



Rimac Technology Unveils Next-Generation Powertrain and Battery Solutions

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picture: Rimac

Rimac Technology has announced significant upgrades to its powertrain and battery technology portfolio - not limited to future EV concepts but geared toward real-world, production-ready applications. The new solutions promise enhanced performance, energy density, safety, and system integration for both hybrid and fully electric platforms.

□ Key Innovations from Rimac

1. Solid-State Battery Advancements & Next-Gen Packaging

- In collaboration with **ProLogium** and **Mitsubishi Chemical Group**, Rimac is

advancing solid-state battery development, integrating cutting-edge cells into lightweight, high-safety housing systems. These designs significantly improve **energy density** and **thermal stability**, while reducing overall system mass.

- The company's new **Evo Technology Platform** leverages **next-generation NMC (46XX Gen2)** cells, encapsulated in **thermoplastic composite housings** (developed with **Kautex Textron**), paired with optimized **thermal management systems** for high-performance EV applications.

2. Scalable Hybrid Battery Architectures

- Rimac introduces **hybrid-capable battery packs** based on both **46XX** and **2170** cylindrical cell formats, supporting **cell-to-pack** construction and modular scalability.
- This approach enables **interchangeable cell configurations**, enhanced thermal and electrical safety, and adaptability across mild hybrid to high-voltage plug-in hybrid architectures – making it ideal for applications in transition toward full electrification.

3. High-Power, Compact e-Axles and Electric Drive Units

- The new **SINTEG 300 and 550** single-motor e-axles achieve **power densities >8 kW/kg** and **torque densities >90 Nm/kg**, using **ultra-lightweight rotors** operating at up to **25,000 rpm** and featuring **advanced magnet geometries**.
- Configurable powertrain platforms now span **150-360 kW** and **2,500-6,250 Nm** of torque, covering performance sedans, SUVs, and sport-oriented vehicles.
- Notably, the **Dual EM EDU 550** platform will include a **High Torque XXL Axle** variant — validated at **>11,000 Nm** axle torque and **>95% peak system efficiency**, targeting global OEM series production in **2026**.

4. Advanced Electronics & Controls Integration

- Rimac is scaling up its **ECU portfolio**, incorporating **domain and zonal controllers** powered by **NXP's S32E2 processors**.
- These next-gen ECUs consolidate legacy modules into centralized, software-definable control units capable of managing **torque vectoring, battery systems, power distribution**, and **OTA (over-the-air) updates** – supporting evolving **SDV (software-defined vehicle)** architectures.

⚙️ **Strategic Relevance for Hybrid & Electrified Powertrains**

Rimac's new offerings align with key industry trends, particularly relevant for OEMs, suppliers, and fleet operators navigating the shift to electrification:

- **Modular, Scalable Platforms:** Hybrid systems based on flexible architectures (cell-to-pack, interchangeable cell formats) simplify adaptation across vehicle segments and regional regulations.
- **Solid-State Battery Safety & Efficiency:** Improved **thermal performance**, **energy density**, and **packaging safety** offer a significant advantage in hybrid applications where combustion fallback systems remain.
- **High-Density e-Axes:** Superior **power and torque per unit mass** enable downsizing without sacrificing performance – critical for hybrid and EV integration without weight penalties.
- **Centralized Controls:** Zonal ECUs and SDV-ready architectures enhance system intelligence, diagnostics, and update pathways – improving lifecycle maintainability.

□ **Bottom Line**

Rimac is not just innovating for the EVs of tomorrow - it is delivering tangible, production-ready components that enable today's transition to electrified mobility. From solid-state breakthroughs to hybrid-ready platforms and ultra-compact e-axes, Rimac's developments provide critical building blocks for OEMs, suppliers, and mobility providers aiming to meet aggressive decarbonization targets while maximizing system performance and flexibility.

Read more: [Rimac unveils next-gen solid-state batteries, hybrid platforms and high-performance e-axes | Automotive Powertrain Technology International](#)