



## EMCORE's SDN500 INS Achieves Success in CAST Navigation Ultra-High-Altitude Flight Simulation

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### Results Featured in *Inside GNSS* Article on CAST Navigation GNSS/INS Simulators

ALHAMBRA, CA, Nov. 24, 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 achieved success in an ultra-high-altitude flight simulation that was featured in an article about CAST Navigation titled "A True Reference" in the September-October issue of *Inside GNSS*. CAST Navigation builds simulators for testing and validating GNSS/INS performance in high-end navigation systems and EMCORE's SDN500 INS (Inertial Navigation System) was tested in the simulation for the article.

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

EMCORE relies on GNSS/INS simulators for hardware-in-the-loop testing to verify the expected performance of algorithms. In the test discussed in this article, EMCORE sought to validate the velocity and altitude limits of a new GNSS receiver along with the algorithm performance in a tactical grade SDN500 system. In the final analysis, the GNSS receiver and navigation algorithm was confirmed to operate as expected throughout the operation for all three of the customer's dynamic constraint scenarios.

"We were extremely pleased to demonstrate how EMCORE takes advantage of the functionality contained in the CAST simulator to prove-out our robust product performance in customer environments," said David Hoyh, EMCORE's Director of Sales & Marketing for navigation products. "I would like to thank *Inside GNSS* and CAST Navigation for the opportunity to contribute and promote the SDN500," added Mr. Hoyh.

This test requires simulating performance at an altitude over 24,000 meters and velocities over 600 m/s. Only a few aircraft in the world have such capabilities including the SR-71 Blackbird, but it is not practical to participate in a test flight on the SR-71. Simulating the SDN500 INS test flight to specific customer profiles on a CAST system is straightforward and cost-effective. Testing began with a stationary period on the ground while the SDN500 initializes and transitions into air navigation mode. Then the flight trajectory entered a series of maneuvers, speed, and altitude changes that provided observability for various parameters with corresponding changes in the calculated figures.

Andy Williams, Senior Field Application Engineer at EMCORE who spearheaded the effort, explains, "During the times when there was no valid solution from the GNSS receiver, the algorithm maintained an accurate solution using only the data from the IMU (Inertial Measurement Unit). In addition, there was no algorithm instability or discontinuity when the GNSS receiver resumed, providing a solution to the algorithm. Throughout this entire profile, even when GNSS signal is lost, the SDN500 maintains an accurate navigation solution. This test is not possible without the synchronized GNSS radio frequency and trajectory matching IMU data provided by the CAST system."

For further information and specifications on EMCORE's SDN500 INS and our complete line of navigation products, call +1 866-234-4976; e-mail: [navigation-sales@emcore.com](mailto:navigation-sales@emcore.com); or visit us on the web: [www.emcore.com/nav](http://www.emcore.com/nav).

Source: "A True Reference. Theory Meets Reality in Synchronized Simulation Environments" *Inside GNSS*, Volume 15/Number 5, September/October 2020, Pages 28, 29, 30.

### 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, 2019, 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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