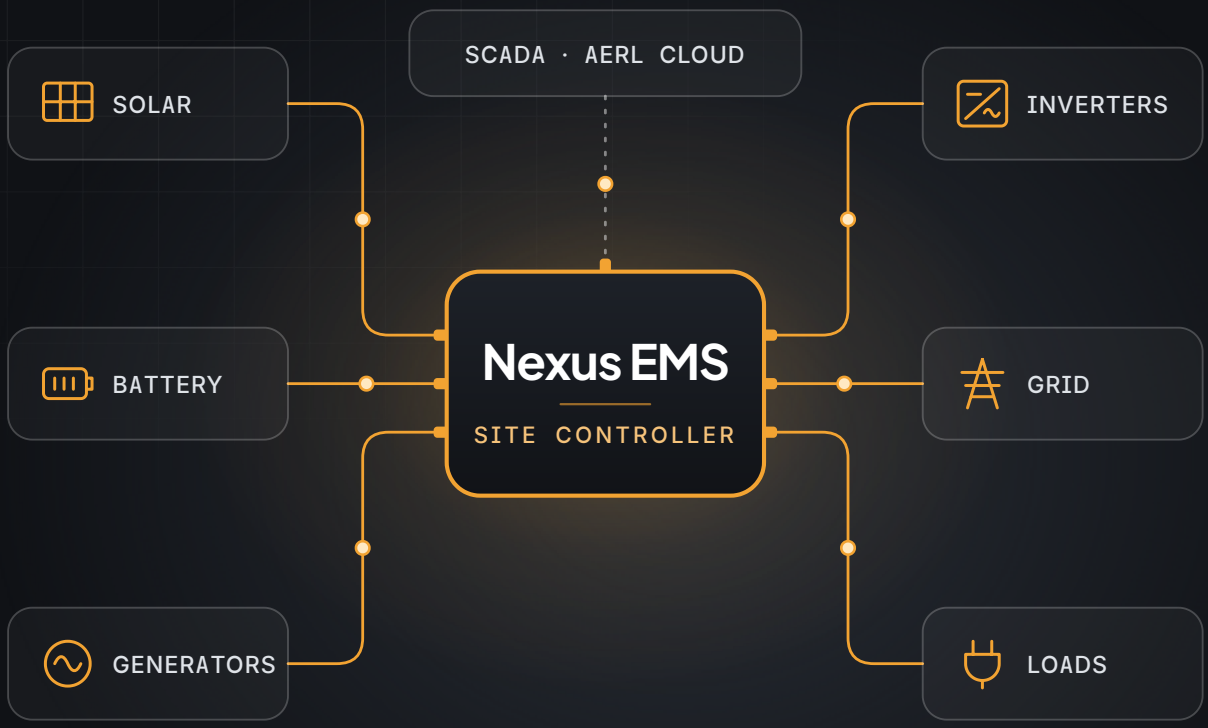
Nexus EMS

The Brain of Your Hybrid Power System



01 Control
Every source, battery and load

02 Integration
Every brand, one system

03 Protection
Battery and equipment first

04 Oversight
Every decision on record

One Site. One Controller.

Nexus Lite · Nexus 4G · Nexus HMI

Nexus EMS is an energy management system (EMS) that runs a whole hybrid or off-grid site. It sits above the device controllers and makes the energy decisions for all of them: on site, offline if need be, with no custom PLC programming.

Control 01

Solar
Charging held within the battery's limits

Generators
Automatic start and stop, sequencing, minimum load, quiet hours

Battery
Charge and discharge control, with a reserve

Grid
Peak shaving, time of use, export control

Loads
Low-battery load shedding, dump loads

Custom rules
Control logic written for your site

Integration 02

Any brand
Every function works the same on every supported brand

Groups
Several inverters or generators run as one

SCADA
The whole site on one Modbus TCP address

Remote dispatch
Accepts limits and run requests from SCADA or a utility

AERL Cloud
Live data, history, alerts, remote commissioning

Protection 03

Battery
Designed to act when a battery limit is exceeded

Priority
Protections take priority over operators and schedules

Interlocks
Checks each device before a command, and the result after

Fail-safe
Designed so charging stops and loads stay supplied if control is lost

Access
PIN at the site; approved clients only for SCADA

Oversight 04

Dry run
See what a function would do before it is allowed to act

Reasons
Shows what set every limit and command, and why

Audit
Every command, refusal and settings change is logged

Watchdogs
Steps in if a self-managing inverter exceeds the battery's limits

Resilience
Critical functions run independently and restart automatically

Works with

TYPE	EQUIPMENT	WHAT NEXUS EMS DOES
Solar charge controllers	AERL CoolMax SRX and SRX-R	Aggregates CCL and CVL and monitors operation
Batteries	AERL LiFe², AERL Kakadu 120, Solinteg, Pylontech	Reads its limits and keeps the site within them
Inverters	Solinteg M2HT (AERL All-In-One), Selectronic SP PRO, Deye, CE+T, XESS	Starts and stops, sets charge and discharge, supervises
Generator controllers	Deep Sea Electronics, ComAp, DEIF, Woodward	Sets mode, starts and stops, resets alarms
Meters and outputs	Modbus energy meters, Nexus 4G relays, Modbus remote I/O	Reads meters, switches relays

Preliminary information. Functions and supported equipment are subject to change; confirm availability with AERL. Nexus EMS decides about once a second: fast protection, synchronising, breaker control and required export limits stay with each device. It protects equipment and is not a functional safety system.

Supplied by

Australian Energy Research Laboratories
1/75 Bluestone Circuit, Seventeen Mile Rocks
QLD 4073

Licensing

Annual licence, per gateway
Activated in AERL Cloud

Contact

sales@aerl.com.au
aerl.com.au