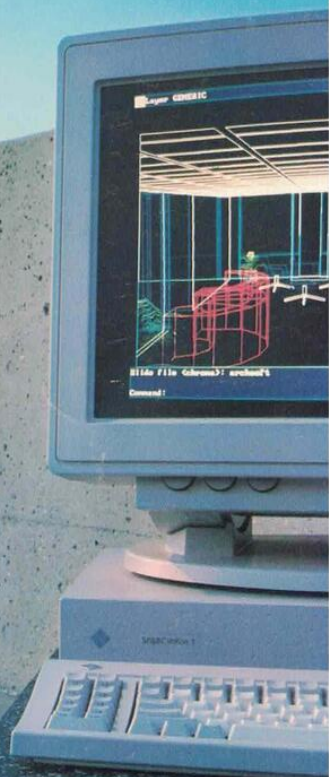


*Sun's SPARCsystem Family: An Overview*



# Sun's SPARCsystem Family: Unequaled Computing Solutions

Sun Microsystems, Inc., the leader in Open Computing, delivers unsurpassed technology, performance, and affordability with the SPARCsystem™ family of supercomputing workstations and servers. With the SPARCsystem family, Sun fulfills its promise for increasingly powerful and versatile computers at prices that set new standards for the industry.

As the rest of the computing industry moves toward RISC-based solutions, Sun leads the way with the broadest range of general-purpose workstations and servers available. This complete product line provides balanced features, performance, and configurations to suit your requirements for virtually every computing category.

## *SPARC: The Architecture of the 1990s*

To meet the performance demands of the next decade, Sun built the SPARCsystem family around a Reduced Instruction Set Computer (RISC) technology called Scalable Processor ARCHitecture (SPARC™). The SPARC design delivers inexpensive, advanced power to the computing arena—power unmatched by conventional approaches. Already, leading software vendors are taking advantage of the broadening gap between SPARC capabilities and conventional architectures.

Because of the simplicity of their design, RISC architectures outperform other architectures. RISC designs are more cost-effective than conventional designs because fewer elements need to interact. In addition, the reduced complexity of RISC processors makes them ideally suited to quickly take advantage of new technologies.

The SPARCsystem family clearly demonstrates that RISC is the architecture of the 1990s. Less than two years after its introduction with the Sun-4™ family of products, Sun has scaled the SPARC architecture in two directions: one toward higher performance, the other toward lower cost. The new SPARCsystem workstations and servers establish SPARC as the architecture of choice for technical applications, and further introduce Sun technology to commercial areas, including office automation and finance.

## *Sun's SPARCsystems: Freedom of Choice*

The SPARCsystem family gives you the freedom to choose the best system for the job. Desktop SPARCstations provide a personal, powerful, multifunctional solution for your computing needs. The SPARCsystem family extends upward to "power-user" SPARCstations for extremely rigorous computing tasks, and on to performance-raising SPARCservers—systems that will increase the power and efficiency of your networks. With the SPARCsystem family, Sun makes mainframe-equivalent power available to every desktop.

In addition to an array of price and performance choices, SPARCsystems are available in various packages that are elegantly designed and highly functional. A small-footprint

desktop package integrates mass storage and unparalleled high-speed graphics. A streamlined office pedestal combines sophisticated 2-D and 3-D graphics with versatile expansion capabilities. A deskside server model packs powerful data-storage and resource-sharing capabilities into an extremely efficient unit. And a Data Center model delivers maximum expandability to meet a wide variety of network needs.

Quieter and cooler operation allows flexible system placement. And though size is minimized, each package gives you superior expansion capabilities and advanced power—so you can easily and inexpensively customize a SPARCsystem for your unique needs.

Because the SPARCsystem family is unified by the Sun software architecture, you'll receive true freedom of choice. Like Sun's other product families, the SPARCsystem family uses the most powerful UNIX® operating system in the industry—the Sun Operating System (SunOS™). SunOS leads the industry in networking, user interface technology, software development, and graphics capabilities. This common software architecture lets customers create networks of SPARCsystems—and systems from other vendors—that act as a single, powerful computer.

## *Product Family Compatibility*

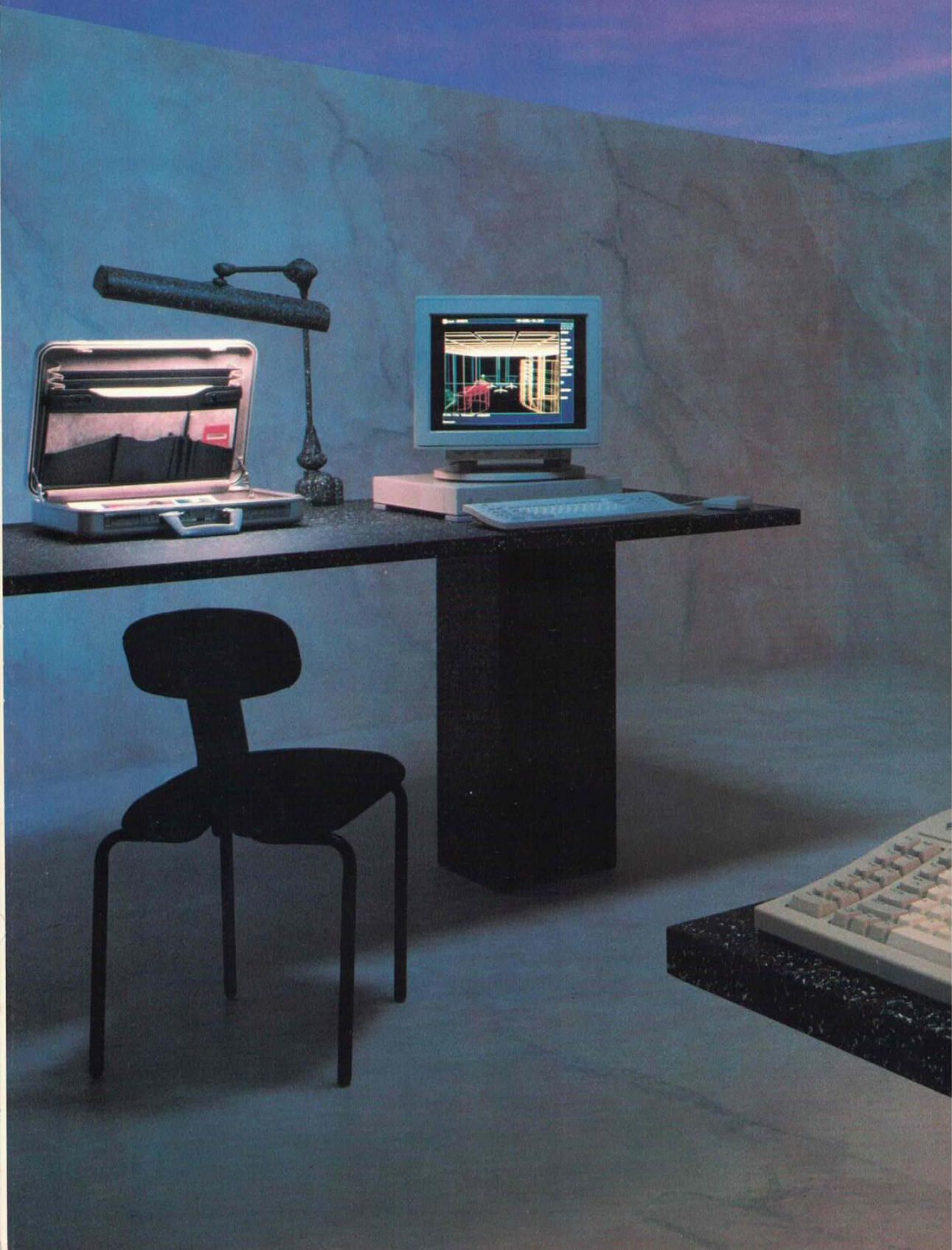
All members of the SPARCsystem family are binary compatible. The SPARCsystem machines are also binary compatible with the Sun-4 product line. Because they use the SPARC architecture, your SPARCsystems will be able to take advantage of the industry's broadest RISC-based software offering—SPARCware™. More applications run on the SPARC architecture than on all other RISC microprocessors combined.

Because they are based on industry standards, the SPARCsystem family is source-code compatible with members of the Sun-2™, Sun-3™, and Sun386i™ families of systems. Most existing software applications require only a recompilation to migrate to and take advantage of the superior SPARCsystem performance.

The SPARCsystem family of workstations and servers gives you advanced functionality across a wide performance spectrum: superior processing power, sophisticated graphics, configuration versatility, and unmatched prices. With the SPARCsystem family, Sun redefines what you should expect from a computer.

With the SPARCsystem family of workstations and servers, Sun delivers a powerful, highly functional solution for computing in the 1990s.







Hydraulic Valve

3D cutaway diagram of a hydraulic valve assembly.

Parameter	Value
Flow rate	100 l/min
Pressure	10 MPa
Temperature	50 °C
Material	Aluminum
Weight	15 kg
Dimensions	100 x 100 x 100 mm

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# Customizable for Any Environment

**T**he SPARCstation 1 is a unique combination of integration and expandability. The compact package includes space for two optional 3.5-inch, 104-Mbyte hard disks. A 3.5-inch, 1.44-Mbyte floppy drive that's compatible with the industry-standard IBM PS/2 format lets you conveniently load applications and data.

If you need more mass storage, the SPARCstation 1 Desktop Disk Pack houses a 3.5-inch, 104-Mbyte disk; the Desktop Backup Pack provides a ¼-inch, 150-Mbyte tape drive for fast data backup. For even larger mass-storage needs, Sun's External Storage Module holds up to two 327-Mbyte SCSI disks, or one 327-Mbyte disk and a 150-Mbyte tape. Whichever disk or tape options you choose, the SPARCstation 1 gives you a wide array of storage alternatives, so your system grows with you as your needs change.

The system can have up to 16 Mbytes of on-board main memory—letting you quickly process demanding tasks. Main memory can be upgraded in 4-Mbyte increments. And you can easily do the upgrade yourself; saving time and money.

A completely new three-slot bus gives you high-performance, low-cost expansion capabilities. Using expansion cards that measure only 3 X 5 inches, the SPARCstation 1 can give you an ultra-fast connection to peripherals such as high-speed printers, scanners, graphics boards, or a second Ethernet<sup>®</sup>, allowing you to use your system for a wide variety of requirements. You can even attach three monitors to the SPARCstation 1 and run each monitor simultaneously.

The SPARCstation 1 also provides a number of monitor choices: 17- or 19-inch monochrome displays for publishing, artificial intelligence, and software engineering; 16- or 19-inch color systems for design and engineering.

SPARCstation 1 high-resolution monitors provide crisp, clear images to fit the needs of many application areas.

And to get you even closer to your work, the SPARCstation 1 has full audio capabilities, including an internal speaker and audio jacks. With the SPARCstation 1, you can play *and* record sound—like voices or music—so your system is ready for voice-mail and multimedia applications.

## Application Versatility

In addition to the hundreds of SPARCware applications available for the SPARCstation 1, the system's optional DOS Windows emulation package lets casual DOS users run the most popular PC programs. Off-the-shelf DOS programs can be run in a SPARCstation 1 window. You can even cut and paste between DOS and UNIX programs.

## Superior Quality

The low power and cooler operation of the SPARCstation 1, coupled with the lowest part count of any workstation, translate into impressive reliability. Sun's emphasis on a simple design that can be easily manufactured and supported means you'll receive the highest quality products at an affordable cost.

With the SPARCstation 1, Sun delivers the industry's most innovative workstation. No other desktop system offers so many features with so much power at such a low price.

The SPARCstation 1 brings the power of SPARC technology to the desktop, providing more features than any other workstation in its class.

# The New Standard for Desktop Computing: SPARCstation 1

For users who demand the advanced computing power of RISC in an affordable, multifunctional desktop workstation, Sun presents the SPARCstation™ 1—a new standard for desktop computing. With the SPARCstation 1, Sun integrates more power with more features than any other desktop workstation available. And the SPARCstation 1 gives you this power in one of the industry's smallest packages. With the SPARCstation 1, Sun delivers maximum performance at a minimum cost—making the high-performance SPARC technology affordable for virtually every desktop.

The system's innovative, compact design, and fast processing capabilities make it an ideal solution for software engineers, financial analysts, and artificial-intelligence developers. With integrated mass storage and simplified installation and start-up, the SPARCstation 1 brings the power of SPARC to new areas such as desktop publishing and office automation. With the system's DOS Windows™ option, casual DOS® users can also run their favorite PC programs. And for users who want supercomputing graphics power at a low price, the SPARCstation 1GX model delivers graphics performance that is unequalled by any desktop workstation from any vendor—giving mechanical and electrical designers a new world of desktop computing power.

## *A Simple Design for a Powerful Solution*

Based on a simple, off-the-shelf gate-array technology, the SPARCstation 1 CPU gives you 12.5 MIPS Dhrystone integer performance—two to three times the performance of conventional desktop workstations. The system's advanced SPARC CPU is complemented by a standard, 1.4-MFLOPS double-precision LINPACK floating-point unit, delivering superior arithmetic capabilities for demanding design and engineering tasks.

With the SPARCstation 1, integration is the watchword. The system's fast computational power is achieved using a minimum number of parts—fewer chips than a typical PC. This high level of integration is continued throughout the SPARCstation 1: the system's motherboard is a mere 8.5 X 11 inches; the size of an ordinary piece of paper. The CPU, memory, mass-storage disks, floppy disk, expansion buses, and audio capabilities are all combined in a small-footprint desktop package that measures just 16 X 16 inches—one of the smallest desktop computer packages ever. And the entire system chassis consumes less power than a 100-watt light bulb. This high level of integration and low part count results in increased reliability and easy maintenance, giving you extremely low cost of ownership.

In the past, small systems implied feature sacrifices. Today, the SPARCstation 1 delivers a powerful, full-featured system that furnishes workstation performance and expansion in a PC-like package. With the SPARCstation 1, you receive power and elegance without compromise.

## *Unprecedented Desktop Graphics*

The SPARCstation 1GX packs more graphics power into a desktop package than any other workstation. Designed to meet the rigorous graphics performance needs of mechanical and electrical designers, the SPARCstation 1GX can draw 400,000 2-D vectors per second; 175,000 3-D vectors per second—power unmatched by workstations twice the price. With fast vector and wireframe capabilities, and accelerated performance of the window system, the SPARCstation 1GX provides a fundamental advance in desktop graphics functionality. You receive unprecedented interactivity—a new standard for 8-bit, desktop color graphics—at a price that makes 2-D and 3-D graphics available to every designer.

The SPARCstation 1 offers mass-storage, an integral floppy drive, expansion capabilities, and more, in a powerful, compact desktop package.



Sun's power-user workstations deliver advanced graphics performance for a broad range of demanding applications.



# The Power-User Workstations: The SPARCstation 300 Series

For users who demand state-of-the-art graphics workstation performance for applications like computer-aided engineering, simulation, and scientific research, Sun introduces the SPARCstation 300 Series—workstations specifically designed for the power user. The SPARCstation 300 Series sets new standards in terms of combined price, performance, and configuration versatility; giving you more choices than any workstation in its class.

The SPARCstation 300 Series is balanced across a variety of performance measurements, giving you general-purpose functionality for a wide range of integer, floating-point arithmetic, I/O, and graphics-intensive tasks. Coupling superior computational power with impressive graphics performance, the system is the perfect solution for customers who need supercomputing graphics power at the price of a traditional workstation.

Based on a custom Cypress CMOS implementation of the SPARC architecture and the powerful TI8847 floating-point unit, the SPARCstation 300 Series delivers 16-MIPS Dhrystone integer performance and 2.6-MFLOPS double-precision LINPACK power. When this power is combined with the system's innovative 5-slot Office Pedestal design or a highly expandable 12-slot package, you receive one of the most versatile graphics computers available. You can select from a wide variety of models, including the GX and GXP editions for your high-end graphics needs, or a standard monochrome system for extremely cost-effective performance and flexibility.

With the SPARCstation 300 Series, you receive a high-performance graphics package that is made even more powerful by its ability to grow with you as your computing needs change.

## *SPARCstation 300 Series—Expandable, Integrated New Packaging*

No matter which package you choose, the SPARCstation 300 Series will provide the expandability you need. With its new 5-slot Office Pedestal, the SPARCstation 330 is ideal for the technical professional's office, easily fitting under a desk. Its aesthetically pleasing design is extremely compact, yet offers expansion alternatives that are usually only found in larger housings. With three slots for triple-height VME boards, and two slots for double-height VME boards, you can give your system faster, more powerful capabilities through the addition of options like hard-disk controllers and vector processor boards.

Advanced design lets you precisely tailor the SPARCstation 330: from 8 to 40 Mbytes of main memory, up to 654 Mbytes of internal mass storage. You'll have the power you need to process compute-, floating-point, and graphics-intensive applications. With external disk expansion, the system can have up to 1.3 Gbytes of mass storage—giving you plenty of room to store your data. And for flexible communication capabilities, the 5-slot package includes an Ethernet and four serial ports.

The 12-slot SPARCstation 370 delivers the same advanced SPARC CPU but provides additional expandability for applications that require a number of specialized peripherals or device interfaces. Additionally, the system pedestal boasts impressive internal mass-storage capabilities—up to 1.3 Gbytes—providing a stylish yet highly functional solution. If increased capacity is needed, up to eight external 688-Mbyte disks can be added for 6.8 Gbytes of total storage, ideal for users working in geophysical analysis, simulation, or animation.

## *Advanced Graphics*

In addition to the system's raw CPU and floating-point power, many components combine to make the SPARCstation 300 Series superior graphics machines for the power user. Both the SPARCstation 330 and SPARCstation 370 are available as GX or GXP graphics models.

The GX model balances 8-bit color graphics with exceptional computing power. The system's superior 2-D and 3-D wireframe performance—a fast 450,000 2-D vectors per second; 200,000 3-D vectors per second—is ideal for applications like electronic and mechanical design. The GX model also accelerates the window system and provides outstanding power for commercial applications, such as financial analysis, that require sophisticated, interactive capabilities. A breakthrough in graphics performance, no other workstation in its class offers such high levels of graphics functionality.

The GXP system is a graphics powerhouse that provides maximum acceleration for full 3-D, 24-bit color requirements. Designed for demanding engineering, molecular modeling, and animation applications, the GXP model lets you interactively manipulate 3-D solids and surfaces. With the SPARCstation GXP supercomputing graphics workstations, you can render objects with impressive realism and superior image quality.

Sun's power-user SPARCstations also provide inexpensive display options that include a 24-bit frame buffer for true-color display; a monochrome system; the TAAC-1™ option for users who require high-end applications acceleration and imaging performance; and the SunVideo™ device for live-motion video images in a SPARCstation window. No other workstation offers the technical professional such a flexible array of graphics choices.

## *Balance and Innovation*

With its unique combination of balanced performance, concise yet expandable packaging, and superior affordability, the SPARCstation 300 Series is truly the ideal solution for the power user. The system delivers outstanding performance for graphics computing tasks that could previously only be performed on expensive, dedicated graphics computers. With the SPARCstation 300 Series, you receive true innovation at industry-leading prices.

# Unprecedented Network Versatility: The SPARCservers

Sun's SPARCserver™ systems increase the performance, capabilities, and effectiveness of your computer networks, providing a centralized resource that can be accessed by any user. The versatility of SPARCservers means that a single network can be composed of file servers, compute servers, database servers, communication servers, and servers that furnish a timeshared computing resource for terminal users. A single SPARCserver system has the versatility to provide one or several of these services to workstations, PCs, and terminals. By eliminating unnecessary duplication of resources, SPARCservers satisfy the unique needs of both small or large organizations, letting you deliver the right capabilities to everyone on the network.

SPARCservers are designed to provide exceptional capabilities at much lower prices than traditional timesharing systems. Through Sun's local- and wide-area networks, users can connect to geographically dispersed systems to share information and applications. A strong commitment to industry standards allows Sun's SPARCservers to link computers from virtually any vendor. With Sun's SPARCserver family, you receive a broad range of expandability, packaging, performance, and price.

## *Efficient New Packaging*

All SPARCserver systems feature innovative new packaging that provides increased expansion options and larger, more powerful mass-storage capabilities. A 5-slot system is specifically designed to satisfy small workgroup requirements. A 12-slot package delivers enhanced expandability for larger office-computing needs. And a 16-slot departmental server—furnishing as much as 32 Gbytes of mass storage—is available for large, Data Center environments. The SPARCserver systems' modular design and quiet, cool operation means simple maintenance and high reliability—giving you an economical and dependable server solution.

## *The SPARCserver 330: Low-cost Information Integration*

Sun's high-performance entry-level system, the SPARCserver 330, provides powerful computing capabilities to small workgroups of terminals, PCs, and workstations at a very affordable price. Based on the SPARC processor, the 5-slot SPARCserver 330 features fast 16-MIPS Dhrystone integer performance, up to 40 Mbytes of main memory, 654 Mbytes of internal mass storage, and connectivity for up to 36 terminals—all in a package that can conveniently fit under a desk. With external disk expansion, the SPARCstation 330 can give your network up to 1.3 Gbytes of disk capacity.

The SPARCserver 330 is ideal as an inexpensive NFS™ fileserver for workgroups needing a powerful, space-saving system. As a low-cost communications server, the SPARCserver 330 is powerful enough to support additional Ethernets and SunLink™ communications options. An unlimited number of workstations or servers on an

internetwork all have access to Sun communication servers. Used as a central resource, a communication server can dedicate protocol processing to a single system, improving the performance of your individual workstations.

The SPARCserver 330 is also an excellent solution for the integration of personal computers into your network. Personal computers that run Sun's PC-NFS™ have transparent access to files located on any server on the network.

With the SPARCserver 330 you receive the industry's most powerful multi-user server in its class. The system provides impressive server capabilities at a price that is affordable for virtually every workgroup.

## *SPARCserver 370: Fast System Throughput, High Expandability*

The SPARCserver 370 is specifically designed for users who need a wide array of peripheral expansion alternatives in the office environment. Combining fast CPU performance with the capability to expand I/O throughput, disk capacity, and terminal connections, the SPARCserver 370 meets the computing requirements of departments with up to 68 users. With the SPARCserver 370, you receive power in a compact, 12-slot desk-side package that easily accommodates significant future growth.

Ideal as a compute server, the SPARCserver 370 is a cost-effective way to deliver increased productivity and performance to an entire network of users. Workstations on networks equipped with a Sun compute server can offload compute-intensive tasks such as circuit simulations to the server, liberating your workstation for other interactive and graphics-oriented jobs. With up to 6.8 Gbytes of disk capacity—1.3 Gbytes internal—the SPARCserver 370 has the power to handle large simulation and modeling jobs that previously required extremely expensive high-end super-minicomputers or mainframes.

## *SPARCserver 390: Productivity through Power*

With the 16-slot SPARCserver 390, Sun's highest performance server, you receive high system throughput and large configuration capabilities at a fraction of the price of conventional super-minicomputers. With its powerful combination of CPU performance, expansion capabilities, and fast I/O throughput, the SPARCserver 390 is versatile enough to function as a multi-user system, compute server, fileserver, or database management system. The SPARCserver 390 is ideal for compute-intensive applications like those in science and engineering environments, and I/O-intensive applications such as database management.

A highly expandable departmental server, the SPARCserver 390 provides up to 32 Gbytes of mass storage with fast Intelligent Peripheral Interface (IPI) disk technology. The system's superior disk capacity extends Sun's mass-storage capabilities into the realm of mainframe computers. When used as a fileserver, the SPARCserver 390 provides enhanced ease of use, increased efficiency,



Sun's SPARCserver family spans a wide array of performance, expandability, packaging, and price—making your network more productive and powerful.

and savings by allowing workstation users to share the system's significant mass-storage capabilities—allowing entire networks of workstation users to operate without local disks. In many cases, the SPARCserver 390 makes diskless workstation performance equal to that achieved by systems with local disk drives.

#### *Consistently Outstanding Performance*

The SPARCserver family offers an excellent blend of CPU, floating-point, mass-storage, and I/O performance. This

balance optimizes the SPARCservers for a full range of applications, including database applications, software engineering, electrical and mechanical computer-aided design, scientific research, earth resources, and artificial intelligence. The SPARCserver family is extensive, meeting virtually any server needs—giving you the flexibility to choose a system with the features and cost attributes that meet your unique computing and budget requirements.

# The SPARCsystem Family: Integrated, Open Computing

Sun has consistently delivered the computer industry's most progressive Open Computing technology—and the SPARCsystem family continues this tradition. Sun recognizes that the computing world is heterogeneous. No single computer company can deliver a complete solution for every user and every organization. Yet until recently, computing options had been dictated by vendors with proprietary hardware and software products. This approach made communication between different vendors' systems difficult, leaving customers with few choices.

Sun's solution is simple yet powerful. In addition to offering some of the most versatile computing tools available, Sun gives you a whole new class of choices—through Open Computing.

Open Computing means more than the "distributed computing" or "open systems" concepts now so frequently used in the industry. Open Computing is an all-encompassing approach: open hardware, open software, open application interface, open graphics, open networks. By basing all products on industry standards, Sun's Open Computing philosophy provides unparalleled benefits: systems from different vendors can communicate over the same networks, customers can learn to use new systems quickly, and your investments in hardware, software, and training are protected. Ultimately, you are free to choose the best system for each job. Only Sun offers computing that is truly open, from the powerful SPARCsystem family of workstations and servers to the many facets of the Sun software environment.

## *The UNIX System Foundation*

There are many factors that make Open Computing possible, but clearly a key component is the UNIX operating system. The SPARCsystem family uses Sun's implementation of the UNIX operating system, which combines the industry's two dominant versions, AT&T System V and 4.3/4.2BSD, into the powerful Sun Operating System (SunOS). Through SunOS, you receive software compatibility across Sun's three hardware platforms—680X0, 80X86, and SPARC—allowing you to mix and match the computers you need into a heterogeneous network of Sun systems and systems from other vendors.

## *Networking Capabilities*

Sun offers the widest range of networking solutions available from any workstation vendor. Central to Sun's Open Computing philosophy is the Open Network Computing (ONC™) environment. This environment provides networking capabilities that make distributed resources easily accessible by any number of workstations, servers, and other computing systems. ONC includes the Network File System (NFS), a de facto industry standard for transparent access to file structures over the network, even to other vendors' computers with different operating systems and architectures.

Sun also gives you extensive data-communication links over both local and wide areas with the SunLink family of



## *SPARC, UNIX, and the Application Binary Interface*

AT&T, with help from Sun and others, is working to create a unified UNIX System V operating system environment. Because AT&T will license both binary and source versions of UNIX System V, the entire computing industry will have full, open access to this software technology. To further support the goal of true application portability, AT&T will provide a UNIX System V Application Binary Interface (ABI) for the SPARC architecture.

Designed to deliver multiple performance points, the SPARC architecture is licensed to many semiconductor vendors. These vendors can sell their SPARC chips to any company who wishes to use the processor. With the ABI, any computer that uses a SPARC processor can run the same off-the-shelf software as any other system using a SPARC processor—from PCs to supercomputers. This encourages software development for the SPARC architecture, lowers production costs, and ultimately lowers the cost to customers.



The SPARCsystem family is source-code compatible with the entire Sun product line, letting you create powerful networks of Sun systems and systems from other vendors.

products. SunLink ensures smooth integration of Sun products with IBM and DEC computers. Additionally, the Sun PC-NFS, TOPS<sup>®</sup>, and SunIPC<sup>™</sup> products provide advanced connectivity to IBM PC-compatible computers.

### *Window System Standards*

Providing an industry-standard windowing environment is as important as delivering multivendor access through networking. Sun's OpenWindows<sup>™</sup> applications environment delivers a consistent, window-based solution for a broad range of computers. OpenWindows consists of three primary components: the OPEN LOOK<sup>™</sup> graphical user interface, the XView<sup>™</sup> toolkit, and the X11/NeWS<sup>™</sup> window system.

The OPEN LOOK graphical user interface replaces complex commands with recognizable, real-world symbols, giving you intuitive access to your entire computing resources. By providing a visual, simple format across different hardware platforms, the OPEN LOOK graphical user interface makes the power of the network and the UNIX operating system available to everyone. Sun's XView toolkit gives developers a quick, stable migration path to OPEN LOOK. Based on Sun's successful SunView<sup>™</sup> user interface

toolkit, XView is unrivaled in its stability and functionality as an X toolkit. The X11/NeWS window system combines the X Window System from the Massachusetts Institute of Technology with Sun's Network Extensible Window System (NeWS<sup>™</sup>). X11/NeWS effectively makes the window system a network resource.

### *The Applications Leader*

All Sun's software offerings are available for the SPARCsystem family. Third-party application software packages are available through Sun's Catalyst<sup>™</sup> Third Party program. Catalyst features more than 2500 third-party products for a vast array of application areas, giving you the right application for the task at hand.

### *The SPARCsystems: A Complete Product Family*

The SPARCsystem family gives you true freedom of choice, offering the broadest range of general-purpose, RISC-based workstations and servers available. Complete with a powerful, open software environment and extensive application offerings, the SPARCsystem family is the platform of choice for leading researchers, engineers, and business professionals.

# The SPARCsystem Family

	SPARCstation 1	SPARCstation 300 Series	SPARCserver 300 Series
Integer Performance	12.5 MIPS	16 MIPS	16 MIPS
Floating-Point Unit	standard	standard	standard
Floating-Point Performance	1.4 DP MFLOPS	2.6 DP MFLOPS	2.6 DP MFLOPS
Main Memory	8-16 Mbytes	8-56 Mbytes	8-56 Mbytes
Disk Capacity	up to 1.1 Gbytes	up to 6.8 Gbytes	up to 32 Gbytes
Bus Slots	3	5 or 12	5, 12, or 16
Graphics Performance			
GX Model:	400,000 2-D vectors/sec 175,000 3-D vectors/sec	450,000 2-D vectors/sec 200,000 3-D vectors/sec	n/a
GXP Model:	n/a	5500 3-D polygons/sec 90,000 3-D vectors/sec	n/a

## Graphics Options

### SPARCstation 300 Series

TC	24-bit color
TAAC-1	User-programmable application accelerator
SunVideo	24-bit, full-motion input/output video board
SunDials™	8-dial valuator box



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microsystems

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