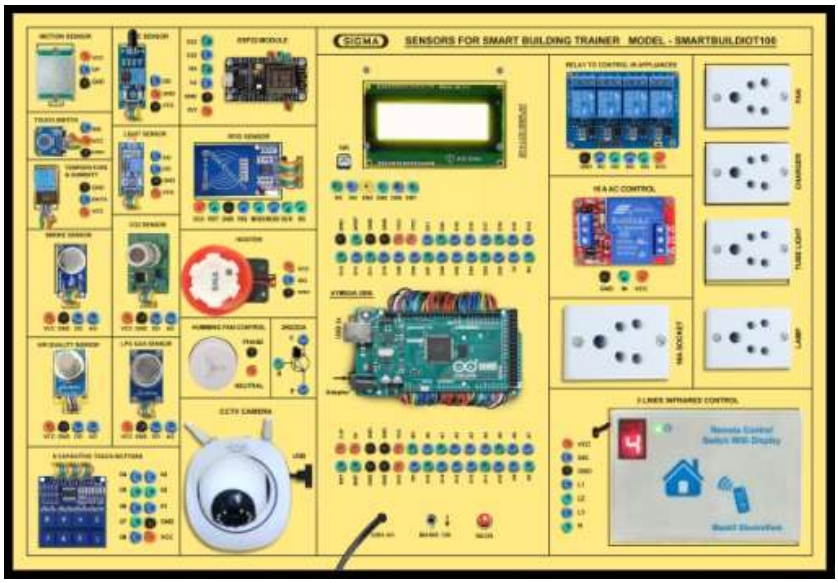
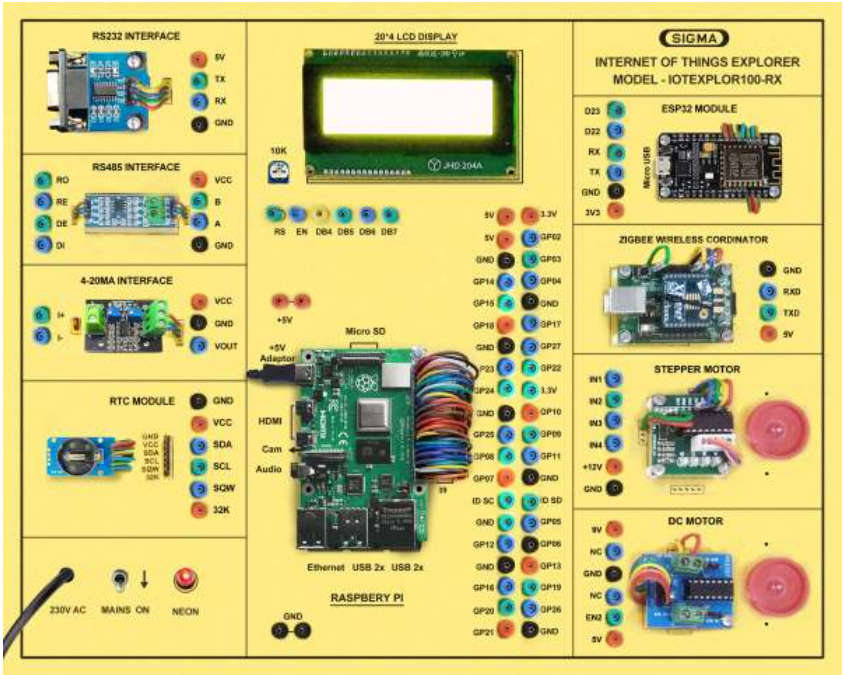
SMART BUILDING IOT TRAINER - TRANSMITTER AND RECEIVER

MODEL- SMARTBUILDIOT100



Transmitter



Receiver

A. Main Specs

1. Following Parts and Modules are assembled on Single PCB of size - 18 Inch x 15 Inch.
2. The complete circuit diagram is screen printed on component side of the PCB with circuit and Parts at the same place.
3. The PCB with components on front side is fitted in elegant wooden box having lock and key arrangement.
4. Modules and Parts should be removable without desodlering for easy repair / replacement
5. The acrylic cover is fitted on PCB to safeguard main parts.

B. Transmitter Node Section

1. Arduino Mega 2560
1. Ambient Temperature & Humidity Sensor – DHT11
2. Air Quality Sensor – MQ135
3. LDR Light Sensor
4. PIR Motion Sensor
5. Smoke Detector Sensor MQ2
6. Fire Sensor
7. LPG Gas Sensor MQ6 O2: Range: (0-25%) Sensor
8. CO2 Sensor
9. Touch Panel Sensor
10. RFID Reader Writer Sensor RC522 with RFID Keychain and RFID Cards
11. Hooter
12. CCTV Camera
13. Four 5 A sockets to control 3 Light bulbs and One Fan
14. 9 Inch Fan with Regulator
15. 16A AC Plug
16. Alexa Voice Control

1. Zigbee IoT Gateway
2. Wifi IOT Gateway – ESP32
3. GSM IoT Gateway
4. Bluetooth IOT Gateway
5. LoraWAN IOT Gateway – LA66

1. 20 X 4 - LCD Display

C. Receiver Base Station Section

1. Raspberry Microcontroller Board – Pi-4, 2 GB RAM, 64 GB Storage
2. 20 X 4 - LCD Display
3. 5V, 2 Channel Relay
4. Audio Buzzer
5. Bluetooth Gateway
6. Zigbee IoT Gateway
7. Wifi IOT Gateway – ESP32
8. LoraWAN IOT Gateway – LA66

D. EXPERIMENTS

1. To explain theory of Raspberry Board, Arduino Board and All sensors and Parts
2. To measure all Sensors data
3. Smart Dashboard for Remote Monitoring and Analysis
4. To send Sensors data from Transmitter Node to Base Receiver using Bluetooth Gateway
5. To send Sensors data from Transmitter Node to Base Receiver using Zigbee Gateway
6. To send Sensors data from Transmitter Node to Base Receiver using Wifi Gateway
7. To send Sensors data from Transmitter Node to Base Receiver using LoRaWAN Gateway
8. To send Sensors data to Mobile using GSM Gateway by SMS
9. To send Sensors data to Mobile using Mobile App
10. To send Sensors data to Website Cloud page
11. To send Sensors data to MySQL Cloud Server and store them
12. To send Sensors data to Local Host Server and Store them on website html page
13. To send Sensors data from Transmitter Node to TTN LoRaWAN Cloud Server using LoRaWAN Gateway

E. Accessories

1. All Cables and Adaptors
2. Pen Drive : 16 GB with All Codes and Soft copy of Manual
3. E-Books for IOT Subject : 100 Nos. in PDF Format
4. Mp4 Video for IOT Subject : 100 Nos
5. Online Cloud/Server Services : For 2 Years on Cloud Server
6. Live Training at College : For 2 Days for 4 Hours per Day
7. After Sale Training support : By Online Zoom Meeting or By Whatsapp Video Call