Sensor payloads for military unmanned systems get smarter

SALLY COLE, SENIOR EDITOR

Size, weight, power, and cost (SWaP-C) considerations are still driving military sensor payload designs for unmanned systems, but sensors are getting much “smarter” and processing tasks are now increasingly being performed right at the payload level.

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Enabling infrared systems in UASs through SWaP optimization

ROSS BANNATYNE, SENSEEKER ENGINEERING

Unmanned aerial system (UAS) platforms continue to reduce their size, weight, and power consumption (SWaP) and enhance their performance and functionality. These improvements are enabled by a new generation of sensing technology; one example is integration of high-performance infrared (IR) imaging systems onto reduced-scale aircraft.

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Is photonics the disruptive answer to turbocharging digital speed and efficiency?

LISA DAIGLE, ASSISTANT MANAGING EDITOR

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Ruggedizing interconnects for military and commercial UAVs

MICHAEL WALMSLEY, TE CONNECTIVITY AND WILLIAM NEWTON, TE CONNECTIVITY

Advances in electrical and electronic components and related interconnect technologies have helped launch a vast drone industry for both military and commercial use. Small drones – classified as unmanned aerial vehicles (UAVs) – are incredibly popular and useful.

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Full-motion video distribution for defense using open-source Secure Reliable Transport

JACK WELSH, HAIVISION

ISO/IEC 13818 Part 1 (ITU-T Recommendation H.222.0) – released in 1995 – describes the synchronization of audio and video using a Transport Stream container structure (TS, MPEG2-TS, m2ts). The Transport Stream is unique in that it serves as a container for streaming video and as a container for static video files.

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SPECIAL REPORT

C-UAS philosophy and needs dictate system advancements

EMMA HELFRICH, ASSOCIATE EDITOR

In the counter-unmanned aerial system (C-UAS) arena, the threats they are designed to mitigate depend heavily on the market for which they are intended. A back-and-forth between UAS advancements and growth in the C-UAS industry dictate to manufacturers what these systems need and how much funding it will take to get them there. What is apparent, however, is autonomous aircraft are becoming more ubiquitous in both military and commercial markets, and along with that so are the systems required to counter them.
SISTER PUBLICATION

SOSA and VITA: Working together for next-gen defense systems

RODGER HOSKING PENTEK, INC.

The SOSA (Sensor Open Systems Architecture) Consortium is developing common open standards for designing, building, and deploying hardware, software, and firmware components of new military electronic systems. Contributing members to SOSA include the U.S. Department of Defense (DoD) – including the Army, Navy, and Air Force – along with key representatives from industry and universities.

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