| **Part** | **Quantity** | **Cost Per Unit** | **Vendor/Link** | **Notes** |
| --- | --- | --- | --- | --- |
| Redcat Racing Blackout SC 1/10 Scale Electric Short Course Truck | 1 | $155.99 | <https://www.amazon.com/Redcat-Racing-Blackout-Waterproof-Electronics/dp/B00VRNR9KS/> |  |
| Servo 2Kg, Metal Arm | 1 | $17.99 | <https://www.amazon.com/gp/product/B01MU7TQV8> |  |
| Sensorless Brushless Motor | 1 | $24.50 | <https://www.amazon.com/gp/product/B075Q6FYRN> | Sensored BLDC motor also available for $20 more. Alternatively, can buy chassis with BLDC already installed (Redcat Blacout SC Pro version) |
| VESC | 1 | $83.89 | <https://hobbyking.com/en_us/turnigy-sk8-esc-for-electric-skateboard-conversion.html> |  |
| Heat Shrink | 1 | $2.66 | <https://www.digikey.com/product-detail/en/3m/FP-301VW-1-4-BLACK-4-BUL/3M161471-ND/3130855> | (Can purchase additional colors if desired) |
| Solderless Wire Connector | 1 | $6.98 | <https://www.amazon.com/gp/product/B01N7XS4Z7> |  |
| 3 pin Through Hole Male Header | 1 | $0.18 | <https://www.digikey.com/products/en?keywords=952-2263-nd> |  |
| USB Mini Cable 1ft | 1 | $6.99 | https://www.amazon.com/gp/product/B01N5PHSJE |  |
| Jetson Nano | 1 | $99 | https://www.nvidia.com/en-us/autonomous-machines/embedded-systems/jetson-nano/ |  |
| Micro SD Card | 1 | $12.36 | https://www.amazon.com/gp/product/B073JYVKNX |  |
| WiFi Card | 1 | $23.90 | https://www.amazon.com/gp/product/B01MZA1AB2 |  |
| WiFi Antennae | 1 | $7.99 | https://www.amazon.com/gp/product/B01MAV4Z2O |  |
| Power Barrel Connector 5.5x2.1 mm | 1 | $4.12 | https://www.digikey.com/product-detail/en/tensility-international-corp/10-01780/839-1246-ND/5638256 |  |
| Pin Jumper | 1 | $0.10 | https://www.digikey.com/product-detail/en/sullins-connector-solutions/STC02SYAN/S9000-ND/76372 |  |
| Buck Converter | 1 | $9.99 | https://www.amazon.com/gp/product/B06XRDV49T |  |
| Battery Connector 4mm | 1 | $12.99 | https://www.amazon.com/gp/product/B01E3999FA |  |
| 5000mAH NiMH battery | 1 | $33.49 | https://www.amazon.com/Redcat-Racing-HX-5000MH-B-Battery-7-2V-Connector/dp/B00D253GSI |  |
| Logitech F710 Gamepad | 1 | $39.00 | https://www.amazon.com/gp/product/B0041RR0TW |  |
| Zip Ties | 1 | $4.99 | https://www.amazon.com/gp/product/B01018DB2E |  |
| Medium Strength Thread Locker | 1 | $3.50 | https://www.amazon.com/Permatex-24200-Medium-Strength-Threadlocker/dp/B0002UEMZ2 |  |
| Super Glue | 1 | $3.99 | https://www.amazon.com/Loctite-Ultra-Control-4-Gram-1363589/dp/B003Y49R7G |  |
| Electrical Tape | 1 | $2.00 | https://www.amazon.com/Scotch-Electrical-Tape-4-Inch-66-Foot/dp/B001ULCB1O |  |
| M3 Flathead Screw 40mm | 1 | $3.83 / pack of 25 | https://www.mcmaster.com/92125a150 |  |
| M3 Nylon Washers | 1 | $3.60 / pack of 100 | https://www.mcmaster.com/95610a530 |  |
| M2.5 Pan Head Screws 10mm | 1 | $4.43 / pack of 100 | https://www.mcmaster.com/92005a071 |  |
| M2.5 Flat Head Screws 10mm | 1 | $7.20 / pack of 25 | https://www.mcmaster.com/91294a018 |  |
| M2.5 Hex Nut | 1 | $2.22 / pack of 100 | https://www.mcmaster.com/90591a270 |  |
|  |  |  |  |  |

**Sensor Options**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Part** | **Quantity** | **Cost Per Unit** | **Vendor/Link** | **Notes** |
| YDLidar | 1 | $99 | https://www.robotshop.com/en/ydlidar-x4-360-laser-scanner.html |  |
| USB Micro Splitter 1ft | 1 | $7.99 | https://www.amazon.com/gp/product/B06XCKX7XC |  |
|  |  |  |  |  |
| Realsense D435i | 1 | $199 | <https://store.intelrealsense.com/buy-intel-realsense-depth-camera-d435i.html> |  |
| USB 3.0 1ft | 1 | $5.99 | <https://www.amazon.com/gp/product/B01809N39W> |  |
| M3 Pan Head Screw 6mm | 1 | $5.06 | <https://www.mcmaster.com/92095a179> |  |
|  |  |  |  |  |
| Realsense T265 | 1 | $199 | <https://store.intelrealsense.com/buy-intel-realsense-tracking-camera-t265.html> |  |
| M3 Pan Head Screw 6mm | 1 | $5.06 | <https://www.mcmaster.com/92095a179> |  |
|  |  |  |  |  |
| Razor IMU | 1 | $37.50 | <https://www.digikey.com/product-detail/en/sparkfun-electronics/SEN-14001/1568-1460-ND/6569364> |  |
| MicroUSB 1 ft | 1 | $7.99 | <https://www.amazon.com/Sabrent-6-Pack-Premium-Cables-CB-UM61/dp/B011KMSNXM> |  |

Optional Items

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Part** | **Quantity** | **Cost Per Unit** | **Vendor/Link** | **Notes** |
| Power Supply (5V 4Amp) | 1 | $13.99 | <https://www.amazon.com/ALITOVE-Converter-5-5x2-1mm-100V-240V-Security/dp/B078RT3ZPS> | Power the Jetson Nano without using battery |
|  |  |  |  |  |
| Redcat Racing Fast Charger | 1 | $18.70 | <https://www.amazon.com/gp/product/B015ZQEID8> |  |
| 5000mAH NiMH battery | 1 | $33.49 | https://www.amazon.com/Redcat-Racing-HX-5000MH-B-Battery-7-2V-Connector/dp/B00D253GSI | Extra Battery |
|  |  |  |  |  |
| Four Port USB 3.0 Hub | 1 | $17.49 | <https://www.amazon.com/gp/product/B00DQFGH80> | Increase USB ports from 4 to 7 |
| Velcro | 1 | $5.77 | <https://www.amazon.com/gp/product/B000WLFRXC> |  |
|  |  |  |  |  |
| Bumper Switch | 1 | $12.99 | <https://www.robotshop.com/en/vex-bumper-switch.html> | Detects when the front bumper has made contact with an object |
| Female to Female Jumper Cable | 1 | $1.95 per pack of 20 | <https://www.digikey.com/product-detail/en/sparkfun-electronics/PRT-12796/1568-1513-ND/5993861> |  |
| 1K Ohm Resistor | 1 | $0.10 | <https://www.digikey.com/product-detail/en/stackpole-electronics-inc/CF14JT1K00/CF14JT1K00CT-ND/1830350> |  |
| 1/8” Heat Shrink | 1 | $1.41 | <https://www.digikey.com/product-detail/en/alpha-wire/F221B1-8-BK100/A018B-4-ND/281671>x |  |
| 20mm M2.5 Pan Head Screws | 1 | $5.92 per pack of 100 | <https://www.mcmaster.com/92000a111> |  |