



NEWS RELEASE

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Curtiss-Wright, Wind River, Ansys, and CoreAVI Collaborate to Demo FACE Conformant, Arm-based Digital Cockpit Flight Display at MOSA Summit 2024

Demo features Curtiss-Wright's DO-254 safety-certifiable V3-1708 processor board and V3-717 graphics board running Ansys SCADE Display Application with Multi-Touch, CoreAVI OpenGL, Wind River Helix Virtualization Platform

MOSA INDUSTRY & GOVERNMENT SUMMIT & EXPO, NATIONAL HARBOR, MD. (Booth 130)

– June 17, 2024 – Curtiss-Wright's [Defense Solutions Division](#) will publicly demonstrate, in collaboration with [Wind River](#), [Ansys](#), and [CoreAVI](#), a [Future Airborne Capability Environment](#)[®] (FACE) conformant digital cockpit flight display running on its 3U VPX [V3-1708 DO-254 safety-certifiable NXP® Layerscape® LX2160A Arm® processor board](#). Developers and integrators of next-generation mission-critical embedded display systems face the challenge of rapidly developing, integrating and fielding new and complex capabilities. These challenges can be addressed through use of open standards that support a [Modular Open System Approach](#) (MOSA) and Curtiss-Wright's COTS Safety-Certifiable hardware product suite.

The demonstration, located in Wind River's booth (#130) at [MOSA Industry & Government Summit & Expo](#), will showcase how all sixteen NXP Layerscape processor cores can be utilized while running a DO-178C DAL A RTOS. The demo hardware features Curtiss-Wright's [V3-717 3U VPX safety-certifiable AMD E8860 graphics board](#) using CoreAVI graphics drivers, highlighting a proven small form factor (SFF) solution for quickly integrating avionics applications using high-performance DAL-A safety certifiable commercial-off-the-shelf (COTS) hardware. The demo application features

a Multi-Touch Cockpit Display Application developed with Ansys SCADE software running on the industry-leading, FACE conformant Wind River Helix Virtualization Platform, a multi-core, multi-tenant, DO-178C DAL A certifiable type 1 hypervisor-based solution.

“Curtiss-Wright is an industry leader in providing safety-certifiable COTS hardware solutions that deliver the latest technology to military system designers, enabling them to use MOSA and FACE to simplify their logistics and boost interoperability,” said Brian Perry, Senior Vice President and General Manager, Curtiss-Wright Defense Solutions. “We are excited to support this collaborative effort that extends our MOSA-based hardware support of FACE compliant solutions on the Wind River Helix Virtualization Platform.”

“The demonstration at MOSA Summit 2024 builds on Wind River’s long history of delivering FACE conformant solutions in collaboration with leaders in the aerospace and defense industry. Proven solutions developed from close relationships with companies including Curtiss-Wright, Ansys, and CoreAVI reduce risk and cost, and speed development for next generation MOSA platforms,” said Michel Chabroux, Vice President, Product Management, Wind River.

“At Ansys, we believe in collaborative engagements based on open standards and interoperable technologies,” said Dr. Olaf Kath, VP of Product and General Manager, Ansys Systems, MBSE, and PIDO business unit at Ansys. “We are very pleased to work with our partners toward a common goal: to enable our joint customers to successfully satisfy MOSA objectives. This is digital systems engineering at its best.”

About the V3-1708 Processor Board

Curtiss-Wright’s V3-1708 3U VPX COTS processor board is designed to reduce the time, cost, and risk associated with getting rugged, safety-critical systems to the field. This high-performance, size, weight, and power (SWaP)-optimized processor is designed for DAL A systems where AMC 20-152A/AC 20-152A is the means of compliance, calling up DO-254. The board is ideal for safety-critical systems, such as flight control computers, mission control computers, and primary flight displays. For applications requiring information assurance, the V3-1708’s hardware design supports NXP Secure Boot and trust capabilities, along with Arm TrustZone. Certification Evidence for the V3-1708 is available today, off-the-shelf, for immediate delivery.

About the V3-717 Graphics Board

The Curtiss-Wright V3-717 is a 3U VPX rugged graphics processor board based on the AMD Radeon E8860 GPU, a popular and well-proven graphics solution for safety-certifiable applications. The V3-717, which enables multi-display output of up to 6 independent displays, is designed for systems with Design Assurance Level (DAL) A process assurance where AC/AMC 20-152A is the means of compliance to apply DO-254. The V3-717 combines the AMD Radeon E8860 GPU with a large complement of dedicated video memory, making the board ideal for use in demanding, graphics-rich applications that require extensive video processing and display capabilities. Certification Evidence for the V3-717 is available today, off-the-shelf, for immediate delivery.

About Wind River Helix Virtualization Platform

The industry-leading, FACE conformant [Wind River Helix Virtualization Platform](#) is a multi-core, multi-tenant, DO-178C DAL A certifiable type 1 hypervisor-based solution. It consolidates multi-OS and mixed-criticality applications onto a single edge compute software platform, simplifying, securing, and future-proofing designs in the aerospace, defense, industrial, automotive, and medical markets. Helix Platform includes VxWorks®, the world's most widely deployed real-time operating system (RTOS) setting the standard for a scalable, safe, secure, and reliable operating environment for running mission-critical computing systems that demand the highest standards. VxWorks is the first and only RTOS that supports embedded software deployment using OCI container technology.

About Ansys SCADE Display

[Ansys SCADE Suite](#) and [Ansys SCADE Suite](#) are capabilities within the SCADE fully-integrated model-based development environment for efficiently developing high-assurance and safety-critical embedded software, provides traceability to requirements management, an easy-to-use model-based design, verification, qualifiable code generation (TQL-1 per DO-330) capabilities and seamless interoperability with other development tools and platforms. Using Ansys SCADE enables developers to reduce verification effort and improves productivity without compromising objectives in developing safe, reliable software for safety-critical applications. Developers drastically reduce safety certification costs by simplifying the development process with qualifiable/certified code generation, automatic design document generation and use of qualified/automated verification capabilities.

About CoreAVI OpenGL Graphics Driver

[CoreAVI's ArgusCore™ suite](#) of real-time and safety-critical OpenGL drivers provide a proven solution for graphics applications requiring safety certification and/or a high Technology Readiness Level (TRL). For integrators wanting to benefit from the advanced technology of Vulkan® while still using OpenGL, CoreAVI offers VkCoreGL® SC1 and VkCoreGL® SC2 application libraries. These libraries are designed to run on CoreAVI's VkCore® SC Vulkan-based safety critical graphics and compute driver and allow integrators to run legacy OpenGL applications while simultaneously taking advantage of the advanced capabilities of Vulkan.

About FACE

FACE is a government-industry software standard and business strategy for acquisition of affordable software systems that promotes innovation and rapid integration of portable capabilities across global defense programs.

For additional information, please visit www.curtisswrightds.com, LinkedIn, and X @CurtissWrightDS.

About Curtiss-Wright Corporation

Curtiss-Wright Corporation (NYSE:CW) is a global integrated business that provides highly engineered products, solutions and services mainly to Aerospace & Defense markets, as well as critical technologies in demanding Commercial Power, Process and Industrial markets. Headquartered in Davidson, North Carolina, we leverage a workforce of approximately 8,600 highly skilled employees who develop, design and build what we believe are the best engineered solutions to the markets we serve. Building on the heritage of Glenn Curtiss and the Wright brothers, Curtiss-Wright has a long tradition of providing innovative solutions through trusted customer relationships. For more information, visit www.curtisswright.com.

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