

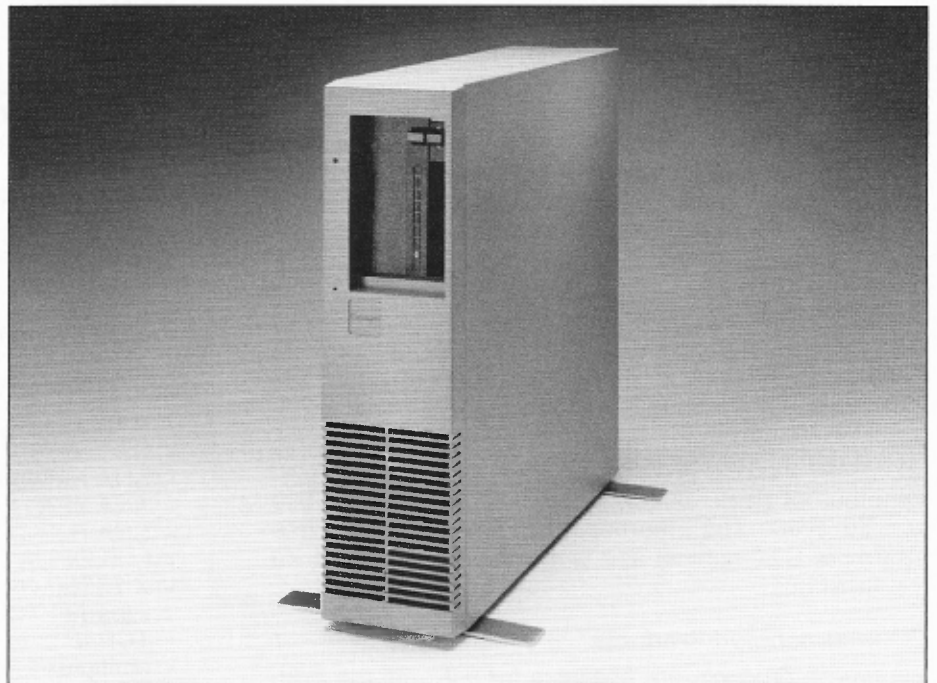
## S/80 Overview

- Powerful 32-bit mini-computer supporting up to 16 users
- Object-code compatible with entire S/Series family of WorkGroup Servers™
- Industry-standard UNIX System V operating system
- Motorola MC 68020 microprocessor
- Optional MC 68881 floating-point coprocessor
- 32 MB demand-paged virtual memory
- 2 to 6 MB RAM
- Integral 5 1/4-inch 40, 80, 145 or 320 MB hard disk(s)
- 8 or 16 integral serial (RS-232-C) ports
- Integral SCSI host adapter
- Extensive easy-to-use administrative and diagnostic tools
- Centronics-compatible parallel printer port
- Programming languages include C, FORTRAN, Pascal, BASIC, LPI COBOL, RM COBOL, source level debuggers, ACCELL/E program development language, and extensive data management facilities
- Development tools include the Source Code Control System; full screen Editor, Linker, and Debugger; and CTAM windows
- Communications facilities include BSC 3270 terminal emulator, BSC 2780/3780, SNA 3270, SNA RJE, LU6.2/PU2.1, X.25, TCP/IP over Ethernet and X.25, Multiplex PC link, and PC Exchange/VINES
- Office applications include WGS/OFFICE (word processor, spreadsheet, mail, and calendar), WGS/WORD ERA, and UNIFY/E relational database

The S/80™ is the smallest member of the Convergent™ S/Series™ family of high-performance UNIX® System V minicomputers. With the sophisticated S/Series architecture, the S/80 has the power to support advanced data processing, office automation, and PC serving. As the lowest cost member of the S/Series family, the S/80 now brings S/Series benefits to even the smallest workgroups.

The entire S/Series family is designed for high reliability and data protection, and includes support for an intelligent uninterruptible power supply (UPS). Also, CTIX™, the S/Series' operating system that is derived from and fully compatible with UNIX System V, has been enhanced to provide more robust file and data reliability even in the event of a complete power loss. Complementing the hardware and operating system designs are extensive diagnostic tools.

This combination of a reliable design and fault resiliency, along with high-quality manufacturing, provides for high up times and low life-cycle costs.



## S/80 HARDWARE OVERVIEW

The S/80 cabinet contains:

- Main processor board
- Memory and input/output (I/O) subsystems
- Backup/software distribution device
- Up to three 5 1/4-inch hard disk drives

### Main Processor

The main processor board in the S/80 uses the 32-bit Motorola® MC 68020 microprocessor with an optional Motorola MC 68881 floating-point coprocessor. A Convergent proprietary memory management unit (MMU) provides high-performance demand paging and enables the S/80 to run large programs up to 24 MB.

The main processor board also includes a time-of-day clock with battery backup and an interface for an intelligent UPS.

### Memory Subsystem

Advanced software often requires large amounts of physical memory to perform as designed; therefore, the S/80 comes standard with 2 MB of byte-parity protected high-speed RAM. Provisions are also included for a memory expansion card. High-speed memory expansion cards are available in 1 and 4 MB versions.

### I/O Subsystem

The S/80 comes standard with extensive integral I/O capability, including eight serial ports (two synchronous/asynchronous RS-232-C and six asynchronous-only RS-232-C with full modem support) and a Centronics-compatible parallel printer port. An optional 8-serial port expander (asynchronous-only RS-232-C with full modem support) is available to connect up to 16 terminals or other serial devices. Also available is an optional Small Computer System Interface (SCSI) external physical interface adapter.

### Backup/Software Distribution Device

A quarter-inch cartridge (QIC) tape drive comes standard with the S/80. Therefore, the S/80 is 100 percent media compatible with the entire S/Series family. Both 60 and 150 MB tape drives are available.

### Hard Disk Drives

The S/80 supports up to three internal half-height hard disk drives. Alternatively, the S/80 will support one large capacity (145 or 320 MB) full-height drive and one smaller (40 or 80 MB) half-height drive.

### Networking Options

An Ethernet (IEEE 802.3) Adapter is available for use with the S/80. The Ethernet Adapter physically resides inside the S/80 cabinet and is electrically interfaced via the SCSI bus.

### Other Expansion Products

Expansion products are available for use with the S/80 (from other vendors) that connect to the integral SCSI host adapter (e.g., large disk drives and tapes).

The optional external SCSI physical interface adapter is required for such use.

## S/SERIES SOFTWARE OVERVIEW

### Operating System Support

The S/80 uses the CTIX operating system, which is, derived from and compatible with the UNIX System V operating system. CTIX is a time-shared operating system that is 100 percent object-code compatible with all products in the S/Series family. CTIX provides both the Bourne and the C shells; extensive programming tools; a multiwindow, multiapplication window manager (CTAM™); and Berkeley enhancements.

Other enhancements include:

- High-speed UNIX file system
- Dynamically loadable drivers
- Robust UNIX file system (requires no check after orderly shutdown and provides recovery in the case of single-bit errors)
- Database support in the file system, including direct I/O and contiguous blocks
- Realtime enhancements, including preemptive scheduling, synchronous writes, and optimized asynchronous I/O

CTIX supports a 32 MB virtual address space per process in the S/80; 8 MB are reserved for kernel virtual space and the balance is available for each running process. A device driver manual is available to aid in creating and integrating customer-generated device drivers.

### Languages

- C
- LPI COBOL
- RM COBOL
- FORTRAN
- Pascal
- BASIC Interpreter
- BASIC Compiler
- ACCELL™/E program development language

### Data Management Facilities

- ISAM
- UNIFY®/E relational database
- Sort/Merge
- DPL Forms
- CTAM windows

### Communications Services

- BSC 2780/3780
- BSC 3270
- SNA Network Gateway
- SNA 3270
- SNA RJE
- LU6.2/PU2.1
- X.25 Network Gateway
- Ethernet TCP/IP
- TCP/IP over X.25
- Multiplex™ PC network productivity tool
- PC Exchange™/VINES™

## Office Automation Software

- WGS/OFFICE™, including:
  - WGS/DESKTOP™
  - WGS/WordProcessor™
  - WGS/SpreadSheet™
  - WGS/Mail™
  - WGS/Calendar™
  - WGS/WORD ERA™

## SPECIFICATIONS

### Processor

MC 68020 operating at 16.7 MHz  
MC 68881 floating-point coprocessor (optional)  
Demand-paging memory-management unit

### Memory Capacity

RAM: 2 to 6 MB

### I/O RATES

#### RS-232-C

External Clock: 110 bps to 38.4 kbps  
Internal Clock: 50 bps to 38.4 kbps

### Parallel (Printer Interface)

600 lines/min

### SCSI

Conforms to ANSI specification 14B  
Async data transfer: Up to 1.25 MB/sec  
Sync data transfer: Up to 2.47 MB/sec  
Burst data transfer: 10 MB/sec (max)

### Cable Requirements

Supports up to two external devices  
Maximum cable length is 15 ft (4.57 m)

## ELECTRICAL

115V: 95 to 130 Vrms  
4.5A at 47 to 63 Hz  
230V: 190 to 260 Vrms  
2.5A at 47 to 63 Hz

The AC loads specified represent the loads presented to the line by a fully configured system.

## PHYSICAL

Height: 19.38 in. (49.3 cm)  
Width: 5.25 in. (13.3 cm)  
Stabilizer: 11 in. (27.9 cm) wide  
Depth: 20 in. (50.8 cm)  
Weight: 55 lb (25 kg) fully loaded

## Third-Party Software

Convergent works closely with software developers to ensure that an extensive set of applications in the UNIX environment is available to users of Convergent equipment. Software developed to the AT&T System V Interface Definition is source code compatible with the S/80 and other members of the S/Series family.

## REGULATORY

### Safety

Meets UL 478 (Business Equipment)  
Meets CSA 220 (Information Tech Equipment)  
Meets VDE 0806/8.81 (Office Equipment)  
Meets IEC 380 (Office Equipment)

### Emissions

Meets VDE 0871/6.78, Class A  
Meets FCC Part 15, Subpart J, Class A

## ENVIRONMENTAL

### ESD

5,000V: No observable effect  
15,000V: No data corruption  
25,000V: No permanent damage

### Ambient Temperature/Relative Humidity

Operating: 10°C to 40°C  
10% to 80%, noncondensing  
Non-operating: -40°C to 60°C  
10% to 90%, noncondensing

### Altitude

Operating: 10,000 ft ASL  
Non-operating: 30,000 ft ASL

### Shock

Non-operating: 10 g

### Acoustic Noise Level

55 dB(A) max

### Transportation

Packaging and shipping containers and procedures comply with the current NSTA preship test procedures. Product and packaging designed for air-express shipment.

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Convergent

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