

## **Vehicle tracking system using GPS and GSM technologies**

### **Objective:**

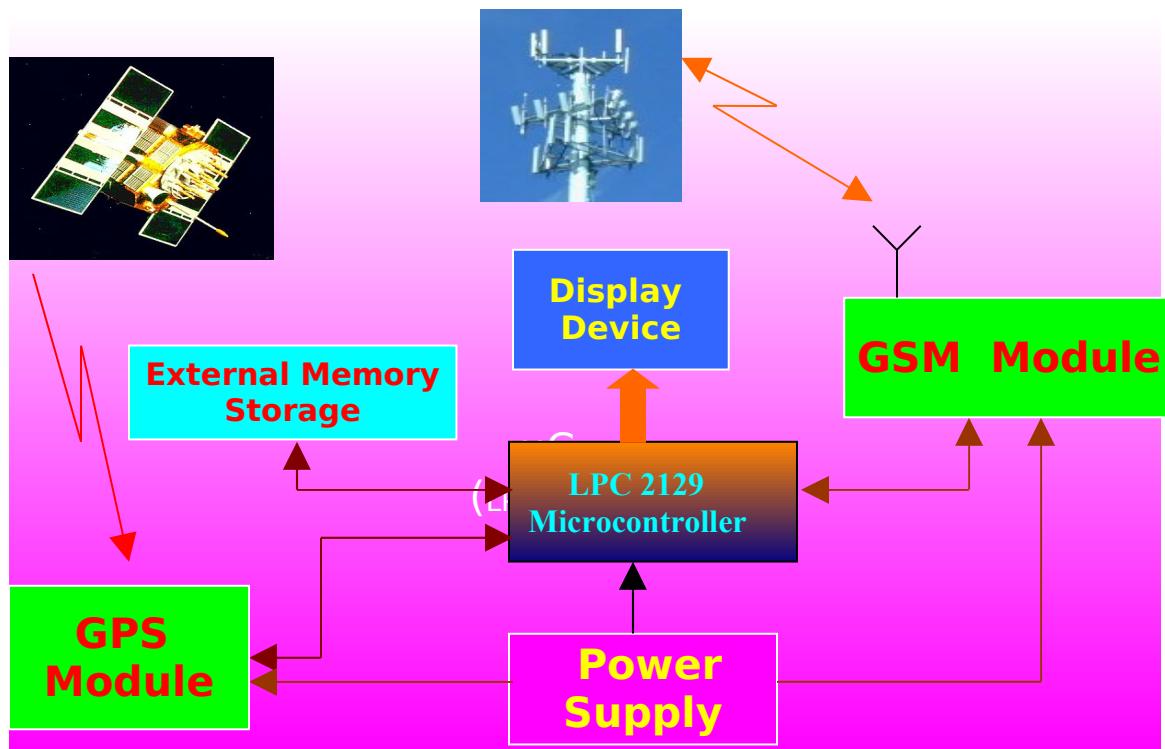
The main objective of our project is to develop a tracking system for vehicle in case of any theft or for surveillance, which can be used for **real time application**. The main features of the project are **GSM** and **GPS** control systems.

This system determine the latitude, longitude i.e. Position of the vehicle in the globe using GPS system by sending a message from our mobile by using GSM module in our kit. The 8051 Microcontroller has been programmed to control various devices connected to the product.

### **Major Technologies Hardware/Software Implemented**

- Global Positioning System (GPS) Receiver.
- GSM System.
- Embedded C.
- Embedded Integrated Development Environment.

## Block Diagram:



## Software requirements:

### **1. Keil µVision3 IDE:**

Keil µVision3 IDE (Integrated Development Environment) is a Windows based front end for the C Compiler and assembler. Keil µVision3 is used for writing embedded C programs. Embedded C is a high level language, which includes many aspects of the ANSI (American National Standard Institute) C programming language. Standard libraries are altered or enhanced to address the peculiarities of an embedded target processor.

### **2. ARM cross compiler:**

ARM cross compiler is used to compile C programs for your target LPC2129 environment and provides several extensions to ANSI Standard C to support the elements of the ARM7 architecture. These C programs are referred as Embedded C programs.

Final Year Project's is One place for all Engineering Projects, Presentation, seminar, summer training report and lot more.

NOTE:-This work is copyright (©) to its Authors. This is only for Educational Purpose.

## **Hardware requirements:**

### **Global System of Mobile communication Module:**



**GSM** is a second generation cellular standard developed to cater voice services data delivery using digital modulation. You need to insert SIM from your GSM provider to activate and Start using GSM modem.

### **2. Global Positioning System Module:**



**GPS** is a satellite based navigation system; these satellites orbit the earth and transmit Radio signals which allow any GPS receiver near the planet to determine its location, speed and direction.

### **3. Microcontroller (LPC 2129):**

This is a ARM7TDMI-S based high-performance 32-bit RISC Microcontroller with Thumb extensions. 256KB on-chip Flash ROM with in-System Programming (ISP) and In-Application Programming (IAP) 16KB RAM, Vectored Interrupt Controller, Two UARTs, I2C serial interface, 2 SPI serial interfaces Two timers (7 capture/compare channels), PWM unit with up to 6 PWM outputs, 4-channels 10bit ADC, 2 CAN channels. Real Time Clock, Watchdog Timer, General purpose I/O pins. CPU clock up to 60 MHz, On-chip crystal oscillator and On-chip PLL.

### **4. EEPROM (24C04):**

This chip is required to store the database of latitude and longitude of specific area so we can display it on LCD.

Final Year Project's is One place for all Engineering Projects, Presentation, seminar, summer training report and lot more.

NOTE:-This work is copyright (©) to its Authors. This is only for Educational Purpose.

## **7. LCD (16\*2):**

16x2 LCD is used in this project to display data to user. There are two rows and 16 columns. It is possible to display 16 characters on each of the 2 rows.

### **Advantages:**

1. Provides very accurate data via GPS system.
2. Allows the remote location of asset from anywhere there is cellular Service.
3. Alleviates the problem of maintaining a cellular phone account with provider due to pre-paid SIM cards inherent to GSM phones.
4. Facilitates simple asset recovery and tracking.



### **Applications:**

1. SIM+GPS Tracking
2. Resource Tracking + job dispatch
3. Car Tracking and management system

Final Year Project's is One place for all Engineering Projects, Presentation, seminar, summer training report and lot more.

NOTE:-This work is copyright (©) to its Authors. This is only for Educational Purpose.

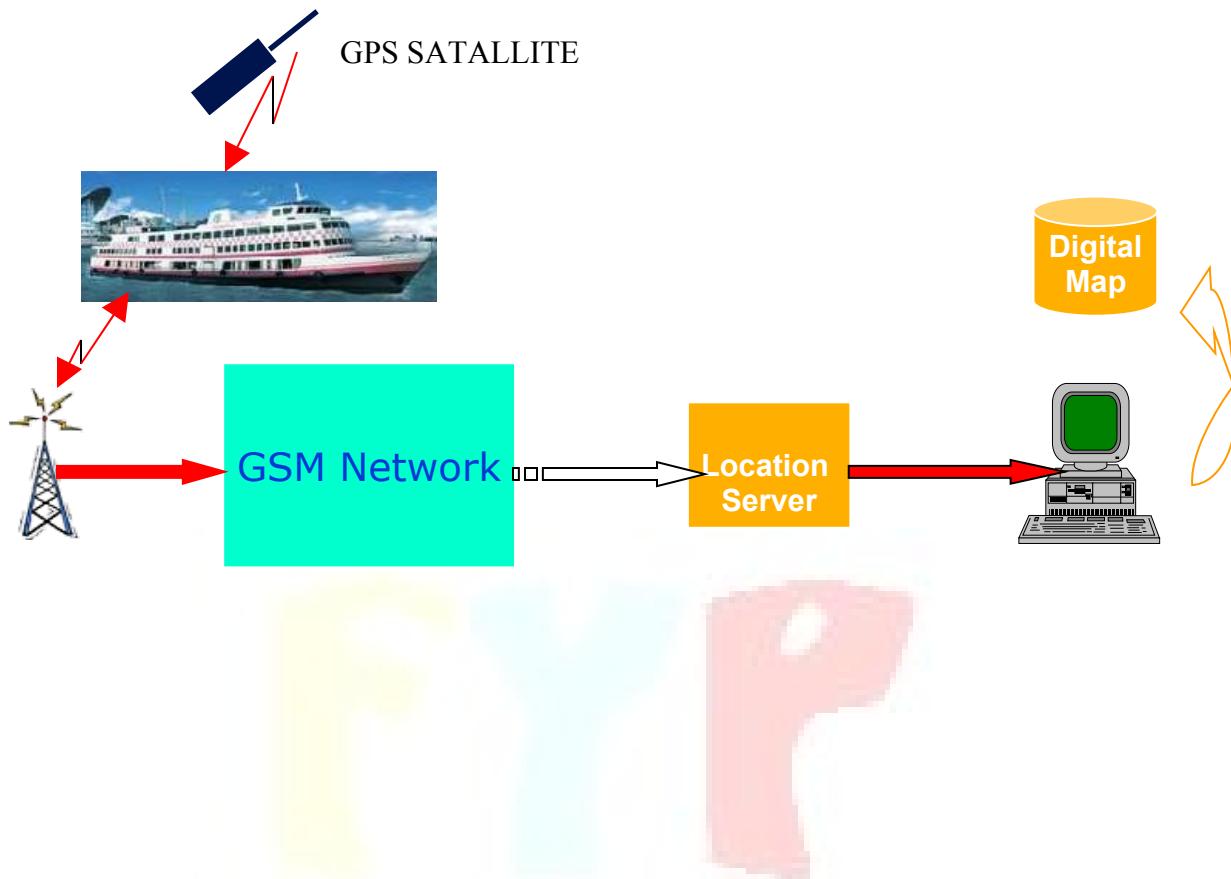
## **FUTURE ENANCEMENT:**

### **Sim + GPS Tracking navigation for ships**



Final Year Project's is One place for all Engineering Projects, Presentation, seminar, summer training report and lot more.

NOTE:-This work is copyright (©) to its Authors. This is only for Educational Purpose.



[www.final-yearprojects.co.cc](http://www.final-yearprojects.co.cc) | [www.troubleshoot4free.com/fyp/](http://www.troubleshoot4free.com/fyp/)

Final Year Project's is One place for all Engineering Projects, Presentation, seminar, summer training report and lot more.

NOTE:-This work is copyright (©) to its Authors. This is only for Educational Purpose.



[www.final-yearprojects.co.cc](http://www.final-yearprojects.co.cc) | [www.troubleshoot4free.com/fyp/](http://www.troubleshoot4free.com/fyp/)