SiliconGraphics
Computer Systems

O2™ Dual Display Option

Maximize Your Visual Area on the O2 Visual Workstation

The Silicon Graphics® O2 Dual Display Option brings cost-effective dual-monitor capabilities to the visualization markets. With a single add-in board, users can drive double the display area for enhanced viewing and workspace management. The Dual Display board outputs the O2 graphics channel to both monitors, automatically splitting the images between two screens. The O2 Dual Display creates an ideal solution for industries such as energy, entertainment, and defense imaging where added screen real estate is especially important.

Texture and 32-Bit Color across Two Monitors

Taking advantage of the built-in digital display adapter of the O2 workstation, the O2 Dual Display board can drive two 1280x1024 displays. The board gives each head the full complement of symmetric, hardware-accelerated, 32-bit color O2 graphics: texture mapping, z-buffering, and anti-aliased points and lines, as well as stencil, fog, and color space conversions. Standard cursor movement and drag operations let users intuitively move screen images and windows between the two displays. The familiar user interaction makes it easy for the increased pixel display area to instantly benefit any visualization application.

No-Compromise Expandability

Unlike many third-party PCI frame-buffer cards, the O2 Dual Display Option does not plug into the system's PCI slot. This leaves the slot available for other PCI options like FDDI, second Ethernet, and SCSI. And, with its simple, modular design, upgrading an existing system is as easy as installing an I/O option: unlock the board, snap in the option, and replace.

A Cost-Effective Solution for Complex Images

The O2 Dual Display Option provides classic Silicon Graphics features and performance, with more viewable space—at a price that can bring two monitors to a new class of users. Applications for data analysis, image modeling, mapping, cel animation, painting, interpretation, and visualization will benefit from the increased display area.

Breadth of Dual-Display Products

Silicon Graphics offers you a wide range of compute platforms for dual-display applications. From the cost-effective O2 system to the two graphics heads on the high-performance OCTANE™ workstation and the multiple-channel display of the Onyx2™ systems, you can select the workstation that meets your particular price/performance requirements. Furthermore, with the convergence of the cross-platform IRIX® 6.5 operating system, you can develop applications for one Silicon Graphics dual-display platform and easily move to another system if your requirements later change.

Features	Benefits
• 32-bit RGBA, double-buffer standard, 24-bit z-buffering, native OpenGL® graphics subsystem	• Delivers high-performance image processing and high-quality, industry-leading realism, inter-activity, and graphics capability
• Unique single managed display area (two 1280x1024 screens) and horizontal window and cursor movement between monitors	• Users can easily operate, display, and drag multiple applications or windows across dual monitors for increased productivity and window management
• 1280x1024 resolution at 75 Hz	• Fast refresh rate on both monitors guarantees quality screen images, no flickering
• 38 Hz graphics update rate	• Easily handles performance requirements for demanding applications in geoscience, 2D/cel and 3D modeling, and animation and image mapping
• Dual-head delivery of the single graphics channel, enabling symmetric graphics output	• Does not visibly impact O2 graphics system performance
• A motherboard built-in monitor port	• Saves workstation I/O (PCI) slot for other devices

Datasheet

O2 Dual Display Option

Technical Specifications

BASE SYSTEM FEATURES

Processor Support	1 MIPS® RISC 64-bit R12000® 1MB L2 cache
	1 MIPS RISC 64-bit R10000® 1MB L2 cache
	1 MIPS RISC 64-bit R5000® 1MB L2 cache
Memory Capacity	64MB–1GB synchronous DRAM (SDRAM)
System Graphics	Resolution (with double-buffered 32-bit color):
	• 1280x1024 at 75 Hz
	Formats: • 8-bit + 8-bit double buffer format
	• 16-bit + 16-bit double buffer format
	• 32-bit + 32-bit double buffer format
Graphics Features	Texture mapping in hardware, native OpenGL graphics subsystem, hardware z-buffer, triangle rasterization in hardware, hardware image mapping support, hardware stencil planes, hardware anti-aliasing, source plus destination alpha in hardware, fast Xline performance
Storage and I/O	Internal single-ended SCSI controller
	External single-ended SCSI controller
	2 internal 3.5" storage bays (R5000)
	1 internal 3.5" storage bay (R10000, R12000)
	Single half-height PCI-64
Communication	Single 10Base-T/100Base-TX port
	Dual serial RS422/RS423 DB-9 ports
	Single IEEE 1284C parallel port
	Two audio I/O ports
Display Options	17" color monitor standard
	20" color monitor optional

DIGITAL MEDIA FEATURES

Analog Audio (Standard)	Mono-microphone, 1 16-bit stereo input channel and 1 16-bit stereo output channel, stereo headphone output, stereo external speaker system output
Video Compression (Standard)	Variable-rate single-stream real-time motion-JPEG encode/decode, software-based MPEG-1, Cinepak encode/decode, and full QuickTime® support
Digital Audio I/O (Optional)	8 channels 24-bit ADAT optical I/O
	2 channels 24-bit AES-3id I/O
	AES11 synchronization
Video I/O (Optional)	S-Video, composite, Silicon Graphics digital video input and output for NTSC and PAL standards; real-time graphics to video output (includes standard audio features)
Digital Video I/O (Optional)	Two 8- or 10-bit SMPTE 259M (CCIR 601) serial digital video inputs or outputs for NTSC and PAL (includes standard audio features), real-time graphics to video output

EXPANSION OPTIONS

PCI	Single-port Ultra SCSI
	Single-port Fibre Channel
	Single-attached FDDI
	Dual-attached FDDI
	Digital audio
Networking	Second 100Base-TX Ethernet
	ISDN basic rate interface

STORAGE OPTIONS

Internal	4GB Ultra Fast/Wide drive (R5000)
	9GB Ultra Fast/Wide drive (R10000, R12000)
	32X CD-ROM
External	4GB Ultra Fast/Wide
	9GB Ultra Fast/Wide
	3.5" floppy drive
	12GB 4 mm DAT drive
	Digital linear tape

BUNDLED SOFTWARE

Collaboration	Outbox
	InPerson®
	IRIS Annotator™
	IRIS Showcase™
	Netscape Communicator® 4.05
	Cosmo™ Player
	Cosmo™ Create
	Netscape® FastTrack Server
	Adobe® Acrobat Reader™
	InfoSearch
	SGI Meeting
	Teleffect
Connectivity	NFS™
	ISDN/PPP support
	Novell NetWare™ Client
	Xinet AppleTalk®
	Samba
Digital Media	SoundEditor
	MovieMaker
	ImageWorks
	SoundTrack
	FX Builder
	MediaRecorder
	MediaPlayer
	CD/DAT Player
	Audio Panel
	Video Panel
	Synth Panel
	Media Convert
Run-Time Libraries	OpenGL
	OpenGL image extensions

PHYSICAL ENVIRONMENT

System	9" W x 12" H x 10.5" D
	22 lb
	17" monitor:
	17" H x 15.9" W x 16.5" D
Voltage and Frequency	100-132/200-264 VAC
Heat Dissipation	<900 BTU/hour
Ambient Temperature	+10°C to +35°C (operating)
	-40°C to +65°C (nonoperating)
Relative Humidity	10% to 80% operating, no condensation
	5% to 95% nonoperating, no condensation
Altitude	10,000 ft operating
	40,000 ft nonoperating
Vibration	0.1" displacement with all axes
	0.25G, 5-380-5 Hz (operating)
	0.5G, 5-380-5 Hz (nonoperating)

REGULATORY AGENCIES

Electromagnetic Emission	FCC Part 15, Class A
	Canada DOC Class A
	CISPR22: 1993/EN 55022: 1988 Class A
	VCCI Class 1
	EN 50082-1:1992
	EN 61000-4-2:1995/IEC 1000-4-2:1995 ESD
	IEC 1000-4-3:1995 Radiated RF
	EN 61000-4-4:1995/IEC 1000-4-4:1995 EFT

O2 is part of the Silicon Graphics visual workstation product family, which includes the O2, OCTANE, and Onyx2 systems for UNIX® and the Silicon Graphics 320™ and Silicon Graphics 540™ workstations for Windows NT.

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