



# ARM7 - LPC2148 TRAINER

MODEL - ARM-7-2148-N

This trainer has been designed with a view to provide practical and experimental knowledge of ARM7 Family (LPC2148) microcontrollers.



## FEATURES

1. RTOS Support
2. Evaluate Real Time Applications
3. Supports Embedded C, ASM
4. ISP Programming / JTAG Debugging
5. Facility to interface external devices

## SPECIFICATIONS

1. Devices : LPC2148 (ARM7TDMI-S Core)
2. Memory : 512K FLASH - Program
3. Data Memory : 32K+8K SRAM
4. Clock : 12MHz crystal, Max = 60 MHz
5. Serial Ethernet | CAN 2.0
6. SPI Digital-Analog Convertor
7. 8 No's of Point LEDs (Logic Output)
8. 8 No's of Slide Switches (Digital Input)
9. 4x4 Matrix Keypad
10. 2X16 Character LCD (Background Light)
11. 4 No's of 7-Segment Display (I2C Enabled)
12. 2 No's of Analog Input (Potentiometer)
13. Temperature Sensor(LM35)
14. Stepper Motor Interface
15. 2 No's of SPDT Relay
16. DS1307 RTC with Battery-Backup
17. 2 No's of UART(RS232)

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

18. Virtual Port
19. Buzzer (Alarm), Digital / Analog Output
20. Interrupts Study, Reset Button
21. Serial EEPROM (I2C Devices)
22. \*128x64 Graphical LCD
23. PS/2 | RS-485
24. 40-Pin Expansion Connector
25. JTAG Header (Program/Debug) | ISP Programmer
26. Traffic Light Modules ( Optional)
27. On board RTOS support FreeRTOS, ucOS II
28. Books for Embedded Systems : 10 Nos in pdf Format
29. Mp4 Video Class for embedded systems : 40 Classes in Mp4 on DVD / Pen Drive

## EXPERIMENTS

1. Multitasking in  $\mu$ COS II RTOS using minimum 3 tasks on LPC2148.
2. Semaphore as signaling & Synchronizing on LPC2148.
3. Mailbox implementation for message passing on LPC2148.
4. Queue implementation for message passing on LPC2148.
5. Implementation of MUTEX using minimum 3 tasks on LPC2148.
6. To study internal ADC with LM35 temperature sensor
7. To study DAC and generation Triangular wave.
8. To study EEPROM to store data internally.
9. To study SPI protocol and interface serial device.
10. To study USB Peripheral device configuration.