**PROJECT DESCRIPTION**

A black background with a black square

Description automatically generated with medium confidence

|  |  |  |
| --- | --- | --- |
| **Component** | **P/N** | **Supplier** |
| MCU | STM32L476RG | STMicroelectronics |
| SD Card | DM3CS-SF | Hirose Electric Co Ltd |
| USB-C | Your choice | Your choice |
| Mag Encoder | AS5145B | ams-OSRAM USA INC. |
| Motor Driver | G\_SOLTWI25/100SE8S | Elmo Motion Control |
| IMU | BNO085 | CEVA Technologies, Inc. |
| Load Cell | AD22151 | Analog Devices Inc. |
| CAN Transceiver | MCP2551 | Microchip Technology |
| Battery | ??? | ??? |

**Questions**

1. Did you have a particular battery in mind?
2. Can battery polarity be non-dependent?

**Notes**

1. The connectors we use are 44055-x by TE Connectivity.
2. LED indicator.
   1. Solid = power on
   2. Blinking = low power
   3. Anything else, have fun with it
3. Get quotes for populated and unpopulated boards.
4. SD Card and LED(s) should be on top side of board.
5. I will provide desired board outline with mounting holes, connector locations, etc.
6. Let MCU access all INT pins.
7. Include headers for unused pins.

Greg TODOs

1. IMU connector pin spec
   1. What signals, how many pins?
2. Load Cell connector pin spec
   1. What signals, how many pins
3. PWM pin spec
   1. What signals, how many pins
4. Mag encoder pin spec
   1. What signals, how many pins
5. LEDs
   1. Preference on top mount, or right angle?
   2. Full color RGB?
   3. Multiple?
6. Battery
   1. Runtime needed?
   2. Where, how much space to mount? Bottom/top?
   3. Connector vs direct solder?
   4. Reverse protection is doable, reverse operation not worth it.
      1. Direct solder no reverse issue