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Microchip Technology Unveils 32-bit MCU Family with Integrated High-Performance Analog Peripherals

PIC32A MCU family showcases industry-leading analog peripherals with 200 MHz CPU for cost-effective system-level solutions

CHANDLER, Ariz., March 11, 2025 (GLOBE NEWSWIRE) -- To address the increasing demand for high-performance, math-intensive applications in a wide range of industries, Microchip Technology **(Nasdaq: MCHP)** has released the **PIC32A family** of MCUs. Enhancing the company's already robust 32-bit MCU portfolio, PIC32A MCUs are designed to be cost-efficient, high-performance solutions for general-purpose applications across automotive, industrial, consumer, Artificial Intelligence/Machine Learning (AI/ML) and medical markets.

Designed to significantly reduce the need for external components, the 200 MHz 32-bit PIC32A family features integrated high-speed analog peripherals, up to 40 Msps 12-bit ADCs, high-speed 5 ns comparators and 100 MHz Gain Bandwidth Product (GBWP) op amps for intelligent edge sensing. These features and a high-performance CPU allow for multiple functions to be performed on a single MCU, optimizing both system and bill of material costs.

Additionally, integrated hardware safety and security features such as Error Code Correction (ECC) on Flash and RAM, Memory Built-In Self-Test (MBIST), I/O integrity monitor, clock monitoring, immutable secure boot and Flash access control features are designed to offer safe execution of software code within an embedded control system application.

A 64-bit Floating Point Unit (FPU) in the PIC32A MCU manages data-intensive math processing applications efficiently and allows for easier adoption of model-based designs. These MCUs assist developers with accelerated execution in computationally intensive applications that require advanced performance in sensor interfacing and data processing.

"Targeting intelligent sensing and control applications, the PIC32A MCUs augment our existing 32-bit portfolio by balancing cost effectiveness, performance and advanced analog peripherals," said Rod Drake, corporate vice president of one of Microchip's MCU business units. "High-speed peripherals and other integrated functionalities reduce the need for certain external components, decreasing system complexity while delivering a high-performance solution."

Development Tools

PIC32A MCUs are supported by the MPLAB® XC32 Compiler, MPLAB Harmony embedded software development framework and the dsPIC33A Curiosity Platform Development Board (EV74H48A) and PIC32AK1216GC41064 General-Purpose DIM (EV25Z08A). To support feature expansion, the Curiosity Development Board provides mikroBUS™ and Xplained Pro

interfaces to connect to Built-in Self-Test Xplained Pro (BIST XPRO) extension kits, sensors and various Click boards™. For a complete list of development tools, visit **the PIC32A MCU web page**.

Pricing and Availability
The PIC32A MCU family is available starting at less than $1 each in volume. For additional information and to purchase, contact a Microchip sales representative, authorized worldwide distributor or visit Microchip's Purchasing and Client Services website, **www.microchipdirect.com**.

Resources
High-res images available through Flickr or editorial contact (feel free to publish):

- Application image: **https://www.flickr.com/photos/microchiptechnology/54277552273/sizes/l/**
- Block diagram: **https://www.flickr.com/photos/microchiptechnology/54277545349/sizes/l/**

About Microchip Technology:
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