A Versatile Three-Phase Motor Drive Evaluation Board Featuring GaN Power Stage Now Available from EPC Space

ANDOVER, MA, UNITED STATES, July 15, 2025 /EINPresswire.com/ -- EPC Space, a leader in radiation-hardened (RH) gallium nitride (GaN) power devices, announces the EPC7C021, a high-performance, three-phase motor demonstration board featuring the radiation-hardened EPC7011L7C eGaN® IC. Designed for ease of evaluation and system integration, the EPC7C021 delivers a user friendly, flexible platform for developing motor drive applications such as reaction and momentum wheels, ion thrusters, robotics and other automation in demanding radiation environments.

> The EPC7C021 helps engineers quickly prototype three-phase motor drives, showcasing the flexibility and monitoring benefits of rad-hard GaN for motor control in harsh environments,"
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> *Maurizio Salato, VP of Engineering at EPC Space*

Measuring just 6.50" x 5.22", the EPC7C021 is a full-featured evaluation board that can operate as a stand-alone three-phase motor driver or be paired with the EPC9147A controller daughtercard for closed-loop motor control. The board includes dead-time generation circuitry, current and voltage monitoring, and optional filtering for sine wave approximation—making it ideal for engineers looking to evaluate GaN performance in space- and radiation-critical applications.

Key Features of the EPC7C021:

- Powered by EPC7011L7C Rad-Hard GaN ICs: Each phase uses a half-bridge GaN IC delivering high efficiency, low switching loss, and superior radiation tolerance.
- Flexible PWM Drive Options: Input signals can be sourced externally (via SMA or header connectors) or internally from the EPC9147A motor controller board.
- Comprehensive Monitoring and Protection: Built-in test points, power-good indicators, thermal monitoring, and adjustable over-current protection.
- Optional Output Filtering and Thermal Management: User-configurable RC filters for phase outputs and AlN-based thermal "helpers" support higher operating currents.
- Easy Integration: Interface options include Hall-effect sensor input, analog monitoring outputs, and support for external or onboard bias generation (12 V, 5 V, 3.3 V).

“The EPC7C021 helps engineers quickly prototype three-phase motor drives, showcasing the flexibility and monitoring benefits of rad-hard GaN for motor control in harsh environments,” said Maurizio Salato, VP of Engineering at EPC Space.

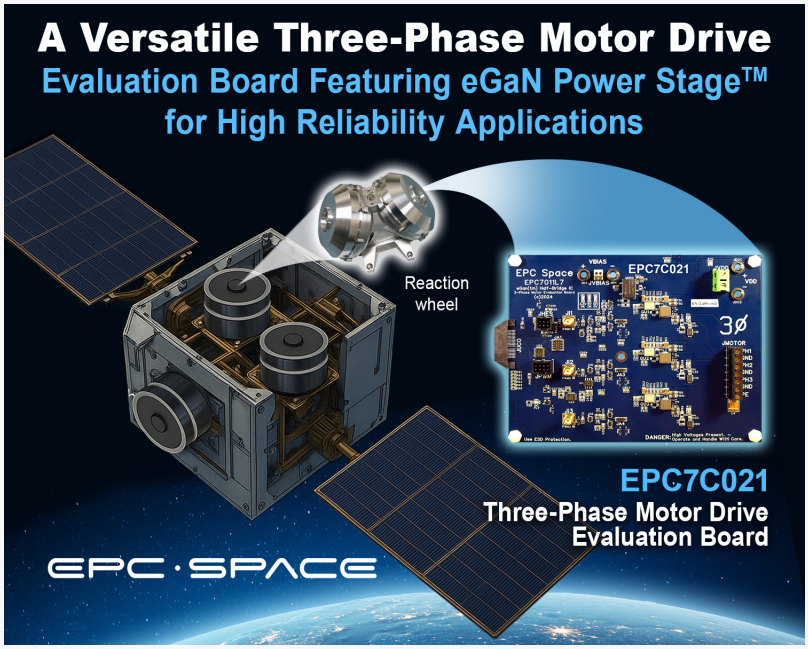
The EPC7C021 is available now through EPC Space and authorized distributors. To learn more, visit www.epc.space or contact your local EPC Space representative.

For product details, please see EPC7C021 page HERE

For more information on EPC and EPC Space visit our websites:

https://epc-co.com

https://epc.space



Three-Phase Motor Drive Evaluation Board with GaN Power Stage

About EPC Space

EPC Space provides revolutionary high-reliability radiation-hardened enhancement-mode gallium nitride power management solutions for space and other harsh environments.

Radiation hardened GaN-based power devices address critical spaceborne environments for applications such as power supplies, motor drives, ion thrusters, and more.

eGaN is a registered trademark of Efficient Power Conversion Corporation, Inc.

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