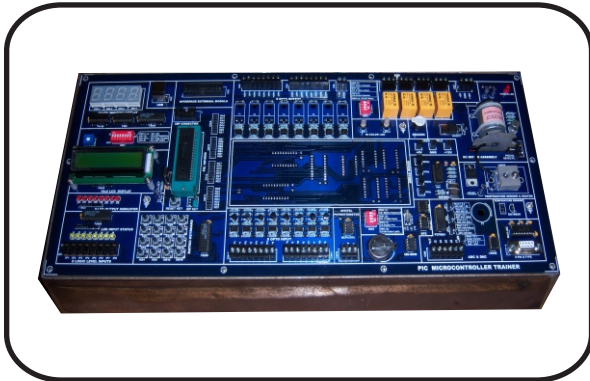# E87-05
PIC EMBEDDED TRAINER KIT

Specifications

- CPU: Microchip 18F4550 operating on crystal frequency @ 20MHz.
  - On-chip 32KB Flash memory and 2048 byte SRAM.
  - On-chip 256byte EEPROM.
  - On-chip UART, SPI, I2C, PWM.
  - On-chip 8 Channel 10 bit ADC.
  - On-chip 32 I/O Lines are provided in four 16 pin Connector.
  - CPU provided on ZIF Socket.

- ISP Programming facility.
  - 10 pin ISP Connector provided on board for Programming.
  - ISP selection Key is provided
  - USB based JTag Programmer/Recorder in metal enclosure.

- On-board Reset Key.

- Mini Signal Generator
  - Fixed TTL clock of frequencies 10 Hz, 100 Hz, 1KHz & 10 KHz.

- Onboard Applications
  - 8 LED's to display Digital Output.
  - 8 Switches to give Digital Input indicated by LED's.
  - 2 Bicolor LEDs to display.
  - 16x2 Alphanumeric LCD backlit display.
  - 4x4 Matrix Keyboard.
  - 500 Tie Points Bread Board Area provided

- Piezoelectric Buzzer.

- SPI Digital Potentiometer using MCP41010

- Four nos. of 12V SPDT Relay.

- 4 digit seven segment displays.

- 8 inputs & 8 Outputs are Optically Isolated using Pc817

- 12V DC Motor interface Photo detector assembly

- I^2C compatible:
  - ✓ 24C512 EEPROM (64KB)
  - ✓ DS1307 RTC with suitable battery
  - ✓ 4Ch. 8bit ADC & 1Ch. 8 bit DAC using PCF8591.

- Temperature sensor interface using Lm35.

- Resistive Heater for Temperature Sensor.

- Temperature sensor interface using DS18B20.

- RS232 Serial Interface provided through 9 Pin D-Type Connector

- 24 I/O Lines Provided on a 26 pin FRC Connector for external interface.

- On board supply + 12V/1A, 5V/2A is Provided.
  - Supply Input Voltage: 230V AC.
  - All ICS are mounted on IC Sockets.
  - Bare board Tested Glass Epoxy SMOBC PCB is used.
  - Attractive Metallic enclosures.
  - 9 Pin Serial Cable & USB Cable Provided
  - Software in windows XP/2000
  - User's Manual with sample programs for all on board features

Note : Specifications can be altered without notice in our constant efforts for improvement.