

NEC Electronics Introduces Twelve New 16-bit Microcontrollers with USB 2.0 Functionality

Enables High-Speed Data Transfer and Offers Industry-Leading Low-Power Consumption

KAWASAKI (Japan), SANTA CLARA, Calif. (USA), DUESSELDORF (Germany), January 29, 2010—NEC Electronics (TSE: 6723) today announced the availability of twelve new 16-bit All Flash™ microcontrollers (MCUs) with built-in Universal Serial Bus (USB) 2.0 functionality and industry-leading low-power consumption. The new offering includes six 48-pin MCUs (78K0R/KC3-L) and six 64-pin MCUs (78K0R/KE3-L) with flash memory options ranging from 64 kilobytes (KB) to 128 KB.

USB 2.0 is an interface standard initially used in PCs and peripherals. With its high-speed transfer mode and connectivity, USB 2.0 is now widely used in consumer electronics devices such as digital audio/video equipment and healthcare products, as well as factory automation equipment. Many of these applications require systems that are battery-driven, such as portable audio players and blood glucose meters. System designers of these products are concerned about power consumption and battery life. To address these concerns, NEC Electronics implemented USB functionality on its industry-leading low-power 78K0R/Kx3-L family of MCUs to maximize product and battery life and minimize power consumption.

Key Features:

(1) Wide range of USB solutions including USB drivers

NEC Electronics offers USB-function drivers to handle device-specific functionality and other related tasks. Starter kits with USB evaluation boards, development environments, sample software and documentation are scheduled to be available in February 2010. Certified by the USB Implementers Forum (USB-IF), NEC Electronics' new MCUs offer manufacturers and consumers the assurance they will function in accordance with the specification and will interoperate with existing USB-enabled devices on the market today.

(2) Industry-leading low-power consumption

The new MCUs combine NEC Electronics' ultra-low-power 78K0R/Kx3-L 16-bit CPU with NEC Electronics' USB 2.0 function controller. Achieving a low standby-power consumption of 1.2 microwatts (μ W), the MCUs also enable a low-active CPU-operation power consumption of 20 milliwatts (mW) at 20 megahertz (MHz).

(3) Wide mix of peripherals

In addition to USB functionality, the products come with a mix of advanced MCU peripherals including 10-bit A/D converters, 16-bit timers, real-time clock, watch-dog timer, 16-bit pulse-modulator (PWM), I²C (inter-integrated circuit) and UARTs.

More information about the new MCUs can be found at

http://www.am.necel.com/micro/product/device_overview.php?category=16-bit-USB-AllFlash.

Pricing and Availability

Samples of the new MCUs are currently available with mass production scheduled to begin in the second quarter of 2010. Suggested distribution resale pricing for 10,000-unit quantities ranges from US\$3.40 to US\$4.55, depending on memory size, package and peripherals.

(Pricing and availability are subject to change without notice.)

#1 Supplier Worldwide for 32-bit Microcontrollers

NEC Electronics Corporation has retained the number one supplier ranking for 32-bit microcontrollers (MCUs) worldwide based on revenue in 2007 and 2008 as ranked by Gartner in its April 2009 report. In addition, the company has moved into the number one position for 32-bit automotive MCUs; the number two position for overall MCUs, and the number two position for 8-bit MCUs. More information can be found at

<http://www.am.necel.com/micro>.

Leadership in USB

NEC Electronics Corporation is a leading supplier of USB solutions for customers worldwide and was the industry's first company to introduce a USB 2.0 host controller and hub controller, as well as the first USB-IF-certified USB 3.0 host controller. With a USB 2.0 product line-up that includes ASSPs and ASICs, the company has shipped more than 150 million units worldwide and continues to be a leader in the development of interface technology. More information about NEC Electronics' USB technologies can be found at

<http://www.am.necel.com/usb>.

About NEC Electronics Corporation

NEC Electronics Corporation (TSE: 6723) specializes in semiconductor products encompassing advanced technology solutions for the high-end computing and broadband networking markets; system solutions for the mobile handset, PC peripheral, automotive and digital consumer markets; and multi-market solutions for a wide range of customer applications. NEC Electronics Corporation has subsidiaries worldwide including NEC Electronics America, Inc. (www.am.necel.com) and NEC Electronics (Europe) GmbH

(www.eu.necel.com). More information about NEC Electronics worldwide can be found at www.necel.com.

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