



C&I ENERGY STORAGE

200 kW
199.68 kWh

**LIQUID-COOLED
SODIUM-ION
ENERGY STORAGE
CABINET**

Integrated battery, bidirectional power conversion, intelligent control and layered protection in one outdoor platform.

NFPP SODIUM-ION

Liquid cooling | IP54
EMS + BMS

aurora-cell.com



Power and energy in one outdoor cabinet

A compact sodium-ion system built for commercial and industrial energy management.

200 kW

POWER CONVERSION CAPACITY

199.68 kWh

RATED BATTERY ENERGY

8 x 24.96

KWH LIQUID-COOLED PACKS

The architecture integrates the power stage, battery system and site controls behind a single enclosure - reducing interfaces and simplifying project engineering.

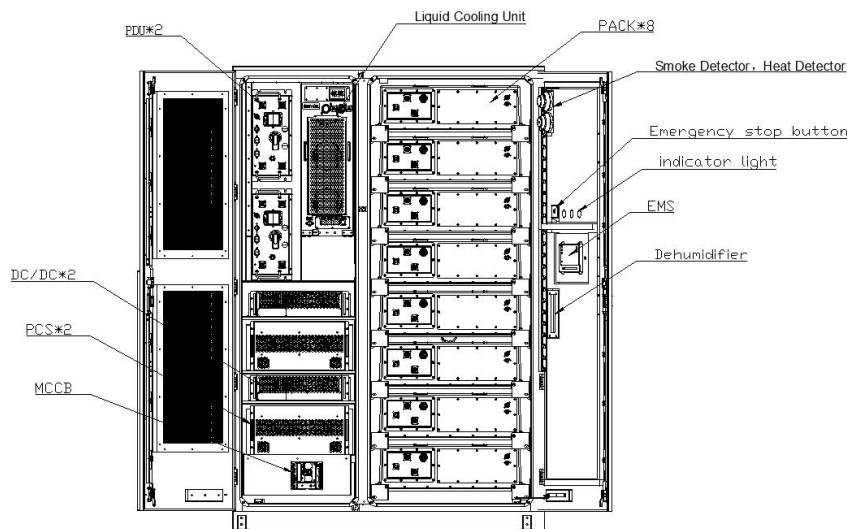
Designed for peak shaving, PV energy shifting, tariff optimization, backup operation and microgrid applications.



Service-accessible internal layout with segregated battery and power electronics sections

A complete C&I energy platform

Battery, conversion, thermal management and controls are engineered as one coordinated system.



01 Battery subsystem

NFPP 160 Ah sodium-ion cells, configured 1P416S across eight 24.96 kWh packs.

02 Bidirectional power stage

Integrated PCS and DC/DC conversion support charging, discharging, grid-connected and off-grid operation.

03 Intelligent site control

EMS coordinates PCS output, schedules operation and acquires live battery and distribution data.

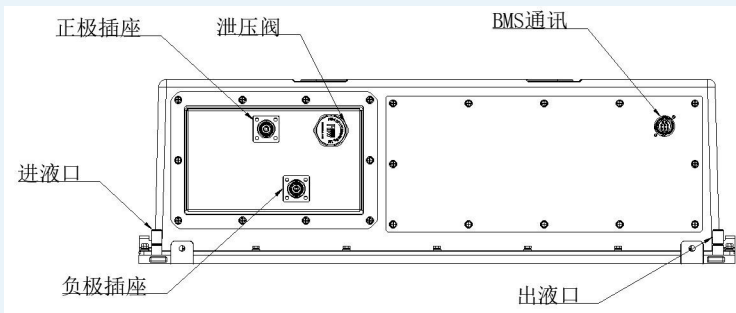
04 Protection and thermal control

PDU, BMS, emergency stop, liquid cooling, pack aerosol and cluster aerosol protect the system.

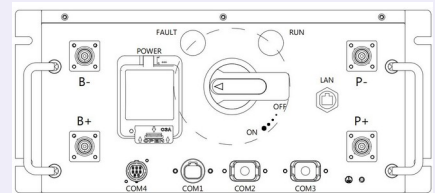
Interfaces: Ethernet / RS485 | Protocols: Modbus TCP / Modbus RTU | BMS: CAN

Protection is engineered from pack to cabinet

Layered detection, suppression and high-voltage controls support safe, stable operation.



24.96 kWh liquid-cooled battery pack



1500 V max / 250 A PDU

01 Pack-level aerosol suppression

Each pack includes an automatic aerosol unit designed to detect, activate and suppress a developing event without external power.

02 Cluster-level detection and suppression

Smoke and temperature detection coordinate cabinet-level aerosol response and alerting through the control system.

03 High-voltage protection architecture

Circuit breakers, fuses, contactors, BCU supervision and emergency-stop logic manage the main DC circuit.

6 kW liquid cooling | 50 L/min flow | 90 kPa supply | Smart thermal control

Technical data at a glance

Power-conversion capacity and rated battery energy are stated separately for transparent project sizing.

ENERGY + POWER

Power conversion	200 kW
Rated battery energy	199.68 kWh
Cell technology	NFPF, 3 V / 160 Ah
System configuration	1P416S
Nominal DC voltage	1248 V
DC voltage range	748.8-1435.2 V
Charge / discharge	0.8P
System efficiency	>95%*
Cycle life	>10.000 cycles
AC output	400 V, 3P4W
Grid range	340-460 V
Power factor / THD	-0.99...+0.99 / <=3%

OPERATING ENVELOPE + CONTROL

Enclosure	Outdoor, IP54
Cooling	Liquid, 6 kW
Cabinet ambient	-25 to +55 C**
Cell charge temp.	0 to +55 C
Cell discharge temp.	-40 to +55 C
Humidity	0-95% RH
Altitude	<=2000 m***
Communication	Ethernet / RS485
External protocols	Modbus TCP / RTU
Dimensions (D/W/H)	1650 / 1375 / 2450 mm
Approx. weight	3200 kg
Noise	<=75 dB(A)

DOCUMENTED COMPLIANCE BASIS

UN 38.3 | IEC 62619 | CE-EMC | GB/T 36276 | GB/T 34120 | GB/T 34131

* Excludes liquid-cooling cabinet auxiliary consumption. ** Derating above +45 C. *** Derating above 2000 m.

One cabinet. Multiple energy strategies.

Configure the operating logic around the site's load profile, grid connection and renewable generation.

01 Peak shaving

Limit site demand peaks and reduce grid-capacity exposure.

02 Tariff optimization

Charge and discharge against time-of-use energy prices.

03 PV energy shifting

Store midday solar generation for later site consumption.

04 Backup and off-grid support

Use the bidirectional PCS for resilient islanded operation.

05 Microgrid integration

Coordinate battery, PV and load control through the EMS.

06 Power quality support

Manage active and reactive power across a wide power-factor range.

From sodium-ion cells to complete energy storage systems.

AuroraCell supports project definition, technical alignment and European commercial deployment - with one partner across the sodium-ion value chain.