Traditionally Embedded systems have come to mean microcontroller based design and programming. OE-5003 the AVR development board with programmer trainer is a full featured development system for AVR ATMEGA8515 microcontroller. It is an ideal trainer to implement and test the designs both for the beginners and the experts.

The OE-5003 is a convenient way to teach the principles of the family of microcontrollers through to programming and interfacing on the ATMEGA8515 device. Using the trainer a range of projects in various domains like telecommunication, robotics, consumer electronics etc can be done. The

OE-5003 gives designers a quick start to develop code on controller with on board programmer and on board breadboard facility. The flexibility of connectors allows the user to make external connections. On board Breadboard allows making their own circuits and performing an experiment as they desire.

OBJECTS:
01 To Study the Procedure of Flash programming of AVR MCU from USB Port Programmer
02 To Study Procedure PC Serial Communication with Omega Type OE-5003 Board

TECHNICAL SPECIFICATIONS
01 Serial Port communication : RS 232 Port Using DB-9
02 MCU Programming : Using USB
03 Baud rate : 9600 bps
04 MCU : ATMEGA8515
05 Crystal frequency : 4 MHz
06 Size of Breadboard : 175 x 65 x 8mm
07 Tie points : 840
08 Test points : 40
09 On board DC supply : ± 12V and ± 5 V

GENERAL SPECIFICATION
01 ATMEL ATMEGA8515 MCU clocked at 4MHz
02 Expansion connectors for plug in modules and Prototyping area
03 On board programmer for ATMEGA8515 device
04 Serial Port Interface to PC for Communication
05 Every pin is marked in order to make work easier
06 Master Reset/Restart Key for hardware reset
07 Input/Output test points provided on board

08 On board breadboard
09 Self contained trainer with On board DC and AC power supply
10 CD with sample project code, Programmer software & useful documents.
10 Programmer unit : Ready to run programmer will program ATMEGA8515 Device
11 Power supply : 230V ± 1 0 %, 50 Hz
12 Power consumption : 20 VA (approx)
13 Dimension (mm) : W 415 x H165 x D315
14 Weight : 3 Kg. (Approx)

LIST OF ACCESSORIES:
01 RS-232 serial cable (9 Pin Male to Female)...............01
02 USB B type to A Type male connector cable................01
03 20 pin FRC cable...04
04 Mains cord..01
05 Operating Manual...01
06 Software CD..01

OTHRE APPARATUS REQUIRED:
The comprehensive range of modules has been designed to aid the teaching of microcontroller interfacing to various peripherals. The module design enables students to easily understand each experiment section as it is worked upon. This plug – in modules are supplied optionally with the lab.
MCM-01 Input interface module
MCM-02 ADC/DAC module
MCM-03 Computer interface module
MCM-04 Display module
MCM-05 Motor drive module
MCM-06 Elevator Control Module
MCM-07 TTL I/O Interface Module
MCM-09 Graphical Display Module
MCM-10 Display & Switch Module
MCM-11 Multi Interface Module
MCM-12 Infrared Communication Module
MCM-16 PWM Based Voltage Regulator

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