

NEC Electronics Expands ECOUSB Host, Peripheral Controller Features for Portable Consumer and Industrial Electronics

USB Software Support for Embedded Applications from SEGGER Microcontroller Added

SANTA CLARA, Calif., (U.S.A.), DUESSELDORF, Germany, May 4, 2009 -NEC Electronics America, Inc. and NEC Electronics (Europe) GmbH today announced enhancements to the USB 2.0 host and peripherals controller, the μ PD720150, adding new drivers, software and industrial temperature range support for consumer electronics and industrial applications.

Announced in June 2008 as part of NEC Electronics' ECOUSB lineup, the μ PD720150 device was initially designed to enable high-speed digital data sharing among various consumer electronic products, such as digital cameras and printers. By expanding the device's operating temperature range from -40 to +85 degrees Celsius, the USB 2.0 host and peripherals controller now offers support for portable electronics devices that need to operate in indoor and outdoor ambient environments as well as in industrial control applications. As part of the enhancement, NEC Electronics engaged with embedded software tool developer, SEGGER Microcontroller, to provide its USB host and device stack, the emUSB for the enhanced μ PD720150 controller. emUSB is designed for use with any real-time operating system (RTOS), including SEGGER's proprietary RTOS, the embOS.

"In addition to working with the USB community to establish new USB standards, NEC Electronics continues to develop and promote the established USB 2.0 specification," said Kats Nakazawa, general manager, digital consumer and connectivity strategic business unit, NEC Electronics America. "Expanding the operating range to support a broader spectrum of ambient temperatures and adding SEGGER's embedded software solutions will facilitate even wider adoption of the USB 2.0 interface for portable electronics and industrial-control applications."

"NEC Electronics brings a long history of success with USB 2.0 product shipments, and we are pleased to collaborate with the company to help drive mainstream adoption of the USB 2.0 specification with the integration of SEGGER's popular embedded development tool suite, providing cost-effective USB stack solutions for numerous embedded applications running any commercially available or proprietary RTOS," said Souhail Rifai, emUSB Project Manager, SEGGER Microcontroller.

NEC Electronics' single-chip μ PD720150 controller integrates communications functions that formerly required separate USB host and peripheral controller chips, thereby helping to reduce device count and conserve board space. The controller executes high-speed data transfers at rates up to 480 megabits per second (Mbps) and also supports rapid software development by providing basic USB functions that have been implemented in hardware, in addition to a general-purpose 16-bit CPU bus interface that enables connection to a variety of embedded CPUs. A member of NEC Electronics' ECOUSB series of USB devices that are manufactured with eco-friendly materials, the μ PD720150 chip further helps to minimize environmental impacts by employing advanced power management techniques that can reduce power consumption in end products. The μ PD720150 device is RoHS compliant and available in a 6 x 6 millimeter (mm), 84-pin plastic fine ball grid array (FBGA) package and a 12 x 12 mm, 80-pin plastic fine-pitch, thin quad flat pack (TQFP) package.

Leadership in USB

NEC Electronics 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. With a USB 2.0 product lineup 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. NEC Electronics is a USB-IF board member, which manages the compliance and certification program, branding, marketing and industry education of USB and Wireless USB technologies.

More information about NEC Electronics' USB technologies can be found at <http://www.necel.com/usb/en/index.html>.

About NEC Electronics America, Inc.

NEC Electronics America, Inc., headquartered in Santa Clara, California, is a wholly owned subsidiary of NEC Electronics Corporation (TSE: 6723), a leading provider of semiconductor products encompassing advanced technology solutions for the broadband and communications markets; system solutions for the mobile, PC, automotive and digital consumer markets; and multi-market solutions for a wide range of consumer applications. NEC Electronics America offers local manufacturing in Roseville, California, and the global manufacturing capabilities of its parent company. In the Americas, NEC Electronics America markets and sells industrial-type active-matrix LCD modules from NEC LCD Technologies, Ltd., a global leader in innovative display technologies. More information about the products offered by NEC Electronics America can be found at <http://www.am.necel.com>.

About NEC Electronics (Europe) GmbH

NEC Electronics (Europe) GmbH, headquartered in Duesseldorf, Germany, is a leading developer and supplier of semiconductor products in Europe. Committed to meeting customers' cost, performance and time-to-market requirements, the company offers solutions ranging from standard products to system-on-a-chip (SoC) solutions, as well as customized products for next-generation designs. Our customers also benefit from state-of-the-art manufacturing from the global production network of our parent company, NEC Electronics Corporation. Additionally, NEC Electronics (Europe) GmbH is the exclusive European sales and marketing channel of LCD modules from NEC LCD Technologies Ltd. For more information, visit <http://www.eu.necel.com>.

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