



# 1500V Liquid Cooling BESS 5016kWh Capacity in 20 Feet

May, 2024

BESS solution with high energy capacity and very high cycle life using 314Ah cell.

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# BESS Specification



No	Items	Unit	Parameters	Remark
1	Nominal Voltage	V	1331.2	
2	Nominal Energy	kWh	5016	@25°C±3°C
3	Voltage Range	V	1164.8-1497.6	
4	Recommended SOC Range	%	5-95	
5	Rated Charging Power	kW	2500	
6	Rated Discharging Power	kW	2500	
7	Charging Temperature	°C	0-55	
8	Discharging Temperature	°C	-20-60	
9	Thermal Management	/	Liquid Cooling	

No	Items	Unit	Parameters	Remark
10	System Temperature Difference	°C	≤5°C	@25°C±3°C
11	System Temperature Rise	°C	≤10°C	@25°C±3°C
12	Auxiliary Power	/	AC220V/400V	
13	Auxiliary Power	kW	~45	
14	Communication	/	RS485	To PCS/EMS
15	IP Level	/	IP65	
16	Altitude	m	≤4000	
17	Weight	T	42	
18	Dimension	mm	6058*2438*2896	20ft

# BESS Structure

BCP: 12 in 1

PDU: 1PDU with 8 packs

Battery Pack: XDLE 314Ah Cells 1P52S

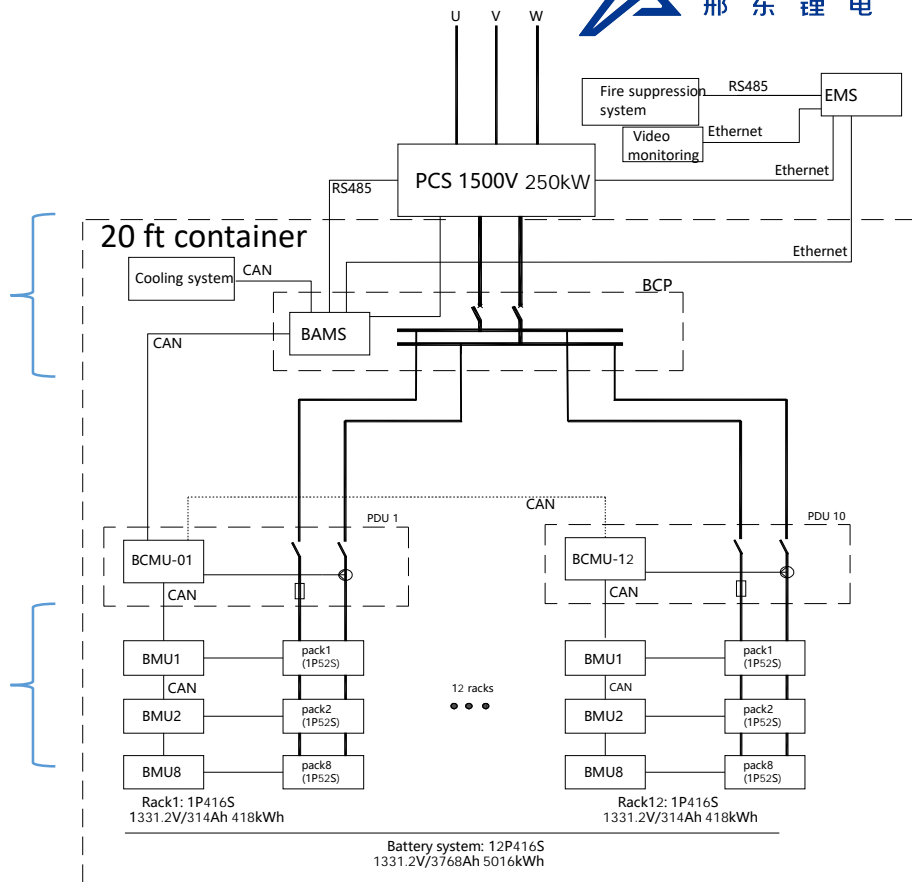
166.4V/52.25kWh

Battery Rack: 8 packs in series, 1P416S

1331.2V/418 kWh

Battery System: 12 racks in parallel,

1331.2V, 3768Ah (5016kWh)



# Our BESS Container



Fire suppression and liquid cooling system are separated with battery systems in two compartments.

# Cell Specification



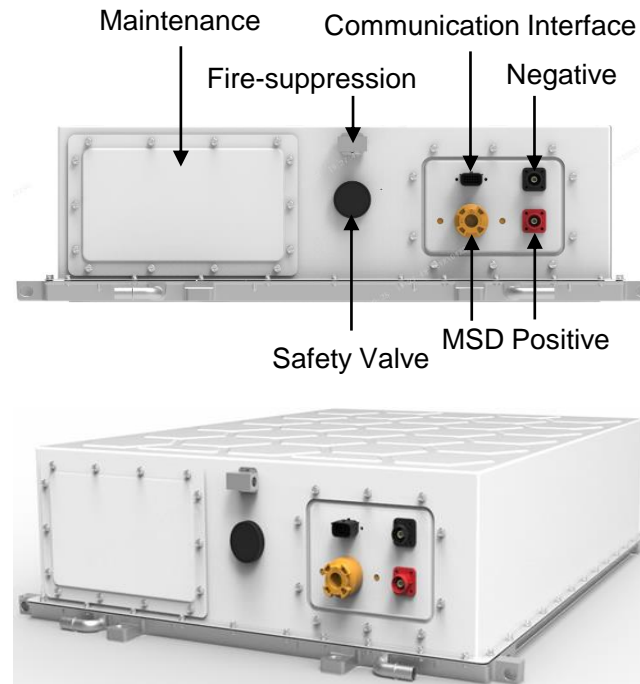
No	Items	Unit	Parameters	Remark
1	Cell Model	/	CBA71173204 (314Ah)	LFP
2	Nominal Capacity	Ah	314	
3	Nominal Voltage	V	3.2	
4	Voltage Range	V	2.5-3.65	
5	Energy	Wh	1004.8	
6	Energy Density	Wh/Kg	179	
7	Recommended SOC Range	%	5-95	
8	Dimension	mm	71×173×204	Without terminal
9	Weight	Kg	5.6	
10	IR	mΩ	≤0.25	
11	Continuous Charging / Discharging Rate	C rate	0.5C/0.5C	



XDLE 314Ah Cell

# Battery Module Specifications

No	Items	Unit	Parameters
1	Cell	/	CBA71173204 (314Ah)
2	Nominal Voltage	V	166.4
3	Energy	kWh	52.25
4	Charge/Discharge Current	C	0.5/0.5
5	Weight	Kg	336
6	Dimension	mm	1066×800×240
7	Number of Series/Parallel	/	1P52S
8	Nominal Capacity	Ah	314
9	Energy Density	Wh/Kg	>155
10	Cooling Method	/	Liquid Cooling



Battery Pack Diagram

The case adopts die-casting process, the liquid-cooled chamber is integrated with case, which has the advantages of light weight and high reliability.

# Battery Rack Specification

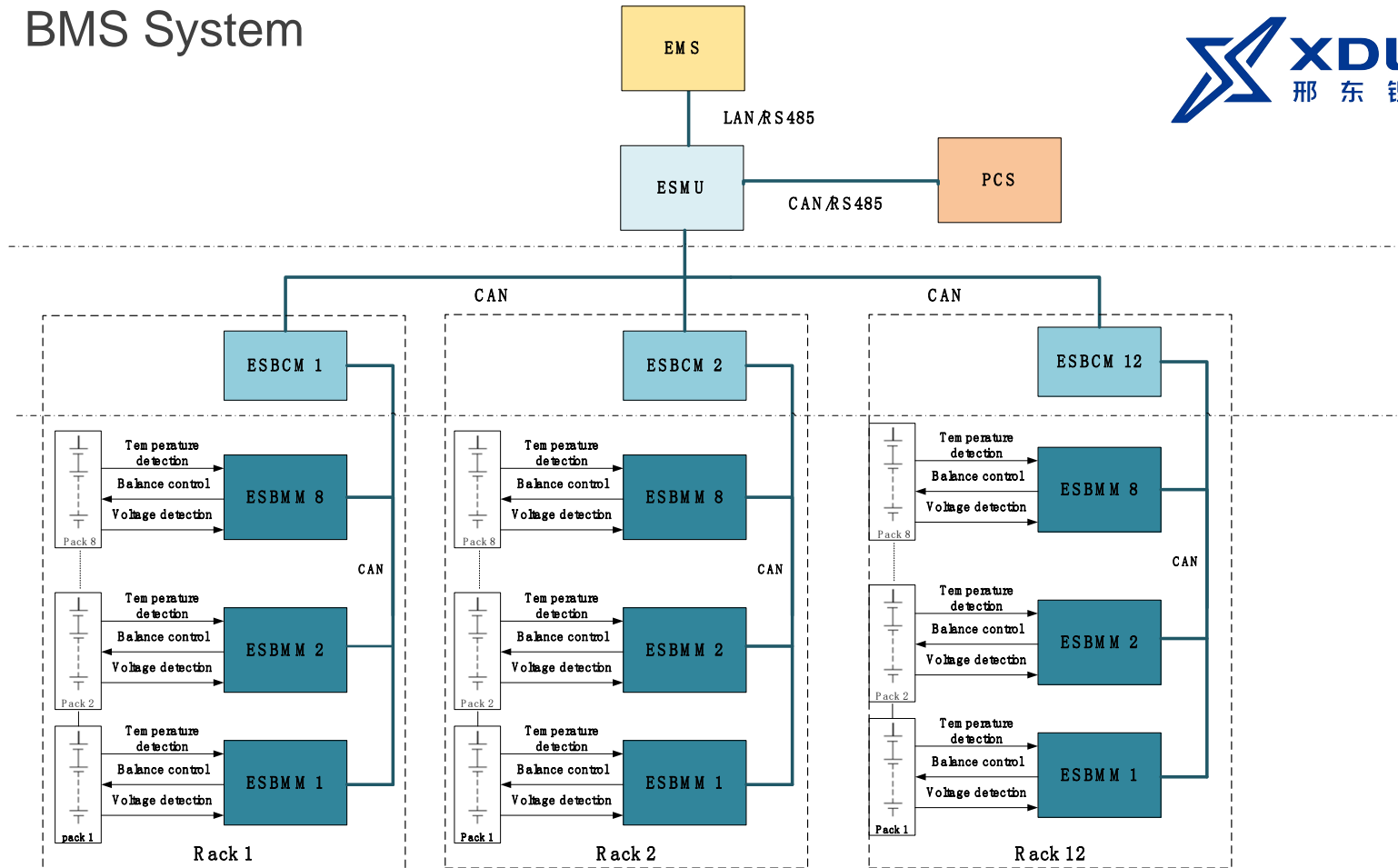
No	Items	Unit	Parameters
1	Nominal Voltage	V	1331.2
2	Energy	kWh	418
3	Number of Series/Parallel	/	1P416S
4	Auxiliary Power	W	200
5	Communication	/	CAN 2.0
6	Weight	Kg	2900
7	Dimension	mm	W862.7×D1077×H2466.4
8	Cooling Method	/	Liquid Cooling



Battery Rack Diagram

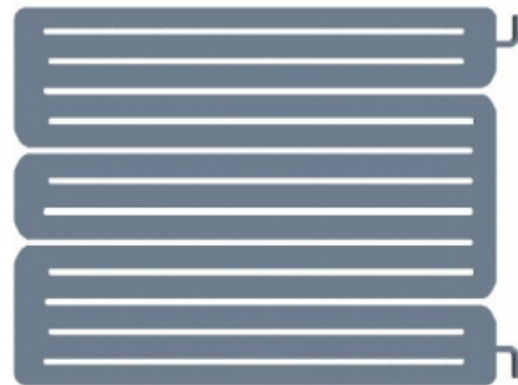
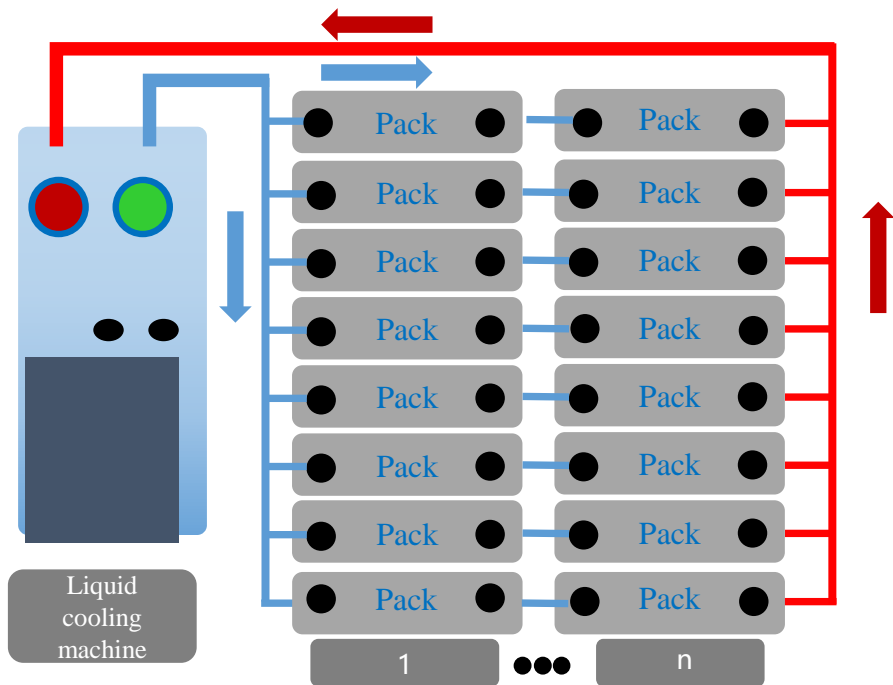


# BMS System



# Liquid Cooling System

- ◆ Parallel cooling circuit to reduce the temperature difference between modules.
- ◆ Big volume pack (52.25kWh/Pack), die-casting process and high reliability.
- ◆ Integrated liquid cooling to achieve both cooling and heating.



Liquid cooling panel at the bottom of module

# Product Certification Status



No	Product Items	Certification	Status
1	Cell	GB/T 36276	Done
2		UN38.3	Done
3		IEC62619	Done
4		UL1973	Done
5		UL9540A	On-going
6	PACK	GB/T 36276	On-going
7		UN38.3	On-going
8		UL9540A	On-going
9	RACK	GB/T 36276	On-going
10		UL1973	On-going
11		UL9540A	On-going