Omega Electronics ARM 7 Development Board (OE- 5004A) serves as a 32 bit development Board and provides means for code development. This Board is designed for students to explore ARM architecture and supporting peripherals provide an ideal platform for extensive embedded development. The Nvis 5004A provides serial and USB connection both, that can be used to download and run code on any standard IDE and allows users to evaluate, prototype and create application specific designs.

OBJECT
01 Study of ARM 7(LPC2148) Microcontroller architecture
02 Pin to pin study of MCU
03 Study of serial protocol(I2C/SPI)
04 Study of internal PWM
05 Study of Timer/Interrupt
06 Study of RTC
07 Study of internal ADC and DAC
08 Study of RTOS signal, semaphore, mutex, mailbox and priority scheduling
09 Interface various external MCM series modules

FEATURES
01 LPC2148 (ARM7TDMI 32 Bit) MCU clocked at 12 MHz
02 Expansion connectors for plug in modules and prototyping area
03 8 kB to 40 kB of on-chip static RAM and 32 kB to 512 kB of on-chip flash memory;128 bit wide interface/accelerator enables high-speed 60 MHz operation
04 On Board Flash download utility (programmer) for Philips Microcontrollers
05 USB & RS232 both interface given for programming
06 USB 2.0 Full-speed compliant device controller with 2 kB of endpoint RAM
07 LPC2146/48 provides 8 kB of on-chip RAM accessible to USB by DMA
08 Every pin is marked in order to make work easier
09 Master Reset/Restart Key for hardware reset
10 RTOS supported
11 On platform UART 0 and UART 1 Interface
12 On platform ADC (10 Bit) Interface
13 On platform 10-bit DAC provides variable analog output
14 On platform PWM Interface
15 On platform facility to connect JTAG debugger
16 On platform GPIO Connectors
17 60 MHz maximum CPU clock available from programmable on-chip PLL with settling time of 100 µs
18 On-chip integrated oscillator operates with an external crystal from 1 MHz to 25 MHz
19 Power saving modes include idle and Power-down
20 Input/Output & test points provided on platform
21 On platform four external interrupts interface
22 Self contained development platform with on platform DC Power Supply
23 CD with sample project code, Programmer software & useful documents

TECHNICAL SPECIFICATIONS
01	MCU	: LPC2148
02	Crystal Frequency	: 12 MHz
03	LEDs	: 8 nos.
04	ADC	: Two Internal 10 bit ADC
05	DAC	: 10 Bit internal DAC
06	Interrupts	: Four External Interrupts on platform
07	RTC	: 3.3 Volt CMOS Battery
08	PWM	: 3 nos. On platform
09	GPIO's	: All GPIO Pins on platform
10	Communication	: USB 2.0 Full speed device control interfaces
11	Serial Communication	: Two RS-232 Port
12	Programmer	: USB/Serial Port
13	Programmer Mode	: Run/ISP Switch Selection
14	Baud Rate	: 600 bps (for both USB/serial ports)
15	Interconnections	: 2 mm Patch cords with FRC Cables
16	Learning Material	: Theory, procedure, reference results etc
17	Dimensions (mm)	: W 415 x H165 x D315
18	Power Supply	: 230V + 10% AC, 50/60Hz
19	Weight	: 1.5Kg (approximately)
20	Operating Conditions	: 0-40 C, 80% RH

LIST OF ACCESSORIES
01 RS232 serial cable...................01 Nos.
02 USB cable...............................01 Nos.
03 20 Pins FRC connector ....01Nos.
04 Patch cord 2 mm length 50cm ..02 Nos.
05 Software CD.............................01 Nos.

OTHER APPARATUS REQUIRED:
Omega makes MCM Series extension module to interface with this board.

We are committed to the continuous development of our products, and therefore reserve the right to amend specifications without prior notice.