

NEC Electronics America Illuminates LED Lighting Innovations at Strategies in Light Conference 2010

Visit Booth #501 for Flexible Control, Networked, Multi-Color and Other LED Demonstrations

SANTA CLARA, Calif., February 8, 2010 – NEC Electronics America, Inc. today announced it will showcase the breadth and depth of its expertise in LED lighting technologies during the Strategies in Light Conference 2010 (booth #501), February 10-12, at the Santa Clara Convention Center. Demonstrations will highlight the company's cost-competitive, intelligent digital-control solutions for a range of high-brightness (HB)-LED lighting applications, including street lighting, entertainment and architectural lighting, and residential and commercial retrofitted lighting.

In keeping with the theme of this year's conference, "Entering a New Era for LED Market Growth," the company will demonstrate multiple lighting applications:

- 1. DALI (Digital Addressable Lighting Interface).** DALI is a digital protocol for the control of lighting in buildings, such as electrical ballasts and dimmers. NEC Electronics America will feature its 78K0/1x2 microcontroller (MCU) in conjunction with a commercial DALI lighting control to demonstrate networked HB-LED lighting for a commercial environment. As shown in this demonstration, the DALI lighting controls send commands to the MCU, which in turn receives the commands, interprets them and drives the HB-LEDs accordingly.
- 2. DMX512.** DMX512 is a standard for digital communication networks that are commonly used to control stage lighting and effects. To illustrate the precise control required by entertainment and architectural applications, NEC Electronics America's multi-color LED demonstration will feature the 78K0/1x2 MCU and a commercial DMX512 controller for network lighting control, color sequencing, programmability and dimming sequencing capabilities.
- 3. Street lighting.** NEC Electronics America will demonstrate how to leverage up to four individual channels of HB-LEDs for street lighting applications. The multi-channel configurability provides additional reliability and output power for this type of application, which requires constant, consistent lighting. The demonstration features NEC Electronics' HCD/LED MCU with an integrated four-channel LED driver, as well as networked lighting control via protocols, such as PLC and wireless (ZigBee®), to demonstrate support for the growing trend toward networked street lighting.
- 4. LED TRIAC dimmer.** In the TRIAC dimmer, NEC Electronics' 78K0/1x2 MCU tackles the challenge of using a commercial TRIAC dimmer to dim LED lights. The MCU also manages

converting AC-to-DC power, power factor correction and constant high-current LED drive. As a flash-based MCU, the 78K0/1x2 device also offers flexibility in lighting control and programmability, as well as network lighting control with the support for current and emerging networking protocols (e.g. DALI, DMX512, ZigBee and PLC).

The street lighting and TRIAC dimmer demonstrations are also available as reference designs for customer development.

"LED technologies are popping up in several new lighting application areas, such as networked street lighting, which require solutions that enable flexibility while maintaining reliability and competitive costs," said Bob Pinteric, general manager, Multipurpose Microcontroller Strategic Business Unit. "NEC Electronics' 8-bit 78K0/1x2 and HCD/LED MCUs offer lighting designers varying integration levels and multiple topologies to meet their changing design needs. The solutions also enhance NEC Electronics' "smart energy" vision, interfacing with protocols such as PLC and ZigBee for the networked environment."

NEC Electronics America also will host a daily raffle in its booth (#501) at the end of the exhibition day. (Winners do not need to be present to win.)

Information about NEC Electronics America's LED driver ICs and power MOSFETs for LED applications also will be available in the company's booth (#501). Additional information about NEC Electronics' lineup of lighting control solutions can be found at <http://www.am.necel.com/applications/lighting/>.

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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