DAM LEVEL WARNING USING GSM SMS

ABSTRACT

This project is aimed to design a system to monitor and control the dam water level by using wireless technology GSM.

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.

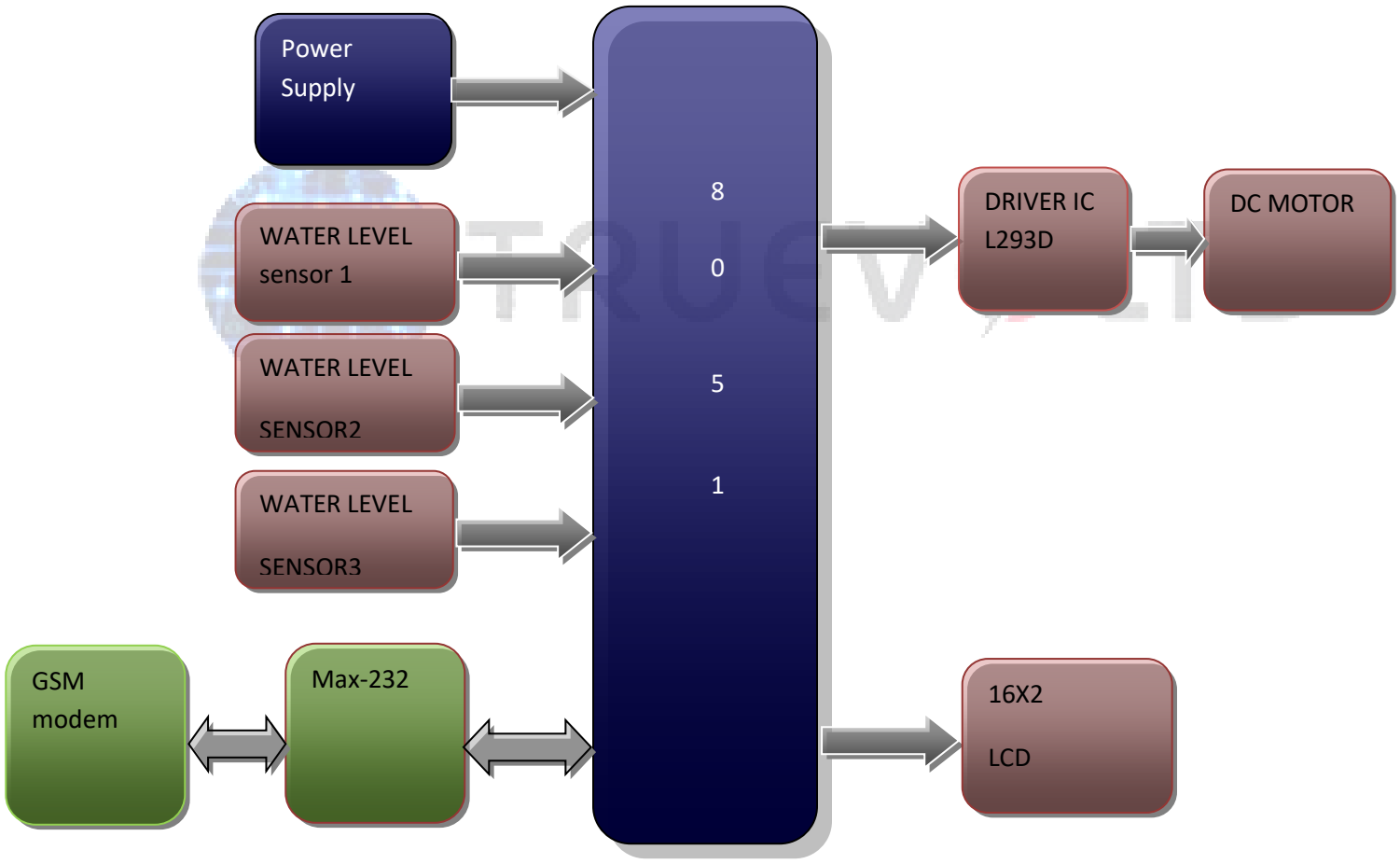
The project is designed in such a way that the micro controller 8051 is interfaced to three water level sensors which are placed at 3 levels of the dam, along with a dc motor. And the dam gate which has to be controlled based on the water level, is connected to this motor. A GSM modem will be interfaced to the controller using serial communication. The water level in the dam will be continuously monitored by the micro controller using sensors. If any sensor activates the corresponding sensor status will be send as a message to the required mobile from modem. Whenever the controlling person wants to open/close the dam gate, he will send a predefined message from his mobile to the modem. The modem receives the message from the mobile and performs the specified task i.e. opening/closing the gate. A 16X2 LCD will be interfaced to the controller to display the status of the system.

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.

APPLICATIONS:

- Irrigation control
- Reservoirs
- Dam gates

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM: