Parasol Elite Power

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PEP-20C2H1200K

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PEP-20C2H1000K



Today, energy storage system plays the critical and growing role in decarbonizing the electric system and improving the electricity quality. More broadly, ESS deployed behind the meter, whether as integrated components of wind and solar power facilities or as stand-alone projects, is providing system capacity and flexible generation to maintain reliability as the growing contributions of renewables from electricity generation.

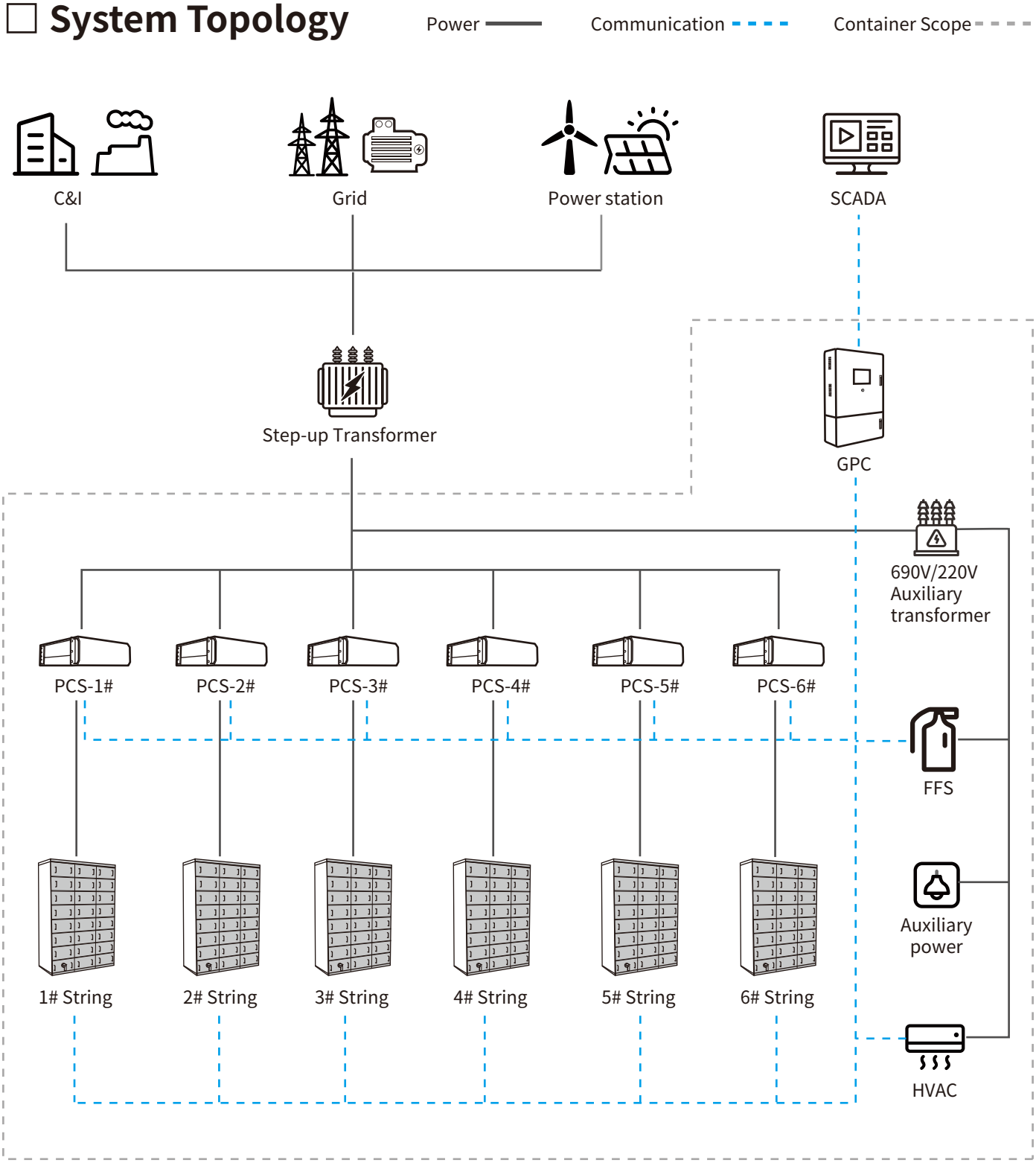
PEP MW is a high-performance, all-in-one, containerized battery energy storage system developed by Deep Blue Energy Engineering Institute, provides C&I users with the intelligent and reliable solution to optimize energy efficiency and resilience. As the leading BESS product, PEP MW is certificated by UL1973, UL9540A, IEC62619, CE , UN38.3, UN3536, providing secure, reliable and safe power supply.

PEP-20C2H1000K, with capacity of 2,064kWh@20ft and 2,238@20ft HQ, is ideal for mostly utility and C&I applications, such as renewable energy power plant supplement, factories, buildings, etc. The integrated and easy-to-install BESS can be easily connected and matched with the equipment, while the advanced BMS and cloud-based operation platforms bring superior interaction experience for users.

Application Areas

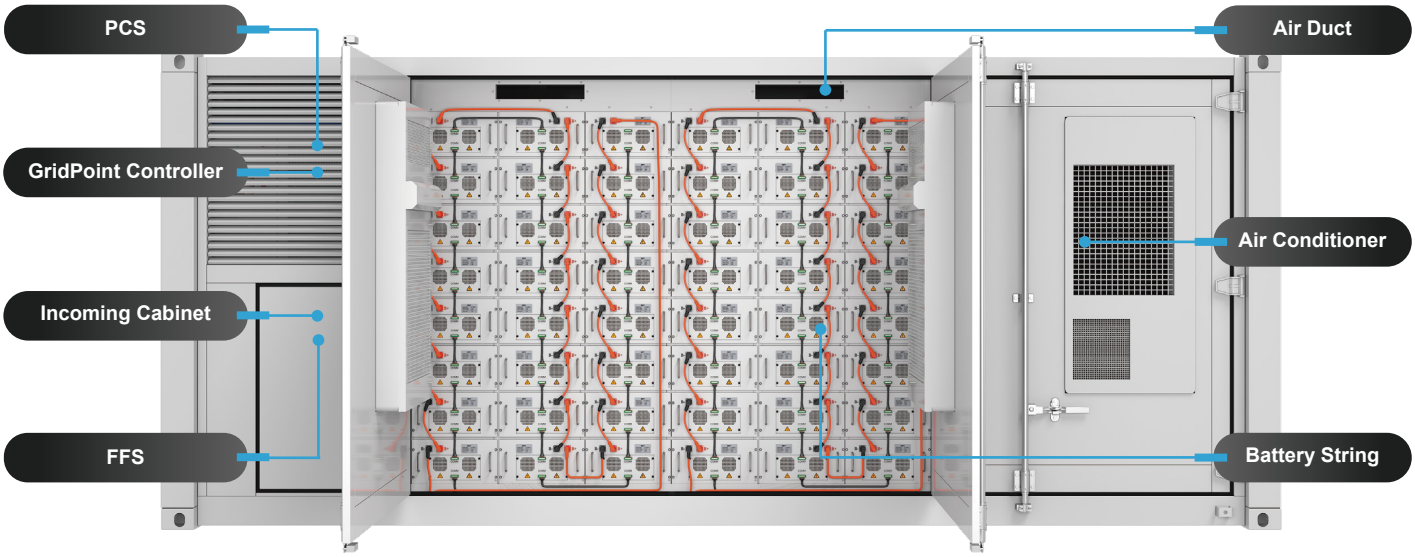
- Smooth New Energy Output
- Voltage, Frequency Support, Frequency Modulation
- Peak Valley Arbitrage
- Demand Management
- Construction of Microgrid

System Topology



More Energy	All-in-one Design	Simple O&M	Safe & Reliable
Pack-level Optimization String-level Optimization	AC/DC All-in-one Design Reducing Initial Investment	No periodic balancing No experts site visit	Modular Design High Availability

Product Layout



Product Model Definition

20C2H1000K-6S373-24P14

Container Size	Minimum Charge Time	PCS Power	Quantity of Battery String	Battery String	Quantity of Pack	14kWh Pack

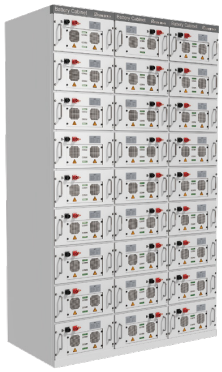
Product Configuration

Product Model	Battery string type	Pack Qty	Nominal capacity	DC voltage range	Grid-connected voltage	Dimensions (WDH mm)
20C2H1000K	S373-24P14	24	2,064kWh	1,075.2V~1,363.2V	690V	6,058x2,438x2,591mm
20C2H1100K	S373-26P14	26	2,237kWh	1,164.8V~1,476.8V	690V	6,058x2,438x2,896mm

System Technical Specifications

Item	1MW/2.0MWh	1.1MW/2.2MWh
DC Data		
Battery chemistry	Lithium Iron Phosphate (LFP)	
Cell life cycle	80% Retention with 5,000 Cycles @ 0.5C 25℃	
Cell spec	3.2V/280Ah	
String configuration	1P384S	1P416S
Number of strings	6	
Rated energy capacity	2MWh	2.2MWh
DC rated energy capacity	2,064.36kWh	2,236.44kWh
Rated voltage	1,228.8V	1,331.2V
Voltage range	1,075.2V~1,363.2V	1,164.8V~1,476.8V
BMS communication interface	RS485, Ethernet	
BMS communication protocol	Modbus RTU, Modbus TCP	
AC Data		
Rated AC power	1,000kW	1,100kW
Maximum AC power	1,320kW	
Rated voltage	690V	
Grid voltage range	586.5~759V(Optional)	
AC rate of current	836.8A	920.5A
Output THDi	< 3%	
AC PF	0.1~1 leading or lagging (Controllable)	
AC output	Three-phase and three-wire	
General Data		
Dimension w/o clearances (L*W*H)	6,058x2,438x2,591mm	6,058x2,438x2,896mm
Weight of the whole system	24t	25.5t
Degree of protection	IP65	
Operating temperature range	-20~40℃	
Relative humidity	0~95% (non-condensing)	
Max working altitude	4,000m/13,123ft	
Cooling concept of DC hatch	HVAC	
Fire fighting system	NOVEC1230/FM-200	
Communication interfaces	RS485, Ethernet, GPRS	
Certificates	UL9540， IEC62619, IEC62109, IEC62933, UN3536, UN38.3	

☐ Key Components



- 0.5C Charge/Discharge;
- Power supply can be single battery string or parallel battery strings;
- Easy configuration and maintenance.

Battery String-S373

Item	Data
Battery module	S373-24P14(Max S373-26P14)
Pack QTY	24(Max 26)
Nominal capacity	344.06kWh(Max 372.736kWh)
Rated voltage	1,228.8V
DC voltage range	1,075.2V~1,363.2V
Pack	3.2V/280Ah@1P16S
Communication	Ethernet, CAN, RS485
Lifespan	>5,000 cycles@0.5C, 25°C
Dimensions (W×D×H)	1,440×650×2,150mm
Weight	2,880kg
Certifications	UL1973, UL9540A, IEC62619, CE , UN38.3



- Single-stage three-level modularization;
- Multi-branch input to reduce battery series and parallels connection;
- One-to-one Management of Battery string and PCS.

Power Conversion System

Item	Data
DC voltage range	1,000~1,500V
Maximum DC current	224.5A * 6
Rated output power	200kW * 6
Rated grid voltage	690V, 3W+PE
Grid voltage range	586.5~759V(Optional)
Grid frequency	50Hz/60Hz
Max AC current	184.1A * 6
AC PF	0.1~1 leading or lagging (Controllable)
Weight	100kg * 6
Certifications	UL 1741, IEEE 1547, IEC62477-1, IEC 61000

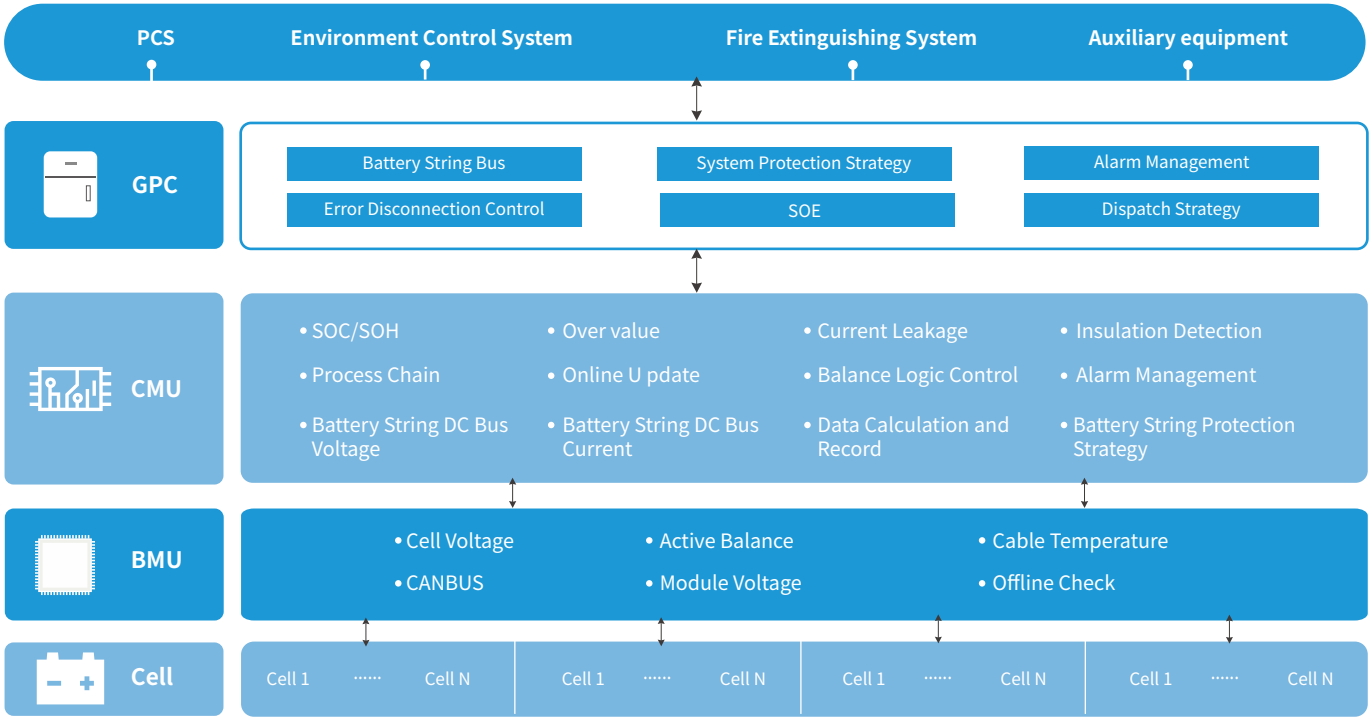


- All-round signal collection;
- Comprehensive logical control;
- Multilevel electric & control protection;
- Intelligentize Communication management ;
- Simple Configuration.

GridPoint Controller (GPC)

Item	Data
Power interface	AC220V/DC24V
Communication	Modubus RTU、Modubus TCP
Relay	24 stem node input / output
Network control application	Peak shifting and valley filling, peak cutting, smoothing renewable energy output curve
Offline control application	Backup power supply, PV/DG/EV/ESS integrated micro-grid control

BMS with Real-time Active Balance



BMU		CMU	
Cell Voltage Measurement Accuracy	±5 mV	Battery String Voltage Measurement Range	50~1,500V
Cell Voltage Monitoring Interval	⩽500ms	Battery String Voltage Measurement Accuracy	±1%
Cell Temperature Measurement Accuracy	±2°C	Battery String Voltage Monitoring Interval	⩽200ms
Cell Temperature Measurement Interval	⩽3s	Battery String Current Measurement Range	±400A
Cell Current Balance	Active Balance,5A MAX	Battery String Current Measurement Accuracy	⩽1%
Cell Voltage Measurement Range	1~4.95 V	Battery String Current Monitoring Interval	⩽50ms
Over-current Protection	250A/1s	SOC Calculation Accuracy	⩽8%
Short-Circuit Protection	500A/10ms	Input Insulation Resistance	⩾10MΩ，1,000VDC

NOTES

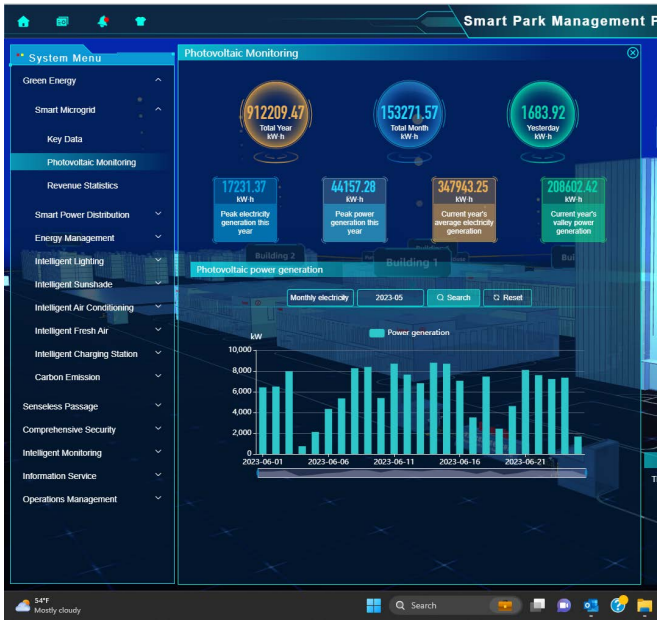
System Platform Screenshots



Microgrid Usage Summary



Outdoor/Indoor Environmental Monitoring



Photovoltaic Monitoring

Product dimensions and physical appearance in this brochure are general representations for demonstration purposes. Actual dimensions and physical appearance may be different depending on customer requirements.

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