

Fluence Smartstack™

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

Make any Site Viable

Smartstack delivers unparalleled energy site density, maximizing MWh capacity in existing footprints and making previously constrained sites viable for development.

Simplified Installation

Smartstack's modular design simplifies shipping on standard trailers and enables phased installation — reducing logistics complexity and accelerating your project timeline.

Accelerated Project Success

Smartstack's AI-enabled intelligence extends battery life and delivers up to 99% availability, while our experienced teams and support services help navigate permitting challenges and integration complexities.

Maximum Return on Investment

Smartstack delivers superior IRR through comprehensive real-time monitoring, providing complete portfolio visibility while protecting your investment over a guaranteed 25-year system lifetime.



Specifications

Battery Pack Options	7.5 MWh	10 MWh
Cell Capacity	3XX Ah	3XX Ah
Energy Capacity	7,308 - 7,524 kWh	~10,000 kWh
Smart Skid Dimensions (L x D x H)	7,371 x 2,202 x 1,616mm 24.1 X 7.2 x 5.3 ft.	7,371 x 2,202 x 1,616mm 24.1 X 7.2 x 5.3 ft.
Pod Dimensions (L x D x H)	1,764 x 2,656 x 2,524 mm 5.79 X 8.7 x 8.3 ft.	1,764 x 2,656 x 3,330 mm 5.79 X 8.7 x 10.92 ft.
Weight	Smart Skid: ~10,000 kg (22,046 lbs) Pod: ~15,000 kg (33,850 lbs)	Smart Skid: ~10,000 kg (22,381 lbs) Pod: ~20,000 kg (44,890 lbs)

Performance & Safety Specs

Maximum AC Output Current (A)	Up to 3762 A	2508 A
Cell Rating (CP-Rate)	≤0.5	0.25
Discharge Duration	2hr; 4hr; 6hr; 8hr	4hr; 6hr; 8hr
DC Voltage	up to 1500V	
AC Voltage	690V 3AC IT	
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 70dB(A) at 1m at 25 °C (77 °F)	
Elevation	2,000 meters (6,562 ft), derating up to a max. of 4000m (13,123 ft)	
Thermal Management	Liquid cooled	
Chemical and Corrosion Resistance(ISO 12944-6)	C3 - 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 Optimisation platform	Fluence Nispera™
Bidding Optimisation 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

Cybersecurity & Supply Chain Integrity

Our multi-layered cybersecurity architecture is designed to safeguard your assets and revenue streams by combining global industry standards and cyber-informed engineering practices. Fluence achieved ISO 27001 certification in 2024 and is pursuing IEC 62443 certification in 2026, to support customers in meeting their regulatory responsibilities across every project scope. Smartstack includes a fully in-house developed OS controls software to reduce supply chain and foreign adversary risks.

Our long-term approach focuses on building the supply chain, products, and partnerships needed to adapt to a rapidly evolving trade and policy environment.

Since 2021, we have been strategically regionalising and diversifying our supplier base to effectively manage current and future supply chain constraints. We maintain a diverse supply of battery cells from different parts of the world and can manufacture battery storage systems that are highly competitive. By accessing both foreign and domestic sources of production, we create the optimal mix that provides customers with the best price point relative to risk, including policy and supply chain risks.



Fluence Product Production

Better and Smarter Performance

Our Smartstack system features built-in intelligence that combines real operating data, advanced modelling and smart controls to monitor, predict and improve, state-of-charge accuracy, state-of-health and system balance. This includes continuous, automated recalibration and control-driven temperature optimization. Together, these capabilities give reliable, data-driven visibility into usable energy across the system lifecycle- so you can make confident dispatch decisions while getting the most out of the system. Our suite of operational Services enables predictive maintenance and precision interventions, delivering unprecedented availability and reduced risk for your energy storage assets.

Industry Leading Guarantees

Smartstack offers optional Smart Service Plans with industry-leading guarantees, including up to 99% availability to minimize disruptions and maximize revenue opportunities. Our Energy Capacity Guarantee provides up to 25 years of predictable performance, protecting your system from unexpected degradation risks. The Dispatchable Energy Guarantee eliminates guesswork by precisely defining how much energy you can trade in real-time, allowing you to capture more revenue without overcommitting.



Leading Safety

Fluence upholds unmatched safety standards, backed by over a decade of global deployment experience and millions of operational hours with an exceptional safety record. Smartstack sets the industry benchmark with a comprehensive fire protection system featuring an innovative battery Pod design that creates isolated containment zones with engineered spacing, to limit pod to pod propagation. The split architecture uses an integrated fire suppression system designed to effectively contain incidents in the skid without damaging batteries, preserving system integrity and investment.

As pioneers in deflagration and large-scale fire testing, we have helped shape industry standards through rigorous testing at the cell, module, unit, and installation

levels. Smartstack is designed to meet and exceed UL9540, UL9540A, and NFPA-855 requirements, going beyond standards with full-scale fire tests that assess propagation, safe distances, gas emissions, and incident response times. Our advanced safety features work in concert to prevent, detect, and contain thermal events, minimising damage and downtime.

We proactively engage with permitting authorities and first responders through comprehensive training programs covering system design, failure modes, and incident response protocols to ensure effective hazard management.



Fluence Energy, Inc. (Nasdaq: FLNC) is a global market leader delivering intelligent energy storage and optimization software for renewables and storage. The Company's solutions and operational services are helping to create a more resilient grid, from powering the next generation of AI-driven data centres to unlocking the full potential of renewable portfolios. With gigawatts of projects successfully contracted, deployed, and under management across nearly 50 markets, the Company is transforming the way we power our world for a more sustainable future.