AVIONICS >DESIGN

JUNE 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.

DO-178C certifiable software to help integrate machine learning into avionics

EMMA HELFRICH, TECHNOLOGY EDITOR

Intelligent Artifacts announced a new partnership with ConsuNova, a global provider of avionics systems certification services, to develop a software Cert-kit for airborne aerospace solutions.

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Collins Aerospace Helps Performance for Northrop Grumman E-2D Advanced Hawkeye with NP2000 Propeller

AVIATION MAINTENANCE MAGAZINE

Collins Aerospace announced that it has begun shipping parts following a second multi-year contract it received in November to supply Northrop Grumman with NP2000 propeller systems for 39 E-2D aircraft. Collins Aerospace says their NP2000 propeller and digital Electronic Propeller Control System, provides E-2D Advanced Hawkeye operators with reduced maintenance time and cost, and enhanced crew comfort and safety.

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Avionics modifications to be made to U.S. Air Force C-5 Galaxy fleet

LISA DAIGLE, ASSISTANT MANAGING EDITOR

Tyonek Native Corp. has been tapped by the U.S. Air Force Mobility and Training Aircraft Directorate to install avionics modifications -- worth as much as $92.8 million -- on the Air Force's C-5 Galaxy aircraft fleet, under an Alternate Modification Installation (AMI) contract.

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SABER software-based electromagnetic spectrum capability tested with BAE Systems

EMMA HELFRICH, TECHNOLOGY EDITOR

BAE Systems flight tested its Small Adaptive Bank of Electronic Resources (SABER) technology, paving the way for a critical software upgrade to the EC-37B Compass Call, a next-generation electronic warfare aircraft.

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COTS open-architecture modules from Curtiss-Wright will upgrade F-22 avionics, mission-processing systems

LISA DAIGLE, ASSISTANT MANAGING EDITOR

Curtiss-Wright Corp. announced that it has won a contract with Lockheed Martin Aeronautics (a Lockheed Martin company headquartered in Fort Worth, Texas) to supply its rugged commercial off-the-shelf (COTS) processor module technology to upgrade the U.S. Air Force's F-22 Raptor tactical fighter aircraft.

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Pinnacle to Provide Aircraft Maintenance for CH-47F Program in Kingdom of Saudi Arabia

AVIATION MAINTENANCE MAGAZINE

Pinnacle Solutions has been awarded a contract by the U.S. Army Multinational Aviation Special Project Office (MASPO) under its Worldwide Logistics Service and Support – Contractor Logistics Support (WLSS-C) program to provide contractor logistics support (CLS) to the Kingdom of Saudi Arabia's (KSA) Royal Saudi Land Forces (RSLF) and the acquisition of their first eight CH-47F MY II aircraft. Pinnacle will be deploying roughly 80 personnel to the KSA to support the program over the next five years.

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Optronics for use in airborne platforms to be worth $2.5 billion by 2025, study finds

LISA DAIGLE, ASSISTANT MANAGING EDITOR

The market for airborne optronics -- optical and vision equipment used by armed forces and security personnel for monitoring, identification, and classification purposes -- is projected to grow from $1.4 billion in 2020 to $2.5 billion by 2025, at a CAGR of 12.7% during the study period, according to a new study by MarketsandMarkets, "Airborne Optronics Market by End Use, System, Technology (Hyperspectral, Multispectral), Application (Commercial, Military, Space), Aircraft Type (Fixed Wing, Rotary Wing, Urban Air Mobility, Unmanned Aerial Vehicles) and Region - Forecast to 2025."

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Cyber-resilient software-defined radio to equip NATO's E-3A fleet

EMMA HELFRICH, TECHNOLOGY EDITOR

Leonardo has been contracted by Boeing to provide its new software-defined radio (SDR), the SWave Airborne SDR SRT-800 for NATO’s fleet of E-3A Airborne Warning and Control System (AWACS) aircraft. The AWACS fleet is being modernized by Boeing to maintain its operational viability through 2035 under the Final Lifetime Extension Program (FLEP).

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Software interoperability goal of Aitech joining The Open Group FACE Consortium

EMMA HELFRICH, TECHNOLOGY EDITOR

Aitech, provider of rugged board and system level solutions for military, aerospace, and space applications, announced it has joined The Open Group Future Airborne Capability Environment (FACE) Consortium.

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Flight hardware and autopilot software validated in Skydweller UAV test

EMMA HELFRICH, TECHNOLOGY EDITOR

Skydweller Aero Inc., a U.S.-Spanish aerospace company developing solar powered aircraft for defense and commercial industries, announced the flight demonstration of the company's initial aircraft control,

actuation, and sensor technology systems, after software design, installation, and ground testing.

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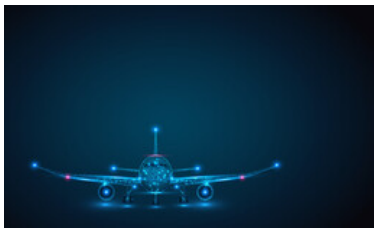

DO-178C cert-kit for airborne machine learning to be researched by Intelligent Artifacts

EMMA HELFRICH, TECHNOLOGY EDITOR

Intelligent Artifacts announced that it has been selected for a Phase I SBIR contract award by the US Air Force to conduct research and development (R&D) in pursuit of a "Blue Sky" opportunity for airborne Machine Learning (ML) that meets strict technical standards for safety in aviation.

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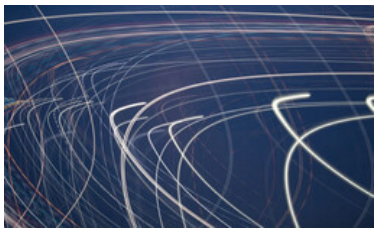

Rugged inertial measurement units use sensors to provide navigation data

EMMA HELFRICH, TECHNOLOGY EDITOR

Honeywell has launched a new series of miniature inertial measurement units that are ruggedized to offer accuracy along with the durability to survive high-shock environments. The new HG1125 and HG1126 inertial measurement units (IMUs) are designed to serve both commercial and military applications.

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Leveraging ARINC 818 for military avionics and sensor applications

JOHN MCHALE, EDITORIAL DIRECTOR

In this podcast, Tim Keller, Chief Operations Officer at Great River Technology discusses defines what ARINC 818 is, discusses common misconceptions about the standard, and describes its growing use in sensor applications and in training and simulation applications. Keller also details new ARINC 818 training for engineers and explores how the standard could potentially work within the Sensor Open Systems Architecture Technical Standard.

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Heavy cargo drones to be equipped with transponders and DAA system

EMMA HELFRICH, TECHNOLOGY EDITOR

Sagetech Avionics, an aerospace technology company providing situational awareness solutions for unmanned aerial systems (UAS), and Pen Aviation have signed a Memorandum of Understanding (MOU) to integrate Sagetech Avionics' MXS transponders and Detect and Avoid (DAA) systems into the PEN 55V midsize drone and the PEN 1360V heavy cargo drone.

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SPONSORED WHITE PAPER

How Can I Teach My Machine to Learn?

CURTISS-WRIGHT

In this white paper, we examine the supervised and unsupervised machine learning methods and the hybrid approach of semi-supervised machine learning. This paper also covers machine learning frameworks that simplify neural network creation, training and validation.

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Reducing SWaP in ISR Signal Processing Applications

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