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For Immediate Release

TASKING substantially extends specific support for TriCore derivatives and is first to support TriCore 2

Version 1.4 of the TASKING TriCore Software Development Toolset cements TASKING's position as the premier toolset for TriCore developers

SYDNEY, Australia – November 1, 2001 – Altium Limited (ASX: ALU) is pleased to announce that it has introduced a number of substantial enhancements and improvements in version 1.4 of the TASKING TriCore Software Development Toolset. These improvements bring increased functionality and capabilities to developers using the range of TriCore architectures through improvements to the assembler, compiler, and debugger, giving developers access to the tools they need to compete with today's demanding time-to-market requirements. The improvements to v1.4 include: enhanced specific support for individual TriCore derivatives, a feature unique to TASKING's TriCore tools; extensions to the Assembler to support the upcoming TriCore 2 architectural upgrade; further enhancements to the C++ Compiler; and a complete makeover of the CrossView Pro debugger's Graphical User Interface (GUI).

TASKING, Altium's industry-leading range of tools for embedded software development, is commonly regarded as the de facto industry standard for TriCore architecture software developments. Version 1.4 of the TASKING TriCore toolset continues to lead the way with many architecture-specific compiler features, additions to the Assembler allowing the support of the upcoming TriCore 2 instruction set, as well as the inclusion of a set of TriCore 2 specific C/C++ libraries.

The TASKING TriCore toolset is renowned for its detailed support of the TriCore architecture, and this release continues the tradition. In addition to the introduction of support for the promising TC1765 automotive microcontroller and the TC1920 Automotive Infotainment device, TriCore derivatives support has been further enhanced through improved device-specific SFR (Special Function Registers) header files and automatic C-start code generation. Other improvements to the specific support of the TriCore architecture in the C-compiler include: indirect addressing mode, extending abilities to employ the

TriCore's vast physical memory reach; enhanced bit field manipulation features; enhanced struct/union packing and array alignment; C-level trap handling and ISR/trap stack frame manipulation.

A vital stage in embedded software development is accurate, efficient debugging, and Altium continues to redefine the state of the art with the TASKING CrossView Pro debugger. The new CrossView Pro debugger found in v1.4 has undergone a complete makeover with a new Graphical User Interface (GUI), improved On Chip Debugging Support (OCDS) connectivity, enhanced breakpoint functionality, and the introduction of both an automatic pipeline flush option upon execution halt, and generic kernel aware debugging for available OSEK ORTI compliant real time operating systems.

The GUI of the new TASKING CrossView Pro debugger has been extensively restyled to enhance the user's experience. Rearranged menus, improved user dialogs, and redesigned button bars and button sizes results in a highly intuitive and productive debugging environment. And, thanks to a new and extensive context-sensitive help system, it is also now easier than ever to learn to effectively use and get the most from the debugger.

The new CrossView Pro debugger allows OCDS connectivity for Windows 95/98/ME as well as the already supported Windows NT/2000, and enables applications to be debugged from the operating system perspective using integral OSEK kernel aware debugging. In addition, the enhanced breakpoint functionality now offers developers the ability to halt applications based upon Instruction counts, Cycle counts, or Timer counts. Time-critical applications can also be debugged as unintrusively as possible using Probe-Points, and Breakpoint sequences allow the identification of even the most complex conditions that developers may want to examine – this permits any number and type of breakpoints to be combined.

The difficulty of debugging pipelined architectures such as TriCore has also been addressed in this release with the introduction of an option to flush all TriCore pipelines upon execution halt - thereby forcing the completion of the instruction at which execution was halted and allowing Data and Register windows to be properly updated to show data as expected.

With the release of v1.4 of TASKING's TriCore software development toolset, Altium continues to break down the barriers to innovation and technological advancement, and provide every electronic engineer and embedded system developer with easy access to the best possible design tools.

Availability

The TASKING TriCore Software Development Toolset v1.4 is now available for PC/Windows, PC/Linux and SUN/Solaris.

About Altium Limited

Altium Limited (ASX: ALU), trading as Protel International Limited (ASX: PRI) prior to August 6, 2001, is a leading global developer and supplier of desktop electronic design automation (EDA) and embedded software design tools for the Microsoft Windows environment.

Since the Company's foundation in 1985 and its release of the world's first Microsoft Windows-based EDA tool in 1991, Altium has continued to apply the most advanced software design methods to provide powerful, easy-to-use and affordable design software to engineers and electronics designers worldwide.

Altium's current product brands include Protel, P-CAD, TASKING, Accolade, CircuitMaker and CAMtastic!. These products offer tailored solutions covering a range of hardware and software design processes.

Altium is headquartered in Sydney, Australia, and operates a number of sales and support offices in Australia, the United States, Japan and Europe – as well as maintaining a large reseller network in all other major markets. More information about the Company and its products and services may be obtained from our new website at <http://www.altium.com>.

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