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Microchip Expands 8-bit PIC® Microcontroller Portfolio With Three High-Resolution 16-bit PWMs in 8-pin Packages

PIC MCUs With 16-bit PWMs and Communications Provide Precision Drive Capability in a Small Form Factor

CHANDLER, Ariz.--(BUSINESS WIRE)-- Microchip Technology Inc. (NASDAQ: MCHP), a leading provider of microcontroller, mixed-signal, analog and Flash-IP solutions, today announced from Embedded World an expansion of its 8-bit PIC® microcontroller (MCU) portfolio with the **PIC12(L)F157X** family, which features multiple 16-bit PWMs with an assortment of analog peripherals and serial communications in an 8-pin package. These MCUs deliver three full-featured 16-bit PWMs with independent timers, for applications where high resolution is needed, such as LED lighting, stepper motors, battery charging and other general-purpose applications. In addition to standard and center-aligned PWM output modes, the peripheral also has four compare modes and can serve as an additional 16-bit timer. The Complementary Waveform Generator (CWG), in combination with the 16-bit PWMs, can be used to create half-bridge and full-bridge drive control. The CWG is a powerful waveform generator, which can generate complementary waveforms with fine control of key parameters such as polarity, dead band and emergency shutdown states. It provides a cost-effective solution, saving both board space and component cost when driving FETs in motor-control and power-conversion applications. The Core Independent Peripherals (CWG, 16-bit PWMs) coupled with the Analog Peripherals (10-bit ADCs, comparator and 5-bit DAC) enable closed-loop feedback and control. The PIC12F157X MCUs are well suited for a wide range of applications, such as lighting (e.g. indoor/outdoor LED lighting, RGB LED color mixing); consumer (e.g. electric razors, radio-control toys); and automotive (e.g. interior LED lighting).

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The PIC12F1572 enables communication with an EUSART, at the lowest price point in the PIC MCU portfolio. The addition of the EUSART enables general-purpose serial communication and LIN for automotive and industrial control. The integrated 10-bit ADCs enable human-interface/touch applications using Microchip's capacitive mTouch™ sensing solution. Additionally, the PIC12F157X offers non-volatile data storage via High Endurance Flash (HEF) memory. The "LF" versions feature low-power technology, for active currents of less than 35 µA/MHz and sleep currents down to 20 nA, which is ideal for battery-powered applications.

"The PIC12F157X family brings high-precision 16-bit PWM drive and closed-loop control capabilities to our 8-pin MCU portfolio," said Steve Drehobl, vice president of Microchip's MCU8 Division. "These are the least expensive products with EUSART, which is paired with advanced PWMs and Core Independent Peripherals to bring high-end capabilities into lower pin counts."

Development Support

Microchip's full suite of development tools support the PIC12F157X MCUs, including the **MPLAB® X Integrated Development Environment (IDE)**, and **PICkit™ 3** (part # PG164130, $44.95), 8-bit Low Pin Count Development Kit (part # **DM164130-9** $25.99), **MPLAB ICD 3** (part # DV164035, $189.99), and **PICDEM™ Lab Development Kit** (part # DM163045, $134.99). Microchip also created the **RGB Badge Demonstration Platform** and High Resolution RGB LED Color Mixing Application Note # AN1562 to assist developers in designing lighting applications using the PIC12F157X family.

Pricing & Availability

The PIC12LF1571, PIC12LF1572, PIC12F1571 and PIC12F1572 MCUs are all available today for sampling and volume production, in 8-pin PDIP, SOIC, MSOP and 3 mm x 3 mm DFN packages, starting at $0.38 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 **http://www.microchip.com/get/G6RB**. To purchase products mentioned in this press release, go to **microchipDIRECT** or contact one of Microchip's authorized distribution partners.

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