Croatia battery management systems

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Rimac Technology, a leading provider of high-performance automotive technology solutions to global OEMs, has partnered with EVE Energy, a leading manufacturer of lithium batteries and pioneer of the 46xx cylindrical cell format. This partnership was formally initiated during the IAA Mobility event in Munich.

The collaboration will see the two companies join forces to manufacture battery cells in Europe from 2027 in an agreement that will address the pressing need for sustainable energy solutions and bolster the local European supply chain. EVE will focus on cell manufacturing while Rimac Technology will focus on the development and high-volume production of a battery module and pack platform using the cells.

Central to the alliance is the production of battery cells used for Rimac Technology’s 46xx platform. Rimac Technology already has a series of nominations for large volume projects with large European OEMs that will use this platform, which creates high-performance battery systems at competitive cost and fully customizable configurations.

One of the key advantages of 46xx cylindrical cells lies in their alignment with evolving regulations regarding thermal propagation because the cylindrical format lends itself to optimal thermal management which is crucial for the safety and reliability of electric vehicles.

"EVE Energy is one of the largest primary lithium battery manufacturers worldwide and brings a lot of experience in battery cell technology to this partnership. Its dedication to advancing lithium battery solutions aligns perfectly with our vision of transforming the electric vehicle and energy storage sectors. We"re thrilled to announce this collaboration that secures a long-term reliable partner for our 46XX platform.”

"The Rimac name is synonymous with innovation and a passion for pushing the limits of what is possible in the automotive industry. We are excited to join forces with Rimac Technology to redefine the future of battery systems production. By combining our strengths, we can create batteries that meet the highest performance and efficiency standards."

Electric hypercar designer Rimac Automobili in Zagreb is planning to incorporate ADI"s precision chips into its battery management system (BMS) used in its electric hypercar and powersub-system designs.

“Rimac is a technology powerhouse in the field of high-performance electric vehicles," said Mate Rimac, CEO of Rimac."We develop and manufacture key electrification systems for many global automotive companies and raise the bar for performance electric vehicles with our own hypercars. Our application of BMS is among the most demanding in the world, requiring the highest accuracy, massive current and voltage draws over very short time scales, and rapid dynamic adjustment within the battery management control system.”

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Rimac Automobili was founded in 2009 when Rimac was 21,converting his first Guinness-World-Record breaking electric car in a garage. The companydevelops and manufactures key electrification systems for many global automotive companies on the outskirts of Zagreb, Croatia, employing600 people, with plans for strong future growth. The company is vertically integrated with many of the components produced in-house.

The company aims to grow from a low volume manufacturer of complex high-end electrification components, to an established Tier-1 supplier for the industry, and Rimac plans to open new high-volume production lines for battery packs, powertrain systems and the C_Two hypercar for production starting in 2020 at new facilities currently being established.The Rimac C_Two is a fully electric hypercar capable of speeds of up to 258 miles per hour. With 1,914 horsepower under the hood, the C_Two accelerates 0-60 mph in 1.85 seconds and 0-186 mph in 11.8 seconds.

BMS technology acts as the "brains" behind battery packs by managing the output, charging and discharging as well as providing precision measurements during vehicle operation. A BMS also provides vital safeguards to protect the battery from damage. A battery pack consists of groups of individual battery cells that work seamlessly together to deliver maximum power output to the car. If the cells go out of balance, the cells can get stressed leading to premature charge termination and a reduction in the battery"s overall lifetime.

"High performance electric vehicles require high precision electronics," said Patrick Morgan, Vice President, Automotive Electrification and Infotainment, Analog Devices. "Precision accuracy directly translates to maximizing battery capacity and range with fast charging time.We are pleased to support Rimac with our precision battery management ICs for its leading-edge electric vehicle systems with the goal of achieving some of the best performance in the world."