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VORAGO Technologies Expands Partner Ecosystem to Drive Innovation in Space Electronics

October 23, 2024

AUSTIN, TX - October 23, 2024 -
VORAGO Technologies, a leading provider of radiation-hardened and radiation-tolerant microcontrollers and microprocessors for aerospace and defense, is pleased to announce the expansion of its global partner ecosystem in support of two key industry needs ? advancing edge computing for space and enhancing radiation resilience for non-volatile memory solutions.

?By expanding our partner ecosystem with these industry-leading companies, VORAGO Technologies is reinforcing its commitment to providing innovative, radiation-hardened and radiation-tolerant solutions for the most demanding environments,? said Ken Obuszewski, Vice President of Business Development and Product at VORAGO Technologies. ?These strategic partnerships will enhance our technology offerings and help our customers accelerate product development and innovation, increasing resilience and value.?

Advancing Edge Computing for Space

Rapid advancements in space edge computing require unique expertise in on-board computing with a focus on SWaP (Size, Weight, and Power) to enable small form factors such as cube sat satellites. VORAGO is

proud to partner with two leading innovators in edge computing for space ? NOVI and IDEAS-TEK ? in supporting this critical objective.

NOVI is a leader in the development of smart satellites and on-board edge computing solutions to enable in-space AI/ML for a wide array of sensors and applications. NOVI?s partnership with VORAGO has included leveraging VORAGO?s ARM® Cortex®-M4 microcontrollers in its 100 and 200 series on-board computers. NOVI also offers custom hardware and software engineering services.

?We are dedicated to providing onboard computing solutions that combine high performance, cost efficiency, and radiation tolerance, driving the continued growth and capability of small spacecraft in LEO and beyond. VORAGO?s M4 processor is crucial in helping us achieve these objectives,? said Michael Bartholomeusz, CEO of NOVI.

VORAGO?s strategic partnership with IDEAS-TEK, a pioneer in computing and embedded-system solutions for space, will focus on developing cost, size and power optimized VNX+ computing platforms, leveraging VORAGO?s VA7230 microprocessor for edge computing and VORAGO ARM® Cortex®-M4 microcontrollers for radiation hardened system monitoring and system control.

?IDEAS-TEK has developed a family of small form factor computing platforms aligned with the VNX/VNX+ standards, offering a range of performance and reliability options. VORAGO?s VA7230 microprocessor and ARM® Cortex®-M4 microcontrollers are ideal additions to enhance our current offerings. We look forward to a successful partnership and to delivering these cutting-edge systems with the quality and reliability that define IDEAS-TEK,? said Alonzo Vera, CEO.

Enhancing Radiation Resilience for Non-Volatile Memory Solutions

Radiation resilience for advanced non-volatile memory solutions is one of the most significant challenges for space deployments. VORAGO is excited to partner with two industry leaders, Avalanche Technology and Infineon Technologies, to deliver hi-rel solutions for mission-critical applications in harsh environments.

Through its partnership with Avalanche Technology, the leader in next-generation MRAM (Magnetoresistive Random-Access Memory), VORAGO will leverage Avalanche?s idealized boot and AI multi-processing solution to enhance performance and reliability in innovative new applications based on rad-hard and rad-tolerant microcontrollers and microprocessors. This will allow customers to access highly optimized processing solutions to support critical space and defense applications.

?The Aerospace & Defense industry has unwavering need for scalable platform solutions that meet a challenging balance of optimized reliability, SWaP and commercial viability,? said Paul Chopelas, General

Manager at Avalanche Technology. ?Working with key ecosystem partners like VORAGO to provide idealized boot solutions for their lineup of processors, we help realize the community?s Goldilocks requirements.?

Infineon Technologies, a global leader in semiconductor solutions, and VORAGO have a strong history of partnership with the joint radiation hardened Infineon FRAM + VORAGO VA41630 MCU solution. In 2025, the parties will offer solutions based on the Infineon radiation hardened NOR flash coupled with next generation VORAGO MCUs.

?Microcontrollers are gaining fast acceptance in space applications due to their flexibility, small footprint, radiation performance and lower power consumption for secondary functions where a full-size FPGA would be exaggerated. We are pleased to support integrated as well as embedded QML certified boot solutions for VORAGO?s microcontrollers,? said Helmut Puchner, VP Fellow Aerospace and Defense at Infineon Technologies.

Learn More

Get more details about these partnerships and solutions at voragotech.com/partners or contact VORAGO for more information.

About VORAGO Technologies

VORAGO leads the industry in providing radiation hardened and radiation tolerant microcontrollers and microprocessors for Aerospace, Defense and Industrial projects around the globe. VORAGO?s patented HARDSIL® technology uses cost-effective, high-volume manufacturing to harden any commercially designed semiconductor component for extreme environment operations. VORAGO primarily serves Aerospace & Defense customers in North America and Europe and has a deep flight heritage. VORAGO is a privately held company based in Austin, Texas. A three-time INC 5000 award winner, the company also made its debut appearance among the Deloitte Technology Fast 500? in 2023. Learn more at voragotech.com.

About NOVI

Founded in 2017, NOVI began with the vision to create a small team capable of rapidly implementing advances in spacecraft computing. The Company has exclusively focused on edge processing and AI for small spacecraft, leading the integration and in-space testing of highly integrated spacecraft and on-board computing technologies for national security and commercial applications. NOVI has been awarded a number of notable contracts and funding awards, including multiple awards from the Commonwealth Commercialization Fund (CCF), as well as Small Business Innovation Research (SBIR) awards from NASA,

the U.S. Air Force, the National Science Foundation (NSF), and the Missile Defense Agency (MDA). NOVI is a privately held company based in Arlington, Virginia. Learn more about NOVI LLC today at novillc.com.

About IDEAS-TEK

Founded in 2014, IDEAS-TEK specializes in designing and manufacturing trailblazing scientific instruments and high-performance computing systems for space applications. The company?s systems solutions use industry standards such as VPX and VNX/VNX+, enabling the creation of heterogeneous, scalable system architectures. IDEAS-TEK tailors each solution to meet the specific reliability, performance, and cost requirements of individual missions, from Class A to Class D. With thousands of operational hours across various constellations and missions, IDEAS-TEK's systems have a proven track record of success. The company operates out of a state-of-the-art 12,000-square-foot facility, which includes a space hardware manufacturing laboratory and is on track to achieve ISO9001 and AS9100(D) certification by the end of 2024. IDEAS-TEK is playing an integral role in advancing the nation?s space capabilities as part of the New Space era. Learn more at ideas-tek.com.

About Avalanche Technology

Avalanche Technology is the space technology leader enabling the Orbital Internet. With a proven STT-MRAM portfolio at multiple geometry nodes combined with an intellectual property portfolio of over 300 patents and applications, Avalanche is the only provider of scalable unified memory architecture for industrial, IoT, aerospace and storage applications that are Space-tested and proven. Avalanche?s Perpendicular STT-MRAM technology is the frontrunner to replace traditional Flash and SRAM for unified memory architectures in future SOC systems, delivering high performance and low power with a path to continued scalability. Learn more at avalanche-technology.com.

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VORAGO Technologies

VORAGO Technologies is a leading provider of radiation hardened and radiation tolerant components for Aerospace, Defense, and Industrial applications.

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