System Requirements Specification

For

Speedometer

1. Introduction

The purpose of the speedometer is to measure and display the instantaneous speed of a vehicle. The speed is visualized in km/h or mph by a circular scale and an arrow on the screen. The units can be changed by pressing a button once.

Cloud

button

D2

I²C

**Display**

**Raspberry   
Pi**

**Arduino**

HDMI

A4

I²C

potentiometer

A1

A5

A3

CS

thermistor

1. Inputs
2. Outputs
3. Behavior  
   4.1. Expected behavior



4.2. Exceptional behavior

Digital Trouble Codes:

* P0501 – Vehicle Speed Sensor Range/Performance  
  a P0501 trouble code means that the vehicle's speed as read by the Vehicle Speed Sensor (VSS) is outside of the expected range (too high or low for example).

Causes :  
- The Vehicle Speed Sensor (VSS) is not reading (functioning) properly.  
- There is a broken/frayed wire leading to the vehicle speed sensor.  
- The vehicle's PCM (vehicle's main computer) is not correctly configured for the actual tire size on the vehicle.