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Enabling Cloud Connectivity to All MCUs and MPUs, Microchip Launches a Range of Embedded IoT Solutions for Rapid Prototyping

When designing IoT solutions, developers can quickly, easily and securely connect to any cloud using Wi-Fi, Bluetooth and narrow band 5G technologies

CHANDLER, Ariz., March 11, 2020 (GLOBE NEWSWIRE) -- Due to the fragmented nature of the Internet of Things (IoT) marketplace, increasing project complexity and costs, today's developers face more challenges in design decisions than ever before. These challenges lead to extended development times, increased security threats and failed solutions. Continuing to execute upon its core strategy of delivering smart, connected and secure systems, Microchip Technology Inc. **(Nasdaq: MCHP)** today announced its **cloud agnostic, turnkey, full-stack embedded development solutions**. From the smallest PIC® and AVR® microcontrollers (MCUs) for sensors and actuator devices, to the most sophisticated 32-bit MCU and microprocessor (MPU) gateway solutions for edge computing, the company is now making it possible for developers to connect to any major core and any major cloud, using Wi-Fi®, Bluetooth® or narrow band 5G technologies – all while maintaining a strong security foundation through the support of its Trust Platform for the CryptoAuthentication™ family.

Microchip's already broad portfolio of IoT solutions now includes six additional solutions. Making their core, connectivity, security, development environment and debug capabilities easily accessible, all are designed to lower project costs and complexity in development:

- **PIC-IoT WA** and **AVR-IoT WA** **boards**: Two new PIC and AVR MCU development boards with a companion custom built rapid prototyping tool developed in collaboration with Amazon Web Services (AWS), helping designers natively connect IoT sensor nodes to the AWS IoT Core service via Wi-Fi
- **Gateway solutions running AWS IoT Greengrass:** Based on the latest wireless System On Module (SOM), the ATSAMA5D27-WLSOM1 integrates the SAMA5D2 MPU, WILC3000 Wi-Fi and Bluetooth combo module fully powered by the MCP16502 high performance Power Management IC (PMIC)
- **SAM-IoT WG:** Connects the Google Cloud IoT Core with Microchip's popular 32-bit SAM-D21 Arm® Cortex® M0+ range of microcontrollers
- **Azure IoT SAM MCU** based IoT development platform: Integrates the Azure IoT device SDK and Azure IoT services with Microchip's MPLAB® X development tools ecosystem
- **PIC-BLE and AVR-BLE boards**: Two new PIC and AVR MCU boards for sensor node devices that connect to mobile devices for industrial, consumer and security

applications and the cloud via gateways featuring Bluetooth Low Energy (BLE)
- **LTE-M/NB-IoT development kit:** Features Monarch chip-based modules by Sequans enabling coverage of IoT nodes and leveraging the latest low power, 5G cellular technology

"Microchip is building on its already comprehensive portfolio of tools and solutions to enable quick, easy development of secure IoT applications across the full spectrum of embedded control devices and architectures," said Greg Robinson, associate vice president of marketing for Microchip's 8-bit microcontroller business unit. "Our latest partnerships with Sequans, utilizing its 5G technology, and Microsoft Azure extend our dedication to developing innovative solutions."

"We are pleased that Microchip is adding the Azure IoT SAM MCU based IoT development platform to its IoT solutions portfolio," said Sam George, corporate vice president, Azure IoT, at Microsoft. "With Azure IoT services and Microchip's MPLAB X development tools ecosystem, customers can seamlessly connect IoT devices to the Microsoft Azure cloud."

Each solution is designed to focus on ease of use and rapid development for smart industrial, medical, consumer, agriculture and retail applications, with embedded security in mind. The vast selection of connectivity technologies, combined with the wide range of microcontroller and microprocessor performance and peripheral features, makes these solutions scalable across a wide range of markets.

Development Tools

Microchip's new IoT solutions build on the company's vast ecosystem of development tools, centered around the MPLAB X Integrated Development Environment (IDE). Code generators such as the MPLAB X Code Configurator (MCC) automate and speed up the creation and customization of the application code for the smallest PIC and AVR microcontrollers, while the Harmony software libraries support all 32-bit microcontroller and microprocessor solutions.

On-board and in-circuit programming and debugging features are provided on the PKOB Nano, requiring only a USB cable to power, debug and communicate. Larger solutions are supported by universal programmers and debuggers, the MPLAB PICkit™ 4 and MPLAB ICD 4. The ATSAMA5D27-WLSOM 1 comes with a set of free Linux distributions and by mainlining Microchip's patches to the Linux kernel, customers receive the full support of the open source community to create high-quality solutions.

Pricing and Availability

Microchip's new range of small sensor node development kits, IoT tools and solutions start at $29.00 in quantities of one. Ordering part numbers include:

- PIC-IoT WA Development Board for Wi-Fi connection to AWS IoT Core: **EV54Y39A**
- AVR-IoT WA Development Board for Wi-Fi connection to AWS IoT Core: **EV15R70A**
- SAMA5D27 and WILC3000-based wireless SOM supporting AWS IoT Greengrass: **ATSAMA5D27-WLSOM1**
- SAM-IoT WG: To be released in Q2 2020
- Azure IoT SAM MCU: To be released in Q2 2020
- PIC-BLE Development Board for Bluetooth Low Energy connection: **DT100112**
- AVR-BLE Development Board for Bluetooth Low Energy connection: **DT100111**
- LTE-M/NB-IoT Development Kit: To be released in Q3 2020

Please visit **www.microchip.com/IoT** to learn more.

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/49483671616

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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