Micro-controller runs at 400 MHz

STMicroelectronics has released the STM32H7 series of micro-controllers, which embeds the highest SRAM memory (1 MiB) of the STM32 platform. The MCUs support CAN FD.

(Photo: STMicroelectronics)

Central to the STM32H7's leap in capability is ST's 40-nm chip-fabrication process combined with innovations in the product architecture, enabling fast data transfers through the system while consuming less than 280 uA/MHz in run mode and less than 7 uA in stand-by.

The first device in the new series is the STM32H743, which features the ARM Cortex-M7 core running at 400 MHz. This MCU is the highest-performing implementation of ARM's highest-performing Cortex-M core currently in the market. It draws on a pool of 35 communication peripherals that support advanced protocols and standards such as CAN FD.

The STM32H7 micro-controllers are suitable for industrial gateways, home automation, telecom equipment, and smart consumer products, as well as high-performance motor controls, domestic appliances, and small devices with rich user interfaces. Integrated security features, including cryptographic accelerators and provision for secure-key storage, provide connected objects with protection against online threats both during the manufacturing and in the field.

"The diversity of IoT and embedded applications demands scalable MCU solutions," said James McNiven, general manager for CPU and media processing groups, ARM. "The advanced capabilities of the H7 series will enable developers to address the high end of the embedded market while delivering all of the efficiency and ease-of-use benefits of an ARM Cortex-M based device."

Michel Buffa, General Manager, Microcontroller Division, STMicroelectronics, added, "In addition to its industry-leading execution performance, the STM32H7 series also significantly increases on-chip resources while realizing power savings that are vital for future generations of embedded systems and offering top-notch protection from threats and intrusions. The dramatically increased memory density, in particular, eliminates traditional constraints on developers and so accelerates time to market for exciting new products."

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