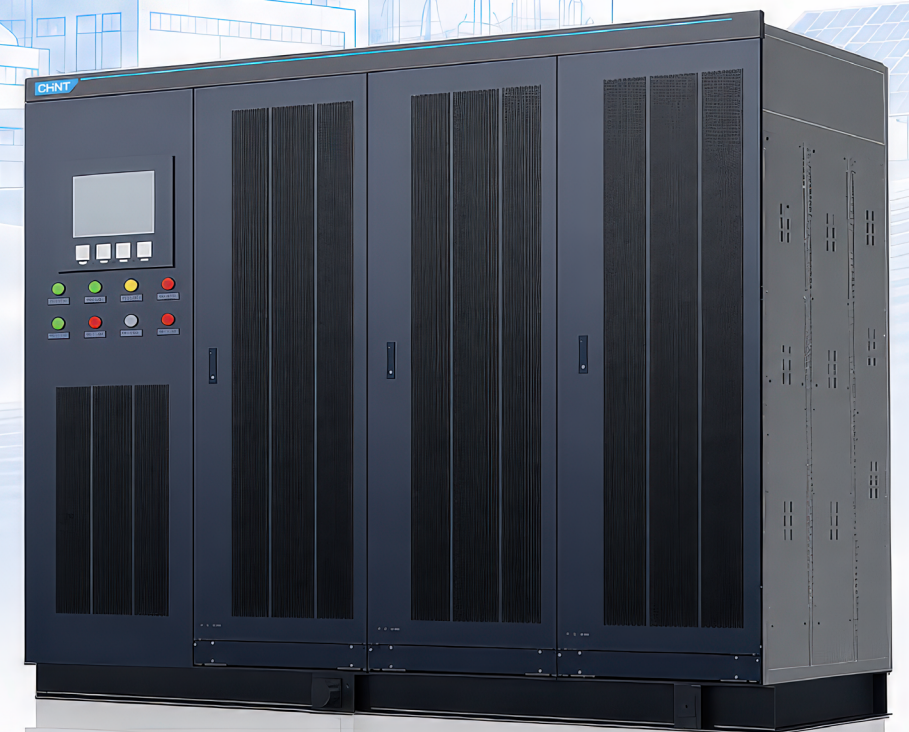


Solid-State Transformer

**1.75MW, 98.5% Efficiency — The High Power Density
Solid-State Transformer That Replaces the Substation**



CHINT GLOBAL INTERNATIONAL PTE. LTD.

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Solid State Transformer

The CHINT SST uses an ISOP topology with FB+DAB two-stage conversion to step 10kV AC down to 800V DC — no oil, no 50Hz iron core, just 2300V SiC devices and high-frequency magnetics in a three-cabinet architecture. It delivers bidirectional, software-defined power conversion at a fraction of the footprint of a conventional transformer.



Compact & Efficient

98.5% peak efficiency, PF ≥ 0.99. Replaces bulky conventional transformers, shrinking substation footprint and cutting energy losses.



DC-Native, Bidirectional

Direct 800V DC output eliminates multi-stage conversion; bidirectional flow enables seamless PV and BESS integration.



Built-in Power Quality

THDi <3%, ripple ±2% — active harmonic compensation and voltage support without external equipment.



Always-On Availability

N+X hot-redundant modules, >10% redundancy — single-module faults don't cause downtime; online maintenance, >99% uptime.

Key Specifications

Parameter	Value
Rated Power	1.75 MW
Input Voltage Range	8-12 kV AC
Rated Input Current	101 A
Rated Output Voltage	800 V DC
Rated Output Current	2,187 A
Peak Efficiency	98.5%
Power Factor	≥ 0.99
Input Current THDi	<3%
Power Modules Per Phase	7+1 (with redundancy)
Redundancy	>10%
Overcurrent Capability	1.1 p.u.
Grid Frequency Range	47.5-52.5 Hz
Dimensions	2,800 × 1,200 × 2,200 mm
Protection Class	IP21
Installation	Indoor
Operating Temperature	- 5° C to +40° C
Altitude	≤ 2,000 m (derated above)

Application Scenarios



Data Centers & EV Charging Infrastructure

High-efficiency MV-to-DC power conversion for AI data centers and high-power EV charging, reducing conversion losses and improving energy performance.



Renewable Energy DC Microgrids

Bidirectional DC integration of PV, BESS, and DC loads for flexible and sustainable energy networks.



Industrial Power Quality & Energy Management

Real-time harmonic mitigation, reactive power dynamic compensation, and voltage regulation for stable industrial power systems.



Railway Traction & Shore Power

Flexible power conversion for dynamic transportation loads, improving efficiency and reducing system complexity.