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Microchip Technology Expands Offering of 8-bit MCUs with Integrated Certified USB 2.0 Peripheral Optimized for Embedded Applications

Eight-Member PIC18F87J50 Family Provides 12 MIPS Performance at 3V with Up to 65 I/O

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

Microchip Technology Inc. (NASDAQ:MCHP), a leading provider of microcontroller and analog semiconductors, today announced the eight-member PIC18F87J50 high-performance, cost-effective 8-bit microcontroller family with an integrated and certified USB 2.0 Full-Speed, 12 Mbps transceiver. This new USB microcontroller family also provides 12 MIPS performance with ample I/O and a rich selection of analog and digital peripherals for embedded systems designers who require Full-Speed USB connectivity. Unlike competitors' products that can only serve as an interface between a serial port and the USB bus, the PIC18F87J50 family can perform as the sole controller in embedded applications.

The majority of USB-capable microcontrollers are optimized exclusively for applications in the personal computing (PC) peripherals and consumer markets, leaving a real void for embedded engineers. Microchip's new USB PIC(R) microcontroller family makes the benefits of Full-Speed USB available to a broader range of embedded applications that operate in harsh environments and only occasionally connect to personal computers or other USB hosts. The particular requirements of the embedded market are addressed by integrating USB as one of the primary serial interfaces, as opposed to the prevalent approach that adds a serial-to-USB patch on top of an existing design.

The PIC18F87J50 family also includes nanoWatt Technology for low power consumption in sleep mode, which is ideal for battery-powered applications. These features, combined with up to 65 available I/O, 128 Kbytes of Flash program memory that can be updated in circuit and a rich peripheral set, including a 12-channel, 10-bit Analog-to-Digital Converter (ADC) and a Parallel Master Port for connection to external memory and displays, make this USB microcontroller family ideally suited for embedded-control applications.

"Most USB microcontrollers focus on the PC peripherals market--neglecting the unique requirements of many embedded designers working on stand-alone embedded applications," said Mitch Obolsky, vice president of Microchip's Advanced Microcontroller Architecture Division. "This new Full-Speed USB PIC microcontroller family can perform as the sole controller in embedded applications requiring a high number of I/O and multiple serial interfaces at a low cost point."

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Example Applications

--  Industrial: manufacturing tools, data loggers, scanners, smart
    displays, micro fuel cells, gambling-machine peripherals, RFID
    readers, robot-controller interfaces, industrial timers,
    gas-flow analyzers, cable-test fixtures

--  Medical: voice-activated applications, advanced wheel chairs,
    research-equipment automation

--  Automotive: vehicle-network bus diagnostic tools, vehicle
    trace recorders (black boxes), ultrasonic sensors

--  Battery-powered: handheld tools, sensors, security
    applications, remote controls, home automation

--  Consumer: business-card scanners, white-board digitizers,
    voice recorders, uninterruptible power-supply systems, MP3
    players, fire alarms, security-system programmers

Key Features

--  USB 2.0 certified, Full-Speed USB connectivity, and 12
    megabits-per-second

--  12 MIPS at 3V (up to 48 MHz operation) in 64- and 80-pin TQFP
    packages

--  Up to 128 Kbytes of Flash program memory and 4 Kbytes of RAM

--  Stand-alone USB operation--eliminates need for separate USB
    interface

--  Up to 65 I/O

--  5 PWMs, two 8-bit timers and three 16-bit timers

--  12-channel, 10-bit ADC and 2 comparators

--  2 SPI/I2C(TM) serial ports

--  2 UARTs, and a Parallel MASTER Port for connection to external
    memory and displays

Development Tools
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To reduce time-to-market, the PIC18F87J50 family is supported by Microchip's standard, high-performance development systems, including: the free MPLAB(R) Integrated Development Environment (IDE) with Visual Device Initializer, MPLAB C18 C Compiler, MPLAB ICD 2 In-Circuit Debugger, and the $59.99 PICDEM(TM) HPC Explorer Board (part # DM183022)--via separate plug-in modules. A PICDEM HPC Explorer plug-in module for the PIC18F87J50 is expected to be available in May (part # MA180021) for $39.99.

Availability

The eight-member PIC18F87J50 family is offered in 64- or 80-pin TQFP package options, and all are available now for general sampling and volume production. Pricing starts at $2.98 each in 10,000 unit quantities. 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

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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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