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## **NXP Semiconductors Partners with Core Avionics & Industrial Inc. to bring the S32V234, an ARM based SoC Family Designed for ISO 26262 ADAS Automotive Systems, to the Avionics Market**

March 9, 2017, Tampa, Florida. Core Avionics & Industrial Inc. (CoreAVI) and NXP Semiconductors N.V. announce today that they have reached agreement for CoreAVI to sell and support the S32V234 product family globally for safety critical display applications. This support includes providing the highest levels of safety critical graphics drivers, safety certification data packages and evaluation boards for avionics and industrial applications.

NXP and CoreAVI's agreement extends S32V234 availability into non-automotive safety critical display markets where the S32V234 features support the unique needs of avionics display systems and other embedded applications. In addition to being available with an extended operating temperature range, -40C to +125C, the S32V234 was developed based on NXP's SafeAssure Functional Safety Program, a comprehensive IEC 61508 and ISO 26262 functional safety design process. This results in significant benefits including collateral to assist safety analysis (e.g. device level FMEDA) and architectural differentiation that includes Built-In-Self-Test (BIST) for logic and internal memory, ECC/Parity, monitors for clock, temperature and supply voltage, safe DMA, and others. In addition, two S32V234 processors can be placed into a shared memory mode which allows them to view each other's memory resources and compare results to ensure data integrity.

The S32V234 brings a platform approach to safety critical design by deploying a heterogeneous mix of CPU, GPU, and image processors. The CPU core platform includes a quad-core 1 GHz ARM® Cortex®-A53 along with an ARM Cortex-M4 microcontroller. The ARM Cortex-A53 CPU is a 64-bit (ARMv8) core that offers balanced performance along with low power and cost-effective die area. To support reliability requirements, the processors all have error correcting codes (ECC) to protect data and instructions to the processor caches, the internal 4MB scratchpad memory, and the DRAM memory. The onboard Image Signal Processor (ISP) is an image preprocessor designed for functions such as dead pixel processing, correction of geometric distortions, High Dynamic Range (HDR) processing, image scaling, color correction, and others.

The GPU is a VeriSilicon Vivante GC3000 3D graphics processor, one of the highest performance per square millimeter of die area GPUs available with support for IEEE floating point GPU compute. The GC3000 is fully supported by CoreAVI's graphics and video driver suite that includes OpenGL SC 1.0 and OpenGL SC 2.0, H.264 video decode and encode, GPU safety monitor and extensive GPU Built-In-Test capabilities. This driver suite is available with optional certification evidence to provide the basis for a complete certifiable graphics solution for Avionics DO-178C Design Assurance Levels (DAL) D through A.



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“CoreAVI is the ideal partner to distribute and support the S32V234 to non-automotive market where it’s unique safety features make it an ideal choice for safety critical display applications,” said Davide Santo, Product Line Manager for NXP ADAS Microcontrollers & Processors. “CoreAVI’s proven track record in serving the safety critical avionics market with long term component supply management and safety critical graphics drivers is part of what attracted NXP to this arrangement.”

"NXP’s innovation in designing the S32V234, with safety critical applications in mind, makes this a very exciting option for avionics and industrial markets requiring safety critical processing in a small, low power package," said Lee Melatti, President of CoreAVI. "The combination of the S32V234 SOC with CoreAVI’s safety certifiable graphics and video driver libraries provides a powerful solution to enhance safety operation and accelerates our customer’s time to market."

For more information, please contact CoreAVI.

### **Media Inquiries**

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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](http://www.coreavi.com)

### **About NXP Semiconductors**

NXP Semiconductors N.V. (NASDAQ:NXPI) enables secure connections and infrastructure for a smarter world, advancing solutions that make lives easier, better and safer. As the world leader in secure connectivity solutions for embedded applications, NXP is driving innovation in the secure connected vehicle, end-to-end security & privacy and smart connected solutions markets. Built on more than 60 years of combined experience and expertise, the company has 45,000 employees in more than 35 countries.