



Silicon Labs Introduces Industry's Lowest Voltage MCUs

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NUREMBERG, Germany & AUSTIN, Texas--(BUSINESS WIRE)--Feb. 25, 2008--Silicon Laboratories Inc. (NASDAQ: SLAB), a leader in high-performance, analog-intensive, mixed-signal ICs, today announced the industry's first microcontrollers (MCUs) capable of operating down to 0.9 V, enabling portable devices to derive power from a single-cell battery for the first time at the Embedded World tradeshow in Nuremberg, Germany. The C8051F9xx family's novel 8-bit architecture with an integrated high-efficiency dc-dc boost converter, which can supply up to 65 mW of power for both internal MCU use and to drive other components, creates a true single-cell battery system solution. For products powered by user-replaceable batteries such as wireless sensor networks, smoke alarms, portable medical devices, remote controls, computer peripherals and portable audio devices, the C8051F9xx family enables smaller form factor products, longer battery life and lower overall system cost in both single- and dual-cell modes.

In many low-power applications, operating from 0.9 up to 3.6 V, the MCU is in sleep mode for the majority of the time, waking up periodically to capture data. The C8051F9xx utilizes innovative design techniques to deliver a typical sleep-mode current of less than 50 nA. The MCU can wake-up from its low power sleep mode with the CPU operating at 25 MIPS and ready to make an analog-to-digital converter (ADC) measurement within just two microseconds. This allows the MCU to spend a minimum amount of time performing measurements and algorithms. To save battery life in active mode, the C8051F9xx's power-efficient architecture yields an active-mode current as low as 170 uA/MHz.

The C8051F9xx family not only provides high performance while saving power but also unprecedented functional density in a small footprint. The C8051F9xx family is the first MCU to integrate 64 kB of Flash and 4 kB of RAM into a 4- x 4-mm package, providing customers with increased memory for typical applications such as data logging. The new low-voltage, low-power MCU family also integrates a 10-bit, 300-ksps analog-to-digital converter (ADC) with an internal fast wake-up voltage reference, a SmaRTClock timing module and multiple internal oscillator options to provide a true system-on-chip solution. This unprecedented integration is enabled by innovative design techniques manufactured in a standard low-power CMOS technology, resulting in fewer external components and reduced bill-of-materials cost for the customer.

"Silicon Labs is revolutionizing the portable device market by enabling devices to operate from a single-cell battery," said Derrell Coker, vice president and general manager of Silicon Laboratories. "We've designed this industry-leading C8051F9xx MCU family with all customer concerns in mind to provide the lowest voltage operation and maximized power efficiency without sacrificing the mixed-signal functionality that differentiates Silicon Labs' MCUs."

Silicon Labs' best-in-class tools help speed design and accelerate market entry. A complete, low-cost professional development kit provides everything required to immediately begin system design including an integrated development environment (IDE), target board, cables and power supply. Also included in the kit is the Silicon Labs Power Battery Life Estimator, a GUI-based tool that provides details on typical battery discharge characteristics, as well as a user-editable spreadsheet allowing a designer to optimize the customer's low-voltage, low-power MCU application. Designers can also begin risk-free evaluation using an inexpensive ToolStick daughter card and base adapter.

C8051F9xx Family

Device	Package	Flash	RAM
C8051F930-GQ	32-pin	64 kB	4 kB
C8051F930-GM	32-pin	64 kB	4 kB
C8051F931-GM	24-pin	64 kB	4 kB
C8051F920-GQ	32-pin	32 kB	4 kB
C8051F920-GM	32-pin	32 kB	4 kB
C8051F921-GM	24-pin	32 kB	4 kB

Pricing and Availability

The C8051F9xx family is available now in compact 24-pin, 4- x 4-mm QFN, 5- x 5-mm, 32-pin QFN and 7- x 7-mm, 32-pin LQFP packages. Pricing for the C8051F93x and C8051F92x families starts at \$1.99 in quantities of 10K. Development kits are available for \$99, and ToolStick daughter cards are available for \$17.90. To purchase samples and development tools, please visit www.silabs.com/point9.

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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