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Microchip Expands General-Purpose 8-bit PIC® Microcontroller Portfolio with Increased Intelligent Analog

MCU Features Complementary Output Generator, Op Amp and 9-bit DAC, Increasing Overall System Capabilities While Reducing Costs

CHANDLER, Ariz.--(BUSINESS WIRE)-- Microchip Technology Inc. (NASDAQ: MCHP), a leading provider of microcontroller, mixed-signal, analog and Flash-IP solutions, today announced an expansion to the PIC16F75X family of 8-bit microcontrollers (MCUs) featuring intelligent analog and core-independent peripherals, making them ideal for general-purpose applications, as well as **power supplies**, **battery charging**, **LED lighting**, **power management** and **power control/smart energy** applications. The new **PIC16F753 MCU** builds on the success of the popular PIC12F752. The PIC16F753 offers all the key features of the PIC12F752, such as the integrated Complementary Output Generator (COG) peripheral that provides non-overlapping, complementary waveforms for inputs such as comparators and Pulse Width Modulation (PWM) peripherals, while enabling dead-band control, auto shutdown, auto reset, phase control and blanking control. Additionally, the PIC16F753 offers an Op Amp with 3 MHz of Gain Bandwidth Product (GBWP), and a slope compensation circuit to help in Switch Mode Power Supply applications. Additionally, the new MCU features 3.5 KB of self read-write program memory, 128B of RAM, an on-chip 10-bit ADC, 9-bit DAC, Capture Compare PWM modules, high-performance comparators, and two 50 mA-capable I/Os, enabling engineers to increase overall system capabilities and reduce costs.

With increased intelligent analog capabilities, the PIC16F753 helps boost system performance and efficiency while reducing system costs, especially for newer LED-lighting and smart-energy applications. With its numerous on-chip general-purpose and specialized peripherals, including the integrated COG, high performance comparators and 50 mA outputs for direct FET drive, the PIC16F753 MCU meets the needs of various applications. The high-voltage version incorporates a shunt regulator that allows operation from 2V to an unspecified user-defined maximum voltage level, with less than 2 mA operation current. This high-voltage variant is ideal for cost-sensitive applications with high-voltage power rails. Additionally, the 8-channel, 10-bit ADC can be used to implement various sensors and **mTouch™** sensing applications, including capacitive touch.

“With all of its enhancements, including the Op Amp and slope compensation capabilities, the PIC16F753 MCU enables efficient power conversion for applications such as LED lighting and power control applications,” said Steve Drehobl, vice president of Microchip’s MCU8 Division. “The PIC16F753 MCU provides a versatile platform to incorporate intelligence into numerous applications. Whether the MCU is used in the **automotive**, **consumer**, **commercial or industrial markets**, it provides for a smart system infrastructure with increased efficiencies, reduced costs and an enhanced user experience.”

Development Support

The PIC16F753 is supported by Microchip's standard suite of world-class development tools, including the **PICDEM™ Lab Development Kit** (part # DM163045, $134.99), the **PICkit™ 3** (part # PG164130, $44.95) and the **PICkit Low-Pin Count Demo Board** (part # DM164130-9, $25.99). A free **reference design** for a high-power LED flashlight is available for this product.

Pricing & Availability

The PIC16F753 is available now for sampling in a 16-pin 4 mm x 4 mm QFN package, as well as 14-pin PDIP, SOIC and TSSOP packages. Pricing starts at $0.60 each, in 10,000-unit quantities. The PIC16F753 is also available in a High Voltage (HV) variant for all packages. Volume production is expected in July.

For additional information, contact any Microchip sales representative or authorized worldwide distributor, or visit Microchip's Web site at **http://www.microchip.com/get/6TM0**. To purchase products mentioned in this press release, go to **microchipDIRECT** or contact one of Microchip's authorized distribution partners.

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Tags / Keywords: Op Amp, intelligent analog, MCU, 9-bit DAC, comparators, slope compensation, SMPS, power supplies, lighting, power control, PFC, power applications

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