



EMCORE Featured in Inside GNSS Article Titled “Forging Inertial Synergy with Quartz MEMS and Fiber Optics”

December 16, 2020

ALHAMBRA, CA, Dec. 16, 2020 (GLOBE NEWSWIRE) -- EMCORE Corporation (Nasdaq: EMKR), a leading provider of advanced mixed-signal products that serve the aerospace & defense and broadband communications markets, announced today that it was featured in an article titled “Forging Inertial Synergy with Quartz MEMS and Fiber Optics” in the December issue of *Inside GNSS*. The article discusses how EMCORE’s dual offering of its Quartz MEMS (Quartz Micro-Electromechanical Systems) technology, from its acquisition of Systron Donner Inertial in 2019, and its FOG (Fiber Optic Gyroscope) technology deliver synergistic solutions across a broad range of tactical- and navigation-grade applications.

[Click here](#) for the complete article.

“Forging Inertial Synergy with Quartz MEMS and Fiber Optics” highlights how EMCORE hits high-performance benchmarks at low CSWaP (Cost, Size, Weight and Power), and that the flexibility and versatility of the Company’s products provide solutions for a very wide range of commercial and defense application environments from weapon systems to AHRS (Attitude Heading Reference Systems), UAVs (Unmanned Autonomous Vehicles), and more.

Inside GNSS explains how Quartz MEMS (QMEMS) technology is particularly well suited as a micromachining substrate for inertial sensors, resulting in a mature and proven product line with superior performance under environmental stress compared to legacy open-loop FOGs and ring-laser gyros (RLGs) as well as better performance under shock, vibration and temperature than competing options such as silicon MEMS.

Reviewing EMCORE’s FOG technology, *Inside GNSS* discusses how the Company’s patented IOC (Integrated Optical Circuit) transceiver enables unique closed-loop designs of very high bandwidth and accuracy for short-term to full navigation-grade applications requiring higher accuracy than QMEMS gyros. EMCORE’s closed loop FOG technology is capable of navigation grade accuracy of <0.001°/hr in-run bias. EMCORE has leveraged this advanced FOG technology in its EN-300 precision FOG IMU (Inertial Measurement Unit) which can offer up to 10 times the performance of the legacy IMUs it is designed to replace.

EMCORE is one of very few companies in the world capable of producing both gyros and accelerometers utilizing different technologies, according to *Inside GNSS*. The Company has demonstrated a new QMEMS gyroscope with the potential to reach high-end navigation grade in-run bias of 0.02°/hr and it has invested in upgrades to its advanced tactical accelerometer technology that now reach low single-digit micro-g navigation-grade.

Finally, “Forging Inertial Synergy with Quartz MEMS and Fiber Optics” explores the realm of hybrid solutions where the in-run performance of next-gen QMEMS Gyroscopes or VQAs (Vibrating Quartz Accelerometers) can be integrated with a precision FOG to deliver the best of both worlds: high performance, low cost and reduced size for emerging applications and markets.

“We would like to thank *Inside GNSS* for their comprehensive article on the synergy and value proposition of EMCORE’s unique combination of quartz MEMS and FOG inertial navigation solutions,” said David Hoyh, EMCORE’s Director of Sales & Marketing for navigation products. “EMCORE’s innovative FOG products combined with our mature and proven Systron Donner line of QMEMS sensors allows us to tailor solutions very precisely to customer requirements,” added Mr. Hoyh.

For further information and specifications on EMCORE’s complete line of navigation products, call +1 866-234-4976; e-mail: navigation-sales@emcore.com; or visit us on the web: www.emcore.com/nav.

Source: “Forging Inertial Synergy with Quartz MEMS and Fiber Optics” *Inside GNSS*, Volume 15/Number 6, November/December 2020, Pages 28-29.

About EMCORE

EMCORE Corporation is a leading provider of advanced mixed-signal products that serve the aerospace & defense and broadband communications markets. Our best-in-class components and systems support a broad array of applications including navigation and inertial sensing, defense optoelectronics, broadband transport, 5G wireless infrastructure, optical sensing, and cloud data centers. We leverage industry-leading Quartz MEMS, Lithium Niobate, and Indium Phosphide chip-level technology to deliver state-of-the-art component and system-level products across our end-market applications. EMCORE has vertically-integrated manufacturing capability at its wafer fabrication facility in Alhambra, CA, and Quartz MEMS manufacturing facility in Concord, CA. Our manufacturing facilities maintain ISO 9001 quality management certification, and we are AS9100 aerospace quality certified at our facility in Concord. For further information about EMCORE, please visit <http://www.emcore.com>.

Forward-looking statements:

The information provided herein may include forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, as amended. Such statements include statements regarding EMCORE’s plans, strategies, business prospects, growth opportunities, changes, and trends in our business and expansion into new markets. These forward-looking statements are based on management’s current expectations, estimates, forecasts, and projections about EMCORE and are subject to risks and uncertainties that could cause actual results and events to differ materially from those stated in the forward-looking statements, including without limitation, the following: (a) uncertainties regarding the effects of the COVID-19 pandemic and the impact of measures intended to reduce its spread on our business and operations, which is evolving and beyond our control; (b) the rapidly evolving markets for EMCORE’s products and uncertainty regarding the development of these markets; (c) EMCORE’s historical dependence on sales to a limited number of customers and fluctuations in the mix of products and customers in any period; (d) delays and other difficulties in commercializing new products; (e) the failure of new products: (i) to perform as expected without material defects, (ii) to be manufactured at acceptable volumes, yields, and cost, (iii) to be qualified and accepted by our customers, and (iv) to successfully compete with products offered by our competitors; (f) uncertainties concerning the availability and cost of commodity materials and specialized product components that we do not make internally; (g) actions by competitors; and (h) other risks and uncertainties discussed under

Item 1A - Risk Factors in our Annual Report on Form 10-K for the fiscal year ended September 30, 2020, as updated by our subsequent periodic reports. Forward-looking statements contained in this press release are made only as of the date hereof, and EMCORE undertakes no obligation to update or revise the forward-looking statements, whether as a result of new information, future events or otherwise.

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