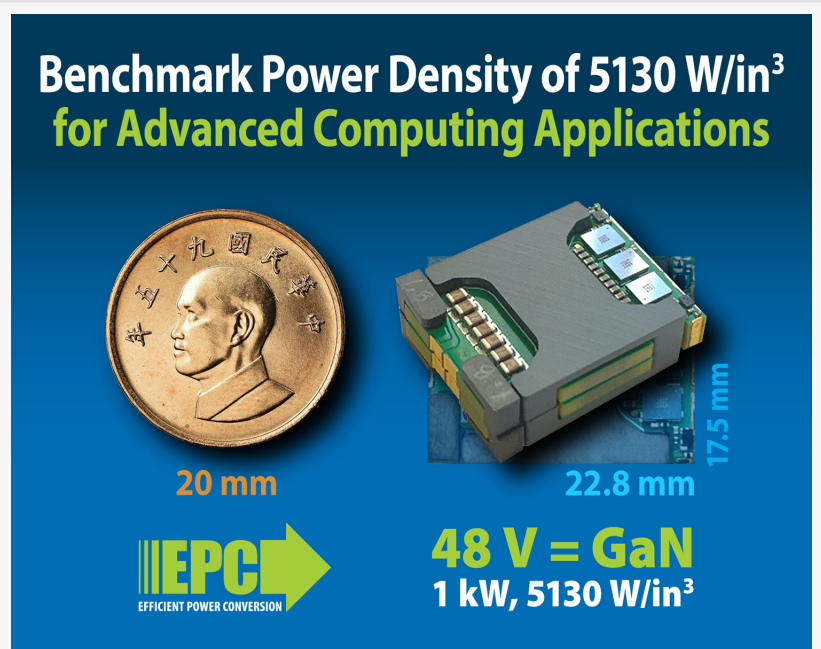


Benchmark Power Density of 5130 W/in³ with GaN FETs Powers Artificial Intelligence and Advanced Computing Applications

The EPC9159 is a 1 kW, 48 V/ 12 V, LLC converter in a tiny 17.5 mm x 22.8 mm footprint for state-of-the-art power density of 5130 W/in³.

EL SEGUNDO, CA, UNITED STATES, September 12, 2023 / EINPresswire.com/ -- EPC announces the availability of the EPC9159, a 48 V / 12 V, LLC converter designed for high-density 48 V server power and DC-DC converters. This reference design can deliver 1 kW of power in a tiny 17.5 mm x 22.8 mm footprint for a power density of 5130 W/cm³. This is achieved by employing gallium nitride (GaN) power switches operating at high switching frequencies in both the primary and secondary circuits.



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The power supply topology used in the design of the EPC9159 is based on the LLC topology. The implemented LLC consists of a primary side full bridge, a fixed ratio planar transformer, and a center tap synchronous rectifier for the secondary side. The primary full bridge uses four [EPC2619](#), 80 V-rated 3.3 mΩ GaN transistors, and the secondary uses six [EPC2067](#), 40 V-rated 1.3 mΩ GaN transistors.

The EPC9159 achieves a power stage efficiency of 98% at 25 A and a full-load efficiency of 96.2% at 83 A into 12 V. This design is ideal for high-density computing applications such as artificial intelligence and advanced gaming.

“eGaN® FETs and ICs provide the fast switching, small size, and high efficiency needed to provide the highest power density solutions for advanced computing applications,” said Alex Lidow, CEO of EPC. “The EPC9159 is the ideal solution to address the growing power needs of artificial intelligence and to support the transition to 48 V input for the new high density and high efficiency servers required for these advanced computing applications.”



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Alex Lidow, CEO of EPC.

Price and Availability

The EPC9159 evaluation board is priced at \$787.80/each and is available for immediate delivery from Digi-Key Electronics at <https://www.digikey.com/en/supplier-centers/epc>

About EPC

EPC is the leader in enhancement mode gallium nitride

(eGaN®) based power management. eGaN FETs and integrated circuits provide performance many times greater than the best silicon power MOSFETs in applications such as DC-DC converters, remote sensing technology (lidar), motor drives for eMobility, robotics, and drones, and low-cost satellites.

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