SGI® Visual Solutions

Innovation Without Limits

The SGI Visual Solutions family extends the SGI heritage of visual computing with a new line of high-performance, professional-grade workstations that provide world-class performance and exceptional value for a range of budgets and price points.

Run Thousands of Applications

Based upon 64-bit x86 computing technologies, the SGI Visual Solutions family allow you to run thousands of commercially available applications written for Windows® and Linux® operating systems. Applications developed in-house can be migrated to the SGI Visual Solutions family quickly and easily.

Pick Your Level of World-Class Support

SGI provides a range of support options to best meet your enterprise's needs. For those with IT organizations who prefer to support their own systems, SGI provides phone support and next-business day advanced parts exchange. We also offer SGI's highly rated onsite hardware support at a range of response times to meet your exact requirements.

Do More with a Trusted Consultant

SGI understands your challenges and is dedicated to helping you achieve breakthrough performance. Not only does SGI provide the SGI Visual Solutions family, but we can also provide the technical expertise in visualization, high performance computing, and storage to make everything work together to seamlessly achieve the results you expect.

Key Features	Key Benefits
x86 Workstation environment using industry standard components	Run thousands of off-the-shelf Windows or Linux applications to become productive immediately.
Based on Intel® Xeon® dual-core and quad-core processors	Provide industry leading performance for workstation class problems.
64-bit global shared memory	Run one copy of the operating system and have up to 8 processor cores address up to 32 GB of RAM.
Scalable graphics	Connect up to two NVIDIA® professional grade GPUs, sync them together, and drive up to four dual-link DVI displays simultaneously.

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The SGI Visual Solutions family offers outstanding performance and value from the industry's leader in visualization technologies.

Technical Specifications VSS

Processors	2 quad-core Intel Xeon X5355 (2.66 GHz, 1333 MHz FSB) 2 quad-core Intel Xeon E5345 (2.33 GHz, 1333 MHz FSB) 2 quad-core Intel Xeon E5310 (1.60 GHz, 1066 MHz FSB) 2 dual-core Intel Xeon 5160 (3.00 GHz, 1333 MHz FSB) 2 dual-core Intel Xeon 5140 (2.33 GHz, 1333 MHz FSB)
Chipset	Intel 5000X (Greencreek) MCH and ESB2 chipset Supports 1333/1066/667 MHz FSB Winbond W83627EHG Super I/O Chip
Memory	8 DDR2 FB-DIMM ECC 667 MHz slots allowing up to 32 GB RAM
Graphics Processing Units (GPUs)	See GPU table G-Sync for FX 4500, FX 4500 X2, and FX 5500 GPU synchronization
PCI Expansion (Some slots may be unavailable depending upon graphics configuration)	1 PCIe x16 slot using x16 signaling 1 PCIe x16 slot using x4 signaling 1 PCIe x8 slot using x4 signaling 2 PCI-X 64-bit, 133 MHz slots 1 PCI 32-bit, 33 MHz slot
Internal Storage	Up to 4 250 GB 7200 RPM SATA drives 1 DVD+/-RW
I/O	4 Serial ATA ports 1 Parallel ATA IDE interface (2 devices) 2 On-board Gigabit Ethernet ports Enhanced HD audio with line-in, line-out, mic-in, SPDIF-in, and SPDIF-out rear ports; line-out, mic-in ports on front of chassis 6 USB ports 2 IEEE 1394a ports 1 Parallel port 1 9-pin 16550 UART serial port PS/2 mouse and keyboard
Operating Systems	Red Hat® Enterprise Linux®, SUSE® Linux Enterprise Server, or Windows® XP
Form Factor	Deskside or 4U rack mount
Chassis Dimensions and Features	17.73"(H) x 6.9"(W) x 19.92"(D) 2 5.25" expansion bays
Weight	30.2 lbs.
Input Voltage	100-240 VAC auto-sensing worldwide power supply
System Power Electrical Service Type	700 W EPS power supply 50 to 63Hz, 15Amp
Environmental (Operating)	Temperature: 5˚C to 50˚C Humidity: 20% to 80% non-condensing
Environmental (Non-operating)	Temperature: -30˚C to 70˚C Humidity: 10% to 95% non-condensing

Restriction of Hazardous Substances (RoHS) Compliance	A system is in place to restrict the use of banned substances in accordance with the European Directive 2002/95/EC. Compliance is based on declaration that materials banned in the RoHS Directive are (1) below all applicable substance threshold limits or (2) an approved/pending RoHS exemption applies
	– Quantity limit of 0.1% by mass (1000 PPM) for:
	  - Lead - Mercury - Hexavalent Chromium
	  - Polybrominated Biphenyls - Diphenyl Ethers (PBDE)
	– Quantity limit of 0.01% by mass (100 PPM) for:
	  - Cadmium

External Interfaces for Storage	• 4 Gigabit Fibre Channel, single-port, dual-port, and quad-port optical HBAs • 2 Gigabit Fibre Channel, single-port optical HBA • Ultra320 SCSI, dual-port HBA • Gigabit Ethernet, dual-port optical and dual-port copper adapters • 10 Gigabit Ethernet, optical adapter
External Storage	SGI® InfiniteStorage 120, SGI® InfiniteStorage 350, SGI® InfiniteStorage 4000, SGI® InfiniteStorage 4500, SGI® InfiniteStorage 6700, SGI® InfiniteStorage RM660, SGI® InfiniteStorage 10000, SGI® InfiniteStorage 370, SGI® InfiniteStorage 4050, SGI® InfiniteStorage 4550, StorageTek® tape libraries, IBM® 3590, LTO-2, LTO-3, HP® LTO-2, LTO-3, Quantum® SDLT, SDLT220/320, SDLT600, Sony® AIT-3, SAIT, DTF

Graphics Processing Units (GPUs) Technical Specifications

Board Features	NVIDIA Quadro® FX 1500	NVIDIA Quadro FX 4500	NVIDIA Quadro FX 4500 X2	NVIDIA Quadro FX 5500
Memory Size	256MB	512MB	512MB per GPU	1GB
Memory Type	GDDR3	GDDR3	GDDR3	GDDR2
Memory Interface	256-bit	256-bit	256-bit	256-bit
Memory Bandwidth	40 GB/sec.	33.6 GB/sec.	33.6 GB/sec.	33.6 GB/sec.
Max Power Consumption	65W	108W	145W	96W
Number of Slots	1	2	2	2
Display Connectors	DVI-I DVI-I HD-OUT	DVI-I DVI-I Stereo	4 X DVI-I Stereo	DVI-I DVI-I Stereo
Dual-Link DVI	2	2	4	2
OpenGL	2.0	2.0	2.0	2.0
Shader Model	3.0	3.0	3.0	3.0
DirectX	9.0c	9.0c	9.0c	9.0c
SLI Frame Rendering Support	-	Yes	Yes	Yes
Genlock/Framelock	-	Yes[1]	Yes[1]	Yes[1]
Geometry (Triangles per Second)	144 Million	181 Million	208 Million	225 Million
Texels per Second/Fill Rate	6.0 Billion	10.8 Billion	12.0 Billion	15.6 Billion
3dsmax-03	41.99	44.54	53.91	45.03
catia-01	34.24	34.98	38.64	36.04
ensight-02	32.69	37.43	66.31	39.86
light-07	27.94	27.89	33.77	27.86
maya-01	55.70	55.73	72.96	55.74
proe-03	62.41	70.41	71.60	79.50
sw-01	34.25	43.91	50.34	51.46
ugs-04	40.43	55.47	115.70	71.81

[1] NVIDIA Quadro G-Sync is available as a separate option card for NVIDIA Quadro FX 5500, 4500 X2, and 4500.

[2] SPECviewperf® 8.1: for more information visit www.spec.org. Tested on 3.8 GHz Pentium® 4, Driver Release 84.26.

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