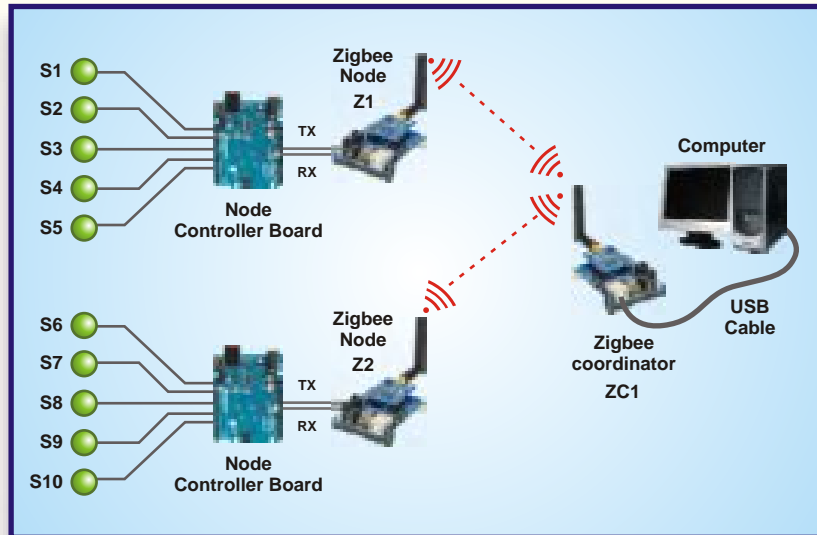# SIGMA

WIRELESS SENSOR NETWORK TRAINER
MODEL-WSN100L

This trainer has been designed with a view to provide theoretical & practical knowledge of Wireless Sensor Network Trainer.

EXPERIMENTS

1. To Study Theory and Block Diagram of Wireless Sensor Network
2. To Study Node Controller Boards
3. To Study ZigBee Wireless Transmitter Nodes
4. To Study ZigBee Wireless Router and Co-Ordinator
5. To Study different type of Sensors and their Output characteristics
6. To install and Connect different Sensors to Node Controller Boards
7. To install and Configure Node Controller Boards
8. To install and Configure ZigBee Wireless Transmitter Nodes
9. To install and Configure ZigBee Wireless Router and Co-Ordinator
10. To write a Program in C++ for programming of different types Nodes and Routers
11. To Start Hyperterminal and send and receive Sensors Data readings to Base Station
12. To understand different types of Protocols and Commands
13. To study Sensor controlling and Monitoring Software
14. To control Sensors using the PC Monitoring software
15. To Study and Configure different types fo Topologies
16. To Cross over from Mesh Network to Internet Network
17. To make different Applications and Projects using Wireless Sensor Network
18. To demonstrate and understand different types of faults

SPECIFICATIONS

1. **Hardware**
   Node Controller Boards   : 2 Nos.
   Zigbee Nodes   : 2 Nos.
   Zigbee Coordinator   : 1 No.

2. **Wireless Sensors -**
   1. Temperature Sensor
   2. Audio Sensor - Condenser Mike
   3. Humidity Sensor
   4. Pressure Sensor
   5. Light - IL luminance Sensor
   6. Infrared Sensor
   7. Capacitive Touch Sensor
   8. Flex Sensor
   9. PIR - Passive Infrared Sensor
   10. Solar Sensor

3. **Software**
   Controller Software CD   : 2 Nos.
   Controller Operating System CD   : 1 Nos.
   Applications Codes CD   : 1 No.

4. **Accessories**
   USB Cables   : 2 Nos.
   Connecting Wires / Jumpers   : 30 Nos
   Pdf Ebooks on WSN Subject   : 10 Nos.
   Mp4 Lectures on WSN Subject   : 40 Nos.
   Practical Manual   : 1 No.