

## **Rhombus Energy Solutions Announces Its Next-Generation “Rushmore” EV Charging Architecture based on Silicon Carbide Technology**

*New architecture provides improvements in power efficiency, reliability, and modularity, while enabling significant reductions in product footprint*

LAS VEGAS ([PRWEB](#)) January 04, 2022 -- Today, Rhombus Energy Solutions is announcing our next-generation “Rushmore” charging technology and architecture. The Rushmore architecture is based around Silicon Carbide (SiC) semiconductor technology, which has significant advantages over insulated-gate bipolar transistor (IGBT) based EV charger technology. The first building block of Rhombus’ Rushmore architecture is a bidirectional 60kW AC/DC power conversion module, which will be introduced tomorrow at CES 2022 in the North Hall, Booth 9036.

SiC technology has a variety of positive attributes for EV charging and power inverter use cases relative to IGBT technology. Chief among these is the ability to switch at significantly higher frequencies than IGBT-based designs. This enables components such as magnetics to be considerably smaller, reducing the physical footprint and weight of the charger/inverter circuitry by up to 50%. SiC-based EV chargers and inverters are more efficient than the equivalent chargers and inverters based on IGBT technology. SiC efficiencies can be as high as 98%, compared with typical IGBT efficiencies of 90%-95%. The result is significantly lower waste heat to be dissipated, increasing overall system reliability.

“The Rushmore architecture represents a new milestone in EV charging and inverter products,” said Rick Sander, Chief Executive Officer of Rhombus Energy Solutions. “By harnessing SiC technology, we can package various power stages into a modular, 4U building blocks that gives flexibility in configurations and power levels of both EV chargers and power inverters. The Rushmore module that Rhombus is introducing at CES 2022 is just the first step in a robust product development roadmap of new charger products and charging infrastructure that will provide maximum flexibility in EV charger deployment.”

The Rushmore 60kW bidirectional power conversion module exemplifies the positive attributes inherent in SiC technology. The Rushmore 60kW module has a power density that is twice what was achieved with comparable IGBT-based power conversion systems. Rushmore is also a modular building block which can be combined to achieve a number of power and voltage ranges, as well as charger infrastructure architectures. Rhombus is developing a variety of products around the Rushmore module that will be launched during 2022.

“I am very proud of Rhombus’ research and engineering staff for the development of the Rushmore 60kW module,” said Joseph Gottlieb, Chief Technology Officer of Rhombus Energy Solutions. “Rushmore represents what can be achieved by combining new technologies and insights into customer use cases to create innovative solutions to customer needs. I look forward to introducing new products based on Rushmore.”

Rhombus is introducing the Rushmore 60kW module at CES 2022. There will be presentations on Rushmore in Rhombus’ booth (North Hall, Booth 9036) on Wednesday January 5 (noon-1:20pm) and on Friday January 7 (2:00pm-2:20pm). If you would like to talk with Rhombus about the Rushmore architecture or any of the company’s other products, please contact [news@rhombusenergy.com](mailto:news@rhombusenergy.com) to arrange a briefing.

### About Rhombus Energy Solutions

Rhombus develops and manufactures next-generation bi-directional electric vehicle charging infrastructure,



high-efficiency power conversion systems and energy management system (EMS) software for vehicle-to-grid (V2G) capable electric vehicle fleet charging, energy storage and microgrid applications. The high reliability of our solutions is the result of decades of experience developing high-power systems for a variety of applications and deployment scenarios, including UL-1741-SA system-to-grid solutions. For more information, please visit [www.RhombusEnergy.com](http://www.RhombusEnergy.com).

Rhombus Press/Media/Analyst Contact:

Carolyn Paynton  
Carolyn@RhombusEnergy.com  
+1 888 978 6564

--or--

Kimber Smith Fidler  
kimber@g2minc.com  
+1 775 298 5260

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**Contact Information**

**Carolyn Paynton**

Rhombus Energy Solutions

<http://www.RhombusEnergy.com>

+1 888 978 6564

**Kimber Smith Fidler**

G2M for Rhombus Energy Solutions

<http://www.RhombusEnergy.com>

+1 775 298 5260

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