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Microchip Introduces Industry's First Low Pin Count MCU Family With I3C Support

Company's PIC18-Q20 product line is space-efficient and easily interfaces with devices operating in multiple voltage domains

CHANDLER, Ariz., Sept. 26, 2023 (GLOBE NEWSWIRE) -- With the step-function increase in data collected and transmitted from cloud-connected edge nodes, Improved Inter Integrated Circuit® (I3C®) is rapidly becoming a more sustainable solution for interfacing sensors with a high data rate and will help expand capabilities in next-generation devices. Leading the way in I3C integration, Microchip Technology (**Nasdaq: MCHP**) has released its [PIC18-Q20 family](#) of microcontrollers (MCUs), the industry's first low pin count MCUs with up to two I3C peripherals and Multi-Voltage I/O (MVIO). Available in 14- and 20- pin packages as small as 3 x 3 mm, the PIC18-Q20 MCUs are a compact solution for real-time control, touch sensing and connectivity applications. The MCUs offer configurable peripherals, advanced communication interfaces and easy connection across multiple voltage domains without external components.

With I3C functionality, flexible peripherals and the ability to operate on three independent voltage domains, PIC18-Q20 MCUs are well suited to be used in conjunction with a primary MCU in a larger overall system. This family of MCUs can perform tasks such as processing sensor data, handling low latency interrupts and system status reporting that the main MCU cannot perform as efficiently. While the Central Processing Unit (CPU) runs at a different voltage domain, the I3C peripheral operates from 1.0 to 3.6V. These low-power, small form factor MCUs can be used in a wide range of space-sensitive applications and markets including automotive, industrial control, computing, consumer, IoT and medical.

“One of the main barriers to large-scale IoT adoption is the cost of implementing an edge node. With the PIC18-Q20 family of MCUs, Microchip is helping to break down that barrier,” said Greg Robinson, corporate vice president of Microchip's 8-bit MCU business unit. “By introducing the industry's first low pin count MCU with I3C we are enabling flexible, cost-effective scaling of IoT applications and embracing the new standard communications interface.”

As the market shifts to demand higher performance solutions with lower power and smaller size, I3C helps designers and software developers address these potentially challenging requirements. Compared to I2C, I3C offers higher communication rates and lower power consumption, all while maintaining backward compatibility with legacy systems. The I3C and MVIO functionality, combined with Microchip's configurable Core Independent Peripherals (CIPs), allow for lower system costs, reduced design complexity and a reduction in board space by replacing external level shifters with on-chip multiple voltage domains. To learn more about Microchip's portfolio of PIC® MCUs, visit the [website](#) and keep up with the latest company news by following Microchip on [LinkedIn](#), [YouTube](#), [Facebook](#) and [Instagram](#).

Development Tools

The PIC18-Q20 MCU family is supported by Microchip's full development ecosystem of hardware and software tools, including its MPLAB[®] X and MPLAB Xpress Integrated Development Environments (IDEs) and MPLAB Code Configurator (MCC) Microchip's development environment is straightforward and makes it easier to implement and generate code, allowing for a reduction in overall development time and reduced financial investment.

Developers can get a quick start in evaluating I3C and MVIO capabilities on the PIC18-Q20 using Microchip's PIC18F16Q20 Curiosity Nano Evaluation Kit—a compact, cost-effective development board for rapid prototyping.

Pricing and Availability

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/53189672970/sizes//>

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 125,000 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 <http://www.microchip.com/>.

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