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## AMD Unveils Improved Opteron Processors

By Jay Lyman  
TechNewsWorld  
08/15/06 2:32 PM PT

AMD this week unveiled new versions of its Opteron dual-core server chips. The company touted greater power efficiency and virtualization capabilities for its Rev F processors. The firm's announcement was widely viewed as a countermeasure to rival Intel's newest Core 2 Duo processors unveiled late last month.

[Advanced Micro Devices](#) (NYSE: AMD) rolled out new and improved versions of its dual-core Opteron server processors this week, touting better power efficiency and virtualization capabilities.

AMD said its new Rev F chips will carry it through to the end of the year, when it plans to make the transition to quad-core processors. [Hewlett-Packard](#) (NYSE: HPQ), [IBM](#) (NYSE: IBM) and [Sun Microsystems](#) (Nasdaq: SUNW) are among a list of vendors that have announced plans to sell servers equipped with the chips.

### Anticipating Quad Core

AMD highlighted performance-per-watt gains and virtualization advances with its Direct Connect microprocessor architecture; the Rev F chips are equipped with a new high bandwidth socket, which makes it possible to upgrade to quad-core functionality with the chips in the future.

"Today's announcement represents continued innovation along the customer-directed path we blazed years ago," said AMD Server and Workstation Division [Vice President](#) Randy Allen. "We provide the complete x86 processor architectural standard for others in the industry to emulate and have planned a seamless upgrade path to quad-core processors."

The firm's announcement was widely viewed as a countermeasure to rival [Intel's](#) (Nasdaq: INTC) [newest Core 2 Duo processors](#) unveiled late last month.

AMD managed to beat Intel to a dual-core processor release with Opteron last year, but Intel, aggressively seeking to retake the industry lead in cutting-edge [technology](#), announced last month plans to release quad-core processor technology by the end of 2006.

## One Chip or Two?

AMD's approach is different than Intel's, according to [Gartner](#) (NYSE: IT) [Research Vice President Martin Reynolds](#). The company is looking to provide quad-core functionality in a single Opteron chip, while Intel is more likely to couple dual-core chips for its quad-core configuration.

"To the user, it doesn't make much difference," Reynolds said, explaining that the performance, power and other benefits of multiple cores get to users in both scenarios.

## Steps Ahead

AMD's Opteron announcement and forecast of quad-core technology are intended to show the market that the smaller chip company has an answer for Intel's quad-core launch, said Semico Research Chief of Technology Tony Massimini.

"AMD is not resting on its laurels," he said. "[It] can't because Intel certainly is going to come at [it] strong."

While Intel is still poised to beat AMD to market with its quad-core product release, AMD's biggest weapon -- the firm's planned move from 90-nanometer manufacturing to more efficient 65-nanometer technology -- may be yet to come, Massimini told TechNewsWorld.

"I'd expect even more improvement with that," he said.