New Dual-Core Intel Itanium 2 Processor Doubles Performance

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Intel Corporation today unveiled five new products in the Dual-Core Intel Itanium 2 Processor 9000 series. Previously codenamed "Montecito," the new processors are designed for the most sophisticated high-end computing platforms in the world.

They double the performance and lower energy requirements, improving performance per watt by 2.5 times compared to existing, single-core versions. All server-maker members of the Itanium Solutions Alliance (ISA) will launch new Dual-Core Intel Itanium 2 Processor 9000 series-based products.

The flagship 9050 model features two complete processing cores and nearly triples the cache or memory reservoir versus Intel's previous generation. It also can execute four instructions or threads per processor enhanced by Intel's Hyper-Threading Technology (HT Technology).

The new Dual-Core Itanium 2 processors represent the world's most intricate product design to date with more than 1.7 billion transistors. This allows Intel designers to deliver new features to the Itanium processor family that create robust virtualization capabilities, enhanced cache reliability and other mainframe-like capabilities.

Unlike products from the remaining RISC vendors, the Dual-Core Intel Itanium 2 Processor 9000 series offers end-user freedom through a broad choice of software with more than 8,000 applications in production. Itanium processor-based servers and high-performance computing (HPC) systems are unique in the industry. They provide mission critical support for Windows, Linux, UNIX and other operating systems as well as new migration tools off of proprietary servers and mainframes - delivering unbeatable flexibility and a confident adoption path for IT managers to migrate to a standards-based architecture.

The Dual-Core Intel Itanium 2 processor 9000 series delivers performance at a system scale unmatched by competing RISC architectures. It set world record results in several key server benchmarks including a score of 4230 SPEC_int_rate_base_20001, nearly triple the previous record.

"Intel remains focused on removing the proprietary shackles that remain in the high-end of the server market segment, and with Dual-Core Itanium 2 processors we are delivering unprecedented IT freedom with a product that excels in performance, reliability and improved energy efficiency," said Pat Gelsinger, senior vice president and general manager, Intel's Digital Enterprise Group. "The broad system and

software support for Itanium 2 processors enables CIOs to move away from aging and expensive legacy systems and instead direct those funds toward standard-based computing and business innovation.

“In virtually all areas, momentum for Itanium-based systems is growing. More applications were added during the first half this year than were available in 2003 and more than 70 percent of the top Global 100 companies are choosing Itanium technology. In addition, the Itanium Solutions Alliance has committed $10 billion of hardware support through 2010 to the architecture.”

Dual-core Itanium 2-based systems target the most compute intensive areas, such as business analytics, large data warehouses and HPC areas. This is increasingly important as companies continue to strive for real-time decision making based on increasingly large amounts of data; and scientists, engineers and researchers seek to solve medical, climatic and other challenges through the use of computing power. The Itanium 2 processor’s Explicitly Parallel Instruction Computing (EPIC) architecture design provides high levels of parallelism and computational capabilities, driving greater efficiency into analytics applications and business intelligence software.

“Microsoft Windows Server 2003 and Microsoft SQL Server 2005 on the new dual-core, multi-threaded Itanium 2 processor will provide exceptional performance, scalability and reliability to enterprise customers with database workloads and line of business applications,” said Bob Muglia, senior vice president of the Server and Tools Business at Microsoft. “Microsoft is resolute in its support of the Itanium architecture, today and in the future.”

Source: Intel