

EPC GaN FETs Enable 4 kW High-Efficiency Buck-Boost Converter Reference Design

EPC2361 eGaN® FETs deliver high-current, low-loss switching in a 36 V to 65 V input, 48 V output platform

EL SEGUNDO, CA, UNITED STATES, October 20, 2026 /EINPresswire.com/ -- [Efficient Power Conversion \(EPC\)](#), a leader in enhancement-mode gallium nitride ([eGaN®](#)) power devices, today announced the use of its EPC2361 100 V eGaN FETs in a high-performance buck-boost converter reference design from Analog Devices, Inc. (ADI).

The design demonstrates how GaN technology can enable efficient, high-current power conversion for demanding industrial, telecom, battery charging, and other high-power applications.

The EVAL-LT7930-AZ combines the LT7930 controller with EPC2361 GaN FETs in a dual-phase, interleaved buck-boost converter operating from 36 V to 65 V input and delivering 48 V output.



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Alex Lidow, CEO of EPC

The platform supports up to 4 kW of output power and achieves typical efficiencies of 98.5% at 36 V and 48 V input and 98.8% at 65 V, demonstrating the high-efficiency power conversion enabled by EPC's GaN technology.

The EPC2361 is a 100 V, 133 A enhancement-mode GaN transistor featuring a typical 0.75 mΩ on-resistance and a compact 3 mm × 5 mm package. Its ultra-low conduction losses, low gate charge, and absence of reverse recovery

make it well suited to high-current, high-frequency power conversion applications.

A key element of the reference design is the ability to optimize the switching behavior specifically



for GaN. The power-stage controller provides gate drivers optimized for GaN FETs and programmable dead-time control. On the evaluation platform, the dead time is set to 10 ns based on the EPC2361 GaN FET parameters, helping minimize reverse-conduction losses while maintaining safe switching operation.

“High-power conversion increasingly requires a combination of efficient control architectures and low-loss power devices,” said Alex Lidow, CEO and co-founder of EPC. “The EVAL-LT7930-AZ demonstrates how EPC’s EPC2361 GaN technology can be combined with the ADI LT7930 controller to deliver a compact, highly efficient multi-kilowatt buck-boost platform. This type of collaboration helps power designers move GaN from individual devices into complete high-performance power systems.”

The EPC2361 is designed for applications including high-power AC-DC power supplies, high-frequency DC-DC conversion, data center power systems, motor drives, robotics, drones, and solar MPPT. It's available through EPC's global distribution network, Digi-Key, and Mouser. EPC provides comprehensive design resources, including device documentation, models, and evaluation hardware, to help engineers evaluate and integrate the EPC2361 into their designs.

About EPC

EPC is the leader in enhancement mode gallium nitride (eGaN®)-based power management. Founded in 2007 by experts in power electronics, semiconductors, and business management, the company leverages cutting-edge technology to advance the field of power electronics through the development and commercialization of GaN-based power devices. 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 satellites.

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Press contact: Efficient Power Conversion: Maurizio Di Paolo Emilio, email:

maurizio.dipaoloemilio@epc-co.com

Maurizio Di Paolo Emilio

Efficient Power Conversion

maurizio.dipaoloemilio@epc-co.com

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