



# 8051 MICRO CONTROLLER TRAINER

## MODEL - MP8051N

This trainer has been designed with a view to provide practical and experimental knowledge of 8051 family microcontroller.



### FEATURES

1. RTOS Support | Rtx51Tiny
2. Evaluate Real Time Applications
3. Supports Embedded C, ASM
4. ISP Programming | SPI | I2C Communications

### SPECIFICATIONS

1. Devices : AT89S51/52/825x (Atmel)  
P89V51Rxx (NXP)  
DS89C420/430/450 (Dallas)
2. Memory : 64K FLASH - Program
3. Clock : 12MHz crystal, Max = 25 MHZ
4. 40pin-ZIF Socket | 44-pin PLCC Socket
5. 8 No's of Point LED's (Logic Output)
6. 8 No's of Slide Switches (Digital Input )
7. 4x4 Matrix Keypad
8. 2X16 Character LCD (Background Light)
9. 4 No's of 7-Segment Display
10. ADC0804 Analog Input Test (Potentiometer)
11. Stepper Motor Interface
12. 2 No's of SPDT Relay
13. DS1307 RTC with Battery-Backup
14. 1 No's of UART(RS232)
15. Buzzer (Alarm), Interrupts Study, Reset Button
16. Serial EEPROM (I2C Devices)
17. \*128x64 Graphical LCD
18. Analog temperature sensor LM35
19. ISP Programmer
20. DS18B20 digital temperature sensor

**Sigma Trainers and Kits**  
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**Dealer:-**

21. Accessories :-

1. At89S51/52 Microcontroller
2. Power Adaptor(12Vdc)
3. RS232 Cable
4. Atmel ISP Cable
5. USB ASP Programmer Software CD
6. Books for Microcontroller Applications : 10 Nos in pdf Format
7. Mp4 Video Class for Microcontroller Applications : 40 Classes in Mp4 on DVD / Pen Drive

## EXPERIMENTS

1. LED Interfacing with 8051 Microcontroller.
2. 0 to 9 counter using single seven segment on 8051.
3. 0 to 99 UP / Down counter using two seven segment on 8051.
4. "HELLO WORLD" display on 16\*2 LCD on 8051.
5. Moving Message display on 16\*2 LCD on 8051.
6. Push button switch interfacing Pull UP / Pull Down on 8051
7. 4\*4 Matrix keyboard with LCD on 8051.
8. ADC 0804 with POT. With LCD display on 8051
9. ADC 0804 with LM35 Temperature sensor.
10. Simple DC Motor – Forward & Reverse on 8051
11. External interrupt, LED Blinking on 8051
12. Serial data transmission on 8051
13. Serial data receiving using internal interrupt on 8051
14. Serial data display on LCD.
15. To study I2c protocol implementing digital clock
16. To study SPI protocol using memory IC
17. To study servo motor interfacing
18. To study graphical LCD interfacing
19. To study one wire protocol using DS18B20