

# EPC Introduces at APEC 2026 the EPC91121 BLDC Motor Drive Evaluation Board Using EPC's Seventh-generation GaN Technology

*50 ARMS three-phase inverter platform built around the Gen-7 EPC2366 eGaN® power transistor, showcased at EPC's booth at APEC*

SAN ANTONIO, TX, UNITED STATES, March 23, 2026 /EINPresswire.com/ -- At APEC 2026, Efficient



With the EPC91121, engineers can evaluate high-frequency GaN-based three-phase inverter designs while leveraging integrated sensing and control interfaces for advanced motor control, "

*Marco Palma, Director, Motor Drives Systems and Applications*

Power Conversion (EPC), a leader in enhancement-mode gallium nitride (eGaN®) power devices, is introducing the EPC91121 motor drive inverter evaluation board, built around the Gen-7 [EPC2366](#) 40 V eGaN® power transistor and [showcasing the platform](#) at the company's booth (#1935).

Measuring 79 mm × 80 mm, the EPC91121 is engineered for rapid prototyping of advanced motor drive architectures in applications such as drones, robotics, industrial automation, handheld power tools, and other compact electromechanical systems where high efficiency and power density are critical.

The EPC91121 is a complete three-phase inverter solution capable of delivering up to 70 A peak (50 ARMS) output current from input voltages ranging between 18 V and 30 V, making it ideal for battery-powered systems operating around a 24 V supply. Designed for rapid prototyping and evaluation, the board integrates the key functions required for a motor drive inverter, including gate drivers, housekeeping power supplies, voltage and temperature monitoring, and current sensing.

High-bandwidth current sensing on all three phases supports measurements up to ±125 A, while phase and DC-bus voltage sensing provide the feedback needed for precise monitoring and advanced motor-control techniques such as field-oriented control (FOC) and space-vector PWM.

Additional features include shaft encoder and Hall-sensor interfaces and multiple test points,

simplifying system integration, measurement, and debugging during development.

At the heart of the design is the 40 V EPC2366 Gen 7 eGaN FET, featuring ultra-low on-resistance of 0.84 m $\Omega$ , enabling extremely efficient power conversion and fast switching performance. The evaluation platform supports PWM switching frequencies up to 150 kHz, significantly higher than typical silicon-based motor drives. This capability allows engineers to reduce magnetic component size, minimize switching losses, and improve overall system responsiveness.



The advertisement features a blue background. On the left, there is a close-up of the EPC91121 evaluation board, a green PCB with various components and connectors. Above it is a single EPC2366 eGaN FET component. Text next to the FET reads: "EPC2366 40 V, 0.84 m $\Omega$  2.6 x 3.3 mm QFN". Below the board, text reads: "EPC91121 50 A<sub>RMS</sub>". The EPC logo is prominently displayed at the bottom left of the board image. On the right side of the advertisement, a drone is shown flying against a blue sky with white clouds, carrying a cardboard box with the EPC logo and the text "EFFICIENT POWER CONVERSION". Below the drone, the text reads: "GaN-based EPC91121 BLDC Motor Drive for Drones". At the very bottom of the advertisement, the text "EPC91121" is displayed.

“With the EPC91121, engineers can evaluate high-frequency GaN-based three-phase inverter designs while leveraging integrated sensing and control interfaces for advanced motor control,” said Marco Palma, Director, Motor Drives Systems and Applications at EPC.

The board’s optimized layout ensures low-distortion switching, reducing motor acoustic noise and torque ripple while controlling dv/dt to below 10 V/ns for stable operation and improved electromagnetic compatibility. For rapid development, the board features a 40-pin controller interface compatible with platforms from Renesas, Microchip, Texas Instruments and STMicroelectronics, allowing engineers to leverage existing motor-control ecosystems.

Complete design support files, including schematic, bill of materials (BOM), and Gerber files, are available on the [EPC91121 product page](#).

### Price and Availability

The EPC91121 reference design board is priced at \$670.

Reference design boards and devices are available for immediate delivery from Digi-Key at <https://www.digikey.com/en/supplier-centers/epc> and Mouser at <https://eu.mouser.com/manufacture/epc/>

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