

# UNLIMITED INNOVATION. SCALE. DISCOVERY.



The SGI® Altix® Family of Servers, Clusters, and Supercomputers



# Altix® 350

The Altix® 350 family of midrange servers brings the power and openness of Linux® to your HPC computing environment, plus advantages the competition can't match.

## Price/Performance

Altix 350 midrange servers can outperform proprietary systems costing up to three times as much<sup>1</sup>—while providing all the true openness of Linux.

## Flexibility

Altix 350 servers fit seamlessly into a mixed computing environment, so they can work within your current data center configuration. Uniquely designed to let you “expand on demand,” Altix 350 servers allow you to independently scale processors, memory, and I/O. Build exactly the system that suits your compute needs, and reconfigure over time as your needs grow.

## Productivity

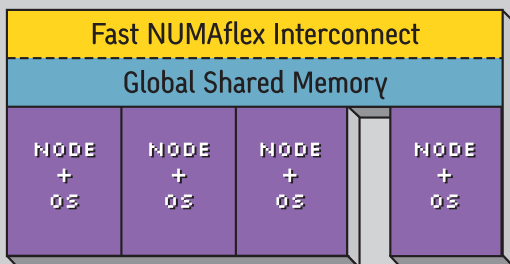
Altix 350 servers provide breakthrough capabilities for technical database and traditional cluster applications. They pack the same powerful NUMAflex™ technology as Altix 3000 supercomputers, delivering a significant productivity advantage through ultra-efficient memory management.

## Clusterability

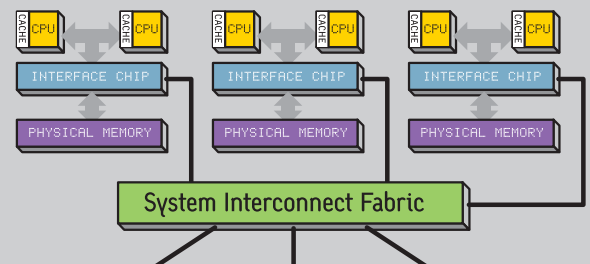
When deployed in a cluster configuration, Altix 350 maximizes processing performance and optimizes the NUMAflex shared memory to simplify computer workload management. Altix 350 clusters are highly efficient, multi-node solutions that can handle complex data sets and throughput challenges.



## Global Shared Memory



## NUMAflex™



## Customer Benefits

### The power of Linux

- Openness
- Stability
- Flexibility

### Shorter time to discovery

- Global Shared Memory for maximum resource utilization
- The power of the Intel® Itanium® 2 processor
- More complex calculations in less time

# Altix® 3000

For pure performance when running HPC applications, there's no more powerful resource than the Altix 3000 family: Supercomputers that live up to the name.



## Scalability

Scale up or scale out on one platform. The Altix family of supercomputers allows you to scale up to 256 processors in a single system image—more than twice the scalability of our nearest competitors.<sup>2</sup>

## Performance

SGI Altix 3000 systems deliver world-record performance on an Open Source platform. Industry-standard benchmarks, as well as blazing speeds on real-world scientific and engineering applications, prove it: In some cases, Altix 3000 boasted more than double the performance of similarly configured systems from IBM, HP, and Sun.<sup>3</sup>

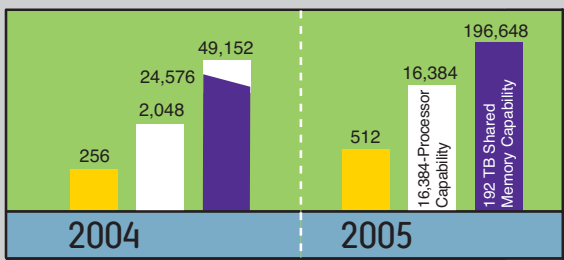
## Unlimited

The Altix 3000 family lets you run Linux without limits. Run small to large jobs in any programming model. Deliver computing, I/O, and memory resources precisely when and where you need them with NUMAflex technology. Independently upgrade, expand, or swap system resources to keep up with changing user demands, organizational structures, and technology advances.

## Open

With technology geared to the Open Source environment, SGI has set the industry standard for performance and scalability on Linux systems. The Altix 3000 builds on SGI's long alliance with Open Source development to deliver breakthrough results in 64-bit computing on Linux.

## SGI Altix Scaling Roadmap



## HPC Applications

- CSM: Computational Structural Mechanics
- CFD: Computational Fluid Dynamics
- CCM: Computational Chemistry and Material Science
- BIO: Bioinformatics
- SPI: Seismic Processing and Interpretation
- RES: Reservoir Simulation
- CSO: Climate/Weather/Ocean Simulation

### The power of thousands of HPC applications

- Broadest choice of applications
- More applications developed every day
- Applications optimized for the Altix platform

### The power of SGI service and support

- SGI's longstanding commitment to support
- Single avenue of support for all system needs
- Large-system experience and enterprise expertise



## Invest in technology that makes good business sense

### It's smart to protect your investments

Altix servers are designed to complement your current computing environment. Businesses can acquire all the benefits of Altix today without leaving anything behind.

### It's smart to plan for growth

An investment in Altix today looks even smarter tomorrow. With its unparalleled scalability to 256 processors per system image, you won't hit roadblocks along your growth path.

### It's smart to go for top performance: Itanium 2

Intel Itanium 2 is today's performance powerhouse. That's why we chose it to power our Altix family. And it's one more big reason for you to choose SGI Altix servers to power your HPC applications and your business.

### It's smart to manage and allocate your resources: NUMAflex does it

The world's fastest processors aren't much good if system memory puts on the brakes. NUMAflex memory management speeds data to anywhere in the system, no matter where it resides, with no extra operations and no waiting.

### It's smart to trust a proven platform: Linux

Once a clever but unproven upstart, Linux has matured from "UNIX® Lite" into the industry standard in Open Source computing—with all of the advantages of UNIX® and none of its limitations. Altix lets you maximize the benefits of Linux, the result of years of collective thinking from the best computing minds in the world.

### It's smart to choose the winning team:

#### Altix + NUMA + Linux

It's a powerful combination: The performance of Altix servers and supercomputers, plus the superior memory management and productivity advantages of NUMAflex running today's best Open Source OS—all backed by the quality and support of SGI. With these players on your team, you can't help but win.

<sup>1</sup> SGI Altix 3000 Series Performance Report, SGI customer-provided data, and STREAM Web site, 11/04/04.

<sup>2</sup> November 2004 competitive Web site comparisons and November 2004 Quandt Analytics White Paper.

<sup>3</sup> SGI Web site, Altix 3000 benchmark results, 09/16/03.

### SGI offers complete enterprise migration services

SGI provides many ways to make migration to a Linux environment easy and efficient, no matter where in the process your company is. Choose the services you need, from diagnostics to migration. SGI can help you migrate key applications and environments to 64-bit Linux from 32-bit Linux and UNIX systems from IBM, HP, Sun, and others. We even offer a range of training programs for your staff.



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