**Parts Selection – Cole Ajode**

1. **Gyroscope**
   1. ITG-3701-Operates on 3.3V (b/w 1.71 to 3.6V) – 12.74$
   2. IAM-20680HP – 16.81$
2. **Encoders**
   1. AEAT-6600-T16 – 7.78$
   2. AS5215OM-HMFP – 7.56$
   3. AS5134-ZSSM – 6.74$
   4. AS5047D-ATST – 6.83$
3. **Motor Drivers**
   1. L6207D – 6.85$
   2. DRV8860PWPR – 3.22$
   3. HIP4020IB – 3.47$
4. **Voltage Regulators**
   1. **24V**

* **DC-DC Converters**
  + - 1. DBS700B24-T – 24V/696W – 312.71000$
  1. **12V**
* **DC-DC Converters** 
  + - 1. SIC451ED-T1-GE3 – 25A – 3.91$

Built-in 5V Regulator

* + - 1. EHHD006A0B41Z – 72W – 6A – 30.82$
      2. TSR 1-24120SM – 12W – 1A – 9.2$
      3. UWF1212S-3WR3 – 3W – 250mA – 8.16$
      4. TES 3-2412WI – 3W – 250mA – 33.6$
      5. TIM 2-2412SM – 2W – 167mA – 28.2$
      6. TMR 1-2412SM - 1W – 83mA – 12.42$
* **IC’s**
  + - 1. **MPQ4436AGRE-AEC1-Z – 6A – 3.40$**
      2. BDJ2FC0WFP-E2 – 1A – 0.84$
      3. MIC29151-12WU-TR – 1.5A – 4.13$
  1. **5V**
     1. NCP3335ADM500R2G – 0.5A – 0.51$
     2. MCP1826T-ADJE/DC – 1A – 0.71$
     3. LM1085ISX-ADJ/NOPB – 3A – 2.1$
  2. **3.3V**
     1. LT1584CT-3.3#PBF – 7A – 12.27$
     2. LM1085ISX-ADJ/NOPB - 3A – 2.1$
     3. NCP186AMX330TAG – 1A – 0.54$
     4. NCP3335ADM330R2G – 0.5A – 0.51$
  3. **2.5V**
     1. LT1584CT#PBF – 7A – 12.27$
     2. NCP186AMX250TAG - 1A – 0.67$
     3. NCP3337MN250R2G – 0.5A – 0.51$
  4. **1.8V**
     1. NCP186AMX180TAG – 1A – 0.52$
     2. NCP3337MN180R2G – 0.5A – 0.51$

1. **Microcontroller**
   * 1. STM32F407VGT6J – 32BIT **–** 1MB FLASH – 100LQFP – 10.78$

CAN Supported device

1. **RJ-45 Connector**
   * 1. 7499011121A – 6.83$ OR
     2. E6588-WA0B44-L – 4.37$
2. **USB-C Connector**
   * 1. UJC-HP-G-SMT-TR – 1.44$
     2. KUSBX-SMT-CS2-B30TR– 1.59$
     3. USB4065-30-A – 3.0$
3. **XT30 Connector**
   * 1. FIT0586 – 30A/500VDC – 1.9$ (Pair of Male and Female Connectors)
     2. XT30U-F – 0.53$ [(LCSC)](https://lcsc.com/product-detail/Power-Connectors_Changzhou-Amass-Elec-XT30U-F_C99102.html)
     3. XT30U-M – 0.47$ [(LCSC)](https://lcsc.com/product-detail/Power-Connectors_Changzhou-Amass-Elec-XT30U-M_C99101.html)
     4. [XT30PW-M](https://lcsc.com/product-detail/Power-Connectors_Changzhou-Amass-Elec-XT30PW-M_C431092.html) – 0.65$ ([LCSC](https://lcsc.com/product-detail/Power-Connectors_Changzhou-Amass-Elec-XT30PW-M_C431092.html))
4. **DB9 Connector**
   * 1. 2301844-2 – Female – PCB Mount – 2.40$
     2. 182-009-213R431 – Female – PCB Mount – 2.07$

**Note:** All Part No.’s are from Digi-Key and prices are in USD.