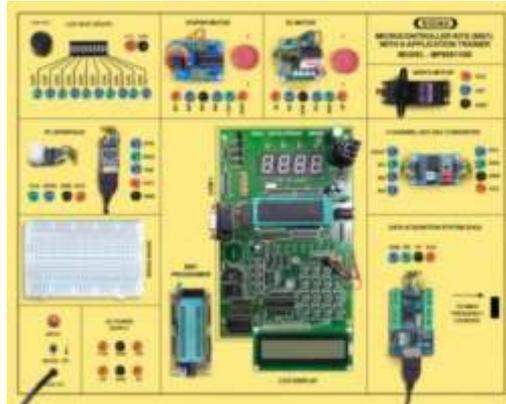




## MICROCONTROLLER KIT - 8051 ALONG WITH SIX IMPORTANT DIFFERENT APPLICATIONS MODEL-MP8051100I

This trainer has been designed with a view to provide practical and experimental knowledge of 8051 Microprocessor Board with Six different applications.



### SPECIFICATIONS

#### 1. Hardware

Following Hardware is assembled on Single PCB of size - 18 Inch x 15 Inch

#### 1. 8051 Microcontroller Board

1. Core 8051 MCU
2. Crystal Frequency - 11.0592 MHz
3. DIL40 ZIF Socket Microcontroller socket
4. Power plug-in jack Power supply AC/DC 12V
5. On board Regulated Power Supply +5v, 12V supplies
6. An RS232 Serial Port
7. 7 Segment multiplexed Display.
8. Interface for 16 x 2 LCD display for both programming mode and run mode
9. RTC Ds1307
10. 8 LED array
11. 4x4 Matrix Key Pad
12. ULN2003 to Drive Stepper Motor and Relays

#### 2. 8051 Programmer Board

1. Supporting both programming modes Keypad and Computer
2. LCD for both programming and run mode
3. Ready to run programmer to support family of controllers AT89C52

**Sigma Trainers and Kits**  
E-113, Jai Ambe Nagar,  
Near Udgam School,  
Thaltej,  
**AHMEDABAD - 380054.**  
**INDIA.**

**Phone(O): +91-79-26852427**  
**Phone(F): +91-79-26767512**  
**Mobile : +91-9824001168**  
**Email : sales@sigmatrainers.com**  
**: drluhar@gmail.com**  
**Web : www.sigmatrainers.com**

**Dealer:-**

### 3. Application modules

1. Input Interface : 4x4 Matrix Keypad, ASCII Key PAD, Four Input Switch
2. Display : 16X2 LCD, Seven Segment, LED Bar Graph
3. ADC/DAC : with ADC/DAC0808
4. PC Interface : RS232 & USB
5. Motor Drive : DC, Servo, Stepper
6. DAQ : 4 Channel Analog 10 Bit, 22 DIO resolution  
6 MHz Frequency Counter (Square wave)  
DAQ with PC interface software
7. Learning content through simulation Software

### 4. Hardware

1. DC Power Supplies +12V, -12V, +5V & - 5V
2. Breadboard - 400 Points to make circuits
3. 2 mm interconnection Sockets

### 2. Accessories

1. USB Cable : 1 No
2. Ethernet Cable : 1 No
3. Jumper wires : 30 Nos.
4. Simulation Software and Driver CD : 1 No.
5. Practical Manual - Printed + Soft Copy : 1 No.
6. E-Books for Microprocessor Subject : 10 Nos. in PDF Format
7. Mp4 Video Class for Microprocessor Subject : 40 Nos

### 3. Cabinet and PCB

The complete circuit diagram is screen printed on component side of the PCB with circuit and Parts at the same place. The PCB with components on front side is fitted in elegant wooden box having lock and key arrangement. The acrylic cover is fitted on PCB to safeguard parts. It works on 230 V AC Supply.

## EXPERIMENTS

1. To make LED blink
2. To display data on 7 segment display
3. To display data on 16 x 2 LCD Display
4. To transfer data using RS232 serial port
5. To use 4 x 4 Matrix Key Pad
6. To convert Analog Data into Digital Data using ADC
7. To measure time using RTC
8. To program 8051 using 8051 programmer
9. To interface 4x4 Matrix Keypad
10. To interface ASCII Key PAD
11. To interface Four Input Switch
12. To interface 16X2 LCD Display
13. To interface Seven Segment
14. To interface LED Bar Graph
15. To interface ADC/DAC
16. To interface PC with RS232 & USB ports
17. To interface DC, Servo and Stepper Motor
18. To require Data Acquisition DAQ with 4 Channel Analog 10 Bit, 22 DIO resolution and 6 MHz Frequency Counter (Square wave)
19. To understand and use DAQ with PC interface software
20. To learn content through simulation Software