

ST510CS-4H

NEW

PowerStack Liquid Cooled C&I Energy Storage System



LOWER COST

- Integrated Pre-installation: High-degree integrated system with pre-installation and pre-commissioning reduces on-site commissioning work
- AI-Controlled Heat Saving: Innovative AI-controlled thermal balance cuts down daily system heat loss by 33%
- Precise Liquid-Cooling Temperature Equalization: Liquid-cooled balanced heat dissipation keeps the cell temperature difference $\leq 2.5^{\circ}\text{C}$



EFFICIENT AND FLEXIBLE

- High-efficiency Power Conversion: DC/AC power converter unit features a high efficiency of up to 98.5%
- Seamless Installation: Cabinets can be installed side by side seamlessly for a smooth appearance
- Flexible Grid Connection: Supports on-grid, off-grid, and automatic switching



SAFE AND RELIABLE

- AI-Monitored Cell Health: AI monitors cell health and gives early warnings for thermal runaway
- Three-level over-current Protection: Three-level over-current protection for PACK, RACK, and PCS
- Three-level fire-prevention Design: Three-level fire-prevention design with accurate early warnings for thermal runaway to prevent fires



SMART AND ROBUST

- Cloud-based Intelligent Monitoring: Monitor via iSolarCloud App or web cloud for real-time alarms and troubleshooting
- Wireless Intelligent Operation and Maintenance: Near-far-end wireless intelligent operation and one-key remote upgrade reduce operation and maintenance costs



Technical data		ST510CS-4H
DC side		
Cell type	LFP 3.2 V / 314 Ah	
System battery configuration	256S2P	
Nominal capacity	514 kWh	
Nominal voltage range	691.2 V ~ 934.4 V	
Depth of charge and discharge	0 % ~ 100 %	
AC side (On-Grid)		
Nominal power	125 kW	
Nominal voltage	400 V	
Access way	3P4L	
Voltage range	340 V ~ 440 V	
Nominal frequency	50 Hz / 60Hz	
Frequency range	45 Hz ~ 55 Hz / 55 Hz ~ 65 Hz	
Max.THD of current	≤ 3 % (Nominal power)	
DC component	≤ 0.5 % (Nominal power)	
Power factor range	1.0 leading ~ 1.0 lagging	
AC side (Off-Grid)		
Nominal AC voltage	400 V	
Nominal AC frequency	50 Hz / 60Hz	
Max.THD of voltage	≤ 3 % (Linear load)	
Unbalance load capacity	100 %	
System parameter		
Dimensions (W * H * D)	2152 mm * 2470 mm * 1610 mm	
Weight	≤ 5300 kg	
Degree of protection	IP55	
Auxiliary power supply	Internal power supply (Default) External power supply (Optional)	
Anti-corrosion degree	C5	
Operation humidity range	0 % ~ 100 %	
Operation temperature range	-30 °C ~ 50 °C (> 45 °C derating)	
Max. operating altitude	3000 m	
Temperature control method	Intelligent liquid cooling	
Noise	≤ 65 dB @ 1 m	
Fire suppression system	Combustible gas detector, Smoke detector, Heat detector, Alarm sounder, Hot aerosol fire extinguishing equipment	
Communication interface	Ethernet	
Communication protocol	Modbus TCP	
Standard	IEC 62619, IEC 63056, IEC 62040, IEC 62477, IEC 61000, IEC 62933, UN 38.3	
Max.Parallel quantity	On-Grid: 25 pcs Off-Grid: 20 pcs	