SiliconGraphics
Computer Systems

O2™ RackMount

A Versatile Rendering and Web Serving Resource

A unique combination of power and system throughput makes the O2 RackMount system the preferred solution for many rendering, Web serving, and custom embedded applications. Users can dedicate an O2 RackMount solution to a group or a task and easily upgrade or reconfigure the system to accommodate changes in the environment or application. The unique architecture and scalable configuration mean that increased I/O, memory, and processing demands can be handled with economical upgrades and add-ons, maximizing the returns on your system investments.

Superior Throughput

With the industry's first high-performance Unified Memory Architecture (UMA), the O2 RackMount system transcends PC or other workstation designs and delivers extraordinary system throughput. The O2 architecture integrates a powerful rendering engine, I/O system, display management subsystem, and compute resources with a high-bandwidth, low-latency memory system. Data, once loaded in memory, becomes accessible by all system processors and subsystems. By minimizing data movement between subsystems, the O2 architecture eliminates many system bottlenecks, streamlines I/O, and allows system components to process user requests and perform computations in a minimal number of machine cycles.

Whether moving large rendering files between disk and memory or serving data to Web clients, the O2 RackMount I/O subsystem delivers unmatched performance. A 10Base-T/100Base-TX Ethernet adapter, dual Fast/Wide Ultra SCSI channels, 64-bit PCI expansion bus, and several other standard I/O options also contribute to the exceptional system throughput. The superior data movement abilities of the O2 RackMount are especially crucial when deploying a render farm.

The Value of the O2 RackMount

The innovative, space-saving design of the O2 RackMount system makes it easy to quickly increase power without growing the data center. A standard 19-inch rack holds up to 20 systems.

An optional shelf allows two system units to sit side by side in a standard 19-inch industrial rack. Shelves can be mounted two deep in a rack, allowing four systems to be mounted on each level for maximized use of space.

To ensure maximized return on investment, the O2 RackMount design gives customers the ability to reconfigure the system into a workstation by simply adding a monitor, keyboard, and mouse. This versatility makes the O2 RackMount system a smart choice for dynamic environments.

Serviceability

The O2 RackMount system design simplifies service. The system can remain in the rack during servicing and does not require the use of tools to service or remove individual components. All peripherals, interface cards, and cables are accessible in the front of the unit for easy replacements and upgrades. These features ultimately save valuable system administration time.

Power and Performance

The O2 architecture delivers sustained bandwidth of more than 15 times the data transfer speed of a typical PC (2GB per second compared to 0.13GB per second). As a result, the O2 RackMount system can manage up to 10 million hits per day. The 64-bit

architecture and XFS™ filesystem optimize throughput and allow the O2 RackMount system to tackle large data files up to 1TB in size.

When measured using standard benchmarks and compared with competing rendering workstations in the same price range, the O2 RackMount system demonstrates industry-leading performance. The results confirm the superiority of the O2 UMA architecture and the high-throughput potential of the system design.

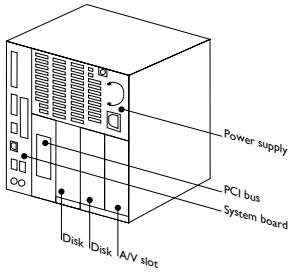
Reliability and Stability

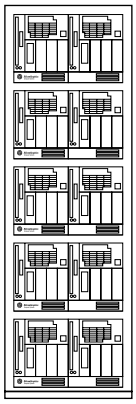
The O2 RackMount system brings the benefits of the proven IRIX® operating system to environments that demand maximized operation. The strength of the Silicon Graphics® networking technologies and optimized device driver software also complement the reliability of the IRIX system and give customers a stable platform for critical applications.

The Power Path

As the lowest-cost Silicon Graphics rendering solution, the O2 RackMount system makes premier Silicon Graphics technology even more accessible for studios that require end-to-end digital capabilities for modeling, rendering, animation, and scene compositing.

Unlike PC-based solutions, the O2 RackMount system offers a strong growth path. Applications can be easily migrated from the O2 RackMount system to higher-performance Silicon Graphics Origin™ systems. When your business or job requires more power, you can take advantage of the other Silicon Graphics rendering platforms and the OCTANE™ family for digital content creation.





O2 RackMount

Technical Specifications

BASE SYSTEM HARDWARE FEATURES AND OPTIONS

Processor

R5000® @ 200 MHz, 1MB secondary cache
RI0000® @ 250 MHz, 1MB secondary cache

Memory

Synchronous	DRAM, 100 MHz, 4 banks, 288-bit wide
Capacity	32-256MB with 16Mb SDRAM 128MB-1GB with 64Mb SDRAM

Mass Storage

2 channel x Ultra Fast/Wide SCSI single-ended

1 internal bus, 1 external bus (40MB/sec peak each)

2 channel x 1" x 3.5" internal drive bays
(only 1 available on RI0000 processor models)

Hard Drives

4GB (available on both configurations) and
9GB (on RI0000 version only)

Integrated Networking Hardware

10Base-T/100Base-TX Ethernet standard

PCI Networking Options

- FDDI
- 10Base-T/100Base-TX Ethernet
- ISDN
- Synchronous serial
- ATM

Video

Composite and S-video I/O via O2 Video Option

Serial digital video I/O via O2 Digital Video Option

Dimensions

7.75" W x 10.5" H x 9.0" D
17 lb
175 W power supply

Optional Rack Shelf

Each shelf holds 2 skinless O2 systems and fits into a standard 19" wide industrial rack

Standard O2 Software

Operating System	IRIX 6.5
Networking	TCP/IP, Novell NetWare™, Xinet AppleTalk®, XFS, NFS™
Web Serving/Setup	Netscape® FastTrack Server, Web Setup Utilities

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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Corporate Office
2011 N. Shoreline Boulevard
Mountain View, CA 94043
(650) 960-1980
www.sgi.com

U.S. 1(800) 800-7441
Europe (44) 118-925.75.00
Asia Pacific (81) 3-54.88.18.11
Latin America 1(650) 933.46.37

Canada 1(905) 625-4747
Australia/New Zealand (61) 2.9879.95.00
SAARC/India (91) 11.621.13.55
Sub-Saharan Africa (27) 11.884.41.47

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