

## BATTERY SYSTEM

### *City buses and commercial vehicles*

Voltabox has developed the C320 battery system for manufacturers and outfitters of commercial passenger and goods vehicles. The modular configuration of these systems allows them to be adapted to different load profiles and types of installation.

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*(Photo: Voltabox)*

THE BATTERY SYSTEM IS BASED ON LITHIUM-IRON-PHOSPHATE storage cells and offers cycle-stability and protection against thermal runaway. It was designed to be functionally safe according to ISO 26262/ASIL C. Possible application areas range from installation on board of new electrically-powered commercial vehicles (buses, trucks, and special vehicles) to the modification of existing electric vehicles that require lithium-ion units to replace their old lead-acid batteries. The rated voltage of the product is 320 V and its capacity is 32,7 kWh. It weighs 600 kg and measures 1900 mm x 1000 mm x 410 mm.

The battery system consists of modules encased in aluminum housings. The battery-management system ([BMS](#)) incorporated into these modules permanently monitors cell-voltages and temperatures, while balancing differences in potential. All communication takes place via a CAN interface. A proactive climate-control system ensures that the batteries can work all year round, without any appreciable effect on range or acceleration performance, says the company.

Voltabox battery systems can be individually configured for specific applications. The result is batteries that are adapted to their corresponding application for the delivery of service and performance. The company selects the optimum cell-chemicals ([lithium iron phosphate](#) or [lithium nickel-manganese-cobalt-oxide](#)) in accordance with envisaged use, and supplies modular systems – compatible with both types of technology – for configuration.



*The C320 battery system (Photo: Voltabox)*

Voltabox is a supplier of lithium-ion batteries for all types of vehicle-based and stationary usage. As members of Paragon (Germany), Voltabox Deutschland and Voltabox of Texas, possess joint know-how concerning electronic/electromechanical modules and systems for the automotive sector, including experience in the development of entire vehicles.