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Microchip Expands High-Performance 32-bit MCU Family With Integrated Floating Point Unit Series

New 48-Member PIC32MZ EF Series Integrates 2 MB Flash, 512 KB RAM, 18 MSPS 12-bit ADC, FPU, Crypto Engine, Hi-Speed USB, 10/100 Ethernet, CAN and Best-In-Class Peripheral Options

CHANDLER, Ariz., Sept. 14, 2015 /PRNewswire/ -- Microchip Technology Inc. (NASDAQ: MCHP), a leading provider of microcontroller, mixed-signal, analog and Flash-IP solutions, today announced a new series within its high-performance PIC32MZ family of [32-bit microcontrollers](#) (MCUs) that features an integrated hardware floating point unit (FPU) for high performance and lower latency in intensive single and double-precision math applications. This new 48-member [PIC32MZ EF](#) series also offers a 12-bit, 18 MSPS analog-to-digital converter (ADC) for a wide array of high-speed, wide-bandwidth applications. Additionally, the PIC32MZ EF supports an extensive DSP instruction set. This combination of DSP instructions, a double-precision FPU and a high-speed ADC improves code density, decreases latency and accelerates performance in process-intensive applications.



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For an overview of the PIC32MZ family, please visit: <http://www.microchip.com/PIC32MZ-091415a>.

The PIC32MZ EF series is powered by Imagination's MIPS M-Class™ core at 200MHz/330 DMIPS and 3.28 CoreMarks™/MHz, along with dual-panel, live-update Flash (up to 2 MB), large RAM (512 KB) and the widest selection of connectivity peripherals in the entire PIC32 portfolio, including a 10/100 Ethernet MAC, Hi-Speed USB MAC/PHY and dual CAN ports. Many embedded applications are adding better graphics displays, and the PIC32MZ EF, in the [LCCG configuration](#), can support up to a WQVGA display without the added cost of external graphics controllers. An optional, full-featured hardware crypto engine is also

available with a random number generator for high-throughput data encryption/decryption and authentication (e.g., AES, 3DES, SHA, MD5 and HMAC).

Accelerating product cycles and rapidly evolving customer demands are increasing time-to-market pressures on designers. Microchip's award-winning [MPLAB® Harmony Integrated Software Framework](#) provides a modular, pre-tested and easy-to-use GUI based development ecosystem that helps ease integration, reduce testing and speed adaptation to quickly changing market demands; enabling designers to focus on product development.

"The PIC32MZ EF is the second-generation series within our popular PIC32MZ Family of high-performance MCUs," said Rod Drake, vice president of Microchip's MCU32 Division. "This series' higher performance, floating point unit, larger Flash, connectivity options and rich peripheral set will help embedded developers address the increasing demands of high-end and next-generation applications. Additionally, our MPLAB Harmony Integrated Software Framework will help accelerate software integration, product-development cycles and time to market."

Development Support

The new PIC32MZ EF series is also supported by Microchip's free [MPLAB X Integrated Development Environment \(IDE\)](#), within which Harmony operates, as well as the [MPLAB XC32 Compilers](#). The [MPLAB ICD 3 In-Circuit Debugger](#) (part # DV164035, \$199.95) and [MPLAB REAL ICE™ In-Circuit Emulator System](#) (part # DV244005, \$499.98) are also available.

Four new PIC32MZ EF development tools are also available today. The complete, turn-key [PIC32MZ Embedded Connectivity with FPU EF Starter Kit](#) (Part # DM320007, \$119); the [PIC32MZ Embedded connectivity with Floating Point Unit and Crypto Starter Kit](#) (Part # DM320007-C, \$119); the [PIC32MZ2048EF PIM Explorer 16 Plug In Module](#) (Part # MA320019, \$25), and the [PIC32MZ EF Audio 144-pin PIM for Bluetooth® Audio Development Kit](#) (Part # MA320018, \$25). For more information and to purchase these tools, visit <http://www.microchip.com/microchipDIRECT-091415a>.

The PIC32MZ EF series is also featured in the new version of the [Arduino™ compatible Digilent® chipKIT™ Wi-FIRE development board](#). This board provides easy access to professional applications and libraries targeting new PIC32 users. It enables them with rapid-prototype development and eases migration into professional integrated development environments, such as Microchip's MPLAB X IDE. The new PIC32MX EF version of this board can be purchased by visiting <http://www.microchip.com/chipKIT-091415a>.

Pricing and Availability

All 48 members of the PIC32MZ EF series are available now for sampling and volume production. The crypto engine is integrated into 16 of the PIC32MZ EF MCUs, and there are 12 MCUs with 512 KB of Flash, 24 MCUs with 1 MB of Flash and 12 MCUs with 2 MB of Flash. Pricing starts at \$5.48 each in 10,000-unit quantities.

The superset family members and their package options are 64-pin QFN (9x9 mm) and TQFP (10x10 mm) for the PIC32MZ2048EFH064; 100-pin TQFP (12x12 and 14x14 mm) for the PIC32MZ2048EFH100; 124-pin VTLA (9x9 mm) for the PIC32MZ2048EFH124; and 144-pin TQFP (16x16 mm) and LQFP (20x20 mm) for the PIC32MZ2048EFH144.

The superset MCUs with an integrated crypto engine are the PIC32MZ2048EFK064, PIC32MZ2048EFK100, PIC32MZ2048EFM100, PIC32MZ2048EFM124 and PIC32MZ2048EFM144.

For more information, contact any Microchip sales representative or authorized worldwide distributor, or visit Microchip's Web site at <http://www.microchip.com/PIC32-091415a>. To purchase products mentioned in this press release, go to [microchipDIRECT](#) or contact one of Microchip's authorized distributors.

Resources

High-res Images Available Through Flickr or Editorial Contact (feel free to publish):

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