

AMPIFARM | AF-C20-CY-2060-NCPB-1000

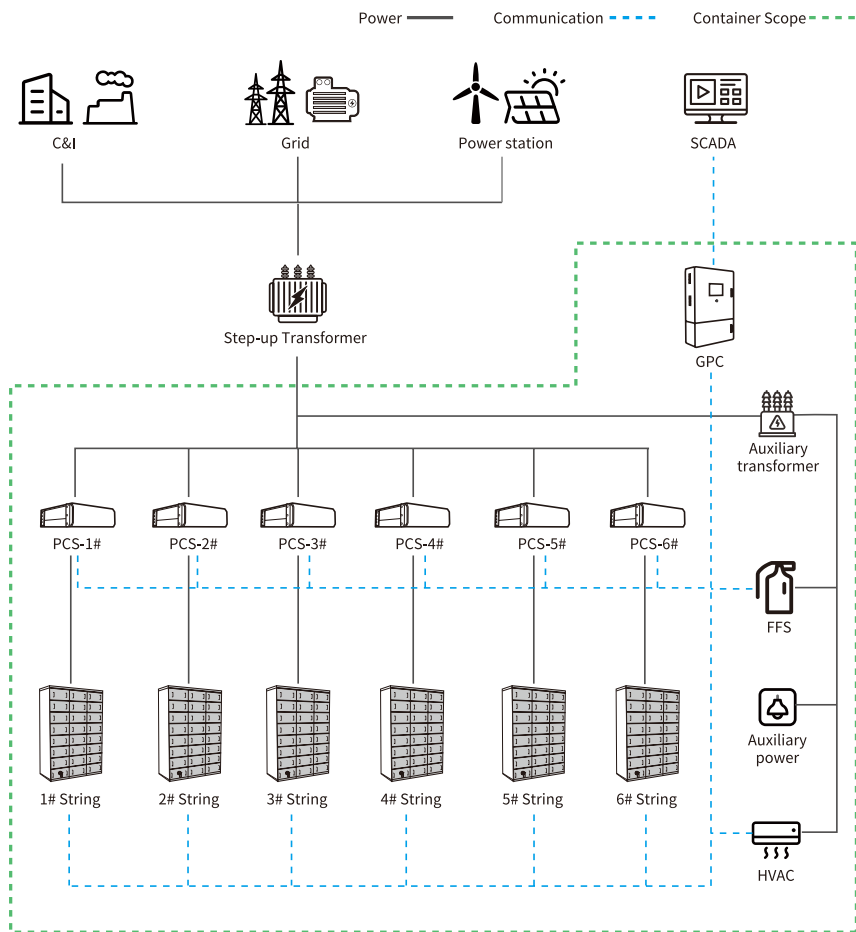
Battery Energy Storage System, 2060kWh Battery Capacity, 1000kW Power Conditioning System (PCS)

AmpiFARM Energy Storage Solution: Safety, Efficiency, and Profitability Combined. Our system is specifically designed to meet the unique needs of industrial and commercial customers. AmpiFARM seamlessly integrates cutting-edge technology, offering unmatched safety and reliability while maximizing financial returns.

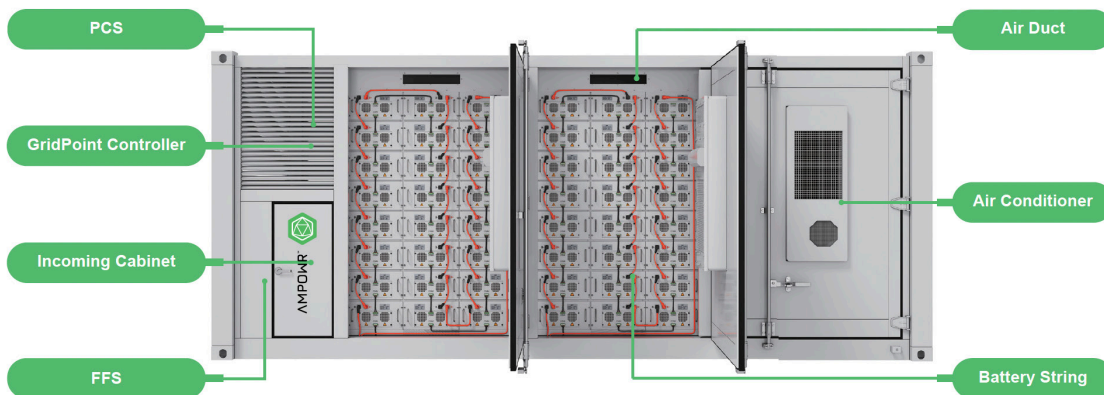
AmpiFARM systems utilize the most recent advancements in battery technology (Nano-Crystal™ Phosphate), ensuring fire safety, reliability, and longevity. AmpiFARM is an adaptable and scalable energy solution that can be expanded when needed. The System connects to Ampowr Cosmos™ (EMS): Our state-of-the-art EMS, which ensures the highest level of data safety while enabling efficient energy consumption monitoring and optimization.

DATASHEET

SYSTEM TOPOLOGY



PRODUCT LAYOUT

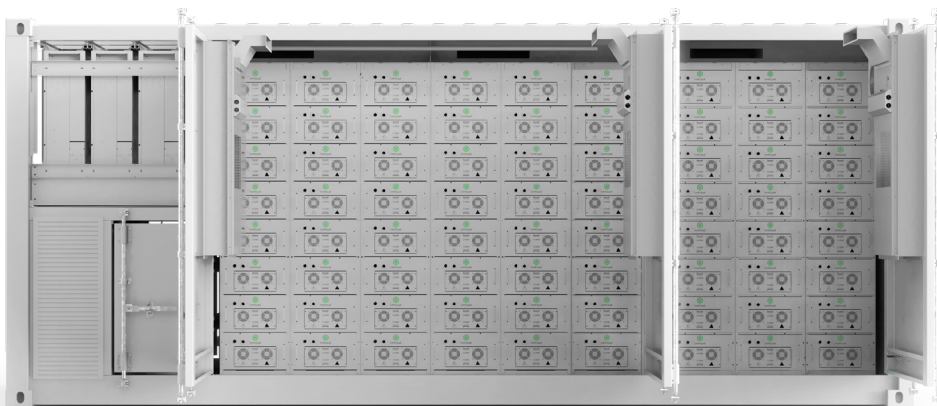


SYSTEM CONFIGURATION

Product Model	Battery string type	String Quantity	Nominal Capacity	DC Voltage Range	Grid-connected voltage	Dimensions (WDH mm)
AF-C20-CY-2060-NCPB-1000	NCPB-41P42373S	6	2,060kWh	1,075.2V ~ 1,363.2V	690V	6,058x 2,438x 2,591mm

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 expert site visits	Modular Design High Availability

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DC DATA

BATTERY CHEMISTRY	Nano Crystal Batteries Lithium Iron Phosphate (LFP)
CELL LIFE CYCLE	80% Retention with 5,000 Cycles @ 0.5C 25 °C
CELL SPEC	3.2V/280Ah
STRING CONFIGURATION	1P384S
NUMBER OF STRINGS	6
DC RATED ENERGY CAPACITY	2,060kWh
RATED ENERGY CAPACITY	1,228.8V
RATED VOLTAGE	1,075.2V ~ 1,363.2V
BMS COMMUNICATION INTERFACE	RS485, Ethernet
BMS COMMUNICATION PROTOCOL	Modbus RTU, Modbus TCP

AC DATA

NOMINAL AC POWER	1,000kW
RATED AC POWER	1,200kW
MAXIMUM AC POWER	1,320kW
RATED VOLTAGE	690V
GRID VOLTAGE RANG	586.5~759V (Optional)
AC RATE OF CURRENT	836.8A
OUTPUT THDI	< 3%
AC PF	0.1-1 leading or lagging (Controllable)
AC OUTPUT	3P+PE

GENERAL DATA

DIMENSION W/O CLEARANCES (L*W*H)	6,058x2,438x2,591mm
WEIGHT OF THE WHOLE SYSTEM	24t
DEGREE OF PROTECTION	IP65
DEGREE OF PROTECTION - PCS ROOM	IP66
DEGREE OF PROTECTION - CONTROL AND DISTRIBUTION ROOM	IP54
OPERATING TEMPERATURE RANGE	-20~40 °C
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

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



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



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

Battery String

BATTERY MODULE	NCPB41P42-373S
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	51.2V/280Ah@1P16S
COMMUNICATION	Ethernet, CAN, RS485
LIFESPAN	>5,000 cycles @0.5C, 25℃
DIMENSIONS (W×D×H)	1,440 × 750 × 2,150mm
WEIGHT	2,922kg
CERTIFICATIONS	UL1973, UL9540A, IEC62619, CE , UN38.3

Power Conversion System

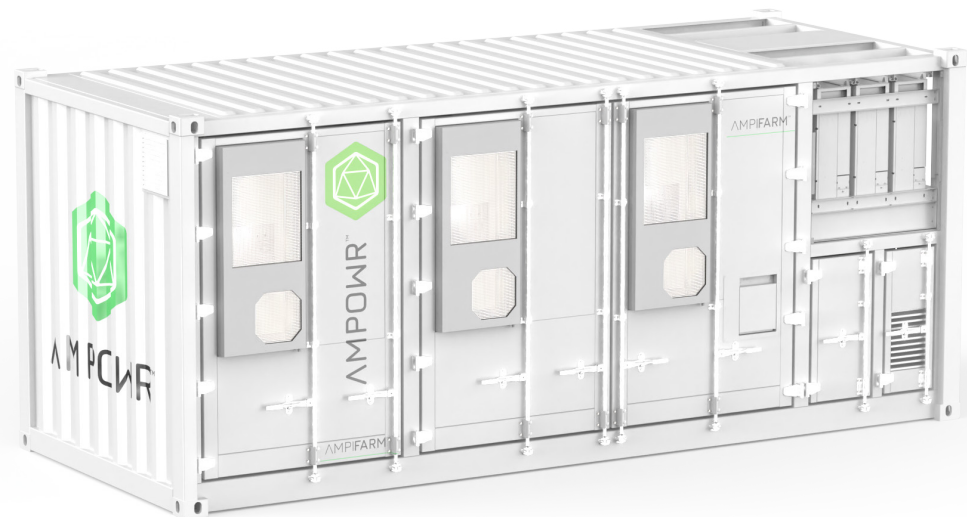
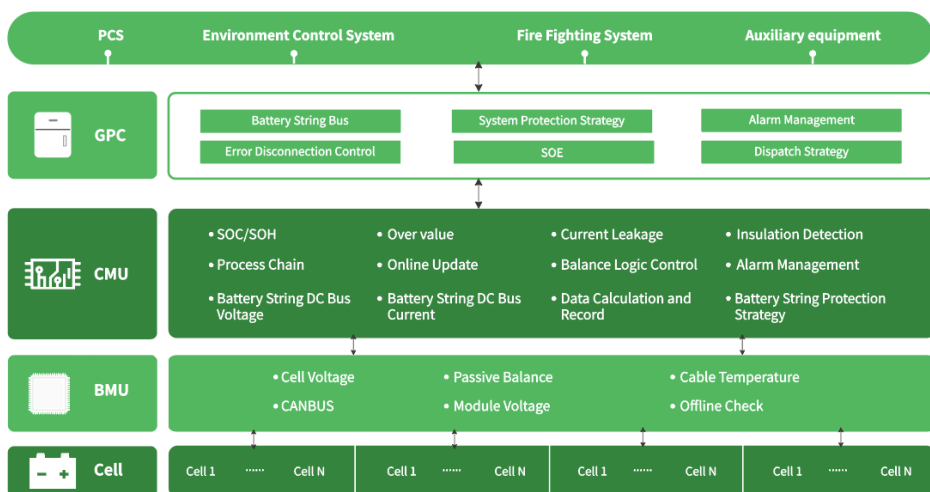
DC VOLTAGE RANGE	1000~1,500V
DC MAX CURRENT	224.5A * 6
RATED AC POWER	200kW * 6
RATED VOLTAGE	690V
GRID VOLTAGE RANGE	-15%~+10%
GRID FREQUENCY	50Hz/60Hz
MAX AC CURRENT	184.1A * 6
AC PF	0.1-1 leading or lagging (controllable)
WEIGHT	100kg * 6
CERTIFICATIONS	UL 1741, IEEE 1547, IEC62477-1, IEC 61000

GridPoint Controller (GPC)

POWER INTERFACE	AC220V/DC24V
COMMUNICATION	Modbus RTU, Modbus TCP
RELAY	24 stem node input / output
NETWORK CONTROL APPLICATION	Peak shifting and valley filling, peak cutting, smooth renewable energy output curve
OFFLINE CONTROL APPLICATION	Backup power supply, PV/DG/EV/ESS integrated micro-grid control

DATASHEET

BMS with Real-time Passive Balance



BMU		CMU	
Cell Voltage Measurement Accuracy	±2.5 mV	Battery String Voltage Measurement Range	100~1,500V
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	±300A
Cell Current Balance	Passive Balance, 150mA MAX	Battery String Current Measurement Accuracy	≤1%
Cell Voltage Measurement Range	1~5 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

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