



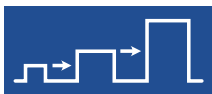
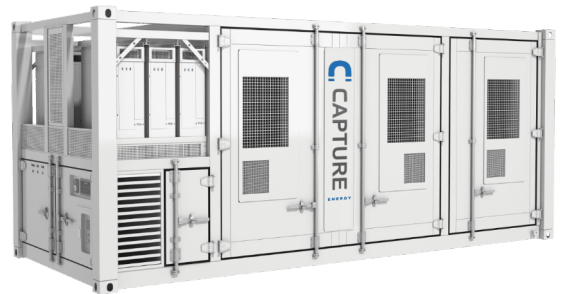
**BESS PowerBox 1MW/2MWh**

**690V**



## BESS PowerBox products

- LPF batteries with long life time
- 80% Retention with 5,000 cycles
- Optimized for use in the flexibility markets
- Colour RAL 7035 (possible to order other colours)
- Can be delivered with end wall for profiling
- EMS ready with Modbus interface
- Delivered with EMS for service agreement functionality
- 5-years warranty



### Scalable

Capture Energy delivers modular and scalable battery energy storage systems (BESS) in containers, the BESS PowerBox solutions with capacities ranging from 250kWh to 2MWh, and these can be integrated to create large BESS installations.



### Wide range of use

The BESS PowerBox can be used for a wide range of services, enabling savings through a combination of optimised use of solar energy, peak shaving, arbitrage and participation in flexibility markets.



### Flexibility / frequency

BESS PowerBox can be unleashed on the rapidly growing frequency market (FFR and FCR-D) in the Nordic countries, and integrated with any flexible trading platform of your choice, can help realise your financial goals.



### EMS ready

The BESS PowerBox controller can be easily integrated into higher-level energy management systems, for compact and flexible energy storage with optimal capacity and performance.



### Easy to install

Capture Energy can meet your energy storage needs both today and in the years ahead by maintaining a low implementation threshold. Capture Energy offers BESS PowerBox systems that are easy to install, manage, adapt and expand.



### Best service

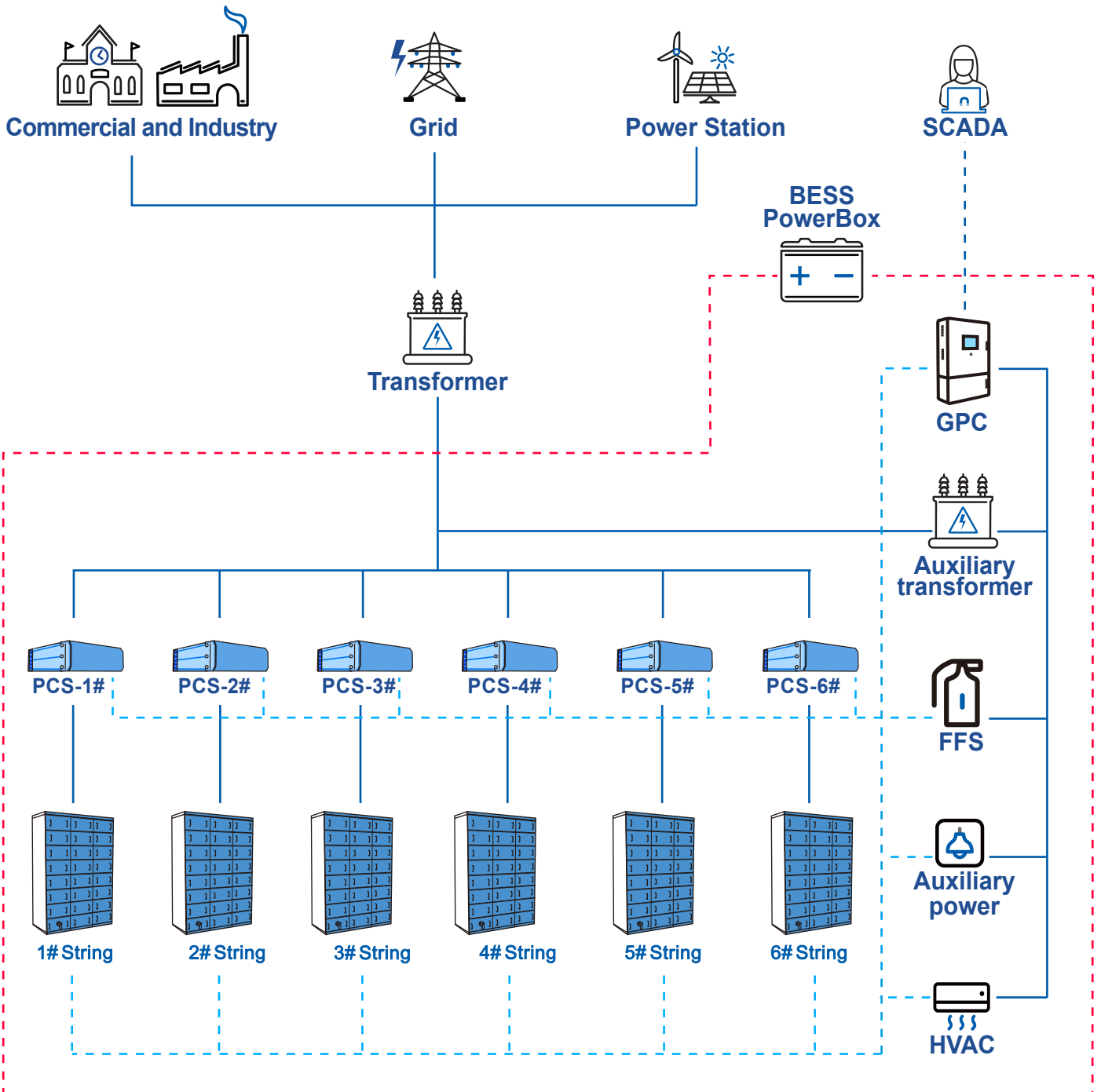
At Capture Energy we are dedicated to delivering technology that will enable us all to achieve our sustainability goals. Our ambition is to be the best in terms of delivery time, project management and service agreements that ensure fast delivery and trouble-free operation.



# BESS PowerBox 1MW/2MWh (690V) 0.5C Charge/Discharge

## System Topology

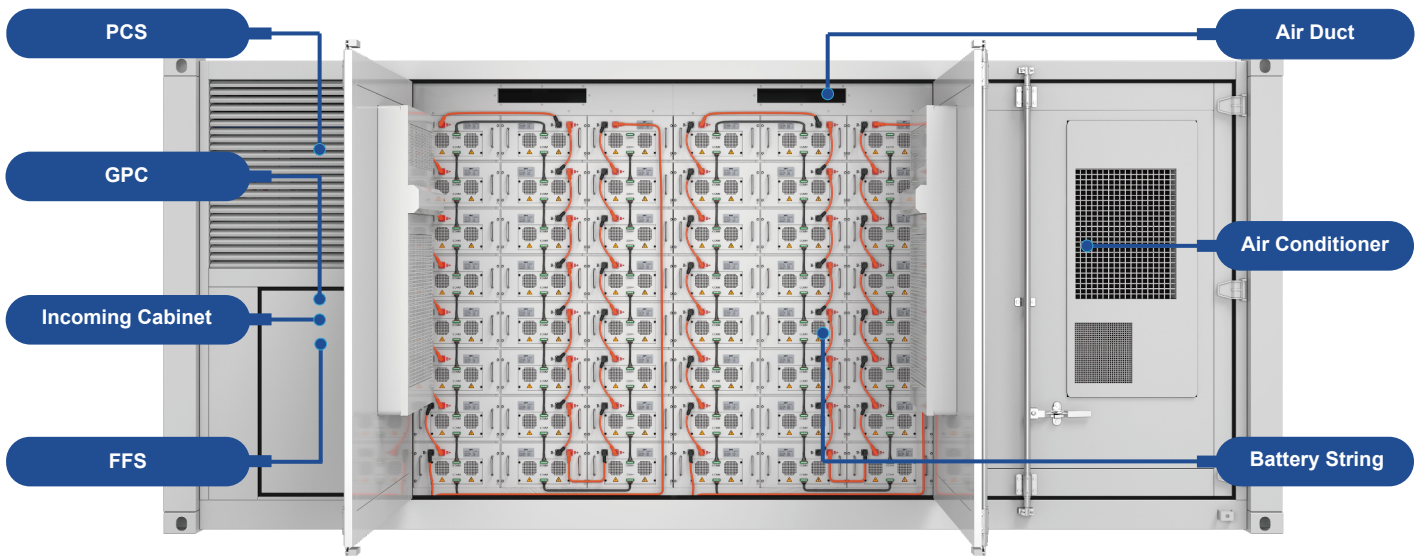
Power ——— Communication - - - - - Container Scope - - - - -





## BESS PowerBox 1MW/2MWh (690V) 0.5C Charge/Discharge

### Product Layout and Configuration



Product Model	Battery String Type	String Qty	Nominal Capacity	DC Voltage Range	Grid-Connected Voltage	Dimensions (WDH mm)
BESS PowerBox 1MW/1,7MWh	373-24-14	5	1,720kWh	1,075.2V~1,363.2V	690V	6,058x2,438x2,591mm
BESS PowerBox 1MW/2MWh	373-24-14	6	2,064kWh	1,075.2V~1,363.2V	690V	6,058x2,438x2,591mm

# System Technical Specifications

## BESS PowerBox 1MW/2MWh

### DC Data

Battery chemistry	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	2,064kWh
Rated voltage	1,228.8V
Voltage range	1,075.2V~1,363.2V
BMS communication interface	RS485, Ethernet
BMS communication protocol	Modbus RTU, Modbus TCP

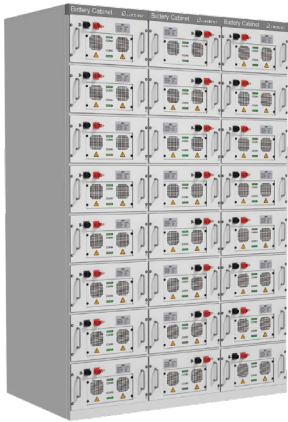
### AC Data

Nominal AC power	1,000kW
Rated AC Power	1,200kW
Maximum AC power	1,320kW
Rated voltage	690V
Grid voltage range	586.5~759V (Optional)
AC rate of current	836.8A
Output THDi	<3%
AC PF	0.1~1 leading or lagging (Controllable)
AC output	3 Phase, PE

### General Data

Dimension w/o clearances(L*W*H)	6,058x2,438x2,591mm
Weight of the whole system	26.5t
Degree of protection	IP54
Operating temperature range	-20~40°C
Relative humidity	0~95% (Non-condensing)
Max working altitude	3,000m/13,123ft
Cooling concept of DC hatch	HVAC
Communication interfaces	RS485, Ethernet, 4G/3G (Only for Capture Energy)
Certificates	UL9540, UL1741, CSAC22.2, IEEE1547, EN 50549, EN 61000, EN62477, UN3536

# Key Components



- 0.5C Charge/Discharge
- Power supply can be single battery string or parallel battery strings

## Battery String-373

Item	Data
Battery module	373-24-14
Pack QTY	24
Rated capacity	344.06kWh
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°C
Dimensions (W×D×H)	1,440×750×2,150mm
Weight	2,940kg
Certificates	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 (PCS)

Item	Data
DC voltage range	1,000~1,500V
Maximum DC current	224.5A * 6
Rated output power	200kW * 6
Rated grid 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
Certificates	UL 1741, IEEE1547, IEC62477-1, IEC 61000

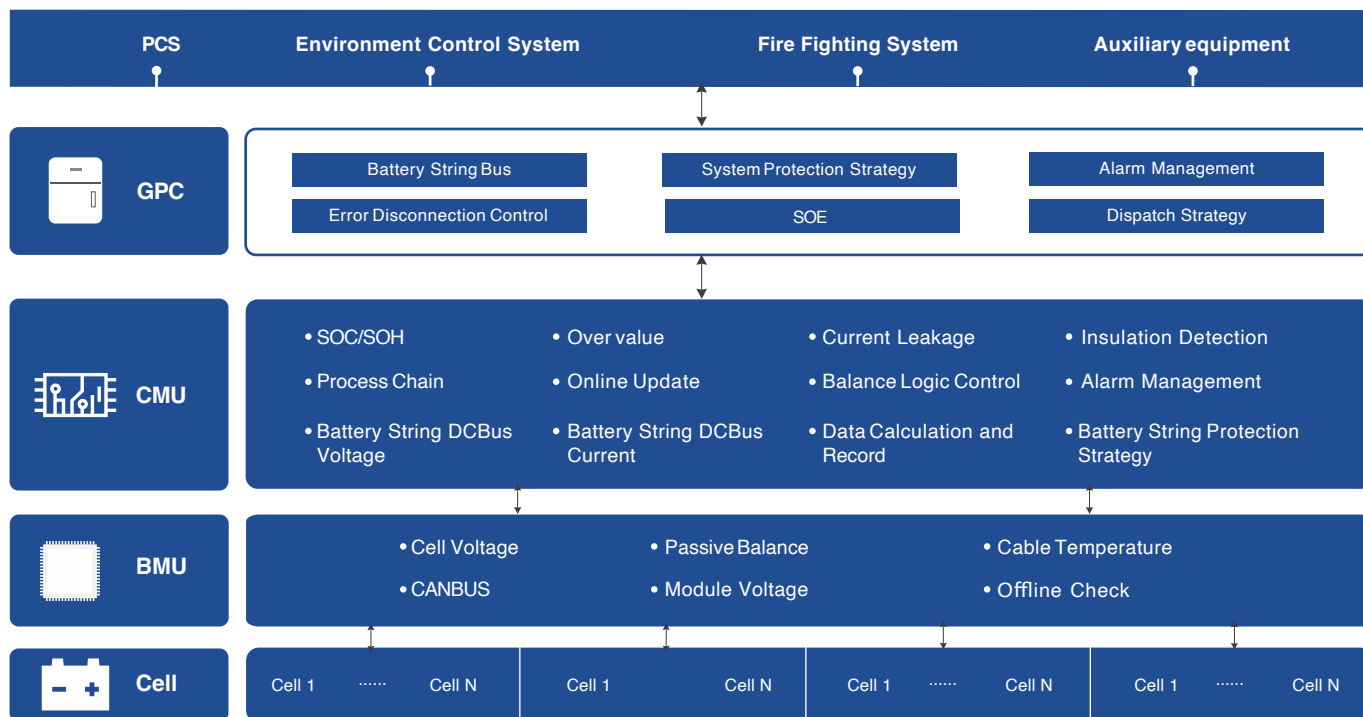


- All-round signal collection
- Comprehensive logical control
- Multilevel electric & control protection
- Intelligentize Communication management

## GridPoint Controller (GPC)

Item	Data
Power interface	AC400V/DC24V
Communication	Modbus RTU, Modbus TCP
Relay	24 stem node input/output

# BMS with Real-time Passive Balance



BMU		CMU	
Cell Voltage Measurement Accuracy	±2.5mV	Battery String Voltage Measurement Range	100~1,500V
Cell Voltage Monitoring Interval	≤500ms	Battery String Voltage Measurement Accuracy	±1%
Cell Temperature Measurement Accuracy	±2℃	Battery String Voltage Monitoring Interval	≤200ms
Cell Temperature Measurement Interval	≤3s	Battery String Current Measurement Range	±300A
Cell Current Balance	Active Balance, 5A MAX	Battery String Current Measurement Accuracy	≤1%
Cell Voltage Measurement Range	1~5V	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

All products are for delivery in Europe. The information in this document may be incomplete, out of date and may contain typographical errors. Capture Energy reserves the right to make changes in specifications and other information without prior notice, and the reader should in all cases consult Capture Energy to determine whether any such changes have been made.

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### Delivery service models

**1. TURN KEY SOLUTION** – all included, we are in charge from the start to plan use of the storage system and with application to grid company, included everything to installed, optimized up and running service at your place.

**2. INSTALL AT LOCATION** – we deliver specification for how to be prepared for installation, you prepare all, we will have a common quality check on site together, then we take the responsibility for installation and optimizing at your site.

**3. DELIVERED TO TRANSPORT** – your business are trained and take own responsibility for installation and optimizing.  
(Only available for selected partners.)



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