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:**

1. 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.
2. Resourcing our manufacturing team with personnel and equipment drawn from decades of industry experience in the LFP battery space.

**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.

**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.

**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.

**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.

**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

**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**
- 49493±220lb
- 22450±100kg

**Altitude**
- ≤ 2000m

**IP Level**
- IPX5 (excl. the chiller compartment)

**Colour**
- RAL 9016

**Coating**
- C4-H

**Communication Protocols**
- Modbus TCP/IP

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**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**
- UN3B.3, UN3536, UN3480

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

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

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