IronBark
TECHNICAL SPECIFICATIONS

RedEarth ENERGY STORAGE

Identification

Model	IronBark 20 ft	IronBark 30 ft
Power	250, 375 or 500 kW	250, 375 or 500 kW
Nominal Capacity (kWh)	482 - 1030 kWh	1450 - 2060 kWh
Form Factor	20 ft high cube container	30 ft high cube container
Battery Chemistry	LFP - Lithium Iron Phosphate	

Performance

Nominal Capacity (kWh)	482 - 1030 kWh	1450 - 2060 kWh
Usable Energy Capacity (kWh)	434 - 927 kWh	1305 - 1854 kWh
Expansion - Capacity (kWh)	dependent on configuration	
Depth of Discharge (DoD)	90%	
Nominal Rated Voltage (VDC)	768 or 819.2 VDC	
Working Voltage Range (VDC)	684 - 876 VDC or 730 - 934 VDC	
Max. Charge / Discharge Current (A)	180 A	
Nominal C-rate	0.5	

Electrical and Solar

Operation Mode	Off-grid or On-grid
Rated Backup Output Power (kW)	250, 375 or 500 kW
Expansion - Power (kW)	dependent on configuration
Overload Capability (kW)	300, 450 or 550 kW
Rated Backup Voltage (V)	230 V Ph-N 400 V Ph-Ph
Unbalanced Load Capacity	100% unbalanced
Max Pass-through Rating (kW)	500 kW
THDv in Backup Mode	< 3%
Maximum Generator Input (kVA)	500 kVA
PV-Coupling	DC-coupled
No. of PV Inputs	20, 30 or 40
Maximum PV Access Power (kW)	500, 750, or 1000 kW
Maximum PV Input Power (kW)	400, 600 or 800 kW
MPPT Max. DC Voltage (V)	684 or 729 V
MPPT Min. DC Voltage (V)	450 V
PV Protection	40A, 1500V, 50 kA fuse + 4P PV isolator + SPD

Thermal and Mechanical

Cooling Method	Air cooling
Operating Ambient Temperature Range (°C)	-5 °C to 45 °C
Optimum Ambient Temperature Range (°C)	15 °C to 35 °C
Storage Temperature Range (°C)	-15 °C to 55 °C
Relative Humidity	0 – 95% non-condensing
Max. Operating Altitude (m)	2000 m
Noise Level (dBA)	< 70 dBA @ 1 m TBC

Controls and Communications

EMS Platform	Steward EMS
Display / HMI	Steward touchscreen HMI
Communication Ports	Ethernet/LAN, Wi-Fi
Communication Protocols	Modbus TCP, Ethernet,
Cloud Monitoring	RedEarth Cloud
Remote Firmware Update	Yes
Operation Modes	Self consumption and generator autostart modes included. Customised power modes available.
Energy Trading Compatibility	Customised - at cost
Data Sovereignty	All Steward and RedEarth data is stored in Australia
API / Third Party Integration	API available

Safety and Compliance

Standards, Compliance	AS/NZS 3000, AS/NZS 5033, AS/NZS 5139, AS/NZS 61439
Fire Suppression System	Aerosol
Battery Safety	IEC 62619, AS/NZS 5139
PCS Electrical Safety	IEC 62109-1, IEC 62109-2
PCS EMC	IEC 61000-6-4, IEC 61000-6-2
PCS Grid Code Certification	AS/NZS 477.2

In the event of any conflict or inconsistency between the RedEarth System documentation and any Component documentation, the RedEarth System documentation shall govern and take precedence.