PCB Assembly

The µCar consists of 2 PCBs. Download the Eagle files.

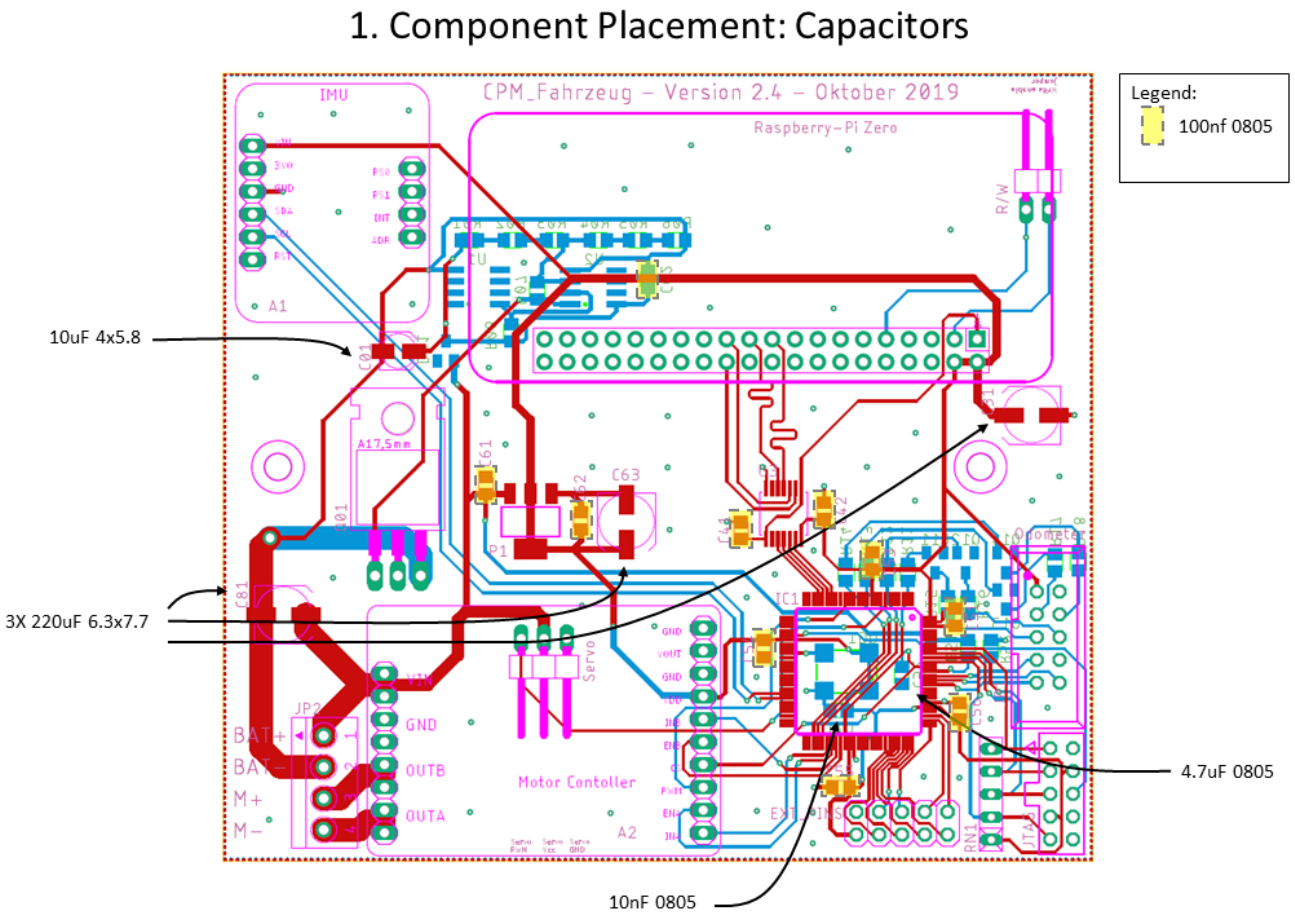
- Vehicle Main Board
- Odometer Board

For questions please contact Patrick Scheffe.

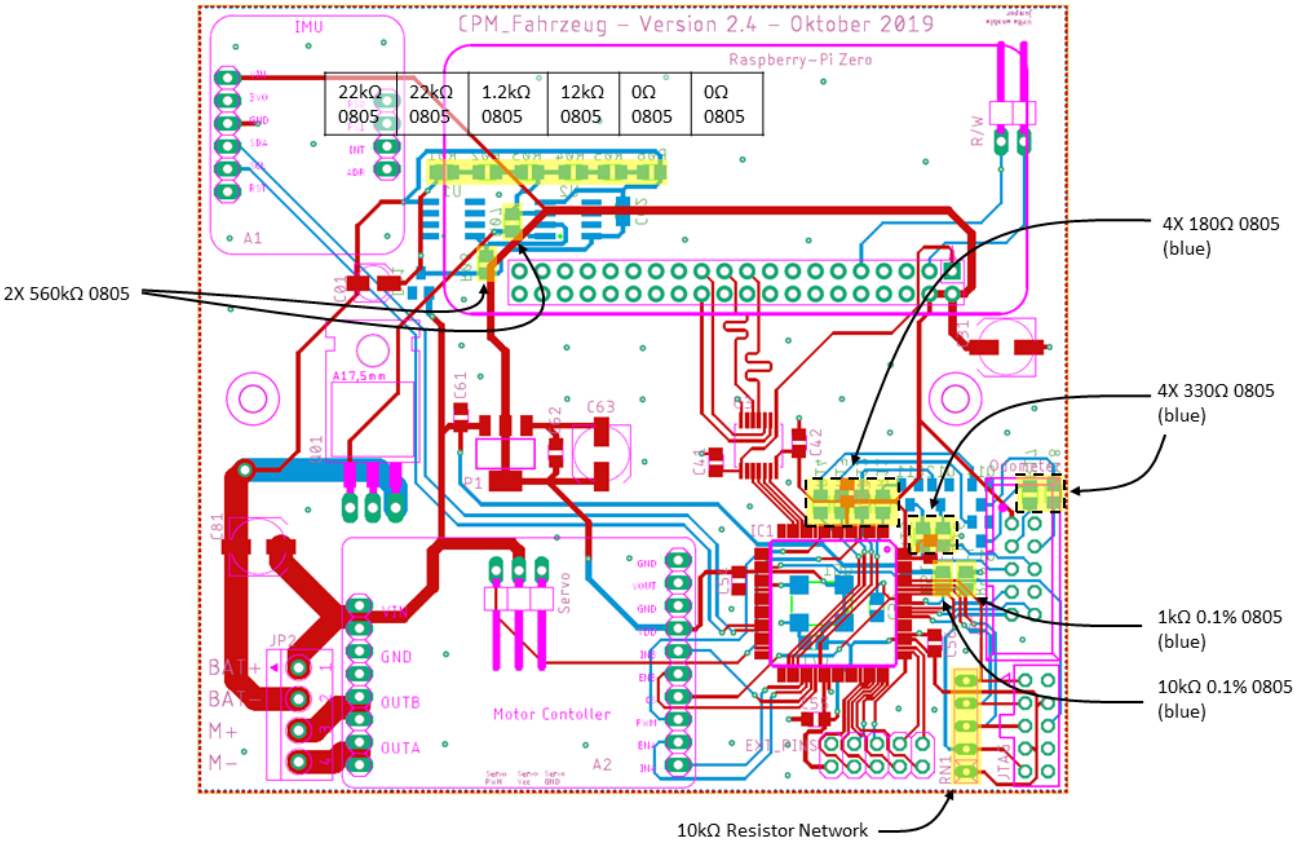
Vehicle Main Board

The main board contains most electrical components necessary for controlling the vehicle:

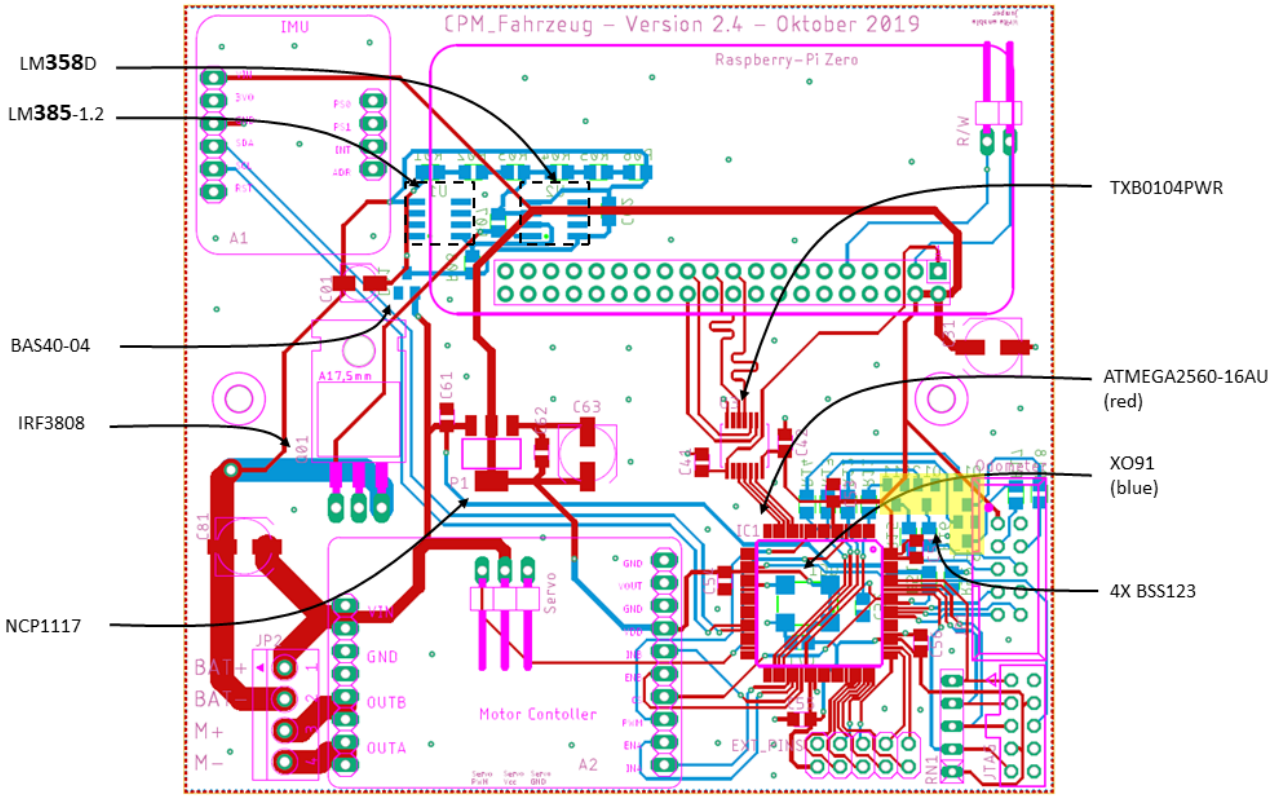
- Raspberry Pi Zero W (Mid Level Controller)
- ATmega2560 (Low Level Controller)
- IMU BNO055
- Motor Controller VNH5019



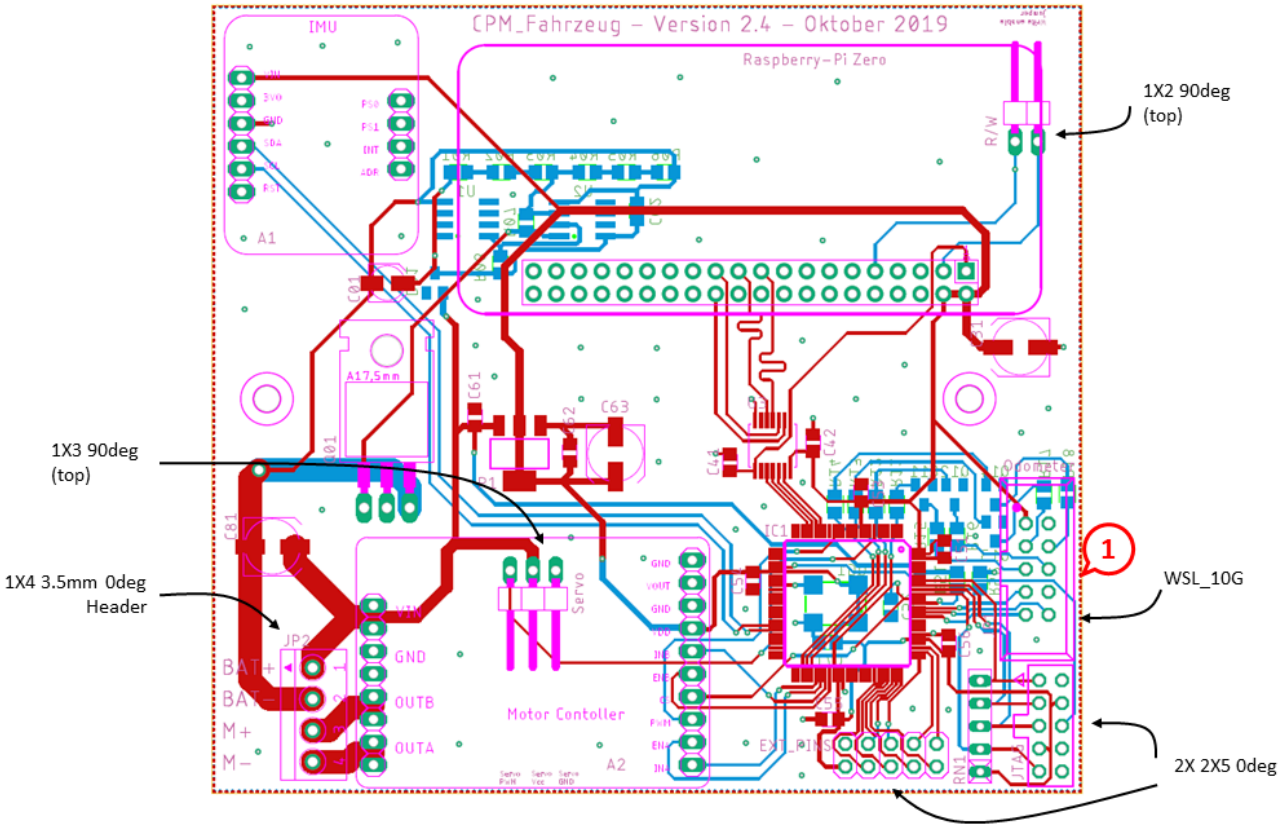
1. Component Placement: Resistors



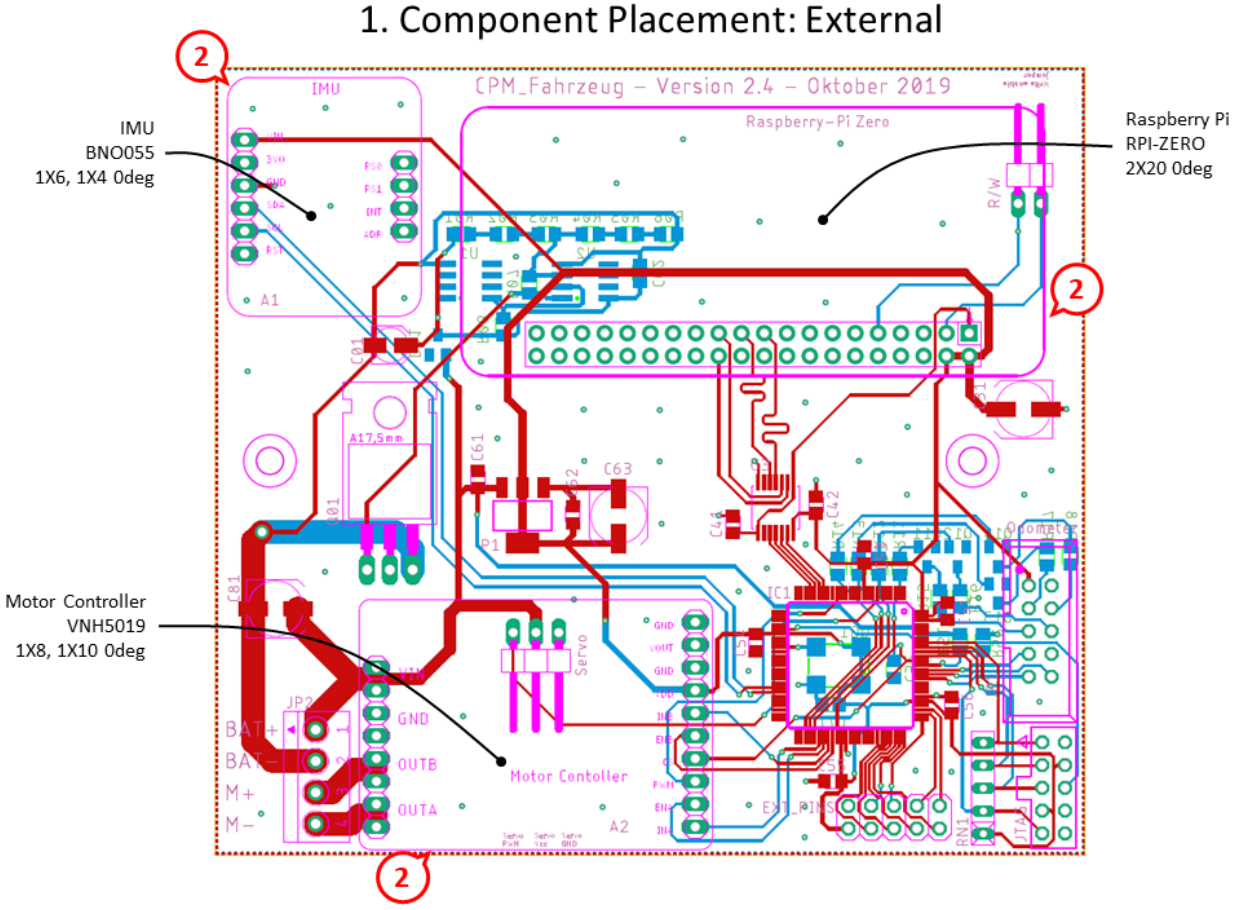
1. Component Placement: ICs



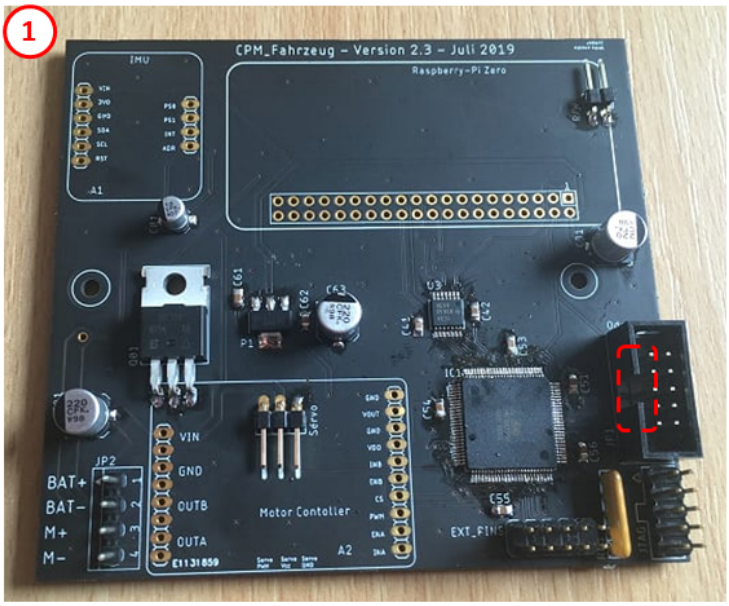
1. Component Placement: Connectors

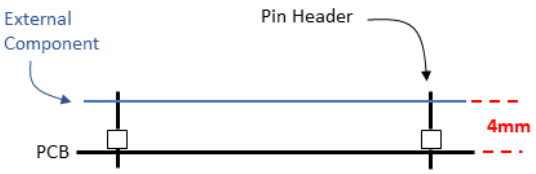


1. Component Placement: External



2. Notes





Note	Instructions
1	Take note of orientation Tab (form fit) points inward
2	Use spacers to ensure **4mm** gap between external components and PCB Applies to IMU (A1), Motor Controller (A2) and Raspberry Pi

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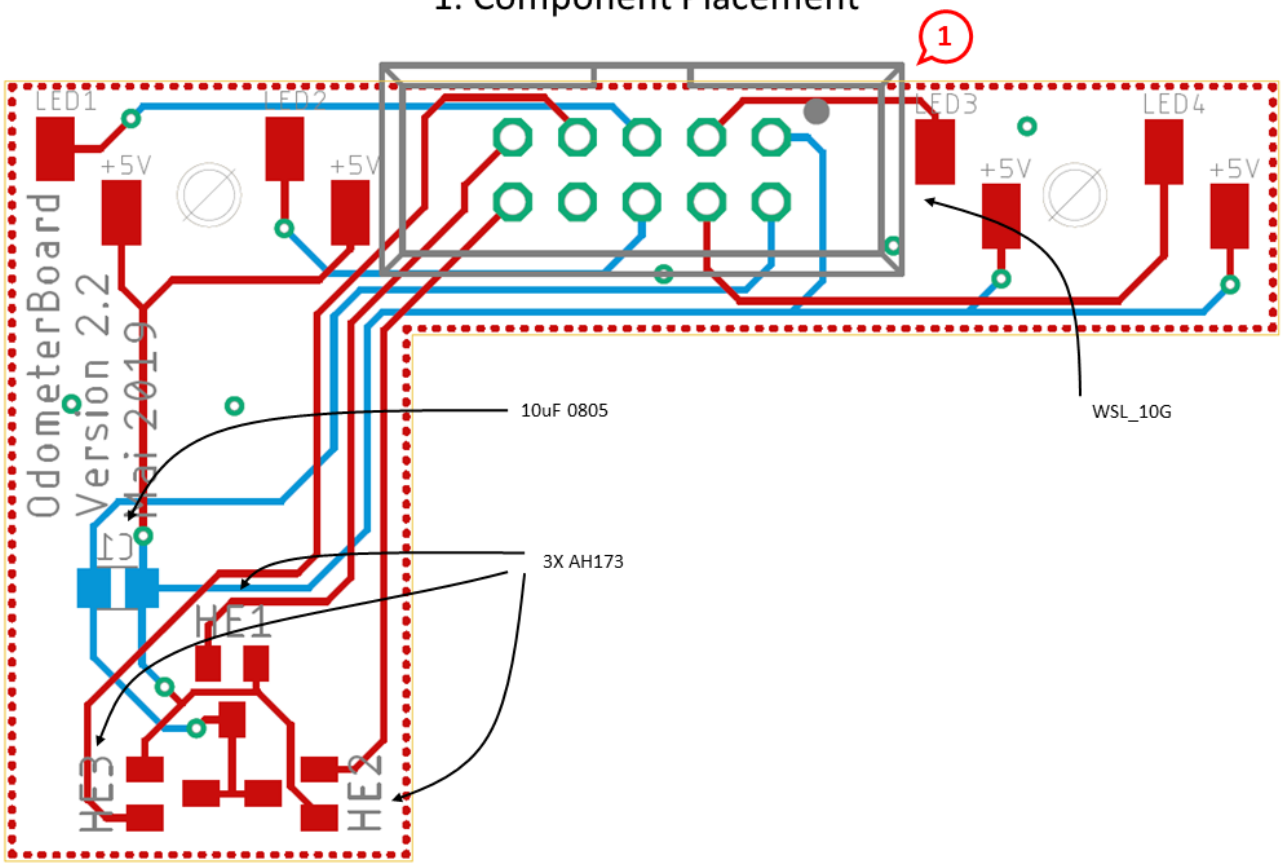
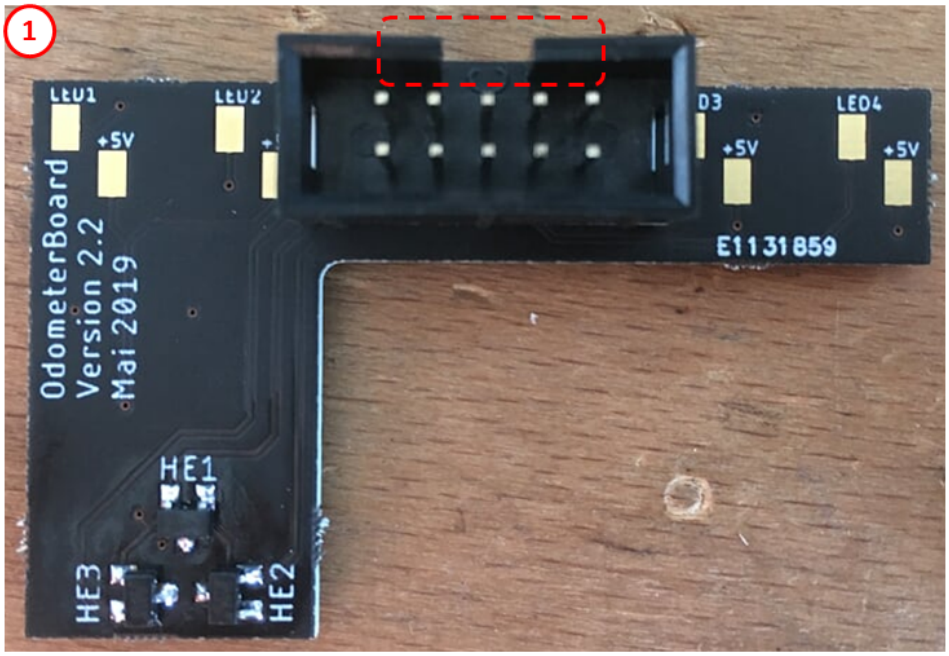
Odometer Board

The odometer board contains two important parts. Firstly, the hall sensors are placed on it and are measuring changes of the magnetic field. These changes result from the rotation of the magnet, which is placed on top of the motor shaft. That allows measuring the driven distance and the velocity. Secondly, the board provides the connections to the LEDs which are necessary for the IPS.

1. Component Placement



2. Notes



Note	Instructions
1	Take note of orientation Tab (form fit) at top