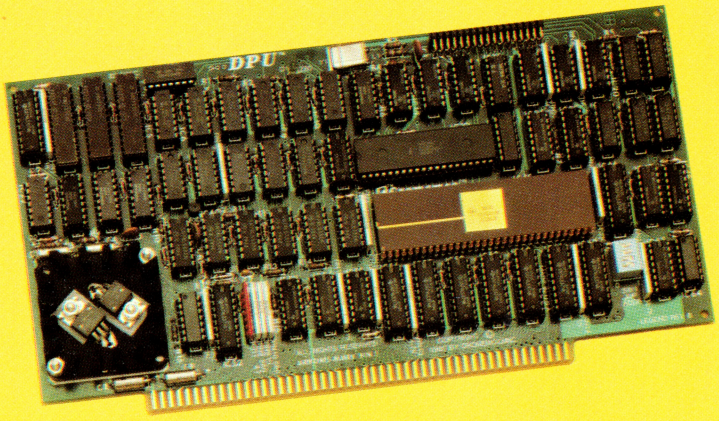
Cromemco



Dual Processor Unit gives 32-bit performance in all Cromemco systems and is compatible with all Cromemco software.

New 68000-Based Central Processor with companion error-correcting memory

Dual Processor Unit with supermini performance at micro prices

The new Model DPU is a high-performance processor card that uses both the MC68000 and Z-80A processors to give a 32-bit processor at modest cost. The processor is fully compatible with all software that currently runs on Cromemco systems.

The Model DPU can directly replace the ZPU processor in any Cromemco system so you have easy upward expandability.

Dynamic switching between the two processors is under software control. When the Z-80A processor is used, you have access to present software.

When the 68000 is used, you have the most powerful microprocessor currently available with 32-bit internal architecture and a 16 bit-wide external data bus.

You also have the 24-bit address bus which can access **16 Megabytes** of memory.

All in all, programs run up to 10 times faster using the DPU and, of course, the address space is enormous.

Other features

- MC68000 with 32-bit Data and Address registers, 16 MB Direct Addressing Range, 56 powerful instruction types, Operations on 5 Main Data types, Memory Mapped I/O, 14 Addressing Modes.
- Functions with either 8- or 16-bit memories (either byte or word width)
- Full compatibility with S-100 Bus standards
- Compatible with existing Cromemco products
- Full software support for the 68000 including Cromemco CROMIX operating system, 68000 Assembler, Fortran 77, Pascal, BASIC, COBOL, and C.

Error-Correcting Memory Cards

Two Memory Storage Units have been developed to provide mass RAM storage for the new Dual Processor. These memory units provide 256K and 512K of storage.

A special feature is that the units have built-in **error detection** and **correction.**

The units represent each 16-bit word with 22 bits to provide two bits per word error detection and one bit per word error correction.

The Storage Units are used with the new Memory Controller Unit. This unit supports up to eight Storage Units and is responsible for all error detection, error correction, and error logging.

Storage Unit Features

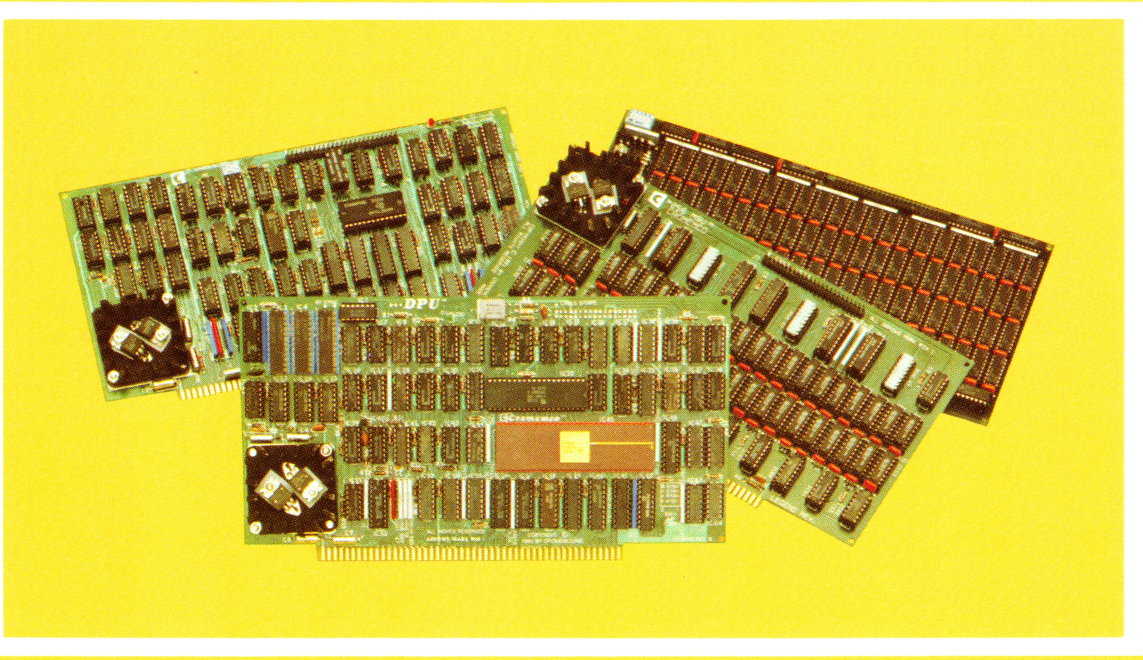
- 256K or 512K memories. Additional six bits of error-correcting code per 16-bit word on board.
- Diagnostic PROM on each MSU for system test
- Retain data on system reset

Control Unit Features

- MCU unit supports either byte or word width memory operations.
- Multiple Control Units possible in one system
- Supports full 16-Megabyte direct address space of MC68000
- Error logging for use with ECC Memory Storage Units; stores errors encountered, identifies MSU card and RAM chip
- LED error indicator in addition to historical error-logging on disk

Cromemco®

Tomorrow's computers today



Dual Processor Unit, Memory Controller Unit, and 256K and 512K Memory Storage Units.

TECHNICAL SPECIFICATIONS

Model DPU

Dual Processor Unit

Processors: MC68000 and Z-80A.
Clock Rate: MC68000: 8 MHz; Z-80A: 4 MHz.
Instruction Set: MC68000: over 1000 instructions in 56 main types.
Z-80A: 158 instructions including the 78 instructions of the 8080.
Processor control: Software-controlled switching between MC68000 and Z-80A.
Bus: S-100.
Power requirements: +8 volts at 2 amps.
Operating environment: 0 to +55° C.

Model MCU
Memory Control Unit

Support capacity: Up to eight MSU memory cards.
Address space: 16 Megabytes.
Bus: S-100.
Power requirements: +8 volts at 1.5 amps.
Operating environment: 0 to +55° C.

Models 256MSU and 512MSU
Memory Storage Units

Memory capacity: 256MSU: (128K × 22 bits) 256K bytes.
512MSU: 256K by 22 bits
512K bytes.
Memory type: 64K RAMs; 150 nanosecond access time.
Bus: S-100
Power requirements: +8 volts at 1.5 amps.
Operating environment: 0 to +55° C.

Cromemco™
incorporated
280 BERNARDO AVE., MOUNTAIN VIEW, CA 94040 • (415) 964-7400
Tomorrow's computers today