

| Name | Description | Designator | Quantity | Manufacturer | Supplier | Total mass[g] | Total Price [\$] | CAD file | EagleCAD library | Shop link | Ordered | Received | Power/Passive Components |
|---|--|------------|----------|----------------------|---------------------|---------------|------------------|-------------------------------------|-------------------------------------|---|-------------------------------------|-------------------------------------|---|
| LiPo Battery Charger | Charger | CHA | 1 | Hitec | MaxAmps | 0 | \$119.99 | | <input type="checkbox"/> | https://www.maxamps.com/lipo-battery-charger-hitec-x2-ac-plus-black-edition-ac | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 11.1V 3S 11000mAh LiPo battery | Battery | BAT1 | 1 | MaxAmps | MaxAmps | 640 | \$249.99 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | https://www.maxamps.com/lipo-11000-3s-11-1v-battery-pack | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| PRT 10474 | XT60 connectors male/female pair | | 1 | | Digikey | | \$1.50 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/PRT-10474/1568-1816-ND/82580642 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Controllers, Processors and Oscillators |
| AC0805JR-07680RL | 680 ohm resistor SMD 0805 | | 1 | | Digikey | | \$0.10 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/AC0805JR-07680RL/YAG3800CT-ND | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Actuators and Receivers/Transmitters |
| ERA-6APB471V | 470 ohm resistor SMD 0805 | | 1 | | Digikey | | \$0.70 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/panasonic-electronic-components/ERA-6APB471V | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| RC0805FR-0710KL | 10K ohm resistor SMD 0805 | | 9 | | Digikey | | \$0.42 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/RC0805FR-0710KL/311-10-0KCRCT-ND/7304827item | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Sensors |
| C0805X103K5RAC7210 | 0.01uF capacitor SMD 0805 | | 1 | | Digikey | | \$0.35 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/C0805X103K5RAC7210/399-C0805X103K5RAC7210CT-ND/1359 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| LD053C104KAB2A | 0.1uF capacitor SMD 0805 | | 12 | | Digikey | | \$5.32 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/LD053C104KAB2A/478-LD053C104KAB2ACT-ND/1215343 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | External Hardware (Not Powered) |
| GRM21BC81C106ME15L | 10uF capacitor SMD0805 | | 8 | Murata Electronics | Digikey | | \$2.00 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/GRM21BC81C106ME15L/490-10499 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Plug Accessories |
| LD1117DT18CTR | 1.8V Voltage Regulator | | 1 | STMicroelectronics | Digikey | | \$0.60 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/stmicroelectronics/LD1117DT18CTR | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| LD1117DT33CTR | 3.3V Voltage Regulator | | 1 | STMicroelectronics | Digikey | | \$0.51 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/LD1117DT33CTR/497-1235-1-ND/586 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| LD1117DT50CTR | 5.0V Voltage Regulator Linear | | 1 | STMicroelectronics | Digikey | | \$0.54 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/LD1117DT50CTR/497-1238-1-ND/586 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| D24V50F5 | 5.0V Voltage Regulator Switching | | 1 | Pololu | Pololu | 3 | \$16.95 | <input type="checkbox"/> | <input type="checkbox"/> | https://www.pololu.com/product/2851 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| PIC32MX340F512H-80V | Microcontroller | M1 | 1 | Microchip Technology | Digikey | 2.3 | \$6.77 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/PIC32MX340F512H-80V/42IPT/PIC32 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| FT232RQ-REEL | USB to UART FTDI IC | | 1 | Newark | | | \$4.95 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.newark.com/webapp/wcs/stores/servlet/EnhancedCheckoutConfirm | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| FT232RQ-REEL | USB to UART FTDI IC | | 1 | Digikey | | | \$4.60 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/FT232RQ-REEL/768-1008-1-ND/183 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| BCM2837B0 | Raspberry Pi Compute Module M3+ 8GB (Microprocessor) | M2 | 1 | Raspberry Pi | Digikey | 9 | \$30.00 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/CM3%2B%28GB/1690-1030-ND/986 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| DX07S016JA1R1500 | USB-C header | J2 | 2 | JAE Electronics | Mouseer | | \$3.02 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.mouseer.com/ProductDetail/JAE-Electronics/DX07S016JA1R150076 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| MicroSD Socket | SD card socket for Raspberry Pi | | 1 | Adafruit | | | \$1.95 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.adafruit.com/product/1660 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Sandisk 16GB Ultra MicroSD Card | MicroSD Card for Raspberry Pi | MSD | 1 | SanDisk | Amazon | 9.92 | \$6.18 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.amazon.com/dp/B073K14CVB/ | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 10033854-052FLF | DDR2 SODIM slot (Raspberry Pi Compute Module) | | 1 | Amphenol ICC | Digikey | | \$6.40 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/amphenol-icc-fci/10033854-052FLF | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| CB3LV-3C-8M-000000 | 80MHz crystal oscillator | | 1 | Digikey | | | \$1.35 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/cts-frequency-controls/CB3LV-3C-8M | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| ASDK-32-768kHz-LRT | 32.768kHz crystal oscillator (smaller footprint) | | 1 | Digikey | | | \$2.73 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/abracon-llc/ASDK1-32-768KHZ-LRT/ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| ASEK-32-768kHz-LRT | 32.768kHz crystal oscillator (reference footprint) | | 1 | Digikey | | | \$1.33 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/abracon-llc/ASEK-32-768KHZ-LRT/ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| MPL315A2 | Pressure/Temperature Sensor IC | BAR | 1 | NXP USA | Mouseer | 1.9 | \$5.46 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.mouseer.com/ProductDetail/841-MPL315A2R1 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| MTK 3339 | GPS Module | GPS | 1 | Mediatek | Adafruit | 4 | \$29.95 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.adafruit.com/product/790 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| ANT-LTE-RPC-UFL | GPS Antenna | GPSANT | 1 | Adafruit | ChangHong | | \$14.95 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.adafruit.com/product/960 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| SMA to u.FL cable adapter | GPS u.FL to SMA adapter | | 1 | Adafruit | Adafruit | | \$3.95 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/adafruit-industries-llc/BS1/605177576 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| HC-SR04 | Ultrasonic | SON | 3 | Sparkfun | Sparkfun | 25.5 | \$12.00 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.sparkfun.com/products/15569 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| ICM-20948 | IMU 9DoF IC | IMU | 1 | TDK InvenSense | Digikey | 13 | \$10.47 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.digikey.com/en/products/detail/tdk-invensense/ICM-20948/6623535 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| BSS138 | Logic Level FET 1.8V to 3.3V vice versa for IMU & PIC32MX340F512H I2C communication wire | | 5 | ON Semiconductor | Mouseer | | \$2.00 | | | https://www.mouseer.com/ProductDetail/863-BSS138-G | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| MPRLS0001PG00001C | Pressure sensor IC | MPR | 1 | Honeywell | Digikey | 1.1 | \$6.44 | <input type="checkbox"/> | <input type="checkbox"/> | https://www.digikey.com/en/products/detail/honeywell-sensing-and-productivity-s | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Flysky FS-i6X 6-10(Default 6)CH 2.4GHz | RC transmitter and receiver | | 1 | Flysky | Amazon | | \$55.99 | | | https://www.amazon.com/gp/product/B0744DFPL8/ref=as_li_tf?ie=UTF8&tag=rc | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Serial Telemetry Radio Kit - 915MHz, 10 | Transmitter | | 1 | Sparkfun | Sparkfun | | \$39.99 | | | https://www.sparkfun.com/products/15007 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Racerstar RS20A BLheli_S 4-in-1 ESC | ESC/ Motor Telemetry | ESC | 1 | Racerstar | getfpv | 25 | \$28.00 | <input type="checkbox"/> | <input type="checkbox"/> | https://www.getfpv.com/racerstar-rs20a-blheli-s-4-in-1-esc.html | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| SK3 2822-1275kv | Motor | MOT | 4 | Turnigy | Hobbyking | 120 | \$78.12 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | https://hobbyking.com/en_us/turnigy-aerodrive-sk3-2822-1275kv-brushless-outdr | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| AKK KC03 | Camera and Transmitter | CAM+CAMTX | 1 | AKK | Amazon | 67.76? | \$27.99 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.amazon.com/AKK-Degree-800TVL-Switchable-Transmitter/dp/ | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| FPV Receiver 5.8G 150CH OTG Receiver | Camera Receiver | CAMRX | 1 | SKYDROID | Amazon | 50 | \$27.99 | <input type="checkbox"/> | <input type="checkbox"/> | https://www.amazon.com/Receiver-Female-Plastic-Android-Monitor/dp/B0705M | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| RC Sail Winch Servo 25T | Servo, 10.6kg / 0.9sec | SRVO | 4 | Corona | Ebay | 60 | \$64.00 | <input type="checkbox"/> | <input type="checkbox"/> | https://www.ebay.com/itm/254648162225?chn=ps&mktype=1&mkcid=28 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Master Aircrow 9 x 4.5 Multi Rotor Propeller Set White | Propeller | PROP | 2 | Master Aircrow | Hobbyking | 19.4 | \$11.78 | <input type="checkbox"/> | <input type="checkbox"/> | https://hobbyking.com/en_us/master-aircrew-9-x-4.5-multi-rotor-propeller-set-w | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 1.0 oz HyperD | Fabric to be used for envelope | ENV | 18 | HyperD | Rip stop by the rol | 500 | \$85.00 | <input type="checkbox"/> | <input type="checkbox"/> | https://ripstopbytheroll.com/collections/ultralight-nylon-fabric/products/1-0-oz-hyp | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Multipurpose 6061 Aluminum Sheet | Aluminum sheet | AI | 1 | McMaster-Carr | McMaster-Carr | 32 | \$4.68 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | https://www.mcmaster.com/89019K116/ | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Passivated 18-8 Stainless Steel Pan Head Phillips Screw | Screw for envelope attachment | SCREW1 | 50 | McMaster-Carr | McMaster-Carr | TBD | \$11.90 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | https://www.mcmaster.com/91772A530/ | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Medium-Strength Steel Hex Nut | NUT for envelope attachment | NUT | 100 | McMaster-Carr | McMaster-Carr | TBD | \$4.88 | <input type="checkbox"/> | <input type="checkbox"/> | https://www.mcmaster.com/95462A029/ | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Steel Pan Head Phillips Screw | Ultrasonic screws | USCREW | 25 | McMaster-Carr | McMaster-Carr | TBD | \$8.41 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | https://www.mcmaster.com/92005A006/ | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Steel Pan Head Phillips Screw | washers on inside of envelope of external part connections | WASH | 30 | McMaster-Carr | McMaster-Carr | TBD | \$9.24 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | https://www.mcmaster.com/90131A101/ | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Carbon Fiber Filament - 1.75mm | 3D Printer Filament | FIL | 1 | NylonX | Matterhackers | TBD | \$58.00 | <input type="checkbox"/> | <input type="checkbox"/> | https://www.matterhackers.com/store/nylonx-carbon-fiber-nylon-filament-1-75mm | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 8238 Weather Balloon | Helium Lift Bag | LFTB | 1 | Hwoyee | scientific sales | 200 | \$35.00 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | https://www.scientificsales.com/8238-Weather-Balloon-350-Grams-Natural-p823 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 60R3 AI He Cylinder W/ CGA580 Valve | Helium | He | 1 | Varies | Praxair | N/A | \$248.00 | <input type="checkbox"/> | <input type="checkbox"/> | https://www.praxairusa.com/ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| OSH Park PCB | PCB printing | PCB | 1 | OSH Park | OSH Park | TBD | \$260.10 | <input type="checkbox"/> | <input type="checkbox"/> | https://oshpark.com/ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Servo to Shaft Clamping Coupler 0.250-D-Profile Ends, 1045 Carbon Steel, 1/4" | Servo connector | CUPLR | 4 | | ServoCity | 12 | \$28.00 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | https://www.servocity.com/0-250-24-tooth-c1-spline-servo-to-shaft-clamping-cou | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 970120244 | D-Profile Rotary Shaft | SHAFT | 4 | McMaster-Carr | McMaster-Carr | 120 | \$27.16 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | https://www.mcmaster.com/8632T1132/ | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| MPMS 002 0005 PH | Voltage Regulator Standoff | VR STAND | 10 | Digikey | | | \$6.27 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | https://www.digikey.com/en/products/detail/w%C3%B0m-elektronik/970120244 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2057-440-AL-6 | Voltage Regulator Screw | VR SCREW | 100 | | Digikey | | \$7.47 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | https://www.digikey.com/en/products/detail/b-fasterener-supply/MPMS-002-0005/ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 9900 | Hex Standoff | PCB STAND | 4 | | Digikey | | \$3.04 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | https://www.digikey.com/en/products/detail/traf-electronic-hardware/2057-440-AL-6/768 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| U.FL-R-SMT-1 | Phillips screw | PCB SCREW | 4 | | Digikey | | \$0.44 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | https://www.digikey.com/en/products/detail/9900/36-9900-ND/3173217itemSeque | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 36 pin male header | Coaxial surface mount antenna plug | ANT1 | 1 | Hirose Electric | Digikey | | \$1.19 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | https://www.digikey.com/en/products/detail/hirose-electric-co-llc/U-FL-R-SMT-1-8 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| BK-668 | 0.1" break away male headers | | 1 | Adafruit | | | \$4.95 | <input type="checkbox"/> | <input type="checkbox"/> | https://www.adafruit.com/product/392 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| | CR1220 3V button battery holder SMD | | 1 | Digikey | | | \$0.54 | <input type="checkbox"/> | <input type="checkbox"/> | https://www.digikey.com/en/products/detail/BK-668/BK-668-ND/2242597?itemSe | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Total Price: | | | | | | | \$1,691.60 | | | | | | |