



Factorial Ships First Solid-State Battery Cells to Avidrone Aerospace for Drone Deployment

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Breakthrough FEST® technology promises greater range and payload capacity for next-generation UAS



BOSTON--([BUSINESS WIRE](#))--Factorial Inc. ([Factorial](#)), an industry leader in solid-state battery technology, today announced the shipment of its first solid-state lithium-metal battery cells for drone use to [Avidrone Aerospace](#) Inc., a Canadian developer of long-range, dual-use unmanned aerial systems (UAS). This milestone marks Factorial's first shipment in the drone sector and the first flight deployment of its proprietary FEST® (Factorial Electrolyte System Technology) platform.

Avidrone will integrate Factorial's solid-state cells into its high-endurance cargo drone platform for demonstration flights focused on evaluating energy efficiency, power discharge, payload capacity, and range under real-world operating conditions, including high altitudes, variable temperatures, and sustained vibrations.

Initial modeling by Avidrone suggests that FEST® technology could double the range of its aircraft for a given payload, a transformational upgrade for drone-based delivery, surveillance, and emergency response.

"This delivery is a major step forward in bringing our battery platform to the skies," said Siyu Huang, CEO of Factorial. "Avidrone's specialized platform is the perfect testbed to prove how our high-energy, lightweight lithium-metal technology can unlock new levels of range and performance in aerial systems. Drones are not just an emerging market – they're a strategic priority for national defense, critical logistics, and infrastructure resilience, and we see this as the first of many aerospace applications for our solid-state batteries."

The global UAS market is undergoing rapid expansion, projected to grow by \$36.1 billion from 2024 to 2028, with military applications alone expected to reach a market value of \$65 billion by 2032. UAS have become essential for intelligence, surveillance, reconnaissance (ISR), electronic warfare, and precision-guided missions, as well as a wide range of commercial and industrial uses.

Factorial's cells achieve up to 50% greater energy density than conventional lithium-ion batteries, unlocking longer flight times, greater payload capacity, and expanded mission range. With internally validated discharge performance tailored for high-power, lightweight applications, Factorial's battery cells provide an ideal energy-to-weight profile for next-generation UAVs.

"In unmanned systems, weight equals range – and range defines the mission," said Scott Gray, Founder and CEO of Avidrone Aerospace. "Factorial's solid-state cells give us a critical edge in endurance and payload, unlocking new capabilities for defense, logistics, and beyond. We're proud to be the first to take this groundbreaking technology airborne."

While Factorial remains committed to powering the electric vehicle transition, the company also views the aerial sector as a strategically aligned growth market. Demand for high-performance, domestically developed batteries in drones presents an opportunity to engage early customers, accelerate manufacturing maturity, and apply critical performance feedback. These capabilities are directly transferable to Factorial's EV roadmap. At the same time, the company's U.S.-based platform supports defense and aerospace sectors seeking secure, American-made energy storage solutions.

About Factorial Inc.

Founded and headquartered in the United States, Factorial is at the cutting edge of solid-state battery technology, developing solutions that offer longer range per charge, increased safety, and cost competitiveness with conventional lithium-ion batteries. The company's proprietary solid-state platforms FEST® (Factorial Electrolyte System Technology) and Solstice™ utilize electrolyte innovations that enable safe and reliable cell performance with high-capacity cathode and anode materials. Factorial's FEST® solid-state batteries are designed to integrate seamlessly with existing manufacturing processes, ensuring scalability and

efficiency. The company has established joint development agreements with leading global automakers, including Mercedes-Benz, Stellantis, Hyundai Motor Company, and Kia Corporation. For more information, visit www.factorialenergy.com.

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About Avidrone Aerospace

Since 2007, Avidrone Aerospace has been developing and manufacturing unmanned rotorcraft which can lift payloads in excess of 50lbs over ranges of 50 miles and autopilot control systems for government, defense, and commercial applications. As specialists in unmanned cargo delivery, proprietary flight control technologies, and sensor payload integration, Avidrone brings cost-saving, innovative solutions to new aerial applications across the globe. Created and led by world-renowned aviation experts and technology innovators, Avidrone develops and manufactures end-to-end, automated unmanned aircraft systems and products ranging from small multi-rotors to large rotorcraft over 1000lbs. Visit www.avidrone.com

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