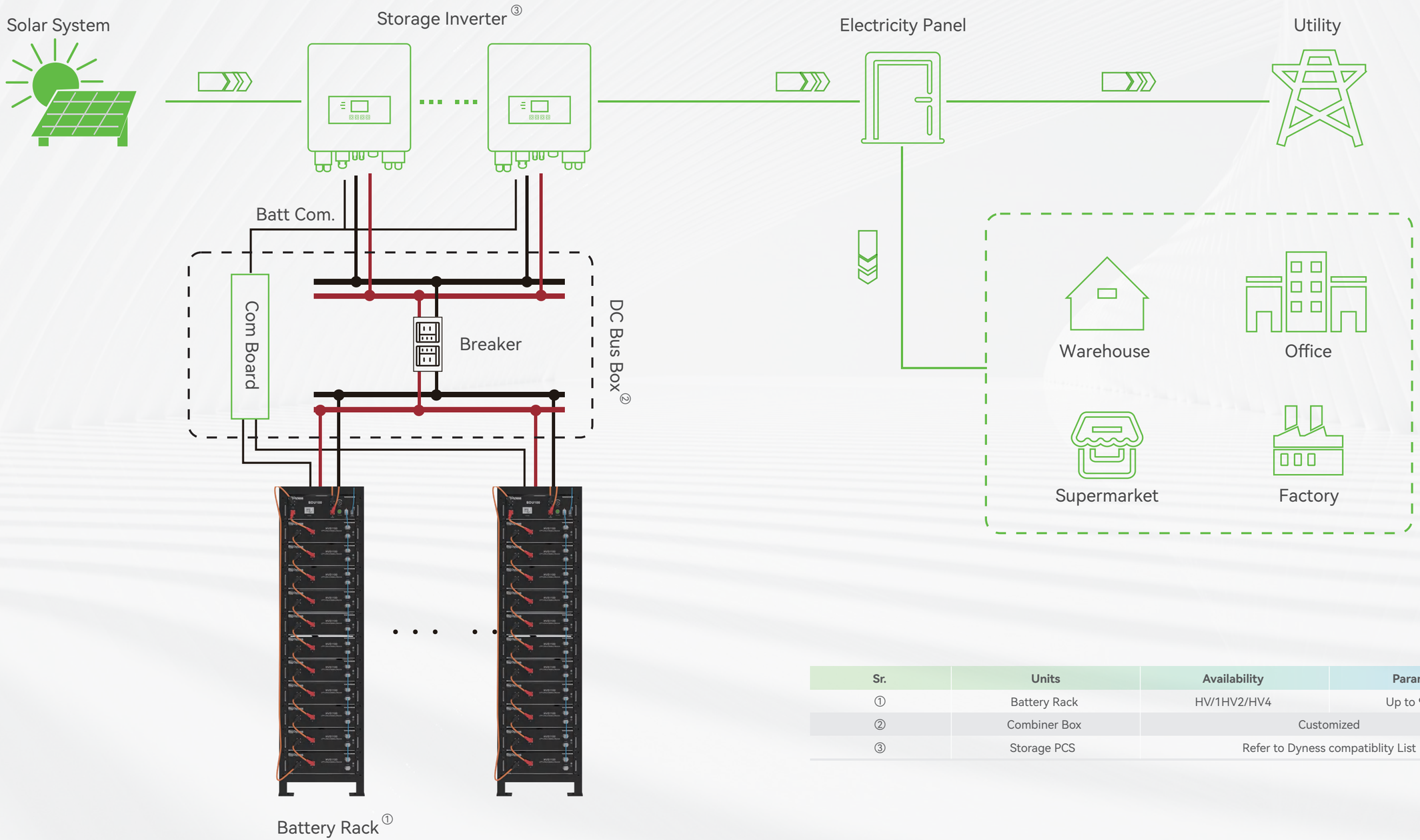
Power Rack HV4F

n×Power Rack HV4F(n≤12)

Model	PowerRack HV4F	
Rack Type	PowerRack HV4F-8s	PowerRack HV4F-11s
Battery Module Type	HV51100F	HV51100F
Battery Module Quantity	8 units	11 units
Nominal Battery Energy	40.96kWh	56.32kWh
Nominal Capacity	100Ah	100Ah
Nominal Voltage	409.6V	563.2V
Operating Vol. Range	358.4~460.8V	492.8-633.6V
Nominal Power Output	40.96kW	56.32kW
Max. Power Output	40.96kw	56.32kW
Recommend Charging Current	100A	100A
Recommend Discharging Current	100A	100A
Net Weight	501kg	642kg
Dimension(W*D*H)	594*558*1663mm	594*558*2152mm
Rack System Control Unit Type[2]	BDU100	BDU100
Module Quantity and Configuration	8 Units in series	11 Units in series

[2]HV51100F battery module need to be used with BDU100 control unit

Product topology diagram



Sr.	Units	Availability	Parameters
①	Battery Rack	HV/1HV2/HV4	Up to 920kWh
②	Combiner Box	Customized	
③	Storage PCS	Refer to Dyness compatiblity List	

Typical Application Scenarios

High Energy Consumption Industry + Energy Storage

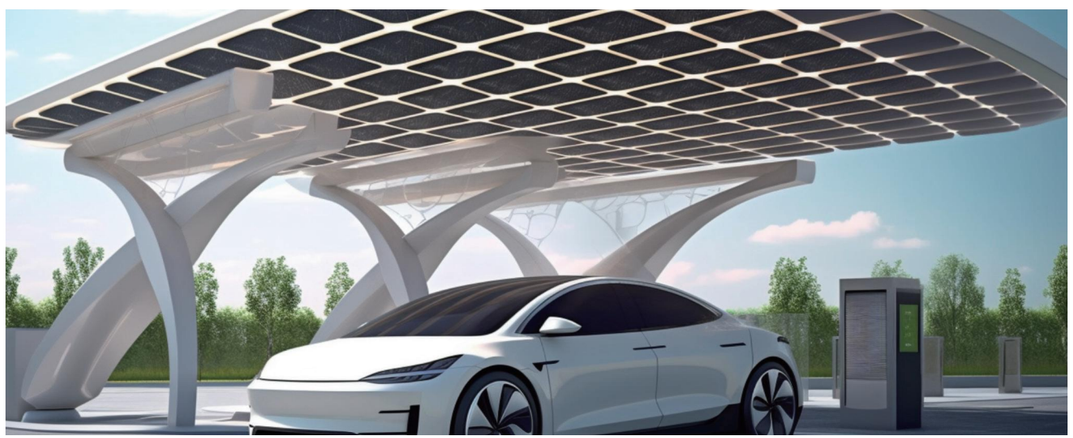
The two high-energy enterprises generally use a lot of electricity and operate 24 hours a day, with high energy consumption and high basic electricity bills. The energy storage system can reduce electricity bills through local peak-to-valley price differences, reduce peak power, and reduce capacity fees to reduce the electricity price expenditure of high-energy-consuming enterprise users. At the same time, it can effectively reduce the cost of capacity expansion in response to the needs of enterprises for later expansion.

Data Center + Energy Storage Project

The energy storage system connected to the data center can enhance the power supply reliability of the data center and prevent data loss caused by accidental power outages. The energy storage system enhances the economics of data center power operation through mechanisms such as peak shaving and capacity deployment, low carbon and energy saving.

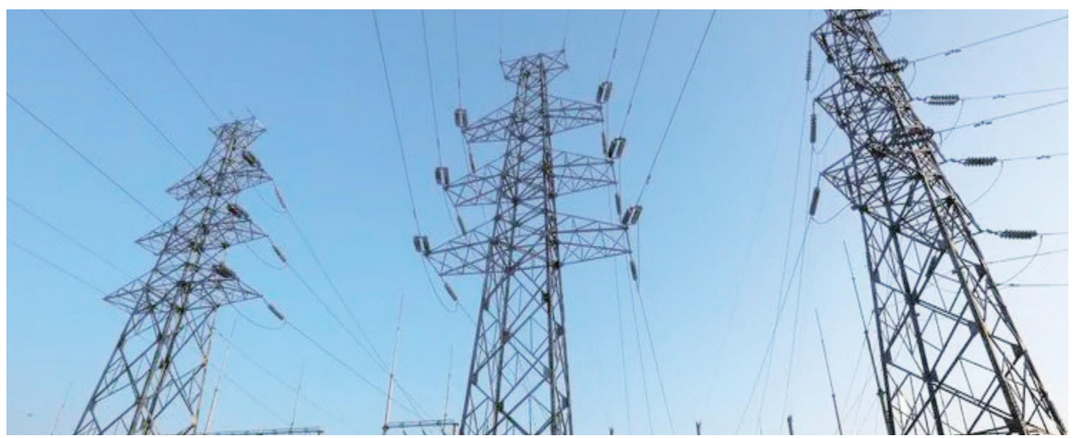
Photovoltaic Storage Charging Station

In the era of expensive gas and rising oil prices, new energy vehicles have become the choice of many car owners. In the booming development of new energy vehicles, the construction of charging infrastructure is also gradually accelerating, and new energy vehicle charging stations, as energy supply facilities to maintain the operation of new energy vehicles, can be said to be riding the wave of the trend. Under the background of carbon neutrality, the supercharging station covering "photovoltaic + energy storage + charging" is favored by local governments. On the one hand, the addition of energy storage can help PV solve part of the redundancy of power generation and grid connection problems in the application process, and on the other hand, it can play a combination of advantages to driving the multi-directional development of PV, energy storage and charging pile.



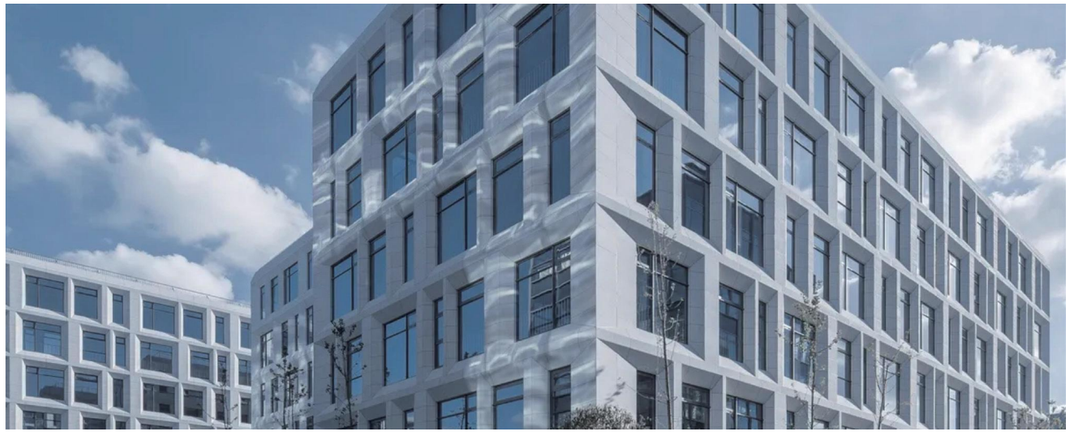
Rural Grid Renovation + Energy Storage

The line is long and the voltage loss is large, which makes the electricity unable to work normally.
User shock load, affecting the stability of the agricultural network;
High harmonic pollution of the grid and easy aging of electrical appliances affect the safety of use;
The demand brought by the development trend of the power grid;
The terminal data monitoring energy storage system in the smart grid can solve the problems of weak grid terminal and capacity demand of the grid terminal.



Zero-carbon Smart Park + Energy Storage

The factory area is large, and there are many equipment such as cabinets and computer rooms. Therefore, the electricity consumption has the characteristics of large power consumption, high load for a long time, and high energy consumption of equipment. The high price difference, which is suitable for energy storage projects. peak valley arbitrage



Energy Storage + Microgrid

Microgrid, also known as distributed energy islanding system, combines generators, loads, energy storage devices and control devices systematically to form a single controllable unit that supplies electricity and heat to customers at the same time. Microgrid + energy storage is suitable for remote areas with electricity, some of which are not covered by large grids, such as islands and remote mountainous areas.

Dyness Smart Solar Storage Cloud Platform

Whole Life Cycle Smart Management

Based on cloud computing and IoT technology, Dyness Smart Solar Storage Cloud Platform can provide intelligent monitoring and management of distributed energy resources, automatically optimise the performance and benefits of the energy storage system, and achieve efficient and highly reliable energy storage and management. The cloud platform supports the various types of energy storage equipment seamless docking and a variety of energy access methods. It can cover the whole scenario of optical storage and diesel charging business, providing users with safe, flexible and sustainable energy management solutions.

System Architecture

- Distributed microservices architecture
- Multitenant + multi-business scenario architecture support
- Powerful data processing and high scalability

Functional Features

- Remote monitoring of energy storage devices
- Energy management & optimisation
- Switching of control strategies such as peak-valley arbitrage and demand management

Operations Management

- Panoramic data collection and intelligent analysis
- Fault diagnosis and early warning of energy storage systems
- Electricity consumption monitoring and profitability optimisation