NEC Electronics Introduces Four New 8-bit LCD Microcontrollers with Integrated Metrology Engine for Smart Electricity Meters

KAWASAKI (Japan), SANTA CLARA, Calif. (U.S.A.), DUESSELDORF (Germany), December 11, 2009 – NEC Electronics (TSE: 6723) today announced the availability of four new 8-bit All Flash™ LCD microcontrollers (MCUs) with an integrated metrology engine providing energy measurement and management functions for smart electricity meters. The new chips will simplify smart meter designs for homes around the world, contributing to efficient energy usage and reducing the emission of greenhouse gases. The 64-pin 78K0/LE3-M microcontroller comes in a 10 millimeter (mm) x 10mm low-profile quad flat package (LQFP) and is designed for single-phase 2-wire electricity meters, while the 100-pin 78K0/LG3-M microcontroller comes in a 14mm x 14mm LQFP and is designed for single-phase 3-wire electricity meters.

Most of the 2.5 billion electricity meters in use today are primitive electromechanical devices that require manual reading of energy usage. Smart electricity meters, a key component of smart grid systems, have communication capabilities that facilitate automatic meter reading and enable utility providers to manage energy supply and demand, ensuring a stable and efficient power grid.

NEC Electronics' 78K0/Lx3-M microcontrollers simplify smart electricity meter designs by offering a rich set of integrated analog and digital peripherals. The metrology engine consists of a high-precision 24-bit ΔΣ (delta-sigma) analog-to-digital (A/D) converter; power calculation hardware with calibration capability; power quality-management circuits to detect power outages, current peaks, and voltage peaks; and anti-tampering circuits to ensure the integrity of power usage data. The devices also come with an LCD controller, able to drive up to a 160-segment display, and Flash memory ranging from 16 kilobytes (KB) to 60 KB. The 78K0/Lx3-M microcontrollers can manage communication sub-systems through various serial interfaces.

Pricing and Availability

Samples of the new MCUs are scheduled for availability in January 2010, and pricing varies depending on memory capacity. Suggested distribution resale pricing for 10,000-unit quantities starts at $3.45 each. Mass production is scheduled to begin in the second quarter of 2010. More information about the new LCD MCUs can be found at http://www.am.necel.com/micro/product/device_overview.php?category=8-bit-ASSP-AllFlash. NEC Electronics' extensive MCU product offerings can be found at

http://www.am.necel.com/micro/. (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.

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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