

**APPLICATION MODULES FOR
MICROCONTROLLER WITH PROGRAMMER
AT89S51/52, AVR ATMEGA8515
OMEGA TYPE MCM-11 & MCM-12**

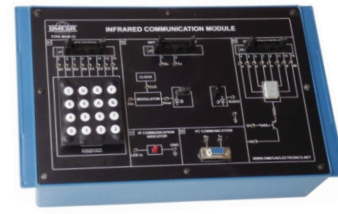
MULTI INTERFACE MODULE

OMEGA TYPE MCM-11



INFRARED COMMUNICATION MODULE

OMEGA TYPE MCM-12



Omega Type MCM-11 Multi Interface module, is an Extension module. The objective is to have a clear understanding of how input peripherals are interfaced and controlled with microcontroller. The module has been designed to have a clear understanding of how stepper motor is interfaced and controlled with microcontroller. It also gives a clear understanding of SPI and I2C interface bus for data transfer.

OBJECTS:

- 01 To study Stepper motor Interfacing
- 02 To study direction and angle control of stepper motor
- 03 To study Interfacing of I²C based EEPROM
- 04 To study Interfacing of SPI based EEPROM
- 05 To study Temperature Sensor Interfacing

TECHNICAL SPECIFICATIONS

- 01 Temperature Sensor : LM-35 0-100°C (Analog output) (with inbuilt ADC 0804)
- 02 I²C Memory : 128K EEPROM
- 03 SPI Memory : 128K EEPROM
- 04 Stepper Motor : 12V DC
- 05 Power supply : From Microcontroller development board with programmer trainer OE-5001 & OE-5003
- 06 Test Points : 14
- 07 Interface : Using 20 pin FRC cable
- 08 Dimension : W 340 x H125 x D210 (mm)
- 09 Weight : 1.2Kg.(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

Omega Type MCM-12 Infrared Communication Module is an Extension module. The objective is to have a clear understanding of how infrared device can interface and controlled with microcontroller. Infrared module MC-12 has input and output terminals for connection of external real world applications

OBJECTS:

- 01 To Study Wireless Infrared Communication Technology
- 02 To Study Data transfer from microcontroller to PC using infrared
- 03 To Study Data transfer from microcontroller to microcontroller using infrared

TECHNICAL SPECIFICATIONS

- 01 Key Pad : 4 X 4 Hex Key Pad
- 02 Infrared Transmitter : IR LED
- 03 InfraredReceiver: Direct TTL Output TSOP-1738
- 04 LED : IR Communication Indicator
- 05 Data Output Display : 7 Segment Display
- 06 PC Communication : RS232
- 07 Baud rate : 2400bps
- 08 Carrier Frequency : 38 KHz
- 09 Powersupply : From Microcontroller development board with programmer trainer OE-5001 & OE-5003
- 10 Interface : 20 Pin FRC Cable
- 11 Test Point : 29
- 12 Dimension : W 340 x H125 x D210 (mm)
- 13 Weight : 1.2Kg.(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 easier
- 04 Input/output test points provided on board
- 05 Ready Experiments
- 06 Exhaustive course & reference material
- 07 Infrared Sensor Interface

LIST OF ACCESSORIES:-

- 01 Operating Manual

Note : These modules work only in combination with Omega Type OE-5001 & OE-5003 Trainers

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

OMEGA ELECTRONICS