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Microchip Technology Announces Complete Portfolio of 8-, 16- and 32-bit USB Microcontrollers

New PIC(R) MCUs Support USB 2.0 Device, Embedded Host, Dual-Role and OTG; Provide Easy Migration Path From Small 8-bit MCUs to an 80 MHz 32-Bit MCU with the Same IDE

CHANDLER, Ariz.--(BUSINESS WIRE)--

Microchip Technology Inc. (NASDAQ: MCHP), a leading provider of microcontroller and analog semiconductors, today announced the industry's most comprehensive portfolio of 8-, 16- and 32-bit USB microcontrollers (MCUs) supported by a single integrated development environment--the free MPLAB(R) IDE. Building on its rich 8-bit USB PIC(R) MCU offerings, Microchip now offers the low-power 16-bit PIC24F USB family, which is pin, peripheral and software compatible with the new high-performance, 80 MHz, 32-bit PIC32 USB MCUs. In addition, Microchip expands its 8-bit USB product offering at the low end with the lower-cost, smaller-footprint PIC18F1XK50 family. The entire USB PIC microcontroller line is supported with free USB software stacks and USB class drivers.

The widespread adoption of USB in the personal-computing market has spawned a large development infrastructure and user base. For this reason, embedded designers are rapidly embracing USB as the external connectivity interface of choice in the consumer and industrial markets. Replacing older communications interfaces--such as RS232--with USB allows engineers to add new functionality to their products while keeping design and manufacturing costs low. Unlike the PC market, embedded applications demand versatility from the interface. Simpler embedded systems may only be required to perform a peripheral role, while others can be called upon to act as USB hosts, or support both roles at various instances. The breadth of Microchip's MCU portfolio gives designers the option to select the appropriate device for their USB application task.

"Microchip's USB product offering in 8-, 16- and 32-bit PIC(R) MCUs expanded significantly during the last few months," said Ganesh Moorthy, executive vice president of Microchip. "The extensive products supported with a single integrated development environment and common software libraries provide customers with an easy migration path to leverage development efforts across many platforms."

Key Features

The PIC18F13K50 and PIC18F14K50 (PIC18F1XK50) are the lowest-cost USB MCUs from Microchip, and build on a broad family of existing USB PIC microcontrollers. They provide a host of features not normally found on inexpensive 8-bit MCUs--enabling the addition of embedded USB into a wide range of applications. The PIC18F1XK50 MCUs include a

variety of serial communications interfaces, such as USB 2.0, I2CTM, SPI and USART; enabling them to transfer data between USB and other embedded serial networks.

The 12-member PIC24F USB microcontroller family is the lowest power (2.6 uA standby current) large-memory (up to 256 KB Flash and 16 KB RAM) 16-bit USB microcontroller family in the world. As the only 16-bit microcontroller family with integrated USB 2.0 device, embedded-host, dual-role and OTG functionality, the PIC24F makes it cost effective and easy to add advanced USB features to embedded designs.

The PIC32 microcontroller family members with integrated USB 2.0 OTG functionality bring more performance and memory to embedded designers, while maintaining pin, peripheral and software compatibility with Microchip's 16-bit microcontroller families. With a maximum operating frequency of 80 MHz, up to 512 KB of Flash and 32 KB of RAM, and USB OTG, the PIC32 USB family members enable lower BOM costs and smaller PCB real estate.

Tools and Support

All of the new 8-, 16- and 32-bit USB PIC MCU families are supported by the full suite of Microchip's world-class development tools, including the MPLAB IDE, the MPLAB REAL ICE(TM) emulation system, the MPLAB ICD 2 in-circuit debugger and the MPLAB PM3 universal device programmer. Additionally, separate MPLAB C Compilers are available for all three families.

Microchip also offers a complete online USB Design Center, located at www.microchip.com/USB, where engineers can find everything they need to get started with their USB designs; including tutorials, technical documentation, programming support, development tool and silicon information, circuit diagrams and technical training. Additionally, designers can download the full source code for Microchip's free USB Host Stack, Device Stack, and Class Drivers (HID, MSD, CDC, Custom). The free USB OTG Stack is currently in beta, with full release scheduled for the third calendar quarter of 2008.

Pricing and Availability

The PIC18F1XK50 MCUs are all available in 20-pin SSOP, SOIC, PDIP and 5 x 5 mm QFN packages. The PIC18F13K50 and PIC18LF13K50 MCUs are priced at $1.32 each, in 10,000-unit quantities; the PIC18F14K50 and PIC18LF14K50 MCUs at $1.46 each, in 10,000-unit quantities. Higher-volume pricing is below $1.00, depending upon quantity. Limited sampling is available now, and volume production is expected to be available in calendar Q3 2008.

The 12-member PIC24FJ256GB1 family is offered in 64-, 80-, or 100-pin TQFP package options, and all are available now for general sampling and volume production. Pricing starts at $3.47 each in 10,000-unit quantities.

The new USB OTG PIC32 family member, the PIC32MX420F032H-40I/PT, runs at 40 MHz and features 32 Kbytes of Flash memory, comes in a 64-pin TQFP package and establishes a new low-cost entry point for the PIC32 family with USB at $3.25 each in 10,000-unit quantities. Volume production for the first seven general-purpose members of the PIC32 family is available now. Samples of the USB OTG-capable devices are available today. For additional information on the seven members with USB, visit www.microchip.com/PIC32.

For additional information, contact any Microchip sales representative or authorized worldwide distributor, or visit Microchip's Web site at www.microchip.com/USB.

Microchip Customer Support

Microchip is committed to supporting its customers by helping design engineers develop products faster and more efficiently. Customers can access four main service areas at www.microchip.com. The Support area provides a fast way to get questions answered; the Sample area offers free evaluation samples of any Microchip device; microchipDIRECT provides 24-hour pricing, ordering, inventory and credit for convenient purchasing of all Microchip devices and development tools; finally, the Training area educates customers through webinars, sign-ups for local seminar and workshop courses, and information about the annual MASTERs events held throughout the world.

About Microchip Technology

Microchip Technology Inc. (NASDAQ: MCHP) is a leading provider of microcontroller and analog semiconductors, providing low-risk product development, lower total system cost and faster time to market for thousands of diverse customer applications worldwide. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support along with dependable delivery and quality. For more information, visit the Microchip website at www.microchip.com.


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