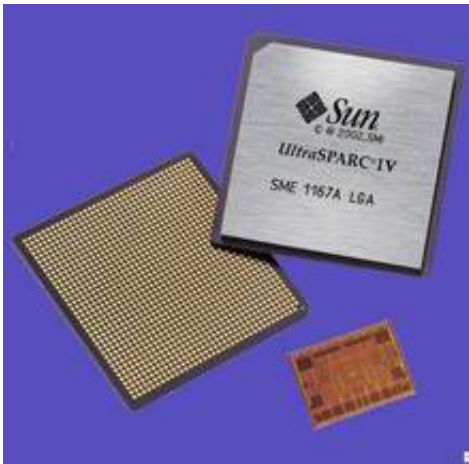


Sun Drives Multithreaded Processor Innovation with New UltraSPARC IV+

October 5 2004



[Sun Microsystems, Inc.](#) today unveiled its next generation UltraSPARC IV+ [processor](#) at In-Stat MDR's Fall Processor Forum. UltraSPARC IV+, powered by **Chip Multithreading technology**, continues Sun's momentum in delivering on its Throughput Computing strategy by enabling a large number of operations, or threads, to be executed simultaneously in order to increase system performance.

"Sun is showing the market that it is serious about delivering on the promise of Throughput Computing," said Kevin Krewell, senior analyst

for Microprocessor Report. "The UltraSPARC IV+ is the second generation of Sun's evolutionary dual-core design. We are impatiently awaiting the revolutionary Niagara processor to hit the market in 2006. This will be a huge departure from conventional processor design that will subsequently alter the face of network computing infrastructure as we know it."

Implemented using Texas Instruments' 90 nanometer process technology, UltraSPARC IV+ will double the application throughput of the existing UltraSPARC IV through expanded caches and buffers, a better branch prediction mechanism, augmented prefetching capabilities and new computational abilities. In addition, UltraSPARC IV+ incorporates a new 3-level cache hierarchy, with a fast on-chip 2MB second level cache and a large 32MB off-chip third level cache.

These new performance features combine with much higher operating frequencies (1.8 Ghz initially) to make UltraSPARC IV+ the highest throughput UltraSPARC processor ever built, with roughly twice the per-thread performance of the original UltraSPARC IV processor. At the same time, an array of new RAS features cooperate to make this design the most reliable UltraSPARC processor ever.

As with the UltraSPARC IV processor, this new second generation UltraSPARC IV+ processor maintains Sun's tradition of binary compatibility, preserving the investment customers have made in development tools and application software. It provides Sun customers with an easy upgrade path that effectively raises both the performance and reliability of their system with no change in its footprint, and relatively little change in either its power or thermal envelope.

October 5) retrieved 3 May 2024 from <https://phys.org/news/2004-10-sun-multithreaded-processor-ultrasparc-iv.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.