

Part	Quantity	Cost Per Unit	Vendor/Link	Notes
Redcat Racing Blackout SC 1/10 Scale Electric Short Course Truck	1	\$169.99	<a href="https://www.amazon.com/Redcat-Racing-Blackout-Waterproof-Electronics/dp/B00VRNR9KS/">https://www.amazon.com/Redcat-Racing-Blackout-Waterproof-Electronics/dp/B00VRNR9KS/</a>	
Servo 2Kg, Metal Arm	1	\$16.66	<a href="https://www.amazon.com/gp/product/B01MU7TQV8">https://www.amazon.com/gp/product/B01MU7TQV8</a>	
Sensorless Brushless Motor	1	\$30.99	<a href="https://www.amazon.com/gp/product/B08J25QYH6/">https://www.amazon.com/gp/product/B08J25QYH6/</a>	Sensored BLDC motor also available for \$20 more. Alternatively, can buy chassis with BLDC already installed (Redcat Blacout SC Pro version)
VESC	1	\$104.99	<a href="https://www.amazon.com/HGLRC-FLIPSKY-SK8-ESC-Electric-Skateboard-EScooter/dp/B07GFB55NV">https://www.amazon.com/HGLRC-FLIPSKY-SK8-ESC-Electric-Skateboard-EScooter/dp/B07GFB55NV</a>	
4mm Bullet Connectors	1	\$8.99	<a href="https://www.amazon.com/gp/product/B07CSQH2QC">https://www.amazon.com/gp/product/B07CSQH2QC</a>	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	\$2.96	<a href="https://www.digikey.com/en/products/detail/alpha-wire/F221V1-4-BK100/3718550">https://www.digikey.com/en/products/detail/alpha-wire/F221V1-4-BK100/3718550</a>	(Can purchase additional colors if desired)
Solderless Wire Connector	1	\$8.69	<a href="https://www.amazon.com/Connectors-Insulated-Waterproof-Automotive-Electrical/dp/B07G4DVT67">https://www.amazon.com/Connectors-Insulated-Waterproof-Automotive-Electrical/dp/B07G4DVT67</a>	
3 pin Through Hole Male Header	1	\$0.19	<a href="https://www.digikey.com/products/en?keywords=952-2263-nd">https://www.digikey.com/products/en?keywords=952-2263-nd</a>	
Jetson Nano	1	\$99	<a href="https://www.sparkfun.com/products/16271">https://www.sparkfun.com/products/16271</a> <a href="https://www.amazon.com/Seeed-Studio-NVIDIA-Jetson-Developer/dp/B07SGBHDCZ/">https://www.amazon.com/Seeed-Studio-NVIDIA-Jetson-Developer/dp/B07SGBHDCZ/</a>	
Micro SD Card	1	\$28.95	<a href="https://www.amazon.com/gp/product/B06XWZWYVP">https://www.amazon.com/gp/product/B06XWZWYVP</a>	

WiFi & Bluetooth Card	1	\$20.98	<a href="https://www.amazon.com/gp/product/B01MZA1AB2">https://www.amazon.com/gp/product/B01MZA1AB2</a>	
WiFi Antennae	1	\$7.99	<a href="https://www.amazon.com/Pair-53cm-20-86in-IPEX4-Antennas/dp/B07K68NHVH">https://www.amazon.com/Pair-53cm-20-86in-IPEX4-Antennas/dp/B07K68NHVH</a>	
Power Barrel Connector 5.5x2.1 mm	1	\$4.30	<a href="https://www.digikey.com/en/products/detail/tensility-international-corp/10-02224/6412266">https://www.digikey.com/en/products/detail/tensility-international-corp/10-02224/6412266</a>	
Pin Jumper	1	\$0.10	<a href="https://www.digikey.com/product-detail/en/sullins-connector-solutions/STC02SYAN/S9000-ND/76372">https://www.digikey.com/product-detail/en/sullins-connector-solutions/STC02SYAN/S9000-ND/76372</a>	
Buck Converter	1	\$9.99	<a href="https://www.amazon.com/gp/product/B06XRDV49T">https://www.amazon.com/gp/product/B06XRDV49T</a>	
Battery Connector 4mm	1	\$9.99	<a href="https://www.amazon.com/OliRC-Bullet-Banana-Connector-Adapter/dp/B07T6J317B">https://www.amazon.com/OliRC-Bullet-Banana-Connector-Adapter/dp/B07T6J317B</a> <a href="https://www.amazon.com/gp/product/B01E3999FA">https://www.amazon.com/gp/product/B01E3999FA</a>	
5000mAH NiMH battery	1	\$17.99	<a href="https://www.amazon.com/Flylinktech-5000mAh-NiMH-Rechargeable-Associated/dp/B00WMC4WBM">https://www.amazon.com/Flylinktech-5000mAh-NiMH-Rechargeable-Associated/dp/B00WMC4WBM</a>	
Tamiya Battery Connector	1	\$8.80	<a href="https://www.amazon.com/gp/product/B0746GQF56">https://www.amazon.com/gp/product/B0746GQF56</a>	
Velcro	1	\$6.01	<a href="https://www.amazon.com/VELCRO-Brand-Fasteners-Perfect-General/dp/B000TGSPV6">https://www.amazon.com/VELCRO-Brand-Fasteners-Perfect-General/dp/B000TGSPV6</a>	Use to hold battery in place
Bluetooth Playstation 4 Controller	1	\$29.99	<a href="https://www.amazon.com/YCCTEAM-Controller-Compatible-Upgraded-playstation-4/dp/B0872MNQVD">https://www.amazon.com/YCCTEAM-Controller-Compatible-Upgraded-playstation-4/dp/B0872MNQVD</a> <a href="https://www.amazon.com/gp/product/B01LWVX2RG">https://www.amazon.com/gp/product/B01LWVX2RG</a>	
Zip Ties	1	\$4.99	<a href="https://www.amazon.com/gp/product/B01018DB2E">https://www.amazon.com/gp/product/B01018DB2E</a>	
Medium Strength Thread Locker	1	\$5.97	<a href="https://www.amazon.com/dp/B0001RSNS/">https://www.amazon.com/dp/B0001RSNS/</a>	
Super Glue	1	\$3.97	<a href="https://www.amazon.com/dp/B00ELV2D0Y">https://www.amazon.com/dp/B00ELV2D0Y</a> <a href="https://www.amazon.com/Loctite-Ultra-Control-4-Gram-1363589/dp/B003Y49R7G">https://www.amazon.com/Loctite-Ultra-Control-4-Gram-1363589/dp/B003Y49R7G</a>	
Electrical Tape	1	\$5.60	<a href="https://www.amazon.com/dp/B001ULCB1O/">https://www.amazon.com/dp/B001ULCB1O/</a> <a href="https://www.amazon.com/Scotch-Super-Vinyl-Electrical-Tape/dp/B00004WCCL">https://www.amazon.com/Scotch-Super-Vinyl-Electrical-Tape/dp/B00004WCCL</a>	
M3 Flathead Screw 40mm	1	\$3.83 / pack of 25	<a href="https://www.mcmaster.com/92125a150">https://www.mcmaster.com/92125a150</a>	
M3 Nylon Washers	1	\$3.60 / pack of 100	<a href="https://www.mcmaster.com/95610a530">https://www.mcmaster.com/95610a530</a>	

M2.5 Pan Head Screws 10mm	1	\$4.66 / pack of 100	<a href="https://www.mcmaster.com/92005a071">https://www.mcmaster.com/92005a071</a>	
M2.5 Flat Head Screws 10mm	1	\$4.19 / pack of 25	<a href="https://www.mcmaster.com/92010a020">https://www.mcmaster.com/92010a020</a>	
M2.5 Hex Nut	1	\$2.22 / pack of 100	<a href="https://www.mcmaster.com/90591a270">https://www.mcmaster.com/90591a270</a>	
Power Supply (5V 4Amp)	1	\$16.49	<a href="https://www.amazon.com/ALITOVE-Converter-5-5x2-1mm-100V-240V-Security/dp/B078RT3ZPS">https://www.amazon.com/ALITOVE-Converter-5-5x2-1mm-100V-240V-Security/dp/B078RT3ZPS</a>	Power the Jetson Nano without using battery if desired
Redcat Racing Fast Charger	1	\$20.26	<a href="https://www.amazon.com/gp/product/B015ZQEID8">https://www.amazon.com/gp/product/B015ZQEID8</a>	

### Sensor Options

Part	Quantity	Cost Per Unit	Vendor/Link	Notes
YDLidar	1	\$99	<a href="https://www.amazon.com/dp/B07DBYHJVQ/">https://www.amazon.com/dp/B07DBYHJVQ/</a> <a href="https://www.robotshop.com/en/ydlidar-x4-360-laser-scanner.html">https://www.robotshop.com/en/ydlidar-x4-360-laser-scanner.html</a>	
USB Micro Splitter 1ft	1	\$6.00	<a href="https://www.amazon.com/dp/B083JZXZYH/">https://www.amazon.com/dp/B083JZXZYH/</a> <a href="https://www.amazon.com/gp/product/B0179QXY9I">https://www.amazon.com/gp/product/B0179QXY9I</a>	
USB Micro to USB C Adapter	1	\$6.99	<a href="https://www.amazon.com/Adapter-Aluminum-Connector-Charging-Compatible/dp/B07G54XXZZ">https://www.amazon.com/Adapter-Aluminum-Connector-Charging-Compatible/dp/B07G54XXZZ</a>	
Realsense D435i	1	\$209	<a href="https://store.intelrealsense.com/buy-intel-realsense-depth-camera-d435i.html">https://store.intelrealsense.com/buy-intel-realsense-depth-camera-d435i.html</a>	
USB 3.0 Type C 1ft	1	\$12.31	<a href="https://www.amazon.com/AmazonBasics-Double-Braided-Nylon-Type-C/dp/B07D7SH77V">https://www.amazon.com/AmazonBasics-Double-Braided-Nylon-Type-C/dp/B07D7SH77V</a>	Optional shorter cable. D435i comes with a suitable but longer cable.
M3 Pan Head Screw 14mm	1	\$8.96	<a href="https://www.mcmaster.com/92000a124">https://www.mcmaster.com/92000a124</a>	
Realsense T265	1	\$209	<a href="https://store.intelrealsense.com/buy-intel-realsense-tracking-camera-t265.html">https://store.intelrealsense.com/buy-intel-realsense-tracking-camera-t265.html</a>	
M3 Pan Head Screw 14mm	1	\$8.96	<a href="https://www.mcmaster.com/92000a124">https://www.mcmaster.com/92000a124</a>	

### Optional Items

Part	Quantity	Cost Per Unit	Vendor/Link	Notes
Push Button	1	\$10.99	<a href="https://www.vexrobotics.com/276-2159.html">https://www.vexrobotics.com/276-2159.html</a>	Detects when the front bumper has made contact with an object
Female to Female Jumper Cable	1	\$1.95 per pack of 20	<a href="https://www.digikey.com/product-detail/en/sparkfun-electronics/PRT-12796/1568-1513-ND/5993861">https://www.digikey.com/product-detail/en/sparkfun-electronics/PRT-12796/1568-1513-ND/5993861</a>	
1K Ohm Resistor	1	\$0.10	<a href="https://www.digikey.com/product-detail/en/stackpole-electronics-inc/CF14JT1K00/CF14JT1K00CT-ND/1830350">https://www.digikey.com/product-detail/en/stackpole-electronics-inc/CF14JT1K00/CF14JT1K00CT-ND/1830350</a>	
1/8" Heat Shrink	1	\$1.41	<a href="https://www.digikey.com/product-detail/en/alpha-wire/F221B1-8-BK100/A018B-4-ND/281671x">https://www.digikey.com/product-detail/en/alpha-wire/F221B1-8-BK100/A018B-4-ND/281671x</a>	
20mm M2.5 Pan Head Screws	1	\$5.92 per pack of 100	<a href="https://www.mcmaster.com/92000a111">https://www.mcmaster.com/92000a111</a>	