# SGI® Altix™ 350 At-a-Glance

The SGI Altix 350 server brings production-quality 64-bit scalable Linux® to mid-range price points. For technical users seeking supercomputing-class capabilities in a cost-effective, scalable platform, the Altix 350 offers leading price and performance along with configuration flexibility in an industry-standard architecture.

This mid-range powerhouse delivers more real-world performance than any system in its price class, and provides breakthrough capabilities for technical database, departmental server and traditional cluster applications. Unlike proprietary mid-range systems based on AIX, HP-UX, or Solaris, Altix 350 is an industry-standard solution based on Intel® Itanium® 2 processors and a robust, scalable Linux operating environment.

The Altix 350 server scales to 32 processors and 384GB of memory, with a modular "expand on demand" architecture allows users to scale processors, memory, and I/O independently to create cost-effective, perfectly sized configurations for any workflows.

## System Features:

Powerful shared-memory NUMAflex™ architecture

- Supports industry-standard Intel Itanium 2 processors:
  - Intel Itanium 2 1.6 GHz/9.0MB cache
  - Intel Itanium 2 1.6 GHz/6.0MB cache
  - Intel Itanium 2 1.5 GHz/4.0MB cache
- Modular architecture supports independently scalable I/O, memory and processors for maximum
  - 1 to 32 processors in a single system image
  - 2 to 384GB of global shared memory
  - 4 to 32 PCI slots
- Includes NUMAlink™ system interconnect fabric for up to 32 processor configurations
- Supports clustering using commercial interconnects and standard MPI, but with significantly less infrastructure cost due to larger node size
- Choice of Linux operating environments: SUSE Linux Enterprise Server 9 with or without SGI ProPack™ 4, certified Red Hat Enterprise Linux Advanced Server 4, or the SGI Advanced Linux™ Environment with SGI ProPack™ for turbo-charged HPC applications.

## Modular Architecture Supports Flexible Configurations and Growth Path

- Modular “expand on demand” architecture allows users to create cost-effective, right-sized configurations that expand to meet changing needs
  - Base compute module: 2U chassis includes 1 or 2 CPUs, Base I/O, 3 available PCI-X slots, DVD 2 Hard drives, 2-24GB memory
  - Processor Expansion: 2U chassis supports increments 1 or 2 CPUs, 2-24GB memory
  - Processor/Memory/I/O Expansion: (CMPX): 2U chassis supports increments of 0-2 processors, 4 available PCI-X slots, 0-24GB memory

- Superior cluster options with Infiniband, gigabit Ethernet, and other third party interconnects, leveraging the efficiencies of a larger node cluster for reduced interconnect and system management costs

## Software: Robust, Production-Ready 64-Bit Linux

SGI offers a suite of software tools for system, resource, and data management, and a choice of Linux operating environments:

- SUSE Linux Enterprise Server 9 with or without SGI ProPack 4 for additional HPC enhancements
- Red Hat Enterprise Linux Advanced Server 4
- SGI Advanced Linux Environment with SGI ProPack for turbo-charged HPC application deployment

## Target Markets: High Performance and Technical Database Computing

- Mid-range departmental server: Altix 350 provides industry-leading price-performance and configuration flexibility for mid-range technical applications.
- Technical database: Altix 350 is based on Intel® Itanium® , the industry's leading database engine. The system's high-throughput I/O capabilities, shared memory architecture, and scalability support outstanding performance on complex technical database applications.
- Throughput cluster node: Altix 350 as a uniquely scalable high-performance cluster node can help users increase throughput and reduce time-to-solution. The shared-memory architecture drives reduced communication overhead and is easy to administer; the superior I/O capabilities drive the biggest workloads; and the industry-standard architecture fits easily into mixed HPC environments.

## Competition: At last, a Linux Alternative to the Proprietary SMP Mid-Range

- Industry-leading price and performance in its class
- Unlike competitive proprietary offerings based on AIX, HP-UX, or Solaris, provides open standard Linux with robust, stable, scalable mid-range server
- Unlike competitive Linux offerings, provides one standard building block for processor counts from 1 to 32: not multiple boxes of two to four processors each
- Flexible configuration with independent scaling of processors, memory and I/O
- Only system with scalable Linux and management tools tuned specifically for HPC applications

## Highlights

- Technology and performance of Altix at mid-range price points
- Best price and performance in class
- "Expand on demand" flexibility for optimal configurations that can expand as processing needs change
- Ideal technical database servers and throughput cluster nodes
- Fits easily into mixed HPC environments; supports all major programming models and adheres to industry standards

*http://www.sgi.com/products/servers/altix/350*

*SGI Advanced Linux Environment 2.1 is based on Red Hat Linux Advanced Server 2.1 for the Itanium Processor, but is not sponsored by or endorsed by Red Hat, Inc. in any way.