| **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 | $15.88 | <https://www.amazon.com/gp/product/B01MU7TQV8> |  |
| Sensorless Brushless Motor | 1 | $19.99 | <https://www.amazon.com/gp/product/B01DBS3MQQ> | Sensored BLDC motor also available for $20 more. Alternatively, can buy chassis with BLDC already installed (Redcat Blacout SC Pro version) |
| VESC | 1 | $89.90 | <https://www.amazon.com/HGLRC-FLIPSKY-SK8-ESC-Electric-Skateboard-EScooter/dp/B07GFB55NV>  <https://www.robotshop.com/en/maytech-vesc-50a-brushless-speed-controller-eskateboard-robotics.html>  <https://hobbyking.com/en_us/turnigy-sk8-esc-v4-12-for-electric-skateboard-conversion-w-bec.html> |  |
| 4mm Bullet Connectors | 1 | $8.99 | <https://www.amazon.com/HRB-Battery-Banana-Bullet-Connector/dp/B06XS79JT3> | This only needs to be purchased if the VESC does not already have 4mm bullet connectors installed on its motor wires. Note that installation will require soldering. |
| Heat Shrink | 1 | $2.88 | <https://www.digikey.com/product-detail/en/alpha-wire/F221B1-4-BK100/A014B-4-ND/281675> | (Can purchase additional colors if desired) |
| Solderless Wire Connector | 1 | $9.99 | <https://www.amazon.com/dp/B01C26ZBMG> |  |
| 3 pin Through Hole Male Header | 1 | $0.18 | <https://www.digikey.com/products/en?keywords=952-2263-nd> |  |
| USB Mini Cable 1ft | 1 | $4.23 | <https://www.amazon.com/StarTech-com-30cm-ft-Mini-Cable/dp/B002L5U7N2> |  |
| Jetson Nano | 1 | $99 | <https://www.amazon.com/NVIDIA-Jetson-Nano-Developer-Kit/dp/B07PZHBDKT> |  |
| Micro SD Card | 1 | $19.99 | <https://www.amazon.com/gp/product/B06XWZWYVP> |  |
| WiFi & Bluetooth Card | 1 | $22.89 | <https://www.amazon.com/gp/product/B01MZA1AB2> |  |
| WiFi Antennae | 1 | $6.99 | <https://www.amazon.com/gp/product/B01MAV4Z2O> |  |
| Power Barrel Connector 5.5x2.1 mm | 1 | $4.33 | 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 | $11.99 | <https://www.amazon.com/OliRC-Bullet-Banana-Connector-Adapter/dp/B07T6J317B>  <https://www.amazon.com/gp/product/B01E3999FA> |  |
| 5000mAH NiMH battery | 1 | $38.99 | <https://www.amazon.com/Flylinktech-Rechargeable-Batteries-Associated-Connectors/dp/B073W57G7Y> | Comes in a pack of 2, but only need one battery. Can replace with any other rc battery that fits, just need to be able to connect to input of voltage regulator. |
| Tamiya Battery Connector | 1 | $9.80 | <https://www.amazon.com/gp/product/B0746GQF56> |  |
| Velcro | 1 | $2.10 | <https://www.amazon.com/VELCRO-Brand-Fasteners-Perfect-General/dp/B000TGSPV6> | Use to hold battery in place |
| Bluetooth Playstation 4 Controller | 1 | $43.95 | <https://www.amazon.com/gp/product/B01LWVX2RG> |  |
| Zip Ties | 1 | $4.99 | <https://www.amazon.com/gp/product/B01018DB2E> |  |
| Medium Strength Thread Locker | 1 | $7.49 | <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 | $3.98 | <https://www.amazon.com/Scotch-Super-Vinyl-Electrical-Tape/dp/B00004WCCL> |  |
| 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 | $4.66 / pack of 100 | <https://www.mcmaster.com/92005a071> |  |
| M2.5 Flat Head Screws 10mm | 1 | $4.19 / pack of 25 | <https://www.mcmaster.com/92010a020> |  |
| M2.5 Hex Nut | 1 | $2.22 / pack of 100 | <https://www.mcmaster.com/90591a270> |  |
|  |  |  |  |  |
| 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 if desired |
| Redcat Racing Fast Charger | 1 | $18.81 | <https://www.amazon.com/gp/product/B015ZQEID8> |  |

**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 | $9.99 | <https://www.amazon.com/gp/product/B0179OXY9I> |  |
|  |  |  |  |  |
| Realsense D435i | 1 | $199 | <https://store.intelrealsense.com/buy-intel-realsense-depth-camera-d435i.html> |  |
| USB 3.0 Type C 1ft | 1 | $5.99 | <https://www.amazon.com/TITACUTE-Durable-Reversible-Connector-Charging/dp/B06XXRL4R9> |  |
| M3 Pan Head Screw 14mm | 1 | $8.96 | <https://www.mcmaster.com/92000a124> |  |
|  |  |  |  |  |
| Realsense T265 | 1 | $199 | <https://store.intelrealsense.com/buy-intel-realsense-tracking-camera-t265.html> |  |
| M3 Pan Head Screw 14mm | 1 | $8.96 | <https://www.mcmaster.com/92000a124> |  |

Optional Items

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Part** | **Quantity** | **Cost Per Unit** | **Vendor/Link** | **Notes** |
|  |  |  |  |  |
| Push Button | 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> |  |