RedEarth
ENERGY STORAGE

KOOKABURRA
SERIES

COMMERCIAL & INDUSTRIAL SCALE ENERGY STORAGE SYSTEMS

The Kookaburra is a ready-to-install energy storage system, comprised entirely inside a single container, slimline or 20ft. This mobile and modular solution includes batteries, solar and/or battery inverters, HVAC, fire protection and auxiliary components. All tested and pre-assembled by Red Earth Engineering experts, and seamlessly operated by our smart management software.

1800 733 637
sales@redearth.energy
www.redearth.energy

RedEarth Commercial

RedEarth Commercial is the industrial projects division of RedEarth Energy Storage, a professional energy storage company that offers systems to suit every client. We engineer and assemble our high-quality solar battery solutions right here in Australia, tailoring solutions to provide energy security and reliability most effectively for our clients.

Quality assurance is at the heart of what we do, from initial concept design through to manufacturing and maintenance. At our ISO9001 certified facility in Brisbane we design and manufacture energy storage solutions to meet your business' needs, both on- and off the grid.

Reliable Support

Not only does RedEarth tailor affordable and intuitive systems for our customers, but we also provide our vast network of technicians with reliable support when it comes to instillation and maintenance of our products. Comprising the complete range of on-grid, off-grid and hybrid energy storage systems, we have a solution to fit every need.

Professional Energy Storage

We are specialists in the field of energy storage, engineering and assembling affordable battery systems to improve sustainability for retail and commercial clients. At RedEarth we pride ourselves on being Australian owned and operated with all our products designed and manufactured locally.

Kookaburra Series

The Kookaburra is a ready-to-install energy storage system, comprised entirely inside a single container, slimline or 20ft.

This mobile and modular solution includes batteries, solar and/or battery inverters, HVAC, fire protection and auxiliary components. All tested and pre-assembled by Red Earth Engineering experts, and seamlessly operated by our smart management software. The Kookaburra series can be delivered and deployed almost anywhere, in both grid-connect applications as well as standalone offgrid scenarios.

Single units can easily be combined to deliver the power and energy capacity required for your business. The systems can cover a variety of applications from 100 kW up to 800kW power output and 200kWh up to several MWh of energy storage.

Should your requirements change in the future, our Kookaburra series lets you easily add or remove capacity and power wherever and whenever you need it. This gives you complete flexibility and enables you to adapt quickly to your business needs and changing market conditions.

SYSTEM ADVANTAGES

Flexibility

Modular scale up capability to meet growing customer demands. Manages multiple power sources, loads and batteries to optimise power generation and storage.

High Quality

Fully engineered, factory assembled and tested in Australia. High quality components used with weatherproof enclosure. Australian Standards compliant.

Easy Installation

Developed for easy and quick installation - minimal onsite preparation. Plug and play connection to your solar, and generators and the grid.

Maintenance

System performance is guaranteed through our Operations Optimisation & Maintenance package.

Remote Monitoring

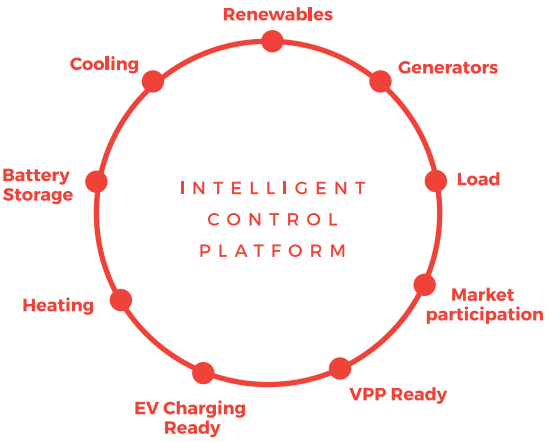
Fully engineered, factory assembled and tested in Australia. High quality components used with weatherproof enclosure. Australian Standards compliant.

Warranty & Support

RedEarth's systems use high quality components and are backed by up to 5 years' replacement warranty. Support including monitoring, is available directly from our headquarters.

Smart Control Platform

Our intelligent software allows fast response times and precise energy management to increase battery performance, optimize solar use and reduce generator running costs. It determines in real-time how to dispatch the Kookaburra as well as all other assets such as solar PV inverters, diesel generators and more to maximise value for our customers while maintaining reliability and power quality. Our control platform can easily be configured to your needs and adapted when new market applications emerge, keeping you on top of things.

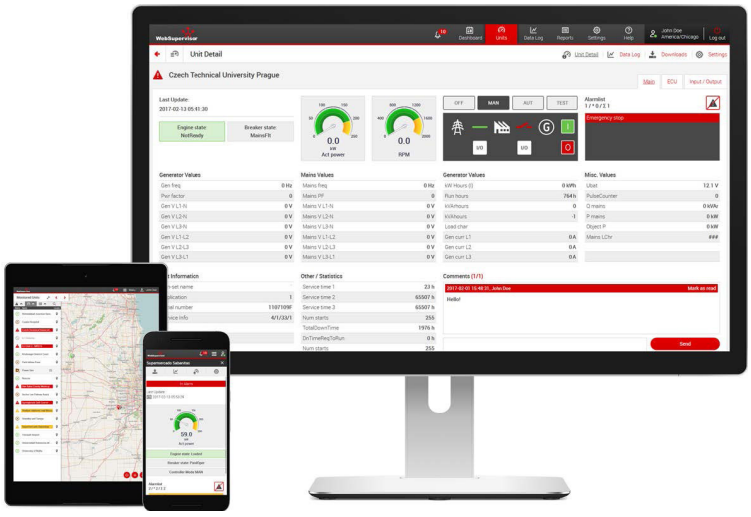


KEY FEATURES

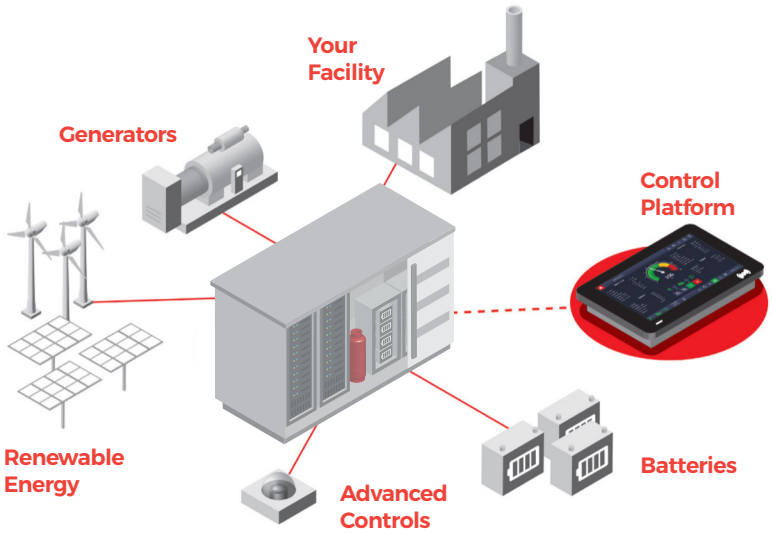
- Support of up to 100% renewable energy penetration
- Interface with various site components (PV inverters, BMS, gen-set controllers,etc.)
- Smooth integration of renewable energy source(s) with genset(s), energy storage systems and the grid
- Continuous monitoring and control of all energy sources (Actual power output from: PV, Genset, Battery and grid)
- Scalable and ready to adjust to future requirements

ADVANCED ANALYSIS AND REPORTING

The platform offers complex control of PV/Battery/Grid & Diesel applications. It allows smooth integration of renewable energy to conventional power while maintaining high reliability, safety and efficiency of the site. Statistics of generated energy and fuel consumption and long term renewable energy penetration calculations can be provided.



1800 733 637 sales@redearth.energy www.redearth.energy



Advanced Operator Controls

The control platform provides the central intelligence for your Kookaburra to work with a wide variety of input and output sources/destinations. Our standard offering can be expanded upon to offer additional capabilities such as:

- Cloud forecasting to anticipate energy use & generation
- Building Management System integration
- API possibility – possibility to integrate into your CRM, ERP or other third party software
- Demand Response control
- Energy markets participation through 3rd party inputs
- Advanced Peak shaving capabilities
- Frequency regulation
- Power Factor correction

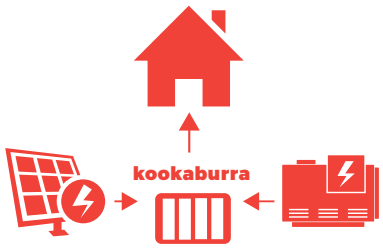
LOCAL OPERATOR PANEL

Each system is fitted with an industrial operator panel equipped with 12,1" colour, multi-touch screen. Together with the controller to visualise and control the Kookaburra system locally, without external 4G or internet connection, in various applications.

Typical Applications

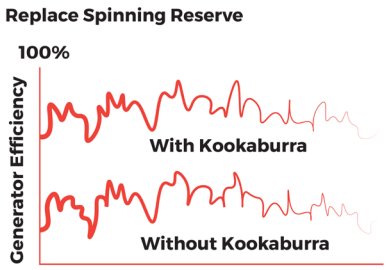
STAND ALONE POWER

Grid forming, the Kookaburra provides a resilient electrical platform for offgrid energy users. Compatible with various energy sources such as solar PV, generators and turbines.



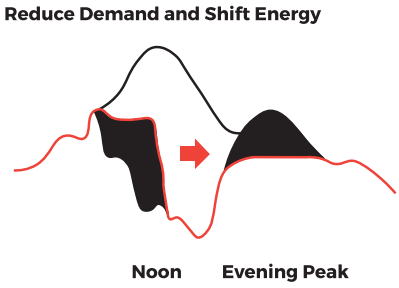
SPINNING RESERVE DISPLACEMENT

Running extra generators to create spinning reserve results in higher fuel consumption. Battery storage acting as spinning reserve helps to increase the overall efficiency of your power system by running fewer generators, and less often.



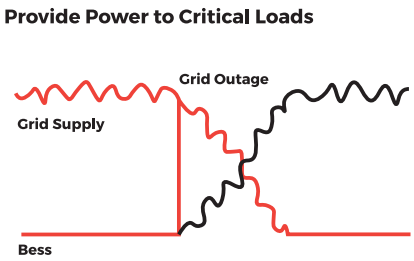
PEAK SHAVING

Peak shaving is designed to prevent supply bottlenecks and reduce your demand charges. Covering your additional power needs by activating generators or using batteries removes this issue.



BLACK OUT PROTECTION

The Kookaburra provides energy when utility power fails, either long enough for critical equipment to shut down gracefully or to keep required loads operational for extended periods of time.



Standard Applications: Offgrid / Hybrid / Grid Support

Typical Use Cases: Mining / Industrial facilities / Shopping centres / Agriculture / Hotels & Resorts / Utility networks / Defence / Telecom

1800 733 637 sales@redearth.energy www.redearth.energy

Technical Specifications

100KW/250KWH

Table 1 Technical Specifications	
System Model	KB-100kW-250kWh
System Information	
Nominal AC Power	100kVA
Nameplate Capacity	250kWh
Battery Information	
Battery Chemistry	LFP
Cell Make / Type	CATL / 280Ah
Configuration	280S2P
Nominal Voltage	896V
Voltage Range	784 ~ 1,000V
Inverter Information	
Max. AC Power	100kW
Nominal Grid/Islanding Voltage	400V
Grid Voltage Range	312V~450V
Power Factor	-1 to 1
Nominal Grid Frequency	50Hz
Isolation	Transformerless
Working Conditions	
Degree of Protection	NEMA 3R / IP54
Noise Emission	≤72dB @1m
Operating Temperature Range	-30˚C ~ 45˚C
Relative Humidity	0~95% (No condensing)
Max. Working Altitude	2,000m
System Information	
Dimensions (W*H*D)	4,550×2,500×1,600mm
Weight (with & without batteries)	7t & 3t
Cooling Method of Battery Chamber	HVAC
Cooling Method of PCS Chamber	Forced air cooling with replaceable fan module
Fire Suppression System	FM-200
Communication Protocol	Modbus TCP/IP
Certificate & Compliance	UL1741, UL 1741SA, IEEE1547, UL1973, UL9540A, UL9540, AS4777.2

Technical Specifications

200KVA/500KWH

Table 2 Technical Specifications	
System Model	KB-200kW-502kWh
System Information	
Nominal AC Power	200kVA
Nameplate Capacity	502kWh
Battery Information	
Battery Chemistry	LFP
Cell Make / Type	CATL / 280Ah
Configuration	280S2P
Nominal Voltage	896V
Voltage Range	784 ~ 1,000V
Inverter Information	
Max. AC Power	2 x 100kW
Nominal Grid/Islanding Voltage	400V
Grid Voltage Range	312V~450V
Power Factor	-1 to 1
Nominal Grid Frequency	50Hz
Isolation	Transformerless
Working Conditions	
Degree of Protection	NEMA 3R / IP54
Noise Emission	≤72dB @1m
Operating Temperature Range	-30˚C ~ 45˚C
Relative Humidity	0~95% (No condensing)
Max. Working Altitude	2,000m
System Information	
Dimensions (W*H*D)	4,550×2,500×1,600mm
Weight (with & without batteries)	12t & 3t
Cooling Method of Battery Chamber	HVAC
Cooling Method of PCS Chamber	Forced air cooling with replaceable fan module
Fire Suppression System	FM-200
Communication Protocol	Modbus TCP/IP
Certificate & Compliance	UL1741, UL 1741SA, IEEE1547, UL1973, UL9540A, UL9540, AS4777.2

Technical Specifications

400KVA/1000KWH

Table 3 Technical Specifications	
System Model	KB-400kW-1000kWh
System Information	
Nominal AC Power	400kVA
Nameplate Capacity	1000kWh
Battery Information	
Battery Chemistry	LFP
Cell Make / Type	CATL / 280Ah
Configuration	280S2P
Nominal Voltage	800V
Voltage Range	784 ~ 1,000V
Inverter Information	
Max. AC Power	4 x 100kW
Nominal Grid/Islanding Voltage	400V
Grid Voltage Range	312V~450V
Power Factor	-1 to 1
Nominal Grid Frequency	50Hz
Isolation	Transformerless
Working Conditions	
Degree of Protection	NEMA 3R / IP54
Noise Emission	≤72dB @1m
Operating Temperature Range	-30˚C ~ 45˚C
Relative Humidity	0~95% (No condensing)
Max. Working Altitude	2,000m
System Information	
Dimensions (W*H*D)	2 x 4,550×2,500×1,600mm or 1 x 6,100×2,440×2,600mm
Weight (with & without batteries)	2 x 12t & 3t
Cooling Method of Battery Chamber	HVAC
Cooling Method of PCS Chamber	Forced air cooling with replaceable fan module
Fire Suppression System	FM-200
Communication Protocol	Modbus TCP/IP
Certificate & Compliance	UL1741, UL 1741SA, IEEE1547, UL1973, UL9540A, UL9540, AS4777.2

Technical Specifications

800KVA/2132KWH

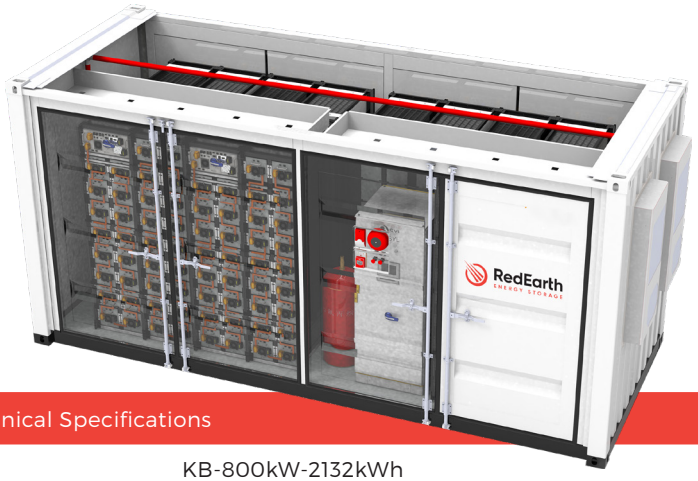
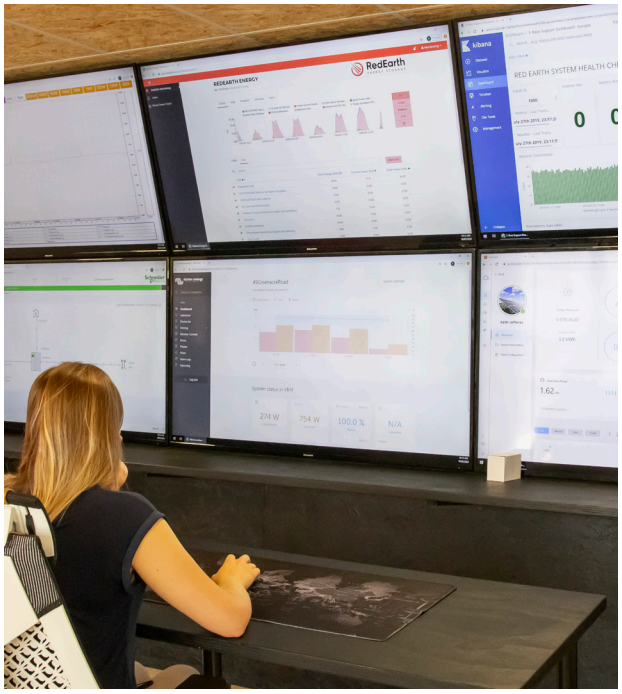


Table 4 Technical Specifications	
System Model	KB-800kW-2132kWh
System Information	
Nominal AC Power	800kVA
Nameplate Capacity	2132kWh
Battery Information	
Battery Chemistry	LFP
Cell Make / Type	CATL / 280Ah
Configuration	340S7P
Nominal Voltage	1,088V
Voltage Range	952-1,224V
Inverter Information	
Max. AC Power	8 x 100kW
Nominal Grid/Islanding Voltage	400V
Grid Voltage Range	312V~450V
Power Factor	-1 to 1
Nominal Grid Frequency	50Hz
Isolation	Transformerless
Working Conditions	
Degree of Protection	NEMA 3R / IP54
Noise Emission	≤72dB @1m
Operating Temperature Range	-30˚C ~ 45˚C
Relative Humidity	0~95% (No condensing)
Max. Working Altitude	2,000m
System Information	
Dimensions (W*H*D)	6,100×2,896×2,438mm
Weight (with & without batteries)	26.6t & 8.5t
Cooling Method of Battery Chamber	HVAC
Cooling Method of PCS Chamber	Forced air cooling with replaceable fan module
Fire Suppression System	FM-200
Communication Protocol	Modbus TCP/IP
Certificate & Compliance	UL1741, UL 1741SA, IEEE1547, UL1973, UL9540A, UL9540

Ongoing Operations Optimisation Maintenance Package

A properly maintained energy storage system can accelerate investment payback, improves safety onsite and ensures the longevity of your system.



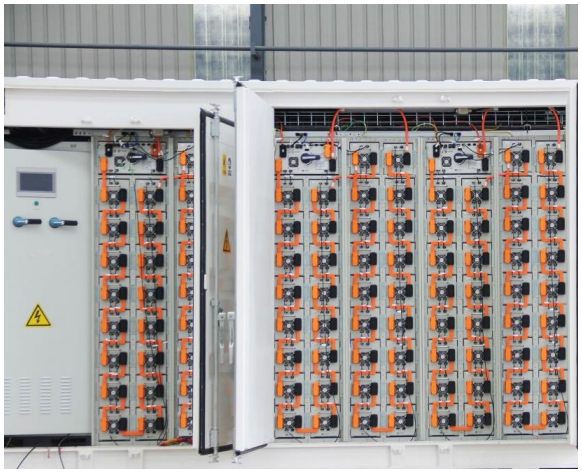
Having a watchful and proactive eye on your investment is vital to ensuring maximum ROI. With our world-class, plant-wide Operations Optimisation and Maintenance (OOM) services for commercial and industrial storage systems, Red Earth Energy Storage is uniquely positioned to help you achieve greater returns faster and ensure maximum system uptime.

Not only can you count on superior inverter and battery technology, but our Monitoring Centre also utilises advanced, real time monitoring capabilities to analyse performance, detect potential issues and resolve matters remotely. To minimize down time, our team can also dispatch field service engineers to get your system back on track quickly.

Case Studies

Time: 2020
Size: 1MW / 1.18MWh
Application: Peak Shifting Frequency Regulation

Time: 2020
Size: 250kW / 502kWh
Application: Peak Shifting Back up Power



Time: 2020
Size: 1MW/5.48 MWh
Application: Peak Shifting Energy Smoothing

RedEarth
ENERGY STORAGE

RedEarth Energy Storage Ltd
1800 733 637

15 Fienta Place, Darra, (Brisbane)
Queensland, 4076
Australia

CLEAN ENERGY COUNCIL
APPROVED
SOLAR
RETAILER

CERTIFIED ISO 9001:2015 COMPANY

SMART ENERGY
COUNCIL
SILVER MEMBER