

# Cluster Controller

## EMS-501

Transform your battery fleet into  
a revenue-generating asset!



The customisable cluster controller manages multiple battery systems across different locations as a single asset, optimising their aggregated performance for energy storage, grid services, and market participation. The controller coordinates charging, discharging, and energy distribution whilst protecting your battery system, and acts as a bridge between your energy systems and the larger virtual power plant (VPP) network.



### Scalable Management

Efficiently coordinates multiple battery systems across different locations to enhance overall performance.



### Built-In CODESYS Programming

Offers flexible, industry-standard programming through integrated Codesys, supporting IEC 61131-3 languages.



### High-Speed, Real-Time Control

Delivers rapid, responsive management of battery charging, discharging and energy distribution.



### Seamless Integration

Supports multiple communication protocols for easy integration with VPPs and energy grids.

## Technical Specifications

Power	24V DC (18 ~ 36V)
Interface	RS485, RS232, CAN, ethernet
Max. functional module	8
Upstream (modular)	Wi-Fi, 4G
Working humidity	0 ~ 95% RH
Installation	DIN rail
Input (input module)	PNP * 8
Output (relay module)	Relay * 4 (0.1A / 240V)
Upstream	Ethernet
Working temperature	-20 ~ +80°C
IP rating	IP 50
Size (main controller)	100mm * 69mm * 48mm (3 poles)

## System Composition Diagram

