August 4, 2022

Microchip Expands Its Portfolio of MPU-Based System-on-Modules (SOMs) with the SAM9X60D1G-SOM

The latest small-form-factor SOM Eases Design and Manufacturing and Speeds Time to Market

CHANDLER, Ariz., Aug. 04, 2022 (GLOBE NEWSWIRE) -- As the embedded market continues to grow rapidly and evolve, developers are seeking to optimize product development, or they may need to transition from a microcontroller (MCU) to a microprocessor (MPU) to handle increased processing requirements. To help developers with this transition and reduce design complexities Microchip Technology Inc. **(Nasdaq: MCHP)** today announces it has expanded its portfolio of microprocessors system-on-modules (SOMs) with the **SAM9X60D1G-SOM ARM926EJ-S™-based embedded MPU** running up to 600 MHz. Software for the SAM9X60D1G-SOM is available with bare metal or RTOS support through MPLAB® Harmony3, or complete Linux® mainlined distributions.

The SOM, based on the SAM9X60D1G System in Package (SiP), is a small 28 mm × 28 mm hand-solderable module that includes the MPU and DDR in a single package, along with power supplies, clocks and memory storage. The SAM9X60D1G-SOM is Microchip's first SOM equipped with 4 Gb SLC NAND Flash to maximize memory storage of data in application devices, while the on-board DDR reduces the supply and price risks associated with memory chips. The small-form-factor SAM9X60D1G-SOM also includes an MCP16501 power management IC (PMIC), which simplifies the power design effort to a single 5V voltage rail to enable lower-power systems.

To offer the features an Ethernet-connected system might require, the SAM9X60D1G-SOM contains a 10/100 KSZ8081 Ethernet PHY and a 1 Kb Serial EEPROM with pre-programmed MAC address (EUI-48). Customers can further customize their design based on the level of security protection required such as secure boot with on-chip secure key storage (OTP), hardware encryption engine (TDES, AES and SHA) and True Random Generator (TRNG).

"With the SAM9X60D1G-SOM, designers can take advantage of a mid-level performance microprocessor and significantly reduce design complexities," said Rod Drake, vice president of Microchip's 32-bit MPU business unit. "This latest SOM provides customers a small-form-factor solution directly from Microchip and eases the logistics burden of separately procuring each of the six active components and numerous passives on the SOM."

The SAM9X60D1G-SOM is the newest addition to the existing portfolio of MPU-based SOMs built using a common set of proven Microchip components to reduce design

complexity and overall PCB costs. For example, because the complex devices are already routed on the SOM, customers can design their products using a low-cost, four-layer PCB.

The SOM and its components are backed by Microchip's client-driven obsolescence practice of continuing to supply a product for as long as possible and while demand for the product exists. This is particularly important in today's semiconductor climate of high demand and supply constraints.

The SAM9X60D1G-SOM is designed for many MPU32 end applications across a variety of industries such as medical equipment, automotive telematics and infotainment systems, electric vehicles chargers, industrial and automation control and more. It is also particularly well-suited for products designed for providing computing capabilities with multiple communication interfaces that are qualified once and then customized for separate projects.

Development Tools

Microchip provides both hardware and software development support for the SAM9X60D1G-SOM including the SAM9X60D1G Curiosity Evaluation Kit (CPN: EV40E67A) featuring three Linux distributions: BuildRoot, Yocto and OpenWRT. The bare-metal or RTOS-based systems are supported by MPLAB® Harmony 3 embedded software framework, MPLAB X Integrated Development Environment (IDE) and MPLAB XC32 compiler.

Pricing and Availability

The SAM9X60D1G-SOM (PN SAM9X60D1G-I/LZB) is available for $42.96 each in 5,000-unit quantities. To purchase, contact a Microchip sales representative, authorized worldwide distributor or 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: **www.flickr.com/photos/microchiptechnology/52227300383/sizes/l**

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**.

Editorial Contact:
Kim Dutton
480-792-4386
Kim.Dutton@microchip.com

Reader Inquiries:
1-888-624-7435

Source: Microchip Technology Inc.