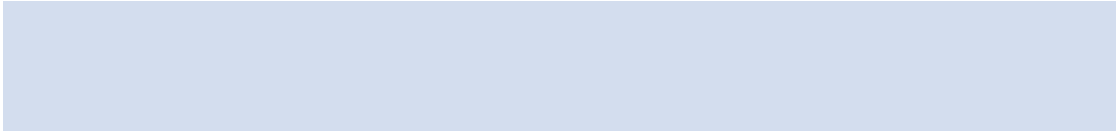


|                     |               |
|---------------------|---------------|
| Class               | 1MCT2         |
| First Name:         | Bert          |
| Name                | Deneef        |
| Project Name :      | Race Tracking |
| Assembly Revision : |               |
| Approval Date :     |               |
| Part Count :        | 10            |
| Total Cost :        | €118          |

| Part # | Part Name                        | Description  | Revision | Qty |
|--------|----------------------------------|--|----------|-----|
| 1      | ESP-WROOM-32                     | Controller with WiFi to go on board                                    |          | 1   |
| 2      | Raspberry Pi 4 Model B           | Raspberry Pi to control the entire system                              |          | 1   |
| 4      | MPU6050                          | To measure the acceleration of the car                                 |          | 1   |
| 5      | One Wire Temperature Sensor      | To measure the temperature inside the hood                             |          | 1   |
| 6      | Light Sensor                     | To detect when the Neopixels need to activate                          |          | 1   |
| 7      | 2x16 LCD Display                 | To display the IP address of the Pi                                    |          | 1   |
| 8      | Neopixel                         | To light up the car when it goes dark or when requested on the website |          | 2   |
| 9      | Speakers                         | To play an alarm when the car gets too hot                             |          | 1   |
| 10     | Linear voltage regulator 5V TO-2 | To regulate the battery voltage to 5V                                  |          | 1   |



**Total**

**10**



| Supplier  | also available from   | Units | Unit Cost |
|---|---|-------|-----------|
| <a href="https://www.bol.com/nl/p/esp-wroom-32-ontwikkelbord/9200000114634593/?bltgh=tD9EYZucmfdTGwpnKcdJVQ.2.15.17.P">https://www.bol.com/nl/p/esp-wroom-32-ontwikkelbord/9200000114634593/?bltgh=tD9EYZucmfdTGwpnKcdJVQ.2.15.17.P</a>   | <a href="https://www.dennisdeal.com/products/esp32-test-board-burner-development-board-wifi-module-voor-voor-esp-32">https://www.dennisdeal.com/products/esp32-test-board-burner-development-board-wifi-module-voor-voor-esp-32</a> | 1     | € 11.99   |
| <a href="https://www.raspberrystore.nl/PrestaShop/raspberry-pi-v4/227-raspberry-pi-4b2gb-765756931175.html?utm_source=RaspberrvDi&amp;utm_medium=Shop&amp;utm_campaign=">https://www.raspberrystore.nl/PrestaShop/raspberry-pi-v4/227-raspberry-pi-4b2gb-765756931175.html?utm_source=RaspberrvDi&amp;utm_medium=Shop&amp;utm_campaign=</a>   | <a href="https://www.bol.com/nl/p/raspberry-pi-4b-starter-kit-4gb-16gb-sd-kaart/9200000110821820/2blt">https://www.bol.com/nl/p/raspberry-pi-4b-starter-kit-4gb-16gb-sd-kaart/9200000110821820/2blt</a>                             | 1     | € 41.95   |
| <a href="https://www.distrelec.be/en/mpu-6050-dof-accelerometer-and-gyroscopic-sensor-breakout-adafruit-3886/p/30167655">https://www.distrelec.be/en/mpu-6050-dof-accelerometer-and-gyroscopic-sensor-breakout-adafruit-3886/p/30167655</a>   | <a href="https://www.bol.com/nl/p/acceleeratie-versnellingsmeter-gyroscoop-i2c-mpu-6050/9200000021805153/2co">https://www.bol.com/nl/p/acceleeratie-versnellingsmeter-gyroscoop-i2c-mpu-6050/9200000021805153/2co</a>               | 1     | € 6.68    |
| <a href="https://www.distrelec.be/en/one-wire-ic-to-ds18b20/p/17377559?q=&amp;pos=1&amp;origPos=1&amp;origPageSize=50&amp;track=true">https://www.distrelec.be/en/one-wire-ic-to-ds18b20/p/17377559?q=&amp;pos=1&amp;origPos=1&amp;origPageSize=50&amp;track=true</a>   | <a href="https://nl.farnell.com/maxim-integrated-products/ds18b20-par/sensor-temperature-nv-alarm-">https://nl.farnell.com/maxim-integrated-products/ds18b20-par/sensor-temperature-nv-alarm-</a>                                   | 1     | € 3.07    |
| <a href="https://www.distrelec.be/en/ambient-light-sensor-560-nm-hamamatsu-s13948-01sb/p/30116991?q=&amp;pos=2&amp;origPos=2&amp;origPageSize=50&amp;track=true">https://www.distrelec.be/en/ambient-light-sensor-560-nm-hamamatsu-s13948-01sb/p/30116991?q=&amp;pos=2&amp;origPos=2&amp;origPageSize=50&amp;track=true</a>   | <a href="https://nl.farnell.com/vishay/veml7700-tt/ambient-light-sensor-i2c-3-6v/dp/2627812?st=light%20s">https://nl.farnell.com/vishay/veml7700-tt/ambient-light-sensor-i2c-3-6v/dp/2627812?st=light%20s</a>                       | 1     | € 2.72    |
| <a href="https://www.distrelec.be/en/dot-matrix-lcd-display-55-mm-16-display-elektronik-dem-16217-syh-ly-cvr22/p/17551451?q=led+2x16&amp;pos=9&amp;origPos=9&amp;origPageSize=50&amp;track=true">https://www.distrelec.be/en/dot-matrix-lcd-display-55-mm-16-display-elektronik-dem-16217-syh-ly-cvr22/p/17551451?q=led+2x16&amp;pos=9&amp;origPos=9&amp;origPageSize=50&amp;track=true</a>   | <a href="https://www.alibaba.com/product-detail/2x16-Display-Lcd-Lcd-1602-Small_60840533103.html?en">https://www.alibaba.com/product-detail/2x16-Display-Lcd-Lcd-1602-Small_60840533103.html?en</a>                                 | 1     | € 24.76   |
| <a href="https://www.distrelec.be/en/neopixel-stick-rgb-led-adafruit-1426/p/30091140?q=neopixel+strip&amp;pos=2&amp;origPos=2&amp;origPageSize=50&amp;track=true">https://www.distrelec.be/en/neopixel-stick-rgb-led-adafruit-1426/p/30091140?q=neopixel+strip&amp;pos=2&amp;origPos=2&amp;origPageSize=50&amp;track=true</a>   | <a href="https://nl.farnell.com/adafruit/1426/led-module-type-board-led/dp/2816232?st=neopixel">https://nl.farnell.com/adafruit/1426/led-module-type-board-led/dp/2816232?st=neopixel</a>   | 1     | € 6.24    |
| <a href="https://www.distrelec.be/en/full-range-speaker-8ohm-15w-84db-ip65-visaton-fr-58-8-ohm-2-3-inch-full-range-wp-schwarz-84db/p/30107306?q=speaker&amp;pos=16&amp;origPos=16&amp;origPageSize=50&amp;track=true">https://www.distrelec.be/en/full-range-speaker-8ohm-15w-84db-ip65-visaton-fr-58-8-ohm-2-3-inch-full-range-wp-schwarz-84db/p/30107306?q=speaker&amp;pos=16&amp;origPos=16&amp;origPageSize=50&amp;track=true</a> | <a href="https://nl.farnell.com/visaton/fr-58-8-ohm/2-3-inch-full-range-speaker-84db/dp/3101120?st=fr%208%20">https://nl.farnell.com/visaton/fr-58-8-ohm/2-3-inch-full-range-speaker-84db/dp/3101120?st=fr%208%20</a>               | 1     | € 13.99   |
| <a href="https://www.distrelec.be/en/linear-fixed-voltage-regulator-5v-5a-to-220-st-17805cv/p/17326242">https://www.distrelec.be/en/linear-fixed-voltage-regulator-5v-5a-to-220-st-17805cv/p/17326242</a>   |   | 1     | € 0.50    |



| Max Cost | Real Cost |
|----------|-----------|
| € 11.99  |           |
| € 41.95  |           |
| € 6.68   |           |
| € 3.07   |           |
| € 2.72   |           |
| € 24.76  |           |
| € 12.48  |           |
| € 13.99  |           |
| € 0.50   |           |
| € -      |           |

€ -

€ 118.14