

System	Description	Our Part # / File name	Cost / Unit	# of Units	Extended Cost	Manufacture	Man. Part #	Supplier	Secondary Supplier	Lead Time*	Comments
Controls	Control Board	CB	\$ 46.48	2	\$ 92.96	China		goodlucksell ebay.com		14-20 days	
	DB25 Breakout Board	DBBB	\$ 17.99	1	\$ 17.99	Gravitech	DB25F-TERM	Gravitech.com		4-7 days	
	1" Male Header Connector Pins		\$ 3.89	3	\$ 11.67	Sullins Connector	PBC36DZAN-ND	Digikey		3-7 days	
	1" Female Header Connector Pins		\$ 4.30	3	\$ 12.90	Sullins Connector	S7139-ND	Digikey		3-7 days	
	Limit Switch L Mount	LSL	\$ 0.48	6	\$ 2.88	Panasonic EC	ESE-11HS2	Digikey		3-7 days	
	Limit Switch R Mount	LSR	\$ 0.68	6	\$ 4.08	Panasonic EC	ESE-11HS1	Digikey		3-7 days	
Lead Screw	Black ABS Stock Plastic		\$ 30.00	1	\$ 30.00		8586k191	McMaster		4-7 days	
	1/64" Rubber Dampers		\$ 4.94	1	\$ 4.94		9013k47	McMaster		4-7 days	
	Threaded Fasteners		\$ 30.00	1	\$ 30.00						
	Stepper Motors		\$ 40.00	4	\$ 160.00	Shanghai zhibei	36PA27G/42BYG40-160-4A	Phidgets Inc.		4-7 days	
Manipulator	Carriage	9829K3 Carriage	\$ 22.47	6	\$ 134.82	McMaster Carr	9829K3	McMaster		4-7 days	
	Guide Rail	Track	\$ 0.18	540	\$ 97.20	McMaster Carr	9829K13	McMaster		4-7 days	
	M3-6mm screws	9285SA307 M3 screw	\$ 0.25	25	\$ 6.22	McMaster Carr	9285SA307	McMaster		4-7 days	
	Stock Aluminum (1.25"x12"x1.25")	Aluminum for all manuf manipulator	\$ 15.55	1	\$ 15.55	McMaster Carr	9008K151	McMaster		4-7 days	For manufacturing
	Cylinder Mount	Cylinder Mount	n/a	3	\$ 90.00					0 days	manufactured
	vz bracket	vz bracket	n/a	1	\$ 15.35	manufactured				0 days	manufactured
	thread receiver	thread receiver	n/a	2	\$ 30.70	manufactured				0 days	manufactured
Hydraulics	T-Handle Valve	Valve	\$ 6.48	3	\$ 19.44			McMaster	4912K76	3-7 days	
	SS Branch Tee Fitting	1.8 Tube to 1.8 NPT Branch Tee T Fitting	\$ 29.38	3	\$ 88.14			McMaster	5182K771	3-7 days	
	SS Compression Fitting	1.8 Tube to 1.16 NPT	\$ 9.01	6	\$ 54.06			McMaster	5182K411	3-7 days	
	High-Strength Clear Nylon Tubing		\$ 0.16	25	\$ 4.00			McMaster	8359K11	3-7 days	
Parts being re-used from P12371 (Does not go into developmental budget)											
Controls	Joystick		\$ 29.99	1	\$ 29.99	Logitech				0 days	Re-using from P12371
	Freescale Microcontroller		\$ 95.00	1	\$ 95.00					0 days	Re-using from P12371
Lead Screw	Lead Screw		\$ 2.00	18	\$ 36.00	Thomson BSA	SV2580	n/a	n/a	0 days	Re-using from P12371
	Lead Screw Bearing		\$ 15.00	6	\$ 90.00	McMaster Carr	8600N9	n/a	n/a	0 days	Re-using from P12371
	Shaft Couplings		\$ 52.50	3	\$ 157.50		2463k11	McMaster		0 days	
	Lead Screw Nut		\$ 28.04	3	\$ 84.12	Thompson BSA	XCF-2580	n/a	n/a	0 days	Re-using from P12371
Manipulator	Aluminum		\$	1	\$					0 days	Re-using from P12371
	3/8" Bore Cylinder		\$ 28.14	3	\$ 84.42	Cylinder & Valve INC	300 series			0 days	Re-using from P12371
	1/2" Bore Cylinder	threaded piston cylinder	\$ 35.15	3	\$ 105.45	Cylinder & Valve INC	500 series	n/a	n/a	0 days	Re-using from P12371
	Pipette holder	unknown	unknown	1	unknown	unknown	unknown	unknown		0 days	Re-using from P12371
	Pipette Screw	unknown	\$ 0.55	1	\$ 0.55	McMaster Carr				0 days	Re-using from P12371