



| Utility-Scale Liquid Cooling ESS |

OneMatrix 2.0



HIGH SAFETY & RELIABILITY

- Thermal runaway prediction & active fire prevention
- Multi-level fuse electrical design
- AI intelligent arc fault real-time detection
- 24/7 real-time online insulation monitoring



HIGH EFFICIENCY

- Full-stack self-development, supporting rapid on-site deployment
- Rack-level management, improving energy generation by 8%
- AI uniform temperature control via liquid cooling, longer service life
- Multiple operation modes, including PQ, VF, VSG, GFM



HIGH ENERGY DENSITY

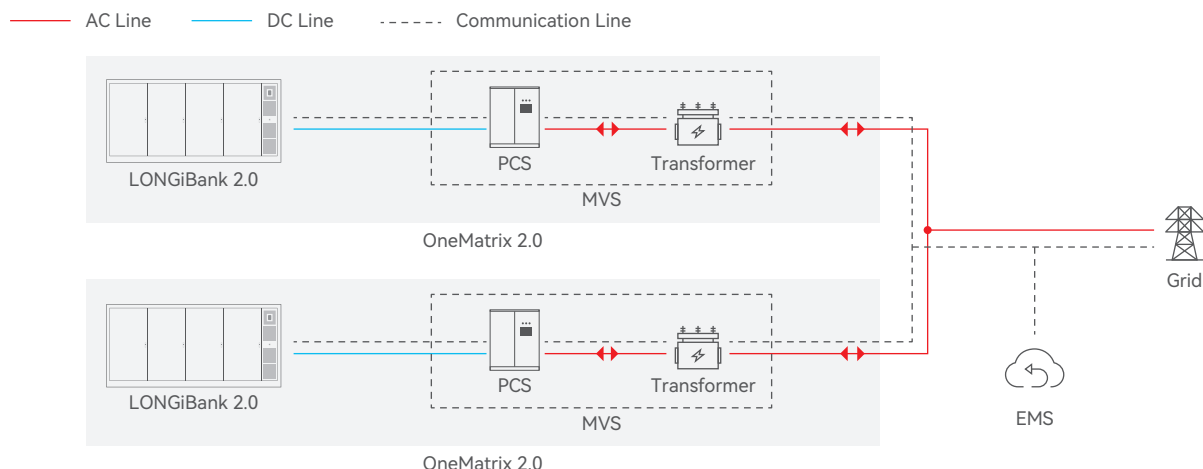
- Liquid-cooled AC/DC integrated design
- High volumetric energy density reaching 146 Wh/L
- Features compact footprint with efficient land utilization
- Industry-leading full-lifecycle LCOE



FULL-CHAIN INTELLIGENT O&M

- AI high-precision health diagnosis
- Modular design for easy maintenance
- Automatic refill without downtime
- 24/7 rapid response

SYSTEM DIAGRAM



PRODUCT SPECIFICATIONS

Technical Data

DC Side

Cell type	LFP
System battery configuration	416S8P
Nominal capacity	6251 kWh
Nominal voltage	1331.2 V
DC voltage range	1164.8 ~ 1500 V
Number of DC inputs	Max. 16
Max. DC current per input	237 A
Voltage regulation accuracy	$\leq \pm 1\%$
Current regulation accuracy	$\leq \pm 1\%$
Charge-discharge rate	$\leq 0.5P$
Dimensions (W×D×H)	6058 mm × 2438 mm × 2896 mm
Weight	≤ 47 t

AC Side

Rated output power	215 kW × 16
Rated grid voltage	690 V
Rated grid frequency	50 / 60 Hz
THDi	< 3%
Power factor range	> 0.99
PCS efficiency	99.02%

MV Transformer

Transformer rated power	3440 kVA
Transformer Max. power	3784 kVA
Voltage ratio	(6~37) kV / 0.69 kV
Transformer type	Oil-immersed / Dry-type

MVS Parameter

Dimensions (W×D×H)	6058 mm × 2438 mm × 2896 mm
Weight	≤ 15 t
Degree of protection	IP55
Operation temperature range	-30 ~ 60°C
Temperature control method	Liquid cooling
Operation humidity range	0 ~ 100% RH
Max. operating altitude	4000 m (>2000 m derating)

Communication Parameter

Communication interfaces	Ethernet, RS485, CAN
Communication protocols	ModbusTCP/RTU, IEC 104, IEC 61850
BMS access	Supported

Standard & Compliance

Standard	IEC 61000, IEC 62619, IEC 62933, IEC 63056, IEC 62477, IEC 62443, UL9540A, NFPA68/69, UN 38.3, UN 3536, etc.
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