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NEWS RELEASE

Curtiss-Wright and Green Hills Software Collaborate to Bring INTEGRITY-178 tuMP Safety-Certifiable RTOS to Industry's First Arm®-based 3U VPX SBC

*Low-power Arm-based VPX3-1703 joins Curtiss-Wright's family of
Intel® and Power Architecture® SBCs, and expands support for
Green Hills Software® INTEGRITY®-178 tuMP™ Safety-Certifiable RTOS*

AUSA 2018, Washington, D.C. (Booth #1607) – October 8, 2018 -- Curtiss-Wright's Defense Solutions division today announced that it has collaborated with Green Hills Software (GHS) to bring support for its field-proven FACE™-conformant INTEGRITY-178 tuMP safety- and security-critical multi-core real-time operating system (RTOS) to Curtiss-Wright's VPX3-1703 single board computer (SBC). The VPX3-1703 is the industry's first commercial available Arm processor-based 3U OpenVPX™ SBC designed to support the DO-254 flight safety standard with data artifacts up to the DAL A level.

With this announcement, Curtiss-Wright now provides support for DO-254 hardware and DO-178C software safety-certifiable operating environments across all three major processor architectures, Arm, Intel, and Power Architecture. This makes Curtiss-Wright uniquely positioned to support avionics system developers seeking to deploy embedded solutions that feature dissimilar redundant system architectures (i.e., using two or more different processor types while also running different operating systems and dissimilar software applications) in order to meet the stringent requirements of DAL A certification. DO-254 DAL A is required for safety-critical avionics applications such as flight control computers, fly-by-wire, flight displays, air data systems, and full authority digital engine control. A new white paper discussing the benefits of dissimilar redundant architectures, "*Why Dissimilar Redundant Architectures Are a Necessity for DAL A*" is available for download.

"We are excited to announce support for INTEGRITY-178 tuMP on our VPX3-1703, the industry's first DO-254 safety-certifiable Arm single board computer," said Lynn Bamford, Senior Vice President and General Manager, Defense Solutions division. "When combined with Green Hills' RTOS, our Arm, Intel, and Power Architecture SBCs provide system designers with the critical building blocks they need to quickly and cost-effectively develop safety certifiable systems. For avionics systems designers, support for INTEGRITY-178 tuMP on the VPX3-1703 expands our ability to provide dissimilar processors for redundancy in order to meet the stringent DAL A requirements."

Using the rugged VPX3-1703 module, avionics system designers can easily and rapidly integrate complete high-performance rugged DO-254/DO-178 safety-certifiable system solutions that run GHS's INTEGRITY-178 tuMP, the first true multi-core operating system for Arm processors that conforms to the FACE 2.1.1 Technical Standard. The [INTEGRITY-178 tuMP RTOS](#), which has successfully met DO-178 DAL A certification objectives multiple times across several different multi-core SOC architectures (each featuring a different core design), is now available for all of Curtiss-Wright's DO-254 safety-certifiable SBC products. Last month, at the 2018 U.S. Army FACE™ Technical Interchange Meeting (TIM), Curtiss-Wright, in collaboration with Harris Corporation and GHS, publicly demonstrated the first working example of a FACE-conformant operating system (OS) and FACE-conformant software application running simultaneously on two completely different processor infrastructures (Intel and NXP® Power Architecture).

About the VPX3-1703 SBC
Recently introduced, the VPX3-1703 features the NXP® Layerscape 1043A Arm quad-core A53 processor. This low-power card (14W to 21W depending on frequency and application) provides designers with a rugged, highly capable module that brings Arm's unparalleled power-to-performance ratio to safety-critical avionics systems. Designed specifically to address DO-254 avionics applications, the VPX3-1703 is available with re-usable data artifacts up to DAL A to help speed and ease the system certification process and greatly reduce program risks and costs. The VPX3-1703's LS1043A processor, supported by NXP with a 15 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-certifiable.

Full Application Ready System Solutions
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 the VPX3-1703's 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.

The VPX3-1703 is easily integrated with other members of Curtiss-Wright's extensive 3U OpenVPX product family, including Intel and Power Architecture based SBCs, DSP, FPGA, GPGPU, graphics, network switch and router modules.

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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