PODCAST

PODCAST: Driving open architectures in F-35 avionics and other military platforms.

Open architectures will make tech refreshes such as the latest avionics modernization (Technology Refresh 3 (TR3)) on the F-35 Joint Strike Fighter and other platforms much more efficient and cost effective in the long run. In the latest McHale Report Podcast, Bryant Henson, vice president and general manager for Harris Corporation's Electronic Systems Avionics Business Unit details how through the open architecture approach, the F-35's next-gen Integrated Core Processor (ICP) is targeted to generate a 75 percent reduction in unit cost compared to the current system.

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SPECIAL REPORT

Cognitive technologies tackle security, robotics, and data analysis in drive to deliver smart military systems

Cutting-edge cognitive technologies will be the enabling factor in getting autonomous systems off the ground and into the military theater of operations. Specifically, artificial intelligence (AI), machine learning (ML), and deep learning (DL) techniques will be key to developing autonomous systems that deliver on the promise of taking some of the data and operational workload off the warfighter.

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New Quartz RFSoC Development Platform Speeds Application Design

With eight 4 GHz A/Ds & 6.4 GHz D/As, the 5950 with the 8257 3U VPX chassis provide an integrated platform ready for immediate development of RFSoC applications. Attach a workstation, and you’re ready to test and debug custom software and FPGA designs.

TOP STORY

F-22 Raptor fleet upgrades process

TOP STORY

Machine learning, AI research

May 2019
is accelerated through Lockheed Martin, Red Hat partnership

Lockheed Martin teamed up with Red Hat to modernize the application development process to bring new capabilities to the U.S. Air Force’s fleet of F-22 Raptor fighter jets. Read More +

TOP STORY

Small UAS search by Army chooses six companies for assessment

The U.S. Army Program Executive Officer (PEO) for Aviation’s Project Manager, Unmanned Aircraft Systems -- in partnership with the Defense Innovation Unit (DIU) and the Army’s Maneuver Center of Excellence -- has chosen six companies that will identify and prototype new unmanned aircraft system (UAS) capabilities as the Department of Defense (DoD) looks to adapt small commercial drones for the battlefield. Read More +

MARKET/BUSINESS DEALS

Military wearables market to reach $6.4 billion by 2025, study says

The market for military wearables is projected to grow from $4.2 billion in 2019 to $6.4 billion by 2025, at a CAGR of 7.17% from 2019 to 2025, according to a study from MarketsandMarkets, “Military Wearables Market by End User (Land, Airborne, and Naval), Technology (Communication and Computing, Connectivity, Navigation, Vision & Surveillance, Exoskeleton, Power & Energy Management), Wearable Type, Region -- Global Forecast to 2025.” Read More +

STANDARDS

VITA Standards activity updates

The March VITA working groups meeting was held in Las Vegas. This update is based on the results of that meeting. Contact VITA if you are interested in participating in any of these working groups. Visit the VITA website (http://www.vita.com) for details on upcoming face-to-face meetings. Read More +

MIL TECH TRENDS

Military UAVs tackle performance issues under SWaP-driven designs

The U.S. Department of Defense (DoD) is seeking high-performing unmanned aerial vehicles (UAVs) designed to meet stringent size, weight, and power (SWaP)
constraints. One solution is to pack the vehicles with components. The problem? The lower the SWaP and the smaller the UAV gets, the more performance suffers.

**MARKET/BUSINESS DEALS**

**Military unmanned surface vehicles will drive 7% growth in unmanned vehicle market to 2024, study says**

The military unmanned vehicle market is set to deliver 7% growth between 2019 and 2024, driven mainly by unmanned surface vehicles.

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**TOP STORY**

**USMC G/ATOR passes initial operational test and evaluation**

Northrop Grumman officials announced that the U.S. Marine Corps' (USMC) AN/TPS-80 Ground/Air Task-Oriented Radar (G/ATOR) Blocks 1 and 2 passed Initial Operational Test and Evaluation (IOT&E).

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**TOP STORY**

**Cyberintelligence lapses in many orgs due to time, personnel, and funding shortages, study finds**

Many organizations lack sufficient personnel, time, and funding to build a cyberintelligence team, according to the findings in a report on cyberintelligence practices released by the Software Engineering Institute (SEI) at Carnegie Mellon University.

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**TOP STORY**

**AlphaDogfight Trials challenge kicks off new DARPA AI-focused program**

Officials at the Defense Advanced Research Projects Agency (DARPA) are launching the Air Combat Evolution (ACE) program, which aims to increase warfighter trust in autonomous combat technology by using human-machine

**MARKET/BUSINESS DEALS**

**Command-and-control systems market worth $25.04 billion by 2025, study says**

The global command-and-control (C2) systems market is anticipated to reach $25.04 billion by 2025, a CAGR of 3.8% over the forecast period, states a new report by Grand View Research. "Command and Control Systems Market Size, Share & Trends Analysis Report By Platform
collaborative dogfighting as its initial challenge scenario.

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FEATURE

Mars Exploration Rover

I was saddened in February with the news from NASA that the Opportunity Rover mission on Mars was formally concluded. What was originally supposed to be a 90-day, 1,000-meter, exploratory excursion had turned into a nearly 15-year, 28.4-mile odyssey across the surface of Mars, far beyond the expectations of anyone.

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TOP STORY

Northrop Grumman team demos rapid spacecraft development

Under the Defense Advanced Research Project Agency’s (DARPA) Radio Frequency Risk Reduction Deployment Demonstration (R3D2) program, a Northrop Grumman-led team demonstrated rapid spacecraft development.

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CHARTY

K9s for Warriors

Each issue, the editorial staff of Military Embedded Systems will highlight a different charitable organization that benefits the military, veterans, and their families. This issue we highlight K9s for Warriors, a U.S. veterans? service organization that trains rescue dogs to help veterans coping with post-traumatic stress disorder (PTSD), traumatic brain injury, military sexual trauma, post-9/11 issues, and other psychological challenges.

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TOP STORY

Missile systems for U.S. Army from Raytheon will be optically tracked,
Raytheon has won a contract from the U.S. Army to refine and improve on the Army's Tube-launched, Optically-tracked, Wireless-guided (TOW) weapons system, according to a news release from the U.S. Department of Defense.

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Best in Show awards selected at Sea-Air-Space 2019

Military Embedded Systems is excited to announce the winners of our Best in Show Award contest, which we held for our supporters exhibiting at the 2019 Sea-Air-Space conference and exposition this month at the Gaylord National Resort and Convention Center in National Harbor, Maryland. Contest winners — drawn from military embedded systems exhibitors at the event — are recognized for the improved performance and innovation they bring to military electronic systems applications.

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Strategic intelligence and the Kill Web

In previous articles, we explored the technologies and tactics going into the Kill Web, and how they work. Now, we need to look at how strategic intelligence feeds into the Kill Web, and into the order of battle (OB). That’s the structure of our troops and weapons, and how they will be deployed against an enemy.

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