

## LICENSE BASED VEHICAL SECURITY

NitinKolekar<sup>1</sup>, KunalPatgave<sup>2</sup>, NitinPatil<sup>3</sup>, AkashPatil<sup>4</sup>

<sup>1,2,3,4</sup>UG Students, Department of Electronics and Telecommunication  
BhartiVidyapeeth College of Engineering, Kolhapur, (India)

### ABSTRACT

The hand aim of this project is to reduce the man power and to reduce the menace of vehicle theft as well as to avoid accidents caused by underage driving. In current dates very reliable and trustful personnel identification system is finger print identification system. In our system we have taken each and every measure in order to enhance the security of vehicle. This system not only ensures the identity of license owner but also prevents the duplicity of license (smart card). To make system more reliable and efficient we have taken every measure including finger print scanner for identification, GSM-GPS in order to alert and track vehicle in case emergency and finally relay which will act as mediator between system and vehicle.

**Keywords:** SMART CARD, FINGERPRINT MODULE, GSM-GPS MODULE .

### I. INTRODUCTION

Today, most vehicles are equipped with high tech security systems in order to mitigate the menace of vehicle theft and hijacking. Similarly, the keyless remote control system, GPS tracking devices, voice recognition devices, GSM based devices, and passive RFID are among the most common technologies used in safe guarding automobiles. Furthermore, the most common security technique used in cars is the keyless car central locking system; however it has not proved to providing a complete vehicle security in theft case scenarios.

One of the primary objectives of Driving License based vehicle security system is to facilitate prevention of driving by drivers with invalid driving license, and underage driving by minors leading to accidents.

### II. PROPOSED SYSTEM

We have made an effort to build License Based Vehicle Security in which it not only acts as safety system for vehicle but also reduces the stress on police.

### III.BLOCK DIAGRAM

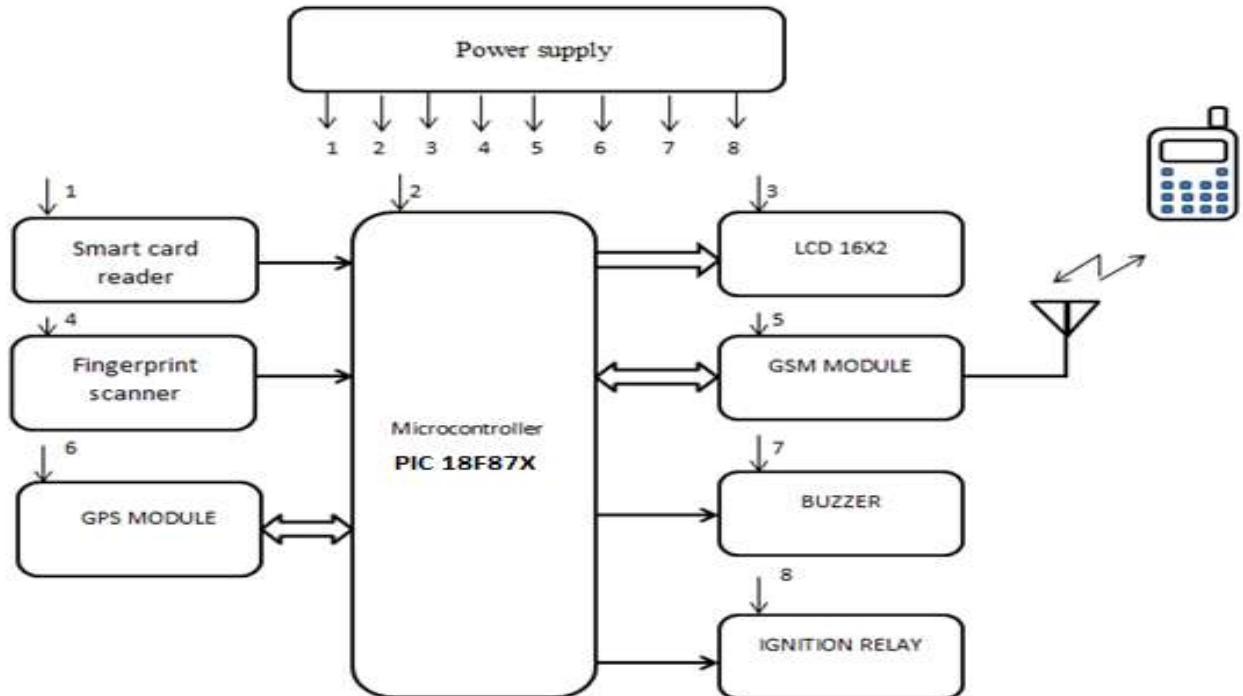


Fig.Block Diagram

The working of the proposed block diagram is as follows:

This system is based on two main components i.e. fingerprint sensor and smart card sensor. When any driver license smart card is inserted into the reader if it is proper a unique code is transmitted serially to the microcontroller. And it is stored in to the memory of the controller. After that when user particular fingerprint is scanned and result is also transmitted to the microcontroller and stored into another variable. And then both are compared and final output is given out on the basis of matching. GSM module will send message to owner about unauthorized access. Buzzer is provided for the indication purpose of operations. Key is there to switch the operation of scanning on and off.

LCD display is provided to indicate the different states of the system. The smart card reader is interfaced to a microcontroller. Whenever the data read by the smart card matches with the data on the microcontroller then LCD would display that the card is authorized and a relay is used simultaneously to switch ON an ignition system (indicating a device or access to secure area). If an invalid card is inserted in the smart card reader, it displays that the card is not authorized and the load (i.e. lamp) remains OFF indicating that the user is not authorized to access the particular area/device.

Also if the owner wants to give his vehicle to another person then, system first check license (smart card) and fingerprint of that person and ask for permission of the owner by the GSM modem. If the permission is granted

then person can access the vehicle on the other hand if permission is not get then the person cannot access the vehicle.

For a security purpose, if any person accessing the vehicle without the permission of owner again and again then an alert message is send by system to owner. Also a buzzer will be on after three failed tries of license.

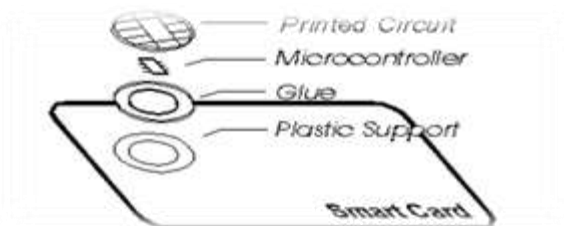
### III.HARDWARE DESCRIPTION

#### GSM-GPS

Designed for global market, SIM300 is a Tri-band GSM/GPRS engine that works on frequencies EGSM 900 MHz, DCS 1800 MHz and PCS1900MHz. SIM300 provides GPRS multi-slot class 10 capabilities and support the GPRS coding schemes CS-1, CS-2, CS-3 and CS-4. With a tiny configuration of 40mm x 33mm x 2.85 mm, SIM300 can fit almost all the space requirement in your application, such as Smart phone, PDA phone and other mobile device.

#### IV.SMART CARD

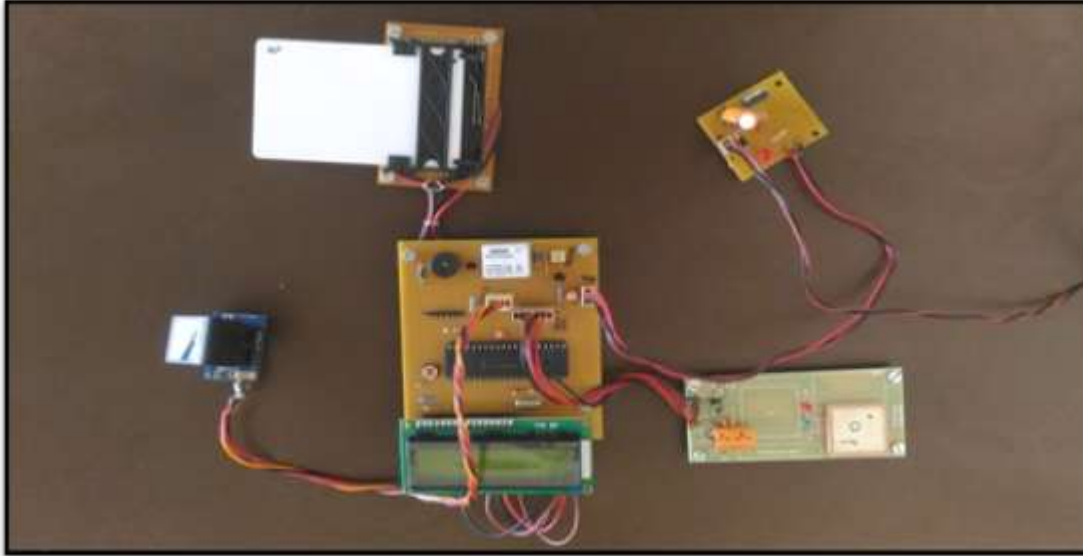
A smart card look like a credit card in size and shape, but inside it is completely different structure. First of all, it has an inside a ordinary credit card is a simple piece of plastic. The inside of a smart card usually contains an embedded microprocessor. The microprocessor is covered by layer of a gold contact pad on one side of the card. Usually for the security system of the microprocessor as substituting the usual magnetic narrow band on a credit card or debit card. The microprocessor deployed on the smart card is for security. The host computer and card reader actually communicate with the microprocessor. The microprocessor executes access to the data on the card. If the host computer read and write in the random access memory (ram) of smart cards, it would be no different than a diskette.



#### V.FINGERPRINT MODULE

In this we are using a fingerprint sensor for getting the fingerprint image and to store that in the database. It is an excellent fingerprint input device can be applied extensively in social security, public security, attendance, fingerprint encryption, embedded, and many other applications. "r305" miniature fingerprint scanner to automatically read the fingerprint image, and through a USB interface to transfer digital images of the fingerprint to the computer-controlled technology to support the bio key SDK build out tools. Require authentication for laptop computers, desktop computer or other personal computing devices, it is the ideal accessory.

## VI.EXPERIMENTAL SETUP



## VII.CONCLUSION

We have implemented the “License Based Vehicle Security” system in order to mitigate the menace of vehicle theft. It also helps to reduce the accidents caused by underage driving and minimizes stress on traffic police.

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