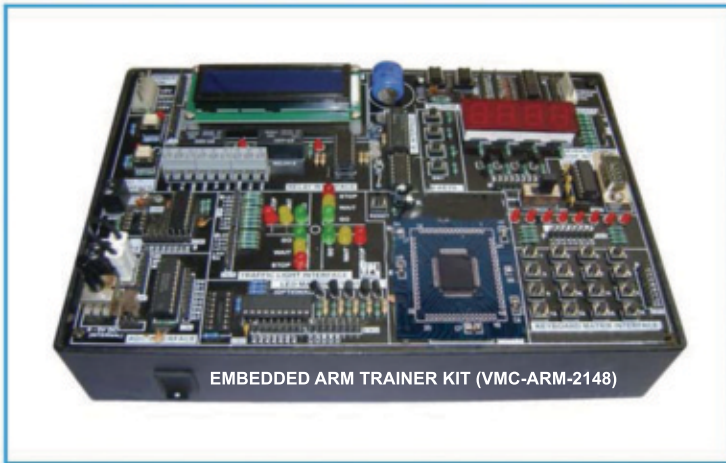




VMC-ARM-2148 Embedded Arm Trainer



EMBEDDED ARM TRAINER KIT (VMC-ARM-2148)

VMC-ARM-2148, the Embedded Arm Trainer has been designed by using Philips LPC214X Microcontroller. This controller provides in-system as well as in circuit programming so that one may be able to write program and download directly in the controller through serial port without removing it from the system.

SYSTEM SPECIFICATION

- CPU: Philips LPC214X Microcontroller
- Four Seven Segment Display Interface
- LCD Display Interface
- 4x4 Matrix Keyboard Interface
- Output LED's 8 Nos.
- ADC Interface
- Four Data Switches
- Relay Interface
- Opto Interface
- I.R. Interface
- Traffic Light Interface
- Stepper Motor Interface
- At24C16 Serial EEPROM
- Real Time Clock
- RS-232 Interface using Rx/Tx of MCU for uploading/downloading

Peripheral Features (Internal)

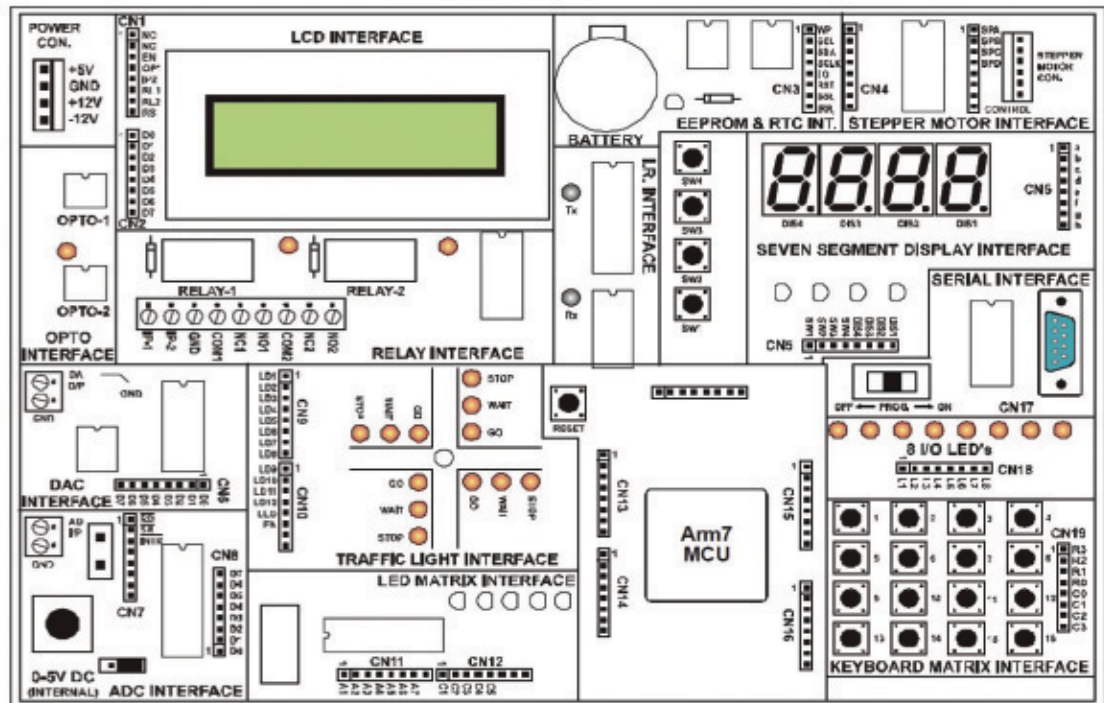
- 16/32 bit ARM7TDMI-S
- 512K Bytes Program Flash
- 42K Bytes RAM
- USB 2.0
- RTC
- 10 bit ADC 2.44 uS
- 2x UARTs

- 2x I2C
- SPI
- 2x 32bit TIMERS
- 6x PWM
- 8x CCR
- 1x DAC
- WDT
- 5V tolerant I/O
- Up to 60MHz operation

EXPERIMENTS

1. Study of ARM7 processor architecture and pin diagram.
2. Study of Interrupt structure in ARM Processors.
3. Write ARM Processor program to Flash LED
4. Interfacing of an LCD Display
5. Write a program to interface an ADC
6. Write a program to generate a Ramp waveform using DAC interface
7. Write a program to control the speed of DC motor
8. Interface relays and write a program to control them
9. Write a program to control a Stepper Motor

BOARD LAYOUT



Specifications are subject to change without notice due to our constant efforts for improvement.

