MICROCONTROLLER APPLICATION LAB – PIC18F4550

MODEL -PIC18F4550

This trainer has been designed with a view to provide practical and experimental knowledge of PIC18 family microcontroller.

FEATURES

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

SPECIFICATIONS

1. 40pin-SIF Socket | 44-pin PLCC Socket
2. 8 Nos. Point LEDs (Logic Output)
3. 8 Nos. Digital Input (DIP Switch)
4. Memory - 4-32KB FLASH - Program
5. Clock - 12MHz crystal, Max = 20 MHz
6. 4x4 Matrix Keypad
7. 2X16 Character LCD (Background Light)
8. 4 Nos. 7-Segment Display
9. ADC with Analog Input Test (Potentiometer)
10. Stepper Motor Interface
11. 2 Nos. of SPDT Relay
12. DS1307 RTC with Battery-Backup
13. USART(RS232)
14. USB 2.0 Device Programmer
15. Buzzer (Alarm), Interrupts Study, Reset Button
16. SPI –EEPROM.25C040 and I2C EEPROM 24C040
17. *128x64 Graphical LCD
18. Digital Temperature Sensor(DS18S20)
19. VGA Connector and CAN Interface Connector
20. Accessories :-
    1. PIC18F4550/4450 Microcontroller Trainer with Power Adaptor (12Vdc), RS232 Cable,ISP Cable
    2. PICkit 2 programmer Software on CD
    3. Books for Microcontroller Applications : 10 Nos in pdf Format
    4. Mp4 Video Class for Microcontroller Applications : 40 Classes in Mp4 on DVD / Pen Drive

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Dealer:-

EXPERIMENTS

1. Write a program for interfacing button, LED, relay & buzzer as follows
   A when button 1 is pressed relay and buzzer is turned ON and LED's start chasing from left to right
   B when button 2 is pressed relay and buzzer is turned OFF and Led start chasing from right to left
2. To display message on LCD without using any standard library function
3. Interfacing 4X4 keypad and displaying key pressed on LCD OR on HyperTerminal.
4. Generate square wave using timer with interrupt
5. Interfacing serial port with PC both side communication.
6. Interfacing DS1307 RTC chip using I2C and display date and time on LCD
7. Interfacing EEPROM 24C128 using SPI to store and retrieve data
8. Interface analog voltage 0-5V to internal ADC and display value on LCD
9. Generation of PWM signal for DC Motor control.
10. Observing supply current of PIC18F controller in various power saving mode and by varying clock frequency.
11. To study and Interface Stepper Motor.
12. To study and Interface 4-sevensegment.
13. To study and interface DS18B20 using one wire protocol.