



Press Release

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Marelli presents new smart actuators for transmission and thermal management in electric vehicles, at Battery Show North America 2023

Marelli launches its new range of **multipurpose smart actuators** aimed at electric cars, that are designed to simplify actuation of complex vehicle functions. As future cars are expected to include more than 100 actuators with different missions and purposes, this solution will help carmakers to reduce complexity and ease the integration in vehicles' mechanic and electronic environments.

Marelli's new smart actuators include an electronic module, that autonomously controls the actuator itself and connects it to the vehicle electronic network. The device has a flexible, modular and scalable mechanical design, to fit complex vehicle electronics and transmission configurations, and a software management designed for easy integration. The overall solution allows simple customization and installation within the vehicle, has a super compact size and light weight, features on board diagnostics and is cyber security ready.

The company offers multipurpose actuators for hybrid and full electric vehicles transmission control, which have applications in systems such as park lock, disconnect clutches, shift by wire and two-speeds actuators. It also develops actuators for battery electric vehicles thermal management, resulting from the combination of Marelli's competences in both propulsion and thermal solutions areas. The focus is particularly on high-end actuators where challenging performances and features are required, such as high safety relevance and cyber security, precise and fast operations, use in severe environments. Based on Marelli's system expertise and integration capabilities, these new solutions for electric vehicles add to the significant production of actuators manufactured each year by the company to drive turbo chargers, manage engine intake and drive gearboxes in internal combustion engines.

The new smart actuators are presented for the first time at booth 2219 in The Battery Show 2023, North America's largest event on advanced batteries and vehicle electrification, taking place in Novi, Michigan, US, from September 12 to 14, 2023.

Other top technologies displayed at the event include Marelli's Vehicle Domain Control Module, recently named a 2023 Automotive News PACE Award finalist. This is a cross-domain controller for vehicles with different propulsions, that enhances the integration between propulsion and chassis functionalities, improving vehicle handling, comfort, and performance, while simplifying the electric and electronic architecture.

At the event, Marelli also showcases its [integrated Thermal Management Module \(iTMM\)](#) for electric vehicles, which allows the efficient combination of the cabin, battery and e-powertrain thermal systems into one single component, to achieve a more efficient thermal management. The main advantages include reduced complexity, simpler assembly and competitive system costs.



The range of Marelli products at the Battery Show is completed by the latest technologies for propulsion and thermal solutions, including centralized, distributed and wireless battery management systems and battery thermal plate.

About Marelli

Marelli is one of the world's leading global independent suppliers to the automotive sector. With a strong and established track record in innovation and manufacturing excellence, our mission is to transform the future of mobility through working with customers and partners to create a safer, greener, and better-connected world. With around 50,000 employees worldwide, the Marelli footprint includes 170 facilities and R&D centers across Asia, the Americas, Europe, and Africa.