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Core Avionics & Industrial Inc. Announces the Release of the Industry's First Safety Critical Graphics and Compute Vulkan® Driver

Tampa, Florida, Sept. 12, 2018: Core Avionics & Industrial Inc. ("CoreAVI") announced today the release of a new safety critical VkCore SC driver based on a subset of Khronos' Vulkan® 1.0 API. Designed from the ground-up for safety critical and high performance, VkCore SC enables applications to harness a modern GPU's graphics and compute capabilities, all in one driver. VkCore SC is certifiable to RTCA DO-178C/EUROCAE ED-12C up to Design Assurance Level (DAL) A as well as ISO 26262 ASIL D. Legacy graphics applications are also supported through OpenGL® SC 1.0.1 and Open GL SC 2 libraries running on top of VkCore SC. This enables applications to take advantage of both OpenGL and Vulkan simultaneously and allows for long term support for OpenGL SC 1 and OpenGL SC 2. CoreAVI's VkCore SC supports latest generation GPUs and SoCs, including AMD's Embedded Radeon™ E9171, and NXP's i.MX8. NASA has selected CoreAVI's VkCore SC driver for its X-59 QueSST Low-Boom Flight Aircraft. Please see our subsequent press release for full details [here](#).

VkCore SC is architected to support mixed DO-178C and ISO 26262 levels of safety critical partitions as well as a GPU virtualization manager for guest OS configurations. To facilitate the deployment of GPUs into systems that require the most stringent levels of safety certification, CoreAVI's TrueCore 2.0 GPU safety monitor library is also supported on VkCore SC's architecture. VkCore SC eliminates the need for separate compute and graphics APIs, and enables heightened performance, flexibility, and direct access to the GPU while greatly reducing CPU overhead. VkCore SC is ideal for multi-core embedded platforms including synthetic vision applications, systems requiring advanced video processing, and compute algorithms. It is deployable across all processor architectures and safety critical RTOSs and is available with DO-178C certification packages or an ISO 26262 Accredited Safety Assessment Certificate.

"We're excited to develop and offer the very first safety critical Vulkan driver on the market," said Damian Fozard, CEO of CoreAVI. "VkCore SC and its associated suite of products is a robust addition to our popular OpenGL series of drivers and will deliver game-changing performance to our customers' applications for modern and legacy platforms alike."

For more information, please contact Sales@coreavi.com.



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About Core Avionics & Industrial Inc.

Core Avionics & Industrial Inc. ("CoreAVI"), a Channel One company, is a global leader in providing products and services designed to enable complete solutions for safety critical applications. A supplier of real-time and safety-critical graphics and video drivers, compute drivers, "program ready" embedded graphics processors, and DO-254/ED-80 certifiable COTS hardware IP, CoreAVI's suite of products enables commercial GPUs, SoC components, and COTS hardware designs to meet the requirements of long-term high-reliability and safety-critical embedded systems with long-term support. CoreAVI's products may be purchased with certification data kits for the most stringent levels of RTCA DO-254/DO-178C and EUROCAE ED-80/ED-12C. www.coreavi.com