

# Toshiba, NEC to Collaborate on 45-nanometer Technologies

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Toshiba Corporation and NEC Electronics Corporation today announced that they have agreed to collaborate on the development of CMOS logic process technology for the 45-nanometer generation.

As advances in semiconductor process technologies become more complex, time consuming and expensive, the joint development will allow the companies to share burdens and accelerate development, while raising system LSI performance and quality.

Under the terms of the agreement, engineers from Toshiba and NEC Electronics will collaborate at Toshiba's Advanced Microelectronics Center in Yokohama on development of fundamental CMOS process technology, which both companies will be able to implement at their manufacturing facilities. The companies will also separately discuss how to handle the development of value-added and differentiated process technologies.

In the leading edge system LSI business, process technologies are shrinking to achieve high-speed, low-power system LSI for application in digital consumer products and mobile communication equipment, and products with 90nm technologies are entering volume production. To achieve further improvements in performance and power consumption, 65nm and even 45nm process technologies are now being developed. Achievement of 45nm system LSI will demand more development resources than ever, and system LSI companies worldwide are promoting collaboration to achieve more efficient development.

In this environment, Toshiba and NEC Electronics will integrate process technologies they have heretofore developed individually, and share newly-developed technologies.

The companies have also begun to discuss comprehensive collaboration in development, such as design environments and product development, as well as collaboration in manufacturing to achieve more efficient use of capital investment and increase capacity utilization rates.

Toshiba and NEC Electronics expect the joint effort to reduce development burdens and to shorten turn-around times for highly advanced system LSI. Toshiba sees future increases in utilization rates at its most advanced system LSI production facility, while NEC Electronics expects to focus on the development of value-added system LSI products, by focusing on differentiated process technologies.

Beginning with this joint development for 45nm system LSI process technology, Toshiba and NEC Electronics have begun to discuss a comprehensive alliance, and through the development and mass-production of excellent system LSI products, aim for leadership in the global semiconductor industry.

Source: Toshiba

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