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Sigenergy focuses on developing cutting-edge home and business energy solutions, with products ranging from energy storage systems to solar inverters and EV chargers. Our world-class R&D team of hundreds of top industry experts shares the vision of making the world greener via continuous innovation. With global sales and services, we aim to become our customers' most trusted partner on their journey to a more sustainable future.

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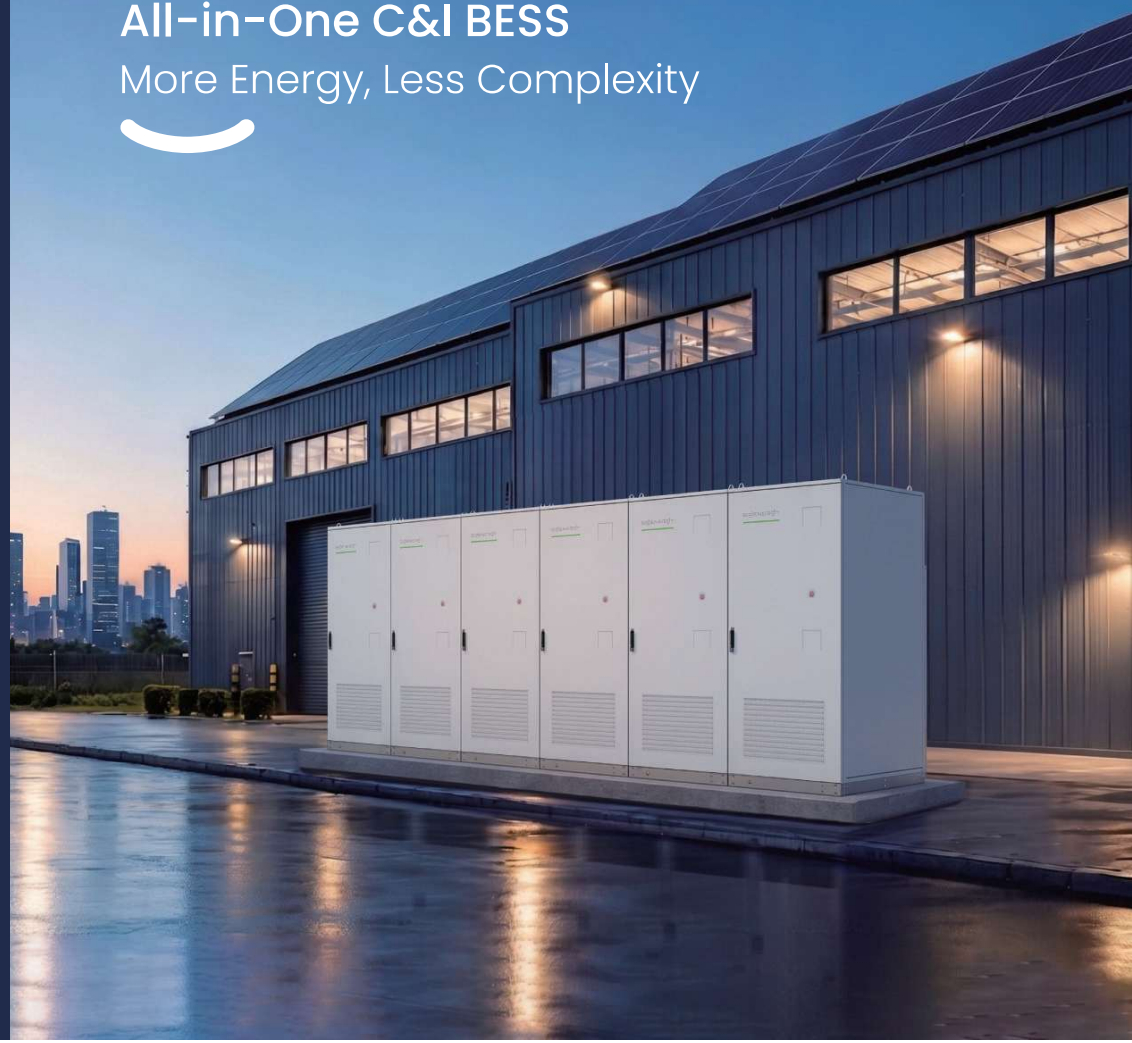
SIGENERGY

SigenCube

All-in-One C&I BESS

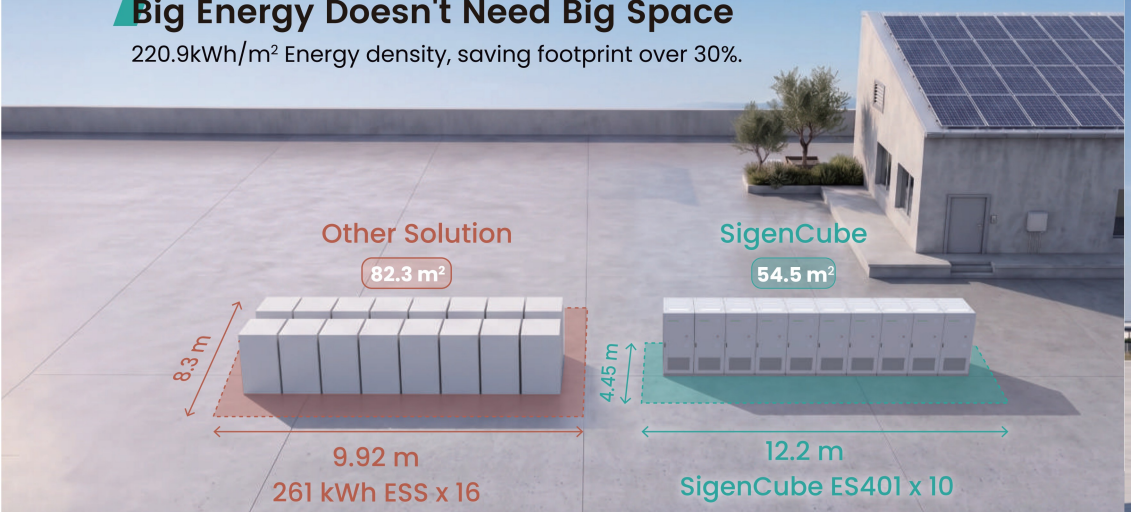
More Energy, Less Complexity



01 Simplified Deployment

Big Energy Doesn't Need Big Space

220.9kWh/m² Energy density, saving footprint over 30%.



Compacted Architecture

PCS, HV and distribution in one compact platform.



Built-in EMS, Built to Scale

Scale to 100 units without data logger, backed by automatic failover.

Max. 100
Units Parallel

0 Extra
Data Logger

Auto Failover
Any Cube Takes Over



Faster On-site Setup

From delivery to start-up, with fewer steps on site.

3~5 *min*
APP commissioning

Fewer Steps
Basic setting | Synchronized upgrade | One-click diagnosis

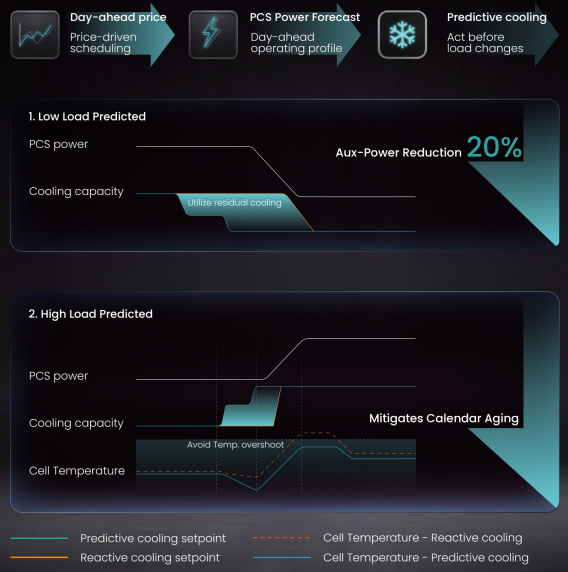


02 Peak Performance

AI Thermal Management

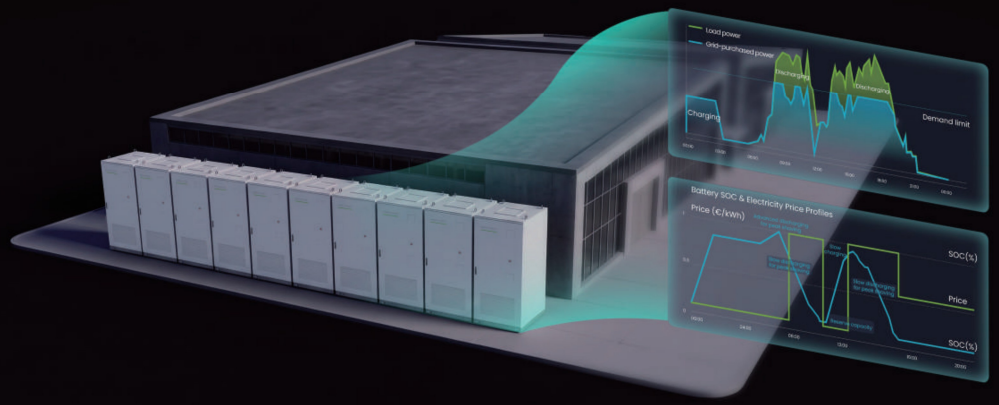
Predictive cooling boosts efficiency and mitigates calendar aging.





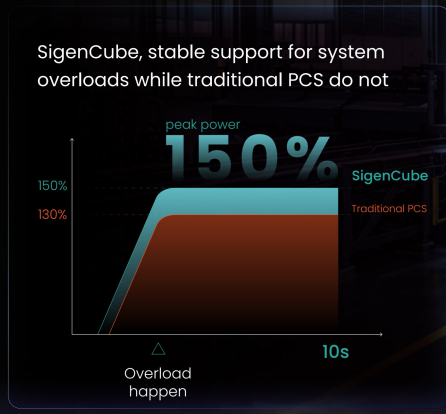
Sigen AI Mode + Peak Shaving

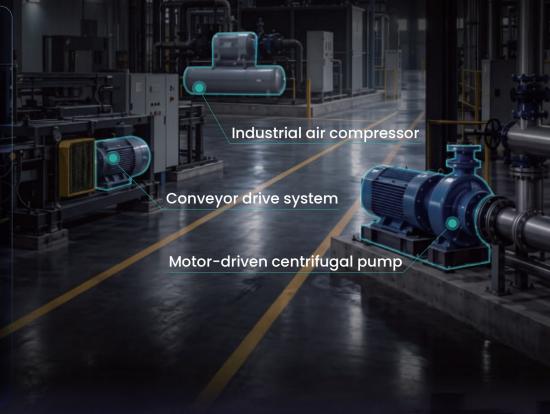
Maximising arbitrage returns, lowering demand charges.



Superior Overload Capability

When loads surge, power holds strong





All-scenario Resilience & Grid Friendly

Built to stabilise power across every energy scenario.



MWh-level Black Start

Recovery without help

Seamless Backup

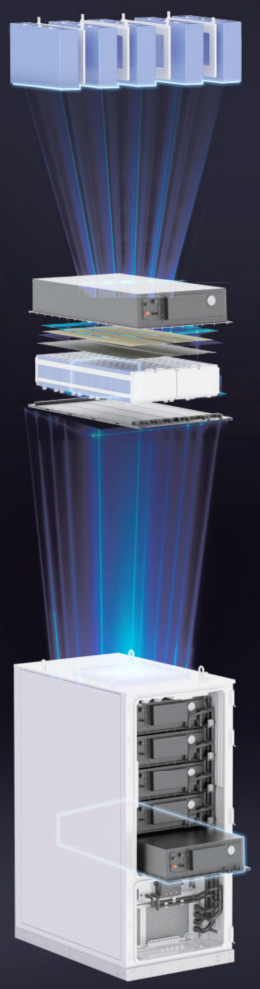
Power without interruption

Grid Ancillary Services

Rapid response, enhanced grid stability

03 All-round Safety

Safety Protection from Cell to System



CELL

	SigenCube	Industry leading	Industry average
Cell-to-cell isolation	✓	✓	✓
NTC temperature sensor	x40	x28	x12
NTC / Cell	0.625	<0.53	<0.23

PACK

	SigenCube	Industry leading	Industry average
Pressure relief valve	✓	✓	✓
Electrical insulation sheet	✓	✓	✓
Crash frame	✓	✓	✓
High-strength crossbeam	✓	✗	✗
Pack-level leakage detection	✓	✗	✗

SYSTEM

	SigenCube	Industry leading	Industry average
Top explosion vent	✓	✓	✗
Flammable gas/Smoke/ Heat detector	✓	✓	✓
Emergency ventilation fan	✓	✓	✗
Aerosol	✓	✓	✓
Water firefighting interface	✓	✗	✗
Overcurrent protection	6 layers	5 layers	5 layers

04 Optimised O&M

10-Year Coolant Life

Less scheduled replacement, less OPEX.





Fewer Site Visits

Lower Lifetime O&M Cost

Less Planned Downtime

*Routine inspections remain required. Coolant service may be necessary in the event of leakage or component repair.

Battery Active Balancing

More usable energy, free from system SOC calibration

SigenCube 7A

VS

Traditional Solution 1 **2~3A** weak balancing current

Traditional Solution 2 Not available

No On-site SOC Calibration

Lower Lifecycle OPEX





SigenCube

ES401-2H-AU / ES401-4H-AU

- Highly integrated layout cuts footprint and deployment costs
- Factory pre-commissioning & one-tap setup accelerate deployment
- Cell-to-system protection, precise thermal runaway control
- Pack-level active balancing, no need for on-site SOC calibration
- Low-noise operation below 60 dB expands site flexibility
- 150% overload for 10 seconds ensures reliable start-up

Sigen Energy Storage System

Preliminary

SigenCube	ES401-2H-AU	ES401-4H-AU	Units
DC Side			
Battery type		$LiFePO_4$	
Total energy capacity		401	kWh
Nominal voltage range		896 ~ 1,152	V
Nominal charge / discharge rate	0.5P	0.25P	
AC Side (On-grid)			
Nominal output power	199,990	99,990	W
Max. output apparent power	199,990	99,990	VA
Max. output active power (cosΦ=1)	199,990	99,990	W
Nominal voltage		400, 3P4W	Vac
Nominal grid frequency		50 / 60	Hz
Power factor		1 leading ~ 1 lagging	
Total current harmonic distortion		THDi ≤ 1.5%	
AC Side (Backup)[1]			
Nominal output power	199,990	99,990	W
Max. output apparent power	199,990	99,990	VA
Peak output power (10 seconds)	299,985	149,985	VA
Nominal voltage		400, 3P4W	Vac
Nominal grid frequency		50 / 60	Hz
Power factor		1 leading ~ 1 lagging	
Total voltage harmonic distortion		THDv ≤ 2%	
Disruption time of backup switch[2]		0	ms
Protection			
Safety protection feature		Insulation monitoring, Residual current monitoring, AC overcurrent/overvoltage/short-circuit protection, Type II AC surge protection, Anti-islanding protection	
System General Data			
Dimensions (W / H / D)		1,100 / 2,450 / 1,650	mm
Weight		4,000	kg
Storage temperature range		-35 ~ 60	°C
Operating temperature range		-30 ~ 55 (Derating at 45°C)	°C
Relative humidity range		0% ~ 100% (non-condensing)	
Max. operating altitude		4,000 (Derating at 3,000m)	m
Cooling		Smart Liquid cooling	
Balance mode		Active balance	
Fire suppression system		Combustible gas detector, Smoke detector, Heat detector, Explosion-proof fan, Alarm sounder, Cabinet-level Aerosol, Top explosion vent, Water-based fire suppression	
System ingress protection rating		IP55	
EMC protection rating		Class B	
Anti-corrosion protection		C4-M	
Noise		≤ 60	dB
Communication		WLAN, Fast Ethernet, RS485	
Communication protocol		Modbus-TCP, IEC61850	

1. SigenCube must be paired with Sigen Energy Gateway to enable backup operation.
2. This refers to the load-side disruption time. Test conditions: In the open-circuit state of the power grid, the total power of the SigenCube is higher than the total power of the loads.
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SigenCube

ES261-2H-AU / ES261-2H-A1-AU

- Factory pre-commissioning & one-tap setup accelerate deployment
- Cell-to-system protection, precise thermal runaway control
- Pack-level active balancing, no need for on-site SOC calibration
- Low-noise operation below 60 dB expands site flexibility
- 150% overload for 10 seconds ensures reliable start-up



Sigen Energy Storage System

Preliminary

SigenCube	ES261-2H-AU	ES261-2H-A1-AU	Units
DC Side			
Battery type		$LiFePO_4$	
Total energy capacity		261	kWh
Nominal voltage range		676 ~ 936	V
Nominal charge / discharge rate	0.5P	0.38P	
AC Side (On-grid)			
Nominal output power	125,000	99,990	W
Max. output apparent power	125,000	99,990	VA
Max. output active power (cosΦ=1)	125,000	99,990	W
Nominal voltage		400, 3P4W	Vac
Nominal grid frequency		50 / 60	Hz
Power factor		1 leading ~ 1 lagging	
Total current harmonic distortion		THDi ≤ 1.5%	
AC Side (Backup)[1]			
Nominal output power	125,000	99,990	W
Max. output apparent power	125,000	99,990	VA
Peak output power (10 seconds)	187,500	149,985	VA
Nominal voltage		400, 3P4W	Vac
Nominal grid frequency		50 / 60	Hz
Power factor		1 leading ~ 1 lagging	
Total voltage harmonic distortion		THDv ≤ 2%	
Disruption time of backup switch[2]		0	ms
Protection			
Safety protection feature		Insulation monitoring, Residual current monitoring, AC overcurrent/overvoltage/short-circuit protection, Type II AC surge protection, Anti-islanding protection	
System General Data			
Dimensions (W / H / D)		940 / 2,380 / 1,325	mm
Weight		2,500	kg
Storage temperature range		-35 ~ 60	°C
Operating temperature range		-30 ~ 55 (Derating at 45°C)	°C
Relative humidity range		0% ~ 100% (non-condensing)	
Max. operating altitude		4,000 (Derating at 3,000m)	m
Cooling		Smart Liquid cooling	
Balance mode		Active balance	
Fire suppression system		Combustible gas detector, Smoke detector, Heat detector, Explosion-proof fan, Alarm sounder, Cabinet-level Aerosol, Top explosion vent, Water-based fire suppression	
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