M51-01
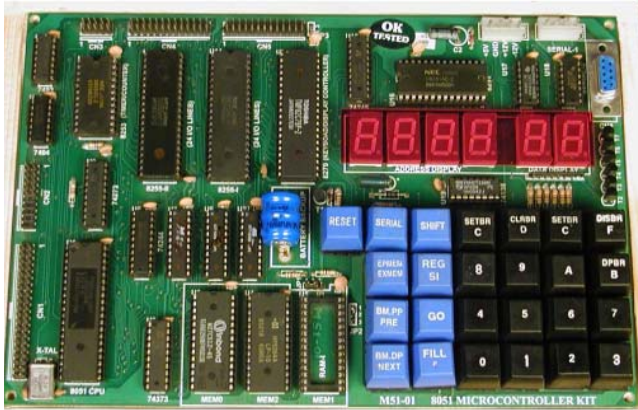## 8051 Microprocessor Trainer Kit

M51-01 is a single board Microcontroller Trainer Kit based on 8 bit 8051 Microcontroller, which is widely used to train engineers to develop on software/hardware for any industrial process & control. Kit has power-full Monitor EPROM, RAM, I/O Lines, Timer/Counter, Serial, Seven Segment Display, Keyboard for Man to Machine Interface.

Features

1. *16K Bytes of EPROM with 8K bytes of Battery Backup RAM.*
2. *48 I/O Lines, Three Channel Timer/Counter, PC Serial Interface using USART, Interrupt Controller.*
3. *Seven Segment Display with 28 Keys Hex Keypad.*
4. *Power-full Command like Single Stepping, Break Point, Full Clock Execution, Examine Memory/ Register.*
5. *Uploading & Downloading to and from PC in Windows98/XP/NT.*
6. *In-Built Power Supply.*

Specifications

1. 8051/89C51 CPU operating @10/12MHz.
2. 8K user RAM using 6264 with Battery Backup using NICD Battery.

1. One socket is provided for RAM expansion up to 64K.
2. 16K bytes of powerful monitor EPROM using 27512..
3. 48 I/O lines through 2 nos. of 8255 brought at 26 Pins FRC Connector to interface with IC-XX Series.
4. Three Channel Timer/Counter using 8253 brought out at 10 Pins FRC Connector.
5. 25 Keys Hexadecimal Keyboard and Six Digit Seven segment display using 8279 KBD Controller
6. Two External interrupts INT0 & INT1 are available at 40 pin FRC connector.
7. RS-232C interface using 8251 brought out at 9 Pins D-Type Connector.
8. Auxiliary RS-232C using RX/TX of 8051 brought out at 9 Pins D-Type Connector.
9. Two modes of operation:
   Keyboard Mode
   Serial Mode
10. Powerful Commands like Examine/Edit Memory, Examine/Edit Register, Single stepping, Execution, Block Move can be used through hex keyboard or PC serial mode.
11. Facility for Downloading/Uploading files from/to PC.
12. All address, data & control lines are available on KXT Bus 50 pin FRC Connector to interface with SC-XX Series.
13. All ICS are mounted on IC Sockets.
14. Bare board Tested Glass Epoxy SMOBC PCB is used.
15. In-Built Power Supply of +5V/2A, ±12V/250mA
16. Attractive Wooden enclosures of Light weight Australian Pine Wood.
17. User's Manual with sample programs.
18. 270mm x 185mm x 105mm (L x W x H).
19. Weight 3 Kgs.

Optional
1. PRINTER INTERFACE to interface with DOT MATRIX Printer

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M51-02
8051 Microprocessor Trainer Kit

M51-02 is a single board Microcontroller Trainer Kit based on 8 bit 8051 Microcontroller, which is widely used to train engineers to develop on software/hardware for any industrial process & control. Kit has power-full Monitor EPROM, RAM, I/O Lines, Timer/Counter, Serial, LCD Display, Keyboard for Man to Machine Interface.

Features

1. **16***K Bytes of EPROM with 32K bytes of Battery Backup RAM.*
2. *48 I/O Lines, Three Channel Timer/Counter, PC Serial Interface using USART, 12 bit ADC, DAC, RTC.*
3. *20x2 LCD Display with 101 ASCII Keyboard.*
4. *Power-full Command like Single Stepping, Break Point, Full Clock Execution, Examine Memory/ Register.*
5. *Uploading & Downloading to and from PC in Windows98/XP/NT.*
6. *In-Built Power Supply.*

Specifications

1. 8051/89C52/89C51RD2/89C61X2 CPU operating @11.0592MHz.
2. 32K user RAM using 6264 with Battery Backup using NICD Battery.

1. One socket is provided for RAM expansion up to 64K.
2. 16K bytes of powerful monitor EPROM using 27512..
3. 48 I/O lines through 2 nos. of 8255 brought at 26 Pins FRC Connector to interface with IC-XX Series.
4. Three Channel Timer/Counter using 8253 .
5. 20x2/40x2/20x4 Alphanumeric LCD Display with Backlite
6. 101 ASCII Keyboard interface using 89c2051 operating @ 12MHz
7. On-board Single Line Assembler & Disassembler.
8. Two External interrupts INT0 & INT1 are available at 40 pin FRC connector.
9. RS-232C interface using RX/TX of 8051.
10 Two modes of operation:
    Keyboard Mode
    Serial Mode
11. Powerful Commands like Examine/Edit Memory, Examine/Edit Register, Single stepping, Execution, Block Move can be used through hex keyboard or PC serial mode.
12. Facility for Downloading/Uploading files from/to PC.
13. All address, data & control lines are available on KXT Bus 50 pin FRC Connector to interface with SC-XX Series.
14. All ICS are mounted on IC Sockets.
15. Bare board Tested Glass Epoxy SMOBC PCB is used.
16. In-Built Power Supply of +5V/2A, ±12V/250mA
17. Attractive Wooden enclosures of Light weight Australian Pine Wood.
18. User's Manual with sample programs.
19. 270mm x 185mm x 105mm (L x W x H).
20. Weight 3 Kgs.

Optional

On-board ISP (In-system Programming) Facility.
1. PRINTER INTERFACE to interface with DOT MATRIX Printer.
2. RS-232C interface using 8251.
3. On-board 12 Bit ADC using Ad574.
4. On-board 8 bit DAC using DAC-0800.
5. On-board Real Time Clock using 6242.

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