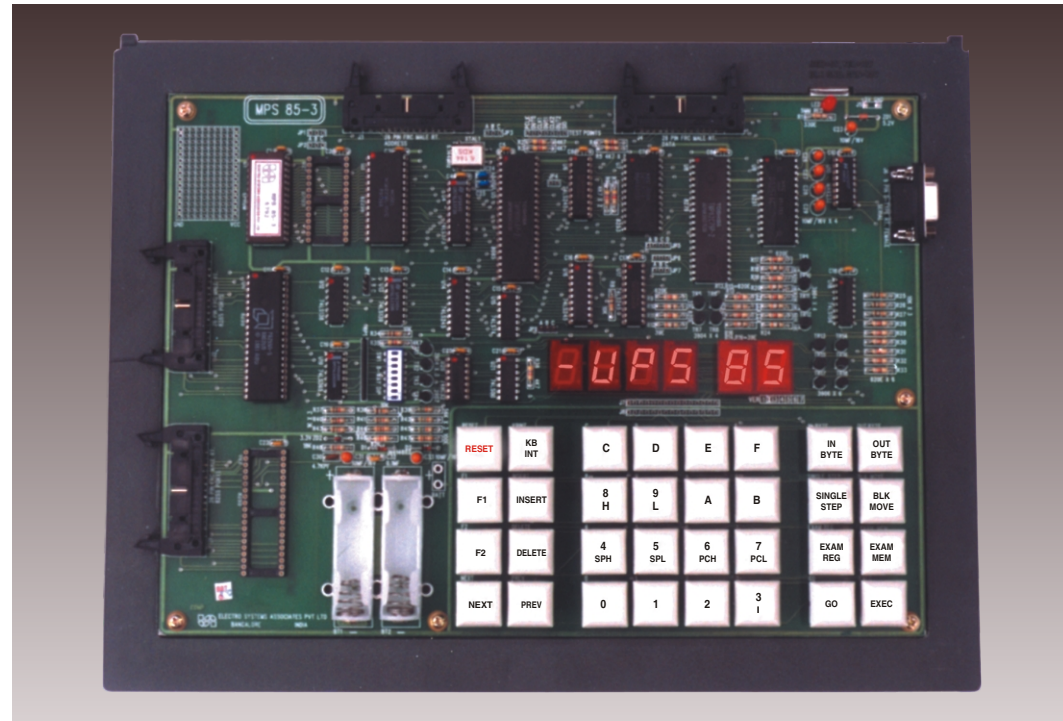# MPS 85-3

A COST EFFECTIVE AND VERSATILE
MICROPROCESSOR TRAINER

MPS 85-3 is an enhanced version of our popular model MPS 85-2 based on the processor 8085. It is a versatile microprocessor trainer used as an instructional aid in colleges and universities. It is a complete single board microcomputer used for software and hardware development in research institutions and R&D labs.

MAIN FEATURES

★ MPS 85-3 operates on **SINGLE +5V** power supply in onboard keypad mode or from host PC through RS-232-C interface.

★ In both stand alone and serial modes, user can enter programs, run them at full speed and debug them through breakpoint and single step facilities.

★ MPS 85-3 allows program editing through **INSERT, DELETE** and **BLOCK MOVE** commands.

★ MPS 85-3 allows direct read/write from/to a specified I/O port through **IN BYTE** and **OUT BYTE** commands.

★ It has four onboard ribbon cable connectors for easy expansion and two user defined function keys.

★ Onboard battery backup for RAM.

★ It supports many types of interfaces which are common for all ESA trainers.

★ Built in Text editor, Assembler and Disassembler facilities in serial mode.

ACCESSORIES (OPTIONAL)

★ Interface Modules for training purpose : Keyboard, Elevator, Display, ADC with DAC, Dual DAC, Logic Controller, Traffic Lights, 8253 Demo, RTC, Tone Generator, Stepper Motor, Numeric Printer, 8 bit - 16 Channel ADC, 12 bit - 16 Channel ADC, Opto Isolated Input, Opto Isolated Output, LCD interface, Relay Output, DC Motor, RTD interface, etc.

★ Power Supply : ESA PS M2 (SMPS) ; +5V@3.0A, ±12V @ 250mA, +30V @ 100mA; required for some of the above interfaces.

★ Power adapter : ADP DC5 ; +5v@3.0A (SMPS)

★ Study Cards for 8255, 8279, 8259, 8251/8253, etc.

★ Cycle Step Interface.

★ EPROM Programmer Interface to program 2716 through 27512.

★ Audio Tape Interface.

CPU :

8085 operated at 3.072 MHz.

MEMORY :

Three 28 pin JEDEC sockets offer 64K Bytes of memory as in the following confign.

ROM : 16K Bytes of monitor program in 27128 EPROM.

ROM / RAM : 16K Bytes user expansion using any EPROM/SRAM.

RAM : 32K Bytes supplied using 62256 CMOS static RAM with battery backup.

PERIPHERALS

8255 : (Two Nos) One 8255 is supplied to give 24 programmable I/O lines. User can have 48 I/O lines by populating an additional 8255 in expansion socket.

8253 : 3 programmable interval timers - Timer 0 is used for implementing single step facility, Timer 1 is used for generating baud clock and Timer 2 is available to the user.

8251 : For serial communication. Supports all standard bauds from 110 to 19200.

8279 : To Control 32 keys keyboard and 6-digit, half-inch size, seven segment LED display.

Bus Expansion :

Fully de-multiplexed and buffered TTL compatible bus signals brought out through two 26 pin ribbon cable connectors for expansion.

INTERFACE SIGNALS :

Parellel I/O: 48 TTL compatible lines (2x8255) brought out through two 26 pin ribbon cable connectors.

Serial I/O : RS-232-C serial interface signals through onboard 9 pin D type female connector.

INTERRUPTS :

All interrupts except TRAP are available to user. If single step function is not required, TRAP can also be used by the user.

POWER SUPPLY REQUIREMENT
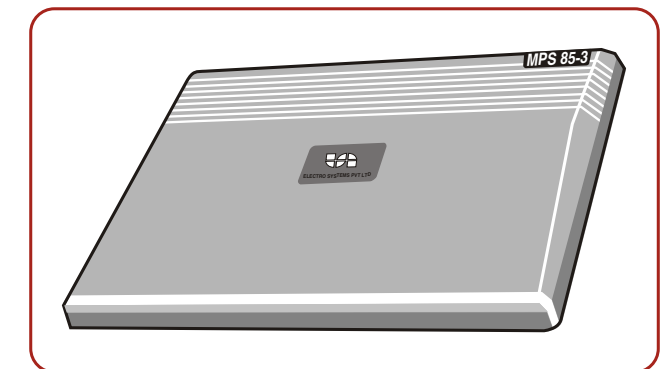
+5V DC @ 900 mA Approx.

DIMENSIONS :

LxBxH : 365 x 275 x 55 mm Approx.
Weight : 1300 gms Approx.

Housed in an ABS Plastic moulded cabinet

SCOPE OF SUPPLY

1. MPS 85-3 Trainer.
2. Windows / DOS Driver CD.
3. RS-232-C Cable.
4. User's Manual.
5. Monitor Program Listing.
6. 8085 Assembly Language Reference Card.

OUR PRODUCT RANGE : Microprocessor Trainers for 8085, Z80, 6502, 6809, 8086/88, 68000; Microcontroller Trainers for 8031, 80C196, 68HC11, PIC Trainers, and Interface Modules; DSP Trainers TMS 320 C6711; Power PCs ; In-Circuit Emulators; ROM Emulators; Microcomputer Development Systems; Universal Device Programmers; UV Erasers; PC compatible systems and Add-on Cards, Logic Analyzers, AD/DA cards, DIO cards, etc.; Microprinters and Software Development Tools.

NOTE : Specifications are subject to change without prior notice