



## MAY 2019

The Avionics Design monthly E-newsletter from the editorial staff of [mil-embedded.com](#) covers hardware and software avionics designs and certification issues in the commercial and military avionics markets in the U.S. and Europe via the Military Embedded Systems partnership with [Aviation Maintenance magazine](#) and the [Aerospace Tech Week show](#).

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

JOHN MCHALE, EDITORIAL DIRECTOR

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, as well as a 25-time increase in computing power.

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# Altavian

### Army program aims to field small UAV weighing less than 5 pounds

MARIANA IRIARTE, TECHNOLOGY EDITOR

Defense Innovation Unit (DIU) officials selected Altavian for the Short Range Reconnaissance Prototype (SRR) contract as a part of the Army's effort to field a next

generation unmanned aerial vehicle (UAV) weighing less than 5 pounds flown by a single operator.

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## U.S. Army's xTechSearch 3.0 kicks off in search of next-gen tech

MARIANA IRIARTE, TECHNOLOGY EDITOR

U.S. Army officials launched the third expeditionary technology search competition (xTechSearch 3.0), with the goal to engage with non-defense traditional small business sector.

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## Boost system performance and consolidate control architectures

TI TMS320F28377D-EP is a powerful 32-bit floating-point MCU providing advanced closed-loop control and eliminating multiprocessor use in high-end avionics systems.



**U.S. AIR FORCE**

## USAF releases RFPs for next Launch Service Procurement contract

MARIANA IRIARTE, TECHNOLOGY EDITOR

The Space and Missile Systems Center, in partnership with the National Reconnaissance Office, released a request for proposals (RFPs) to award two firm fixed-price, indefinite-delivery requirements contracts to domestic launch service providers.

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## Harris to supply its open systems COTS processor for the MQ-25 program

MARIANA IRIARTE, TECHNOLOGY EDITOR

Harris will supply its mission management open systems processor to Boeing under a contract to support the U.S. Navy's MQ-25 unmanned aerial vehicle (UAV) refueling program.

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## Four calls to FAA Whistleblower Hotline about 737 Max came April 5

AVIATION MAINTENANCE MAGAZINE

A new report by CNN says after the release of the preliminary crash report on Ethiopian Airlines flight 302, four Boeing employees called an Federal Aviation Administration whistleblower hotline. The hotline calls reportedly voiced concerns about the angle of attack sensor and the anti-stall system (MCAS). All four calls came on April 5.

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## FACE-conformant Arm architecture announced for RTOS by Green Hills Software

LISA DAIGLE, ASSISTANT MANAGING EDITOR

Green Hills Software has completed the certification of conformance for its INTEGRITY-178 Time-Variant Unified Multi Processing (tuMP) real-time operating system (RTOS) for Arm architectures to the Future Airborne Capability Environment (FACE) Technical Standard edition 3.0.

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## Drone delivery company, Wing Aviation, receives first FAA air carrier certification

MARIANA IRIARTE, TECHNOLOGY EDITOR

Federal Aviation Administration (FAA) officials granted the first air carrier certification to a drone delivery company, Wing Aviation, U.S. Department of Transportation (USDOT) Secretary Elaine L. Chao announced in a press release.

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## Vendor backing grows for the emerging FACE standard

RICARDO CAMACHO, LDRA

Avionics vendors ? hardware and software ? share an



enthusiasm for the Future Airborne Capability Environment (FACE) Technical Standard, which promotes a common operating environment with reuse of software capabilities across multiple Department of Defense (DoD) avionics systems. This enthusiasm continues to grow as does participation within the FACE consortium ? run by the Open Group ? as the version 3.0 of the standard is soon to be released.

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The advertisement features the Mercury Systems logo at the top left. To the right, the text reads: "Secure processing blade for on-platform AI and sensor fusion processing." Below this is an image of a grey, rectangular electronic module with a metal heat sink. The text "BuiltSECURE™" is displayed next to it. At the bottom, a red button with a white download icon and the text "Download the data sheet" is shown.



## Navy's MQ-25 UAS to be equipped with Cubic's SATCOM modem & common data link

MARIANA IRIARTE, TECHNOLOGY EDITOR

Boeing officials selected Cubic Mission Solutions (CMS), a Cubic Corp. business division, to supply its Wideband Satellite Communications (SATCOM) modem system and Line-of-Sight (LOS) Common Data Link (CDL) system for the MQ-25 unmanned aerial refueling program.

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## USAF demo shows Raytheon's directed energy system engage multiple UASs

MARIANA IRIARTE, TECHNOLOGY EDITOR

During a U.S. Air Force (USAF) demonstration, the Raytheon-built advanced high power microwave (HPM) and mobile high energy laser (HEL) systems engaged and defeated multiple unmanned aerial system (UAS) targets.

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## Counter-UAS technology expansion the focus of U.S. Air Force deal with Citadel Defense

LISA DAIGLE, ASSISTANT MANAGING EDITOR

Citadel Defense has been tapped by the U.S. Air Force to expand its work into counter-unmanned aerial system (CUAS) technology that will defeat enemy drones on the battlefield and may also be useful for broader commercial application.

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## Aerospace Tech Week 2020 Call For Papers

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## Counter-UAS solution selected by DLA to support USSOCOM



## requirements

MARIANA IRIARTE, TECHNOLOGY EDITOR

Defense Logistics Agency (DLA) officials selected Citadel Defense Co. for its counter-unmanned aerial systems (counter-UAS) mobile systems to support U.S. Special Operations Command (USSOCOM) requirements. The contract is valued at \$1 million.

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## Successful C-26D test flight advances Nextant Aerospace cockpit upgrade programs in military aviation sector

AVIATION MAINTENANCE MAGAZINE

Nextant Aerospace has successfully completed the test flight with a U.S. Navy C-26D in Italy. This follows the certification flight completed earlier for the USAF T-1A AMP program.

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## Northrop Grumman team demos rapid spacecraft development

MARIANA IRIARTE, TECHNOLOGY EDITOR

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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WHITE PAPER

## Thunderbolt 3: A Path Forward for Avionics Data Bus Interfaces and Abaco's ARINC 615-3 Data Loader

ABACO SYSTEMS

It's no secret that the expansion slot capability available on commercial laptops has changed dramatically over the past ten years. PC Card slots (also commonly referred to as PCMCIA slots) have all but vanished and it's rare to find Express Card slots. Thunderbolt ports are now gaining in popularity for high-performance peripheral support. The headaches of migrating to new computer hardware and operating systems also present some significant hurdles to overcome. On top of that, the always-present pressure to do more with less can put a strain on efficiency when engineers must compete internally for budget. This white paper looks at a possible solution to these challenges.

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