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Microchip Technology Announces 30 New 16-bit MCUs and DSCs; Significantly Increases Low Pin Count Options for Embedded Designers

New PIC24 and dsPIC33 Families Provide up to 128 KB Flash in Packages as Small as 6x6 mm; Six Devices Have Audio DAC

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

Microchip Technology Inc. (NASDAQ: MCHP), a leading provider of microcontroller and analog semiconductors, today announced 30 new 28- and 44-pin 16-bit devices for embedded system designers requiring increased memory or performance, or enhanced peripherals, while obtaining the cost and size savings associated with lower pin count devices. This brings the total 16-bit Microcontrollers and Digital Signal Controllers (DSCs) offered by Microchip to well over 100 distinct devices. Additionally, Microchip now offers the industry's largest DSC portfolio, enabling optimum system costs for a broad range of embedded applications that require high performance or DSP functionality.

Announced today are 10 PIC24H Family 40 MIPS 16-bit microcontrollers, 10 dsPIC33 Family General Purpose DSCs and 10 dsPIC33 Motor Control and Power Conversion Family DSCs. These 28- and 44-pin devices offer 32-, 64- or 128 Kbytes of programmable Flash memory; up to 2 Kbytes of dual-port RAM; 4 to 16 Kbytes of SRAM including DMA; two on-chip comparators; a user-selectable 10-bit (4 S&H) or 12-bit (1 S&H) Analog-to-Digital Converter (ADC); a real-time clock and calendar. Standard serial peripherals include two SPIs, two UARTs and one I2C(TM) module.

Selected DSCs include a new 16-bit peripheral for Microchip--a dual-channel, 16-bit audio Digital-to-Analog Converter (DAC). Some devices also offer an on-chip CAN 2.0B module and a CODEC interface supporting the I2S and AC'97 protocols.

"For many of our customers, product size is a key competitive differentiator," said Sumit Mitra, vice president of Microchip's Digital Signal Controller Division. "Low pin count customers now have a pin-compatible option to migrate from 64 to 128 Kbytes of on-chip Flash program memory without changing their board or overall form factor. This represents real savings in material costs and development time."

Additional Key Features

All three families are offered in packages as small as 6x6 mm, which is an industry first for high-performance 16-bit products with 128 Kbytes of Flash memory. All devices also operate at up to 40 MIPS, making the PIC24H the industry's highest performing 16-bit MCU. Finally,

all family members are offered in the industrial (-40 degree to +85 degree C) and extended (-40 degree to +125 degree C) temperature ranges.

The devices also feature a Parallel Master Port for rapid parallel communication with off-chip resources, such as displays, communication peripherals or memory. The on-chip Peripheral Pin Select (PPS) feature permits digital peripherals to be remapped to other pins to achieve layout efficiency or access to pin-multiplexed peripherals.

The dsPIC33F Motor Control and Power Conversion DSCs add a powerful 6-channel PWM, plus a similarly featured 2-channel PWM with a separate timebase for power factor correction or for induction-cooking applications. This family also includes two quadrature encoder interfaces for sensor-based motor control applications.

Compatibility

To further enable fast and efficient development cycles, these new 16-bit families continue Microchip's seamless migration methodology by making devices pin- and instruction-set compatible (DSCs add DSP instructions). Common peripherals are also compatible, and Microchip's universal MPLAB(R) Integrated Development Environment (IDE) platform supports the entire 8-, 16-, and 32-bit spectrum of Microchip's embedded controllers.

"The time impact of learning a new software development tool, implementing board layout changes, and modifying software to accommodate a new architecture can easily be underestimated," said Will Strauss, president of Forward Concepts. "With their dsPIC(R) DSCs and PIC24 MCUs, Microchip is still the only company on the planet with truly unified DSP and MCU product lines."

Development Tools, Availability and Pricing

In addition to being compatible with the MPLAB IDE, the PIC24 and dsPIC33F families are supported by existing Microchip development tools, such as the MPLAB C30 C compiler, emulation, debugging and the MPLAB PM3 universal device programmer. Microchip also created the Explorer 16 development board in support of all its 16- and 32-bit controllers.

Selected members of the new PIC24 and dsPIC33 families are sampling today. Production for all 30 of the new PIC24 and dsPIC33 controllers is expected to occur by the end of CQ208. Prices range from \$2.63 to \$4.18 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/16bit.

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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