DSCs and MCUs Bring 70 MIPS Performance and Cap Touch to Cost-Sensitive Designs

Microchip Technology, a leading provider of microcontroller, analog and Flash-IP solutions, today announced the expansion of its enhanced core **16-bit dsPIC33 and PIC24 "E" Digital Signal Controller (DSC) and microcontroller (MCU) families** [1] to include on-chip op amps and Microchip's Charge Time Measurement Unit peripheral (CTMU), enabling advanced features in user-interface, intelligent-sensing, general-purpose and **motor-control** [2] applications at a low cost. The new devices are pin compatible with existing **16-bit** [1] dsPIC33 and PIC24 products for easy migration, and are available in multiple package options, including the new, ultra small 5 mm x 5 mm 36-pin VTLA package.

With 70 MIPS of DSP performance and a 6-channel Pulse Width Modulation (PWM) peripheral, the dsPIC33 and PIC24 "E" devices provide advanced motor control and high-speed application execution. This results in more efficient, smaller and lower-cost designs, as a single DSC or MCU can be used to control the entire system. The on-chip op amps can be used in a variety of sensing applications where signal conditioning is needed, and reduce the need for external components, helping to reduce overall design cost and size. The CTMU peripheral, used in **mTouch™** [3] capacitive touch-sensing, simplifies the addition of innovative and reliable user interfaces, including keypads, buttons and sliders.

"Our new dsPIC33 and PIC24 'E' devices provide high performance and innovative features at a lower cost than previously possible," said Sumit Mitra, vice president of Microchip's High-Performance Microcontroller Division. "These new dsPIC33 and PIC24 "E" devices are among the most capable and cost-effective controllers on the market."

Development Support

The **dsPIC33EP64MC504** [4] (part # **MA330028** [4], $25] and **PIC24EP64MC204** [5] Motor-Control Plug-In Modules (part # **MA240028** [5], $25) for Microchip's **dsPICDEM™ Low Voltage** [6] (part #**DM330021** [6], $150.00), and **High Voltage Motor Control Development Kits** [7] (part # **DM330023** [7], $650.00), are available today. All of these tools can be purchased at **microchipDIRECT** [8](**http://www.microchip.com/get/7WF0** [8]).

Pricing & Availability

The dsPIC33EP64MC50X DSC is available in 28-pin SOIC, SPDIP, SSOP and QFN packages. The dsPIC33EP64MC20X DSC is available in 44-pin VTLA, TQFP and QFN packages. The PIC24EP64MC20X MCU is available in 64-pin TQFP and QFN packages. Pricing starts at $1.58 each, in 10,000-unit quantities. **Samples** [9] of these devices are available today,

at **http://www.microchip.com/get/B1GP** [9] . Volume-production quantities of these devices can be purchased today, at **http://www.microchip.com/get/7WF0** [8].

The dsPIC33EP64GP50X DSC and PIC24EP64GP20X MCU are available for limited sampling in a 36-pin VTLA package, today. Pricing for these devices will also start at $2.34 each, in 10,000-unit quantities.

For further information, contact any Microchip sales representative or authorized worldwide distributor, or visit Microchip's Web site at **http://www.microchip.com/get/N8VX** [1].

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Links:
[1] http://www.microchip.com/get/N8VX
[2] http://www.microchip.com/get/WTFD
[3] http://www.microchip.com/get/BPRU
[4] http://www.microchip.com/get/8DJ7
[5] http://www.microchip.com/get/U56W
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