Silicon Graphics Prism™ Family of Visualization Systems
At-A-Glance
Innovation Without Limits

The Announcement

On Tuesday, April 26, 2005 SGI announced an extension of the Silicon Graphics Prism™ family, adding the deskside form factor. This deskside system is the bridge between traditional workstations and the successful rackmount Silicon Graphics Prism, bringing large memory and world-leading I/O capabilities to power users at an even lower price point.

Since the announcement of the Silicon Graphics Prism family of visualization systems in October 2004, there has been great momentum and strong adoption by both customers and ISVs, far exceeding the expectations of SGI. Designed to solve a spectrum of visualization problems facing researchers, scientists and engineers, the addition of the deskside system to the Silicon Graphics Prism family expands the opportunities for Linux® OS-based interactive visualization systems in the market.

Overview

Silicon Graphics Prism delivers unbeatable visualization and a new level of Linux performance and innovation by combining the best of both worlds—the power of the SGI® scalable, shared-memory visualization architecture and the world-leading Linux scalability found in SGI® Altix® high-performance server products. Based on best-of-breed industry-standard components, with Intel® Itanium® 2 processors and ATI® graphics processors, the system is both powerful and economical.

The Silicon Graphics Prism family stands apart in the visualization world, designed for breaking through barriers imposed by other computer system architectures and fundamentally reshaping the boundaries of what is possible. Whether you're discovering the next new drug, designing and building the next new car or maximizing the recovery of oil in an existing field, Silicon Graphics Prism provides the infrastructure to solve the toughest problems with systems starting at less than US$8,500.

Silicon Graphics Prism System is:

Designed for Breaking Through Barriers

For leaders, innovators, and visionaries to push limits and solve previously unsolved problems

- Unlock the secrets of the planet by intuitively grasping the complex interplay of oceans, sunlight and atmospheric effects
- Diagnose life-threatening medical conditions in unprecedented detail
- Extract currently unrecoverable petroleum assets through better understanding and management of existing oil fields

Interactivity for Rapid Insight and Discovery

- Gain increased insight by easily working with all your data, all the time, even with terabytes of data
- Eliminate time-consuming data simplification by interactively visualizing billion polygon models
- Combine computation and visualization to accelerate your workflow and increase productivity

Room to Grow for the Future

- Access to high performance features and capabilities, starting at less than US$8,500
- Seamlessly and independently scale compute, memory, graphics and I/O
- Start small and expand to meet the needs of your entire team

Customer Needs

Interactive visualization is vital for achieving breakthrough results. Yet, it has become increasingly difficult as systems are not keeping up with the exponential growth in size and complexity of datasets. Today, data sizes of a terabyte or more are commonplace, and the choice of architecture is critical to avoid system bottlenecks and reduce tradeoffs in performance or image quality that users often make in order to obtain interactivity.

The System

With Silicon Graphics Prism, limits are meant to be broken. Leveraging the power of true scalability, Silicon Graphics Prism provides the ability to easily scale resources within a system to meet your interactive visualization needs. Scaling up to 16 graphics pipelines and 256 processors, the Silicon Graphics Prism family offers many times the visualization capability of any other computing system available. Its global shared memory architecture provides direct access to all the data, and its world-leading I/O capabilities enable entire workflows to be accelerated by eliminating time wasted on waiting for data to be loaded, saved or distributed.

Silicon Graphics Prism also provides a new way to deliver advanced visualization throughout your organization with the use of the unique Visual Area Networking (VAN) technology. Fostering new levels of collaborative research and development, VAN allows visualization to be transparently accessed from commodity desktops and shared by multiple users. The combination of Silicon Graphics Prism and VAN makes increased productivity, accelerated insight and greater data security a globally available competitive advantage.

Features and Benefits

Feature	Benefit
World-leading Architecture with NUMAflex™	
• Modular and scalable	Seamlessly and independently scale system resources (CPU, I/O, memory, storage, graphics) to meet your specific visualization needs.
• Global shared memory	Eliminate time-consuming data preparation by interactively visualizing terabyte datasets using a single, system-wide, shared memory.
• High bandwidth, low latency	Increase application performance by accessing all your data over multiple 6.4GB/second interconnects.
• Intel Itanium 2 processors, ATI® FireGL™ graphics, Linux and other open source tools	Leverage innovation with industry and open standard components.
• Scalable Graphics Compositor with dynamic load balancing	Increase performance and image quality by combining the power of multiple GPUs.
• Visual Area Networking	Transparently access and share data and resources from cross-platform clients for effective collaboration.
• QuickTransit™ dynamic translator	Run existing IRIX® applications without recompiling.
• Comprehensive development environment	Exploit the power of true scalable visualization with a host of OpenGL® based visualization tools and APIs, including OpenGL Performer™, OpenGL Multipipe™ and OpenGL Volumizer™.

Key Specifications

Deskside	Power	Team	Extreme
$8.5K - $39K US	$30K - $150K US	$75K - $250K US	$200K + US
1-2 ATI FireGL GPUs 1-2 Intel Itanium 2 CPUs Up to 24GBytes shared memory 15.5”(H)x13.37”(W)x20.5”(D)	2-4 ATI FireGL GPUs 2-8 Intel Itanium 2 CPUs Up to 96GBytes shared memory 4U - 8U (7” to 21”) high rackmount	4-8 ATI FireGL GPUs 8-16 Intel Itanium 2 CPUs Up to 192GBytes shared memory 12U - 20U (21” to 35”) high rackmount	4-16 ATI FireGL GPUs 16-256 Intel Itanium 2 CPUs Up to 3TBytes shared memory 23U+ (40.75”) high rackmount
Delivers Productivity	**Delivers Performance**	**Delivers Breakthroughs**	**Delivers Ultimate Advantage**

3791 (03.2005) J14868