



# INTEL GALILEO MICRO CONTROLLER TRAINER MODEL - INTGL100

This trainer has been designed with a view to provide theoretical & practical knowledge of Intel Galileo Micro controller board.



## SPECIFICATIONS

### 1. Hardware

- |                                   |   |       |
|-----------------------------------|---|-------|
| 1. Intel Galileo Micro Controller | : | 1 No. |
| 2. Breadboard                     | : | 1 No. |
| 3. Display 20 * 4 LCD             | : | 1 No. |
| 4. Infrared Sensor                | : | 1 No. |
| 5. Audio Sensor                   | : | 1 No. |
| 6. Humidity Sensor                | : | 1 No. |
| 7. PIR Sensor                     | : | 1 No. |
| 8. Reed Switch Sensor             | : | 1 No. |
| 9. Light Sensor                   | : | 1 No. |
| 10. Gas Sensor                    | : | 1 No. |
| 11. Pressure Sensor               | : | 1 No. |
| 12. Temperature Sensor            | : | 1 No. |
| 13. Onboard Parts                 | : |       |

Push Switch, Buzzer, Seven Segment Display, Potentiometer, Speaker, Relay, Servo Motor, DC Motor and Different types of Resistors, LEDs.

### 2. Software

- |                                  |   |       |
|----------------------------------|---|-------|
| 1. Controller Driver Software CD | : | 1 No. |
| 2. Applications Software CD      | : | 1 No. |

### 3. Accessories

- |                                      |   |                       |
|--------------------------------------|---|-----------------------|
| 1. Practical Manual                  | : | 1 No.                 |
| 2. Required Cables                   | : | 1 No.                 |
| 3. Software and Driver CD            | : | 1 No.                 |
| 4. E-Books for Intel Galileo         | : | 10 Nos. in PDF Format |
| 5. Mp4 Video Class for Intel Galileo | : | 40 Nos                |

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**Dealer:-**

#### 4. **Trainer Board**

The complete circuit diagram should be screen printed on component side of the PCB with circuit and Parts at the same place. The true value of component is printed on component side. The PCB with components on front side is fitted in elegant wooden box having lock and key arrangement. The acrylic cover is fitted on PCB to safeguard parts. It has holes for alignment and repair. The testing points are provided with 1.25" tags to connect CRO probe.

5. Printed Manuals with softcopy on Pen Drive is to be supplied.
6. Online manual and Library for Arduino Books, Charts, PPT, and Software is to be provided.
7. Minimum 100 Experiments with .ino code files for Basic, Audio Visual, Motor Control, Sensor Interfacing and Data acquisition, Web Server Internet, SD Card are to be provided with Kit.

#### 8. **Note**

**One Computer system (Pentium IV 1.5GHz, 160GB HD, 1GB RAM) with One USB Port is required to operate this trainer.**

## EXPERIMENTS

1. Software and hardware configuration for Intel Galileo board.
  2. Write a program to blink on board LED.
  3. Write program to take input form switch and blink LED.
  4. Display "Hello world" on 20\* 4 alphanumeric LCD
  5. Moving Message Display on 20\* 4 alphanumeric LCD.
  6. Write a program to interface Infrared Sensor
  7. Write a program to interface Audio Sensor
  8. Write a program to interface Humidity Sensor
  9. Write a program to interface PIR Sensor
  10. Write a program to interface Reed Switch Sensor
  11. Write a program to interface Light Sensor
  12. Write a program to interface Gas Sensor
  13. Write a program to interface Pressure Sensor
  14. Write a program to interface Temperature Sensor
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1. To Write a program to interface Ultrasonic distance measurement sensor.
  2. To Write a program to interface real time clock (RTC) using I2C protocol.
  3. To Write a program to interface 3 axis accelerometer module using SPI protocol.
  4. To Write a program for external interrupt, to blink LED.
  5. To Write a program to send data serially using UART.
  6. To Write a program to receive data serially using UART.
  7. To Write a program to send and receive data using UART.
  8. To Write a program to write data into internal EEPROM.
  9. To Write a program to read and To Write back data into internal EEPROM.
  10. Intel Galileo at Application approach – To Write an application to display temperature and humidity data on LCD and send data over serial port.