



NEO^{V2}

100 kW / 228 kWh to MW / MWh
Battery Energy Storage Systems



enel x | Renmark Pumping Station SA

- ≡ Turnkey AC Coupled Battery System
- ≡ Liquid Cooled with Fire Suppression
- ≡ Outdoor Freestanding Solution
- ≡ Advanced Power Control Software

Power your way

SYSTEM COMPONENTS

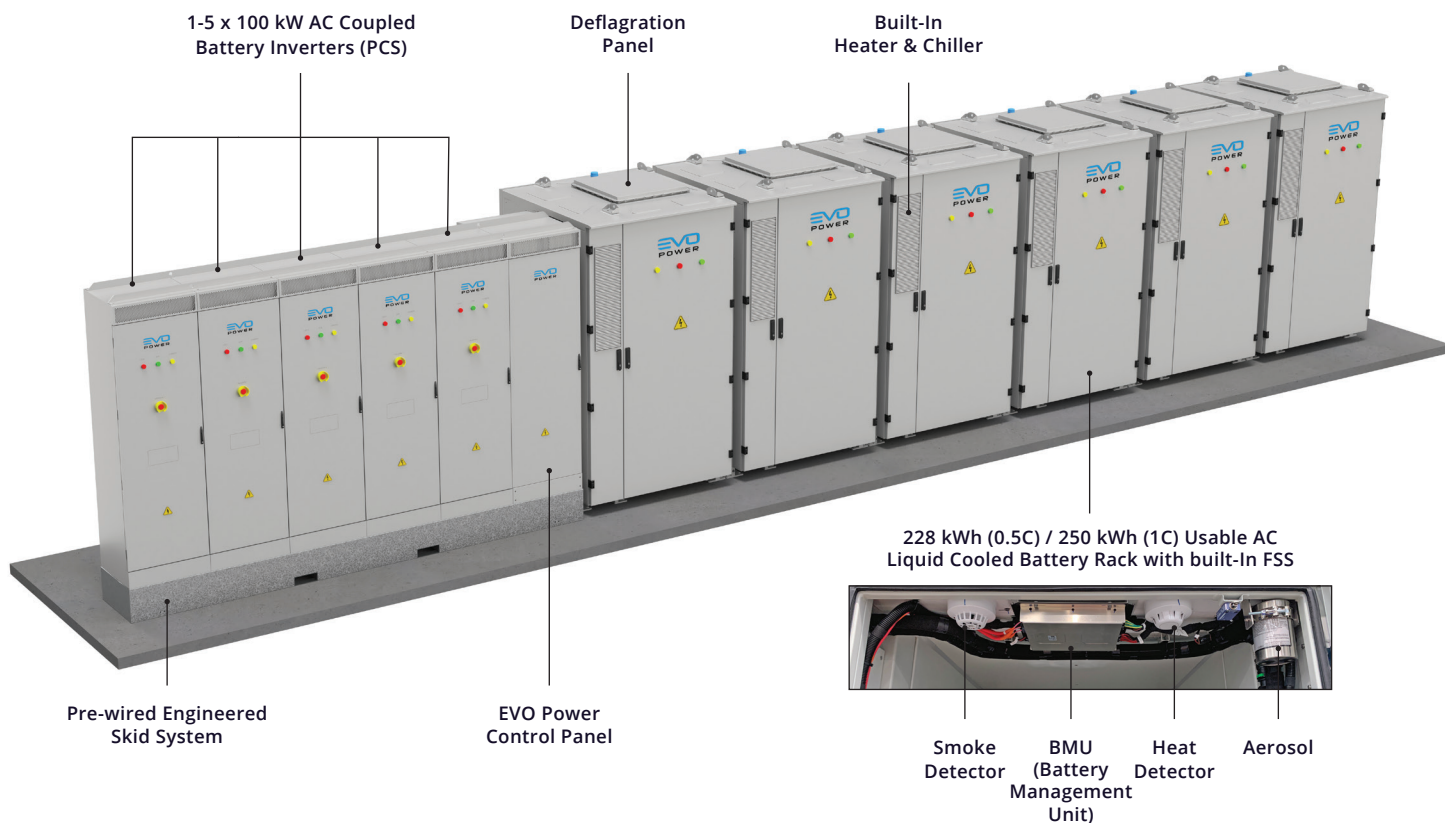


Image: NEO V2.0 SERIES 500kW / 1,367 kWh USABLE AC BESS

HARDWARE FEATURES



- o Improved LFP Chemistry
- o UL 9540A Certified Battery Racks
- o Liquid Cooling/Heating Battery Modules
- o Fire Suppression System Built-In
- o Deflagration Panel (NFPA855 compliant)



- o Very Fast FCAS Market Compliant
- o Scalable Inverter Station
- o High Voltage / High Efficiency
- o 400 VAC 3 Phase Output (4 wire)
- o Backup Power (Optional)

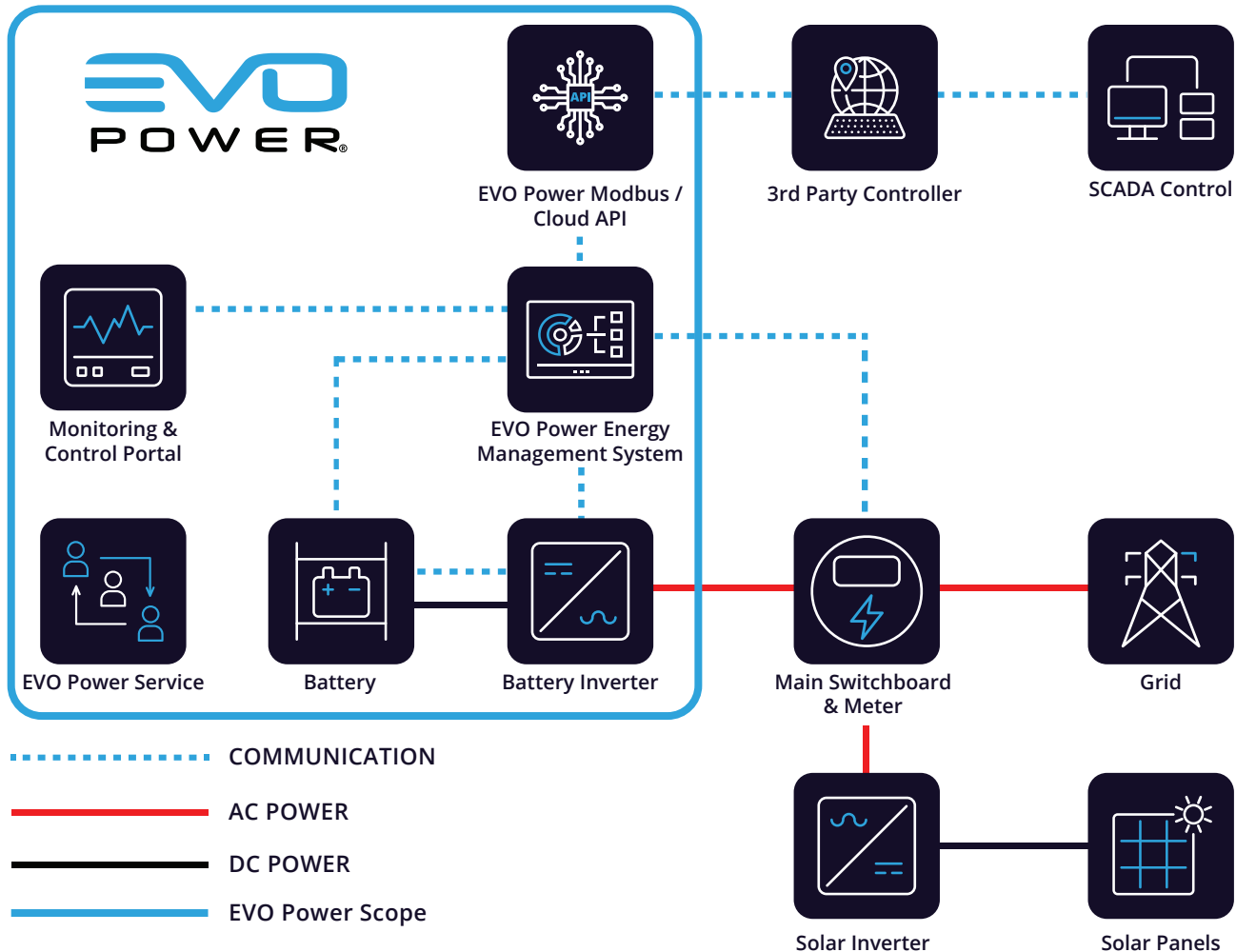


- o EVO Advanced Power Control Software
- o EVO API for 3rd Party VPP Aggregators
- o EVO Advanced Monitoring Platform
- o Optional Monitoring of PV Systems
- o Cyber Security (Secure VPN)



- o Outdoor Mounted Pod-Style Solution
- o Scalable & Flexible Layout Options
- o In-built Aux. Power Supply
- o Pre-configured AC & DC Protection Devices
- o Full-Turnkey World Class BESS Solution

SYSTEM SCHEMATICS



POWER CONTROL APPLICATIONS



- ≡ Solar Self-Consumption
- ≡ Peak Shaving
- ≡ Retail Time-of-Use

- ≡ Utility Meter Reading Capability
- ≡ Optional Solar Inverter Control
- ≡ Backup Power (Optional)

≡ EVO Power Modbus / Cloud API for 3rd Party System Control for Orchestration of Grid Services

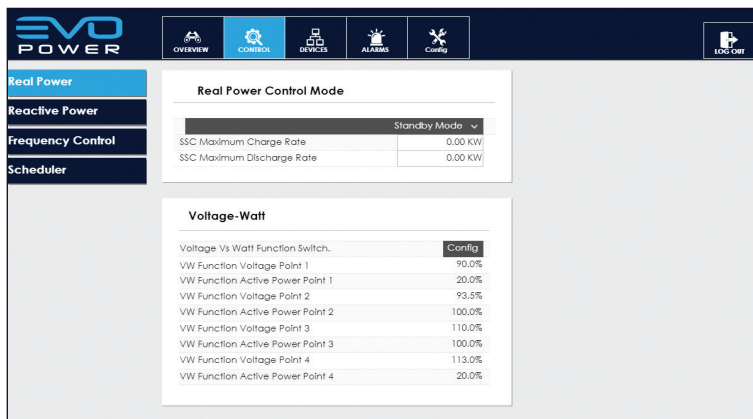
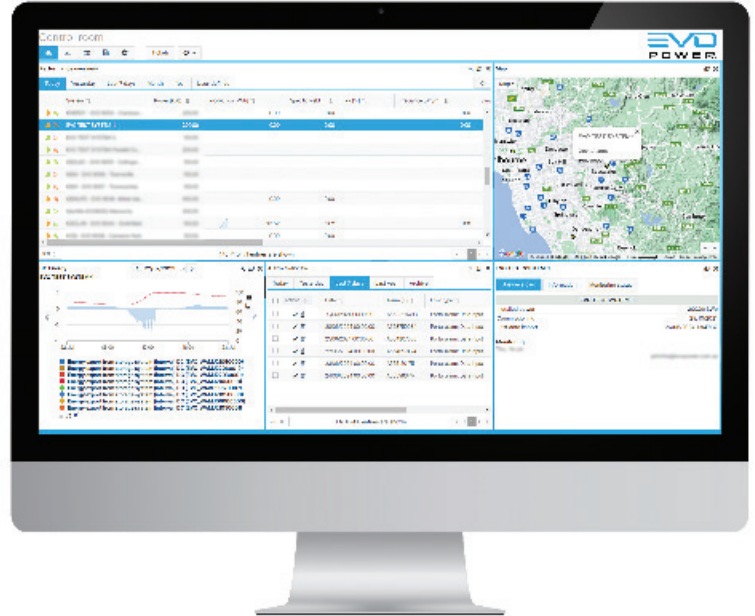


- FCAS / Grid Services
- Energy Arbitrage
- Virtual Power Plant
- Integration with other platforms

EVO EMS (Energy Management System)

EVO MONITORING PLATFORM

- Dashboard for a System-Specific Overview
- Individual Configuration of Alarm Criteria
- Mobile Monitoring with iOS and Android App.
- Calendar for Coordinating Service Deployments
- Individual Reporting, CSV Export of all Measurement Data
- Fleet Review - Tabular Display of the Key Performance Indicators for all Systems

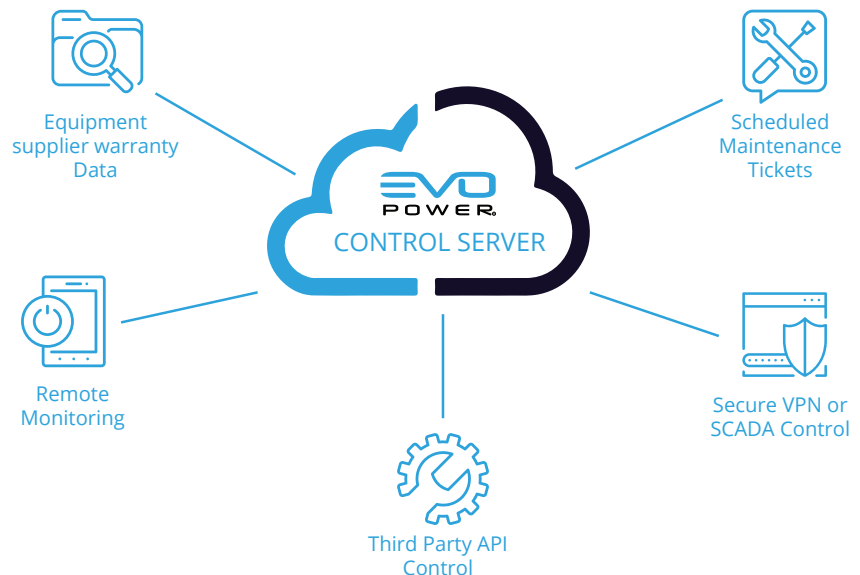


EVO REMOTE CONTROL PLATFORM

- Graphical User Interface for Configuration
- Programmable Peak Shaving Fixed Value and Characteristic Curve Control
- Active Power and Reactive Power Control
- FCAS Response Control

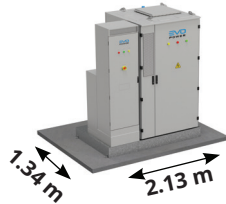
EVO CONTROL SERVER PLATFORM

- Optional Control via Third Party Optimisation / VPP Aggregator
- Agnostic API Control Commands
- Open Platform
- Optional SCADA Control
- Single Asset or Fleet Management



NEO^{V2} SCALABILITY

NEO V2.0 AiO 100 kW / 228 kWh*



NEO V2.0 400 kW / 911 kWh*



NEO V2.0 200 kW / 456 kWh*



NEO V2.0 500 kW / 1,139 kWh*



NEO V2.0 300 kW / 684 kWh*



NEO V2.0 500 kW / 1,367 kWh*



NEO^{V2} MW CONFIGURATION

1 MW / 2.278 MWh (2 x NEO V2.0 500 kW / 1,139 kWh)*



* Usable Energy AC

Note: Dimensions may vary, excludes product maintenance clearances. Client needs to follow regulatory installation guidelines.

SYSTEM SPECIFICATIONS

INVERTER	NEO ^{V2} 100 kW	NEO ^{V2} 200 kW	NEO ^{V2} 300 kW	NEO ^{V2} 400 kW	NEO ^{V2} 500 kW
Rated AC Power	100 kVA / kW	200 kVA / kW	300 kVA / kW	400 kVA / kW	500 kVA / kW
Rated Grid Voltage	400 VAC				
Rated AC Current	145 A	290 A	435 A	580 A	725 A
Total Harmonic Distortion	<3%				
Rated Grid Frequency (Range)	50 Hz (45 ~ 55 Hz)				
Peak Efficiency	98%				
Power Factor	-1 to 1, continuously adjustable				
ENERGY STORAGE (Parallel up to 6x battery racks per system)					
Nominal Energy DC (Max. useable energy DC) ¹	255 kWh (238 kWh) for 0.5C Cells		285 kWh (263 kWh) for 1C Cells		
Max. useable energy AC (BOL) ¹	228 kWh for 0.5C Cells		250 kWh for 1C Cells		
Voltage Range (Nominal Voltage)	650 ~ 949 VDC (832 VDC)		780 ~ 1,138 VDC (998.4 VDC)		
Chemistry	Lithium Iron Phosphate (LFP)				
ENVIRONMENTAL					
Operating Temperature Range / Humidity Range	-30~55 °C (Inverter derating at 45 to 55 °C) / 0 to 95% RH non condensing				
IP Ratings	Energy Storage IP66, EVO Control Panel IP54, Inverter IP55				
FEATURES					
VPP & Grid services platform	YES – Capable through EVO Power API & 3 rd Party Aggregator				
AC & DC Isolation Devices	Internal AC & DC Isolation prewired and included as standard				
Fire Suppression System	Fire Suppression system with smoke and heat detectors plus aerosols. Deflagration panel				
COMPLIANCE					
Inverter Related Standards	AS/NZS 4777.2, VDE-AR N4105, IEC/EN 62477.1, IEC 62109-1/-2, IEC/EN 61000.6.2, IEC/EN 61000.6.4, IEC 60068.2.64				
Battery Related Standards	UN 38.3, UL 1973, UL 9540A, IEC 62619, IEC 61000.6.2/-4, NFPA855				
DIMENSIONS & WEIGHTS					
System dimensions (L x W x H)	• 1,200x 780x 2,280 mm per 100 kW inverter station (600 mm longer per additional 100 kW) and 1,390 x 1,344 x 2,344 mm for each Battery Rack • NEO AiO 100 kW / 228 kWh (Part No 1248) - 2,129 x 1,355 x 2,344 mm				
Weight of key components (kg)	• 500 kg for 100 kW inverter skid, 250kg heavier per additional 100 kW • NEO AiO - 3,500 kg • NEO V2.0 Series 250 kWh 1C Battery Rack - 2,955 kg per rack • NEO V2.0 Series 228 kWh 0.5C Battery Rack - 2,760 kg per rack				

SYSTEM DESCRIPTION	EVO PART NO.	CHARGE / DISCHARGE POWER [AC kW] ¹	USEABLE ENERGY (BOL, AC kWh) ²	NOMINAL ENERGY (BOL, DC kWh) ²
NEO V2.0 100 kW / 228 kWh	1248	100	228	255
NEO V2.0 100 kW / 456 kWh	1227	100	456	509
NEO V2.0 200 kW / 250 kWh - Power	1228	200	250	285
NEO V2.0 200 kW / 456 kWh	1229	200	456	509
NEO V2.0 200 kW / 684 kWh	1249	200	684	764
NEO V2.0 200 kW / 911 kWh	1250	200	911	1,018
NEO V2.0 250 kW / 684 kWh ³	1251	250	684	764
NEO V2.0 300 kW / 500 kWh - Power	1226	300	500	569
NEO V2.0 300 kW / 684 kWh	1231	300	684	764
NEO V2.0 300 kW / 911 kWh	1252	300	911	1,018
NEO V2.0 300 kW / 1,139 kWh	1253	300	1,139	1,273
NEO V2.0 300 kW / 1,367 kWh	1254	300	1,367	1,528
NEO V2.0 400 kW / 500 kWh - Power	1232	400	500	569
NEO V2.0 400 kW / 911 kWh	1255	400	911	1,018
NEO V2.0 400 kW / 1,139 kWh	1256	400	1,139	1,273
NEO V2.0 400 kW / 1,367 kWh	1257	400	1,367	1,528
NEO V2.0 500 kW / 500 kWh - Power	1233	500	500	569
NEO V2.0 500 kW / 1,139 kWh	1258	500	1,139	1,273
NEO V2.0 500 kW / 1,367 kWh	1259	500	1,367	1,528

Combinations of the same systems above can be controlled in parallel to achieve up to 1.5 MW.

¹. All AC power ratings excludes auxiliary power consumption.

². Useable energy & Nominal Energy is based on beginning of battery life at 25 °C and at peak efficiency charge/discharge rate.

³. Derated 300 kW inverter.

For back-up applications - additional kit and battery capacity is required. Contact your EVO Power Account Manager for further details.

All specifications are at 25 °C and rated DC input voltage unless otherwise stated, values may be different at higher or lower temperatures.

Please contact EVO Power for the detailed Warranty Statement.

Specifications may be updated without notice, please refer to the EVO Power website for the current information.

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