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Introducing SAMA7D65 Microprocessors Available in System-in-Package and System-on-Chip with Advanced Graphics and Connectivity Features

Microchip's SAMA7D65 MPU runs 1 GHz Arm® Cortex®-A7 core and integrates MIPI DSI®, LVDS display interfaces and 2D GPU for Human-Machine Interface (HMI) applications

CHANDLER, Ariz., Feb. 26, 2025 (GLOBE NEWSWIRE) -- Embedded developers must address the challenge of designing systems that achieve a balance between compactness, energy efficiency and high performance. As applications grow more sophisticated with demands for advanced graphics and connectivity, offering multiple solutions ranging from SoCs to SiPs and SOMs simplifies and accelerates development timelines. Microchip Technology **(Nasdaq: MCHP)** today announces its portfolio of **SAMA7D65 MPUs based on the Arm® Cortex®-A7 core running up to 1 GHz and offered in a System-in-Package (SiP) with a 2 Gb DDR3L and System-on-Chip (SoC)**. The SAMA7D65 MPU series is designed to target Human-Machine Interface (HMI) and connectivity applications with its advanced graphic features.

The graphic features of the SAMA7D65 MPUs include LVDS, MIPI DSI® interfaces and 2D GPU. These high-performance features enable the transmission and processing of more data for efficient graphic performance, making it an optimal solution for HMI applications in industrial, medical and transportation markets.

Equipped with advanced audio and connectivity features, the SAMA7D65 MPUs include dual Gigabit Ethernet with Time Sensitive Networking (TSN) support, enabling precise synchronization and low-latency communication critical for real-time systems. These features target industrial and building automation HMI applications, where seamless data exchange and deterministic networking are essential for responsive and reliable user interfaces.

The SAMA7D65D2G SiP features 2 Gb DDR3L memory for high-speed synchronous dynamic random-access operations, while its low-voltage design reduces power consumption and enhances energy efficiency. SiPs are designed to accelerate the design process and time to market by pre-solving high-speed memory interface design considerations and simplifying memory supply.

"Raising the bar for HMI applications, the SAMA7D65 series combines advanced graphics capabilities, low latency and connectivity with optimized power consumption for an energy-efficient design," said Rod Drake, corporate vice president of Microchip's high-performance MCU and MPU business units. "Its integrated DDR3L SiP variant, the SAMA7D65D2G,

streamlines R&D efforts and minimizes logistical supply challenges, providing our customers with a seamless and efficient pathway from design to production."

The SAMA7D65 series targets applications with interactive touchscreen displays and complements Microchip's existing SAMA7G54 1 GHz Arm Cortex-A7 based MPU. Embedded developers using Microchip's MPUs can take advantage of Microchip Graphics Suite, a platform for building sophisticated Graphical User Interfaces (GUIs) and other graphics applications within MPLAB® Harmony v3 and Linux® software platforms. This comprehensive solution for designing GUI interfaces and other graphics applications helps designers improve reusability across projects and simplifies design complexities.

Microchip's portfolio of 32- and 64-bit Arm- and RISC-V-based MPUs offers powerful, flexible solutions for applications ranging from consumer products to space missions. In addition to its single- and multi-core SOM and SiP MPUs, Microchip offers other essential components for these applications, including connectivity, security, power management, timing and memory. For more information about the SAMA7D65 MPUs, visit the **web page**.

Development Tools

The SAMA7D65 MPUs are supported by **Microchip Graphics Suite (MGS)**, as well as other third party graphics tools. For customers developing RTOS or bare-metal systems, these MPUs are supported in **MPLAB Harmony v3**. Linux support is provided in Microchip's mainline Linux distribution. Additionally, to evaluate the SAMA7D65 series, the **SAMA7D65 Curiosity Development Board** is available.

Pricing and Availability

The SAMA7D65 MPUs are now available for purchase in production quantities. 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**. The SAMA7D65D2GN8 System on Module (SOM) is available for Early Access, for more information visit the **web page**.

Resources

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

- Application image: **www.flickr.com/photos/microchiptechnology/54306684502/sizes/l**

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Microchip Technology Inc. is a leading provider of smart, connected and secure embedded control and processing 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 over 100,000 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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