Personal Iris - 4D/20

Personal 3D Workstation

The Personal Iris™ combines dynamic 3D graphics, powerful computing, and ease of operation in the first 3D workstation designed for personal use. The price/performance and complete feature set of the Personal Iris make it an outstanding platform for engineering, scientific, and creative design applications.

True 3D Graphics

The Personal Iris is the first personal workstation to incorporate the features and performance of real time 3D graphics. Breakthroughs in component design and optimization of Silicon Graphics' Geometry Pipeline™ permit a high level of integration and a corresponding reduction in physical size and cost.

Advanced Graphics Performance

The result is a single graphics board that provides 8 color bitplanes and 4 administration planes standard, expandable to a total of 24 color bitplanes with 8 administration planes and a 24-bit Z buffer. The Personal Iris renders 5,900 polygons per second,* can manipulate plain, anti-aliased or depth-cued 3D vectors, and runs Silicon Graphics' powerful Graphics Library set of software routines.

Powerful Computing

The Personal Iris provides the power to run demanding applications at your desk. The single board CPU is based on the MIPS® R2000A RISC processor running at 12.5 MHz and rated at 10 mips (VAX Dhrystone). With the floating point coprocessor performance equals 0.9 Mflops.**

The Features You Need

The Personal Iris comes with a large number of standard features, including Ethernet with TCP/IP, two serial ports, a Centronics port, an SCSI port, audio ports and a VME slot.

Built-in Useability

Owning and using the Personal Iris is simple: you can unpack and install the system and be running an application in less than 20 minutes. System software arrives already installed on the hard disk and runs automatically when the system is powered on. An icon-based user interface helps guide users with ease through the complexities of UNIX® system administration. Users install options including memory, cartridge tape and additional disks, and powerful diagnostics help users find problem areas and determine the best course of action.

Fits in Your Environment

The Personal Iris fits nicely in the typical office. The system package is small and attractive, and an efficient design reduces heat output and fan noise to a minimum. The system requires only one standard 15 amp power outlet and the rear bumper protects cabling when pushed towards a wall. The Personal Iris will fit *under* your desk."

Choice of Configurations

Personal Iris configurations include versions with 8 color bitplanes or 24 color bitplanes and 24-bit Z buffer. Configurations include diskless, 155MB or 344MB disk. Each configuration can be expanded to over 2 gigabytes. Standard memory is 8 MB expandable to 12 or 16 MB. Optional 4DSoftPC runs MS-DOS® compatible programs in a window while you simultaneously run 3D applications in other windows.

Compatible Member of the IRIS Family

The Personal Iris is a member of the 4D product family and is binary code compatible with the IRIS-4D Series of superworkstations. Since all 4D systems run the same graphics library and the UNIX V.3® operating system, applications will run on the entire 4D product line. Thus, the Personal Iris is the entry point to the broadest range of compatible 3D workstations available anywhere.

Low Cost of Ownership

Innovation, design efficiencies and an advanced Total Quality Control program contribute to a low cost of ownership for the Personal Iris. You can choose from a variety of support programs, including Standard Support starting at around 5% of list price.

Your Breakthrough to Higher Productivity

The Personal Iris is the breakthrough you've been waiting for. Consider the advantages of full 3D graphics, a powerful CPU, a complete set of standard features, expandability, DOS compatibility, usability, low cost of ownership, a friendly user interface, and complete compatibility with all Silicon Graphics IRIS-4D™ systems. All in a low cost, personal 3D workstation: the Personal Iris.

SiliconGraphics
Computer Systems

Standard features

Processor
- 12.5 MHz 32-bit RISC CPU
- 12.5 MHz floating point coprocessor (standard for Super model)

CPU Memory
- 8 MB dynamic RAM

Storage (stand-alone systems require a tape drive)
- Internal 155 MB or 344 MB formatted 5.25″ Winchester disk drive (SCSI)
- Diskless model available

Display
- Tilt/swivel RGB color monitor—
  19″ diagonal measure
  1280 x 1024 color resolution
  60 Hz non-interlaced display

Graphics
- Entry models
  8 color bitplanes plus 2 additional bitplanes for window ID plus two additional bitplanes for overlay/underlay (total of 12 bits/pixel)
- Super models
  24 color bitplanes plus four additional bitplanes for window ID plus four additional bitplanes for overlay/underlay plus 24-bit z-buffer (total of 56 bits/pixel)

Color range
- Color map mode (12 bits)—4096 colors displayable
- RGB Mode (24 bits)—16.7 million colors displayable

Peripherals
- Optical 3-button mouse with pad, 200 cpi resolution
- 101-key sculpted keyboard with numeric keypad and user definable keys

Communications
- Ethernet Port with TCP/IP
- Two RS-232 serial ports with modem control, up to 38.4K baud (includes RS-423 support)
- One Centronics port
- One single-wide, double-high VME slot
- One SCSI port
- Audio port with LINE IN, MIC, and loudspeaker connectors

Productivity Software
- UNIX System V.3 operating system with SGI enhancements
- SGI Environment Manager
- SGI Graphics Library
- 4Sight™ Windowing System (NeWS, GL windows, X Windows)
- Diagnostics software

Options

Processor
- 12.5 MHz floating point coprocessor (optional for Entry model)

CPU Memory
- One or two additional 4 MB increments of dynamic RAM (total of 16 MB)

Storage (Stand-alone systems require a tape drive)
- Additional 344 MB formatted user-installable disk (SCSI)
- External 344 MB to 1GB formatted 5.25″ Winchester disk drive subsystem with power supply and cables (connects to SCSI port)
- 150 MB user-installable 1/4″ cartridge tape drive (SCSI)
- External 1.2 MB floppy disk drive (SCSI) for 4D SoftPC DOS emulation software (connects to SCSI port)
- Upgrade enabling diskless system to accept disks

Graphics
- Graphics upgrade for entry models (from 12 to 56 bits/pixel)

Peripherals
- 11x11 digitizing tablet with stylus or cursor
- Dials and buttons image control modules
- Video I/O card with genlock NTSC or PAL encoder (VME)
- Programming terminal
- Video and keyboard/mouse extender cables, 75′ (up to 2, total of 150′)
- Color printer with cables
- IEEE 488 interface board (VME)
- 6-port serial I/O card (VME)

Communications
- Networking Software Package with NFS
- IBM 3270 communications package (VME)
- IBM 5080 communications package (VME)
- DEC communications software
- Supercomputer interface (VME)

Productivity Software
- Software Developer's Package with C compiler and Developers Environment UNIX
- EMACS text editor
- Documenter's Workbench
- FORTRAN compiler
- ADA compiler
- Pascal compiler
- PL/1 Compiler
- PC-DOS emulation software
- PHIGS software
- Text Processing Software (for Laser Printer)

Physical and Environmental

Power
- 115V Line voltage (90-132 VAC) Approx. 3 amps-system, 2.5 amps-monitor
- 230V Line voltage (180-264 VAC) AC Frequency range 47-63 Hz NEMA 10 amp outlet

Size and Weight
- CPU
  9.1″w x 21.5″h x 17.7″d
  (23.1 x 54.6 x 44.9 cm)
  60 pounds (27.3 Kg)
- Keyboard
  20″w x 1.75″h x 8.5″d
  (50.8 x 4.4 x 21.5 cm)
  3 pounds (1.4 Kg)
- Monitor
  19.2″w x 18.2″h x 19.4″d
  (48.8 x 46.2 x 49.4 cm)
  68 pounds (30.6 Kg)

Environment
- Ambient temperature
  +13 to +35 degrees C operating
  −40 to +65 degrees C shipping and storage
- Relative humidity
  10% to 80% operating no condensation
  10% to 95% non-operating no condensation
- Altitude
  10,000 feet operating
  40,000 feet non-operating

Acoustic Noise
45 dBA max in typical operating position

Safety
UL 478, 114
CSA 154
TUV (VDE 0806, IEC 380)
FCC Class A emissions
VDE 0871 A emissions
25 KV ESD, no damage
(17.5 KV ESD for keyboard)

Personal Iris Models

Super 8 MB, FPU 24 bitplanes 24-bit z-buffer	Not available	155MB disk[1]	344MB disk[1]
Entry 8 MB 8 bitplanes	Diskless	155MB disk[1]	344MB disk[2]

[1] 170MB unformatted
[2] 380MB unformatted

*Z buffered, Gouraud shaded, 4 sided 10x10 independent polygons
**Linpack Double Precision Coded Bias

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Computer Systems

ESD-10/88