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# NEWS RELEASE

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## **Atmel and SEGGER Announce Real Time OS Support to AVR32 Architecture**

**San Jose, CA, February 19, 2008** . . . Atmel® Corporation (Nasdaq: ATML) and SEGGER Microcontroller, a leading manufacturer of middleware for embedded systems, announced today the availability of the real time operating system (OS) embOS for the AVR®32 microcontrollers.

The modern AVR32 architecture from Atmel is specially crafted to meet RTOS requirements with its fast multilevel interrupt controller, memory protection unit and the support for nested interrupts. Having an outstanding energy efficiency of 1.08 DMIPS/MHz and delivering up to 83 Dhrystone MIPS (DMIPS) performance at 66 MHz running from embedded flash the UC3 parts are among the highest performance flash microcontrollers in the market today.

The port of the embOS operating system from SEGGER to the AVR32 takes full advantage of the advanced architecture of the AVR32. embOS supports all four interrupt levels and fully nested interrupts with zero interrupt latency. The AVR32 offers a Supervisor mode and an Application Mode for programs. Unlike other OS, embOS runs application code (tasks) in Application Mode and the kernel and interrupts in Supervisor mode, allowing the application program to take advantage of the protection mechanism offered by AVR32. It also reduces the amount of RAM used for stack space and makes overall memory requirements for the stack very predictable. The embOS kernel needs only 2.5 KB of program memory and 52 bytes of RAM, and offers a premium set of features for embedded applications. To list just a few, the graphical profiler embOSView, unlimited number of tasks, no need for pre-configuration and no assembly language required. SEGGER does not charge any royalties for embOS.

“We are very excited to bring embOS support for our AVR32 products,” said Dr. Øyvind Strøm, Product Line Director at Atmel. “embOS is very efficient and well written with the limited resources of

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microcontrollers in mind. Just like the AVR32, embOS has been optimized for very fast interrupt handling, which makes embOS and AVR32 the perfect combination in timing critical applications.”

“The AVR32 is well equipped to play a major role in the important 32-bit market” said Robert Teufel, COO at SEGGER. “With embOS, SEGGER offers a tailored OS for this new, high performance microcontroller family.”

AT32UC3 microcontrollers rich feature set includes up to 512 KB Flash, up to 64 KB SRAM, Ethernet MAC, Full Speed USB with OTG, 10-bit ADC, SPIs, SSC, two-wire interface (I2C compatible), UARTs, general purpose timers, thirteen pulse width modulators and a full set of supervisory functions.

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#### **About Atmel**

Atmel is a worldwide leader in the design and manufacture of microcontrollers, advanced logic, mixed-signal, nonvolatile memory and radio frequency (RF) components. Leveraging one of the industry's broadest intellectual property (IP) technology portfolios, Atmel is able to provide the electronics industry with complete system solutions focused on consumer, industrial, security, communications, computing and automotive markets.

#### **About SEGGER**

SEGGER Microcontroller develops and distributes hardware and software development tools as well as software components. All software components are ANSI "C" compliant and can be used in embedded systems including industries such as telecom, medical technology, consumer electronics, automotive industry and industrial automation. SEGGER software products include: embOS (RTOS), emWin (GUI), emFile (File System), emUSB (USB device stack) and embOS/IP (TCP/IP stack). Besides the highly efficient software products, SEGGER also provides embedded hardware tools such as the well-known J-TAG emulator J-Link, J-Trace and the Flasher (stand alone programmer). SEGGER's intention is to cut software development time for embedded applications by offering affordable, flexible and easy-to-use tools and software components allowing developers to focus on their applications.

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**Information:**

For further information on AVR32, go to <http://www.atmel.com/avr32>

For further information on SEGGER go to <http://www.segger.com>

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