

Part Name	Quantity Needed Per Box	Part / Identification Number
McMaster		
5 mm Linear Motion Shaft	1	6112K37
Clear polycarbonate film (Wraps around wheel)	1	85585K15
Female Threaded Round Standoff	10	93330A541
Black Screws (Secures top and bottom headplates)	2	91290A111
Pololu		
Aluminum Mounting Hub for 5mm Shaft	1 (Pack of 2)	1203
Screws holding bearing holder	1	1962
Thorlabs		
0.75 Inch Post	1	TR075
2 Inch Post	2	TR2
4 Inch Post	5	TR4
6 Inch Post	2	TR6
8 Inch Post	2	TR8
10 Inch Post	2	TR10
2 Inch Post Holder	1	PH2
3 Inch Post Holder	4	PH3
6 Inch Post Holder	1	PH6
Right Angle End Clamp	4	RA180
Rotating Clamp	1	SWC
Right Angle Post Clamp	1	RA90TR
Mini Optical Post	1	MS3R
12" x 18" Aluminum Breadboard	1	MB1218
Breadboard lifting handles	2	BBH1
Cap screws for holding female post	10	SH4S038
Thumbscrews for securing ball bearings	2	TS25H

SparkFun		
Rotary Encoder (Resin Coupling Adaptor Included)	1	E6B2-CWZ3E (E69-C06B)
Digikey		
Speaker 80hm 5w top port 104db	1	2104-SP500208-3-ND
Amazon		
5 mm Steel Ball Bearing	2	SMR115-ZZ #5 LD
S-mount lens with IR filter (Xenocam)	1	SPM16214000924
3 mm UV light, 395-400nm (Chanzon)	1	100F3T-YT-WH-PU
5 mm super-bright IR LED, 940nm (Adafruit)	1	ADA388 / B00ULB0U44
Arduino Mega 2560 Rev3 Microcontroller Board (Arduino)	1	A000067 / B0046AMGW0
USB 2.0 Cable Type A/B (Arduino)	1	M000006 / B013EOQUAW
IR LED Resistor (32 ohms / 1 Watt)	1	B09WJY76F6
UV LED Resistors (90 ohms / 1 Watt)	1	B09WJY76F6
Solderless Breadboards (REXQualis)	1	B082VYXDF1
PCB Mount Screw Terminal Block Connectors (Tnisesm)	1	CATN-T03B
Electrical Wire (Fermerry, 24 AWG 50 feet)	1	B089CX3FVV
Heat Shrink Tubing (Electfun)	1	ELECFUN / B08SQBPVJB
Black Adhesive contact paper (Yancorp)	1	X002IY6LBT
IPS Weld-On 3 Acrylic Plastic Cement (Weld-On)	1	TLLPN-21847771
12V 5A DC Power Cable Male Female Connector (Centro Power)	1 (Pack of 10)	B07C7VSRBG
12V DC Power Connector Barrel Adaptor (Centro Power)	1 (Pack of 10)	B07C61434H
12V Red LED Flexible Strip Ribbon Light (Alitrove, 16.4 feet)	1	B07MXXDWDM
Custom Machined Parts		
Rotary Encoder Adaptor	1	Custom Part (eMachineShop)
Head Plate Holder	2	Custom Part (eMachineShop)
Head Plate (Top Piece)	1	Custom Part (eMachineShop)
Head Plate (Bottom Piece)	1	Custom Part (eMachineShop)

Head rings	X	Custom Part (eMachineShop)
FLIR		
Firefly S Camera	1	FFY-U3-16S2M-S
USB 3.1 Locking Cable	1	ACC-01-2300
GPIO cable w/ 6 pins	1	ACC-01-3015