

IBM News Room

## **NEC Electronics and Toshiba Extend Chip Technology Development Agreements with IBM**

### **Join IBM technology alliance's 28nm, low-power process technology development program**

PRNewswire-FirstCall  
EAST FISHKILL, N.Y., KAWASAKI and TOKYO, Japan

IBM Corporation, NEC Electronics Corporation and Toshiba Corporation announced that NEC Electronics and Toshiba have extended technology development agreements with IBM to participate in the development of a 28-nanometer (nm), high-k metal gate (HKMG), low-power chip technology geared for consumer products.

(Logo: <http://www.newscom.com/cgi-bin/prnh/20090416/IBMLOGO> )

NEC Electronics and Toshiba join the IBM technology alliance to develop a 28nm bulk complementary metal oxide semiconductor (CMOS) process technology. The alliance, based at IBM's facility in East Fishkill, New York, now includes Chartered Semiconductor Manufacturing Ltd., GLOBALFOUNDRIES, Infineon Technologies, NEC Electronics, Samsung Electronics, Co., Ltd., STMicroelectronics, and Toshiba.

The low-power, 28nm technology can contribute to faster processing speed and longer battery life in next-generation mobile communication devices and other consumer electronics applications.

The 28nm alliance builds on the success of earlier joint development work in 32nm HKMG technology. Clients can transition to 28nm technology without the need for a major redesign, with lower risk, reduced cost and faster time-to-market. Internal test results have shown the power-efficient advantages of HKMG and device performance that meets or exceeds competitive targets.

"NEC Electronics and Toshiba bring significant skills and resources that will help ensure development of an industry-leading 28nm technology offering," said Gary Patton, vice president for IBM's Semiconductor Research and Development Center. "Together, the alliance partners will deliver a high-performance, energy efficient technology to enable a full range of multifunction, power-sensitive mobile and consumer electronics."

Toshiba joined the IBM bulk semiconductor process technology development alliance in December 2007 and NEC Electronics joined in September 2008.

"The advanced 28nm low-power process technology will dramatically enhance the product's density, performance, as well as power consumption compared to the former 40nm node, providing highly competitive solutions, especially in the fields of consumer electronics and automotive," said Masao Fukuma, senior vice president of NEC Electronics. "Utilizing this process technology with NEC Electronics' proprietary eDRAM, high-reliability, and low-power consumption technologies, we will focus on being the first to market with the SoC products that can meet our customers' expectations with added value."

"This alliance brings together industry leaders in advanced process technology," said Mr. Masakazu Kakumu, corporate vice president of Toshiba Corporation and vice president of Toshiba Semiconductor Company's System LSI Division. "The program supports our efforts to maximize R&D efficiency, and we will apply its results

to offering our customers a new generation of high quality products delivering better performance with lower power consumption."

For recent news on IBM's Semiconductor Alliance partners please see: [newsroom.ibm.com/2009-04-16-IBM-Technology-Alliance-Announces-Availability-of-Advanced-28-Nanometer-Low-Power-Semiconductor-Technology](http://newsroom.ibm.com/2009-04-16-IBM-Technology-Alliance-Announces-Availability-of-Advanced-28-Nanometer-Low-Power-Semiconductor-Technology)

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About NEC Electronics: Visit NEC Electronics' web site at [www.necel.com/en/](http://www.necel.com/en/)

About Toshiba: Visit Toshiba's web site at [www.toshiba.co.jp/index.htm](http://www.toshiba.co.jp/index.htm)

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