

New Intel Server Processors: Fewer Watts, High Performance

March 25 2008

Intel Corporation has further increased its energy-efficient performance lead today with the introduction of two low-voltage 45 nanometer processors for servers and workstations that run at 50 watts, or just 12.5 watts per core and frequencies as high as 2.50 GigaHertz (GHz).

The Quad-Core Intel Xeon Processor L5400 Series takes advantage of Intel's unique 45nm manufacturing capabilities and reinvented transistor formula that combine to boost performance and reduce power consumption in data centers.

Benefiting companies with power-constrained, high-compute density environments, the Quad-Core Intel Xeon L5400 processors are as much as 25 percent faster¹ and have a 50 percent larger cache size than Intel's previous-generation, low-voltage Quad-Core Intel Xeon processors, while at the same time maintaining the low 50-watt thermal envelope. The quad-core L5420 and L5410 processors run at 2.50 GHz and 2.33 GHz, respectively, and feature a unique 12 megabytes (MB) of on-die cache and dedicated 1333 MHz front side buses (FSB).

"Using Intel's hafnium-infused high-k metal gate transistors has allowed our quad-core 45nm low-voltage server chips to attain new heights in power-efficient performance," said Kirk Skaugen, vice president and general manager of Intel's Server Platforms Group. "These chips deliver the speed needed while using meager amounts of energy."

A number of systems vendors are supporting the L5400 series and

L5210, including Asus, Dell, Fujitsu, Fujitsu-Siemens, Gigabyte, HP, Hitachi, IBM, Microstar, NEC, Quanta, Rackable, Supermicro, Tyan and Verari. Next quarter, Intel will also begin shipping a new dual-core low-voltage processor that will boast a 40-watt rating and clock speed of 3 GHz, with a 6 MB cache size and a 1333 MHz FSB. Intel is also extending the existing Quad-Core Intel Xeon processor 5400 series for embedded market segments by offering the Quad-Core Intel Xeon processor L5410 with support for a 7-year life cycle.

Since unveiling the industry's first 45nm processors last November, Intel today is shipping more than 35 different server, desktop and notebook processors with Intel's Hafnium-based high-k metal gate formula and 45nm technology.

Source: Intel

Citation: New Intel Server Processors: Fewer Watts, High Performance (2008, March 25)
retrieved 25 April 2024 from

<https://phys.org/news/2008-03-intel-server-processors-watts-high.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.