

CES 2026: Niron Magnetics and Bimotal team up for rare-earth-free EV motors

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The duo aims to power next-gen EV drivetrains and robotic actuators without performance trade-offs

Niron Magnetics and Bimotal announced a partnership to create high-performance, rare-earth-free electric motors for electric vehicles and robotics, unveiling prototypes at the Consumer Electronics Show (CES) 2026. The collaboration targets US supply chain vulnerabilities by combining domestically produced iron nitride magnets with ultracompact motor designs.



Source: Getty Images/Bosca78

As EV adoption surges and rare earth dependencies strain global supplies, manufacturers seek alternatives. Niron's iron nitride technology — named a TIME Best Invention in 2023 — delivers strong magnetic performance using abundant iron and nitrogen. Bimotal's Elevate motor system, a 2024 TIME Best Invention, offers high torque in a tiny footprint, fully assembled in the US with a push toward domestic sourcing.

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"Bimotal's customers, particularly in the robotics sector, are increasingly seeking powertrain solutions that can be fully sourced in the United States without performance compromises," said Toby Ricco, founder and CEO of Bimotal. "By working directly with Niron Magnetics, we are developing state-of-the-art solutions that look to resolve a number of operational and supply chain challenges. We are committed to pushing the limits of what's possible in electric motor design."

Early prototypes integrate Niron's magnets into Bimotal's systems, promising scalable solutions for mobility amid rising demand.

"We are pleased to work with Bimotal to develop the next generation of mobility solutions," said Jonathan Rowntree, CEO of Niron Magnetics. "This collaboration represents progress in demonstrating what Iron Nitride can achieve and suggests that these high-performance motors no longer need to rely on fragile rare earth supply chains. For manufacturers, it indicates that a viable alternative is emerging in next-generation platforms."

This comes at a pivotal time as pressure on critical mineral supply chains intensifies, and demand for permanent magnets rises across industries.

The CES debut positions the partnership as a key step toward secure, powerful electrification, potentially reshaping EV and robotics production.

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