

ST510CS-4H-AU

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 $\leq 2.5^{\circ}\text{C}$



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



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



SMART AND ROBUST

- Fast / Very fast FCAS application
- 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



Product Name		ST510CS-4H-AU
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		110 kW
Nominal voltage		400 V
Access way		3P4L
Voltage range		340 V ~ 440 V
Nominal frequency		50 Hz
Frequency range		45 Hz ~ 55 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
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		Default : Combustible gas detector, Smoke detector, Heat detector, Alarm sounder, Hot aerosol fire extinguishing equipment Optional : Ventilation system, Explosion vent panel
Communication interface		Ethernet
Communication protocol		Modbus TCP
Standard		IEC62619, IEC63056, IEC62040, IEC62477, IEC61000, UN 38.3, AS/NZS 4777.2, AS/NZS 3000
Max.Parallel quantity		On-Grid: 20 pcs Off-Grid: 20 pcs
Energy Management System		
EMS		EMS300CP
Functions		FCAS, Peak shaving, Emergency backup, Peak-valley arbitrage, Demand control, Zero-export, Integrated control of PV, ESS and diesel generator, etc

