

NEC Electronics America Announces Release of Complete Microcontroller Abstraction Layer Based on AUTOSAR Release 3.0/3.1

DUESSELDORF (Germany), SANTA CLARA, Calif. (U.S.A.), February 25, 2009

– NEC Electronics (Europe) GmbH and NEC Electronics America, Inc. today released a complete microcontroller abstraction layer (MCAL) compliant with the AUTOSAR Release 3.0/3.1 software specification. The companies are the first suppliers to launch an MCAL according to this version of the AUTOSAR standard. The MCAL has been available since November 2008 for NEC Electronics' V850E/PHO3™ microcontrollers (MCUs) and is scheduled to be available for its V850ES/Fx3™ MCUs in February 2009. Both MCUs are based on NEC Electronics' 32-bit V850™ CPU core.

The MCAL software contains all AUTOSAR module drivers including the device driver for FlexRay™ technology. To match exceptional quality standards of the hardware, the MCAL software was developed using software processes compliant with the exacting CMMI and automotive SPICE evaluation systems.

Since the end of 2007, the AUTOSAR standard has been available as Release 3.0 and has been expanded in many areas compared to Release 2.1. For instance, developers have harmonized the concept for wake-up of ECUs and start-up of networks in the vehicle and have introduced state managers for the CAN and LIN bus systems and FlexRay system. As an active member in the AUTOSAR partnership, NEC Electronics Europe and NEC Electronics America are pleased to support these new and enhanced features.

Gerd Look, general manager, Automotive Business Group, NEC Electronics Europe, points out that "as a semiconductor vendor, NEC Electronics knows its own microcontroller hardware best. It's completely logical for NEC Electronics to supply the hardware-dependent software modules. This ensures the best possible software implementation for our microcontrollers, minimizing memory use and maximizing performance"

In line with this approach, NEC Electronics has in recent years developed MCALs compatible with AUTOSAR standards from Release 2.0 on many platforms. This practical experience has flowed into the development of the AUTOSAR Release 3.0/3.1 MCAL. As a result, NEC Electronics Europe and NEC Electronics America are pleased to offer a highly optimized, high-quality software product ready for use in mass production. This demonstrates the full commitment of the companies to the AUTOSAR standard, in line with a clear trend in the automotive industry.

Availability

The MCAL has been available for NEC Electronics' V850E/PHO3 MCUs since November 2008 and is scheduled to be available for the company's V850ES/Fx3 MCUs in February 2009. (Availability is subject to change without notice.)

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>.

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>.

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