Flash microcontroller family includes advanced connectivity peripherals and floating point unit

Atmel Corporation announced it has expanded its ARM Cortex-M4 based Flash family to include the SAM4E series [1], which features advanced connectivity peripherals, a floating point unit (FPU), advanced analog capabilities, and higher processing power.

This rich mix of features make the SAM4E devices [1] ideal for the industrial automation, home and building control, machine-to-machine communications, automotive aftermarket and energy management applications.

Atmel SAM4E ARM Cortex-M4 processor-based MCUs offer more processing power with a maximum operating frequency of 120MHz, a FPU and an integrated cache providing zero wait state flash access at full speed. The SAM4E includes embedded flash memory up to 1MB, safety and security features, and extensive communication links such as Ethernet IEEE1588 MAC, USB 2.0 device and dual CAN. The high performance and high-system integration of the SAM4E addresses the growing application requirements for high-speed wired and wireless communications.

The advanced analog technology on the device includes two independent 16-bit ADCs offering dual sample and hold capability, offset and gain error correction, programmable-gain amplifier enabling measurement of a wide input signal range with high precision.

“Industrial applications that serve the manufacturing automation market, such as programmable logic controller (PLC), require microcontrollers that deliver higher performance, advanced connectivity and better analog capability,” said Ingar

Fredriksen, Sr. Director of Microcontroller Products, Atmel Corporation. “The new Atmel SAM4E series addresses these specific requirements with a unique combination of just that - more connectivity, higher performance with a floating point unit and advanced analog. The new ARM Cortex-M4 series rounds out our diverse ARM product portfolio to offer designers a full breadth of devices based on the popular ARM core.”

To help accelerate a designer’s project, the SAM4E series, is supported by the Atmel Studio 6 integrated development platform (IDP). Available as a free download, Atmel Studio 6 [2] includes the Atmel Software Framework, a complete library of source code, project examples, drivers and stacks. The IDP also features the Atmel Gallery app store [3] for embedded tools and extensions and the Atmel Spaces collaborative workspace [4] for software and hardware projects based on Atmel microcontrollers.

Pricing, availability, & technical specs
SAM4E series is available in two memory options 512KB and 1MB in BGA and QFP packages.
Pricing for the SAM4E series starts at $5.10 USD for 1,000-piece quantities.

The new SAM4E 1MB is sampling now, with general availability in February 2013. The ATSAM4E-EK evaluation kit is available now to support the SAM4E device enabling design engineers to begin prototyping and get a head start on their designs.

Atmel SAM4E Series:
http://www.atmel.com/products/microcontrollers/arm/sam4e.aspx [1]

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http://www.ecnmag.com/product-releases/2013/01/flash-microcontroller-family-includes-advanced-connectivity-peripherals-and-floating-point-unit?qt-recent_content=0&qt-most_popular=0

Links:
[1] http://www.atmel.com/products/microcontrollers/arm/sam4e.aspx
[2] http://www.atmel.com/studio6
[3] http://gallery.atmel.com/
[4] http://spaces.atmel.com