THE McHALE REPORT

Apirl 2022

The McHale Report, by militaryembedded.com Editorial Director John McHale, covers technology and procurement trends in the defense and aerospace electronics community.
View our archive of recent and past issues of the McHale Report e-mail newsletter.

SPECIAL REPORT

Open systems streamline helicopter avionics upgrades

Military helicopter avionics upgrades like those for Future Vertical Lift platforms make data and modular-agnostic hardware a priority for defense electronics manufacturers. As systems and electronics evolve, many of these advances will have to comply with open architecture standards like the Future Airborne Capability Environment (FACE) and must leverage a modular open systems approach (MOSA) to ease cost and time-to-market pressure.

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TOP STORY

Fireball data collected by government sensors released by Space Force

An agreement between NASA and the U.S. Space Force recently authorized the public release of decades of data collected by U.S. government sensors on fireball events, or large bright meteors also known as bolides, for the benefit of the scientific and planetary defense communities.

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TOP STORY

eVTOL advances could change battlefield logistics

Funding for electric vertical take-off and landing (eVTOL) aircraft continues to increase as U.S. defense planners recognize that eVTOL platforms can be a game changer on the battlefield. eVTOL-maker Talyn Air (Los Angeles, California) recently secured $1.7 million in government funding through an AFWERX AFVentures Tactical Funding Increase (TACFI) program in support of a two-year design/build/fly effort with the Air Force's Agility Prime program.

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TOP STORY

Hypersonic air-breathing weapon demoed with Lockheed Martin

The Defense Advanced Research Projects Agency (DARPA), Air Force Research Lab (AFRL), Lockheed Martin, and Aerojet Rocketdyne team have flight tested the Hypersonic Air-breathing Weapon Concept (HAWC).

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6 GHz Ultra-Wideband Recorder Extends Recording Bandwidths

The Talon RTR 2742 is a turn-key record and playback system for ultra-wideband analog RF/IF signals. Using two 12-bit, 6.4 GHz A/D converters, this system can achieve sustained recording of 2.4 GHz bandwidth signals at rates up to 6 GBytes per second.

Download Datasheet»

MARKET RESEARCH

Unmanned surface vehicle market to grow over next few years, study predicts

The global market for military and commercial flight simulation is projected to reach $6.1 billion by 2025, notching a compound annual growth rate (CAGR) of 3.9% over the analysis period, according to a new study by Global Industry Analysts, "Commercial and Military Flight Simulation -- Global Market Trajectory & Analytics."

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FROM THE EDITOR

Drone law and tech trends from AUVSI xPonential 2022

Military Embedded Systems Editorial Director John McHale chats with Dawn Zoldi, (Col, USAF, Ret.) founder of P3Tech Consulting and host of the Dawn of Drones Podcast, about her Law Tech Connect Workshop this week at AUVSI's xPonential 2022 conference and exhibition and the overall buzz at this year's event.

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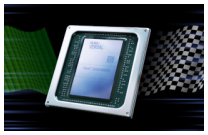
TOP STORY

AMD releases new Versal series targeting military radar, SIGINT applications



Military radar and signals intelligence (SIGINT) applications require intensive signal processing to fuel artificial intelligence (AI) aimed at the never ending data these systems produce. With that in mind AMD engineers announced their Versal Premium series with AI Engines.

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GUEST BLOG

Rationalizing the Army's "Need for Speed"

For most of the last decade, both the U.S. Department of Defense (DoD) and the U.S. Congress have bemoaned the slow pace of weapons-systems acquisition for equipping the country's warfighters. A 2020 study from the Center for Strategic and International Studies (CSIS) found the average cycle time for a major defense acquisition program (MDAP) – defined as the time it takes from Milestone B (the official start of a program) to the declaration of Initial Operational Capability (IOC) – to be nearly seven years.

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TOP STORY

Missile-warning ground stations garner Northrop Grumman $99.6 million contract from U.S. Navy

Northrop Grumman has won a contract worth $99.6 million from the U.S. Naval Information Warfare Center (NIWC) Pacific to provide mission-critical capabilities for Relay Ground

Station-Asia (RGS-A) under which the company will design, develop, integrate, test, and deliver the first of the next-generation relay ground stations to support legacy and future missile-launch and missile-warning detection satellites.

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SPONSORED CONTENT

PRODUCT OF THE WEEK: X-ES Xpedite7770 D-1700 processor-based 3U VPX-REDI Module

This week's product, Extreme Engineering Solutions' (X-ES') XPedite7770 3U VPX-REDI Module, is a single-board computer (SBC) based on the Intel D-1700 series (formerly Ice Lake-D) of processors. It is targeted at computationally heavy applications requiring maximum data and information protection such as Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR), radar, and other mission-critical defense systems..

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PRODUCT OF THE WEEK: Mercury Systems' SOSA aligned, 3U VPX, Development Platform

This week's product, the Mercury Systems' Model 8257A Development Platform A/D, is aligned with the Sensor Open Systems Architecture (SOSA) Technical Standard and features a a single-slot 3U VPX backplane and integrated power supply. The solution enables engineers to accelerate development of their sensor processing applications for radar, electronic warfare, and other platforms in an easy-to-use SOSA aligned desktop environment, saving time and money.

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SPONSORED CONTENT

PRODUCT OF THE WEEK: Annapolis Micro Systems' 100Gb Ethernet SOSA aligned, 3U OpenVPX Development Kit

This week's product, the Annapolis Micro Systems' WILD 100 3U OpenVPX Development Kit, is aligned with the Open Group's Sensor Open Systems Architecture (SOSA) Technical Standard and is 100Gb Ethernet capable. Made in the USA, the kit is designed from the ground up to economically speed development of electronic warfare (EW) system applications.

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TOP STORY

DARPA program seeks sensor data on high-frequency radio wave propagation

The Defense Advanced Research Projects Agency (DARPA) has embarked on a new program to develop and validate high-frequency (HF) propagation models that seek to enhance warfighting capabilities across the military domains -- air, sea, space, and land.

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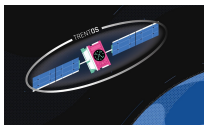
TOP STORY

Cybersecurity for satellites goal of

MARKET RESEARCH

Developing "moon market" could

HENSOLDT Cyber and Beyond Gravity collaboration



Beyond Gravity (formerly RUAG Space) and HENSOLDT Cyber have announced a collaboration intended to offer the IT security operating system TRENTOS for the latest satellite computer Lynx from Beyond Gravity.

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generate $105 billion over the next decade, study says

The future lunar economy or "moon market" is on track to generate $105 billion over the next 10 years, according to research firm NSR's recent study, "Moon Market Analysis, 2nd Edition."

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GUEST BLOG

The Space Force, Lagrange points, xenomorphs, and the Kill Web

So far, we have studied how the U.S. Army (IBCS) and Navy (CEC) programs have been conducting experiments, to integrate their weapons and ISR (intelligence, surveillance, and reconnaissance) systems into the Kill Web mesh network. Now, let's take a look at what the Space Force is doing. The Space Force was formed as the fourth armed service in 2019 and operates under the Air Force.

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TOP STORY

SPY-6 radars to be installed aboard next-gen U.S. Navy ships

Raytheon Missiles & Defense (RMD), a Raytheon Technologies business, has won a $651 million, with options totaling $2.5 billion, hardware, production, and sustainment contract for full-rate production of the AN/SPY-6(V) family of radars.

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TOP STORY

Raytheon Intelligence & Space installs expanded system for protected communications for USAF

Raytheon Intelligence & Space (RI&S -- a Raytheon Technologies business) recently finished installing its first Global Aircrew Strategic Network Terminal (ASNT) system for the U.S. Air Force.

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TOP STORY

Counter-UAS system from Liteye delivered to U.S. Army HEL program

Liteye Systems has delivered its first SHIELD counter-small unmanned aerial system (C-sUAS) solution to the U.S. Army Rapid Capabilities and Critical Technologies Office (RCCTO) HEL (high-energy laser) program, under the multiple-year contract Liteye signed with the Army in 2021.

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SPONSORED WHITE PAPER

Unlocking the Value of AI in Defense

AI is viewed as highly important to defense organizations' strategy now and in the future. AI-enabled solutions help defense organizations improve their mission effectiveness and decision-making through both military-specific and noncombat-focused applications.

SPONSORED WHITE PAPER

High performance Ethernet redundancy solution for the Industrial and Defense markets

Today's defense systems are highly sophisticated and based on high-performance mission computers, servers, workstations

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and signal processing nodes that need to exchange large amounts of information.

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