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Microchip Introduces Smallest, Lowest-Cost PIC32 Microcontrollers

Feature-Packed 32-bit Microcontrollers Include I^2S Interface for Audio Playback Applications; Plus Capacitive Touch, USB 2.0 and Digital Pin Remapping

CHANDLER, Ariz.--(BUSINESS WIRE)-- Microchip Technology Inc. (NASDAQ: MCHP), a leading provider of microcontroller, analog and Flash-IP solutions, today announced a new series of low pin count 32-bit PIC32 microcontrollers (MCUs) that provide 61 DMIPS of performance in packages as small as 5 mm x 5 mm for space-constrained and cost-sensitive designs. The **PIC32 "MX1" and "MX2" MCUs** are the smallest and lowest-cost PIC32 microcontrollers, and are the first PIC32s to feature dedicated **audio** and **capacitive-sensing** peripherals. These new MCUs include a host of additional useful features that make them suitable for applications in the **consumer**, **industrial**, **medical** and **automotive** markets.

To view a brief presentation on these products, visit: **http://www.microchip.com/get/UL4G**

Rated for operation up to 105°C, the PIC32 MX1 and MX2 MCUs include up to 32 KB of Flash, and 8 KB of SRAM; two I^2S interfaces for audio processing; Microchip's Charge Time Measurement Unit (CTMU) peripheral for adding **mTouch™** capacitive touch buttons or advanced sensors; and an 8-bit Parallel Master Port (PMP) interface for graphics or external memory. The new devices also feature an on-chip 10-bit, 1 Msps, 13-channel Analog-to-Digital Converter (ADC), as well as **USB 2.0**, and serial-communications peripherals. The MCUs bring eight new packages to the PIC32 MCU product line, from 28- to 44-pins, with sizes down to 5 mm x 5 mm and a 0.5 mm pitch. Further easing the design effort is Microchip's Peripheral Pin Select feature, which allows developers to "remap" most digital-function pins in the chip, making layout and design modifications significantly simpler. The PIC32 MX1 and MX2 devices are compatible with Microchip's 16-bit PIC24F product line for easy migration, and are supported by the **MPLAB® X IDE**—the single development environment for all of Microchip's 8-, 16- and 32-bit MCUs.

"More designs in the consumer, industrial, medical and other markets are requiring high-quality audio, touch-sensing and graphics capabilities, as well as USB communication," said Sumit Mitra, vice president of Microchip's High-Performance Microcontroller Division. "With their numerous on-chip peripherals and features in small packages, the PIC32 MX1 and MX2 enable designers to add all of this functionality, while keeping design size and costs low."

Development Tool Support

Microchip also unveiled the **MPLAB Starter Kit for PIC32MX1XX/2XX MCUs** (part # **DM320013**, $109.99) today. The USB-powered kit features a PIC32MX220F032 with 32 KB of Flash and 8 KB RAM, as well as a 2" color TFT display (220 x 176 pixel), capacitive-touch slider and buttons, SD-card storage and 24-bit audio playback. Additionally, the new

PIC32MX CTMU Evaluation Board (part # **AC323027**, $24.95) is available, as well as the new **PIC32MX220F032D Plug-In Module** (part # **MA320011**, $24.95) for the Explorer 16 Development Board. All of these tools can be purchased today, at **microchipDIRECT** (**http://www.microchip.com/get/HQP0**).

Packaging, Pricing & Availability

The **PIC32MX110F016B** and **PIC32MX220F032** MCUs are available in 28-pin SPDIP, SSOP, SOIC and QFN packages; and in 44-pin QFN, VTLA and TQFP packages. Pricing starts at $1.58 each, in 10,000-unit quantities**. Samples** can be ordered today, at **http://www.microchip.com/get/EA7A**. Volume-production quantities of the MCUs can be purchased today, at **http://www.microchip.com/get/99H0**. Enter coupon code "PIC32MX" in the coupon field and enjoy free shipping until November 7, 2011.

A 36-pin VTLA package option with a .5 mm pin pitch is available for limited sampling today. Industrial temperature range products with operation up to 85°C are available today, with 105°C options expected in late CQ4 2011. Pricing for all of these devices starts at $1.58 each, in 10,000-unit quantities, as well.

For further information, contact any Microchip sales representative or authorized worldwide distributor, or visit Microchip's Web site at **http://www.microchip.com/get/7NBT**. To purchase products mentioned in this press release, go to **microchipDIRECT** or contact one of Microchip's authorized distribution partners.

About Microchip Technology

Microchip Technology Inc. (NASDAQ: MCHP) is a leading provider of microcontroller, analog and Flash-IP solutions, providing low-risk product development, lower total system cost and faster time to market for thousands of diverse customer applications worldwide. Headquartered in Chandler, Ariz., Microchip offers outstanding technical support along with dependable delivery and quality. For more information, visit the **Microchip Web site** (**http://www.microchip.com/get/L6G9**).

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High-res Photos and Block Diagram available through editorial contact or Flickr (feel free to publish):

PIC32 MX1 and MX2 Photo
http://www.microchip.com/get/F2HM

Block Diagram
http://www.microchip.com/get/XXTT

PIC32 Cap Touch CTMU Evaluation Board
http://www.microchip.com/get/3XE8

PIC32MX220F032D PIM
http://www.microchip.com/get/X4EN

MPLAB Starter Kit for PIC32MX1XX/2XX MCUs
http://www.microchip.com/get/QLPM

Presentation available at Microchip's Web site or via editorial contact:
http://www.microchip.com/get/UL4G

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