Performance boost to STMicroelectronics' cost-efficient STM32C0 series

New STM32C071 devices bring larger Flash and RAM, USB, and TouchGFX graphics, enabling slimmer, trimmer, and more competitive product designs

STM32C0 MCUs

GENEVA, SWITZERLAND, September 17, 2024 /EINPresswire.com/ -- STM32 developers can now get more memory and extra features in STM32C0 microcontrollers (MCUs) to support more sophisticated functionality in resource-constrained and cost-sensitive embedded applications.

Bringing up to 128Kbyte of Flash and 24Kbyte of RAM, the STM32C071 MCUs also add USB Host and crystal-less Device as well as TouchGFX support. With USB on-chip, designers can easily save at least one external clock and four decoupling capacitors to cut the bill of materials and ease PCB layout. Also, having only one power-supply pair helps to simplify the PCB design. New product designs can become slimmer, trimmer, and more competitive.

STM32C0 MCUs feature the Arm® Cortex®-M0+ core and can replace legacy 8-bit or 16-bit MCUs in equipment like home appliances, simple industrial controls, power tools, and IoT devices. As a cost-effective 32-bit option, they provide more performance, memory, and peripheral integration for functions such as user-interface control, as well as other basic controls, timing, computation, and communications.

Also, developers can accelerate development with STM32C0 MCUs by taking advantage of the powerful STM32 ecosystem that provides extensive tools, software packs, and evaluation hardware. And, of course, connecting with the STM32 user community. Scalability is another strong feature as the STM32C0 series shares key attributes with ST's higher-performing

STM32G0 MCUs, including the Cortex-M0+ core, peripheral IP, and most compact pinout with maximum I/O ratio.

“We conceived the STM32C0 series as an affordable entry point to 32-bit embedded computing. With larger memory options and USB Host/Device on-chip, the STM32C071 line now gives more flexibility to upgrade existing applications and create new products,” said Patrick Aidoune, General Purpose MCU Division General Manager, STMicroelectronics. “Also, with full support in TouchGFX GUI software, these MCUs simplify elevating user experiences with graphics, animation, color, and touch.”

Two customers for the STM32C071, Team Source Display (TSD) headquartered in Dongguan, China, and Riverdi Sp. of Gdańsk, Poland, have completed their first projects with the new STM32C071 MCUs. Both are ST Authorized Partners.

TSD chose the STM32C071 to control a complete 240x240-resolution knob display module, including the knob’s 1.28-inch circular LCD and position-coding electronics. Roger L.J, TSD’s COO, comments, “The MCU is cost-efficient and easy for our developers to use, enabling us to deliver a competitively priced and transformative product for home appliances, smart-home devices, car controls, beauty equipment, and industrial controls.”

Kamil Kozłowski, co-CEO of Riverdi, describes his company’s 1.54-inch LCD module that combines high optical clarity and brightness with very low power consumption. “Our customers can integrate our new display modules easily in their own projects, benefiting from the STM32C071’s simplicity and affordability. We designed the modules to connect directly with the STM32 NUCLEO-C071RB development board, and created TouchGFX graphics demonstration projects, taking advantage of the excellent ecosystem.”

The STM32C071 MCUs are in production now, priced from $0.53 in the TSSOP20 package and $0.73 in LQFP64 for orders of 1000 units. ST’s longevity program ensures STM32C0 MCUs will be available for up to 10 years from the date of purchase, to support ongoing production and field-maintenance requirements.

Please visit https://www.st.com/stm32c0 for more information.

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