



Altia Offers Code Generation Support for Renesas R-Car D3 Running Green Hills INTEGRITY RTOS and Green Hills INTEGRITY Multivisor

The Altia 3D Cluster Running Green Hills on Renesas R-Car D3 on Display at Embedded World 2018

COLORADO SPRINGS, CO – February 26, 2018 – Altia announces code generation support for the Renesas R-Car D3 using Altia HMI development software and safety certified Green Hills INTEGRITY real-time operating system (RTOS) with INTEGRITY Multivisor virtualization solution. This combination of technologies was featured at CES 2018 and will be on display at the upcoming Embedded World 2018 in Nuremberg, Germany.

The Renesas R-Car D3 system-on-chip delivers high performance and graphics capabilities with its powerful ARM® Cortex®-A53 core and 3D GPU. The R-Car D3 also offers significantly reduced system development cost – and is priced to align with the BOM cost of a traditional 2D instrument cluster.

Altia generates ANSI C code for Renesas R-Car D3 that is optimized to leverage its available on-chip resources, thus delivering first-class graphics for entry-level cars. To create an HMI for Renesas R-Car D3, Altia Design, a WYSIWYG user interface editor, pulls together a variety of graphic assets into a single model. Altia DeepScreen then generates production-ready C code that leverages the unique resources available on the selected target to deliver a pleasing user experience for production displays. Altia's advanced 3D capabilities offer developers incredible control of 3D content, time-saving workflow, a library of common materials that have been optimized for embedded applications, customizable shaders, small memory footprint, and outstanding performance on chip.

The code generation target for Renesas R-Car D3 is tailored to run on the INTEGRITY RTOS as native tasks, and on Linux, when virtualized by the secure INTEGRITY Multivisor. With this scalable platform, developers creating embedded displays for automotive applications are ensured that the highest possible security, reliability and performance standards will be met. INTEGRITY's secure memory partition architecture isolates and protects embedded applications, guaranteeing that each task has available the resources it needs to run correctly. These secure partitions protect the INTEGRITY kernel, native user tasks and guest OSes from malicious or errant software.

“Green Hills has deployed millions of ASIL certified digital clusters in the automotive industry based on its safe and secure ASIL-certified INTEGRITY RTOS,” said Dan Mender, Vice President, Business Development, at Green Hills Software. “In addition, the INTEGRITY Multivisor secure virtualization service enables production-ready consolidation of mixed criticality functions with virtualized Linux and Android. Our collaboration with Altia addresses the HMI tools needed to build digital instrument clusters that exceed driver expectations and satisfy safety standards on the road.”

Green Hills Software will demonstrate an Altia 3D instrument cluster on INTEGRITY on the Renesas R-Car D3 in Hall 4, Booth 4-325 at Embedded World 2018 from February 27 to March 1 in Nuremberg, Germany. Altia will also demonstrate a variety of HMIs on hardware at Embedded World. Meet Altia in Hall 4, Booth 4-339 or [click here](#) to request a meeting with the Altia team.



About Altia

Altia is a software company that provides graphical user interface design and development tools that can be used from concept to final product code. Our [GUI editor, Altia Design](#), offers development teams the capability to implement a model-based development process for clear communication and accelerated user interface development. Our [code generator, Altia DeepScreen](#), supports a [vast range of low- to high-powered processors](#) from a variety of industry-leading silicon providers. Altia generates pure C source code that is optimized to take full advantage of hardware resources. Graphics code generated by Altia is driving millions of displays worldwide – from automotive instrument clusters, HUDs and radios to thermostats, washing machines and healthcare monitors. Our mission is to get the best [automotive](#), [medical](#) and [consumer](#) interfaces into production in the shortest time on the lowest cost hardware.

Altia was founded in 1991 and its customers include Aston Martin, Behr-Hella, COBO, Continental Automotive, DAF Trucks, Denso, Fiat Chrysler Automobiles, Ford Motor Company, GM, Honda, Renault, Magneti Marelli, MTA, Nippon Seiki, Rolls-Royce, Valeo, Visteon and many other leading manufacturers.

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