

# NEC Electronics Expands Lineup of EMMA Mobile 1 System-on-Chip For Portable Audio/Visual Devices

## Features Reduction in System Development Time and Board Space

**KAWASAKI, Japan, DUESSELDORF, Germany, SANTA CLARA, Calif. (U.S.A.), May 12, 2009**--NEC Electronics today announced the availability of a new EMMA Mobile™ 1 series of system-on-chips (SoCs), the EMMA Mobile 1-D, for use in portable audio/visual (A/V) devices such as multimedia players and mobile televisions.

The EMMA Mobile 1-D device is a single-chip solution that integrates all the features necessary for playing multimedia content. It is particularly targeted for the mobile device market and has a reduced package size of 12.7 millimeters (mm) x 12.7mm, approximately 20 percent smaller in package size than previous NEC Electronics mobile SoC products. The EMMA Mobile 1-D also integrates embedded DRAM in the same package, greatly reducing the effort of mobile device system designers and improving the time-to-market for product deployment.

The EMMA Mobile 1-S, an SoC without embedded DRAM, is also available, which enables the flexibility of memory configuration to adopt several applications.

According to Techno Systems Research 2008, the worldwide market for portable A/V devices, such as multimedia players and mobile televisions, has been growing rapidly, from 10.0 million units in 2007 increasing at an annual rate of 35 percent to an expected 25.0 million units in 2010. At the same time, the features and performance of embedded digital still cameras and digital video cameras have been improving remarkably as well. These evolving portable A/V devices are expected to create a new market that offers robust multimedia processing capability.

NEC Electronics has a proven track record of developing its successful EMMA SoC product lines to enable advanced home digital AV appliances such as digital televisions and DVD recorders. As a result from the same expertise in hardware and software technologies, NEC Electronics introduced the EMMA Mobile 1 device in November 2008 as a new member of the mobile multimedia processor product line. The EMMA Mobile 1 product incorporates a high-end ARM CPU core ARM1176JZF-S™, a dedicated digital signal processing (DSP) core, and an advanced H.264 function block. As a mobile-phone SoC provider, NEC Electronics also implements its state-of-the-art low power technology into the EMMA Mobile 1, capable of decoding and playback of MP3 and AAC audio and video contents on a D1-size screen (720 x 480 pixels) at 30 fps, at an outstanding level of low-power state.

The EMMA Mobile 1-D SoC will meet the stringent design and features-rich requirements for today's mobile digital AV devices. It also will enable NEC Electronics to focus strategically on the portable devices market, providing customers with a solution to design high-performance, competitive products with incredibly short time-to-market. An evaluation kit will be available through collaboration with partner companies.

Main specifications of NEC Electronics' EMMA Mobile 1 SoC can be found at [http://www.necel.com/mobile/en/emma\\_mobile/index.html](http://www.necel.com/mobile/en/emma_mobile/index.html).

### **Pricing and Availability**

Samples of NEC Electronics' EMMA Mobile 1-D and EMMA Mobile 1-S devices are available now, priced at US\$40 and US\$30, respectively. Volume production is scheduled to begin in October 2009, and monthly production is expected to reach approximately 1,000,000 units. Pricing and availability are subject to change.

### **Exhibition at ESEC**

NEC Electronics plans to exhibit the EMMA MOBILE 1 in NEC's booth (Hall East, Stand 48-50) at the Embedded System EXPO & Conference (ESEC) to be held in Tokyo, Japan from May 13-15, 2009.

(Note)

30fps: A measurement generally used to indicate the imaging performance. The value of fps indicates the number of frames per second.

### **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](http://www.am.necel.com)) and NEC Electronics (Europe) GmbH ([www.eu.necel.com](http://www.eu.necel.com)). More information about NEC Electronics worldwide can be found at [www.necel.com](http://www.necel.com).

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