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Microchip Launches MPLAB® Machine Learning Development Suite to More Easily Incorporate ML Into MCUs and MPUs

Unique solution is first to support 8-bit, 16-bit and 32-bit MCUs and 32-MPUs for ML at the edge

CHANDLER, Ariz., Sept. 07, 2023 (GLOBE NEWSWIRE) -- Machine Learning (ML) is becoming a standard requirement for embedded designers working to develop or improve a vast array of products. Meeting this need, Microchip Technology **(Nasdaq: MCHP)** has launched a complete, integrated workflow for streamlined ML model development with its new **MPLAB® Machine Learning Development Suite**. This software toolkit can be utilized across Microchip's portfolio of microcontrollers (MCUs) and microprocessors (MPUs) to add an ML inference quickly and efficiently.

"Machine Learning is the new normal for embedded controllers, and utilizing it at the edge allows a product to be efficient, more secure and use less power than systems that rely on cloud communication for processing," said Rodger Richey, VP of Microchip's Development Systems business unit. "Microchip's unique, integrated solution is designed for embedded engineers and is the first to support not just 32-bit MCUs and MPUs, but also 8- and 16-bit devices to enable efficient product development."

ML uses a set of algorithmic methods to curate patterns from large data sets to enable decision making. It is typically faster, more easily updated and more accurate than manual processing. One example of how this tool will be utilized by Microchip customers is to enable predictive maintenance solutions to accurately forecast potential issues with equipment used in a variety of industrial, manufacturing, consumer and automotive applications.

The MPLAB Machine Learning Development Suite helps engineers build highly efficient, small-footprint ML models. Powered by AutoML, the toolkit eliminates many repetitive, tedious and time-consuming model-building tasks including extraction, training, validation and testing. It also provides model optimizations so the memory constraints of MCU and MPUs are respected.

When used in combination with the **MPLAB X Integrated Development Environment (IDE),** the new toolkit provides a complete solution that can be easily implemented by those with little to no ML programming knowledge, which can eliminate the cost of hiring data scientists. It is also sophisticated enough for more experienced ML designers to control.

Microchip also offers the option to bring a model from TensorFlow Lite and use it in any **MPLAB Harmony v3** project, a fully integrated embedded software development framework that provides flexible and interoperable software modules to simplify the development of

value-added features and reduce a product's time to market. In addition, the VectorBlox™ Accelerator Software Development Kit (SDK) offers the most power-efficient Convolutional Neural Network (CNN)-based Artificial Intelligence/Machine Learning (AI/ML) inference with PolarFire® FPGAs.

MPLAB Machine Learning Development Suite provides the tools necessary for designing and optimizing edge products running ML inference. Visit Microchip's **Machine Learning Solutions** page to learn more about streamlining the development process while keeping costs down and achieving a quicker time to market with Microchip's intuitive ML tools.

Pricing and Availability
Pricing varies based on licensing. A free version of the MPLAB Machine Learning Development Suite is available for evaluation. For additional information or to purchase, contact a Microchip sales representative at **www.microchipdirect.com**.

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

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 **www.microchip.com**.

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A photo accompanying this announcement is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/f5ee0459-2520-4caf-b747-63949be374f5



New development suite provides a complete, integrated workflow for streamlined ML model development

Source: Microchip Technology Inc.