Vehicle Tracking System (VTS)

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1.Introduction

1.1 Purpose

The purpose of this document is to specify the requirements of the Vehicle Tracking system Which its main functionality is to track client's vehicle and save the tracked routes incase of connection loss .

1.2 Conventions

Acronym	Description
VTS	Vehicle Tracking system
GSM	Global System for Mobile communication
GPS	Global Positioning System
UART	Universal Asynchronous Receiver Transmitter
RTC	Real Time Clock
RTOS	Real Time Operating System

1.3 Intended Audience

This project is a prototype for the Vehicle Tracking system and it is restricted within the Telecommunication Institute premises .This has been implemented under the guidance of institute Tech committee .

1.4 Project Scope

The purpose of the Vehicle Tracking system is to mainly offer the customer an easy way of tracking his Vehicles through Connecting to cloud and enabling live tracking precisely and taking into consideration track drawing especially in the curves and U turns , also we support that if for any reason lost the connection once it reconnected, draw the previous track that wasn't streamed live . in addition to another features our scope is to generally make the client more confident in tracking and monitoring his vehicle .

2.Overall Description

2.1 Product Perspective

The Vehicle Tracking system involves the following :

Live Tracking :

- The user should be able to track his vehicle and our system support precise routing through different routes including U turns .
- The system stores tracked routes in case of connection loss which can be play backed once the connection is restored .

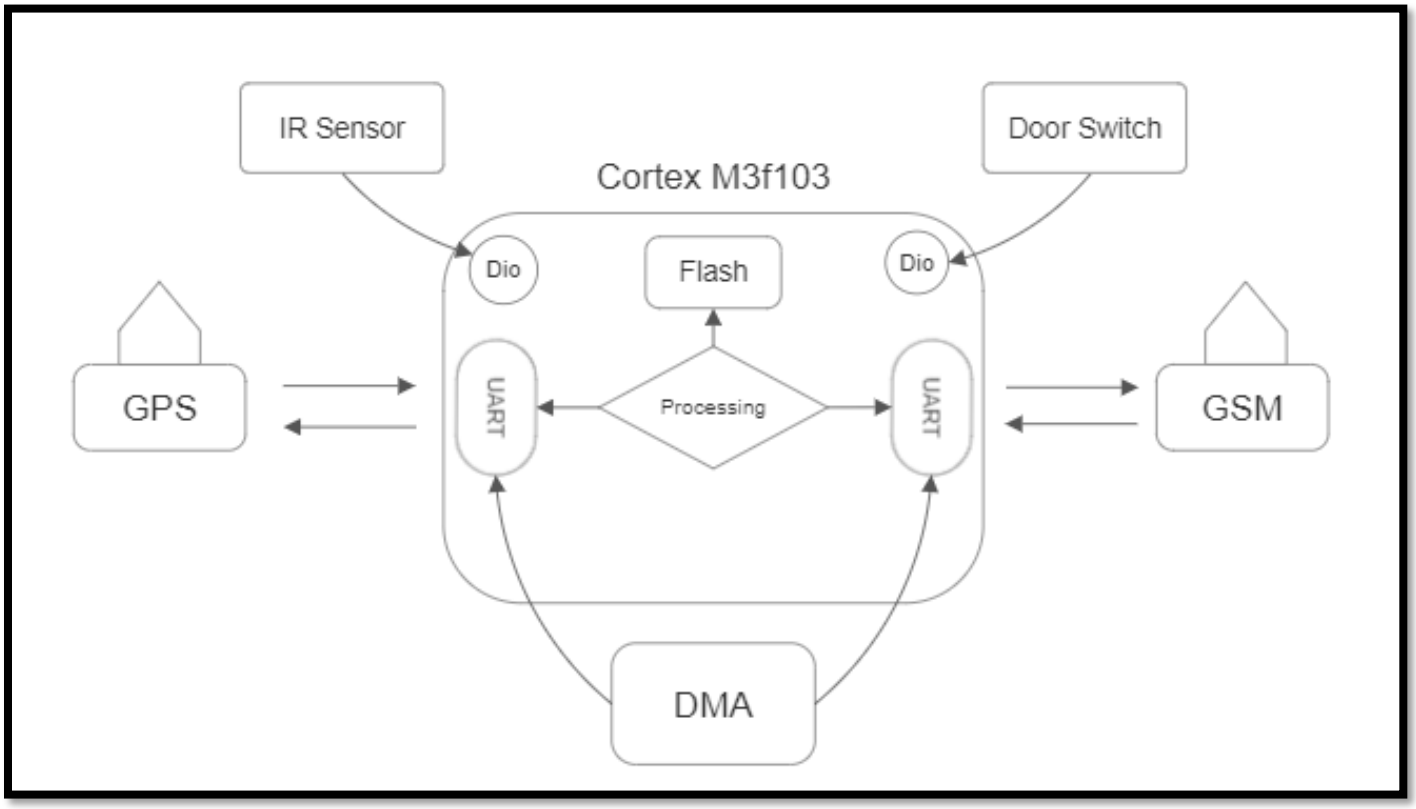
Security and Safety :

- The system offers an indication for the user to detect whether the car is moving on its wheels or is carried over a winch .
- The system detects if any of the doors is open and gives an alert to the user .

User Interface :

- The user should be able to see the precise location of the vehicle on the map .
- The user will be able to track the route taken in the back up history .
- Through dash board the user can monitor system security and safety issues .

2.2 Overall System Design



3.System Features

3.1 Functional Requirements

- The user shall be able to login in GUI and navigate the map .
- The user shall be able to track his vehicle/s in live time using map Api .
- The user shall be able to see past routes through dashboard .
- The system shall be immune to route loss due to inconvenient connection using playback to show the missing points .
- The user shall be able to check on vehicle safety through dashboard .
- The system supports antitheft methods through door lock and wench detection .

3.2 Non Functional Requirements

- The system should be responsive.
- The system should be reliable and robust.
- The user interface should be pleasant and user friendly.