



High-Energy Commercial Vehicle Battery System

We have designed and developed the first high voltage commercial vehicle battery using Nissan’s latest NMC cell technology. The battery is suitable for medium/heavy duty trucks, buses and off-highway vehicles.

Features	Specifications	Comments
Battery type	Lithium Nickel Manganese Cobalt Oxide (NMC)	Supplied by Nissan Motor Company
Configuration	40 Nissan Modules configured in series	160S2P base cell configuration
Pack voltages	Nominal 584 Volts DC, Charge 664V, Minimum 415V	Configurable for other voltages
Typical capacity	Nominal 67.2 kWh, 53.7 kWh useable	Based on Nissan module data
Power output	Absolute 140kW, Continuous 70kW, 250A Max	Based around application requirements
Charge power	22kW 3 Phase & regen charging	Charger not included
Operation range	-25 ~ 60°C with limitations due to temperature. Temperature monitoring on all cells	Active thermal management optional depending on application
Battery management system	Performance Forecasting Battery Condition Estimation Battery Monitoring & protection	Available Power Prediction Current and Voltage Limits High-Accuracy State of Charge calculation Active State of Health estimation
Case material	Fabricated steel enclosure - designed for IP68	
Pack weight	~575kg (steel case) ~500kg (aluminium case)	Steel version includes vehicle mounting structure
Size	1920mm (l) x 625mm (w) x 440mm (h)	Can be mounted beneath, above or to side of chassis depending on vehicle installation
Interfaces	CAN control, 3 x Amphenol HV sockets, TE & Molex LV sockets	Optional single HV socket for single motor application
Other	Integrated BMS, crash sensor, service disconnect, earth leakage detection, pre-charge HV/LV Fusing & EMC filter	

