NEWS RELEASE

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Curtiss-Wright Debuts Industry's First Arm®-based 3U VPX Single Board Computer Designed for DO-254 Safety-Certifiable Avionics Applications

NXP® Layerscape®-based VPX3-1703 SBC provides system integrators with compelling new option for architecting critical systems

ASHBURN, Va. – March 1, 2018 – Curtiss-Wright's Defense Solutions division today launched a new era of safety-certifiable avionics embedded computing with the debut of the COTS industry's first Arm processor based 3U OpenVPX™ single board computer (SBC) designed to support DO-254 DAL C (PLD to DAL A) requirements. The safety-certifiable VPX3-1703 SBC is based on the latest generation NXP® Layerscape® LS1043A Arm Quad-core A53 processor. This low-power card (14W to 21W depending on frequency and application) provides designers of safety-certified avionics systems with a compelling new alternative to traditional processor architectures, such as those based on Intel® or Power Architecture® devices.

Designed specifically to address DO-254 avionics applications, the VPX3-1703 is available with re-usable DAL C design artifacts that help speed and ease the system certification process while greatly reducing program risks and costs. The VPX3-1703's LS1043A processor, supported by NXP with a 10+ year life cycle, features four low-power Arm A53 cores that provide a superior balance between performance, power, and cost for deployed defense and aerospace systems. What's more, because A53 cores are well known and field-proven, they provide an ideal, high-confidence pedigree for demanding and critical safety-certifiable applications, such as avionics and motor/engine control. The fully rugged VPX3-1703 is ideal for use in mission computers, as well as general purpose SBC applications, both safety-certifiable and non-safety-certifiable.

For many DO-254safety-critical applications, system designers prefer to architect a mix of "dissimilar" processor types in order to reduce the risk of system failure. A specific software glitch is significantly less likely to appear on two or three different processor architectures simultaneously. The availability of a new family of Arm processor-based SBCs provides system designers with a powerful alternative for architecting dissimilar processor-based safety-certified avionics solutions. Curtiss-Wright believes that the VPX3-1703 will also be the industry's first Arm-based 3U OpenVPX SBC module designed to DO-254 requirements to ship to customers.

“Low-power Arm processing technology delivers a compelling alternative for embedded single board computer designs that have typically depended on traditional processor technologies,” said Lynn Bamford, Senior Vice President and General Manager, Defense Solutions division. “For next-generation safety-certifiable SBCs, Arm provides a perfect balance between compute power and low-power dissipation, both critical for many deployed aerospace and defense platforms. Curtiss-Wright sees a great future for Arm in rugged embedded computing and we plan to expand our product family with a wide range of offerings and form factors in the near future. We look forward to leading the industry into an exciting future with Arm.”

The VPX3-1703 is the first in a new family of Arm-based 3U based OpenVPX modules from Curtiss-Wright. In addition, to ease integration of the VPX3-1703 with legacy modules, Curtiss-Wright plans to announce new OS and software driver support for a wide variety for products, including its VPX3-717 and VPX3-719 DO-254 and DO-178C Safety-Certifiable 3U OpenVPX Graphics Processors, and the VPX3-611 DO-254 Safety-Certifiable MIL-STD-1553B and ARINC 429 I/O Module.

Software Support
Software support for the VPX3-1703 includes Curtiss-Wright’s U-Boot firmware, providing a comprehensive suite of system debug, exerciser, and update functions, BIT, and non-volatile memory sanitization function. A Wind River VxWorks® 7 and a Linux® Board Support Package (BSP) and Driver Suite will be available. Safety-certifiable OSs will be available from Curtiss-Wright’s software partners.

Sales inquiries: Please forward all Sales and reader service inquiries to defensesales@curtisswright.com.

For more information about Curtiss-Wright’s Defense Solutions division, please visit www.curtisswrightds.com.

About Curtiss-Wright Corporation
Curtiss-Wright Corporation is a global innovative company that delivers highly engineered, critical function products and services to the commercial, industrial, defense and energy markets. 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 8,600 people worldwide. For more information, visit www.curtisswright.com.

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