# 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.**

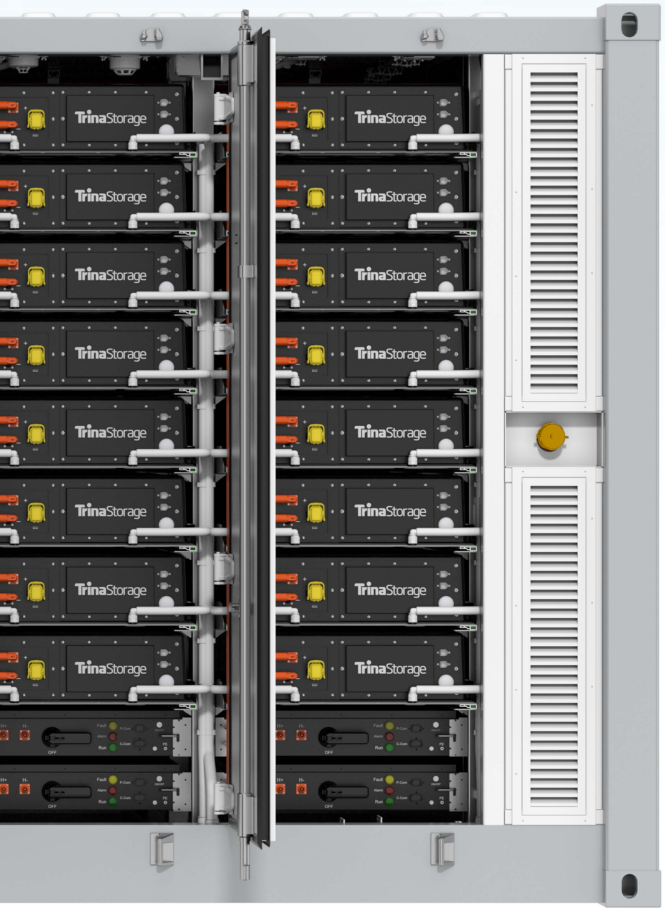
The new design incorporates advanced features including a unique module design, precise thermal management enabled by smart liquid cooling technology, and a robust fire mitigation and suppression system to ensure unparalleled efficiency, comprehensive safety, and long-term reliability.

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 $\Delta T \leq 2.5°C$
- 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<br>(10 racks of 4 battery modules each) | 1P416S12P<br>(12 racks of 4 battery modules each) |
| Nominal Capacity | 4073kWh | 5015kWh |
| Typical Operational Duration | 2-6 hours | 2-6 hours |
| Max Operating Voltage Range (DC) | 1040V~1497.6V | 1040V~1497.6V |
| Auxiliary Power-Max input power consumption | 55kVA (0.5p) | 52kVA (0.5p) |

| System parameters | | Elementa 2 4.073MWh | Elementa 2 5.015MWh |
|---|---|---|---|
| Dimensions(W×H×D) | | 6058mm*2896mm *2438mm<br>(Standard 20ft Container) | 6058mm*2896mm *2438mm<br>(Standard 20ft Container) |
| Weight | | ≤ 35 T / < 77162 LB | ≤ 42.5T |
| IP Level | | IP55 - Excl. TMS<br>(Temperature Management System)<br>IP67 - Module | IP55 - Excl. TMS<br>(Temperature Management System)<br>IP67 - Module |
| Operating Ambient Temperature | | -30~50°C | -30~50°C |
| 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 | Battery Safety | UL 9450, UL9540A, UL1973(rack), IP65, IEC 62477, IEC 62619, IEC 63056 | UL 9450, UL9540A, UL1973(rack), IP65, IEC 62477-1, IEC 62619, IEC 62933-5-2, IEC 63056 |
| | Transportation | UN 38.3, UN 3536 | UN 38.3, UN 3536 |
| | EMC | EN/IEC 61000-6-2, EN/IEC 61000-6-4 | EN/IEC 61000-6-2, EN/IEC 61000-6-4 |
| | Marking | CE/UKCA | CE |

TrinaStorage

# Leading the Energy Transition through Storage

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