SIGMA

INTEL EDISON
MICRO CONTROLLER TRAINER
MODEL - INTLEDISON100

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

SPECIFICATIONS

1. Hardware

1.	Intel Edison Controller	:	1 No.
2.	Node Microcontroller	:	1 No
3.	Audio	:	I2S Out
4.	Flash	:	SDIO Interface; 4GB Flash RAM
5.	RAM	:	1 GB
6.	Processor	:	500MHz Dual-core Atom processor
7.	MCU	:	100 MHz Quarks MCU
8.	Input / Output Bus	:	70 Pin 0.4mm Header
9.	Wii	:	Dual-Band 802.11a/b/g/n)
10.	Bluetooth	:	Bluetooth 2.1/4.0
11.	USB	:	1 USB
12.	Other interfaces	:	SPI, UART, I2C, PWM
13.	Power Supply	:	3.3V to 4.5V

2. Software

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

3. Accessories

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

4.   Trainer Board:-
The complete circuit diagram should be is 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.

6.   Note:
Two Computer systems (Pentium IV 1.5 GHz, 160GB HD, 128 MB RAM) with Windows-7 are required to operate this trainer.

EXPERIMENTS

1.   Software and hardware configuration for Intel Edison board.
2.   To Write a program to blink on board LED.
3.   To Write a program to take input form switch and blink LED.
4.   To Display "Hello world" on 16* 2 alphanumeric LCD
5.   To make moving Message Display on 16* 2 alphanumeric LCD.
6.   To Write a program to interface DHT11 sensor to implement one wire protocol.
7.   To Write a program to interface Flame sensor.
8.   To Write a program to interface IR object sensor.
9.   To Write a program to interface Ambient light sensor using
10.   To Write a program to blink led using PWM module.
11.   To Write a program to interface Ultrasonic distance measurement sensor.
12.   To Write a program to interface real time clock (RTC) using I2C protocol.
13.   To Write a program to interface 3 axis accelerometer module using SPI protocol
14.   To Write a program for external interrupt, to blink LED.
15.   To Write a program to send data serially using UART.
16.   To Write a program to receive data serially using UART.
17.   To Write a program to send and receive data using UART.
18.   To Write a program to write data into internal EEPROM.
19.   To Write a program to read and To Write back data into internal EEPROM.
20.   Intel Edison at Application approach – To Write an application to display temperature and humidity data on LCD and send data over serial port.