



Silicon Labs Launches Industry's Lowest Power Touch-Sense Microcontrollers

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AUSTIN, Texas, Jun 30, 2010 (BUSINESS WIRE) -- Expanding its ultra-low-power F9xx MCU family, [Silicon Laboratories Inc.](#) (NASDAQ: SLAB), a leader in high-performance, analog-intensive, mixed-signal ICs, today introduced the industry's lowest power capacitive touch-sense microcontrollers (MCUs) delivering wake-on-touch power consumption below one microamp. The latest additions to Silicon Labs' [C8051F9xx family](#) include F99x MCUs with integrated touch-sense technology for human interface applications and F98x MCUs targeting power- and cost-sensitive applications such as home automation, smart meters, lighting control, security systems, games and toys.

Like other members of the F9xx MCU family, Silicon Labs' new ultra-low-power F99x and F98x MCUs offer the industry's lowest power consumption in active mode, sleep mode and deep sleep mode. In addition to consuming the lowest current per MHz, a common industry specification, the new MCUs contain an integrated low drop-out (LDO) regulator that keeps the current constant at 150 microamps per MHz over the entire operating range of 1.8 to 3.6 V. The on-chip LDO regulator helps reduce the MCU's drain on the battery by 50 percent compared to competing products, which extends battery life and makes the ultra-low-power F99x and F98x MCUs ideal for battery-powered applications.

"With the introduction of our latest ultra-low-power MCUs, we've expanded our industry-leading F9xx family to provide additional feature set and memory size options to meet our customers' application needs," said Mark Thompson, vice president of Embedded Mixed-Signal products at Silicon Labs. "As the first IC supplier to achieve sub-microamp wake-on-touch power consumption for touch-sense MCUs, we continue to push the boundaries of extreme power efficiency through mixed-signal innovation."

The new F99x touch-sense MCUs, a part of Silicon Labs' [QuickSense\(R\) family](#) of human interface devices, combine ultra-low-power capabilities with fast, accurate capacitive sensing technology to address the rapidly growing touch-sensing market. The F99x devices feature a patent-pending, high-resolution capacitance-to-digital converter (CDC) with a 40 microsecond acquisition time, enabling the industry's fastest capacitive touch-sense capability. The CDC offers superior noise immunity for reliable performance in challenging conditions and configurations such as thick laminate overlays, electrical noise or variances in circuit board manufacturing.

Available with up to 14 capacitive sensing inputs, the F99x MCUs support sophisticated and highly responsive touch-sense functions to replace traditional mechanical buttons, sliders and wheels. By combining the F99x ultra-low-power MCUs with Silicon Labs' [Si11xx QuickSense infrared and ambient light sensors](#), system designers can develop innovative "touchless" proximity sensing interfaces. These touchless interfaces enable users to control and interact with end products through simple, intuitive gestures, in addition to using direct capacitive touch-sense control.

The new F99x and F98x MCUs integrate a 25 MHz pipelined 8051-compatible core, a precision oscillator, a 12-bit analog-to-digital converter (ADC), a temperature sensor, a voltage reference and four timers. The new low-power MCUs also add 2, 4 and 8 kB flash options to the F9xx family, which offers a broad range of footprint- and software-compatible ultra-low-power MCUs scaling up to 64 kB of flash. For added board design flexibility, the F99x and F98x MCUs are available in standard 24-pin QFN and 24-pin QSOP packages as well as a new, space-saving 20-pin 3 mm x 3 mm QFN package option that's ideal for space-constrained applications.

Pricing and Availability

Samples of the new F9xx MCUs are available now with production quantities planned for Q3. Product pricing in 10,000-unit quantities begins at \$0.85 (USD).

The new F99x and F98x MCUs are supported by the C8051F996DK development kit (available for \$99 USD), the ToolStick990DC daughtercard (available for \$9.90 USD) and ToolStick programming adapters (priced at \$69 USD each) to support the three available package options. The F990SliderEK capacitive touch slider evaluation kit (available for \$29 USD) demonstrates the low-power and robust touch-sense capabilities of the F99x MCUs. QuickSense Studio, an easy-to-use software environment that enables developers to design touch-sense interfaces without creating a single line of code, can be downloaded at www.silabs.com/pr/QuickSense.

For additional F9xx ultra low power MCU product information, samples and development tools, please visit www.silabs.com/pr/lowpower.

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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