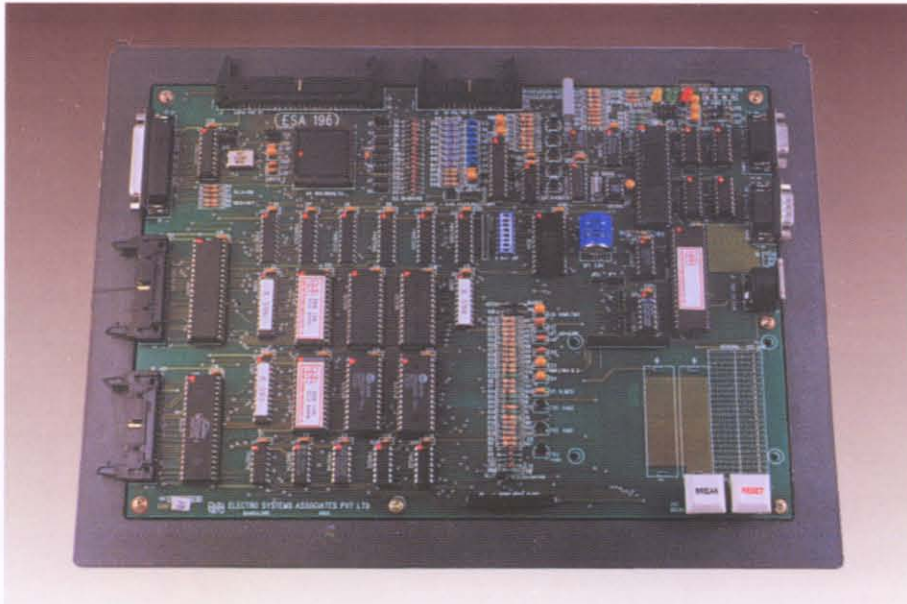




ESA 196

MICROCONTROLLER TRAINER



ESA 196 trainer is based on 80C 196 KB/KC microcontroller. ESA 196 trainer can be used as a flexible instructional aid in academic institutions and as a powerful development kit in R & D labs. ESA 196 can be used in realtime event control, motor control, high speed input / output operations and also in instrumentation.

MAIN FEATURES

- ★ ESA 196 can be operated either in stand-alone mode using optional PC keyboard and LCD or with host computer through its RS 232 C / RS 422 interface in serial mode
- ★ Keyboard and serial monitor programs support the entry of user programs, Editing and Debugging facilities like Breakpoint, Single-step and full speed execution of user programs
- ★ Line Assembler, Disassembler in both Serial and Stand-alone mode
- ★ ESA 196 has provision for on-board memory of 160K bytes of which 128K bytes of RAM with battery backup facility
- ★ On-board parallel printer port and RTC
- ★ Provision for system Bus expansion through 50 pin ribbon cable connector
- ★ All On-chip peripherals are available for user
- ★ Driver Software for file upload/download to/from host PC
- ★ Supported by variety of Interface Modules

ACCESSORIES (Optional)

- ★ Power supply: +5V@3A; +12V@250mA; -12V@100mA; 30V@100mA
- ★ PC keyboard and 20 X 4 LCD module for stand-alone mode of operation
- ★ Interface Modules for training purposes: Calculator type Keypad, Elevator, Logic Controller, Traffic Lights, Stepper Motor, RTC, ADC using DAC etc
- ★ On-board DAC
- ★ Parallel printer cable
- ★ RS 422 interfacing cable
- ★ 26 core ribbon cable connector set
- ★ 50 core ribbon cable connector set

SPECIFICATIONS

MICRO CONTROLLER

80 C 196 KB/KC @ 12MHz supplied with KC.

MEMORY

6 JEDEC sockets provide the following memory configuration.

PROGRAM MEMORY

ROM : 32K bytes of system firmware using 27178.

RAM : 32K bytes using 62256.

DATA MEMORY

RAM : 96K bytes using 62256 (32K X 3).

PERIPHERALS

8255 : (PPI) two nos. providing 48 I/O lines available to user.

8254 : (PIT) There are three timers, timer '0' is used for single step. Timer 1 & 2 are available to user.

85C30 : Dual channel Serial Communication Controller Implement (RS-232C and RS 422) interfaces supporting all standard baud rates from 110 to 19200

8042 : (UPI) Used to interface PC AT Keyboard in Stand-alone mode

DS1302 : Real Time Clock with battery backup

AD7225 : Four channels of Digital to Analog converter

POWER SUPPLY REQUIREMENT

5V@1A : In Keyboard mode

5V@1A : In Serial mode
±12V@50mA

Demension : (L) 365mm x (B) 275 mm x (H) 55mm

Weight : 1500 gms (Approx)

Housed in ABS plastic Box

SCOPE OF SUPPLY

- 1) ESA 196 Trainer
- 2) RS 232 C cable
- 3) DOS Driver software for PC
- 4) User's Manual



OUR PRODUCT RANGE : Microprocessor Trainers for 8085, Z80, 6502, 6809, 8086/88, 68000; Microcontroller Trainers for 8031, 80C196 KB/KC, 68HC11 and interface modules; DSP Trainers for TMS320 2X, TMS 320 3X, TMS 320 54X; In-Circuit Emulators for 8085, Z80, 6502, 8048 family, 8086 / 8088, 68000 and 8051 family; Rom Emulators; Microprocessor Development Systems; Universal Device Programmers; UV Erasers; PC compatible systems and Add-on Cards, Logic Analyzer, IC Tester, AD/DA cards, DIO cards etc.; Microprinters; Printer Support Products and Software Development Tools.



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NOTE : Specifications are subject to change without prior notice