February 12, 2020

New PIC® MCU Family Moves Software Tasks to Hardware for Faster System Response

Microchip's PIC18-Q43 family combines more Core Independent Peripherals and an extensive development tool ecosystem for improved designs in real-time control and connected applications

CHANDLER, Ariz., Feb. 12, 2020 (GLOBE NEWSWIRE) -- In microcontroller (MCU) based system design, software is often the bottleneck for both time to market and system performance. By offloading many software tasks to hardware, Microchip Technology Inc.'s **(Nasdaq: MCHP)** next generation **PIC18-Q43 family** helps developers bring higher performing solutions to market faster.

The family's combination of peripherals offers users greater versatility and simplicity when creating custom hardware-based functions with easy to use development tools. Configurable peripherals are smartly interconnected to allow near zero latency sharing of data, logic inputs or analog signals without additional code for improved system response. Ideal for a variety of real-time control and connected applications, including home appliances, security systems, motor and industrial control, lighting and Internet of Things (IoT), the PIC18-Q43 family helps reduce board space, Bill of Materials (BoM), overall costs and time to market.

Core Independent Peripherals (CIPs) are peripherals that have been designed with additional capabilities to handle a variety of tasks without the need for intervention from the Central Processing Unit (CPU). With CIPs like timers, simplified Pulse Width Modulation (PWM) output, CLCs, Analog to Digital Converter with Computation (ADCC), multiple serial communications and more, the product family is designed to make it easy for developers to customize their specific design configuration. The CLC provides programmable logic that operates outside the speed limitations of software execution, providing customers with the ability to tailor such things as waveform generation, timing measurements and more. CLCs can be the "glue" logic to connect on-chip peripherals for hardware customization with unprecedented ease. Its core-independent communication interfaces, including UART, SPI and I2C, offer flexible, easy-to-use building blocks for developers looking to create a customized device, while the addition of multiple DMA channels and interrupt management accelerate real-time control with simplified software loops. With Microchip's comprehensive development tool suite, users can quickly and easily generate application code and customize combinations of CIPs in a graphical user interface (GUI) environment. Additionally, the family operates up to 5V which increases noise immunity and enables customers to interface to a wide range of sensors.

"The PIC18-Q43 family offers CIPs that enable many functions and even whole control loops to be realized in customizable on-chip hardware," said Greg Robinson, associate vice president of marketing for Microchip's 8-bit microcontroller business unit. "With the combination of flexible CIPs and high analog integration, users will significantly reduce

development time and improve system performance by automating waveform control, timing and measurement operations and logic functions."

Development Tools

The PIC18-Q43 family is supported by Microchip's MPLAB® X IDE and MPLAB Xpress IDE development environments, and MPLAB Code Configurator (MCC) — a free software plug-in that provides a graphical interface to configure peripherals and functions specific to an application. It's also supported by the PIC18F57Q43 Curiosity Nano board — a compact, cost-effective development board with programming and debugging capabilities.

Pricing and Availability

The PIC18-Q43 product family offers a range of memory sizes, packages and price points to match a wide range of application needs. All products are available for volume production and sampling in a variety of packages. Volume pricing begins at $0.64 each.

For additional information, contact a Microchip sales representative, authorized worldwide distributor or visit Microchip's website. To purchase products mentioned here, click to **order now** or contact a Microchip authorized distributor.

Resources

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

- Application image: **https://www.flickr.com/photos/microchiptechnology/49234019476**
- Chip image: **https://www.flickr.com/photos/microchiptechnology/49394942926**
- Tool image: **https://www.flickr.com/photos/microchiptechnology/49235086432**
- Block diagram: **https://www.flickr.com/photos/microchiptechnology/49394457653**

About Microchip Technology

Microchip Technology Inc. is a leading provider of smart, connected and secure embedded control solutions. Its easy-to-use development tools and comprehensive product portfolio enable customers to create optimal designs which reduce risk while lowering total system cost and time to market. The company's solutions serve more than 120,000 customers across the industrial, automotive, consumer, aerospace and defense, communications and computing markets. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support along with dependable delivery and quality. For more information, visit the Microchip website at **www.microchip.com**.

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Source: Microchip Technology Inc.