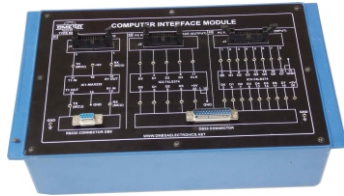# OMEGA ®
A SIGN OF QUALITY PRODUCT

APPLICATION MODULES FOR MICROCONTROLLER WITH PROGRAMMER AT89S51/52, AVR ATMEGA8515
OMEGA TYPE MCM-03 & MCM-04

COMPUTER INTERFACE MODULE
OMEGA TYPE MCM-03

DISPLAY MODULE
OMEGA TYPE MCM-04

Omega Type MCM-03 Computer interface module for development board with programmer trainers, MCM-03 is an Extension module. The module has been designed to have a clear understanding of how serial port and parallel port interfaced devices are controlled and interface with microcontroller. The apparatus is connected with microcontroller unit and PC. The computer interface trainer is made in such a way that student can understand the whole concepts of serial and parallel port and how they are interfaced with microcontroller.

OBJECTS:
01 To study PC "HyperTerminal".
02 To study Basics of Serial Communication of MCU and Interfacing between PC Serial port
03 To Study Programming and Transmission of Data through Serial Port.
04 To Study Programming and Reception of Data through Serial Port.
05 To study installation procedure of "ParellelPortViewer".
06 To Study MCU connection to Parallel Port of PC
07 To Study the Parallel Data Transmission From PC to MCU.
08 To Study PC Parallel Port Reception from MCU.
09 To Study of synchronous and asynchronous serial communication

TECHNICAL SPECIFICATIONS
01 Serial Port communication   : RS 232 Port Using DB-9
02 PC Parallel Port Interface   : 25 pin LPT port Using DB-25 Output & Input
03 Baud rate   : 9600 bps
04 Power supply   : From Micro controller development board with programmer trainer OE-5001 & OE-5003
05 Interface   : Using 20 pin FRC cable
06 Test points   : 36
07 Dimension (mm)   : W 340 x H 125 x D 210
08 Weight   : 700 gm (approx)

GENERAL SPECIFICATIONS:
01 RS-232 Interface using Rx/Tx of MCU for Uploading/ Downloading
02 Printer Interface
03 PC Based Programming
04 Expansion Connectors for plug in with Microcontroller Unit and prototyping area

Omega Type MCM-04 Display module is an ideal tool to study the working of displays used for industrial applications. The trainer has been designed to demonstrate the applications of Microcontroller. The objective is to connect and program a microcontroller to display data and monitoring.

OBJECTS:
01 To study implementation, analysis and interfacing of Dot Matrix Display
02 To study and analyze the interfacing of 16 x 2 Characters LCD
03 To study implementation, analysis and interfacing of 4 Digit Seven segment display

TECHNICAL SPECIFICATIONS
01 Dot Matrix Display Interface   :   One
02 16 x 2 LCD Interface   : 16 x 2 Characters LCD
    2.1. Contrast control   : 0 to -5 V (Variable)
    2.2. Back light control   : 0 to 5 V (Variable)
03 Seven segment display: Four
04 Power supply   : From Microcontroller development board with programmer trainer OE-5001 & OE-5003
05 Interface   : Using 20 pin FRC cable
06 Test points   : 39
07 Dimension   : W 340 x H 125 x D 210
08 Weight   : 800 gm (approx)

GENERAL SPECIFICATIONS:
01 PC based Programming
02 Expansion connectors for plug in with Microcontroller Unit and prototyping area
03 Every pin is marked in order to make work easier
04 Input/Output test points provided on board
05 Ready Experiments
06 Exhaustive course & reference material

LIST OF ACCESSORIES:
01 Operating Manual.......................................01.
02 Patch cord 2mm length 50cm Red & Black ..04

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

OMEGA ELECTRONICS