AVIONICS >DESIGN
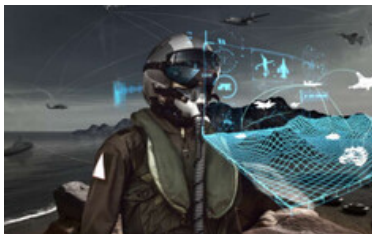
APRIL 2021

The Avionics Design monthly E-newsletter from the editorial staff of militaryembedded.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.

CAE to acquire L3 Harris Military Training business for $1.05 billion

LISA DAIGLE, ASSISTANT MANAGING EDITOR

Training and technology company CAE will acquire the L3Harris Military Training business for $1.05 billion, subject to customary adjustments.

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Duncan Aviation's St. Paul Satellite Installs Garmin G5000 In Two Citation Excels

AVIATION MAINTENANCE MAGAZINE

Duncan Aviation's satellite facility in St. Paul, Minnesota, recently installed the Garmin G5000 integrated flight deck in two of a customer's Citation Excel aircraft. After removing the entire cockpit, the crew in St. Paul installed the G5000, which includes bright, high-resolution color displays, touchscreen interfaces with audible feedback, Automatic Flight Guidance and Control Systems, GPS, Synthetic Vision System (SVS), and real-time weather, chart, traffic, and terrain information on the large moving maps that provide pilots with a great deal of situational awareness.

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Military-simulator systems market will

be driven by spending in emerging economies, study says

LISA DAIGLE, ASSISTANT MANAGING EDITOR

Market demand for military-simulator systems is anticipated to be driven by high levels of expenditure by emerging economies in the Asia-Pacific region, including India and China, according to a new study by GlobalData, "The Global Military Simulator Systems Market to 2030."
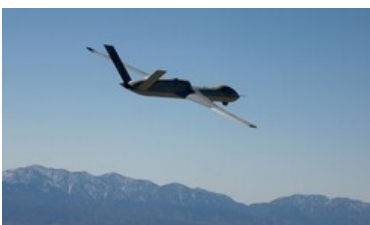
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INTEGRITY-178 tuMP avionics system meets NSA Raise the Bar requirements

EMMA HELFRICH, TECHNOLOGY EDITOR

Green Hills Software announced that its INTEGRITY-178 Time-Variant Unified Multi-Processing (tuMP) RTOS is being used by Collins Aerospace to meet the NSA's Raise the Bar (RTB) initiative for Cross Domain Solutions (CDS).

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FAA-issued Experimental Certificate achieved by GA-ASI Avenger RPA

EMMA HELFRICH, TECHNOLOGY EDITOR

General Atomics Aeronautical Systems, Inc., manufacturer of Remotely Piloted Aircraft (RPA) systems, radars, and electro-optic and related mission systems solutions, announced that its company-owned Avenger ER received an FAA-issued Experimental Certificate (EC) enabling the "Extended Range" Avenger

to perform expanded operations in the U.S. National Airspace System.

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GA Telesis Announces Four Additional Firm Orders for 737-800 Freighter Conversions

AVIATION MAINTENANCE MAGAZINE

GA Telesis inked a contract for four additional firm orders for 737-800SF freighter conversions with Aeronautical Engineers, Inc. (AEI). The contract was executed by GAT's LIFT (Leasing, Investments, Finance & Trading) Group. The first of the two originally contracted passenger-to-freighter (P2F) conversions was completed in March and delivered to Ethiopian Airlines. The second freighter aircraft is expected to be completed in May 2021.

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HENSOLDT renames avionics business to better address market

EMMA HELFRICH, TECHNOLOGY EDITOR

HENSOLDT announced that it is strengthening its avionics business by re-naming its subsidiary EUROAVIONICS GmbH, Pforzheim, and addressing the avionics market under the unified brand name HENSOLDT Avionics. The renaming is driven by a new management team led by the Managing Directors, André Hinueber and Dieter Buchdrucker.

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FACE approach gains new business guide from The Open Group

EMMA HELFRICH, TECHNOLOGY EDITOR

The Open Group, the vendor-neutral technology consortium, has announced the launch of the Future Airborne Capability Environment (FACE) Business Guide, Version 3.0.

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Digital avionics displays from the cockpit to the helmet to the holograph

SALLY COLE, SENIOR EDITOR

The digital cockpits of military aircraft today have increased in complexity and capability by leveraging commercial processing, graphics, and navigation in open architecture designs, bringing unprecedented awareness and advantages to military pilots.

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Helmet-Mounted Display system for Apache pilots to be sustained under Elbit Systems contract

EMMA HELFRICH, TECHNOLOGY EDITOR

Elbit Systems of America announced it will provide the U.S. Army with continued support and maintenance of the Integrated Helmet and Display Sighting System (IHADSS) that is used by AH-64 Apache pilots.

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Military avionics market flying steady

JOHN MCHALE, EDITORIAL DIRECTOR

The last 12 months have not been kind to commercial avionics suppliers, as the pandemic ended up grounding many flights and slowing aircraft purchases, consequently meaning fewer orders for avionics systems like displays and computers. Those commercial avionics suppliers – whether prime contractors or embedded computing suppliers – that are staying afloat are ones with a strong military business to offset the losses from the commercial market, as the military avionics market remains healthy.

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DO-178 continues to adapt to emerging digital technologies

EMMA HELFRICH, TECHNOLOGY EDITOR

Guilty until proven innocent – that is how the U.S. Department of Defense (DoD) treats the safety-certification process for military avionics systems, and the software portion of these systems is no exception. Certifying DO-178 in avionics software is a detailed process by which the safety and security of the software is determined to be acceptable to fly. The certification process itself is still a work in progress: Having already undergone revisions since its conception in the late 1980s following the emergence of supplemental software in aviation, DO-178 and other safety-certification standards for military and commercial avionics are being challenged to keep pace with digital innovation.

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Detect and Avoid system to equip AiRanger UAS

EMMA HELFRICH, TECHNOLOGY EDITOR

Sagetech Avionics, an aerospace technology company providing situational awareness solutions for Unmanned Aerial Systems (UAS), and American Aerospace ISR (AA ISR) have signed a Memorandum of Understanding (MOU) to integrate Sagetech's Detect and Avoid (DAA) system into the AA ISR AiRanger unmanned aircraft.

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Ampex Data Systems to Support Air Force Test Center at Edwards Air Force Base

Ampex Data Systems (Ampex), a Delta Information Systems Company, has been awarded a firm-fixed price, indefinite-delivery/indefinite-quantity contract in support of the Air Force Test Center. The contract will provide telemetric electrical system-supplies and ancillary services to Edwards Air Force Base (AFB), Eglin AFB, and other Department of Defense (DoD) and National Aeronautics and Space Administration (NASA) activities.

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Development Tactics and Techniques for Small Form Factor RF Signal Recorders

PENTEK

This paper describes the engineering considerations and design techniques used to develop a small form factor rugged recorder that can handle the extremely high data rates associated with very wide bandwidth RF signal recording. It is intended to provide engineers with ideas on how to bring this capability into confined and often extreme environments while focusing on military specification compliance, SWaP and ease of use with confidence.

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