
AN ADVANCED EMBEDDED MOBILE WEB SERVER FOR AGED PEOPLE MONITORING AND PARAMETER BACK RECEPTION USING GSM TECHNOLOGIES

ABSTRACT

This project includes the branch of Biomedical Engineering. This project is aimed to design a system that continuously monitors the aged people health conditions and pass the data to the doctor by using wireless concept GSM technology.

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.

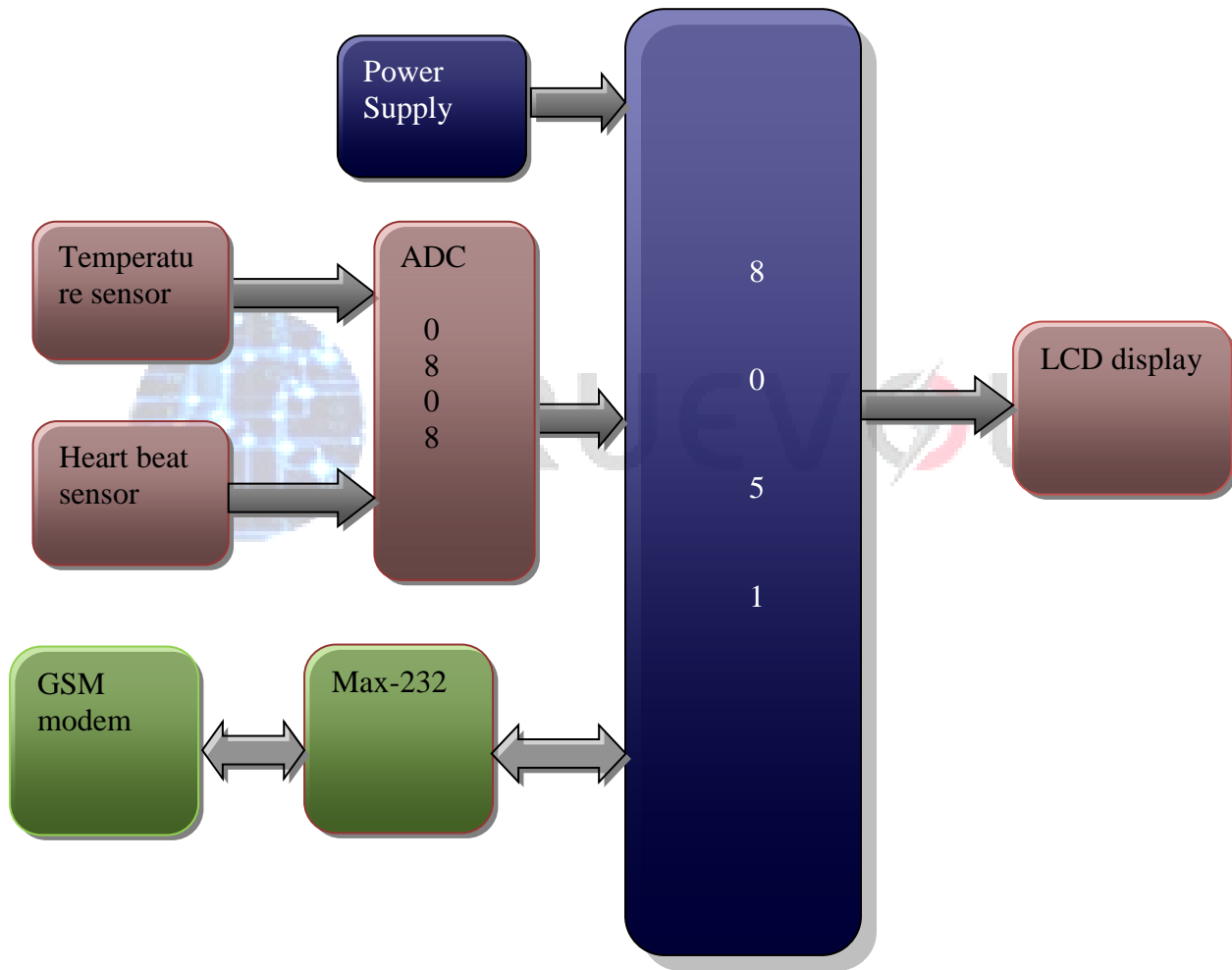
In this project the parameters like temperature and heartbeat are to be monitored continuously by using analog temperature sensor and heartbeat sensor. In other words, the doctor will be diagnosing the aged people continuously. This project is designed in such a way that, the analog quantities which are to be recorded continuously are taken and converted into corresponding digital values using an eight channel ADC. Here we consider temperature and heart beat sensors to monitor the temperature and heart beat respectively. The microcontroller continuously monitors the sensors data. The processed data from ADC is sent to micro controller. The doctor can continuously check the aged people status by sending a predefined message to the controlling unit. And if the sensors data the temperature and heartbeat exceeds their preset values which is programmed in the controller, now it is the job of controller sends the heartbeat value and temperature value as a message to the doctor's mobile through GSM modem. Thus, the doctor can take immediate actions based on the parameters received from the system using GSM modem. A16X2 LCD will be interfaced to the controller to display the status of the sensors.

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

APPLICATIONS:

- Biomedical applications

BLOCK DIAGRAM:



POWER SUPPLY BLOCK DIAGRAM:

