Silicon Labs USB Interface IC Simplifies Touch Screen Application Development

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AUSTIN, Texas, Sep 01, 2010 (BUSINESS WIRE) -- Silicon Laboratories Inc. (NASDAQ: SLAB), a leader in high-performance, analog-intensive, mixed-signal ICs, today introduced a universal serial bus (USB) touch screen bridge IC that streamlines the connection between touch controllers and host CPUs in computing systems with large displays. Silicon Labs' new CP2501 USB touch screen bridge provides a programmable, easy-to-use USB interface for laptops, tablets, eBooks, mobile Internet devices (MIDs), kiosks, ATMs and other point-of-sale (POS) equipment with touch screen displays.

The CP2501 device is the only semiconductor product of its kind with pre-programmed touch screen USB interface software providing out-of-the-box USB support for large touch screens. Today's touch screen systems in computing applications frequently use a USB interface to communicate between the touch screen controller and host CPU. Most touch controllers on the market do not support USB directly, requiring a separate IC to bridge the communications gap. The prevailing solution for developers is to use a standard microcontroller (MCU) as a bridge chip and develop touch screen USB interface software or acquire it from resellers - a costly, time-consuming process that requires USB expertise.

The CP2501 touch screen bridge eases touch screen application development by providing pre-programmed firmware that enables developers to configure touch screen settings quickly and easily, streamlining software development and speeding time to market. The USB interface is Microsoft Windows(R) 7 touch interface compliant and supports the USB human interface device (HID) digitizer class driver. The CP2501 also is supported by a GUI-based configuration wizard from Silicon Labs that allows developers to connect a touch controller to a USB system without developing customized USB firmware. Using the configuration tool, developers can create the firmware project, customize USB parameters and generate USB touch screen descriptors. A pre-programmed USB bootloader also supports easy in-system firmware updates.

"The CP2501 USB touch screen bridge uniquely addresses the growing application need to integrate large touch screens within computing systems - quickly, easily and with minimal USB software expertise," said Mark Thompson, vice president of Silicon Labs' Embedded Mixed-Signal products. "Leveraging Silicon Labs' leadership in high-performance, analog-intensive mixed-signal technology, the CP2501 is designed to accelerate the development of touch screen applications with Windows 7 compliant USB connectivity."

The CP2501 IC supports capacitive and resistive touch screen technologies and offers interfaces to the inter-integrated circuit (I2C), universal asynchronous receiver/transmitter (UART) and serial peripheral interface (SPI) buses.

The CP2501 features a high-performance 8051-compatible MCU core running at 48 MIPS with 53 kB of flash memory and 3.5 kB of RAM available for application software. The high-performance MCU core and generous memory provide ample headroom for developers to perform sophisticated algorithms such as noise filtering, position calculation and gesture interpretation. Sixteen GPIO pins enable developers to control LEDs and/or haptics, saving precious pins from the touch controller and reducing the processing burden on the host CPU.

The CP2501 IC can be paired with Silicon Labs' QuickSense(TM) human interface products such as the F99x, F8xx and F7xx capacitive touch-sense MCUs and the Si11xx ambient light and infrared sensors to enable sophisticated proximity sensing and intuitive "touchless" interface solutions. The CP2501 also can be combined with Silicon Labs' Si24xx modem in notebook and tablet applications.

Silicon Labs supports customers with evaluation and development kits to speed time to market for touch screen designs. The CP2501EK evaluation kit provides an easy-to-use demonstration of the touch screen USB bridge, and the CP2501DK development kit offers a fully functional development environment.

Pricing and Availability

Samples of the CP2501 USB touch screen bridge are available now in a 5 mm x 5 mm QFN32 package. Pricing begins at $4.37 (USD) in 10,000-unit quantities.

For more information about the CP2501 USB touch screen bridge, visit www.silabs.com/pr/interface.

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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