Trina Storage Elementa 2 Platform

Advanced, Flexible, High-efficiency ESS

Trina Storage Elementa 2

4.073 MWh @ 1500V DC

Trina Storage Elementa 2

5.015 MWh @ 1500V DC

Trina Storage Elementa 2 is a new generation, cutting-edge, grid-scale battery storage system built from the ground up using Trina´s vertically integrated LFP cells.

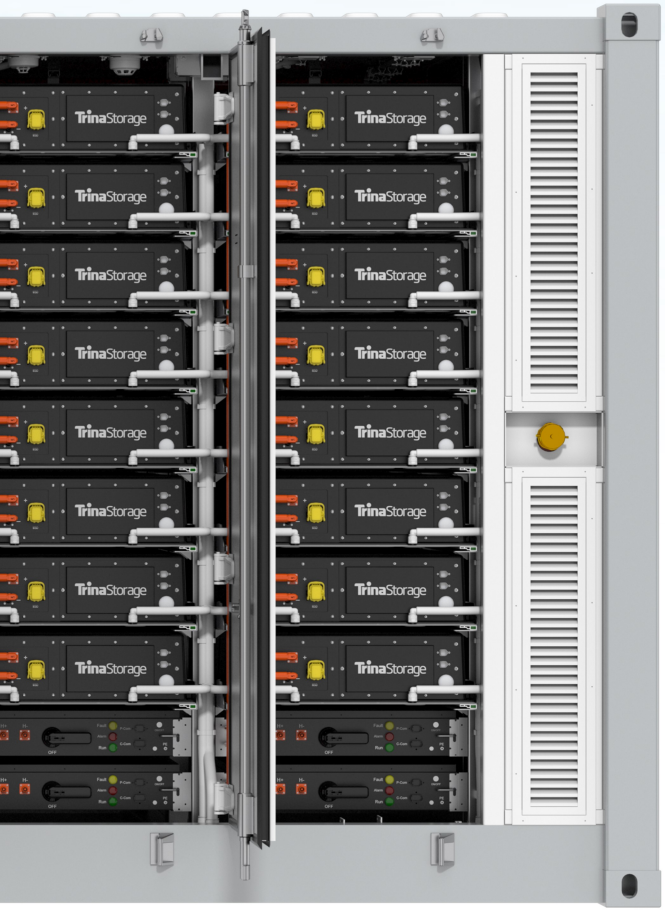
The new design incorporates advanced features including a unique module design, precise thermal management enabled by smart liquid cooling technology, and a robust fire mitigation and suppression system to ensure unparalleled efficiency, comprehensive safety, and long-term reliability.

Engineered for adaptability, rapid deployment, and smooth operational and maintenance processes, the product not only minimizes project costs but also enhances overall system performance.

Key Product Features

High-Efficiency ESS

- In-house Trina Storage Cells: Extended battery lifetime & performance with up to 12000 cycles; 0 degradation in the first year & ≥ 95% Energy Efficiency (for 4MWh)
- Upgraded Module Design: Featuring independent O&M window & two-way stop valve; Intelligent liquid cooling technology - maintains $\Delta T \leq 2.5^{\circ}C$
- Higher ROI & Cost-advantages: Reduced CAPEX & OPEX; Improved TCO & Lower LCOS
- Higher Energy Density packed into the same form factor (for 5 MWh)



Intelligence

- Advanced rack-level energy management; precise control & optimization
- Uniformity in battery SOC, preventing electrical imbalances, extending battery life & performance
- Multi-level BMS, equipped with advanced chip for high reliability; Grade-by-grade warning, effective isolation & protection
- Smart O&M - Designed for minimal downtime and simplified maintenance

Highly Integrated & Flexible Solution

- Compact design ensures up to 35% reduction in footprint
- Built for a standard 20ft HC container, reducing shipping costs, facilitating quick transportation & rapid deployment
- Optional DC/DC configurations
- Bankable warranties, guarantees & services

Comprehensive Safety

- Prioritizes product & personnel safety
- Multi-dimensional cell testing; targeted design; higher precision in fault detection
- Heat, Gas & Smoke detectors, active ventilation system for explosion prevention
- Implements a state-of-the-art aerosol-based FSS
- All international safety standards & certifications conformed

Product Specifications

Battery parameters	Elementa 2 4.073MWh	Elementa 2 5.015MWh
Battery Cell	3.2V, 306 Ah	3.2V, 314 Ah
Electrical Configuration	1P416S10P (10 racks of 4 battery modules each)	1P416S12P (12 racks of 4 battery modules each)
Nominal Capacity	4073kWh	5015kWh
Typical Operational Duration	2-4 hours	2-4 hours
Max Operating Voltage Range (DC)	1123.2V ~ 1497.6V	1123.2V ~ 1497.6V
Auxiliary Power-Max input power consumption	48kVA (0.5p)	67kVA/53kW

System parameters	Elementa 2 4.073MWh		Elementa 2 5.015MWh	
Dimensions (LxWxH)	6058mm * 2438mm * 2896mm (Standard 20ft High Cube Container)		6058mm * 2438mm * 2896mm (Standard 20ft High Cube Container)	
Weight	≤ 35 T / < 77162 LB		42.5 ± 1.5T	
IP Level	IP55 - Excl. TMS (Temperature Management System) IP67 - Module		IP55 - Excl. TMS (Temperature Management System) IP67 - Module	
Operating Ambient Temperature	-30~50℃		-30~50℃	
Altitude	≤2000m		≤2000m	
Cooling Mode	Liquid cooling, 50% ethylene glycol aqueous solution		Liquid cooling, 50% ethylene glycol aqueous solution	
Fire Safety	Fire panel with heat and smoke sensors		Fire panel with heat and smoke sensors	
	Fire resistant enclosure		Fire resistant enclosure	
	Gas sensor and active ventilation system		Gas sensor and active ventilation system	
	Automatic aerosol-based fire suppression system, Water based fire suppression system (Optional)		Automatic aerosol-based fire suppression system, Water based fire suppression system (Optional)	
Coating	C4-M (C5-M, optional)		C4-M (C5-M, optional)	
Color	RAL9016		RAL9016	
Communication Protocols	CAN/Modbus TCP		CAN/Modbus TCP	
Compliance	IEC 61000-6-2/4	CE	IEC 61000-6-2/4	CE
	IEC 62477-1	UL 1973	IEC 62477-1	UL 1973
	IEC 62619	UL 9540	IEC 62619	UL 9540
	IEC 62933-5-2	UL 9540A	IEC 62933-5-2	UL 9540A
	IEC 63056	UN38.3	IEC 63056	UN38.3

TrinaStorage

Leading the Energy Transition through Storage

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