April 21, 2026

Programmable Logic Redefined for Simpler, Smarter, Fully Integrated Designs

Microchip's CLB-based PIC® MCUs combine programmable logic and embedded control in a single device to help reduce latency, cost and design complexity

CHANDLER, Ariz., April 21, 2026 (GLOBE NEWSWIRE) -- Engineers designing timing-critical systems for motor control, industrial automation and automotive safety applications often face challenges with latency and unpredictable software execution. To help address these challenges without adding the cost and complexity of multichip designs, Microchip Technology **(Nasdaq: MCHP)** is expanding its Configurable Logic Block (CLB)–based microcontroller (MCU) portfolio. The **PIC16F13276** and **PIC18-Q35** families combine Complex Programmable Logic Device (CPLD)-like programmable logic and an MCU in a single, low-power device.

Microchip's CLB is designed to simplify multitasking by enabling users to implement logic functions in dedicated hardware instead of software. This helps reduce power consumption, provide more predictable system behavior and improve throughput compared to software only MCU solutions or discrete CPLD-plus-MCU implementations. The new device families offer the option to automatically load the CLB at power-up or reset, allowing the logic to initialize independent of the CPU, supporting predictable startup behavior that may be required in functional safety, industrial and automotive systems.

The PIC16F13276 family has 32 logic elements and the PIC18-Q35 family has 128 logic elements, enabling engineers to implement parallel, deterministic logic alongside embedded control on a single chip. This integrated approach can replace separate CPLD and MCU designs, reducing bill of materials (BOM), board space and overall system cost and complexity.

"Our new product development isn't based on keeping pace with competitors, it's based on efficiently solving real-world design challenges," said Greg Robinson, corporate VP of Microchip's MCU business unit. "By enabling CPLD-like functionality on a low-power, cost-effective microcontroller, these two families give engineers an easy way to add programmable logic to their designs."

The devices are drop-in compatible with existing PIC16 and PIC18 designs, enabling customers to adopt hardware-based logic without a complete redesign of their systems. Additionally, Programming and Debugging Interface Disable (PDID) provides anti-tamper protection to help safeguard designs from unauthorized access and malicious modification.

With hardware-based timing paths, Microchip's CLB addresses timing challenges in software-based systems and a CLB timing analysis tool allows designers to identify signal delays, critical paths and potential timing risks early in the design cycle. Verifying timing

issues upfront helps reduce debug time. Visit the website to learn more about Microchip's portfolio of **CLB-enabled MCUs**.

Development Tools
Microchip's enhanced CLB Configuration tool, now available in Microsoft® Visual Studio® Code (VS Code®), helps accelerate logic development through an intuitive, drag-and-drop graphical interface. The integrated CLB synthesizer combines logic design with upfront timing analysis, simulation and hardware debug capability, enabling developers to verify functionality, observe real-time operation and validate precise timing without writing HDL code or manually configuring registers. The PIC16F13276 and PIC18-Q35 MCUs are also supported by Microchip's comprehensive development ecosystem, including MPLAB® X Integrated Development Environment (IDE) and MPLAB Code Configurator (MCC). The PIC18F56Q35 Curiosity Nano (EV55P36A) and PIC16F13276 Curiosity Nano (EV18Z11A) evaluation kits provide cost-effective, ready-to-use hardware platforms with full programming and debugging support for rapid prototyping and evaluation.

Pricing and Availability
PIC16F13276 MCUs are available starting at $0.32 at volume and the PIC18-Q35 devices are available starting at $0.62 at volume. You can **purchase** directly from Microchip or contact a Microchip **sales representative or authorized worldwide distributor**.

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

- Application image: **https://www.flickr.com/photos/microchiptechnology/55197893249/sizes/o/**

About Microchip Technology:
Microchip Technology Inc. is a broadline supplier of semiconductors committed to making innovative design easier through total system solutions that address critical challenges at the intersection of emerging technologies and durable end markets. Its easy-to-use development tools and comprehensive product portfolio supports customers throughout the design process, from concept to completion. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support and delivers solutions across the industrial, automotive, consumer, aerospace and defense, communications and computing markets. For more information, visit the Microchip website at **www.microchip.com**.

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