



Australian lithium ion batteries & technology

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welcome to the renaissance

Energy Renaissance is the only Australian company operating today committed to creating and making all Australian lithium-ion batteries from cells to CSIRO-designed superStorage™ commercial battery products and accelerating Australia's transition to a clean energy superpower.

With products that are 100% Australian-made, employing 92% Australian components and driven by CSIRO-authored BMS and EMS software that is 100% Australian, a head office in Sydney and manufacturing operations in NSW's Hunter Region, we are well on the journey.

All this is made possible by our committed installers and customers helping secure the local supply chain for Australia.



Supply security. Install simplicity.

85MWh
capacity
/month from
our Australian facility
and expanding

92%
australian
content
reduced supply risk,
Australian standards
and quality, reduced
delivery time and cost

100%
australian
expertise
our unique CSIRO
designed product and
ongoing local service and
support means simple
installation and shipping

australia's best value commercial battery



lowest total cost

Our unique advantages result in lowest total cost of ownership - purchase, ship, install, operate, maintain and retire



most complete solution

Our integrated and scalable superStorage™ platform includes packs, racks, BMS and EMS all made by us here in Australia



unique CSIRO technology

Five years in development with CSIRO to deliver safe, secure, hyper-efficient hot climate operation in tough conditions with defence-grade cybersecurity.



truly Australian

All Australian team, ownership, service and support and designed by Australia's science agency. With 92% Australian battery content and growing.



Recycling & second life

Designed for recyclability and reuse with rapid non-destructive disassembly and supports cell-level non-destructive refurbishment.

A person in a blue polo shirt is working on a battery energy storage system. They are holding a small component in their right hand and using a tool in their left hand. The system consists of many black battery modules with metal terminals. The background is a factory or workshop setting with various equipment and cables.

battery energy storage systems

Demand response

Load shifting

Microgrid

Demand charge reduction

Solar self-consumption

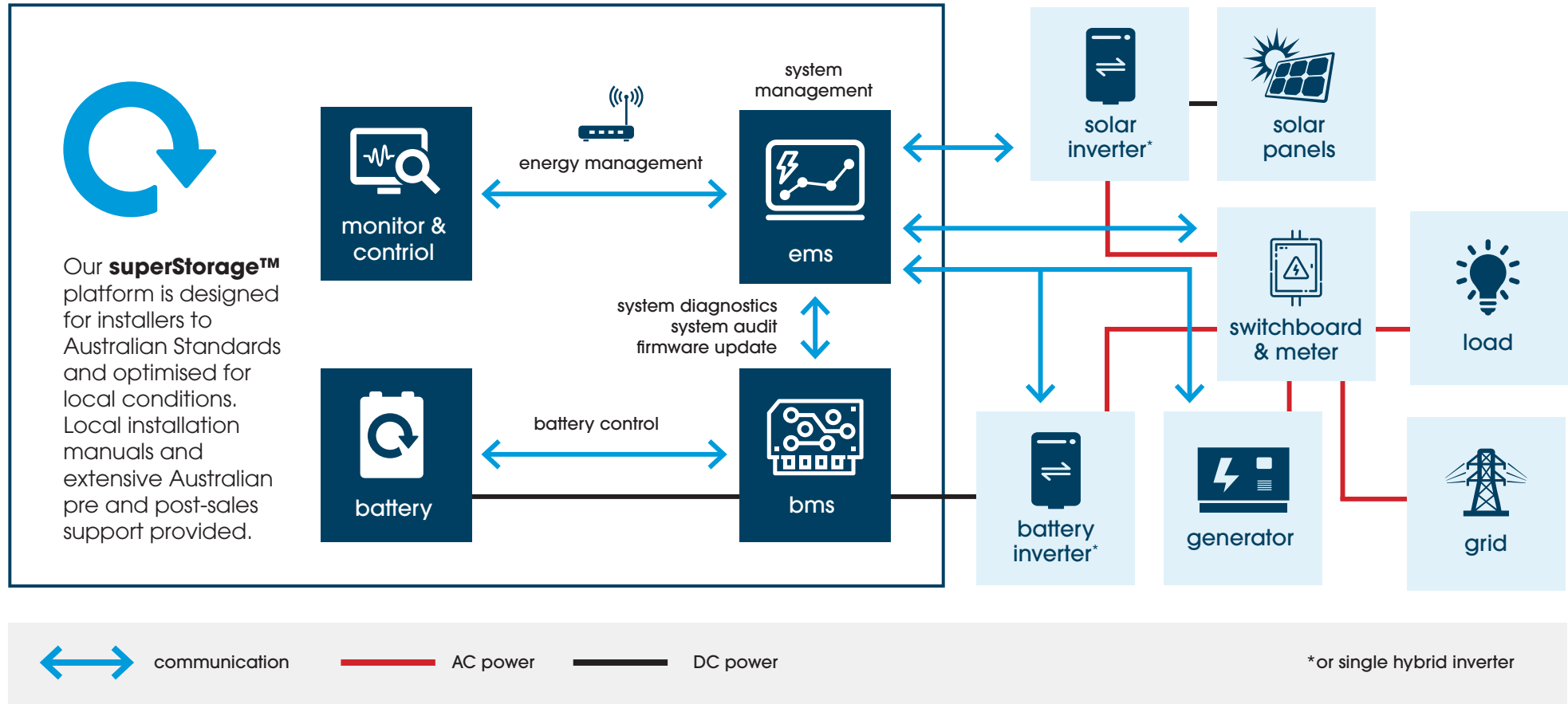
Solar sponge

Emergency backup

Renewable firming

Peak shaving

battery energy storage systems



renaissance superEMS™

energy management system

Monitor and set the desired minimum state of charge, generation and load at given times in the day of batteries remotely via mobile or desktop app.

Ensuring compatibility and easy integration with most battery inverters for simple plug and play battery installation. Renaissance **superEMS™** provides both an installer and customer level interface to monitor and control your energy generation remotely.

microgrid

load shifting

solar sponge

demand response

renewable firming

emergency backup

solar self-consumption

demand charge reduction



Communications

- Nano-SIM card for 5G/4G/3G/2G
- LAN eth Port x1
- RS485 × 2
- CAN × 1
- Modbus



Physical specifications

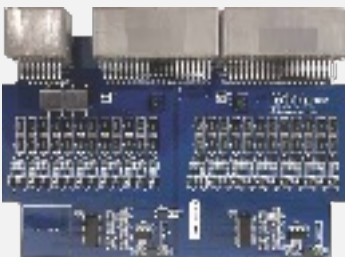
- Mounting..... DIN Rail
- Number of Poles..... 6
- Width..... 145mm
- Height..... 90mm
- Depth..... 40mm
- Operating Temperature..... -10°C to 50°



The core of all **superStorage™** batteries is our integrated cybersecure, hyper-accurate and Australian battery management system. Simple, safe and secure with a wide range of voltage configurations to allow for maximum inverter compatibility.



Renaissance
superBMS™
rack PCB



Renaissance
superBMS™
pack PCB



Renaissance superBMS™
software

manages all superStorage™ batteries

- Provides the PCS/EMS with access to battery performance thresholds as well as real-time voltage, current, temperature, State of Charge (SOC), and Depth of Discharge (DOD) information.
- Scales back current thresholds as batteries approach maximum SOC and DOD, reducing the risk of overcharge and over-discharge by the PCS.

powers all superStorage™ applications

- Commercial and Industrial (C&I) facilities
- Utility grid support
- Residential energy storage
- Specialty vehicle applications

world-class multi-layer security

- Cyber-secure architecture for safe and trusted remote management.
- Safety settings are factory-locked to balance flexibility with safety.
- Includes built-in coil drivers that can energize and de-energize contactors.

- Provides bi-directional contactor control to reduce the risk of contactors arcing and welding during disconnection under load.
- Disconnects the batteries from the power path if safety thresholds are exceeded or contactors become damaged.
- Detects faulty voltage and temperature sensor wiring or fused contactors and will not connect the stack if they are present.

manage multiple racks from one place

- Provides real-time battery data directly to environmental controls and other safety systems.

constantly improving

- Ongoing firmware updates and feature additions ensure the Renaissance superBMS™ is always ready to support new technologies.

What does 'built tough' mean?

superMod™

- 15% less weight
- Thermally efficient
- Chemistry independent
- Easily recycled
- Lower cost



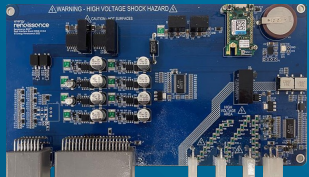
superPak™

- Safe
- Recyclable
- Lighter



superRack™

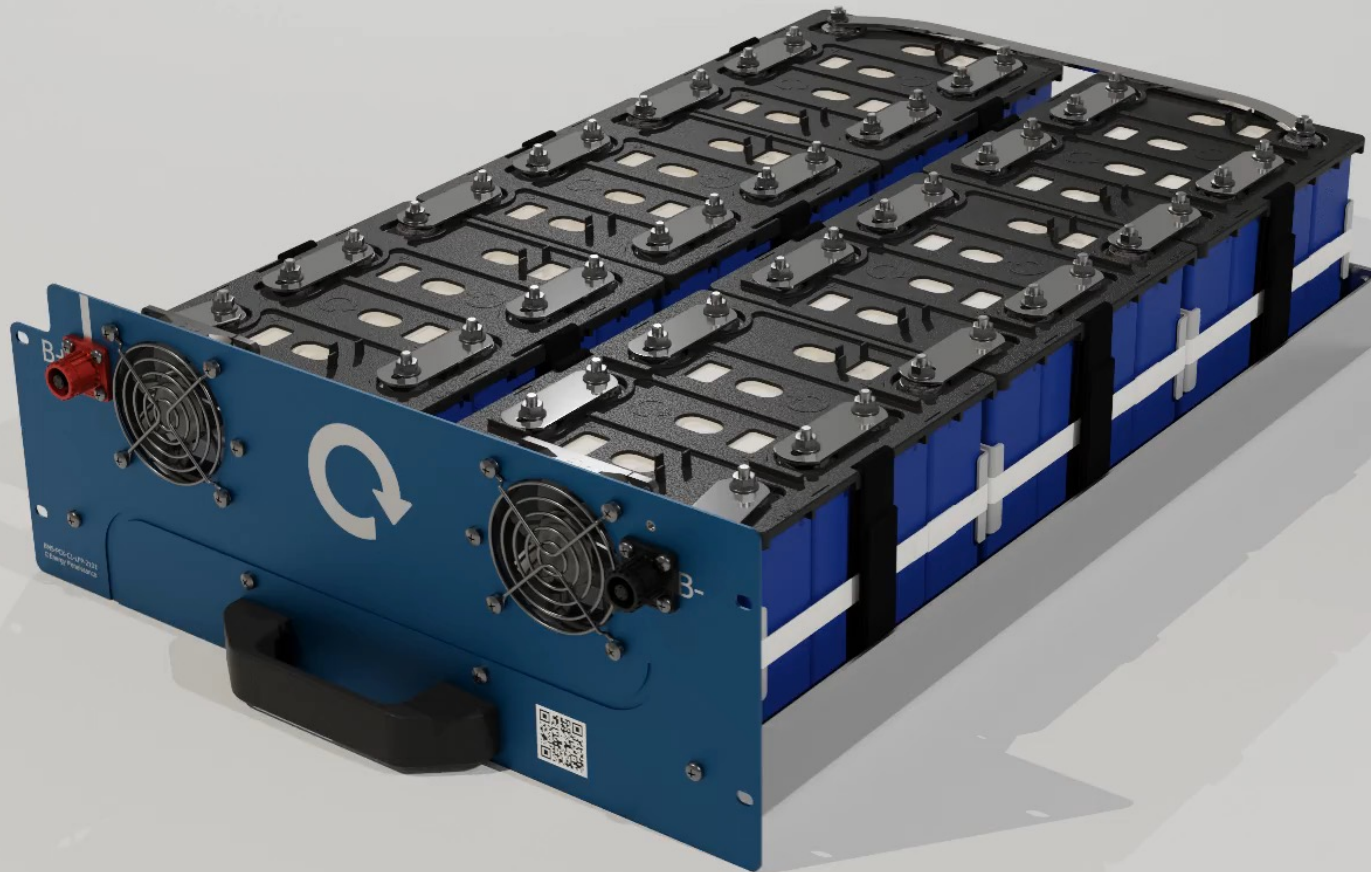
- Ruggedised
- Transport in-rack
- Standard footprint on all products
- Fast and easy installation
- superSEAS™-ready



superBMS™

- Cybersecure
- Hyper-accurate
- superSEAS™-ready

Pak Design



australian technology

The superRack™ design makes it easy to address a wide range of power and energy applications.

Scaling is simple with multi rack systems that are pre-configured and with our unique ship-in-rack capability this means **faster, easier and more cost effective installation.**



Product	super6T™	superPak™	superRack™	superRack™ twin	superRack™ outdoor	superCube™	superVolt™
Capacity	2.56 kWh	7.68 kWh	up to 77 kWh*	up to 153 kWh*	up to 153 kWh*	upto 307 kWh*	up to 1.8 MWh*
Rating	NATO 6T	Indoor	Indoor	Indoor	Outdoor	Outdoor	Outdoor
Scalable	Yes	Yes	Yes	Yes	Yes	Yes	Yes

*Configurable to suit inverter/site.

Ask us for inverter and EMS compatibility information for further details on system designs

unique battery platform

Renaissance **superStorage**™ batteries are uniquely designed by CSIRO for cybersecurity and hot-climate ruggedised operation, are manufactured, serviced and supported in Australia using over 90% Australian content and are optimised for second life and recycling. Providing the lowest total cost and most complete commercial battery in Australia.



superBMS™

The core of all superStorage™ batteries. Simple, safe and secure - peace of mind with our integrated CSIRO-developed cybersecurity, hyper-accurate battery management system.



superPak™

Reduce cost and complexity with standardised, tough battery pack design optimised for Australian conditions.



superEMS™

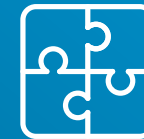
Easy integration with most battery inverters means plug and play solution installation. Installer and customer level interface to monitor and control your energy generation remotely.

superRack™

Reduce cost and complexity of solution design, install and transportation with standardised footprint across models, power configuration flexibility and toughened rack design optimised for Australian conditions.



Supports integration
with 3rd party data
systems



Future proof support
reduce cost, weight
and recycling
complexity and
increase cooling
efficiency with unique
module design



Stay ahead of the market
with an **AI-ready technology**
stack supporting new
commercial models

renaissance superRack™

- ✓ Powered by cybersecure Renaissance superBMST™ and supported by Renaissance superEMST™
- ✓ Wide range of inverter options supported by superEMST™, single rack can be supplied with a 30kW inverter in rack and twin with 2 x 30 kW inverters or 1 x 30kW inverter and 1 x 45kW, 3-channel MPPT A
- ✓ Up to 16 racks can be paralleled using superBlockController™
- ✓ Designed, manufactured (from over 90% Australian components), serviced and supported in Australia.
- ✓ Available in different voltage configurations, from 310 to 1,300V_{nom}, 700 and 1,200V_{nom} detailed in tables
- ✓ Built for high energy density and competitive pricing
- ✓ Flexible modular battery rack designed to meet various energy, voltage, and power requirements
- ✓ Transportable; packs designed to be transported in rack to site
- ✓ Compact design for minimum installation space
- ✓ Real-time local and remote monitoring through the battery management system for commercial and utility applications
- ✓ Easy access, rapid module maintenance
- ✓ Tightly integrated battery management at pack, rack, and multi-rack level
- ✓ 10-year performance warranty
- ✓ External power and data interface



Tough, flexible,
scalable

indoor and outdoor solutions

renaissance superPak™



The Renaissance **superPak™** provides plug-and-play cell compatibility, fast and easy cybersecure BMS configuration and a rugged design.

^ 4RU standard rack dimension.

Configuration		Energy LFP	Medium LFP
Capacity/rack	kWh	7.68	7.68
C-rate	-	0.25C	0.5C
Continuous power	kW	1.92	3.84
Nominal voltage	V _{dc}	76.8	76.8
Operating voltage	V _{dc}	64.8 - 86.4	64.8 - 86.4
Efficiency	%	>97% (@ 0.5 C-Rate)	
Operating temperature	°C	25 ± 5	
Certificates	-	UL1642, 1973 (Safety), UN38.3 (Transport), CE, IEC62619	
Cell capacity/voltage	-	100Ah / 3.2V	
Cycle life @ 0.5 C-Rate	cycle	6000	5000
Calendar life	year	10	
Response time	ms	<5	
Charging method	-	CC-CV, CP-CV, CP	
Dimensions (D x W x H)^	mm	683.1 x 482.6 x 177.5	
Weight	kg	68	

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renaissance superRack™



The superRack™ design makes it easy to address a wide range of power and energy applications. **Scaling is simple** with multi rack systems that are pre-configured and with our unique ship-in-rack capability this means **faster, easier and more cost effective installation.**

Specifications may change at anytime without notice.

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Capacity/rack	kWh	up to 77 (configurable to suit inverter/site)
C-rate	h ⁻¹	0.5 C
Continuous power	kW	Up to 38 (configurable to suit inverter/site)
Nominal voltage	V _{dc}	up to 768 (configurable to suit inverter/site)
Efficiency	%	>97% (@ 0.5 C-Rate)
Operating temperature	°C	25 ± 5
Relative humidity	%	0~95% (no condensing)
Elevation	m	<2,000
Certificates	–	UL1642,1973(Safety), UN38.3(Transport), CE, Australian Made (AMAG)
IP rating	–	IP 20
Communication	–	MODBUS RTU
Cycle life @ 80%DOD	cycle	3,650
Calendar life	year	10
Switchgear fuse rating	–	1500 V _{dc} , 125 A, 250 kA
Charging method	–	CC-CV, CP-CV, CP
Populated superRack™ weight	kg	360±50 - 780±50
Dimensions (D x W x H)	mm	880 x 540 x 1,840 (8 pack rack) 880 x 540 x 2,200 (10 pack rack)
Paralleling	–	yes

renaissance superRack™ twin



The superRack™ design makes it easy to address a wide range of power and energy applications. **Scaling is simple** with multi rack systems that are pre-configured and with our unique ship-in-rack capability this means **faster, easier and more cost effective installation.**

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Capacity/rack	kWh	Up to 153 (configurable to suit inverter/site)
C-rate	h ⁻¹	0.5 C
Continuous power	kW	up to 65 (configurable to suit inverter/site)
Nominal voltage	V _{dc}	Up to 1,306 (configurable to suit inverter)
Efficiency	%	>97% (@ 0.5 C-Rate)
Operating temperature	°C	25 ± 5
Relative humidity	%	0~95% (no condensing)
Elevation	m	<2,000
Certificates	–	UL1642,1973(Safety), UN38.3(Transport), CE, Australian Made (AMAG)
IP rating	–	IP 20
Communication	–	MODBUS RTU
Cycle life @ 80%DOD	cycle	3,650
Calendar life	year	10
Switchgear fuse rating	–	1500 V _{dc} , 125 A, 250 kA
Charging method	–	CC-CV, CP-CV, CP
Populated superRack™ weight (per rack)	kg	360±50 - 780±50
Dimensions per rack (D x W x H)	mm	880 x 540 x 1840 (8 pack rack) 880 x 540 x 2,200 (10 pack rack)
Paralleling	–	yes

renaissance superRack™ outdoor



The Renaissance **superRack™ outdoor** provides all the benefits of the **superRack™** twin in a ruggedised, safe and easy to transport outdoor enclosure.

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Capacity/rack	kWh	Up to 153 (configurable to suit inverter/site)
C-rate	h ⁻¹	0.5 C
Continuous power	kW	up to 69 (configurable to suit inverter/site)
Nominal voltage	V _{ac}	415 (3-phase, 4-wire, 50 Hz)
Efficiency	%	>94% (@ 0.5 C-Rate)
Operating temperature	°C	10 - 55
Relative humidity	%	0~95% (no condensing)
Elevation	m	<2000
Wind region	–	A
Certificates	–	UL1642,1973(Safety), UN38.3(Transport), CE, Australian Made (AMAG), AS4777.2, EN50549
IP rating	–	IP 56
Communication	–	MODBUS RTU or TCP
Cycle life @ 80%DOD	cycle	3,650
Calendar life	year	10
Main circuit breaker rating	–	100 A, 10 kA
Populated superRack™ outdoor weight	kg	1,400 ± 100
Dimensions (D x W x H)	mm	1,303 x 1,250 x 2,365
Paralleling	–	Yes

renaissance superCube™



The **superCube™** outdoor integrated DC block enclosure is the perfect choice for energy storage applications in commercial and industrial environments. The Australian-made enclosure integrates switchgear, battery racks, HVAC and all fire and safety equipment inside for safe, secure integration with market-leading topologies.

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Capacity/rack	kWh	up to 307 (configurable to suit inverter/site)
C-rate	h ⁻¹	0.5 C
Continuous power	kW	up to 154 (configurable to suit inverter/site)
Nominal voltage	V _{dc}	up to 1306 (configurable to suit inverter/site)
Efficiency	%	>97% (@ 0.5 C-Rate)
Operating temperature	°C	10 - 55
Relative humidity	%	0~95% (no condensing)
Elevation	m	<2,000
Wind region	–	A
Certificates	–	UL1642,1973(Safety), UN38.3(Transport), CE, Australian Made (AMAG)
IP rating	–	IP 56
Communication	–	MODBUS RTU
Cycle life @ 80%DOD	cycle	3,650
Calendar life	year	10
Response time	ms	<1
Charging method	–	CC-CV, CP-CV, CP
Populated superCube™ weight	kg	3,200 ± 150
Dimensions (D x W x H)	mm	1,303 x 2,115 x 2,365
Paralleling	–	yes

renaissance superVolt™



The Renaissance **superVolt™** integrated DC block enclosure is the perfect choice for energy storage applications in commercial and industrial environments. The Australian-made enclosure integrates switchgear, battery racks, HVAC and all fire and safety equipment inside for safe, secure integration with market-leading topologies.

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Capacity/rack	kWh	up to 307 (configurable to suit inverter/site)
C-rate	h ⁻¹	0.5 C
Continuous power	kW	up to 154 (configurable to suit inverter/site)
Nominal voltage	V _{dc}	up to 1306 (configurable to suit inverter/site)
Efficiency	%	>97% (@ 0.5 C-Rate)
Operating temperature	°C	10 - 55
Relative humidity	%	0~95% (no condensing)
Elevation	m	<2,000
Wind region	–	A
Certificates	–	UL1642,1973(Safety), UN38.3(Transport), CE, Australian Made (AMAG)
Communication	–	MODBUS RTU or TCP
Cycle life @ 80%DOD	cycle	3,650
Calendar life	year	10
Response time	ms	<1
Charging method	–	CC-CV, CP-CV, CP
Populated superVolt™ weight	kg	6,400 +/-300
Dimensions (D x W x H)	mm	2,600 x 2,150 x 2,250
Paralleling	–	yes

widest inverter compatibility

Our **superRack™** products leave the factory pre-commissioned for installation with your selected inverter for easier installation.

We provide integration with a range of inverter sizes to suit your end use case;

10kW / 20kW / 30kW / 50kW / 75kW / 100kW / 500kW



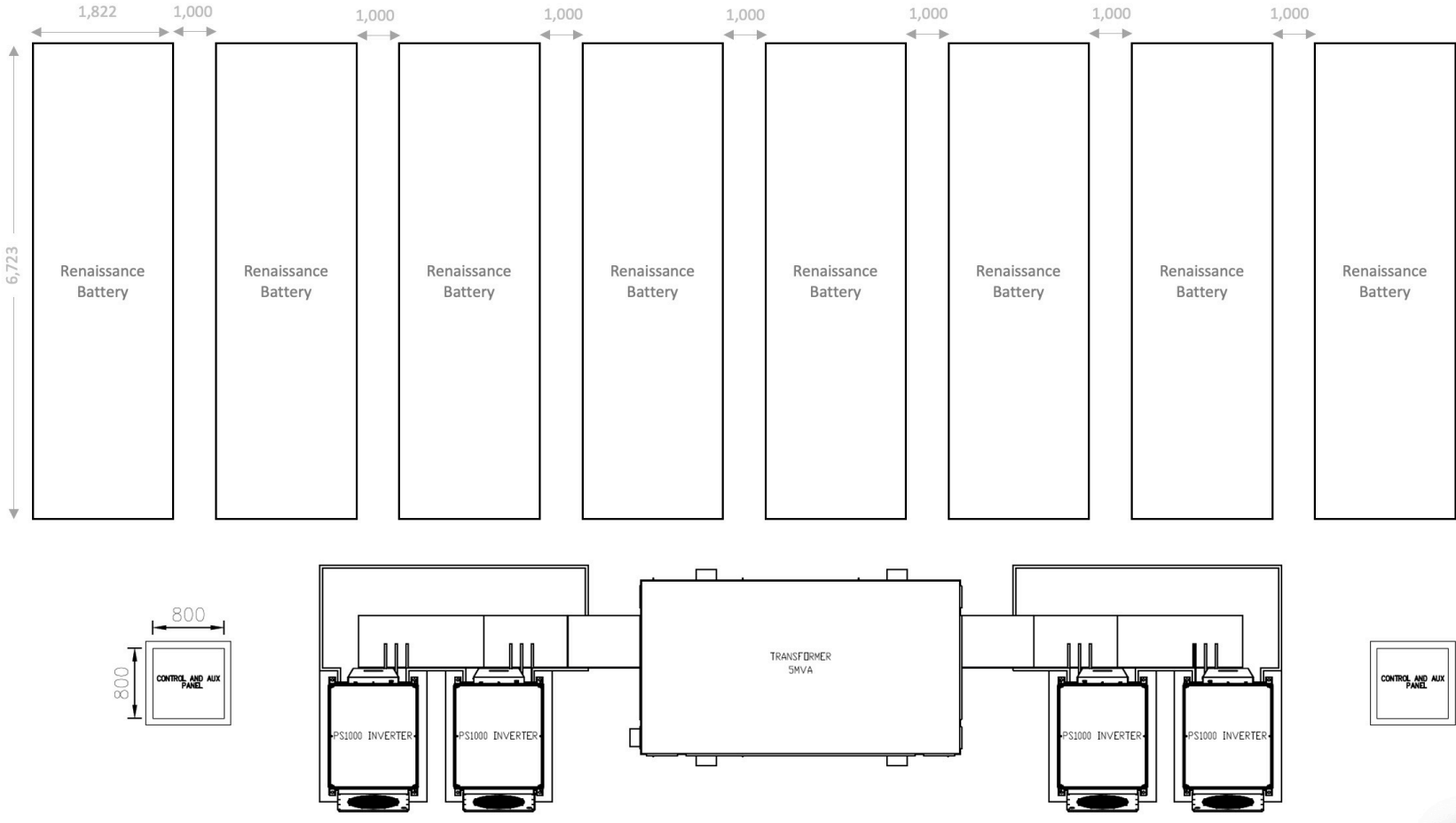
Trusted brands include:



renaissance superStorage™

typical solution architecture

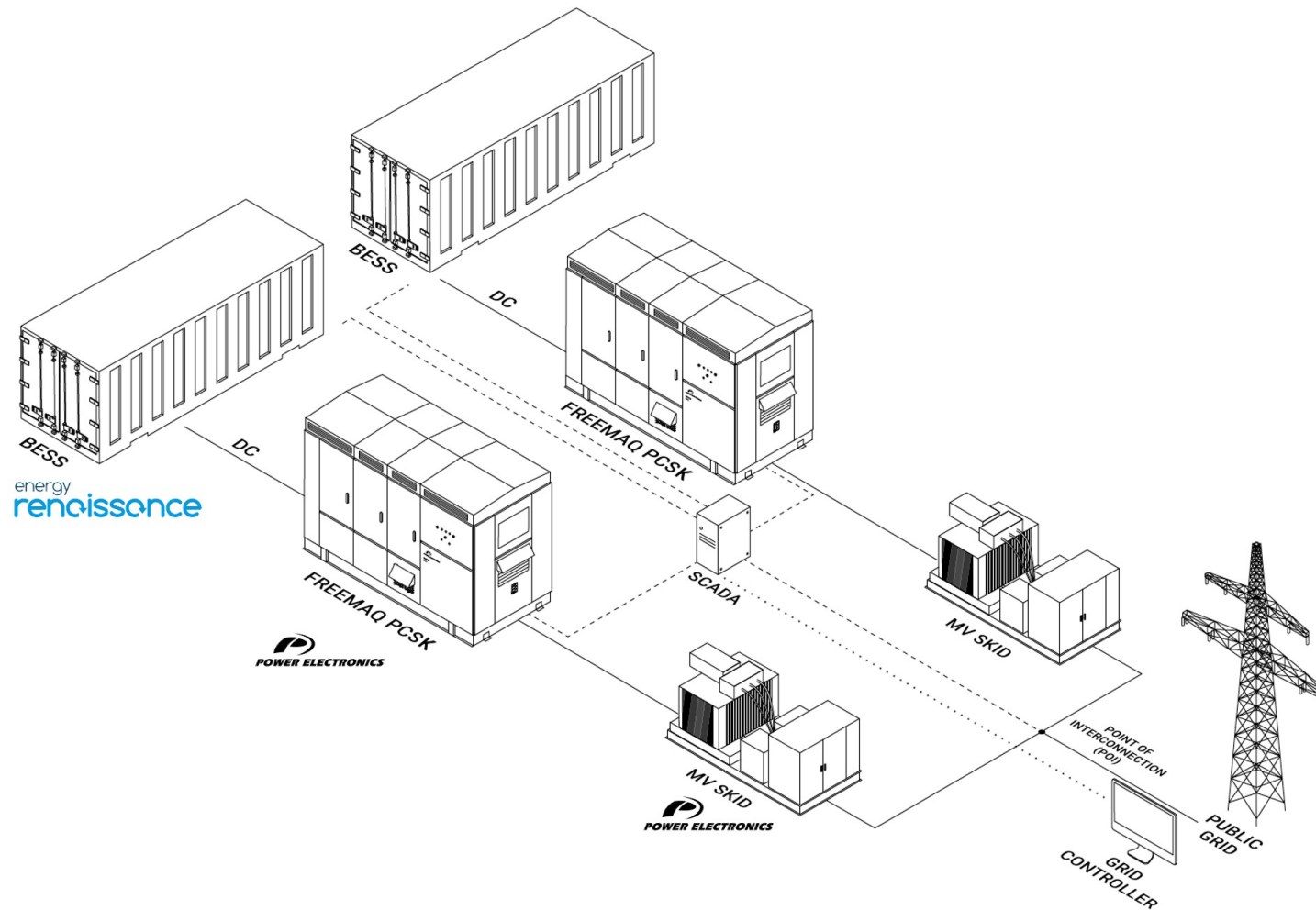
Example: superVolt™ energy storage system connected to a Hitachi Energy PCS1000 Power Conversion System.



renaissance superStorage™

Illustrative topology

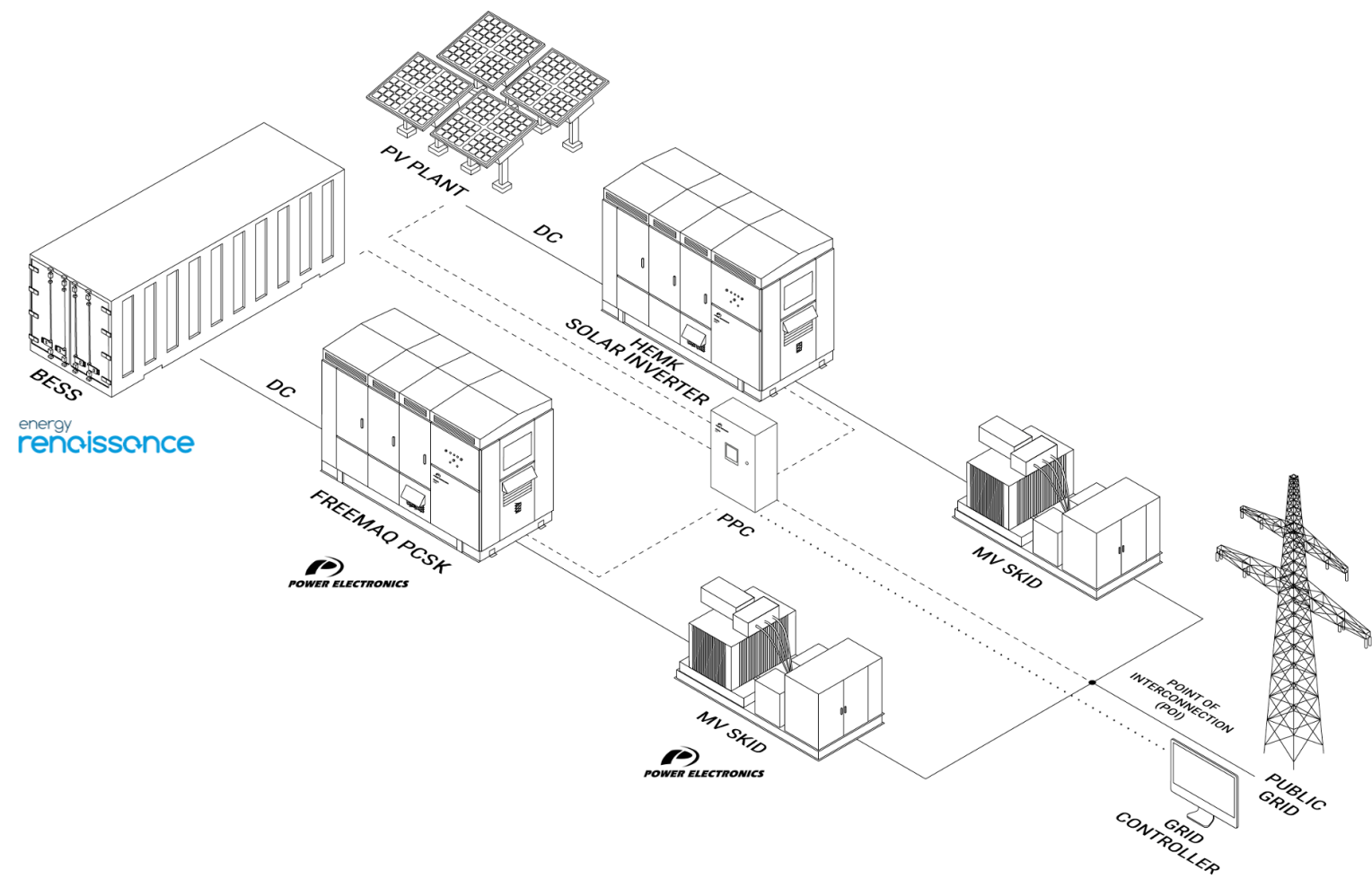
Example A: superVolt™ BESS connected to a Power Electronics Freemaq PCSK 3800kVA (FP3670K) Power Conversion System.



renaissance superStorage™

Illustrative topology

Example B: superVolt™ BESS connected to a Power Electronics Freemaq PCSK 3800kVA (FP3670K) Power Conversion System.



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