Silicon Graphics Prism™ Family of Visualization Systems

Innovation Without Limits

The Silicon Graphics Prism™ family of visualization systems stands apart in the visualization world, designed for breaking through barriers and fundamentally reshaping the boundaries of what is possible. It is, simply, the world's leading interactive Linux® visualization platform, enabling leadership and innovation without the limitations imposed by other architectures. 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 a spectrum of capabilities to solve the toughest problems, with systems starting at less than US$8,500.

Breaking Through Barriers

- 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

Key Features	Key Benefits
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 with industry-leading system bandwidth (over 1 terabyte per second).
Intel Itanium 2 processors, ATI FireGL graphics, Linux and other open source tools	Leverage innovation with industry standard components: Linux®, Intel® Itanium® 2, and ATI® FireGL™ graphics.
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™.

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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.

Limits are meant to be broken with Silicon Graphics Prism. 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 delivers superior leadership, insight, decisions, and results.

Technical Specifications	Silicon Graphics Prism	Silicon Graphics Prism	Silicon Graphics Prism	Silicon Graphics Prism
System Specifications	**Deskside Level**	**Power Level**	**Team Level**	**Extreme Level**
Processor quantity	1-2	2–8	8–16	16-256
Graphics pipes	1-2	2–4	4–8	4-16
Memory	Up to 24GB	Up to 96GB	Up to 192GB	Up to 3.0TB
I/O expansion	Up to 6 PCI/PCI-X slots	Up to 16 PCI/PCI-X slots (13 available)	Up to 28 PCI/PCI-X slots (25 available)	Up to 96 PCI/PCI-X slots (91 available)
Form factor	Deskside	19" rack mount or 17U short 19" rack	19" rack mount or 39U tall 19" rack	19" rack mount or multiple 39U tall 19" rack
Height (each U is 1.75 inches)	16.11"(H)x13.48"(W)x21.39"(D)	4U - 8U	8U - 20U	23U +
Input Voltage per module	100-240 VAC auto-sensing worldwide power supply	120/240 VAC auto-sensing worldwide power supply	120/240 VAC auto-sensing worldwide power supply	120/240 VAC auto-sensing worldwide power supply and 48VDC with Power Bay
System Power (unracked)	750 W max.	2000 W max.	4500 W max.	Varies by Configuration
System Heat dissipation (unracked)	2559 BTU/hr	6500 BTU/hr max.	14500 BTU/hr max.	Varies by Configuration

System Features

- Intel Itanium 2 CPUs running SGI Advanced Linux™ Environment with SGI ProPack™
- ATI FireGL Graphics Processors with XFree86®, Gnome/KDE Window Manager, OpenGL® 1.5 with GLSL
- Scalable Graphics Compositor to combine 2, 3, or 4 digital display inputs (TMDS via DVI-D) into a single digital (DVI-I) or analog (13W3) output using flexible composition modes with zero latency and load balancing

Dimensions and Weights

- Deskside
  16.11"(H)x13.48"(W)x21.39"(D)
  Maximum Weight: 60 lbs
- Modules
  2U (3.44"H x 17.06"W x 26"D)
  Maximum weight: 50 lbs
- Short Rack
  17U (36.06"H x 25.41"W x 41.83"D)
  Maximum weight: 610 lbs
  19-inch EIA standard with lockable front and rear doors
- Tall Rack
  39U (75.82"H x 23.62"W x 41.25"D)
  Maximum weight: 1547 lbs
  19-inch EIA standard with lockable front and rear doors

Environmental (Operating)

Temperature

- Deskside
  +5C to +35C, altitude 5000 MSL
  +5C to +30C, altitude 10000 MSL
- Rackmount
  +5C to +35C, altitude 5000 MSL
  +5C to +30C, altitude 10000 MSL

Humidity

- Deskside
  10% to 95% noncondensing
- Rackmount
  10% to 90% noncondensing

Environmental (Nonoperating)

Temperature

- Deskside
  -40C to +60C
- Rackmount
  -40C to +60C

Humidity

- Deskside
  10% to 95% noncondensing
- Rackmount
  10% to 95% noncondensing

Altitude

- Deskside
  40,000 MSL
- Rackmount
  40,000 MSL

Electrical and Power

- Deskside Power Requirements
  750W
- Short Rack Power Requirements
  3.36 kW
- Tall Rack Power Requirements
  7.20 kW
- Electrical service type: deskside system VAC at 15 amp
- Electrical service type: racked systems NEMA L6-30R, 208 VAC at 30 amp (rack PDU)

Service and Support

- SGI provides full support for Silicon Graphics Prism hardware and systems software. SGI also offers services to implement and integrate Linux applications in your environment. For more information, please see *www.sgi.com/support*.

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