Group Member Names: Cooper Ayers, Garret Wagner, and Grace Jenkins Welsh

Course and Quarter: ENGR114 Winter 2020

Date: 03/13/2020

Revision number: 4

**People Counter**

**Hardware Setup:**

Bill of Materials:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Part Name** | **Purpose** | **Item Name** | **URL** | **Price** |
| RedBoard | Logic Board | SparkFun RedBoard Qwiic DEV-15123 | <https://www.sparkfun.com/products/15123> | $19.95 |
| Vernier Interface Shield | Interfaces with Vernier Photogates | SparkFun Vernier Interface Shield DEV-12858 | <https://www.sparkfun.com/products/12858> | $24.95 |
| 2 Photogates | Relays information to be recorded | Vernier Photogate | <https://www.vernier.com/product/photogate/> | $49.00 |
| 2 Laser Pointers | Used with photogate | Vernier Laser Pointer | <https://www.vernier.com/product/laser-pointer/> | $19.00 |
| 2 x Laser Stands | Holds Laser Pointers | Vernier Laser Pointer Stand | <https://www.vernier.com/product/laser-pointer-stand/> | 2 x $14.00 |
| USB Micro-B Cable | Power RedBoard | CAB-10215 | <https://www.sparkfun.com/products/10215> | $4.95 |

Hardware Schematic:

Hookup Guide:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Part** | **Pin** | **Connector** | **Pin** | **Part** |
| RedBoard |  | Micro USB |  | Laptop |
| Vernier Interface Shield |  | board |  | RedBoard |
| Photogate 1 | 2 |  |  | Vernier Interface Shield |
| Photogate 2 | 6 |  |  | Vernier Interface Shield |

Images:

Video Documentation Attached

![A circuit board

Description automatically generated]()