TRINA STORAGE ELEMENTA

Flexible, high-performance, inherently safe Utility Scale Battery System

Trina Storage Elementa is a smart, large scale modular storage solution tailored for stand-alone and co-located renewable energy sites. Fully integrated utilising our proprietary, in-house Lithium Iron Phosphate (LiFePO4) cells and monitored by our dedicated Battery Management System (BMS), Trina Storage Elementa offers a state-of-the-art, revenue generating Grid asset which has also been optimized for lower OPEX through flexibility, smooth installation, and efficient maintenance.

Our industry leading battery cells have been enabled by two main drivers:

01 Huge investment – close to $700 million deployed by the Trina into Research and Development since 2021, among which over $26 million into dedicated battery cell Research and Development.

02 Resourcing our manufacturing team with personnel and equipment drawn from decades of industry experience in the LFP battery space.

ENHANCED LIFECYCLE

Enhanced battery lifetime with **over 12,000 cycles** is possible, thanks to its cutting-edge cell technology combined with advanced Battery Management techniques

OPTIMIZED COST

Savings of up to 8% on CAPEX and OPEX compared to other Tier 1 suppliers due to the maximized efficiency throughout our value chain.

VERTICAL INTEGRATION & SECURED SUPPLY CHAIN

In-house battery manufacturing for better control over the battery value chain and sound ability to tackle market volatility.

ALL BATTERIES ARE NOT CREATED EQUAL

Improved real life performance, longer lifecycle and higher efficiency along with our dedicated thermal management strategy.

ADVANCED SAFETY FEATURES

Advanced fire mitigation and suppression strategies. Equipped with heat & smoke detectors, Aerosol-based extinguisher and active ventilation system with gas sensor. Designed to meet latest international standards

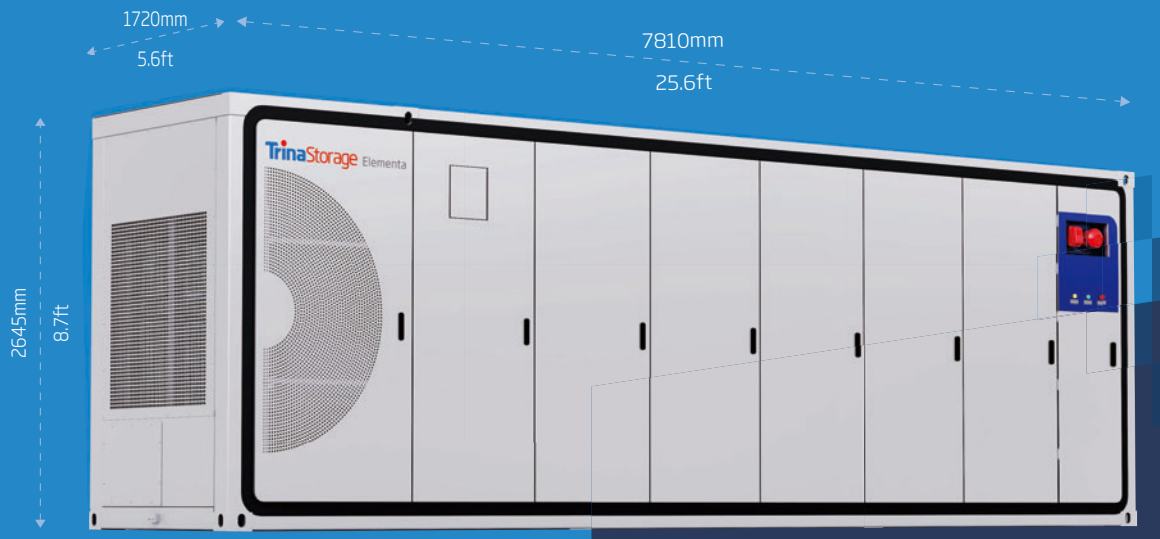
RAPID DEPLOYMENT ON-SITE

Up to 30% reduced installation time enabled by “above ground” busbars and a modular design.

FLEXIBLE & BANKABLE WARRANTIES

System warranty & performance warranty package with flexible usage parameter up to 20y

Elementa Specifications



Fire Safety

Fire panel with heat and smoke sensors

Automatic aerosol-based fire suppression system

Gas sensors and active ventilation system

Fire resistant enclosure

Certifications

Battery Safety
UL 1973, UL 9540A, NFPA855
IEC 62619, IEC 63056

Transportation
UN38.3, UN3536, UN3480

EMC
EN / IEC 61000-6-2, EN / IEC 61000-6-4

Battery Cell	280 Ah LiFePO4 Prismatic battery cells
Electrical Configuration	6 racks of 8 battery modules
Nominal capacity	~2.2 MWh
Typical Operational Duration	2-4 hour system
Max Operating Voltage (DC)	~1500 V
Auxiliary Power	
-Max input power consumption (0.5P)	~29kW
-Max input power consumption (0.25P)	~22kW
Operating Ambient Temperature	-30~50°C
Cooling Mode	Liquid cooling, 50% ethylene glycol aqueous solution
Weight	22450±100kg 49493±220lb
Altitude	≤ 2000m
IP Level	IPX5 (excl. the chiller compartment)
Colour	RAL 9016
Coating	C4-H
Communication Protocols	Modbus TCP/IP

*IP Level refers to the cabinet excluding the chiller compartment.