

Total Cost / Purchase List

Item	Quantity	Unit Price	Net Cost	URL
ODrive S1 FOC Controller	1	\$149	149	https://odriverobotics.com
C6374 170KV Brushless DC Motor	1	\$52	52	C6374 170KV Efficiency Br
1:19 Planetary Gearbox				
Nema 17 Stepper Motor	2	\$40.43	80.86	STEPPERONLINE 19:1 Plan
Nema 23 Stepper Motor	1	\$23.45	23.45	https://www.amazon.com
Nema 17 16 Ncm	1	\$11.99	11.99	https://www.amazon.com
Servo Motor	1	\$13.59	13.59	https://www.amazon.com
TMC2209 Stepper Motor Driver 5-Pack	1	\$26.99	26.99	https://www.amazon.com
8mm Flange Coupling				
Connectors 4-Pack	1	\$9.99	9.99	https://www.amazon.com
608-2RS Bearings 20-Pack	1	\$9.99	9.99	https://www.amazon.com
6812-2RS Bearings 2-Pack	1	\$14.29	14.29	https://www.amazon.com
625ZZ Bearings 10-Pack	1	\$9.99	9.99	https://www.amazon.com
480W 24V Power Supply	1	\$39.99	39.99	https://www.amazon.com
M2,M3,M4,M5 Screw Set	1	\$24.99	24.99	https://www.amazon.com
20 Gauge Wire Set	1	\$23.49	23.49	https://www.amazon.com
Cable Ties	1	\$5.98	5.98	https://www.amazon.com
JST Connectors Kit	1	\$34.99	34.99	https://www.amazon.com
8mm Steel Linear Motion Rods 5-Pack	1	\$9.99	9.99	https://www.amazon.com
Emergency Stop Switch	1	\$9.99	9.99	https://www.amazon.com
ODrive S1 Heat Spreader	1	\$12.00	12	https://odriverobotics.com
Encoder Magnets	1	\$9.00	9	https://odriverobotics.com
USB Isolator	1	\$14.00	14	https://odriverobotics.com
ODrive S1 Harness Build Kit	1	\$9.99	9.99	https://odriverobotics.com
Raspberry Pi 4	1	\$61.75	61.75	https://www.amazon.com
Universal Perfboard for Circuits	1	\$8.99	8.99	https://www.amazon.com
2 Kg PLA Filament	1	\$29.98	29.98	https://www.amazon.com
Heat Shrink Tubing Kit	1	\$13.99	13.99	https://www.amazon.com

TOTAL: \$711

Optionals Purchased In Prototype For Other Purposes

NVIDIA Jetson Orin Nano	1	\$499
Xbox 360 Controller	1	N/A
MDF Wood for Mounting	1	N/A
Silicone Lubricant	1	N/A

Tools Used

Soldering iron	1	N/A
Heat gun	1	N/A
M1.5-M4 Allen Keys	1	N/A
Wire Strippers	1	N/A
Cable Cutters	1	N/A
Calipers	1	N/A
Multimeter	1	N/A

3D Printer

Bambu X1C 3D-Printer	1	\$1,449
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Software

Fusion 360	N/A	FREE FOR STUDENTS
Bambu Studio	N/A	FREE
Orca Slicer	N/A	FREE
Python	N/A	FREE

[1/shop/odrive-s1](#)

[Brushless Belt Sensored Motor for Electric Skateboard Longboarding \(C6374, 170KV\)](#)

[Planetary Gearbox High Torque Nema 17 Stepper MotorDIY CNC Camera Telescope](#)

[1/gp/product/B089SRQN1P/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1](#)

[1/gp/product/B00PNEQ79Q/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1](#)

[1/gp/product/B07HNTKSZT/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1](#)

[1/gp/product/B07YW7BM68/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&th=1](#)

[1/gp/product/B08335MYGW/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&th=1](#)

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[1/gp/product/B0BX6HJQ3Z/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1](#)

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[1/gp/product/B07ZK5F8HP/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1](#)

[1/gp/product/B01NCOMFLT/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1](#)

[1/dp/B00NTT91Y0?psc=1&ref=ppx_yo2ov_dt_b_product_details](#)

[1/shop/heat-spreader-plate-for-odrive-s1](#)

[1/shop/set-of-5-encoder-magnets](#)

[1/shop/usb-isolator](#)

[1/shop/harness-build-kit-for-odrive-s1](#)

[1/Raspberry-Model-2019-Quad-Bluetooth/dp/B07TC2BK1X/ref=sr_1_2?crid=2ON5XG48Z4YEF](#)

[1/Chanzon-Double-Sided-Board-Sizes/dp/B07LF78ZY3/ref=sr_1_3?crid=22IF7VEMDWQAX&di](#)

[1/ELEGOO-Filament-Printing-Dimensional-Accuracy/dp/B0C6XHYSL5/ref=sr_1_3_pp?crid=2M](#)

[1/gp/product/B0BW2CYP24/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1](#)



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e0gitMLF160D7Ya-FhnhKKm1WUVvqjc.Wm7REqAur8F0JipkVUDAcCbs8Dzrk0bxQGubenhVGy](#)



[=se&keywords=raspberry+pi+4&qid=1715904400&sprefix=rasp%2Caps%2C163&sr=8-2](#)

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[s&dib_tag=se&keywords=PLa%2Bfilament&qid=1715904641&sprefix=pl%2Bfilament%2Caps](#)



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