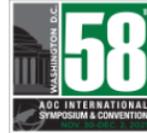


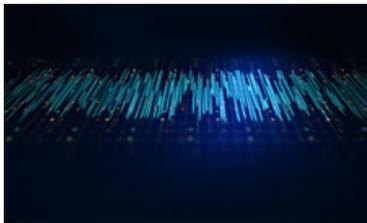
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MIL TECH TRENDS

Military spectrum management: Spectrum sharing, quantum sensors, and AI advances

SALLY COLE, SENIOR EDITOR

U.S. military spectrum management is currently undergoing many changes – from spectrum sharing to technology advances in quantum sensors and artificial intelligence (AI).

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SPECIAL REPORT

5G and the military: A new era of connectivity

EMMA HELFRICH, TECHNOLOGY EDITOR

Fifth-generation wireless technology, or 5G, is poised to emerge in a big way into the defense market. While the buzz surrounding the 5G technology standard has been growing in the general public in recent years, the U.S. Department of Defense (DoD) has been trailing behind commercial entities on adopting 5G due in part to both the slower pace of the DoD's acquisition process and the hard-to-keep-up-with pace of consumer-technology refresh. However, officials at several defense communications companies agree that it's just a matter of time before 5G-enabled military solutions are deployed and forever change the way in which the armed forces communicate.



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TECHNOLOGY UPDATE

Strong signals: Improve antenna performance in high-frequency military applications with radome innovations

RICK JOHNSON, LAIRD R&F PRODUCTS AND ERIC TRANTINA,
LAIRD PERFORMANCE MATERIALS

High-quality antenna performance protects lives and military assets. However, as defense and aerospace communications systems operate at higher frequencies, optimizing signal quality while also protecting antennas from harsh environmental conditions becomes more difficult. The key to addressing these challenges lies in the radomes that surround and shield antennas. Lowering the dielectric constant of the radome while also making the surround rugged requires a mix of in-depth knowledge of high-frequency communications systems, sophisticated modeling, materials science expertise, and rigorous testing.

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SPECIAL REPORT

MOSA provides the flexibility the DoD needs to modernize the battlespace

Faced with operating across an increasingly complex and contested battlespace, the U.S. Department of Defense (DoD) must innovate at pace to successfully counter emerging threats around the world. Central to the DoD's multidomain strategy is the Modular Open Systems Approach (MOSA) – a concept enabling the U.S. Army, Navy, and Air Force to rapidly integrate best of breed subsystems on board any platform type in any operational environment.



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GIVING BACK: America's VetDogs

LISA DAIGLE, ASSISTANT MANAGING EDITOR

Each issue, the editorial staff of Military Embedded Systems highlights a different charitable organization that benefits the military, veterans, and their families. We are honored to cover the technology that protects those who protect us every day.

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FROM THE EDITOR

Remembering Marty Simon



JOHN MCHALE, EDITORIAL DIRECTOR

At 40 years old this fall, the VMEbus standard’s longevity can be traced to its inventors, VME product designers, VITA Standards Organization members, military systems users, and also to the creativity and marketing acumen of a rock and roll aficionado named Marty Simon. Marty – founder of The Simon Group, member of the VITA Hall of Fame, early proponent of VME, my friend, and the most positive person I’ve ever come across – passed away in September at the age of 77 from complications from ALS.

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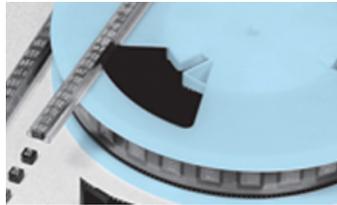


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MIL TECH TRENDS

Doubling down: Intel’s 8-core Xeon processor raises the performance bar for rugged systems

AARON FRANK, CURTISS-WRIGHT

In August 2021, Intel announced the new Intel Xeon W-11000E Series processor (formerly known as “Tiger Lake-H”), designed for the embedded market. This new processor follows the announcement of similar 11th-generation processors introduced for the commercial market several months earlier.

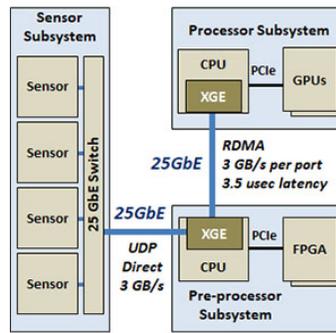
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BENCHMARK SECURE TECHNOLOGY

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