Silicon Laboratories MCUniversity Program Offers Complete University Course for Microcontrollers

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AUSTIN, Texas--(BUSINESS WIRE)--Sept. 17, 2007--Silicon Laboratories Inc. (Nasdaq:SLAB), a leader in high-performance, analog-intensive, mixed-signal ICs, today announced the MCUniversity Course designed for electrical engineering professors teaching embedded system design with microcontrollers (MCUs). Based on the C8051F020 advanced, mixed-signal MCU, the MCUniversity program provides complete coursework and development tools for instruction on mixed-signal MCUs. Leveraging Silicon Labs' ToolStick USB development tool, the MCUniversity program also offers a low cost or no cost program for students, making the course very easy to adopt.

Including a textbook, lecture materials, exercises, lab work, and solutions, the MCUniversity course is a turnkey program for professors that want to instruct their students on the design of control systems with high-speed, precision digital and analog performance. A MCUniversityWiki site provides access to the solutions and the labs and tutorials, teaching and lab ideas, and posted files. Because the program includes all of the basic elements required for a semester long course, the program is easy for professors to quickly adopt. For students, the program requires little, if any investment as the student can build their own hardware based on free materials and documentation. No lab equipment other than a PC is required to develop on the MCU.

Similar courses are based on microcontrollers with limited features or functionality. Silicon Laboratories' MCUniversity program is centered on the F020 MCU, a precision mixed-signal device that combines high precision analog data converters with a high throughput 25 MIPS 8051 CPU. Ideal for analog and compute intensive applications, the F020 exposes students to a number of analog features including a 12-bit ADC, 8-bit DAC, voltage reference, comparators, temperature sensor and on-board oscillator. Complete digital peripherals such as external memory interface, timers, programmable counter array (PCA) modules and UART, SPI and SMBus ports enable professors to maximize the scope of the course and expose students to the full range of embedded design options and challenges.

No software, equipment or even a power supply are required to use the USB Toolstick development tool. With only a PC with a USB port, students can fully experience the Silicon Labs software development environment and on-chip debug allowing full, non-intrusive access to the target CPU, peripherals and memory. The software development environment includes an easy intuitive integrated development environment (IDE, editor, debugger, Flash programmer and a demonstration version of the Keil compiler. Oscilloscope software is also provided to allow lab experiments to be conducted on the student's PC.

"We've been using Silicon Labs development boards in our microcontroller classes and in senior design projects since 2001. They're great for an introductory microcontroller class since they are not only based on the 8051 core, but also include just about every I/O peripheral you need in a single device," said Professor Ken Hughes of the University of the Pacific. "This makes it easy to relate course material to practical hands-on experience."

"I have been using Silicon Laboratories' development boards for my advanced Microprocessor course for the past two years. The integrated user interface (IDE) is undoubtedly one of the easiest for students to master in a very short time. The JTAG debugging capability eliminates the need for expensive tools such as in-circuit emulators and logic analyzers. The JTAG interface also allows students to see exactly what is happening within the device as their code executes," said Professor Iskandar Hack of Purdue University.

"We developed the MCUniversity course based on feedback from University professors and students that coursework needed to center around more advanced systems to better prepare students for what they would encounter in the work force," said Doug Holberg, vice president of technology for Silicon Laboratories. "The program is built around a truly mixed-signal MCU and incorporates everything needed, including a self contained development tool to quickly get the course up and running with students developing from day one."

How to Register

Professors can review and adopt the course by visiting our website at www.silabs.com/mcuniversity. Course materials and development tools are available online and through Silicon Labs' distribution partners. Registered professors can also log onto the MCUniversityWiki to get access to MCUniversity support community and forum.

Silicon Laboratories Inc.

Silicon Laboratories is an industry leader in the innovation of high-performance, analog-intensive, mixed-signal ICs. Developed by a world-class engineering team with unsurpassed expertise in mixed-signal design, Silicon Labs' diverse portfolio of highly-integrated, easy-to-use products offers customers significant advantages in performance, size and power consumption. These patented solutions serve a broad set of markets and applications including consumer, communications, computing, industrial and automotive.

Headquartered in Austin, TX, Silicon Labs is a global enterprise with operations, sales and design activities worldwide. The company is committed to contributing to our customers' success by recruiting the highest quality talent to create industry-changing innovations. For more information about Silicon Labs, please visit www.silabs.com.

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