



**HEWLETT  
PACKARD**

# Real-Time Emulator Motorola® MC6801/6803

MODEL 64256S

TECHNICAL DATA 1 NOV 82

## Description

Model 64256S Emulator offers real-time, full-speed emulation of Motorola MC6801/6803 microprocessors. This capability brings the power of emulation to all phases of microprocessor-based product design, development, and maintenance. As a subsystem of the HP 64000 Logic Development System, Model 64256S emulator also provides access to the other sophisticated software and hardware development tools of the 64000 System. With the versatile 64000 System, you can speed your 6801/6803-based systems to market.

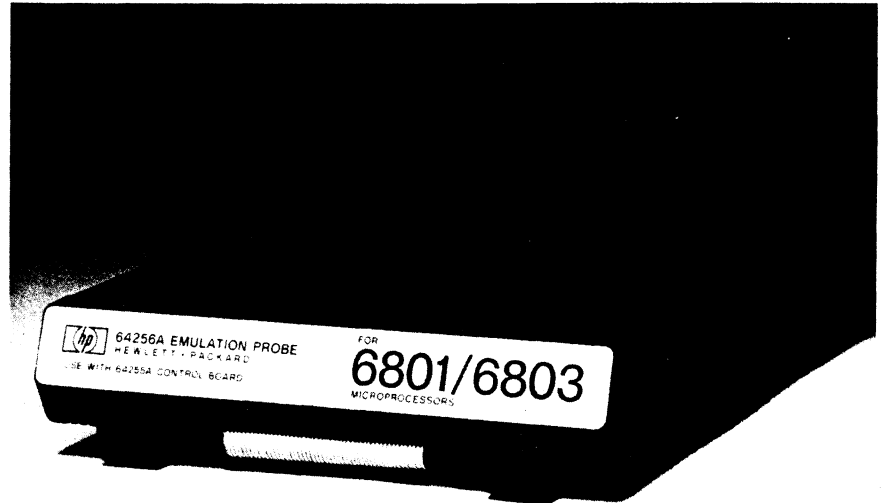
Model 64256S is part of an integrated set of design and development aids for 6801/6803 processors. Assembler/linkers are available to accommodate programming at the most efficient level. Directed syntax softkeys and an easy-to-use, responsive editor streamline software development and documentation. Logic State/Software Analysis or Logic Timing/Hardware Analysis subsystems may be combined with the emulator for interactive operating modes. Emulation/analysis measurements add the flexibility needed in integrating, optimizing, and troubleshooting complex designs. Accelerate your design cycle by selecting the best 64000 system for your 6801/6803 development needs. Convenience, ease of use, and the measurement power of the 64000 System help you produce a better 6801/6803 product in less time, to gain a competitive edge.

## Emulator Features

- Real-time execution to 1.25 MHz
- Fully interactive multiprocessor emulation
- Input mode testing in the target system

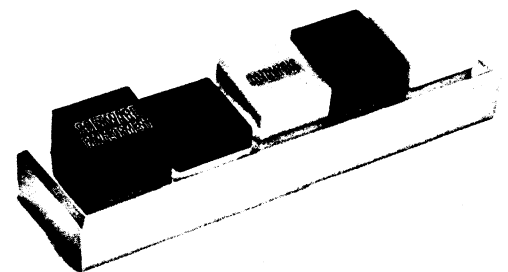
## Memory Mapping Features

- Designate memory blocks as RAM, ROM, or illegal
- Up to 64k bytes of emulation memory available
- Mapping allows 6801/6803 to operate in modes 0,1,2,3,5,6,7



## Analysis and Debugging Features

- Compatibility with 64600S Logic Timing/Hardware Analysis and Model 64620S Logic State/Software Analysis subsystems for interactive measurements in a single development station
- Powerful internal logic analyzer for real-time monitoring of processor bus activity
- Single cycling and register displays of processor's internal activity
- Simulated I/O for emulator access to 64000 System resources: disc files, printer, and development station keyboard, display, and RS-232 port
- Command file structure combines with emulation for automated testing and debugging
- Display/modify capabilities on emulation memory, user memory, and on-chip memory
- Symbolic debugging



## Characteristics

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### ELECTRICAL

**Maximum Clock Speed:** (no wait states inserted) 1.25 MHz.

**Data Input:** low-power Schottky TTL loads with capacitance of approx 20 pF.

**Clock Input:** meets Motorola MC6801/6803 specifications plus approx 20pF.

### PHYSICAL

**Cable Length:** development station to emulation pod, approx 1.5 m (5 ft); emulation pod to target system, approx 305 mm (1 ft).

### ENVIRONMENTAL

**Temperature:** operating, 0° to +40° C (+32° to +140° F); nonoperating, -40° to +75° C (-40° to +167° F); operating survival, -20° to +50° C (-4° to +122° F).

**Altitude:** operating, 4600 m (15 000 ft); nonoperating, 15 300 m (50 000 ft).

**Relative Humidity:** 5% to 80%.

## Ordering Information

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A complete MC6801/6803 emulator consists of Model 64256S Emulator subsystem, and Model 64156S Emulation Memory system; and Model 64300A (40-channel) or Model 64302A (48-channel) Internal Logic Analyzer is available to display activity on the emulator bus. Emulator software is available on flexible disc (64256SF) or tape cartridge (64256ST) for transfer of the emulator operating system to mass storage. Model 64841AF/AT 6800 Assembler/Linker and Model 64811AF/AT 6800 Pascal Compiler are highly recommended; they are also transferred to mass storage. Only one set of software is needed for each 64000 System cluster.

### Model 64256S 6801/6803 Emulation Subsystem

**Model 64256SF 6801/6803 Emulation Software** on flexible disc

**Model 64256ST 6801/6803 Emulation Software** on tape cartridge

### Model 64156A 32k byte Emulation Memory System

**Option 011** 64k byte Emulation Memory System

### Model 64300A 40-channel Internal Logic Analyzer

### Model 64302A 48-channel Internal Logic Analyzer

**Model 64841AF 6800 Assembler/Linker** on flexible disc

**Model 64841AT 6800 Assembler/Linker** on tape cartridge

**Model 64811AF 6800 Pascal Compiler** on flexible disc

**Model 64811AT 6800 Pascal Compiler** on tape cartridge

### COMPONENTS

**Model 64255A 6801/6803 Emulation Control Board**

**Model 64256A 6801/6803 Emulator Pod**

**Model 64155A Wide-address Memory Control Board**