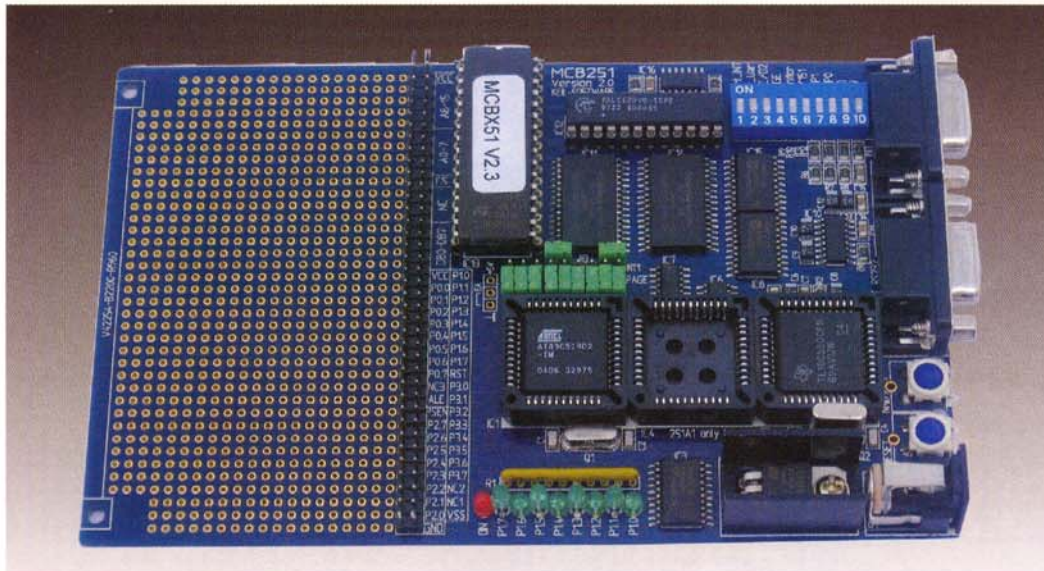




# ESA KEIL MCBx51

## EVALUATION BOARD



ESA KEIL MCBx51 Evaluation Board introduces the user to the 8051 family microcontrollers. This evaluation board includes a 2K-limited version of the PK51 Professional Developer's Kit.

ESA KEIL MCBx51 single-board computer is an evaluation board and supports numerous 8051 compatible and 80251 compatible devices. The MCBx51 allows the user to investigate the capabilities of the 8051 and 80251 and to create real working programs with the KEIL development tools.

ESA KEIL MCBx51 board can be integrated with other subsystem cards by populating a 96 pin Euro connector and can be housed in card cages. ESA KEIL MCBx51, can be used to develop the application in C language, debug the application in source level and deploy the same system in the field just by disconnecting it from host PC.

ESA ADP PPI is a piggyback adapter for ESA KEIL MCBx51 Evaluation Board. This is designed to use the ESA range of Interface Modules with the MCBx51. Thus the standard ESA Interface Modules procured by the customers along with ESA Microprocessor / Microcontroller trainers can also be used with MCBx51 and have all the benefits of KEIL  $\mu$ Vision3 IDE (Integrated Development Environment). The 26 pin connector on this adapter has matching pin designations required by the Interface Modules and hence the modules can be directly connected using the same cables supplied along with them.

### MAIN FEATURES

- ★ Support for both Harvard and Von Neumann architectures
- ★ Support for upto 256 K bytes of RAM
- ★ Support for upto 256K bytes of ROM
- ★ Two RS-232-C drivers for on-chip and external serial ports
- ★ ESA KEIL MCBx51 Evaluation board can be interfaced optionally to a piggy back adapter ESA ADP PPI
- ★ Single Euro size card for rack mounting.
- ★ Support for serial download and debugging the user programmes in source level.
- ★ Reset push button switch
- ★ User definable push button switch
- ★ All CPU signals brought out to the prototyping area
- ★ Simple configuration using DIP switches
- ★ LEDs connected to P1 for program testing

### SPECIFICATIONS

**CPU** : Any 44-pin PLCC 8051 compatible or 251 compatible device

#### For example :

- Intel 80C251Sx and 80C251Tx
- Atmel Wireless 80C251G1D and 80C251G2D
- Classic 8051 devices like 80C32 and 8xC51Fx
- Enhanced 8051 devices like the Philips and Atmel Wireless 8xC251Rx2 and the Philips 8xC664
- Dallas 80C320, 89C420 and 87C520

**BUS** : 8 bit multiplexed

**Wait States** : 0

**Power Supply** : 9 volt DC, 500mA

**Oscillator Frequency** : 24 MHz

**RAM** : 256 KB

**ROM, Monitor** : 128 KB

**Serial Ports, RS-232-C** : 2 (1 on-chip and 1 external 16550)

**PCB Size** : 100mm x 160mm (Single Euro)

**Prototyping Area** : 95mm x 55mm

## MONITOR CONFIGURATION

ESA KEIL MCBx51 Evaluation Board includes several pre-configured monitor programs, MON51 and MON251 in EPROM

The MON51 and MON251 Monitors provide a direct interface for source-level, symbolic debugging with the  $\mu$ Vision3 Debugger. User can download and debug target programs on the MCBx51 Evaluation Board

### KEY FEATURES OF MON51 and MON251 :

- Display Memory contents in ASCII and hexadecimal
- Interactively change memory contents
- Display and change register contents
- Initialize memory with constant values
- Disassemble program code
- Assemble in-line code
- Run programs with breakpoints in real-time
- Single-stepping the user program
- Step over subroutines
- Download Intel HEX files, OMF-51 and OMF-251 files

There are several monitor configurations available for MCBx51 depending on the 8051 or 80251 device in use, serial port requirements and memory configuration.

## SCOPE OF SUPPLY

1. ESAKEIL MCBx51 Evaluation Board
2. ESAKEIL MCBx51 User's Guide
3. KEIL CD ROM with Evaluation Software
4. RS-232-C Cable Set
5. Power Adapter

### ACCESSORIES (Optional)

ESAADP PPI : 8255 (PPI) piggy back adapter

ESA RS 232 - USB :- RS 232 C to USB adapter

### SYSTEM REQUIREMENTS

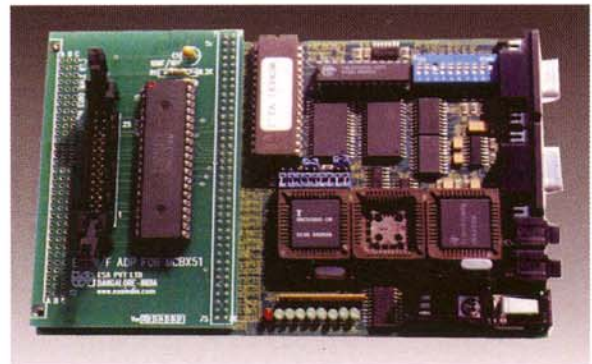
PC with one free RS-232-C Serial Port

Windows 2000/XP/Vista

One CD-ROM drive

200 MB free hard disk space

512 MB of RAM



NOTE : Specifications are subject to change without prior notice

**OUR PRODUCT RANGE :** Microprocessor Trainers for 8085, Z80, 6809, 8086/88, 68000; Microcontroller Trainers for 8031/51, 80C196 KB/KC, 68HC11, PIC Trainers and Interface Modules; DSP Trainers; Power PCs; In-Circuit Emulators; ROM Emulators; Microcomputer Development Systems; Universal Device Programmers; UV Erasers; PC compatible systems and Add-on Cards, Logic Analysers, AD/DA cards, DIO cards, etc.; Microprinters; Printer Support Products and Software Development Tools; etc.,



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