SIGMA

SMART WEARABLE IOT TRAINER

MODEL- S-WEAR-IoT100

This trainer has been designed with a view to provide theoretical & practical knowledge of Smart Wearable IoT.

SPECIFICATIONS

1. Hardware

1. Microcontroller Node	:	1 No.
2. Fire sensor	:	1 No.
3. Temperature sensor	:	1 No.
4. Relay Board	:	2 Nos.
5. Ethernet module	:	1 No.

2. Software

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

3. Accessories

1. USB Cables	:	2 Nos
2. Connecting Wires / Jumpers	:	10 Nos.
3. Practical Manual	:	1 No.
4. E-Books for IoT Subject	:	10 Nos. in PDF Format
5. Mp4 Video Class for IoT Subject	:	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.

5.   Experiments:-

1.   To Study Theory and Block Diagram of IoT
2.   To Study Node Controller Board
3.   To Study Fire Sensor
4.   To Study Gas Sensor
5.   To Study Temperature Sensor
6.   To install Node Controller software
7.   To install and Configure Node Controller Board
8.   To write a Program in C++ for programming for controlling Home devices
9.   To dump C++ Code into Node Controller Board using Node Control Software
10.   To control Fire sensor using Facebook
11.   To control Temperature using Facebook
12.   To control Gas sensor using Facebook
13.   To control Appliances using Bluetooth remote
14.   To understand different types of Protocols and Commands
15.   To understand Serial UART Data transmission
16.   To study Sensor Controlling and Monitoring Software
17.   To control Sensors using the PC Monitoring software
18.   To make different Applications and Projects using Node Controller Board
19.   To control above Devices using IOT Server
20.   To demonstrate and understand different types of faults
21.   To understand Circuit Diagram
22.   To Measure Test Point Voltages
23.   To Observe Test Point Waveforms
24.   To understand Glossary of words used in IoT

10.   Warranty:
        a. At least 1 year inclusive of parts and labor / after sales service from the date of successful completion of installation and commissioning and handling over with response time of not more than 5 working days.
        b. The warranty claim must be settled within 10 working days, if more time is required, loan unit has to be provided until the faulty unit is repaired.
        c. Telephone and Email support to be provided for any query within 24 Hrs.

16.   Experiments:-
1.   To Study Theory and Block Diagram of Smart Agriculture IoT
2.   To monitor soil moisture in vineyards to control the amount of sugar in grapes and grapevine health using Soil moisture, Soil temperature, Humidity, Leaf wetness, Atmospheric pressure sensors.
3.   To Control micro-climate conditions to maximize the production of fruits and vegetables using Soil moisture, Soil temperature, Humidity, Leaf wetness, Atmospheric pressure sensors.
4.   To control selective irrigation in dry zones to reduce the water resources required in the green using Soil moisture Sensors.
5.   To Control Humidity and Temperature levels in Alfalfa, Hay, Straw, etc. to prevent fungus and other microbial contaminants using Humidity, Soil moisture, Soil temperature sensors.