

Fluence Smartstack™

Fluence Smartstack™ revolutionizes utility-scale energy storage by delivering embedded intelligence and unprecedented energy density in a revolutionary split-architecture design. Our innovative approach makes intelligence, not hardware, the heart of innovation, creating the industry's first future-proof storage solution.



Delivers approximately 30% higher energy density compared to traditional AC systems



Embedded with AI-enabled system intelligence that lengthens life, increases uptime, and market participation



Drives greater overall Internal Rate of Return (IRR) for project developers



Simplified logistics and installation

Smart Benefits on Top of Smart Storage

Smartstack's split architecture separates critical control systems from battery packs, enabling unprecedented flexibility and maintenance efficiency.

- Eliminates the need for the giant cranes typically used for large 50-ton block storage, simplifying shipping and logistics.
- Delivers superior IRR through comprehensive real-time data monitoring.
- Maximizes density, initially shipping 7.5 MWh of energy using proven, 3XX battery cells.
- Extends battery life and increases uptime with AI-enabled intelligence.

A Legacy of Industry-Leading Safety

- Advanced safety features in all Fluence storage solutions work together to prevent, detect, and contain thermal events, minimizing damage and downtime.
- As a pioneer in deflagration and large-scale fire tests that have helped define safety standards, Fluence completes fire testing at the cell, module, unit, and installation levels for all systems. Fire testing incorporates the UL9540A standard and goes well beyond industry standards with the purposeful inception of a full-scale fire to measure propagation, safe distances, gas emissions, incident times, and safety practices.
- Fluence also engages proactively with permitting authorities and first responders through comprehensive training programs on battery storage safety and operations, covering system design, failure modes, and incident response to ensure effective hazard management.



Battery Pod

Battery cell housing with integrated sensors



Smart Skid

Centralized electrical and control command center

Specifications

Battery Pack Options	Battery
Cell Capacity	3XX Ah
Energy Capacity	7,308 – 7,524 kWh
Smart Skid Dimensions (L x D x H)	7,369 x 2,200 x 1,584mm 24.1 X 7.2 x 5.2 ft.
Pod Dimensions (L x D x H)	1,762 x 2,656 x 2,523 mm 5.78 X 8.7 x 8.3 ft.
Weight	Smart Skid: ~10,000 kg (22,046 lbs) Pod: ~14,900 kg (32,850 lbs)
Performance & Safety Specs	
Discharge Duration	2hr; 4hr; 6hr; 8hr
DC Voltage	up to 1500V
AC Voltage	690V 3AC IT
Maximum AC Output Current (A)	Up to 3762 A
Cell Rating (CP-Rate)	≤0.5
Availability	Up to 99%
Grid Frequency	50/60 Hz
Seismic Rating	Compliant with IEEE 693 “moderate”, “high” with a reinforcement kit, Confirms with International Building Code (IBC), California Building Code (CBC) requirements per Seismic Design Category (SDC) D, Conforms to ASCE 7-16 standard
Operating Temp. Range (ambient)	-30°C to +55°C (-22°F to +131°F) derating after 50°C (122°F)
Certifications	UL/IEC
Battery Enclosure IP Rating	IP55
Noise Level	Sound Pressure Level of 73dB(A) at 1m at 25°C (77°F) (2 hr)
Elevation	Up to 4,000 m (13,123 ft) de-rating after 2,000 m (6,562 ft)
Thermal Management	Liquid cooled
Chemical and Corrosion Resistance(ISO 12944-6)	C5
Certifications and Codes	NFPA68 and 69, UL9540A, UL9540, IEC62933, IEC 62477-1, UL-1741, CSA C22.2 No. 107.1, FCC Part 15, IEC 61000-6-2, IEC 61000-6-4
Software	
BMS, System Control, and Market Applications	Fluence OS7
Communication Protocol	Modbus, DNP3, and OPC UA
Analytics and Optimization platform	Fluence Nispera™
Bidding Optimization Software	Fluence Mosaic™*

Note: Specifications in the above table are design estimates only and are not guaranteed. Contact Fluence for a project-specific estimate as final values depend on system design, location, and use case.

*Mosaic is an add-on currently available for assets in the NEM, CAISO, and ERCOT



Fluence Energy, Inc. (Nasdaq: FLNC) is a global market leader delivering intelligent energy storage and optimization software for renewables and storage. Our solutions and operational services are helping to create a more resilient grid and unlock the full potential of renewable portfolios. With gigawatts of projects successfully contracted, deployed, and under management across nearly 50 markets, we are transforming the way we power our world for a more sustainable future.

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