



NEWS RELEASE

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Curtiss-Wright Collaborates with NI to Migrate Industry-Leading Software Defined Radio Technology to CMOSS and SOSA Technical Standard 1.0 Aligned Systems

New VPX3-E320 module is industry's first fully rugged MOSA-based 3U Open VPX™ variant of NI's popular Ettus Research USRP E320 SDR

AUSA 2021, Walter E. Washington Convention Center, Washington D.C. (Booth 1051) – October 11, 2021 – Curtiss-Wright's [Defense Solutions division](#), a leading supplier of [modular open systems approach](#) (MOSA) based solutions, today announced that it is collaborating with [NI](#) (formerly National Instruments) to bring advanced high-performance Software Defined Radio technology to deployed applications aligned with [The Open Group Sensor Open Systems Architecture™](#) (SOSA) and U.S. Army's [C5ISR/EW Modular Open Suite of Standards](#) (CMOSS) technical standards. Curtiss-Wright's new VPX3-E320 Ruggedized Universal Software-Defined Radio module, developed under agreement with NI, is the first fully rugged OpenVPX variant of the popular Ettus Research USRP E320 SDR solution, enabling applications developed in the lab to be seamlessly transitioned to mission hardware. The conduction cooled 3U OpenVPX module speeds and eases the integration of critical SDR capabilities, such as deployed SIGINT, tactical communications, and reconfigurable jamming, into platforms deployed in harsh environments.

“Reflecting our commitment to be the industry leader in delivering best-in-class CMOSS and SOSA aligned solutions, our innovative agreement with NI enables us to be the first to bring the functionality of the Ettus Research USRP E320 software defined radio to open architecture OpenVPX systems,” said Chris Wiltsey, Senior Vice President and General Manager, Curtiss-Wright Defense Solutions. “In support of the DoD’s mandate for MOSA-based solutions, our VPX3-E320 SDR 3U OpenVPX module provides system designers with a compelling choice for deploying rugged battlefield communications capabilities.”

“Dominance of the electromagnetic spectrum has never been more critical to mission success. NI is committed to accelerating the transition of new communications and EW capabilities from concept to laboratory to the warfighter,” said Luke Schreier, Senior Vice President and General Manager of NI’s Aerospace, Defense, and Government Business Unit. “Our collaboration with Curtiss-Wright on the VPX3-E320 provides system designers with a direct path to migrate IP from NI prototyping hardware to mission systems.”

About the VPX3-E320

Developed under agreement with NI, Curtiss-Wright’s VPX3-E320 SDR module is an OpenVPX functional equivalent variant of the Ettus Research USRP E320. The module is fully compatible with the USRP Hardware Driver (UHD) and features a flexible 2 x 2 MIMO RF Agile Transceiver with 12-bit ADCs and DACs. The board supports tunable bandwidths from 200 kHz to 56 MHz over a frequency range from 70 MHz to 6 GHz. As part of the product roadmap, Curtiss-Wright will add a “step-down” converter to this board to accommodate frequencies down to 30 MHz for use on combat net radios. Baseband signal processing uses a Xilinx Zynq 7045 System-on-Chip FPGA to deliver accelerated FPGA computations and software-based processing using its dual-core Arm® CPU. Device configuration can be accomplished with the NI USRP UHD, either through GNU Radio or with common programming languages such as Python or C++. Applications previously developed on the USRP E320 will port directly to the VPX3-E320.

The VPX3-E320 module’s backplane I/O is designed for alignment with the latest RF system implementation standards, including CMOSS, the Vehicular Integration for C4ISR/EW Interoperability (VICTORY), and Modular Open RF Architecture (MORA). Designed for superior durability and reliable operation in harsh environments, the VPX3-E320 incorporates Curtiss-Wright’s industry-leading rugged hardware design and validation practices to meet the stringent requirements of the most demanding front-line conditions.

A Leader in Open Standards

Curtiss-Wright is an active contributor to the definition and advancement of the open standards included in CMOSS and those being defined in The Open Group Sensor Open Systems Architecture™ (SOSA). Curtiss-Wright has been a leading participant in the development of the CMOSS and SOSA standards since the inception of both initiatives and is a key participant in several SOSA™ Consortium working groups (including holding a chair position in the SOSA Consortium). In addition, the company has been a leading contributor to the VITA Standards

Organization (VSO) that oversees the definition of the OpenVPX, PMC, XMC, and FMC form factor standards that provide the foundation of both CMOSS and SOSA technical standards. This makes Curtiss-Wright ideally positioned to work with customers to help guide the development and success of their CMOSS- and SOSA-aligned applications.

To [download the VPX3-E320 product sheet](#), please click here. Availability of development units will be announced in the near future (availability subject to component supplies).

For additional information about Curtiss-Wright MOSA technologies, please visit www.curtisswrightds.com, LinkedIn, and Twitter @CurtissWrightDS.

About Curtiss-Wright Corporation

Curtiss-Wright Corporation (NYSE:CW) is a global innovative company that delivers highly engineered, critical function products and services to the Aerospace and Defense markets, and to the Commercial markets including Power, Process and General Industrial. Building on the heritage of Glenn Curtiss and the Wright brothers, Curtiss-Wright has a long tradition of providing reliable solutions through trusted customer relationships. The company employs approximately 8,200 people worldwide. For more information, visit www.curtisswright.com. For more information, visit www.curtisswright.com.

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