

For more Project details visit:

<http://www.projectsof8051.com/gsm-based-industrial-fault-monitoring-detection-system/>

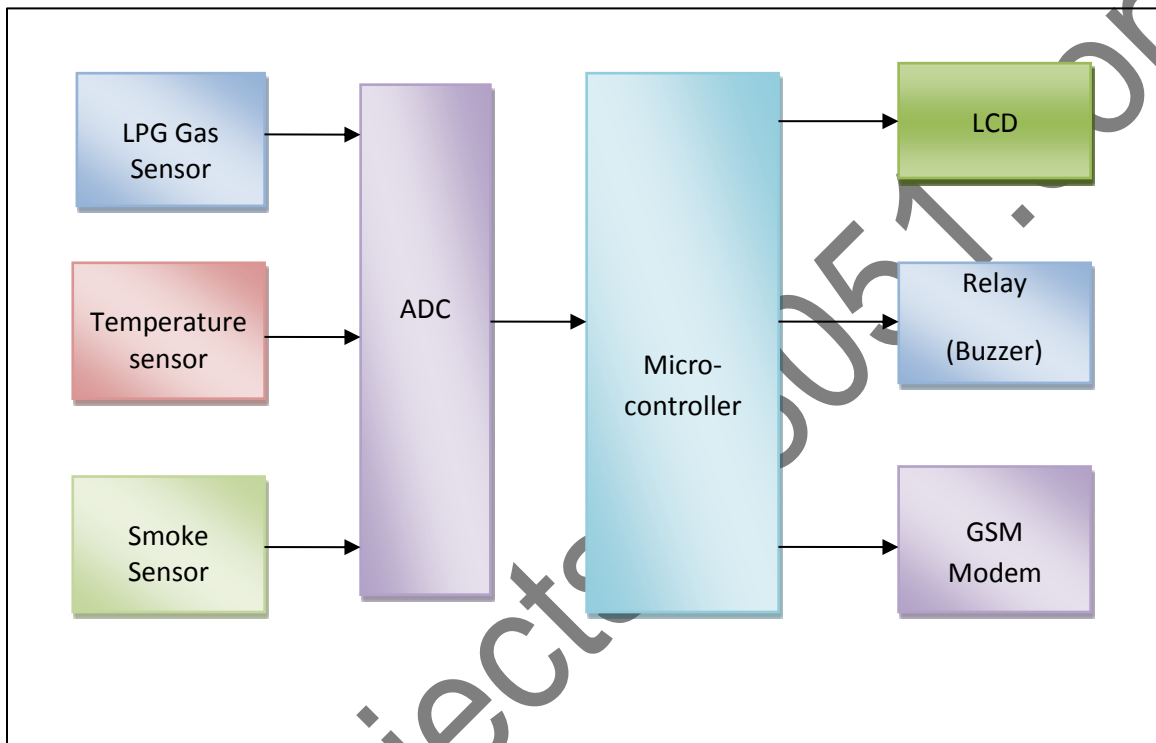
## Synopsis for GSM based Industrial fault detection system

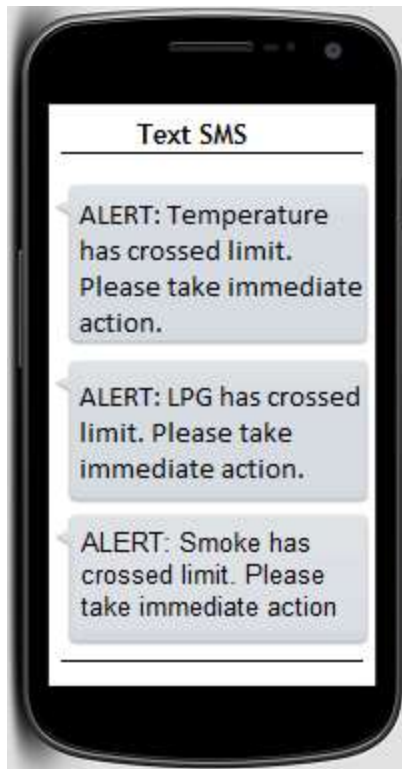
### 1. Introduction

This project has 3 sensors. These three sensors are LPG gas sensor to detect the gas leakage, Temperature sensor for overheat detection and Smoke sensor to detect smoke from fire. This module also turns on buzzer if 3 sensors give high output. If any fault is detected then buzzer is turned on and SMS is sent.

GSM modem is used to send the SMS whenever there are changes in any of the three modules.

## 2. Block Diagram





### 3. Block Diagram Description

It mainly consist of following blocks

1. **Smoke sensor:** it detects smoke from fire.
2. **LPG Gas sensor:** This sensor is used to detect Gas leakage in the industry

**3. Temperature sensor:** It is used to detect if there is overheat due to fire.

**4. Microcontroller:** This is the CPU (central processing unit) of our project. We are going to use a microcontroller of 8051 family. The various functions of microcontroller are like

I. Reading the digital input from infrared receivers and sensors.

II. Sending this data to LCD so that the person operating this project should read the status of sensors.

III. Sending SMS through GSM modem

**4. LCD:** We are going to use 16x2 alphanumeric Liquid Crystal Display (LCD) which means it can display alphabets along with numbers on 2 lines each containing 16 characters.

**6. GSM Modem:** We are going to use sim900 as a GSM modem. The values of number of LPG Gas leakage status and the status of temperature sensor and IR sensor will be sent to GSM modem.

## **Application and Advantage:**

1. This project can be used in various industries
2. Can be used in various rooms like seminar hall, conference room, and study
3. This can also be used in Home

## **Future Development:**

1. We can implement other related modules and sensors.
2. We can add GPS