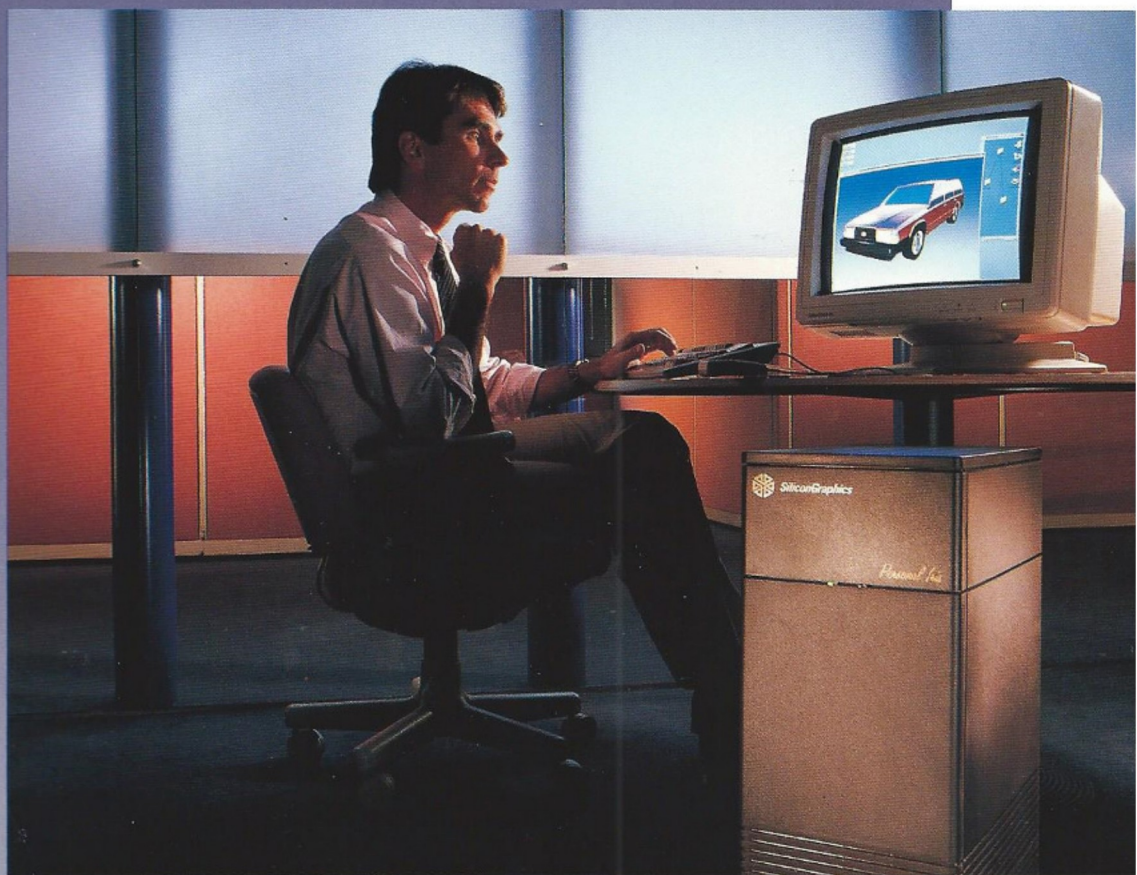




SiliconGraphics

PERSONAL  
IRIS



*The Personal IRIS  
3D Workstation*

## *Personal IRIS—A Tool for Competitive Excellence*

Silicon Graphics has pioneered a powerful new technology that's fast becoming one of the tools you need to excel—3D computing. Our 3D workstations have unprecedented graphics capabilities to help you analyze and solve real-world problems, design innovative products and bring those products to market more quickly than ever before possible.

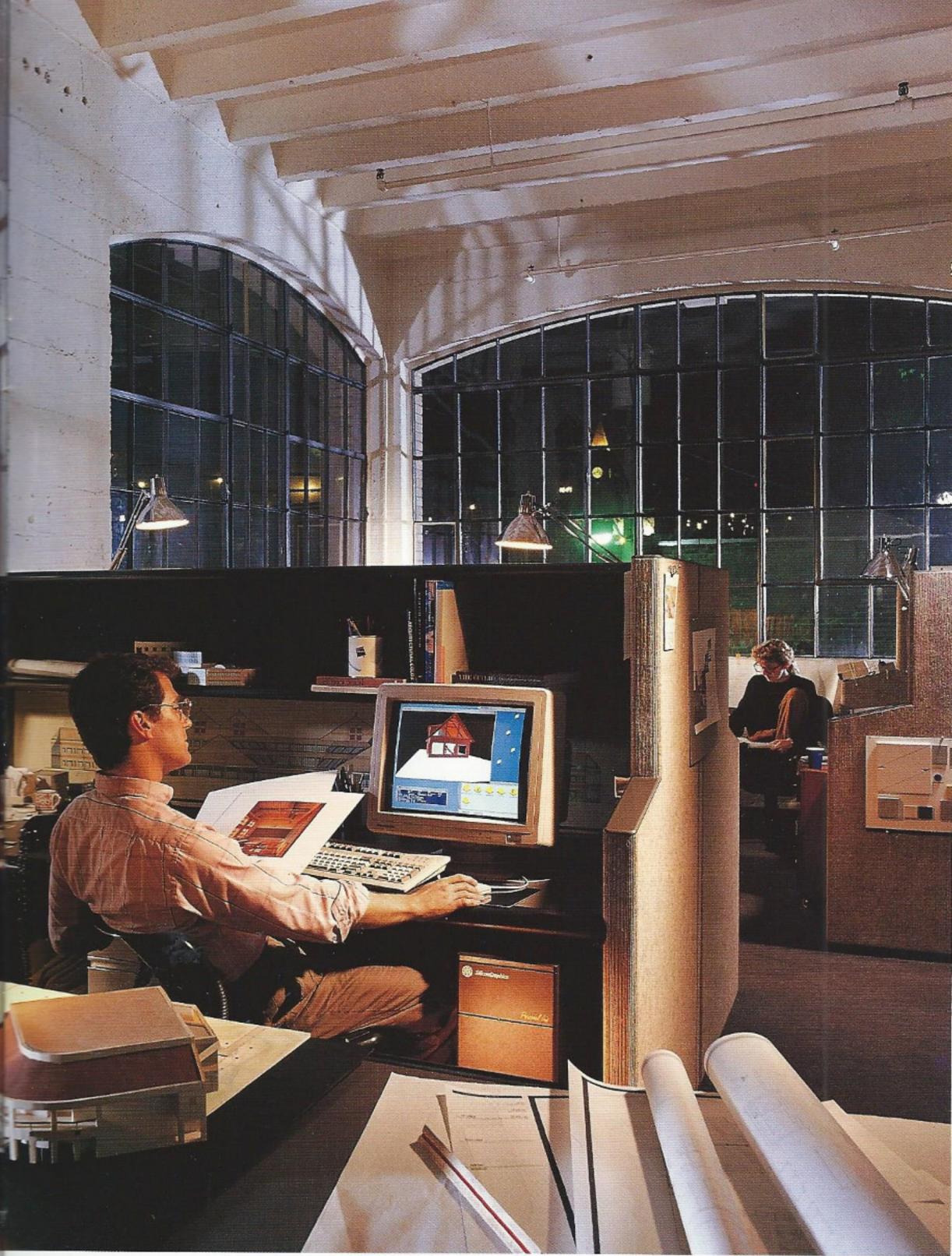
Silicon Graphics makes this new technology even more accessible with the Personal IRIS.<sup>™</sup> This new class of workstation combines dynamic 3D graphics, powerful computing and ease of operation in a low-cost system designed both for individual users and for workgroups in organizations like yours. Its price, performance, and complete feature set give you a significant competitive tool for science, engineering and creative design.

The Personal IRIS puts the real world on your screen. Unlike PCs and workstations that are limited to wire-frame or stop-and-shade solids, the Personal IRIS also produces realistic, smoothly moving color images that respond immediately, so you can see your design changes as you make them. This can cut 20-40% off your normal design time.

Silicon Graphics has proved that 3D computing is effective. After conducting a productivity study of several Silicon Graphics customers, the internationally renowned consulting firm KPMG Peat Marwick stated, "3D computing offers an enterprise the opportunity for significant competitive advantage today." Now we've made 3D computing affordable. The Personal IRIS is as easy to set up and use as a personal computer and is comparably priced. It fits right into your office environment and is easy to maintain and upgrade.

*You work in a 3D world. ►  
With the Personal IRIS  
you'll design in one.  
The advantages you'll  
experience—vastly  
accelerated design cycles,  
increased error detection  
and superior visualization  
of your project—are  
remarkable.*





► The Data Station's  
 computational power,  
 storage capacity, and  
 binary compatibility with  
 the entire Silicon Graphics  
 product line make it an  
 ideal compute or file  
 server for Personal IRIS  
 workstations.

## **The Personal IRIS:**

### **A Technological Breakthrough.**

The Personal IRIS represents a technological breakthrough from Silicon Graphics, the acknowledged leader in computer graphics. It uses the same Graphics Library™ and graphics subsystems used by even the most powerful IRIS superworkstations, enabling you to take advantage of the same technology that makes our \$150,000 systems the leaders in computationally and graphically intensive fields like image processing and molecular modeling. Because of the Personal IRIS' complete compatibility with the rest of Silicon Graphics' workstation family, Personal IRIS users have

access to the largest library of 3D software available anywhere—over 400 industry-leading applications.

A powerful standalone workstation, the Personal IRIS will also let you spread the benefits of 3D computing across your entire organization. It uses accepted communication standards—such as TCP/IP, NFS™ and Ethernet™—so it integrates easily with other systems in a workgroup as well as into your existing corporate computing environment.

So, if you already use Silicon Graphics workstations, the Personal IRIS will integrate easily into your current environment. If you're a new Silicon Graphics customer, you're assured a growth path that will protect the hardware and software investment you've already made.



## A New Category of Workstation.

The Personal IRIS represents a new category of product: the personal 3D workstation.

Here's why:

### The industry's best graphics:

The Personal IRIS provides graphics features previously available only on high-end workstations costing far more:

- Shading for true 3D perspective
- Lighting from multiple colored light sources
- Real-time 3D motion
- Sharp anti-aliased lines

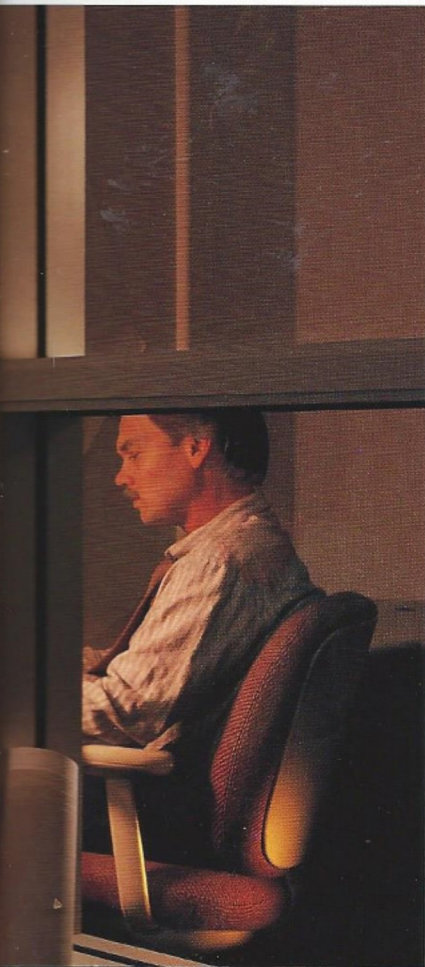
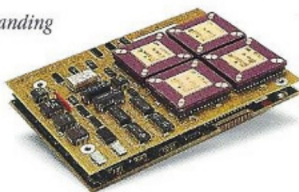
The Personal IRIS delivers a blend of graphics and computational power unique among workstations.

- Through the use of dedicated graphics processors the Personal IRIS performs graphics computations *in parallel* with the CPU rather than tying up the CPU itself, as other workstations do.
- The standard Personal IRIS system provides 256 simultaneously displayable colors for realistic on-screen representations. Additional color planes provide you with full color for a photo-realistic display with a palette of over 16 million colors.
- An optional Z-buffer performs fast hidden surface removal, letting you examine 3D models while smoothly rotating them to any position.
- And if you need even more power, the Turbo graphics option more than doubles 3D vector drawing rates and quadruples polygon rendering rates.

The result is true 3D performance unrivaled by any comparably priced system.

◀ Because of its low price and networkability, the Personal IRIS enables you to spread the power of 3D computing across your entire workgroup.

Using new VLSI technology, the Turbo Graphics option produces up to 240% faster graphics performance for exceptionally demanding applications. ▶



### **Powerful computing.**

Built around the industry-leading RISC microprocessor from MIPS Computer Systems<sup>®</sup>, the Personal IRIS offers a choice of CPUs that allow you to enjoy compute performance up to 16 MIPS and 1.6 Mflops with a high-performance floating point accelerator.

Systems with a 16 MIPS CPU also incorporate a 32/64 Kbyte cache and a high performance synchronous SCSI interface for high-speed access to disks and other peripherals.

Eight megabytes of memory is standard on all systems, and can be expanded up to 32 megabytes.

Standard interfaces built into the Personal IRIS include:

- Two serial ports
- A parallel port
- A VME<sup>™</sup> slot
- An Ethernet connector
- A SCSI bus connector
- Audio in/out jacks
- A single connection that handles both the programmable keyboard and the optical three-button mouse.

### **Flexible Growth Path.**

Silicon Graphics offers you the broadest range of binary compatible products available today. An application that runs on the Personal IRIS will run on any Silicon Graphics system—all the way up to our 160 MIPS Power Center<sup>™</sup> system. This offers you:

- A full complement of graphics capabilities to meet your changing needs.
- A full line of servers that can offload your file access or compute-intensive tasks, such as the low cost and compact Data Station server—an outstanding performer at an entry-level price.

### **Complete software environment.**

Silicon Graphics' visual tools make it easy for you to focus on your work instead of UNIX<sup>®</sup>.

The IRIS WorkSpace<sup>™</sup>, an exciting visual alternative to the UNIX shell, lets you manage files and launch applications without learning a single UNIX command. WorkSpace offers you features such as:

- An intuitive, iconic interface to the UNIX file system
- File operations and instant access to applications at the click of the mouse
- Up-to-date view as the file system is changed
- User customization

The graphical System Manager<sup>™</sup> lets you perform administration tasks quickly and easily under WorkSpace and includes tools for:

- Network administration
- Printer administration across local or networked systems
- User account management
- Backup and restoration of files

Powerful graphics have never been so easy to use.





▲ *The Personal IRIS fits into your creative environment, complementing and supporting the way you work. And because of its flexible design and expandability, the Personal IRIS can serve as the control center for your entire creative operation.*

◀ *WorkSpace and System Manager provide you with an easy-to-use interface to the UNIX operating system, allowing you to focus on your work — and not on system administration.*





#### Industry standards.

The Personal IRIS standard system environment includes:

- IRIX, an enhanced version of the AT&T UNIX V.3 operating system, with many features of the Berkeley 4.3 UNIX release as well as Silicon Graphics enhancements.
- Silicon Graphics 4-Sight™ Windowing System, which can support any application developed for X Windows or NeWS.
- Our SoftPC® option that runs MS-DOS™ applications in a window.

The optional developer's environment includes a complete C programming language package and the Graphics Library. Compilers—for FORTRAN, Ada, Pascal, and PL/1—allow developers to write graphics applications in the language and windowing system of their choice.



### Powerful networking tools.

Our high-performance networking ensures complete connectivity with:

- Digital Equipment Corporation computers (DECnet),™
- IBM mainframes (SNA or local connections allowing 3270 or 5080 emulation),
- Cray supercomputers (Hyperchannel)™
- Machines from vendors such as Sun and HP/Apollo (NFS, TCP/IP, and Ethernet).

### Easy installation and operation.

We planned every aspect of the Personal IRIS to make it as affordable to own as it is to purchase. We put the Personal IRIS through extensive user testing to ensure the easiest possible integration into your office. There is no need to prepare a special environment—it

runs off a standard electric outlet, generates very little heat, and is quiet enough to keep at your desk.

We include all you need to know to unpack your system and launch your first application in a single-volume owner's manual. Thanks to its pre-installed operating system and interactive diagnostics, you can unpack and assemble your new Personal IRIS within 20 minutes.

And to give you an even greater sense of security, we back the Personal IRIS with Silicon Graphics' comprehensive customer support and hotline service.

### Compact, modular design.

If you ever need to replace one of the two system boards, the modular design allows you to swap in a new one in about 10 minutes. Installing upgrades such as a tape drive or additional disk drives is literally a snap and requires no tools.

### Peripheral options.

The Personal IRIS was designed to allow you great flexibility in configuring a system that satisfies your specific input, output and storage requirements.

You can easily add disk capacity with a range of disk drives allowing expansion from 190 MB to 3.5 gigabytes (formatted). Tape drives that enable you to back up and move data between



◀ *The Personal IRIS combines dynamic 3D graphics, powerful computing and ease of operation in a package that fits nicely in your office. The system is small and attractive, and its efficient design reduces heat and noise to a minimum.*

machines include a 150 MB  $\frac{1}{4}$ " tape drive and a tabletop 9 track quad density  $\frac{1}{2}$ " drive. With these products, your Personal IRIS will be completely compatible with existing systems and data tapes.

The Personal IRIS accepts a wide range of third-party products for applications that require expandability. The VME interface lets you add video and communications options that include:

- A 6-port serial I/O card
- An IEEE-488 interface
- A 5080™ and 3270™ emulation card
- A genlock option for video

And as a Personal IRIS user you have access to leading edge but inexpensive printer technology such as:

- Color printers with 300 dots-per-inch resolution and 3- or 4-pass color copies in both A (8.5" x 11") and B (11" x 17") sizes.
- Printer driver and user interface software bundled with the Personal IRIS that make generating beautiful, full-color output a simple task.

#### **An Invitation.**

The Personal IRIS offers you the industry's best 3D graphics, outstanding compute performance, a tremendous range of available applications and an affordable entry point to the industry's broadest family of compatible 3D workstations. Therefore, it's not surprising that the Personal IRIS is quickly making a name for itself. Many organizations in the areas of manufacturing, the sciences, industrial design, architecture, creative graphics, color publishing and education are putting the Personal IRIS to work helping people visualize what they design and analyze. Because of the Personal IRIS, many of them can afford 3D computing for the first time.

In its recent study of Silicon Graphics customers, KPMG Peat Marwick remarked that, "In some instances, engineers and scientists were using 3D computing to create designs and perform analyses that were not even possible before."

Why wait any longer? We invite you to share in the vision that inspired Silicon Graphics to add a new dimension to your competitiveness.

Contact your Silicon Graphics representative to arrange a demonstration of the Personal IRIS today.

## Silicon Graphics Product Family

### Servers



Full Binary Compatibility  
Common System Software  
Comprehensive Networking

Graphics Systems

## Specifications

|                              |                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CPU</b>                   | RISC processor with floating point coprocessor<br>4D/20 performance: 10 mips, 0.9 mflops<br>4D/25 performance: 16 mips, 1.6 mflops                                                                                                                                                                                                                                                              |
| <b>CPU Memory</b>            | 8MB standard<br>Expandable to 12, 16, 24 or 32MB                                                                                                                                                                                                                                                                                                                                                |
| <b>Storage</b>               | Internal 190MB, 344MB or 700MB formatted<br>SCSI disk drives<br>Expansion up to 3.5GB formatted capacity<br>Diskless model available                                                                                                                                                                                                                                                            |
| <b>Graphics</b>              | Entry model: 8 color bitplanes plus 4 administration planes<br>Super model: 24 color bitplanes plus 24 Z buffer planes plus 8 administration planes<br>Optional Full Color upgrade or Z buffer upgrade for Entry models<br>Standard performance: 90,000 2D/3D vectors/second plus 5,000 polygons/second<br>Optional turbo performance: 200,000 2D/3D vectors/second plus 20,000 polygons/second |
| <b>Communications</b>        | Standard ports include Ethernet, RS-232 (2), Centronics, VME slot, audio and SCSI<br>Optional capabilities include NFS, IBM SNA, 3270, 3770, 5080 and LU6.2, DEC and super-computer communications packages                                                                                                                                                                                     |
| <b>Productivity software</b> | Standard software includes UNIX System V.3 operating system, IRIS WorkSpace, IRIS System Manager, 4Sight windowing system with X.11 and NeWS, QuickPaint™, QuickModel™ and Personal Visualizer™ software<br>Optional software includes software development environment, a range of compilers, DOS emulation software, FrameMaker®, PHIGS, relational database management software and others   |

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**SiliconGraphics**  
The 3D Computer Company

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