

PC BASED INDUSTRIAL PARAMETERS STORAGE SYSTEM

AIM:

Design and Development of PC based industrial parameters storage system.

PURPOSE:

In industries SCADA and PLCs plays major role and make manual work so easy. Using these systems we can easily monitor few kinds of parameters of any type of industry. These are having some sensors and monitoring software. Software located at centralized place where monitoring team handles all data. But SCADA and PLCs are expensive for medium and small scale companies. To solve this issue we have solution with microcontrollers and sensors. We can implement this kind of system with Arduino microcontroller and it act as like SCADA and PLC. The proposed solution title is PC based industrial parameters storage system using Arduino. We can call it as PC based industrial Data logger also.

DESCRIPTION:

Arduino connected to PC or laptop through USB-TTL cable. LM35/34 connected to Arduino analog pin. Smoke sensor (mq2) and Fire sensor connected to Arduino digital pins.

WORKING:

C# application running in PC to display and store sensors data. Arduino reads sensors data and display on LCD. Also application as feature that can store sensors data in a text file. It can display sensors data on graphical user interface and also stores in local file. Sensors data stored in file with respective to Date and time. This functionality works as like mini database. This file can be sharable within the local area network.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontrollers	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
Communication cable	:	USB to TTL
Temperature Sensor	:	LM35/34
Smoke Sensor	:	MQ2
Fire Sensor	:	IR receiver type
Power Source	:	12VDC adaptor

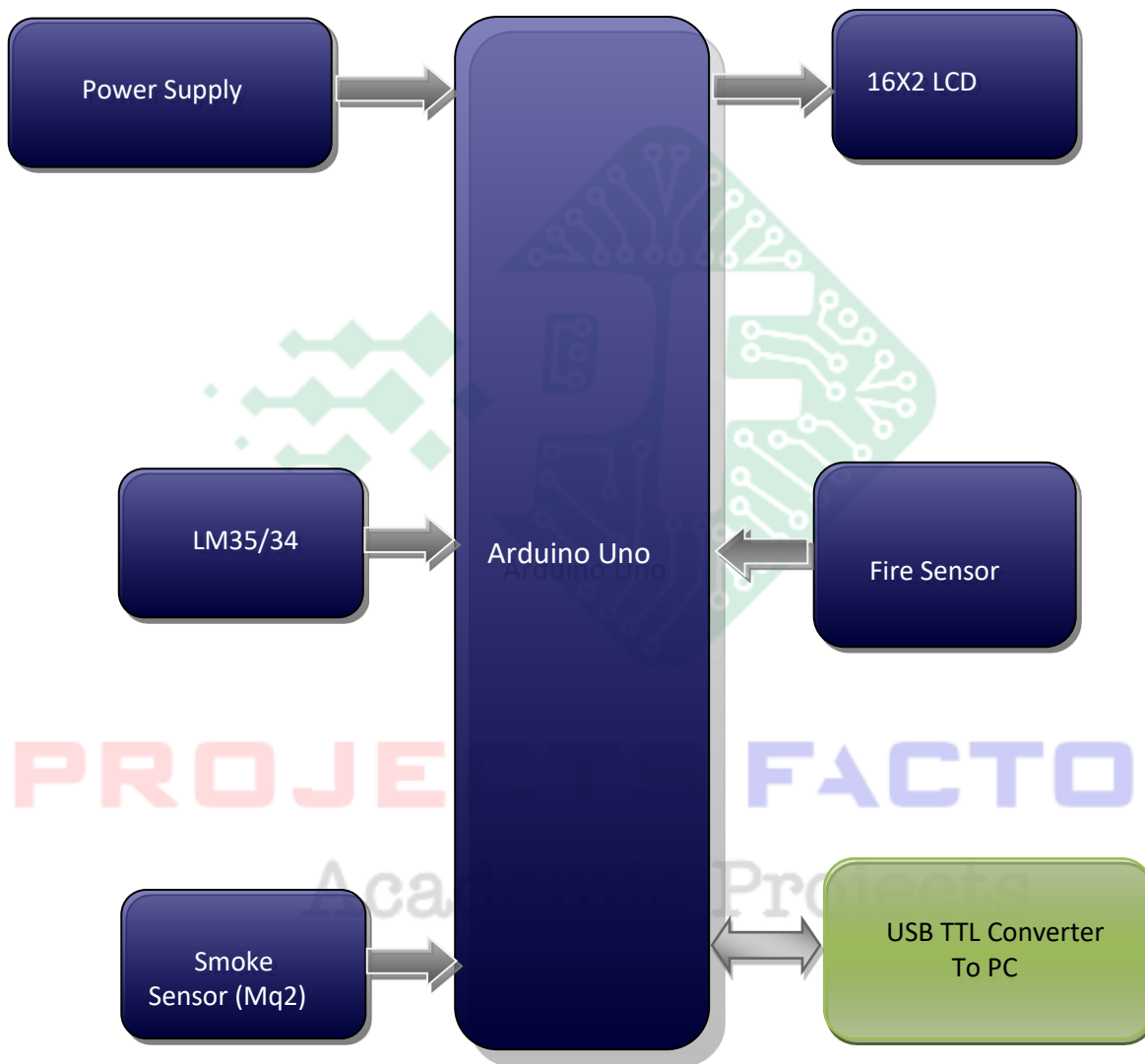
SOFTWARE:

Arduino IDE
Proteus based circuit diagram

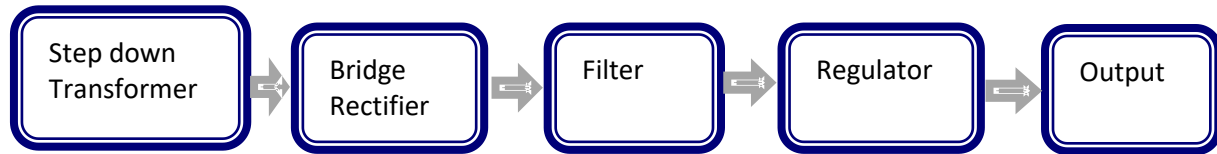
APPLICATIONS:

- Industrial Automation
- PLC applications
- Industrial data logger

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered Arduino and PC interface
- Sensors like lm35/34, Smoke (Mq2) and Fire sensors

PROJECTS FACTORY
Academic Projects