Altium announces new TASKING C compiler for Renesas RH850 automotive microcontroller family

New TASKING compiler broadens Altium's offering for advanced 32-bit single-core and multi-core microcontroller based automotive applications, where ISO 26262 support is essential

Sydney, Australia – 29 July 2014 - Altium Limited, a global leader in Smart System Design Automation, 3D PCB design (Altium Designer) and embedded software development (TASKING) announces a major new addition to its TASKING C compiler solutions for automotive application development, providing support for the RH850 architecture from Renesas Electronics.

The RH850 is the latest automotive microcontroller family from Renesas to offer high performance balanced with very low power consumption over a wide and scalable range of products. This family provides rich functional safety and embedded security features needed for new and advanced automotive applications. It offers a range of CPU core structures (single, multiple, lock-step and combination thereof) to support high performance and/or high reliability requirements. The new TASKING VX-toolset supports all currently available RH850 devices. Altium will continue to work with Renesas to support future RH850 variants to ensure the delivery of TASKING's well-respected multi-core support features developed in collaboration with Altium's Tier-1 automotive customers.

The TASKING VX-toolset for RH850 is the first compiler to incorporate support for the latest MISRA C:2012 guidelines for C programming, in addition to the MISRA C:1998 and C:2004 guidelines. TASKING's MISRA C support enables developers to easily select the MISRA rules to enforce and configure the MISRA guidelines in accordance with the company's prescribed rules in order to increase code safety, reliability and maintainability. By providing support for MISRA C:2012, developers now can benefit from the latest guideline improvements that can reduce the cost and complexity of compliance, whilst aiding consistent, safe use of C in critical systems.

"With the RH850 architecture Renesas has built a microcontroller family that has gained a lot of recognition amongst our automotive customers, resulting in a strong interest for TASKING's robust and efficient VX compiler technology to support the RH850 series", says Harm-Andre Verhoef, TASKING Product Manager at Altium. "Thanks to close cooperation with Renesas in the development of the new VX-toolset, as well as our ability to develop a compiler that works independently from compilers for other architectures, we have been able to create a stable and highly optimized compiler for the RH850 in a very short time."

TASKING's Viper technology used in the new RH850 compiler ensures compatibility to other popular TASKING toolsets and eases application migration from other architectures. TASKING compilers have a proven reputation with highly efficient and robust code for automotive applications like power train, body control, chassis control and safety critical applications. The Viper compiler provides a caching functionality which saves the compiler's intermediate results

in order to avoid full compilations, enabling short project build times of embedded applications and saving developers both time and cost.

Automotive embedded applications benchmarks with TASKING's C compilers have shown best-in-class code efficiency achievements, enabled by Viper, cooperation with customers and understanding their code optimization needs.

Key features of the TASKING VX-toolset for RH850 include:
- Eclipse based IDE with integrated compiler and debugger
- Highly efficient code generation, allowing for fast and compact applications
- Integrated code analyzers for
- MISRA-C:1998, C:2004 and C:2012 guidelines
- CERT C secure coding standard
- Profiling through code instrumentation and run-time error checking capabilities
- Highly configurable linker with versatile script language for optimal memory control
- Compliance with relevant and up-to-date industry standards

TASKING's ISO 26262 Support Program is available for the new RH850 toolset release, offering various cost and lead-time efficient solutions to help customers achieve certification for functional safety standards such as ISO 26262 and others. The manufacturer of an electronic (sub)system is responsible for obtaining certification credit. As part of this process the manufacturer has to assess the required level of confidence in the utilized software tools such as the TASKING RH850 toolset, enabled by Altium through a Compiler Qualification Kit as well as optional ISO 26262 Compiler Qualification Services.

The VX-toolset for RH850 release v2.1 is available now on PC/Windows, with other platforms supported on request. Pricing starts at USD 4,695 / € 3,495 for the TASKING VX-toolset Standard Edition. The Professional Edition with hardware debug support using the Renesas E1 emulator will be available in fall 2014.
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ABOUT TASKING
TASKING is an Altium brand. TASKING development tools are used by carmakers and the world's largest automotive Tier-1 suppliers to program microcontroller based power train, body control and safety related applications around the globe. More than ten thousand users rely on the TASKING compilers and debuggers to create richer next-generation applications while achieving optimum reliability, security, and performance. TASKING compilers are also part of Altium Designer and installed on hundreds thousands of developer's desktops around the globe. In 2012 the TASKING brand celebrated its 35-years anniversary of technology leadership, quality tools and customer support excellence.

ABOUT ALTIUM
Altium Limited (ASX: ALU) is an Australian multinational software corporation that focuses on 3D PCB design, electronics design and embedded system development software.
Altium Designer, a unified electronics design environment links all aspects of smart systems design in a single application that is priced as affordable as possible.
With this unique range of technologies Altium enables electronics designers to innovate, harness the latest devices and technologies, manage their projects across broad design 'ecosystems', and create connected, intelligent products.
Founded in 1985, Altium has offices worldwide, with US locations in San Diego and Boston, European locations in Karlsruhe, Amersfoort, Kiev, Moscow and Zug and AsiaPacific locations in Shanghai, Tokyo and Sydney. For more information, visit www.altium.com or www.tasking.com. You can also follow and engage with Altium via Facebook, Twitter and YouTube.