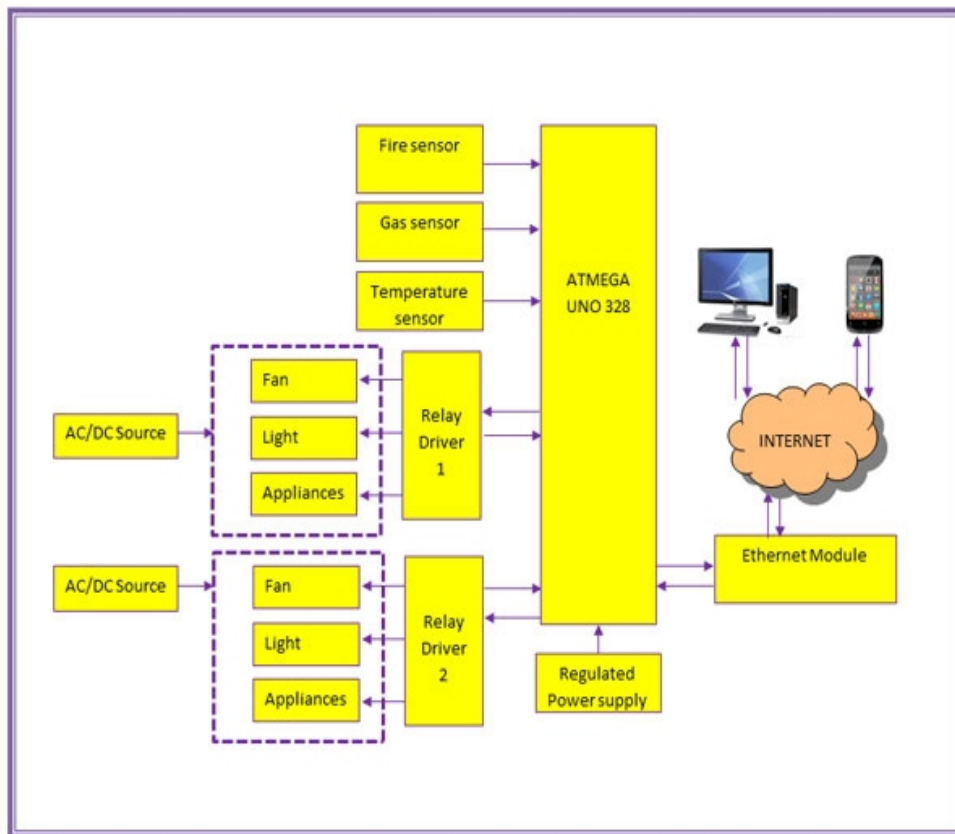# SMART CLOUD IOT TRAINER

MODEL- MODEL – SMART CLOUD-IOT100

SIGMA

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

The Smart Home Internet of Things is nothing but to control different home appliances remotely through Internet at home or works. Smart Home Control IoT is used to control devices at home like electrical light, electric fan, air conditioner and refrigerator etc remotely either by Mobile - SMS or by Internet using Cloud Server Technology.

1. Hardware

1.	Microcontroller Node	:	1 No.
2.	Fire sensor	:	1 No.
3.	Gas sensor	:	1 No.
4.	Temperature sensor	:	1 No.
5.	Relay Board	:	2 Nos.
6.	Ethernet module	:	1 No.
7.	Screw shield.	:	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 Fan using Cloud Server
11.   To control Bulb using Cloud Server To control Appliances using Bluetooth remote
12.   To control Gas using Cloud Server
13.   To control Fire using Cloud Server
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

6. Note:-

One Computer systems (Pentium IV 1.5GHz, 4GB HD, 128 MB RAM) with One Serial Port and One
          USB is required to operate this trainer