

12402 - Updated Bill of Materials

Item Description	Manufacturer	Manufacturer Part #	Vendor	Vendor Part #	Price / Unit	# Required	Estimated Total Cost	Estimated Shipping	Actual Total Cost	Actual Unit Cost
Female Tamiya Connector (15cm gold 18AWG)	All-battery	80000-4	All-battery	80000-4	\$1.69	8	\$13.52	\$5.20	\$12.96	\$1.62
Micro Controller	Texas Instruments	MSP430G2231IN14	Digi-Key	296-25832-5-ND	\$1.93	7	\$13.51	\$11.57	\$15.44	\$2.21
Micro Controller Dev Board	Texas Instruments	MSP-EXP430G2	Digi-Key	296-27570-ND	\$4.35	1	\$4.35	*	\$4.35	\$4.35
Switches (Relays)	Omron Electronics Inc	G6L-1P DC12	Digi-Key	Z1229-ND	\$2.76	8	\$22.08	*	\$22.08	\$2.76
Resistors (1W, 1% 0.75Ω) (THT) (Rs Regulator)	Ohmite	WHBR75FET	Digi-Key	WHBR75FECT-ND	\$0.93	8	\$7.44	*	\$7.44	\$0.93
Resistors (1/2W, 1% 750Ω) (THT) (R2 Regulator)	Vishay/Dale	CMF55750R00FHEB	Digi-Key	CMF750HFCT-ND	\$0.17	8	\$1.36	*	\$1.36	\$0.17
Resistors (1/2W, 1% 100Ω) (THT) (R1 Regulator)	Vishay/Dale	CMF55100R00FHEB	Digi-Key	CMF100HFCT-ND	\$0.17	8	\$1.36	*	\$1.36	\$0.17
Resistors (1/2W, 1% 909Ω) (THT) (Red LED)	Vishay/Dale	CMF55909R00FHEB	Digi-Key	CMF909HFCT-ND	\$0.17	8	\$1.36	*	\$1.36	\$0.17
Resistors (1/2W, 1% 825Ω) (THT) (Green LED)	Vishay/Dale	CMF55825R00FHEB	Digi-Key	CMF825HFCT-ND	\$0.17	8	\$1.36	*	\$1.36	\$0.17
Resistors (1/2W, 1% 20kΩ) (THT) (V Div)	Vishay/Dale	CMF5520K000FHEB	Digi-Key	CMF20.0KHCT-ND	\$0.17	8	\$1.36	*	\$1.36	\$0.17
Resistors (1/2W, 1% 10kΩ) (THT) (V Div/R1 Amp)	Vishay/Dale	CMF5510K000FHEB	Digi-Key	CMF10.0KHCT-ND	\$0.17	16	\$2.72	*	\$2.38	\$0.15
Resistors (1/2W, 5% 30kΩ) (THT) (R2 Amp)	Stackpole Electronics Inc	CF12JT30K0	Digi-Key	CF12JT30K0CT-ND	\$0.14	8	\$1.12	*	\$1.12	\$0.14
Capacitor (0.1μF)	AVX Corporation	SR215E104MAR	Digi-Key	478-3193-ND	\$0.28	1	\$0.28	*	\$0.28	\$0.28
Capacitor (10μF)	Panasonic - ECG	ECA-1CM100	Digi-Key	P5134-ND	\$0.20	10	\$2.00	*	\$2.00	\$0.20
Capacitor (100μF)	Panasonic - ECG	ECA-1CM101	Digi-Key	P5138-ND	\$0.22	8	\$1.76	*	\$1.76	\$0.22
Diode (1N4001)	Comchip Technology	1N4001-G	Digi-Key	641-1310-1-ND	\$0.25	8	\$2.00	*	\$2.00	\$0.25
LEDs (Red) (THT)	Kingbright Corp	WP7113LID	Digi-Key	754-1266-ND	\$0.11	8	\$0.88	*	\$0.88	\$0.11
LEDs (Green) (THT)	Kingbright Corp	WP7113LGD	Digi-Key	754-1265-ND	\$0.11	8	\$0.88	*	\$0.88	\$0.11
Power Barrel Connector (2.5x5.5mm 8A)	CUI Inc	PJ-063BH	Digi-Key	CP-063BH-ND	\$1.78	1	\$1.78	*	\$1.78	\$1.78
Terminal Block Connectors	TE Connectivity	36954	Digi-Key	A27449-ND	\$0.61	20	\$12.18	*	\$13.04	\$0.65
Terminal Block	TE Connectivity	1546306-2	Digi-Key	A98503-ND	\$0.67	8	\$5.36	*	\$5.36	\$0.67
IC Socket 14 Pin (THT)	TE Connectivity	1-390261-3	Digi-Key	A100205-ND	\$0.16	8	\$1.28	*	\$1.36	\$0.17
Fuse Holder	Littelfuse/Wickmann	6560001009	Digi-Key	WK6245-ND	\$0.90	1	\$0.90	*	\$0.90	\$0.90
Fuse	Littelfuse Inc	021706.3HXP	Digi-Key	F2401-ND	\$0.34	1	\$0.34	*	\$0.34	\$0.34
OpAmp (THT)	STMicroelectronics	TS912AIN	Digi-Key	497-7682-5-ND	\$1.67	8	\$13.36	*	\$13.36	\$1.67
Reset Switch (THT)	TE Connectivity	FSM4JH	Digi-Key	450-1650-ND	\$0.15	1	\$0.15	*	\$0.15	\$0.15
DC Equipment Cooling Fan	Sunon Fans	KDE1205PHV2 MS.A.GN	Sunon Fans	KDE1205PHV2 MS.A.GN	\$4.29	1	\$4.29	*	\$4.29	\$4.29
PCB (5x7)	Advance	Custom	Advance	Custom	\$51.00	1	\$51.00	*	\$33.00	\$33.00
3-7/8 in. Utility Pull	Everbilt	15717	Home Depot	Store SKU # 794863	\$2.87	1	\$2.87	\$0.00	\$2.96	\$2.96
Silicone II 2.8 oz Tube	GE	GE281 3TG	Home Depot	Store SKU # 398942	\$3.89	1	\$3.89	\$0.00	\$3.89	\$3.89
Regulators (Batteries) (THT)	Linear Technology	LT1086CT	Linear Technology	LT1086CM	\$2.50	8	\$20.00	\$10.53	\$21.20	\$2.65
Regulators (μController) (THT)	Linear Technology	LT1086CT-3.6	Linear Technology	LT1086CM-3.6	\$2.50	1	\$2.50	*	\$2.65	\$2.65

2" Aluminum 90 deg angle iron - 4'	McMaster-Carr	8982K144	McMaster-Carr	8982K144	\$21.04	1	\$21.04	\$5.00	\$21.04	\$21.04
1/4" x 12" x 24" Polycarbonate Sheet	McMaster-Carr	8707K132	McMaster-Carr	8707K132	\$71.11	1	\$40.88	\$5.00	\$40.88	\$40.88
1" 90 Deg Polycarbonate - 4' length	McMaster-Carr	1755K62	McMaster-Carr	1755K62	\$5.78	1	\$5.78	\$5.00	\$5.78	\$5.78
Type A Washer [6]	McMaster-Carr	90126A509	McMaster-Carr	90126A509	\$1.27	1	\$1.27	\$5.00	\$1.27	\$1.27
Pan Machine Screws [6-32] 3/4"	McMaster-Carr	90272A151	McMaster-Carr	90272A151	\$2.68	1	\$2.68	\$5.00	\$2.68	\$2.68
Pan Machine Screws [6-32] 1/2"	McMaster-Carr	91772A148	McMaster-Carr	91772A148	\$4.89	1	\$4.89	\$5.00	\$4.89	\$4.89
Thin Locking Nuts [6-32]	McMaster-Carr	90633A007	McMaster-Carr	90633A007	\$2.30	1	\$2.30	\$5.00	\$2.30	\$2.30
Rubber Feet	McMaster-Carr	95495K241	McMaster-Carr	95495K241	\$4.80	1	\$4.80	\$5.00	\$4.80	\$4.80
Velcro Sheet	McMaster-Carr	95005K291	McMaster-Carr	95005K291	\$8.56	1	\$8.56	\$5.00	\$8.56	\$8.56
Top Grab Latch	McMaster-Carr	1790A15	McMaster-Carr	1790A15	\$2.76	1	\$2.76	\$5.00	\$2.76	\$2.76
Pinless Hinge	McMaster-Carr	1637A713	McMaster-Carr	1637A713	\$0.78	2	\$1.56	\$5.00	\$1.56	\$0.78
Inside Velcro	McMaster-Carr	9776K71	McMaster-Carr	9776K71	\$6.85	1	\$6.85	\$0.00	\$6.85	\$6.85
Steel Fan Grate	McMaster-Carr	19155K92	McMaster-Carr	19155K92	\$1.11	1	\$1.11	\$0.00	\$1.11	\$1.11
AC/DC Converter	Mini-Box	PWR-ACDC-12V-8.5A-102W	Mini-Box	PWR-ACDC-12V-8.5A-102W	\$35.95	1	\$35.95	\$12.00	\$35.95	\$35.95
Test Point Socket	Aries	10-0513-10T	Mouser	535-10-0513-10T	\$1.74	4	\$6.96	*	\$7.04	\$1.76
LED Lens Cap	Keystone	8671	Mouser	534-8671	\$0.44	16	\$7.04	\$10.00	\$6.96	\$0.44
25 Ft 18 Guage Wire	RadioShack	278-567	RadioShack	278-567	\$7.99	1	\$7.99	*	\$0.00	\$0.00
Weather Enclosure	Rubbermaid	3R39	Walmart	7432032	\$8.49	1	\$8.49	\$0.00	\$8.49	\$8.49
PCB Mounting Spacer	Richco	SRLCBS-8-01	Richco	SRLCBS-8-01	samples	10	\$0.00	\$0.00	\$0.00	\$0.00
PCB Mounting Spacer Rivet	Richco	SR-4070B	Richco	SR-4070B	samples	10	\$0.00	\$0.00	\$0.00	\$0.00
New Hinge	McMaster-Carr	1498A12	McMaster-Carr	1498A12	\$7.19	1	\$7.19	\$5.00	\$7.19	\$7.19
New Fan Grate	McMaster-Carr	19155K94	McMaster-Carr	19155K94	\$1.19	1	\$1.19	*	\$1.19	\$1.19
Smartsheet (1 month split between 12401 & 402)	SmartSheet Inc.	-	-	-	\$15.99	1	\$15.99	*	\$7.98	\$7.98
Laser Cutting Labor (time)	-	-	-	-	\$15.00	3	\$45.00	\$0.00	\$45.00	\$15.00

~~\$370.15~~ ~~\$104.30~~
Estimated
Total Costs: \$474.45

Actual Shipping Costs	
LT ship	\$10.49
LT tax	\$1.97
Digi ship	\$9.89
Digi tax	\$7.76
McMaster ship	\$9.97
Advanced ship	\$18.31
Mini-box ship	\$11.89
All-B ship	\$10.23
Re-McMaster	\$5.08
	\$85.59
Actual Total Costs:	\$494.52