

Mostek MD Series

MDX

Expandable

Modules

Actual size shown

MDX-CPU1

The CPU of a multi-module Z80-based microcomputer system. It is STD-Z80 BUS compatible, and is compatible with all Mostek Z80 development equipment.

FEATURES

- ☐ Z80 CPU
- ☐ 4K x 8 EPROM (two 2716's, customer provided)
- ☐ 256 x 8 Static RAM (compatible with DDT-80 debugger).
- ☐ Flexible Memory decoding for EPROM and RAM
- ☐ Four counter/timer channels
- ☐ Restart to 0000H or E000H (strapping option)
- ☐ Debug compatible for single step in DDT-80
- ☐ 4MHz version available
- ☐ + 5V only
- ☐ Fully buffered signals for system expandability
- ☐ STD-Z80 BUS compatible

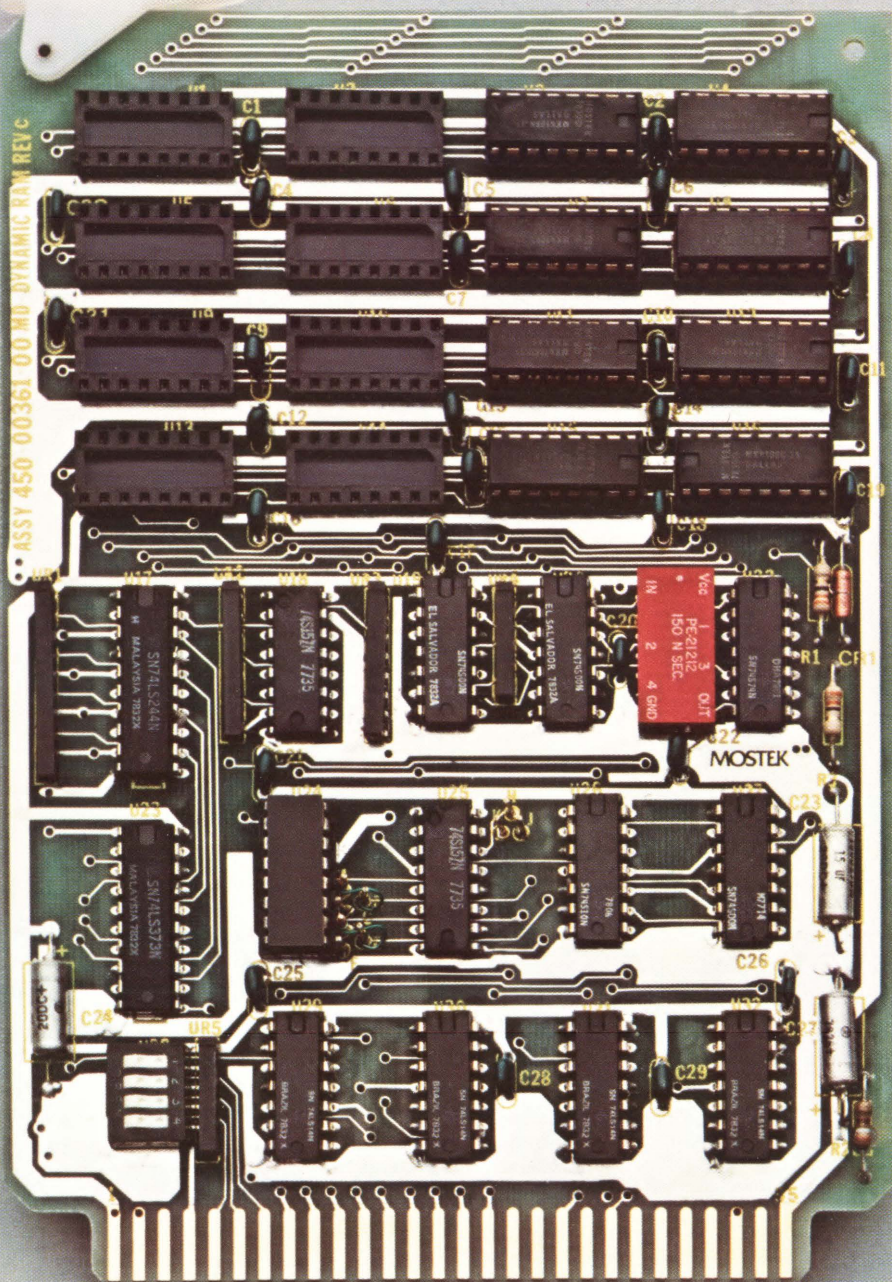
ORDERING INFORMATION

| DESIGNATOR | DESCRIPTION | PART NO. |
|------------|---|-----------|
| MDX-CPU1 | Module with Operation Manual less EPROMs and mating connections. 2.5MHz version. | MK77850 |
| MDX-CPU1-4 | Module with Operations Manual less EPROMs and mating connectors. 4.0 MHz version. | MK77850-4 |
| | MDX-CPU1 Operations Manual | MK79612 |

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• ASSY 450 00361 00 MD DYNAMIC RAM REV C



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MDX-DRAM

This add-on RAM module for the STD-Z80 BUS uses Mostek's dynamic RAMs.

FEATURES

- ☐ Three memory sizes
 - 8K x 8 (MDX-DRAM8)
 - 16K x 8 (MDX-DRAM16)
 - 32K x 8 (MDX-DRAM32)
- ☐ Selectable addressing on 4K boundaries
- ☐ 4MHz version available (MDX-DRAM-4)
- ☐ STD-Z80 BUS compatible

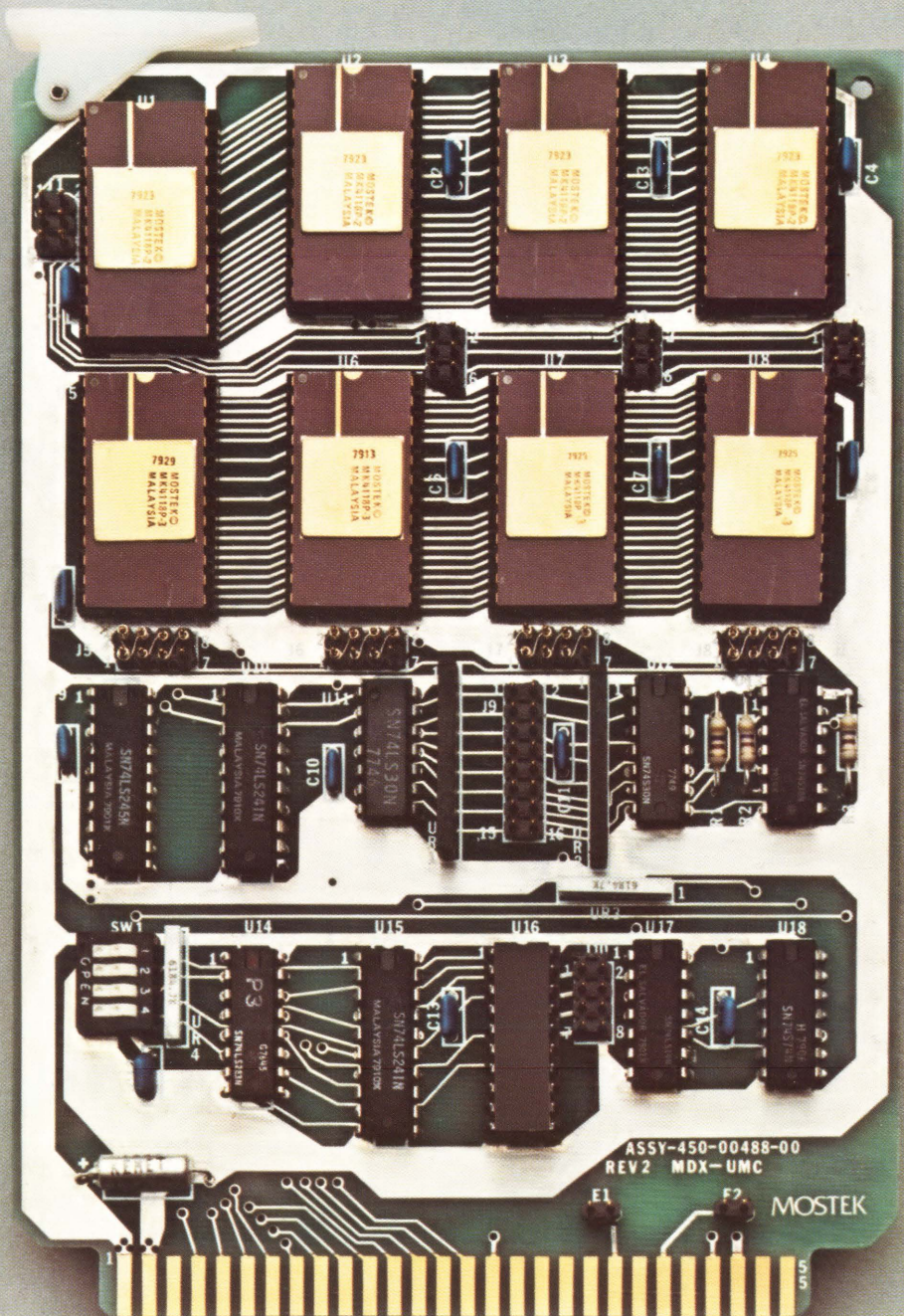
ORDERING INFORMATION

| DESIGNATOR | DESCRIPTION | PART NO. |
|--------------|---|--------------------|
| | Module with Operation Manual less mating connectors in the following memory capacities, 2.5MHz versions. | |
| MDX-DRAM8 | 8K Bytes (4108's) | MK77750 |
| MDX-DRAM16 | 16K Bytes (4108's) (4116's) | MK77751 MK77754 |
| MDX-DRAM32 | 32K Bytes (4116's) | MK77752 |
| | Module with Operations Manual less mating connectors in the following memory capacities, 4.0 MHz version: | |
| MDX-DRAM16-4 | 16K Bytes (4116's) | MK77754-4 |
| MDX-DRAM32-4 | 32K Bytes (4116's) | MK77752-4 |

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MDX-SRAM



MDX-SRAM

The MDX-SRAM is a static memory expansion board for the STD-Z80 BUS.

FEATURES

- ☐ Three memory sizes
 - 4K x 8 (MDX-SRAM4)
 - 8K x 8 (MDX-SRAM8)
 - 16K x 8 (MDX-SRAM16) [planned]
- ☐ Selectable starting address on 4K boundaries
- ☐ 2.5 MHz and 4.0 MHz compatible
- ☐ STD-Z80 BUS and STD BUS compatible
- ☐ +5 Volt only

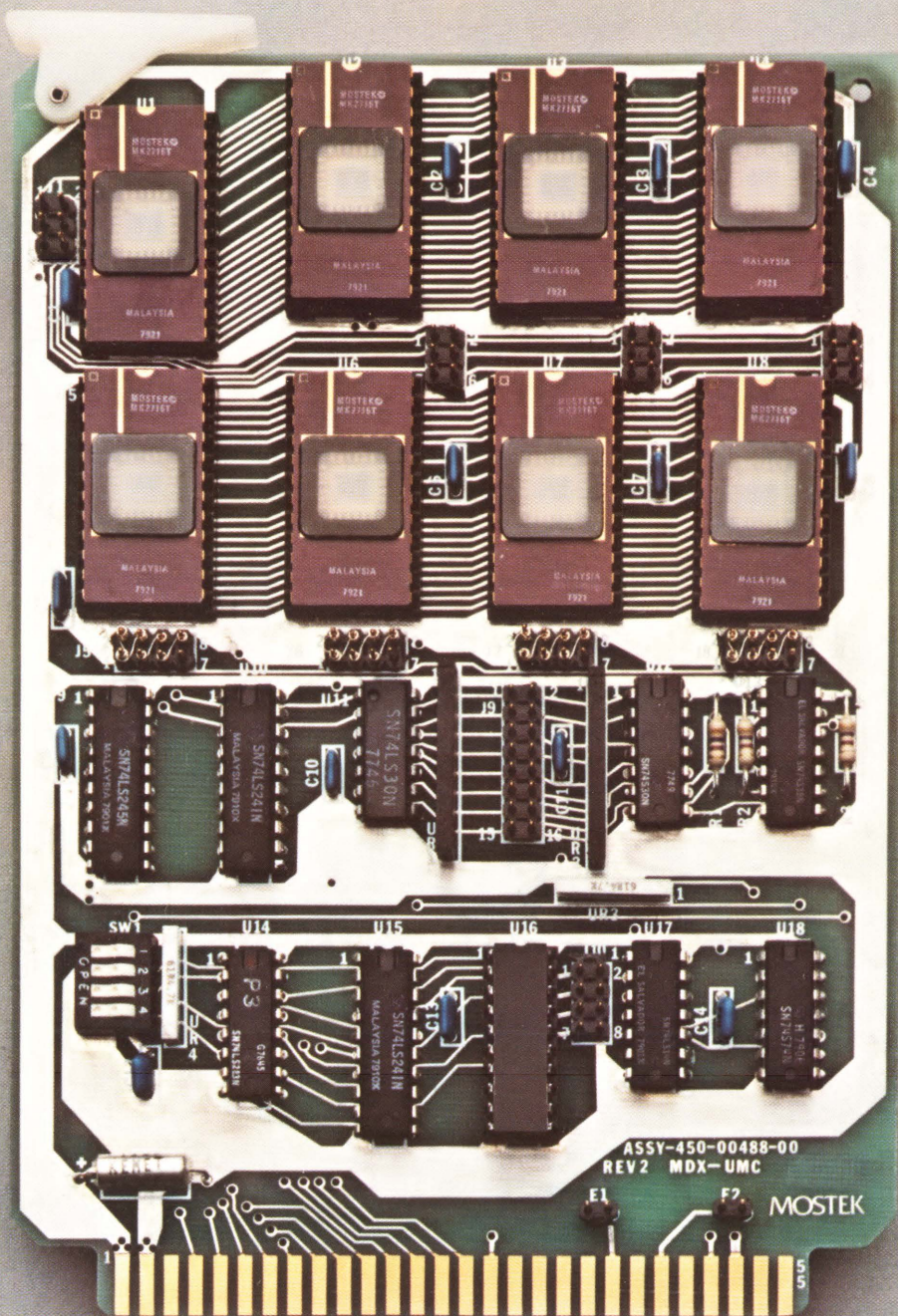
ORDERING INFORMATION

| DESIGNATOR | DESCRIPTION | PART NO. |
|------------|---|----------|
| MDX-SRAM4 | 4K Bytes (4118's) module with operation manual | MK77755 |
| MDX-SRAM8 | 8K Bytes (4118's) module with operation manual | MK77756 |
| MDX-SRAM16 | 16K Bytes (4802's) module with operation manual | MK77757 |
| | MDX-SRAM Operations Manual only | MK79673 |

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MDX-EPROM



MDX-EPROM

The MDX-EPROM is an EPROM memory expansion board for the STD-Z80 BUS.

FEATURES

- ☐ Accepts the following industry standard EPROMS:
 - 2758 (1K x 8)
 - 2716 (2K x 8)
 - 2732 (4K x 8)
- ☐ Eight EPROM sockets for maximum storage of:
 - 8K x 8 using 2758's
 - 16K x 8 using 2716's
 - 32K x 8 using 2732's
- ☐ Eight 2716 EPROMs included
- ☐ Wait state generator for 4MHz operation
- ☐ STD-Z80 BUS compatible
- ☐ +5 Volt only

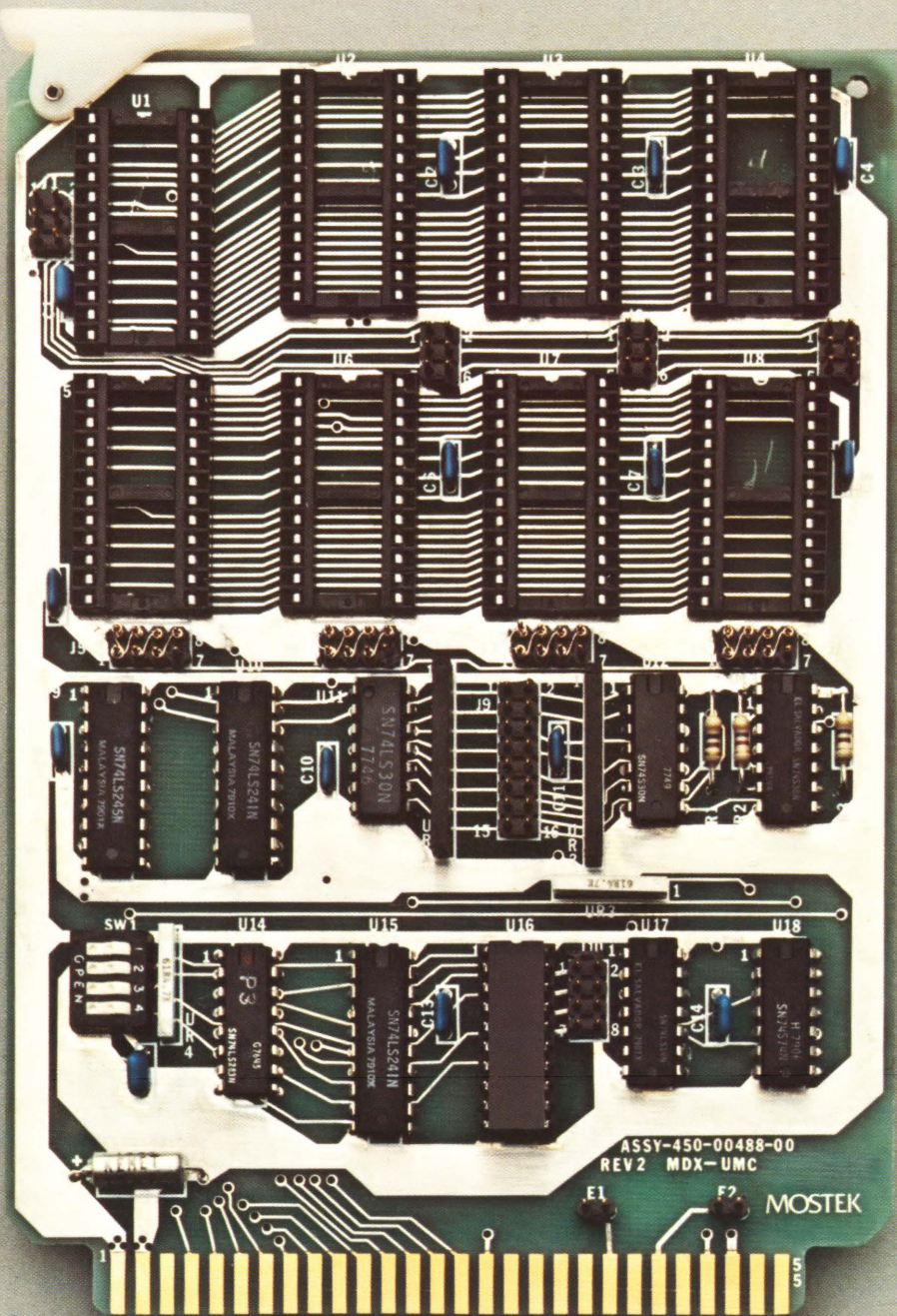
ORDERING INFORMATION

| DESIGNATOR | DESCRIPTION | PART NO. |
|------------|----------------------------------|----------|
| MDX-EPROM | Module with Operation Manual | MK77758 |
| | MDX-EPROM Operations Manual only | MK79671 |

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Actual size shown



MDX-UMC

A universal memory card for the STD-Z80 BUS. The MDX-UMC lets the user configure the board to meet the system requirement of ROM/EPROM and/or RAM by using strapping options.

FEATURES

- ☐ Can be strapped to accept the following industry-standard memory devices:

| | | |
|---------------|-----------------|------------------|
| EPROM | STATIC RAM | ROM |
| 2758 (1K x 8) | MK4118 (1K x 8) | |
| 2716 (2K x 8) | MK4802 (2K x 8) | MK34000 (2K x 8) |
| 2732 (4K x 8) | | |
- ☐ Memories can be mixed to form a combination memory board
- ☐ Wait state generator for 4MHz operation
- ☐ STD-Z80 BUS compatible
- ☐ + 5 Volt only

ORDERING INFORMATION

| DESIGNATOR | DESCRIPTION | PART NO. |
|------------|---|----------|
| MDX-UMC | Module with operation manual less mating connectors | MK77759 |
| MDX-PROTO | MD Series prototyping package | MK77951 |

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MDX-PIO

Using Mostek's MK 3881 Z80-PIOs, this module is a general purpose programmable interface for the STD-Z80 BUS.

FEATURES

- ☐ Four 8-bit I/O ports with 2 handshake lines per port
- ☐ All I/O lines fully buffered
- ☐ I/O lines TTL compatible with provision for termination resistor networks
- ☐ Jumper options for inverted or non-inverted handshake
- ☐ Two 8-bit ports capable of true bidirectional I/O
- ☐ Programmable In only, Out only, or Bidirectional
- ☐ Output data buffers selectable to provide inverted or non-inverted drive capability
- ☐ Interrupt driven programmability
- ☐ Address strap selectable
- ☐ STD-Z80 BUS Compatible
- ☐ 4 MHz Option
- ☐ Fully buffered for MD Series expandability

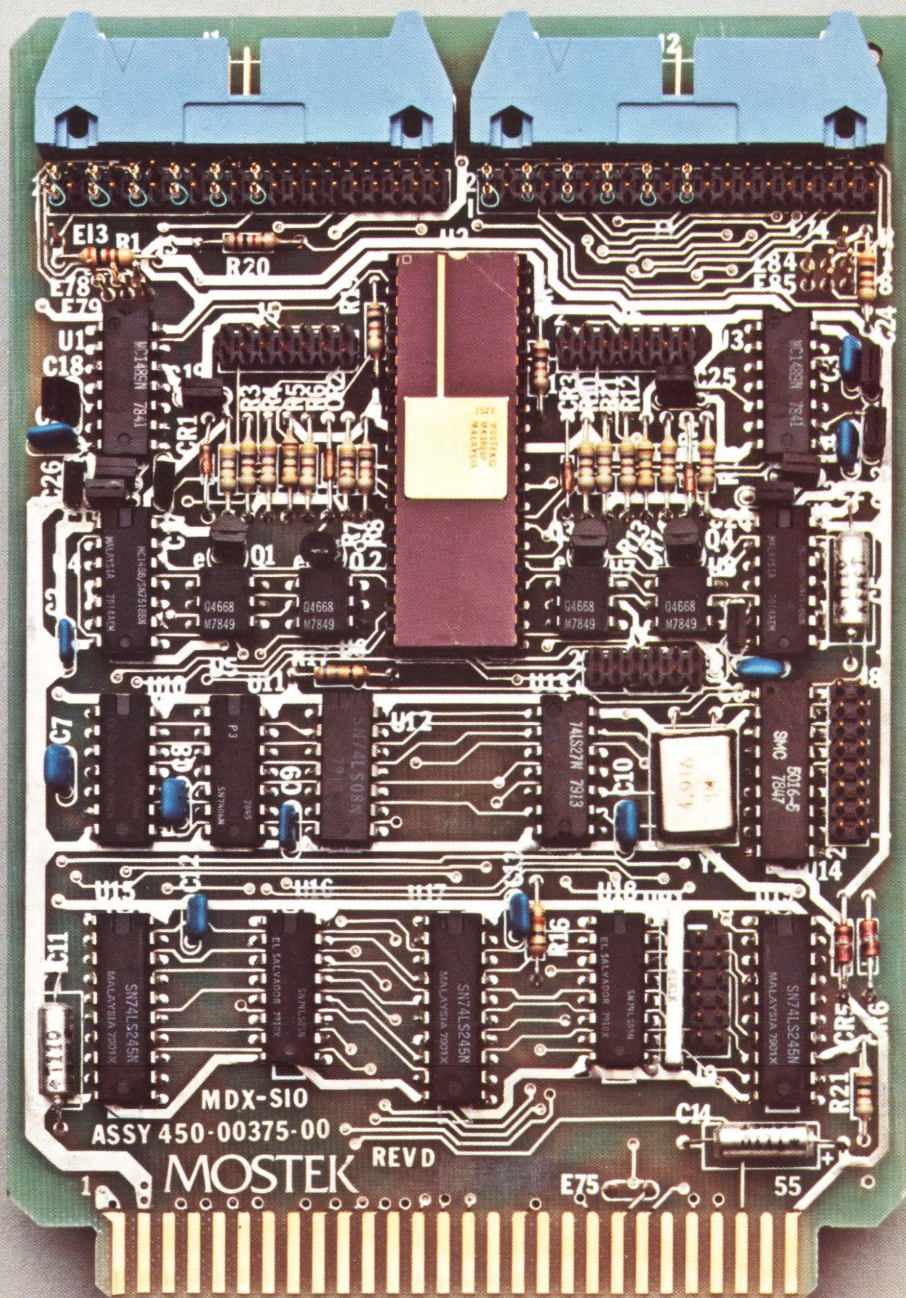
ORDERING INFORMATION

| DESIGNATOR | DESCRIPTION | PART NO. |
|------------|--|-----------|
| MDX-PIO | Module with Operation Manual less mating connectors. 2.5MHz version | MK77650 |
| MDX-PIO-4 | Module with Operation Manual less mating connectors. 4.0 MHz version | MK77650-4 |
| | MDX-PIO Operations Manual only | MK79606 |

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MDX-SIO



MDX-SIO

Using Mostek's MK 3884 Z80-SIO, this MDX module is designed to be a multi-protocol asynchronous or synchronous I/O module for the STD-Z80 BUS.

FEATURES

- ☐ Two independent full-duplex channels
- ☐ Independent programmable Baud rate clocks
- ☐ Asynchronous data rates — 110 to 19.2K bits per second
- ☐ Receiver data registers quadruply buffered
- ☐ Transmitter data registers double buffered
- ☐ Asynchronous operation
- ☐ Binary synchronous operation
- ☐ HDLC or IBM SDLC operation
- ☐ Both CRC-16 and CRC-CCITT (-0 and -1) hardware implemented
- ☐ Modem control
- ☐ Operates as DTE or DCE
- ☐ Serial input and output as either RS-232 or 20mA current loop
- ☐ Current loop optically isolated
- ☐ Current loop selectable for either active or passive mode
- ☐ Address programmable
- ☐ 4 MHz option
- ☐ Compatible with STD-Z80 BUS

ORDERING INFORMATION

| DESIGNATOR | DESCRIPTION | PART NO. |
|------------|--|-----------|
| MDX-SIO | Dual channel, Full-Duplex Serial I/O Module less mating connectors with Operations Manual. 2.5MHz version. | MK77651 |
| MDX-SIO-4 | Module with Operations Manual less mating connectors. 4.0MHz version | MK77651-4 |
| | MDX-SIO Operations Manual | MK79608 |

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ASSY 450-00473-00 REV 2 MDY-FIP MOSTEK



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MDX-FLP

This floppy disk controller module is capable of handling up to four disk drives on the STD-Z80 BUS.

FEATURES

- ☐ On-board DMA controller
- ☐ Supports up to four drives
- ☐ Single density operation
- ☐ IBM 3740 soft sector compatible
- ☐ Supports 5-inch or 8-inch drives, single or double-sided
- ☐ STD-Z80 BUS compatible
- ☐ Strap selectable port addresses
- ☐ Interrupt driven or polled operation

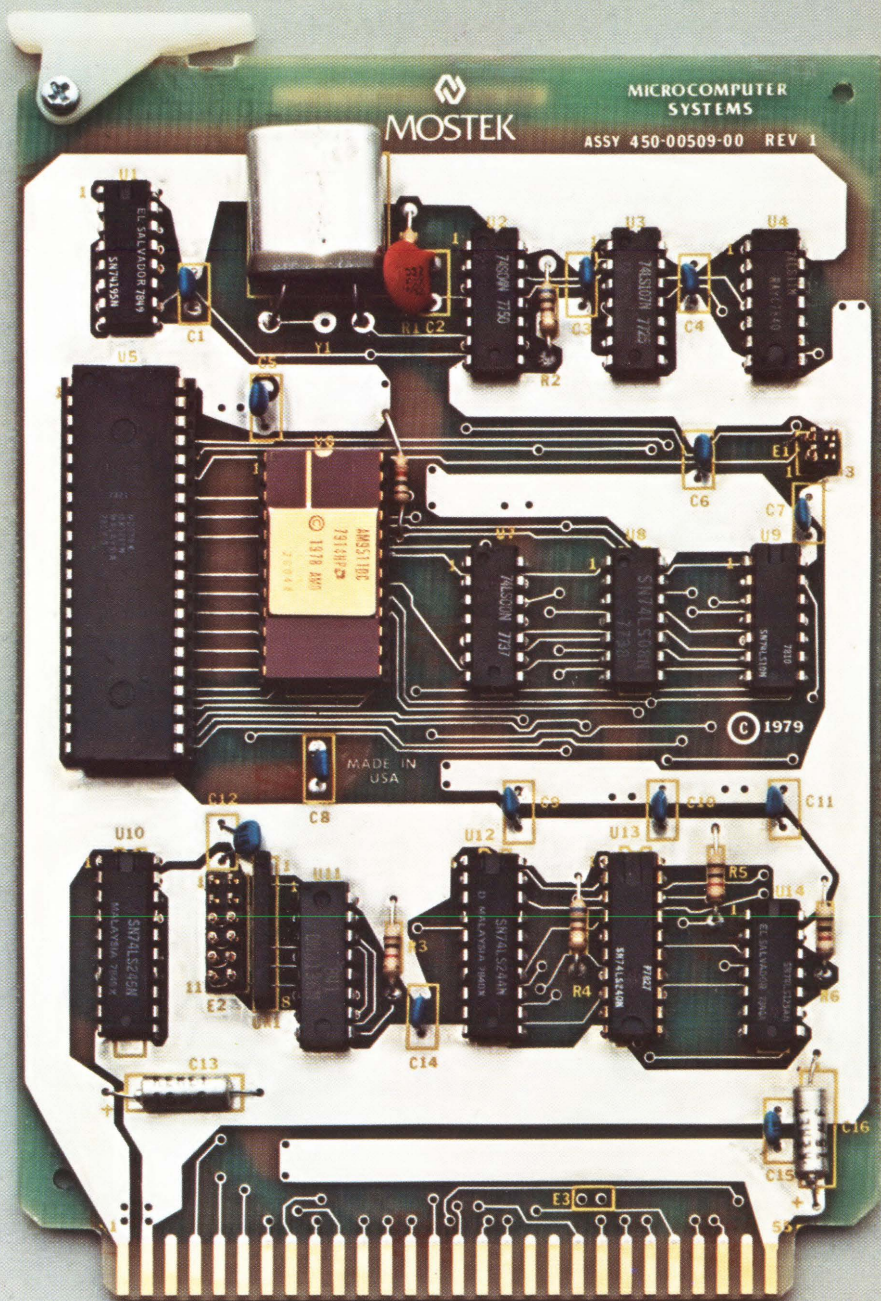
ORDERING INFORMATION

| DESIGNATOR | DESCRIPTION | PART NO. |
|------------|---|----------|
| MDX-FLP | Module with Operation Manual less mating connectors. 2.5MHz version | MK77652 |
| | MDX-FLP Operations Manual only | MK79639 |
| MDDOS | MD Disk Operating Software | MK77965 |
| FLP-80DOS | MD Development Software | MK77962 |

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MDX-MATH



MDX-MATH

Provides high speed computation using the AMD 9511 math processor.

FEATURES

- ☐ Uses AMD 9511 math processor (arithmetic and trigonometric functions)
- ☐ Interrupt driven or polled operation
- ☐ On-board wait state generator
- ☐ 32-bit floating point operation
- ☐ STD-Z80 BUS compatible
- ☐ Strap selectable port addresses

ORDERING INFORMATION

| DESIGNATOR | DESCRIPTION | PART NO. |
|------------|--|----------|
| MDX-MATH | Module with Operations Manual; 2.5MHz version | MK77852 |
| | MDX-MATH module Operations Manual only. | MK79741 |

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Actual size shown

MDX-A/D 10

An Analog Data Acquisition and Control Board that comprises a complete analog I/O subsystem which simplifies the interface of real time analog signals to the MD Series.

FEATURES

- ☐ Memory mapped I/O
- ☐ Combination Analog Input and Output
- ☐ 16 channels of Analog single ended Input or 8 channels Differential
- ☐ 2 channels of 8-bit Analog Output
- ☐ Input overvoltage protection to ± 35 volts
- ☐ Sample and Hold Amplifier on board
- ☐ Monolithic 10-Bit A/D converter
- ☐ Single on-board precision reference circuit
- ☐ + 5V only
- ☐ STD-Z80 BUS and STD BUS compatible

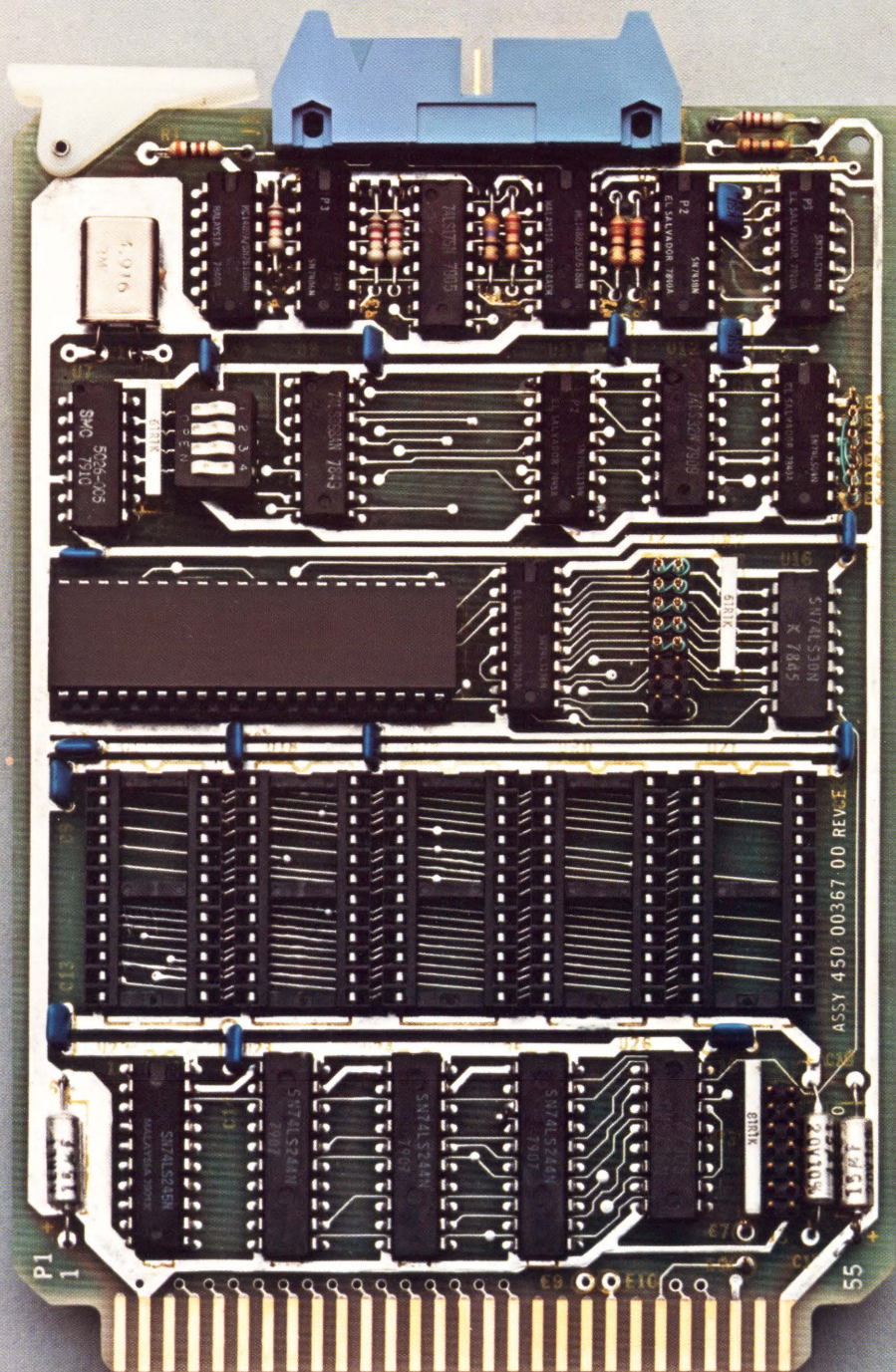
ORDERING INFORMATION

| DESIGNATOR | DESCRIPTION | PART NO. |
|-------------------------|---|----------|
| MDX-A/D10 | Module with Operation Manual less mating connectors. | MK77654 |
| | MDX-A/D10 Operations Manual Only | MK79775 |
| MDX-PROTO Data Sheet | MD Series prototyping package data sheet | MK79605 |
| AID-80F Data Sheet | Data Sheet of disk based development system MD Series | MK79568 |
| AIM-80 Data Sheet | Z80 In-circuit Emulation module (2.5 MHz only) | MK78537 |

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MDX-EPROM/UART



Actual size shown

MDX-EPROM/UART

A universal PROM add-on module for the STD-Z80 BUS. Includes a fully-buffered asynchronous I/O port with a Teletype reader step control.

FEATURES

- 10K x 8 EPROM/ROM (2716's not included)
- Serial I/O channel
 - RS-232 and 20 mA interface
 - Reader step control for Teletypes
 - Baud rate generator 110-19200 Baud
- 4MHz version available (MDX-EPROM/UART-4)
- STD-Z80 BUS compatible.

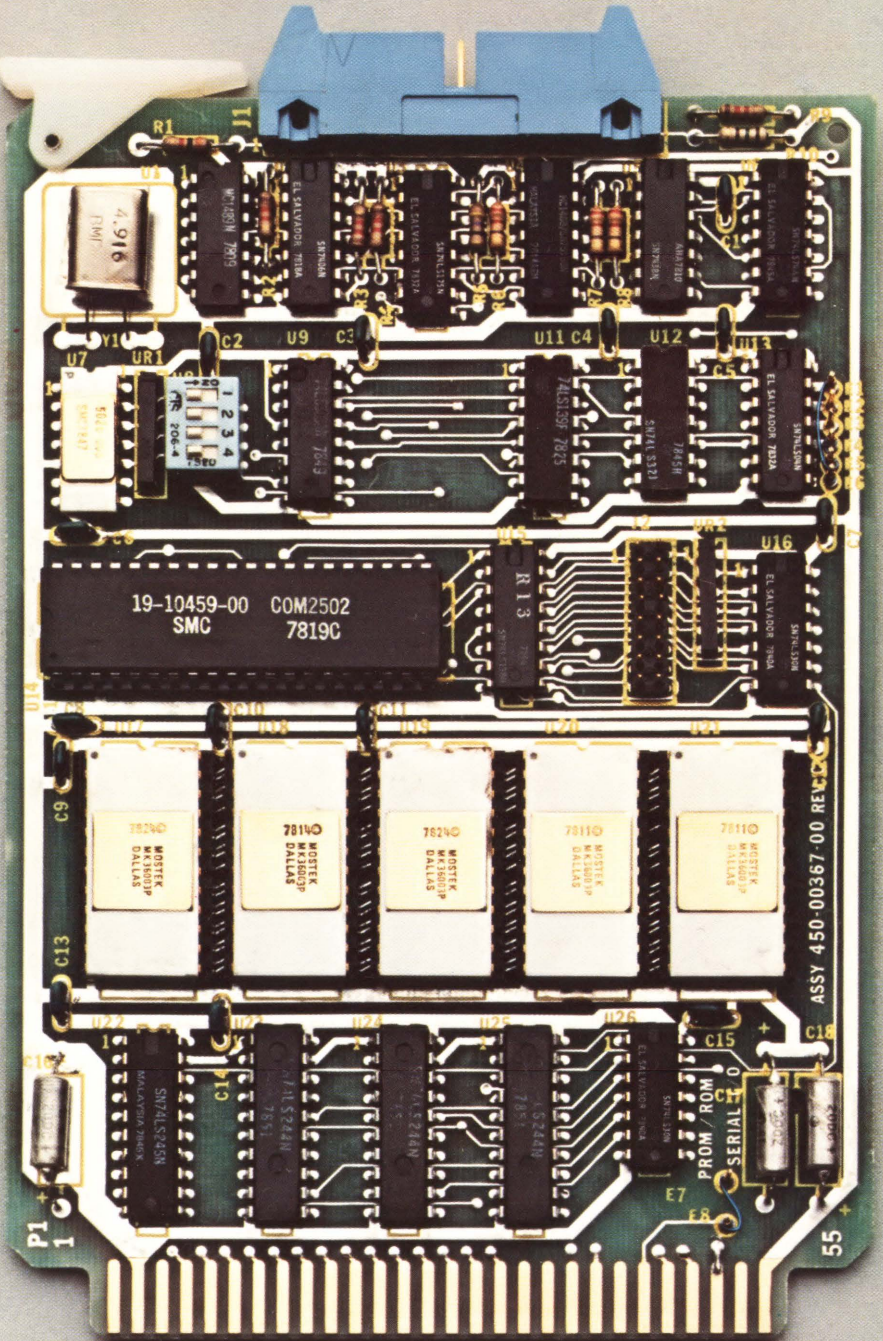
ORDERING INFORMATION

| DESIGNATOR | DESCRIPTION | PART NO. |
|------------------|--|-----------|
| MDX-EPROM/UART | Module with Operation Manual Less EPROMs and mating connectors. 2.5MHz version. | MK77753 |
| MDX-EPROM/UART-4 | Module with Operation Manual less EPROMs and Mating connectors. 4.0 MHz version. | MK77753-4 |
| | MDX-EPROM/UART Operations Manual only | MK79604 |

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MDX-DEBUG



Actual size shown

MDX-DEBUG

Provides the designer a low cost way to generate and debug Z80 programs on the STD-Z80BUS. This module may be used in place of external development equipment.

HARDWARE FEATURES

- ☐ STD-Z80 BUS compatible
- ☐ 4 MHz version available
- ☐ Serial I/O Channel
- ☐ 10K bytes of ROM contain the following firmware: DDT-80, ASMB-80

DEBUGGER FEATURES

- ☐ Z80 Operating System with debug capability
- ☐ Channelized I/O for versatility
- ☐ I/O peripheral drivers supplied
- ☐ ROM based

TEXT EDITOR FEATURES

- ☐ Input and modification of ASCII Text
- ☐ Line and character editing
- ☐ Alternate command buffers for pseudo-macro command capability
- ☐ ROM based

ORDERING INFORMATION

| DESIGNATOR | DESCRIPTION | PART NO. |
|-------------|--|---------------------|
| MDX-DEBUG | Module with 10K bytes of firmware and Operations Manual. No mating connectors. 2.5MHz version. | MK77950 |
| MDX-DEBUG-4 | Module with 10K bytes of firmware and Operations Manual. No mating connectors. 4.0MHz version | MK77950-4 |
| | MDX-DEBUG Operations Manual only | MK79611 |
| | Program Source Listing of 10K byte firmware package (DDT/ASMB-80) including comments and flow charts. (Available free with purchase of either MDX-DEBUG Module). License required. | MK78536 and MK78534 |

ASSEMBLER FEATURES

- ☐ Assembles all Z80 mnemonics
- ☐ Object output in industry standard hexadecimal format extended for Relocatable and Linkable Programs
- ☐ Over fifteen pseudo-ops
- ☐ Two pass assembly
- ☐ ROM based

LINKING LOADER FEATURES

- ☐ Loads into memory both relocatable and non-relocatable object output of the assembler
- ☐ Loads Relocatable modules anywhere in memory
- ☐ Automatically provides linkage of global symbols between object modules as they are loaded
- ☐ Prints system load map
- ☐ ROM based

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MACRO COMPUTER SYSTEMS

MDX-SC/D

A system controller and diagnostic module for the MD Series.

FEATURES

- ☐ Provides operator interface via control switches and display readouts
- ☐ Push button reset
- ☐ Memory sockets for up to 10K of EPROM
- ☐ Software is available for diagnostics (MEDEX-80)
- ☐ Strap selectable port addresses
- ☐ Selectable memory addressing on 2K boundaries
- ☐ STD-Z80 BUS compatible
- ☐ 4MHz version available
- ☐ + 5 Volt only

ORDERING INFORMATION

| DESIGNATOR | DESCRIPTION | PART NO. |
|------------|---|-----------|
| MDX-SC/D | Module with Operation Manual, 2.5MHz version | MK77963 |
| MDX-SC/D-4 | Module with Operation Manual, 4.0MHz version | MK77963-4 |
| | MDX-SC/D Operation Manual Only | MK79678 |
| MEDEX-80 | Diagnostic software for various MD Series cards | MK77968 |

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MDX-SST

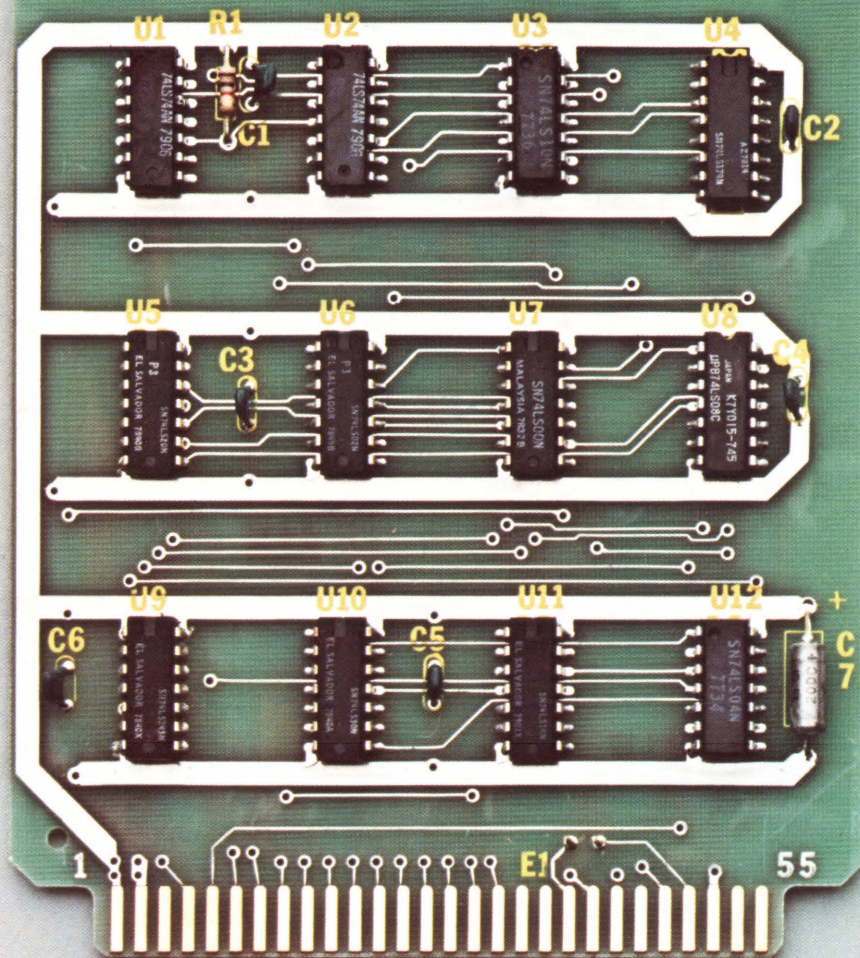
MOSTEK

ASSY.

MDX-SST

450-00386-00

REV C



MDX-SST

The MOSTEK MDX-SST was designed to enhance the hardware and software debug capability for MD Series systems. The use of the MDX-SST with the MDX-CPU1 and MDX-DEBUG boards allows the user to single-step instructions through RAM and/or EPROM/ROM with the capability of displaying all of the MDX-CPU1 registers on each instruction execution.

FEATURES

- ☐ Hardware single-step capability
- ☐ Compatible with DDT-80 Operating System
- ☐ STD-Z80 BUS compatible

ORDERING INFORMATION

| DESIGNATOR | DESCRIPTION | PART NO. |
|------------|-----------------------------------|----------|
| MDX-SST | Single Step Module | MK77958 |
| | MDX-SST Operations Manual only | MK79638 |

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1215 W. Crosby Rd. • Carrollton, Texas 75006 • 214/323-6000

In Europe, Contact: MOSTEK Brussels
150 Chaussee de la Hulpe, B1170, Belgium;
Telephone: 660.69.24