# REMOTE POWER LINE DATA MONITORING SYSTEM USING GSM

This project is aimed to design a remote meter reading system, which uses GSM technology, this project makes collection of meter readings very easy and reliable., without going near to the meters.

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 is interfaced to the controller using serial communication. The system is treated as a hub for few number of electricity meters from a certain area, here we will maintain a tiny data base inside the controller dynamically, [here four meters], the reading from different meters is collected and stored I the controller, each meter is given a unique code, and the data is also stored on the same unique code. If we want to know the reading of a meter, we have to send a SMS to the database server [here micro controller], which in response send back the reading of that corresponding energy meter. An LCD is interfaced to display the status of the system. We mimic pushbuttons to increase the meter reading, unlike using conventional loads.

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
- Line driver : Max232
- GSM modem : sim 300
- LCD : HD44780
- Fire sensor
- Push buttons : tactile

Power supply

- Transformer : 12V step down
- Filter : 1000uf/25V
- Voltage Regulator : 7805, 7812

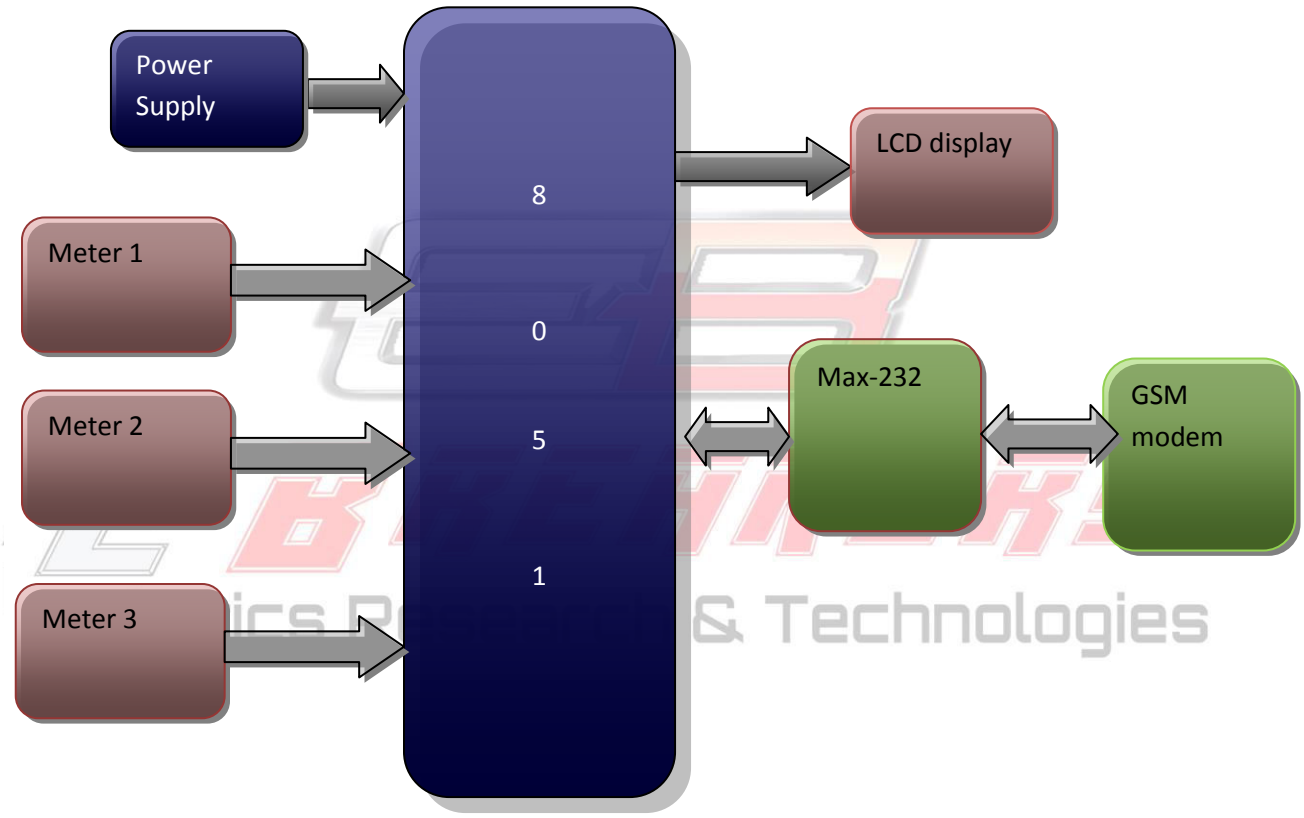
**SOFTWARE:**

- Keil IDE
- UC flash
- Proteus

**APPLICATIONS:**

- Industrial applications
- Household applications

**BLOCK DIAGRAM:**




**POWER SUPPLY BLOCKDIAGRAM:**