



## InfiniBand Shines on the Top500 List of World's Fastest Computers

*InfiniBand Drives Two Top Ten Supercomputers and Gains Widespread Adoption for Clustering and Storage*

PITTSBURGH, PA - November 9, 2004 - (SuperComputing 2004) – Mellanox® Technologies Ltd, the leader in performance business and technical computing interconnects, announced today that the InfiniBand interconnect is used on more than a dozen systems on the prestigious Top500 list of the world's fastest computers, including two systems which achieved a top ten ranking. The latest Top500 list ([www.top500.org](http://www.top500.org)) was unveiled this week at SuperComputing 2004 – the world's leading conference on high performance computing (HPC). This represents more than a 400% growth since last year when InfiniBand technology made its debut on the list with just three entries.

The Top500 computer list is a bellwether technology indicator for the broader performance business computing and technical computing markets. InfiniBand is being broadly adopted for numerically intensive applications including CAD/CAM, oil and gas exploration, fluid dynamics, weather modeling, molecular dynamics, gene sequencing, etc. These applications benefit from the high throughput, low latency InfiniBand interconnect - which allows industry standard servers to be connected together to create powerful computers at unmatched price/performance levels. These InfiniBand clustered computers deliver a 20X price/performance advantage vs. traditional mainframe systems.

InfiniBand enables NASA's Columbia supercomputer to claim its status as the second fastest computer in the world. Columbia uses InfiniBand to connect twenty Itanium-based Silicon Graphics platforms into a 10,240 processor supercomputer that achieves over 51.8 Tflops of sus-

tained performance. The system shows excellent efficiency for a broad range of NASA scientific applications that are already yielding huge benefits in scalability and throughput.

"Columbia will have a huge impact on NASA's ability to solve truly complex problems in engineering design, weather modeling, astronomy, and many other mission critical applications," said Bill Thipgen, Columbia project manager at Ames Research Center, Mountain View, Calif. "The high performance InfiniBand interconnect is a key component of the system, facilitating highly efficient communication for the second most powerful supercomputer in the world."

Because of its leading performance and wide availability, InfiniBand is also gaining adoption by commercial software vendors. Fluent Inc., a leader in Computational Fluid Dynamics (CFD) applications, will support InfiniBand in the upcoming release of its FLUENT 6.2 application software. Fluent applications are being demonstrated on InfiniBand clusters in the Mellanox, Intel, and Voltaire booths at SuperComputing 2004. CFD simulations are a critical design tool for companies in the automotive, manufacturing, and aerospace industries and are driving demand for large-scale InfiniBand clusters.

"To meet the increasing demands of industrial design, our customers require more complex models and increased resolution in their product simulations", said Paul Bemis, VP of Marketing at Fluent. "InfiniBand delivers outstanding scalability of our CFD applications, especially on 64-bit platforms. This increased design capacity leads to significantly improved product quality, time-to-market, and enables new product features for our customers."

In addition to significant adoption for compute clustering, InfiniBand technology has also demonstrated strong growth in storage systems. At the SuperComputing 2004 Conference several research and academic groups are demonstrating significant improvements in scalability and throughput using parallel file systems on InfiniBand. Several vendors are also announcing or demonstrating native InfiniBand storage products at the conference, including Cluster File Systems, DataDirect, Engenio, SuperMicro, Terrascale, and others. As the only industry standard technology offering 10 and 20 Gb/sec performance, transport offload, and remote direct memory access (RDMA) – InfiniBand delivers a converged system area network unifying clustering, communications, and storage traffic on a single high performance interconnect. Native InfiniBand

storage platforms enable this convergence and indicate increasing momentum in storage for both the high performance computing and business performance computing market segments.

### **About Mellanox**

Mellanox field-proven offering of interconnect solutions for communications, storage and compute clustering are changing the shape of both business and technical computing. As the leader of industry-standard, InfiniBand-based silicon and system solutions, Mellanox is the driving force behind the most cost-effective, highest performance interconnect solutions available.

For more information visit Mellanox website at [www.mellanox.com](http://www.mellanox.com)

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