

Name of Item	Description	Used in which subsystem(s)	Part Number	Manufacturer	Quantity	Price	Total
Rechargeable 12 V Battery	12 V/6000 mAh Lithium Ion Battery Pack	Power	YB1206000-USB	TalentCell	1	\$39.99	\$39.99
Buck Converters	DC-DC Adjustable Buck Converters 3-40V to 1.5 35V	Power	LM2596	ATNSINC	3	\$15.69	\$47.07
E-Stop Button	Self-Locking Emergency Stop Button 2 NC Red Mushroom 660 V 10 A	Power	HB2-B5544	MXUTEUK	1	\$10.99	\$10.99
3 A Fuses	3A 250V Fuses (pack of 20)	Power	F3AL250V	BOJACK	2	\$5.99	\$11.98
1N5822 Diode	Ximimark 100Pcs 1N5822 Schottky Diode 3A 40V DO-201AD (DO-27) Barrier Rectifier Diode for Household Appliances	Power	1N5822	Ximimark	1	\$7.29	\$7.29
0.1 uF Capacitors	E-Projects - 0.1uF Ceramic Disc Capacitor - 50 Volts (25 Pieces)	Power	0.1 uF	E-Projects	1	\$5.99	\$5.99
1 uF Capacitor	1 µF Conformal Coated Tantalum Capacitors 50 V Radial 80hm	Power	TAP105K050SCS	KYOCERA AVX	1	\$0.82	\$0.82
330 uF Capacitors	Capacitor 4.7UF 6.8UF 10UF 15UF 22UF 47UF 100UF 220UF 330UF 470UF 680UF 1500UF Electrolytic Capacitors Kit 6.3V 10V 16V 25V 35V 50V 100V 400V,295Pcs	Power	330 uF	changhe	1	\$18.98	\$18.98
33 uH inductors	uxcell 50Pcs 0510 Color Ring Inductor 33uH 1W Axial RF Choke Coil Inductor	Power	33 uH	uxcell	1	\$8.49	\$8.49
DC-DC Converter	DC DC Converter 12 V 120 W	Power	209-JCK4012512	XP Power	1	\$71.50	\$71.50
TIP 102 Transistor	Darlington Transistors NPN Power Darlington	Power	511-TIP102	STMicroelectronics	4	\$0.99	\$3.96
Power Distribution Bus	Solid Brass	Power	737	Adafruit	5	\$1.95	\$9.75
Steel Ball Transfer	Steel Ball Transfer(21 mm Height)	Duck Storage	1619-001-001	Servo City	1	\$2.99	\$2.99
Lock-Style Solenoids	12 V-DC	Duck Storage	1512	Adafruit	2	\$14.95	\$29.90
Aluminum Sheet	Sides and Backing for Duck Corral - Multipurpose 6061 Aluminum Sheet, 1/8" thick, 6" x 12"	Duck Storage	6061	McMaster Carr	3	\$24.28	\$72.84
Rack	14-1/2 Degree Pressure Angle Gear Rack, 32 Pitch (1ft) Nylon Plastic	Duck Storage	57655K62	McMaster Carr	2	\$8.94	\$17.88
Servo-Mounted Pinion	32P, 32 Tooth, 25T 3F Spline Servo Mount Gear (Acetyl)	Duck Storage	RSA32-2FS-32	McMaster Carr	2	\$3.94	\$7.88
Servo Motor	2000 Series Dual Mode Servo	Duck Storage	2000-0025-0002	Servo City	1	\$31.99	\$31.99
Servo Motor Controller	3102 Series Dual Mode Servo Programmer	Duck Storage	3102-0001-0001	Servo City	2	\$9.99	\$19.98
TIP102 Transistors	Darlington Transistors in order to have the ability to switch on and off the solenoid to lock the trailer	Duck Storage	976	Adafruit	1	\$2.50	\$2.50
Servo Controller	Micro Maestro 6-Channel USB Servo Controller	Duck Storage, Pedestal Storage, Sorting, and Feeding	1350	Pololu	1	\$39.95	\$39.95
Servo Motor	FEETECH F590 Micro Servo	Feeding	2818	Pololu	1	\$5.25	\$5.25
Proximity Sensor	Pololu Digital Sensor 5cm	Pedestal Storage and Delivery	4050	Pololu	2	\$12.95	\$25.90
Servo Motor	FEETECH Mini Servo FT1117M	Pedestal Storage and Delivery	3423	Pololu	1	\$9.95	\$9.95
Color Sensor	RGB Color Sensor with IR filter and White LED	Sorting	TCS34725	Adafruit	1	\$7.95	\$7.95
Motor	99:1 Metal Gearmotor 25Dx69L mm LP 6V CPR Encoder	Sorting	4827	Pololu	1	\$45.95	\$45.95
Belt	NABOWAN Solid Rubber Sheets,Strips,Rolls 1/16" (.062") Thick x 4" Wide x 120" Long, Thin Neoprene Rubber, Perfect for DIY Gasket Material, Sealing, Liner, Shield, Padding, Mat	Sorting	N/A	NABOWAN	1	\$20.99	\$20.99
DC Motor Controller	TB9051FTG Single Brushed DC Motor Driver Carrier	Sorting	2997	Pololu	1	\$11.95	\$11.95
Servo Motor	FEETECH F590 Micro Servo	Sorting	2818	Pololu	1	\$5.25	5.25
Motor Mount	Pololu 25D mm Metal Gearmotor Bracket Pair	Sorting	2676	Pololu	1	\$7.95	\$7.95
Arduino Mega 2560 Rev3	Microcontrollers	Low-Level Controller	A000067/7630049200067	Arduino	2	\$48.40	\$96.80
Jumper Wires ELEGOO	120 pcs	Low-Level Controller	B01EV70C78	ELEGOO	1	\$9.99	\$9.99
Servo Motor	FEETECH F590 Micro Servo	Feeding	2818	Pololu	1	\$5.25	\$5.25
12V DC Motor	12V DC Motor	Locomotion	4865	Pololu	4	\$45.95	\$183.80
Motor Mount	DC Motor Mount (pack of 2)	Locomotion	2676	Pololu	2	\$7.95	\$15.90
Mecanum Wheels	48 mm Mecanum Wheels (pack of 4)	Locomotion	14209	Nexus Robot	1	\$41.84	\$41.84
Wheel Coupling	4 mm Brass Wheel Coupling	Locomotion	18077	Nexus Robot	4	\$2.34	\$9.36
DC Motor Controller	DC Motor Driver (pack of 4)	Locomotion	L298N	ST	1	\$11.39	\$11.39
Nvidia Jetson Nano Developer Kit	Top - Level Controller	Top-Level Controller	945-13450-0000-100	Nvidia	1	\$149.99	\$149.99
microSD Card	Storage device with Jetson Nano (256 GB)	Top-Level Controller	LMSE5XX256G-BNAEU	Lexar	1	\$24.99	\$24.99
5V DC barrel jack power input cable	Standard Barrel Jack Connector	Top-Level Controller	B07JGR7JJQ	SIOCEN	1	\$9.99	\$9.99
Bluetooth keyboard and mouse	iClever DK03 USB connection with a bluetooth chip	Top-Level Controller	B08KZXLTM6	iClever	1	\$39.99	\$39.99
Micro USB Cable	MYFON Micro-USB Cable	Top-Level Controller	B098DW7485	MYFON	1	\$6.99	\$6.99
Color Sensor	RGB Color Sensor with IR filter and White LED	Vision	TCS34725	Adafruit	2	\$7.95	\$15.90
Distance Sensor	Time of Flight Micro-LIDAR Distance Sensor Breakout	Vision	VLS3L0X	Adafruit	8	\$14.95	\$119.60
Resistors	EDGELEC 100 pcs 4.7K ohm Resistor 1/2w (0.5Watt) +1% Tol	Vision	EFR-W0D50-A:MF	EDGELEC	1	\$5.99	\$5.99
D Profile Shaft	D-Profile rotary shaft, D-profile ends, 1045 Carbon steel, 3/8" Diameter, 12" Long	Consumption	3832T1	McMaster-Carr	3	\$11.67	\$35.01
Bushing/Bearing	Ball bearing, Shielded, Trade Number R6-2Z for 3/8" Shaft diameter	Consumption	60355K45	McMaster-Carr	6	\$6.25	\$37.50
Shaft Collar	Set Screw Shaft Collar for 3/8" Diameter, Black-Oxide 1215 Carbon Steel	Consumption	9414T8	McMaster-Carr	6	\$1.75	\$10.50
Shaft Pulley	Corrosion-Resistant Timing Belt Pulley, XL, 3/8" Maximum Width, Hub, 2 Flange, 1.75" OD, 3/8" Shaft	Consumption	1277N28	McMaster-Carr	3	\$16.65	\$49.95
Motor Pulley	Corrosion-Resistant Timing Belt Pulley, XL Series, 3/8" Maximum Belt Width, with Hub, 2 Flanges, 7/8" OD	Consumption	1277N41	McMaster-Carr	1	\$10.20	\$10.20
Timing Belt	XL Series Timing Belt, Trade No. 210xL025	Consumption	6484K219	McMaster-Carr	1	\$6.97	\$6.97
Motor	47:1 Metal gearmotor 25Dx67L mm HP 6V with 48 CPR Encoder	Consumption	4805	Pololu	1	\$48.95	\$48.95
Motor Controller	TB9051FTG Single Brushed DC Motor Driver Carrier	Consumption	2997	Pololu	1	\$11.95	\$11.95
Washer Pack	316 Stainless Steel Washer for 3/8" Screw Size, 0.406" ID, 0.75" OD	Consumption	90107A127	McMaster-Carr	1	\$9.50	\$9.50
Corner Bracket	Corner Machine Bracket, Finish-Your-Own, 6061 Aluminum, 1" x 1" x 1-1/4"	Consumption	2313N36	McMaster-Carr	1	\$7.24	\$7.24
<b>Total</b>			<b>Total Components</b>		<b>103</b>	<b>Total Cost</b>	<b>\$1,579.40</b>