

Stellantis to incorporate Factorial's solid-state batteries into demo fleet of Dodge EVs

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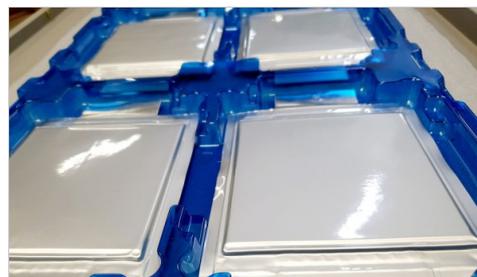
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Stellantis plans to launch a demonstration fleet of the all-new Dodge Charger Daytona vehicles powered by Factorial's solid-state batteries in 2026, the carmaker announced Oct. 23. The move, which will mark a key step in the commercialization of the promising all-solid-state battery technology, will enable the carmaker to validate Factorial's technology and assess the performance of its solid-state batteries in real-world driving conditions via its demo fleet.



Source: Getty Images/eunju choi

The development is in line with the announcements Stellantis made at its EV Day in July 2021, when the carmaker disclosed its plan of introducing competitive solid-state battery technology in the market by 2026.

The Amsterdam-headquartered car manufacturer made a strategic investment of \$75 million in the Massachusetts, US-based solid-state battery technology startup Factorial in 2021, in addition to signing a joint development agreement to advance Factorial's high-voltage traction, solid-state battery technology. The plan to power a demo fleet of Dodge electric vehicles, which are developed on the STLA Large platform, with Factorial's solid-state batteries is part of that joint development agreement between the two companies.

The battery startup is known to have developed its own proprietary solid-state platforms Factorial Electrolyte System Technology (FEST) and Solstice, which utilize electrolyte innovations that enable safe and reliable cell performance with high-capacity cathode and anode materials. Moreover, Factorial claimed that its solid-state batteries are designed to integrate seamlessly with existing manufacturing processes, ensuring scalability and efficiency. Besides Stellantis, Factorial has also signed similar joint development agreements with Mercedes-Benz, Hyundai and Kia, which only highlights how keenly automakers are following the development of solid-state batteries globally.

Stellantis said that Factorial will supply cells based on its FEST technology, which enables a specific energy density of over 390 watt-hours per kilogram (Wh/kg). The latter also claimed that its patented battery technology offers substantial advantages over the current generation of lithium-ion batteries, including providing a significantly higher energy density, reduced weight, improved performance and a potential for further reduction in total vehicle cost over time.

“Stellantis has selected the STLA Large multi-energy platform for this innovative technology due to its focus on high-volume electric SUVs and performance vehicles,” the carmaker said in a statement.

The STLA Large platform is one of three key platforms on which the carmaker aims to develop its complete battery-electric vehicle (BEV) lineup in the future. Part of Stellantis' Dare Forward 2030 strategic plan, the STLA Large platform is expected to underpin several BEVs for the Jeep, Dodge, Chrysler, Alfa Romeo and Maserati brands.

According to the company, the STLA Large platform is designed and developed to support up to 2 million vehicles globally.

“This demonstration fleet is an important milestone in our partnership with Factorial,” said Ned Curic, Stellantis' chief engineering and technology officer. “By integrating Factorial's innovative

battery solution into the STLA Large platform, we are validating its potential to enhance our electric vehicle lineup, ensuring customers benefit from improved performance, longer driving ranges and faster charging times in the coming years.”

“We are honored to be part of this journey with Stellantis to accelerate the adoption of electric vehicles,” said Siyu Huang, Factorial’s CEO and co-founder. “We believe solid-state technology can play a crucial role in enabling the next generation of EVs with improved performance and reduced costs.”

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