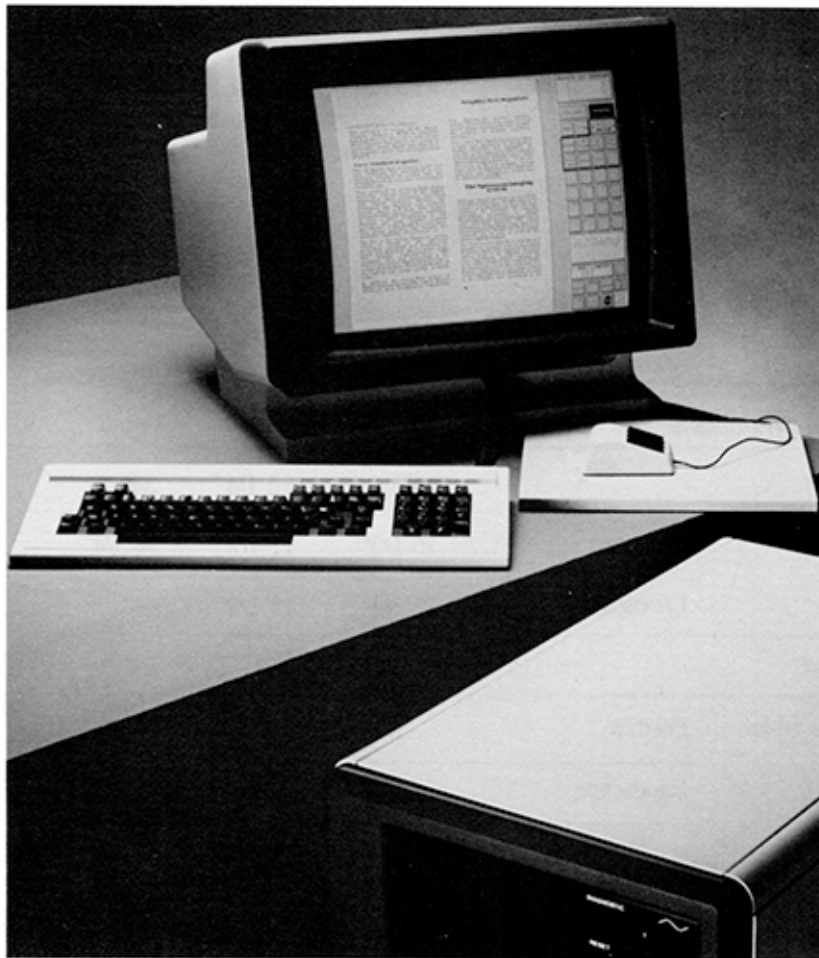**ACCENT** Systems Corporation

PERQ PQ4000
GRAPHICS WORKSTATION

The PERQ PQ4000 graphics workstation offers unprecedented power and flexibility to professionals who deal with information visually—in areas like electronic publishing, image processing, computer-aided design, drafting and software development. PERQ combines the work capacity and processing speed of an expensive minicomputer with the price of a traditional microcomputer and adds a graphics capability that is far superior to both.

A single-user system, PERQ can operate as a stand-alone workstation or can be easily integrated into an IEEE 802.3-based local area network for advanced communication.

The standard PERQ PQ4000 configuration includes:
• Base unit, housing processor, memory, I/O controller and fixed disk(s),
• High performance graphics display,
• Graphics tablet with pointing device,
• Alphanumeric keyboard.

Processor
- Proprietary bit-slice bipolar CPU with 170 ns. cycle time.
- Microprogrammable to optimize speed and memory usage for programs written in specific higher order languages, including Pascal, C and FORTRAN 77, to provide multiple instruction set architectures within a single workstation.
- 16K Writable Control Store.
- Hardware RasterOp bitmap manipulation, enabling bit-addressed raster data to be moved at up to 32 Mbits per sec.
- 24 bit real address registers.
- Hardware diagnostics implemented via microcode with results displayed automatically.

Memory
- 2 or 4 Mbytes of MOS semiconductor RAM with parity checking.
- Memory cycles 64 bits every 680 ns.
- Approximately 200 Mbits/sec. aggregate memory bandwidth, shared equally between display and processor.
- Integrated memory /display controller.
- Screen bit-mapped directly from any area of memory.

Input/Output
- I/O controller (for high speed devices) multiplexes up to 6 simultaneous DMA channels at up to 10 Mbits/sec. each; 2 DMA channels for user options.
- Dedicated microprocessor to control low speed devices.
- Two RS232 interfaces: full duplex synchronous/asynchronous serial data ports; speeds up to 9600 baud.
- GPIB interface: IEEE 488-1975.
- Speech and sound generation hardware.
- IEEE 802.3 Ethernet™ local area network interfaces available.
- IEEE 796 Multibus™ (optional).

Displays

- Free-standing, raster-scanned bit-mapped CRT.
- 60 Hz non-interlaced refresh rate.
- 100 dots/inch resolution.
- P4 white tube phosphor.
- Hardware cursor user-definable up to 56 x 64 pixels.
- Direct refresh from main memory.
- Portrait screen 768 x 1024 pixels, 15" diagonal.
- Landscape screen 1280 x 1024 pixels, 20" diagonal.

Graphics tablet

Tablet with mouse
- Completely flat surface.
- Active area 8.25" x 10.75" (portrait) or 12" x 10" (landscape).
- Electromagnetic operation.
- Three-button mouse.
- Max. distance from display: 8'.

Optional high-resolution bit pad
- Active area 11" x 11".
- 0.005" resolution.
- Choice of 4-button puck or stylus.
- Max. distance from base unit: 8'.

Keyboard

- Detached, solid-state keyboard stretches up to 8" from display.
- 84 keys (including numeric key-pad and 4 user-definable function keys).
- ASCII character code.

Fixed disk units

- 5 1/4" Winchester disks.
- One disk standard, second integral disk optional.
- 43-288 Mbyte capacity.
- Rotational speed 3600 rpm.
- Average access time: 30 ms.
- Transfer rate: 5 Mbits/sec.
- Average latency: 8.33 ms.

Floppy disk drive (optional)

- 8" double-sided, double-density, soft-sectored.
- 1 Mbyte formatted capacity.
- Rotational speed 3600 rpm.
- Average access time: 96 ms.
- Transfer rate: 62.5 Kbytes/sec.
- Average latency: 83.3 ms.
- Head load time: 50 ms.
- Settling time: 15 ms.
- Track-to-track seek: 3 ms.

Operating systems

- Accent™.
- PNX.
- PERQ Operating System (POS).

Optional software

- Pascal.
- C.
- FORTRAN 77.
- XNS™.
- TCP/IP.

General information

Power requirements
- Source: 100/115/240 V.
- Line frequency: 50/60 Hz.
- 880 watts.

Environment
- Operating temperature: 15° to 32° C.
- Relative humidity: 20% to 80%.

Cabling
- All necessary cables for the minimum configuration are supplied.

Physical dimensions		Height	Width	Depth
Base unit		26"	15 1/4"	30"
Display	Portrait	16 1/2"	11 1/2"	14 3/4"
	Landscape	17 3/4"	19 1/2"	18"
Keyboard		1 3/4"	19"	18"
Graphics tablet	Portrait	1/2"	8 1/4"	10 3/4"
	Landscape	1/2"	12"	10"
		9/16"	15 1/2"	15 1/2"

ACCENT Systems Corporation