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## FIRE DETECTION AND AUTOMATIC ALERT SYSTEM

Security is primary concern for everyone. There are many ways to provide security at homes or in industries. The main aim of this project is to continuously monitor the house or industries and if any fire accidents occur, the system should alert the siren and also inform immediately to the person concerned by using wireless communication system GSM. This system totally eliminates a person who has to monitor the house or industry all the time.

A GSM modem provides the communication interface. It transports device protocols transparently over the network through a serial interface. A GSM modem is a wireless modem that works with a GSM wireless network. This GSM Modem can accept any GSM network operator SIM card and act just like a mobile phone with its own unique phone number. Advantage of using this modem will be that you can use its RS232 port to communicate and develop embedded applications. Applications like SMS Control, data transfer, remote control and logging can be developed easily. The modem can either be connected to PC serial port directly or to any microcontroller.

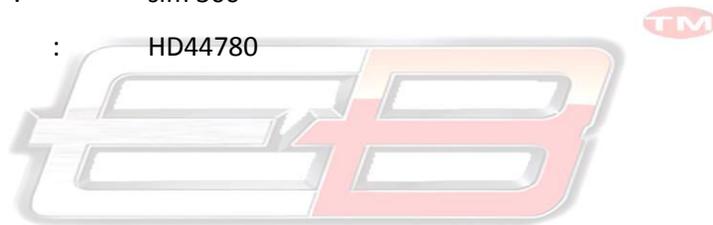
This project is designed in such a way that a GSM modem will be interfaced to the controller using serial communication along with a fire sensor. This control unit will be fixed in the house or in an industry. A buzzer is also interfaced to the microcontroller for an audio identification. The microcontroller continuously monitors the status the sensor. Whenever the status of the sensor changes, microcontroller detects this and sends a predefined message to the modem. The modem sends the same message to the user mobile number and the user can take the necessary action immediately. The siren will be alerted simultaneously. A 16X2 LCD will be interfaced to the controller to display the status of the sensor.

This project uses regulated 5V, 500mA power supply. 7805 three terminal voltage regulator is used for voltage regulation. Bridge type full wave rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.

## TECHNICAL SPECIFICATIONS:

### HARDWARE:

- Micro controller : AT89x series
- Crystal : 11.0592 MHz
- Serial line driver : Max232
- GSM modem : sim 300
- LCD : HD44780
- Fire sensor
- Buzzer
- Power supply
- Transformer : 12V step down
- Filter : 1000uf/25V
- Voltage Regulator : 7805, 7812



**EBREAKERS**  
Robotics Research & Technologies

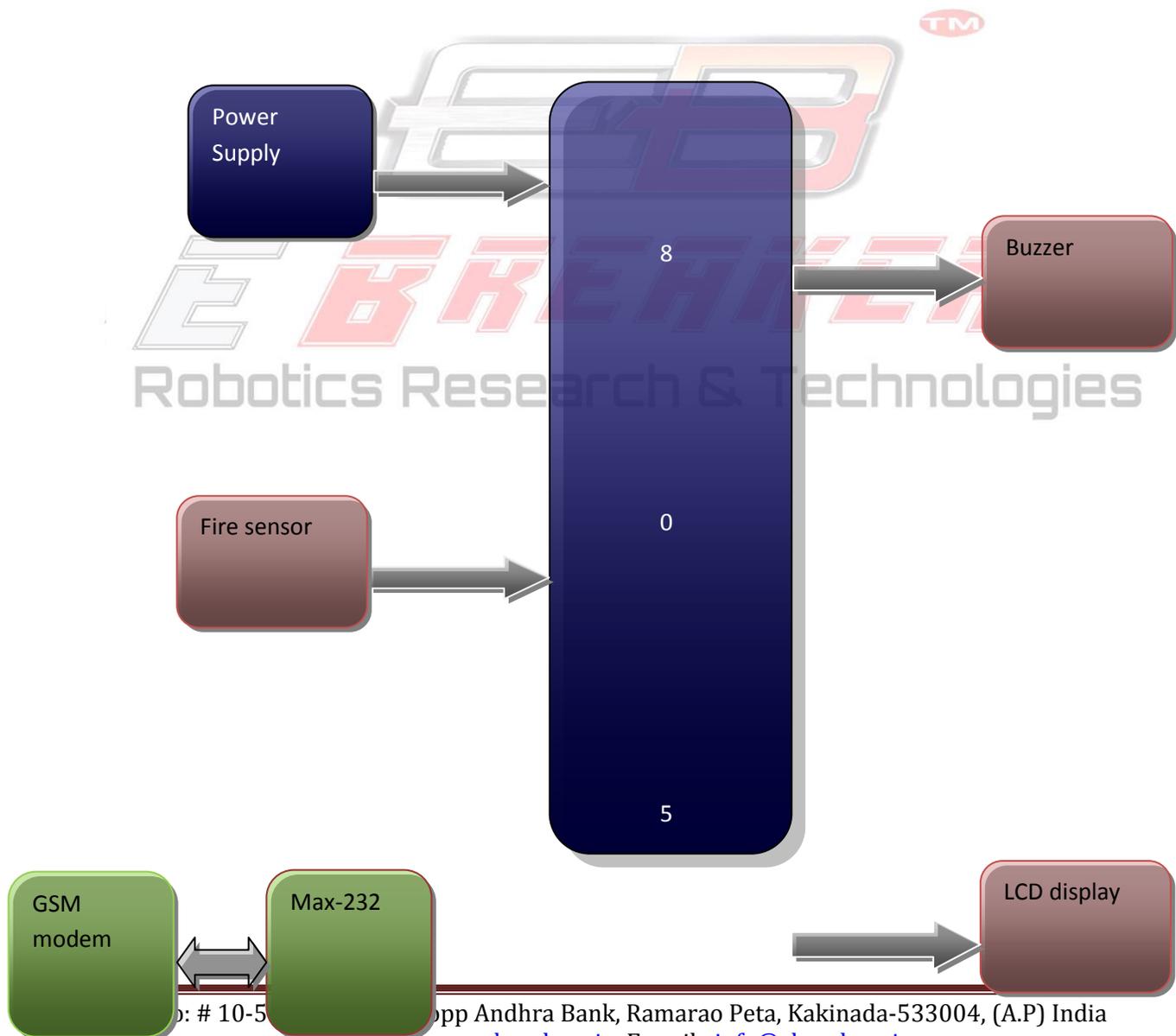
### SOFTWARE:

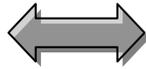
- Keil IDE
- UC flash
- Proteus

### APPLICATIONS:

- Industrial applications
- Household applications

**BLOCK DIAGRAM:**





**POWER SUPPLY BLOCKDIAGRAM:**

