

# Purchasing Report

ECE 492 - Spring 2016

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## Summary

Request #	Vendor	Date Requested	TSV	VSCADA	GLV	Cabling	Motor Char/Model	Shipping/Tax/General	Extra-Budgetary	Request Totals	Notes	
001	8devices	2/8/2016		\$65.00				\$9.50		\$74.50		
002	Digi-Key	2/18/2016			\$7.88					\$7.88	Shipped with other department parts	
003	Gigavac	2/18/2016			\$92.00			\$16.88		\$108.88		
004	Amazon	2/18/2016			\$17.99			\$8.14		\$26.13		
005	Amazon	3/3/2016		\$168.50				\$1.80		\$170.30		
006	Digi-Key	3/9/2016	\$162.20		\$99.18				\$501.63	\$763.01	Shipped with other department parts	
007	Linear Technology	3/14/2016								\$0.00	Order cancelled	
008	freto (via Tindie)	3/18/2016			\$14.95			\$3.00		\$17.95		
009	Adafruit	3/29/2016		\$19.95				\$9.51		\$29.46		
010	Amazon	3/29/2016		\$4.99						\$4.99		
011	Deutsch Connectors	3/29/2016				\$93.11		\$11.83		\$104.94		
012	Digi-Key	3/29/2016	\$23.75		\$81.97	\$8.26		\$11.59	\$72.46	\$198.03		
013	Amazon	4/4/2016	\$11.42	\$7.99				\$19.13	\$14.85	\$53.39		
014	Mouser Electronics	4/6/2016	\$9.68	\$2.68	\$38.71			\$7.99	\$13.42	\$72.48		
015	Newark	4/6/2016	\$261.10					\$33.70	\$230.00	\$524.80		
016	Digi-Key	4/6/2016	\$65.46		\$36.09			\$12.45	\$188.74	\$302.74		
017	DFRobot	4/11/2016						\$12.00	\$46.00	\$58.00		
018	Digi-Key	4/13/2016	\$11.66		\$61.03			\$10.60	\$44.49	\$127.78		
019	Amazon	4/14/2016	\$5.29		\$61.97			\$9.74	\$15.87	\$92.87		
020	Newark	4/21/2016			\$100.54	\$3.62		\$7.87		\$112.03		
021	Digi-Key	4/21/2016	\$8.46	\$1.88	\$128.44	\$9.33		\$10.60	\$33.09	\$191.80		
022	McMaster-Carr	4/22/2016	\$33.24		\$35.24	\$199.20		\$15.37		\$283.05		
023	Amazon	4/25/2016			\$6.00	\$12.31		\$6.03		\$24.34		
024	WireCare	4/27/2016	\$25.94			\$116.86		\$11.37	\$174.12	\$328.29		
025	McMaster-Carr	5/2/2016				\$48.36	\$86.88	\$7.19		\$142.43		
026	Digi-Key	5/3/2016	\$0.60		\$9.20				\$1.80	\$11.60	Shipped with other department parts	
n/a	Advanced Circuits	3/8/2016	\$83.00					\$43.48		\$126.48		
n/a	Advanced Circuits	4/2/2016	\$157.50		\$41.50			\$86.96		\$285.96		
n/a	Advanced Circuits	4/15/2016			\$33.00			\$43.48		\$76.48		
		<b>Overall</b>										
<b>Total Spent</b>		<b>\$2,984.12</b>	\$859.30	\$270.99	\$865.69	\$491.05	\$86.88	\$410.21	\$1,336.47	\$4,320.59		
<b>Total Budgeted</b>		<b>\$3,000.00</b>	\$850.00	\$400.00	\$900.00	\$300.00	\$250.00	\$300.00	-	-		
<b>Remaining Budget</b>		<b>\$15.88</b>	<b>-\$9.30</b>	\$129.01	\$34.31	<b>-\$191.05</b>	\$163.12	<b>-\$110.21</b>	-	-		
			<b>Total Budgeted Expenses</b>						<b>Total Project Expenses</b>			
			<b>\$2,984.12</b>						<b>\$4,320.59</b>			

## ECE Department Material Request

**Course:** ECE 492  
**Professor:** Nadovich/Yu

**Req Number** 001

**Requested By:** Joseph Cericola on behalf of Domenick Falco  
**Requested Date:** 8-Feb-16  
**Ship By:** Ground

**Vendor:** 8devices  
**Web Site** <http://shop.8devices.com/index.php?route=common/home>  
**Phone** 370609655

#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	1	USB2CAN	USB/CAN adapter	\$65.00	\$65.00	19-Feb-16
2					\$0.00	
3					\$0.00	
4					\$0.00	
5					\$0.00	
6					\$0.00	
7					\$0.00	
8					\$0.00	
9					\$0.00	
10					\$0.00	

**Shipping Fees** \$9.50  
**Grand Total:** \$74.50

Instructor Approval: \_\_\_\_\_

Department Approval: \_\_\_\_\_  
 (Over \$500)

## ECE Department Material Request

<b>Course:</b> ECE 492		<b>Req Number</b> 002				
<b>Professor:</b> Nadovich/Yu						
<b>Requested By:</b> Joseph Cericola on behalf of Timothy Andrews		<b>Vendor:</b> Digi-Key				
<b>Requested Date:</b> 18-Feb-16		<b>Web Site:</b> <a href="http://www.digikey.com">www.digikey.com</a>				
<b>Ship By:</b> Ground		<b>Phone:</b> 1-800-344-4539				
#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	2	PB1800-ND	Automotive Relay, SPDT, 40A, 24V	\$3.94	\$7.88	24-Feb-16
2					\$0.00	
3					\$0.00	
4					\$0.00	
5					\$0.00	
6					\$0.00	
7					\$0.00	
8					\$0.00	
9					\$0.00	
10					\$0.00	
				<b>Shipping Fees</b>	\$0.00	
				<b>Grand Total:</b>	\$7.88	
<b>Instructor Approval:</b>			_____			
<b>Department Approval:</b>			_____			
(Over \$500)						

## ECE Department Material Request

<b>Course:</b> ECE 492		<b>Req Number</b> 003				
<b>Professor:</b> Nadovich/Yu						
<b>Requested By:</b> Timothy Andrews		<b>Vendor:</b> Gigavac				
<b>Requested Date:</b> 18-Feb-16		<b>Web Site:</b> <a href="http://www.gigavac.com">www.gigavac.com</a>				
<b>Ship By:</b> Ground		<b>Phone:</b> 1-805-684-8401				
<b>#</b>	<b>Quantity</b>	<b>Vendor Part</b>	<b>Description</b>	<b>Unit Price</b>	<b>Total Price</b>	<b>Rcvd</b>
1	1	GX14CA	350A Contactor, 24VDC coil, 15in flying leads, no auxially contact	\$92.00	\$92.00	26-Feb-16
2					\$0.00	
3					\$0.00	
4					\$0.00	
5					\$0.00	
6					\$0.00	
7					\$0.00	
8					\$0.00	
9					\$0.00	
10					\$0.00	
				<b>Shipping Fees</b>	\$16.88	
				<b>Grand Total:</b>	\$108.88	
<b>Instructor Approval:</b>						
<b>Department Approval:</b>						
(Over \$500)						

## ECE Department Material Request

<b>Course:</b>	ECE 492	<b>Req Number</b>	004			
<b>Professor:</b>	Nadovich/Yu					
<b>Requested By:</b>	Timothy Andrews	<b>Vendor:</b>	Amazon			
<b>Requested Date:</b>	18-Feb-16	<b>Web Site</b>	<a href="http://www.amazon.com">www.amazon.com</a>			
<b>Ship By:</b>	Ground	<b>Phone</b>	1-734-414-0900			
#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	1	2843011	Hella 2843 Series 100A Rating Battery Master Switch	\$17.99	\$17.99	24-Feb-16
2					\$0.00	
3					\$0.00	
4					\$0.00	
5					\$0.00	
6					\$0.00	
7					\$0.00	
8					\$0.00	
9					\$0.00	
10					\$0.00	
				<b>Shipping Fees</b>	\$8.14	
				<b>Grand Total:</b>	\$26.13	
<b>Instructor Approval:</b>						
<b>Department Approval:</b>						
(Over \$500)						

## ECE Department Material Request

<b>Course:</b> ECE 492	<b>Req Number</b> 005
<b>Professor:</b> Nadovich/Yu	

<b>Requested By:</b> Joseph Cericola on behalf of Domenick Falco	<b>Vendor:</b> Amazon
<b>Requested Date:</b> 3-Mar-16	<b>Web Site:</b> <a href="http://www.amazon.com">www.amazon.com</a>
<b>Ship By:</b> Ground	<b>Phone:</b> 1-734-414-0900

#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	1	B01C6FRVQM	Raspberry Pi 3 Model B Board	\$49.99	\$49.99	14-Mar-16
2	1	B0153R2A9I	Raspberry Pi Foundation 7" Touchscreen LCD Display	\$88.62	\$88.62	14-Mar-16
3	1	B00870ZHCQ	AmazonBasics High-Speed HDMI Cable - 3 Feet	\$4.99	\$4.99	14-Mar-16
4	1	B00IVPU7AO	Samsung 64GB EVO Class 10 Micro SDXC Card with Adapter	\$17.95	\$17.95	14-Mar-16
5	1	B009D79VH4	Transcend Information USB 3.0 Card Reader	\$6.95	\$6.95	14-Mar-16
6					\$0.00	
7					\$0.00	
8					\$0.00	
9					\$0.00	
10					\$0.00	

<b>Shipping Fees</b>	\$1.80
<b>Grand Total:</b>	\$170.30

Instructor Approval: \_\_\_\_\_

Department Approval:  
(Over \$500) \_\_\_\_\_

## ECE Department Material Request

	<b>Course:</b> ECE 492		<b>Req Number</b>		006		
	<b>Professor:</b> Nadovich/Yu						
<b>Requested By:</b> Joseph Cericola			<b>Vendor:</b> Digi-Key				
<b>Requested Date:</b> 9-Mar-16			<b>Web Site:</b> <a href="http://www.digikey.com">www.digikey.com</a>				
<b>Ship By:</b> Ground			<b>Phone:</b> 1-800-344-4539				
#	Quantity	Vendor Part	Description	Customer Reference	Unit Price	Total Price	Rcvd
1	50	P0.0GCT-ND	Panasonic 0.00hm Chip Resistor 0603	R30, R31	\$0.01260	\$0.63	15-Mar-16
2	50	P120CCT-ND	Panasonic 120Ohm 1% Chip Resistor 0805	R25	\$0.02200	\$1.10	15-Mar-16
3	100	P10.0KHCT-ND	Panasonic 10KOhm 1% Chip Resistor 0603	R1, R2, R5, R9, R10, R16, R34, R37, R38	\$0.00840	\$0.84	15-Mar-16
4	50	P10.0KCCT-ND	Panasonic 10KOhm 1% Chip Resistor 0805	R18, R19, R20	\$0.02200	\$1.10	15-Mar-16
5	50	P113KHCT-ND	Panasonic 113KOhm 1% Chip Resistor 0603	R15	\$0.01140	\$0.57	15-Mar-16
6	50	P115KHCT-ND	Panasonic 115KOhm 1% Chip Resistor 0603	R17	\$0.01140	\$0.57	15-Mar-16
7	50	P300KHCT-ND	Panasonic 300KOhm 1% Chip Resistor 0603	R14	\$0.01140	\$0.57	15-Mar-16
8	10	CSNL1206FT1 L00CT-ND	Stackpole 0.0010hm 1% Chip Resistor 1206	R3	\$0.53900	\$5.39	15-Mar-16
9	10	RMCF0603FT1 0M0CT-ND	Stackpole 10M0hm 1% Chip Resistor 0603	R32	\$0.01900	\$0.19	15-Mar-16
10	50	490-12530-1-ND	Murata 10pF 50V Ceramic Cap 0603	C1, C4	\$0.04380	\$2.19	15-Mar-16
11	10	490-1616-1-ND	Murata 220pF 50V Ceramic Cap 0805	C14	\$0.11000	\$1.10	15-Mar-16
12	10	490-12330-1-ND	Murata 1uF 50V Ceramic Cap 0603	C12	\$0.16300	\$1.63	15-Mar-16
13	10	490-1891-1-ND	Murata 10uF 50V Ceramic Cap 1210	C9, C11, C15	\$0.58000	\$5.80	15-Mar-16
14	10	493-6214-1-ND	Nichicon 220uF 20% 16V Aluminum Cap	C16	\$0.29300	\$2.93	15-Mar-16
15	10	493-9379-1-ND	Nichicon 220uF 20% 50V Aluminum Cap	C10	\$0.75700	\$7.57	15-Mar-16
16	10	445-173047-1-ND	TDK 220uH Fixed Inductor	L1	\$0.46000	\$4.60	15-Mar-16



17	50	SK310A-LTPMSCT-ND	Micro Commercial 100V 3A Schottky Diode	D5, D6, D8, D9, D15, D18, D19, D21	\$0.32880	\$16.44	15-Mar-16
18	10	PTZTE2533BC T-ND	Rohm 35V 1W Zener Diode	D7	\$0.38500	\$3.85	15-Mar-16
19	10	568-6370-1-ND	NXP 5.1V 500MW Zener Diode	D20	\$0.16600	\$1.66	15-Mar-16
20	10	732-4980-1-ND	Würth LED Green 0603	D1	\$0.24000	\$2.40	15-Mar-16
21	25	RRR015P03TLCT-ND	Rohm P-Fet 30V 1.5A SC-96	Q1, Q2, Q3, Q4	\$0.37200	\$9.30	15-Mar-16
22	6	1297-1132-1-ND	Würth Flyback Transformer LT8302	T1	\$4.55000	\$27.30	15-Mar-16
23	25	507-1077-1-ND	Bel Fuse 1A Board Mount Fuse 1206	F1	\$0.26800	\$6.70	15-Mar-16
24	6	Z3697-ND	Omron 10A 3V Relay	RLY1	\$1.43000	\$8.58	15-Mar-16
25	6	PB1014-ND	TE Connectivity 30A 5V Relay	RLY2	\$4.22000	\$25.32	15-Mar-16
26	10	887-1741-1-ND	TXC 10MHz Surface Mount Crystal	X1	\$0.60500	\$6.05	15-Mar-16
27	6	CKN9363CT-ND	C&K 0.1A 42V Pushbutton Switch	SW1	\$2.43000	\$14.58	15-Mar-16
28	6	ED2983-ND	On Shore Technology 4-Pos USB Receptacle	J1	\$0.58000	\$3.48	15-Mar-16
29	5	5237FE-ND	Norcomp 37-Pos D-Sub Receptacle	J2	\$4.08000	\$20.40	15-Mar-16
30	6	WM3789CT-ND	Molex 6-Pos Vertical Surface Mount RJ12 Receptacle	J3	\$1.16000	\$6.96	15-Mar-16
31	5	A113982-ND	TE Connectivity 4-Pos Blade Socket Receptacle	P1	\$8.66000	\$43.30	15-Mar-16
32	5	WM1340-ND	Molex 2-Pos Connector Header	P2	\$2.61000	\$13.05	15-Mar-16
33	5	WM1344-ND	Molex 6-Pos Connector Header	P3	\$4.20000	\$21.00	15-Mar-16
34	3	3M11931-ND	Sullins 16-Pos Connector Header	P4	\$0.55000	\$1.65	15-Mar-16
35	10	609-4054-ND	Amphenol 10-Pos Connector Header	P5	\$0.96800	\$9.68	15-Mar-16
36	3	AT90CAN128-16AURCT-ND	Atmel 128KB Microcontroller	U1	\$10.40000	\$31.20	15-Mar-16
37	5	ADM6320CY29ARJZ-R7CT-ND	Analog Devices External Watchdog	U2	\$1.44000	\$7.20	15-Mar-16
38	5	568-1074-1-ND	NXP I2C I/O Expander	U3	\$1.22000	\$6.10	15-Mar-16
39	6	296-29034-1-ND	Texas Instruments Current Monitor	U4	\$3.44000	\$20.64	15-Mar-16
40	5	296-38849-1-ND	Texas Instruments 16-Bit ADC	U5	\$5.65000	\$28.25	15-Mar-16
41	5	LTC3638EMSE #PBF-ND	Linear Technology Buck Converter	U6	\$7.79000	\$38.95	15-Mar-16
42	6	336-2048-5-ND	Silicon Labs 3.75KV Digital Isolator	U8	\$3.33000	\$19.98	15-Mar-16

43	2	NCP1117ST33 T3GOSCT-ND	ON 3.3V Voltage Regulator	U9	\$0.46000	\$0.92	15-Mar-16
44	6	296-13493-1- ND	Texas Instruments Inverter	U10	\$0.54000	\$3.24	15-Mar-16
45	6	MCP2551- I/SN-ND	Microchip Technology Can Transceiver	U11	\$1.02000	\$6.12	15-Mar-16
46	5	768-1007-1- ND	FTDI USB/UART Serial Interface	U12	\$4.50000	\$22.50	15-Mar-16
47	6	TLP2361(V4- TPLECT-ND	Toshiba 3.75KV Optoisolator	U13	\$1.14000	\$6.84	15-Mar-16
48	5	603-1284-ND	Delta 5VDC 200mA Fan		\$12.08000	\$60.40	15-Mar-16
49	10	F5984-ND	Littlefuse 30A In-Line Blade Fuseholder		\$4.45500	\$44.55	15-Mar-16
50	25	F4195-ND	Littlefuse 25A Blade Fuse		\$0.24000	\$6.00	15-Mar-16
51	6	556879-4-ND	TE Connectivity 4-Pos Blade Plug		\$4.83000	\$28.98	15-Mar-16
52	25	A104027CT- ND	TE Connectivity Blade Pin		\$0.63200	\$15.80	15-Mar-16
53	10	609-4055-ND	Amphenol 10-Pos Connector Receptacle		\$2.38800	\$23.88	15-Mar-16
54	6	237ME-ND	Norcomp 37-Pos D-Sub Connector Header		\$2.30000	\$13.80	15-Mar-16
55	1	458-1150-ND	Mallory Sonalert 2.9KHz Buzzer		\$16.66000	\$16.66	15-Mar-16
56	2	67-1184-ND	Lumex Panel Mount LED Green		\$1.32000	\$2.64	15-Mar-16
57	1	SC2106-ND	Switchcraft Panel Mount HDMI Receptacle		\$19.74000	\$19.74	15-Mar-16
58	2	626-1355-ND	Conec Panel Mount USB Receptacle		\$13.16000	\$26.32	15-Mar-16
59	1	626-1461-ND	Conec Panel Mount RJ45 Coupler		\$15.77000	\$15.77	1-Apr-16
60	1	SC2102-ND	Switchcraft RJ45 Connector Dust Cap		\$2.05000	\$2.05	15-Mar-16
61	100	A27828-ND	TE Connectivity Female Crimp Quick Connect		\$0.16000	\$16.00	15-Mar-16
62						\$0.00	
					Shipping Fees	\$0.00	
					Grand Total:	\$763.01	
		Instructor Approval:					
		Department Approval:					
		(Over \$500)					

## ECE Department Material Request

<b>Course:</b> ECE 492		<b>Req Number</b> 007				
<b>Professor:</b> Nadovich/Yu						
<b>Requested By:</b> Joseph Cericola		<b>Vendor:</b> Linear Technology				
<b>Requested Date:</b> 14-Mar-16		<b>Web Site</b> <a href="http://www.linear.com">www.linear.com</a>				
<b>Ship By:</b> Ground		<b>Phone</b> 408-432-1900				
#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	10	LT8302ES8E#PBF	Linear Technology 42V Flyback Converter 8-SOIC	\$4.96	\$49.60	
2					\$0.00	
3					\$0.00	
4					\$0.00	
5					\$0.00	
6					\$0.00	
7					\$0.00	
8					\$0.00	
9					\$0.00	
10					\$0.00	
				<b>Shipping Fees</b>		
				<b>Grand Total:</b>	\$49.60	
Instructor Approval:						
Department Approval:						
(Over \$500)						

## ECE Department Material Request

<b>Course:</b>	ECE 492	<b>Req Number</b>	008			
<b>Professor:</b>	Nadovich/Yu					
<b>Requested By:</b>	Joseph Cericola on behalf of Timothy Andrews	<b>Vendor:</b>	freto (via Tindie)			
<b>Requested Date:</b>	18-Mar-16	<b>Web Site</b>	<a href="http://www.tindie.com">www.tindie.com</a>			
<b>Ship By:</b>	Ground	<b>Phone</b>				
<b>#</b>	<b>Quantity</b>	<b>Vendor Part</b>	<b>Description</b>	<b>Unit Price</b>	<b>Total Price</b>	<b>Rcvd</b>
1	1	n/a	Pi Camera HDMI Cable Extension	\$14.95	\$14.95	12-Apr-16
2					\$0.00	
3					\$0.00	
4					\$0.00	
5					\$0.00	
6					\$0.00	
7					\$0.00	
8					\$0.00	
9					\$0.00	
10					\$0.00	
				<b>Shipping Fees</b>	\$3.00	
				<b>Grand Total:</b>	\$17.95	
<b>Instructor Approval:</b>			_____			
<b>Department Approval:</b>			_____			
(Over \$500)			_____			

## ECE Department Material Request

<b>Course:</b>	ECE 492	<b>Req Number</b>	009			
<b>Professor:</b>	Nadovich/Yu					
<b>Requested By:</b>	Joseph Cericola on behalf of Domenick Falco	<b>Vendor:</b>	Adafruit			
<b>Requested Date:</b>	29-Mar-16	<b>Web Site</b>	<a href="http://www.adafruit.com">www.adafruit.com</a>			
<b>Ship By:</b>	Ground	<b>Phone</b>				
<b>#</b>	<b>Quantity</b>	<b>Vendor Part</b>	<b>Description</b>	<b>Unit Price</b>	<b>Total Price</b>	<b>Rcvd</b>
1	1	1030	USB WiFi Module with Antenna for Raspberry Pi	\$19.95	\$19.95	1-Apr-16
2					\$0.00	
3					\$0.00	
4					\$0.00	
5					\$0.00	
6					\$0.00	
7					\$0.00	
8					\$0.00	
9					\$0.00	
10					\$0.00	
				<b>Shipping Fees</b>	\$9.51	
				<b>Grand Total:</b>	\$29.46	
<b>Instructor Approval:</b>						
<b>Department Approval:</b>						
(Over \$500)						

## ECE Department Material Request

<b>Course:</b> ECE 492		<b>Req Number</b>	010
<b>Professor:</b> Nadovich/Yu			
<b>Requested By:</b> Joseph Cericola on behalf of Domenick Falco		<b>Vendor:</b> Amazon	
<b>Requested Date:</b> 29-Mar-16		<b>Web Site:</b> <a href="http://www.amazon.com">www.amazon.com</a>	
<b>Ship By:</b> Ground		<b>Phone:</b> 1-734-414-0900	

#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	1	B018BGRDVS	LoveRPi Heatsink Set for Raspberry Pi 2/3 Model B CPU and LAN	\$4.99	\$4.99	8-Apr-16
2					\$0.00	
3					\$0.00	
4					\$0.00	
5					\$0.00	
6					\$0.00	
7					\$0.00	
8					\$0.00	
9					\$0.00	
10					\$0.00	

<b>Shipping Fees</b>	\$0.00
<b>Grand Total:</b>	\$4.99

Instructor Approval: \_\_\_\_\_

Department Approval: \_\_\_\_\_  
(Over \$500)

## ECE Department Material Request

<b>Course:</b>	ECE 492	<b>Req Number</b>	011			
<b>Professor:</b>	Nadovich/Yu					
<b>Requested By:</b>	Joseph Cericola on behalf of Timothy Andrews	<b>Vendor:</b>	Deutsch Connectors			
<b>Requested Date:</b>	29-Mar-16	<b>Web Site</b>	<a href="http://www.deutschconnector.com">www.deutschconnector.com</a>			
<b>Ship By:</b>	Ground	<b>Phone</b>	877-364-8036			
#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	2	DT04-2P-L012-Assy	2-Way Receptacle Assembly, Flange Mount, Gray	\$10.03	\$20.06	1-Apr-16
2	1	DT04-4P-L012-Assy	4-Way Receptacle Assembly, Flange Mount, Gray	\$9.66	\$9.66	1-Apr-16
3	1	DT04-6P-CL09-Assy	6-Way Receptacle Assembly, Flange Mount, Gasketed, Black	\$22.07	\$22.07	1-Apr-16
4	2	DT04-08PA-L012-Assy	8-Way Receptacle Assembly, Flange Mount, Gray	\$13.38	\$26.76	1-Apr-16
5	2	DT3P-L012-GKT	Neoprene Gasket for 2-Way and 3-Way Flange Mount Recaptacle	\$0.96	\$1.92	1-Apr-16
6	8	DT4P-L012-GKT	Neoprene Gasket for 4-Way Flange Mount Recaptacle	\$1.10	\$8.80	1-Apr-16
7	2	DT8P-L012-GKT	Neoprene Gasket for 8-Way Flange Mount Recaptacle	\$1.92	\$3.84	1-Apr-16
8					\$0.00	
9					\$0.00	
10					\$0.00	
				<b>Shipping Fees</b>	\$11.83	
				<b>Grand Total:</b>	\$104.94	
		<b>Instructor Approval:</b>				
		<b>Department Approval:</b>				
		(Over \$500)				

## ECE Department Material Request

<b>Course:</b> ECE 492	<b>Req Number</b> 012
<b>Professor:</b> Nadovich/Yu	
<b>Requested By:</b> Joseph Cericola	<b>Vendor:</b> Digi-Key
<b>Requested Date:</b> 29-Mar-16	<b>Web Site:</b> <a href="http://www.digikey.com">www.digikey.com</a>
<b>Ship By:</b> Ground	<b>Phone:</b> 1-800-344-4539

#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	1	1053-1202-ND	Orion 5VDC 40mm-Square Fan	\$9.9800	\$9.98	4-Apr-16
2	1	1053-1390-ND	Orion 40mm-Square Fan Filter	\$1.3500	\$1.35	4-Apr-16
3	10	952-1512-ND	Harwin 25mm 3M Hex Standoff	\$0.6080	\$6.08	4-Apr-16
4	10	36-9191-4-ND	Keystone Electronics M3 Machine Screw	\$0.2180	\$2.18	4-Apr-16
5	1	67-1183-ND	Lumex Panel Mount LED Red	\$1.2000	\$1.20	4-Apr-16
6	10	F4200-ND	Littlefuse 15A Blade Fuse	\$0.2600	\$2.60	4-Apr-16
7	10	F4197-ND	Littlefuse 5A Blade Fuse	\$0.2600	\$2.60	4-Apr-16
8	5	BK-6010-ND	MPD Blade Fuse PCB Block	\$0.5400	\$2.70	4-Apr-16
9	1	Z2254-ND	Omron 10A 24V G5LE SPST Relay	\$1.3000	\$1.30	4-Apr-16
10	1	Z3115-ND	Omron 10A 5V G5LE SPST Relay	\$1.4100	\$1.41	4-Apr-16
11	2	296-34970-1-ND	Texas Instruments High Side Switch	\$0.5400	\$1.08	4-Apr-16
12	1	AE10924-ND	Assmann 9-Pos D-Sub Receptacle	\$0.7800	\$0.78	4-Apr-16
13	50	ED2609-ND	On Shore Technology 2-Pos 5.08mm PCB Terminal Block	\$0.2908	\$14.54	4-Apr-16
14	10	ED2610-ND	On Shore Technology 3-Pos 5.08mm PCB Terminal Block	\$0.5100	\$5.10	4-Apr-16
15	4	811-2109-5-ND	Murata DC/DC Converter 5V 1.2A	\$22.0000	\$88.00	4-Apr-16
16	1	102-2348-ND	CUI DC/DC Converter 5V 4A	\$19.9100	\$19.91	4-Apr-16
17	1	102-2421-ND	CUI DC/DC Converter 12V 2.5A	\$22.1800	\$22.18	4-Apr-16
18	10	SMAZ30-TPMSCT-ND	Micro Commercial 30V Zener Diode	\$0.3450	\$3.45	4-Apr-16

	<b>Shipping Fees</b> \$11.59
	<b>Grand Total:</b> \$198.03
<b>Instructor Approval:</b>	



	Department Approval:					
	(Over \$500)					

## ECE Department Material Request

<b>Course:</b> ECE 492		<b>Req Number</b>	013
<b>Professor:</b> Nadovich/Yu			
<b>Requested By:</b> Joseph Cericola		<b>Vendor:</b> Amazon	
<b>Requested Date:</b> 4-Apr-16		<b>Web Site:</b> <a href="http://www.amazon.com">www.amazon.com</a>	
<b>Ship By:</b> Ground		<b>Phone:</b> 1-734-414-0900	

#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	2	B00HZ9A0FY	45 AMP Anderson Powerpole Connectors (10 Sets) (Shipped from: Debco Electronics Inc.)	\$8.79	\$17.58	11-Apr-16
2	17	B00LQPUL84	ANDERSON POWER PRODUCTS - 110G9 - RETAINING PIN, POWERPOLE PAK RCPT SHELL (Shipped from: DataAlchemy)	\$0.49	\$8.33	12-Apr-16
3	1	B00HZ26N2U	Aurum Ultra Series - High Speed HDMI Cable With Ethernet 2 PACK (1 Ft) - Supports 3D & Audio Return Channel [Latest Version] - 1 Feet - 2 Pack	\$7.99	\$7.99	11-Apr-16
4					\$0.00	
5					\$0.00	
6					\$0.00	
7					\$0.00	
8					\$0.00	
9					\$0.00	
10					\$0.00	

<b>Shipping Fees</b>	\$19.13
<b>Grand Total:</b>	\$53.03

Instructor Approval: \_\_\_\_\_

Department Approval: \_\_\_\_\_

(Over \$500)

## ECE Department Material Request

<b>Course:</b> ECE 492		<b>Req Number</b> 014				
<b>Professor:</b> Nadovich/Yu						
<b>Requested By:</b> Joseph Cericola		<b>Vendor:</b> Mouser Electronics				
<b>Requested Date:</b> 6-Apr-16		<b>Web Site</b> <a href="http://www.mouser.com">www.mouser.com</a>				
<b>Ship By:</b> Ground		<b>Phone</b> (800) 346-6873				
#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	7	879-1460G1	Anderson Powerpole 2-4P Housing Plug With Latch	\$1.70	\$11.90	11-Apr-16
2	5	879-1461G1	Anderson Powerpole 2-4P Housing Plug, No Latch	\$1.54	\$7.70	11-Apr-16
3	1	653-A165S-T3M-2	Omron 3-Pos Rotary Switch	\$28.80	\$28.80	11-Apr-16
4	1	653-A16S-3N-2	Omron 3-Pos Rotary Switch Socket	\$9.91	\$9.91	11-Apr-16
5	2	601-737792-1	AIM-Cambridge Cat 5e RJ45-RJ45 Ethernet Cable, Blue, 1ft	\$1.34	\$2.68	11-Apr-16
6	7	879-1827GA-BK	Anderson PP15/45 Ground Housing, Green	\$0.50	\$3.50	11-Apr-16
7					\$0.00	
8					\$0.00	
9					\$0.00	
10					\$0.00	
				<b>Shipping Fees</b>	\$7.99	
				<b>Grand Total:</b>	\$72.48	
<b>Instructor Approval:</b>						
<b>Department Approval:</b>						
(Over \$500)						

## ECE Department Material Request

<b>Course:</b>	ECE 492	<b>Req Number</b>	015			
<b>Professor:</b>	Nadovich/Yu					
<b>Requested By:</b>	Joseph Cericola on behalf of Geoffery Nudge	<b>Vendor:</b>	Newark			
<b>Requested Date:</b>	6-Apr-16	<b>Web Site</b>	<a href="http://www.newark.com">www.newark.com</a>			
<b>Ship By:</b>	Ground	<b>Phone</b>	1 800 463 9275			
#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	5	05M6458	Anderson Powerpole 2-4P Housing Snap-In Receptacle	\$2.570	\$12.85	8-Apr-16
2	8	22T8520	Anderson PPMX 2-Piece Housing Only, Black	\$0.895	\$7.16	8-Apr-16
3	16	22T8518	Anderson PPMX Socket Contact	\$1.570	\$25.12	8-Apr-16
4	16	22T8519	Anderson PPMX Pin Contact	\$1.560	\$24.96	8-Apr-16
5	3	44W4346	ITT Cannon Powerlock Line Source, Green	\$52.890	\$158.67	18-Apr-16
6	2	04X2126	Veam Powerlock Panel Drain, Blue	\$79.840	\$159.68	11-Apr-16
7	1	44W4363	ITT Cannon Powerlock Panel Source, Green	\$50.230	\$50.23	18-Apr-16
8	1	44W4342	ITT Cannon Powerlock Line Drain, Gray	\$52.430	\$52.43	18-Apr-16
9					\$0.00	
10					\$0.00	
				<b>Shipping Fees</b>	\$33.70	
				<b>Grand Total:</b>	\$524.80	
	<b>Instructor Approval:</b>					
	<b>Department Approval:</b>					
	(Over \$500)					

## ECE Department Material Request

<b>Course:</b> ECE 492		<b>Req Number</b>	016
<b>Professor:</b> Nadovich/Yu			
<b>Requested By:</b> Joseph Cericola		<b>Vendor:</b> Digi-Key	
<b>Requested Date:</b> 6-Apr-16		<b>Web Site:</b> <a href="http://www.digikey.com">www.digikey.com</a>	
<b>Ship By:</b> Ground		<b>Phone:</b> 1-800-344-4539	

#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	2	AE10623-ND	Assmann USB 2.0 MaleA-MaleA Cable, 1m	\$2.36000	\$4.72	12-Apr-16
2	1	502PB-ND	Judco SPST Switch, 14V, 2A	\$1.34000	\$1.34	12-Apr-16
3	2	67-1183-ND	Lumex Panel Mount LED Red	\$1.20000	\$2.40	12-Apr-16
4	2	67-1185-ND	Lumex Panel Mount LED Yellow	\$1.32000	\$2.64	12-Apr-16
5	2	67-1184-ND	Lumex Panel Mount LED Green	\$1.32000	\$2.64	12-Apr-16
6	20	CKN9207-ND	C&K Pushbutton Plunger	\$0.45400	\$9.08	12-Apr-16
7	20	CKN9363CT-ND	C&K SPST Pushbutton	\$2.27100	\$45.42	12-Apr-16
8	4	1195-3481-ND	Harting USB 2.0 FemaleA-FemaleA Panel Mount Receptacle	\$21.65000	\$86.60	12-Apr-16
9	4	1195-2189-ND	Harting USB Receptacle Cap	\$8.14000	\$32.56	12-Apr-16
10	10	754-1883-ND	Kingbright LED Red, 5mm	\$0.54600	\$5.46	12-Apr-16
11	10	67-1332-ND	Lumex Panel Mount 5mm LED Holder	\$0.20900	\$2.09	12-Apr-16
12	6	WM2902-ND	Molex 4-Pos Connector Housing	\$0.27000	\$1.62	12-Apr-16
13	6	WM1342-ND	Molex 4-Pos Connector Header	\$2.99000	\$17.94	12-Apr-16
14	10	ED10502-ND	On Shore 16-Pos Connector Socket	\$0.33600	\$3.36	12-Apr-16
15	10	A111927-ND	TE Connectivity 10-Pos Connector Receptacle, Panel Mount	\$0.27000	\$2.70	12-Apr-16
16	10	A30594-ND	TE Connectivity 10-Pos Connector Plug, Free Hanging	\$0.25400	\$2.54	12-Apr-16
17	10	A30590-ND	TE Connectivity 2-Pos Connector Receptacle, Free Hanging	\$0.17800	\$1.78	12-Apr-16
18	10	A30654-ND	TE Connectivity 2-Pos Connector Plug, Free Hanging	\$0.11600	\$1.16	12-Apr-16
19	10	A27284CT-ND	TE Connectivity 10-12AWG Crimp Connector Ring	\$0.34800	\$3.48	12-Apr-16
20	10	920074-07-ND	3M Connector Tap	\$0.55100	\$5.51	12-Apr-16
21	5	WM1340-ND	Molex 2-Pos Connector Header	\$2.61000	\$13.05	12-Apr-16

22	250	A100459CT-ND	TE Connectivity 16AWG Socket	\$0.03956	\$9.89	12-Apr-16
23	250	A110999CT-ND	TE Connectivity 16AWG Pin	\$0.03956	\$9.89	12-Apr-16
24	25	A30638-ND	TE Connectivity 22-26AWG Socket	\$0.05080	\$1.27	12-Apr-16
25	25	A30646-ND	TE Connectivity 22-26AWG Pin	\$0.05640	\$1.41	12-Apr-16
26	1	SC2106-ND	Switchcraft Panel Mount HDMI Receptacle	\$19.74000	\$19.74	12-Apr-16
				Shipping Fees	\$12.45	
				Grand Total:	\$302.74	
		Instructor Approval:				
		Department Approval:				
		(Over \$500)				

## ECE Department Material Request

<b>Course:</b>	ECE 492	<b>Req Number</b>	017			
<b>Professor:</b>	Nadovich/Yu					
<b>Requested By:</b>	Joseph Cericola on behalf of Jaejoon Yang	<b>Vendor:</b>	DFRobot			
<b>Requested Date:</b>	11-Apr-16	<b>Web Site</b>	<a href="http://www.dfrobot.com">www.dfrobot.com</a>			
<b>Ship By:</b>	Ground	<b>Phone</b>	86-21-61620183			
<b>#</b>	<b>Quantity</b>	<b>Vendor Part</b>	<b>Description</b>	<b>Unit Price</b>	<b>Total Price</b>	<b>Rcvd</b>
1	2	DFR0154	DFRobot LCD Display	\$23.00	\$46.00	14-Apr-16
2					\$0.00	
3					\$0.00	
4					\$0.00	
5					\$0.00	
6					\$0.00	
7					\$0.00	
8					\$0.00	
9					\$0.00	
10					\$0.00	
				<b>Shipping Fees</b>	\$12.00	
				<b>Grand Total:</b>	\$58.00	
<b>Instructor Approval:</b>			_____			
<b>Department Approval:</b>			_____			
(Over \$500)			_____			

## ECE Department Material Request

<b>Course:</b> ECE 492		<b>Req Number</b>	018			
<b>Professor:</b> Nadovich/Yu						
<b>Requested By:</b> Joseph Cericola		<b>Vendor:</b> Digi-Key				
<b>Requested Date:</b> 13-Apr-16		<b>Web Site:</b> <a href="http://www.digikey.com">www.digikey.com</a>				
<b>Ship By:</b> Ground		<b>Phone:</b> 1-800-344-4539				
<b>#</b>	<b>Quantity</b>	<b>Vendor Part</b>	<b>Description</b>	<b>Unit Price</b>	<b>Total Price</b>	<b>Rcvd</b>
1	4	A30258-ND	TE Connectivity AMP 2-Pos Micro MATE-N-LOK Connector Receptacle	\$0.3100	\$1.24	19-Apr-16
2	2	A30264-ND	TE Connectivity AMP 8-Pos Micro MATE-N-LOK Connector Receptacle	\$0.6500	\$1.30	19-Apr-16
3	25	A107960CT-ND	TE Connectivity AMP Micro MATE-N-LOK 18-22AWG Socket	\$0.1964	\$4.91	19-Apr-16
4	1	ATATMEL-ICE-BASIC-ND	Atmel-ICE Programmer Basic Kit	\$53.5800	\$53.58	19-Apr-16
5	500	WM2562-ND	Molex 24-30AWG Socket	\$0.0876	\$43.80	19-Apr-16
6	4	Q361-ND	Qualtek USB 2.0 MaleA-MaleB Cable, 3ft	\$2.1500	\$8.60	19-Apr-16
7	10	ED10523-ND	On Shore 16-Pos Connector Header	\$0.3750	\$3.75	19-Apr-16
8					\$0.00	
9					\$0.00	
10					\$0.00	
				<b>Shipping Fees</b>	\$10.60	
				<b>Grand Total:</b>	\$127.78	
<b>Instructor Approval:</b>						
<b>Department Approval:</b>						
(Over \$500)						



## ECE Department Material Request

<b>Course:</b> ECE 492		<b>Req Number</b>	019			
<b>Professor:</b> Nadovich/Yu						
<b>Requested By:</b> Joseph Cericola		<b>Vendor:</b> Amazon				
<b>Requested Date:</b> 14-Apr-16		<b>Web Site:</b> <a href="http://www.amazon.com">www.amazon.com</a>				
<b>Ship By:</b> Ground		<b>Phone:</b> 1-734-414-0900				
#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	4	B00B5HS7TI	YCS Basics Black 6 Inch USB 2.0 High Speed Printer / Scanner Right Angle Cable	\$5.29	\$21.16	18-Apr-16
2	1	B00S2KC1ZC	Meind 24v 20a 480w Switching Power Supply for Led Strip Light Input Ac100v-240v Dc 24v Output	\$44.99	\$44.99	18-Apr-16
3	1	B013PKYAV6	bayite DC 6.5-100V 0-20A LCD Display Digital Current Voltage Power Energy Meter Multimeter Ammeter Voltmeter	\$16.98	\$16.98	18-Apr-16
4					\$0.00	
5					\$0.00	
6					\$0.00	
7					\$0.00	
8					\$0.00	
9					\$0.00	
10					\$0.00	
				<b>Shipping Fees</b>	\$9.74	
				<b>Grand Total:</b>	\$92.87	
<b>Instructor Approval:</b>						
<b>Department Approval:</b>						
(Over \$500)						

## ECE Department Material Request

<b>Course:</b>	ECE 492	<b>Req Number</b>	020			
<b>Professor:</b>	Nadovich/Yu					
<b>Requested By:</b>	Joseph Cericola on behalf of Timothy Andrews	<b>Vendor:</b>	Newark			
<b>Requested Date:</b>	21-Apr-16	<b>Web Site</b>	<a href="http://www.newark.com">www.newark.com</a>			
<b>Ship By:</b>	Ground	<b>Phone</b>	1 800 463 9275			
<b>#</b>	<b>Quantity</b>	<b>Vendor Part</b>	<b>Description</b>	<b>Unit Price</b>	<b>Total Price</b>	<b>Rcvd</b>
1	1	08J0991	Omron 10A 24V G2RS DPDT Relay	\$17.27	\$17.27	25-Apr-16
2	6	67K9453	Omron Relay Socket	\$3.80	\$22.80	25-Apr-16
3	1	35K4862	Omron Din Rail Relay Socket	\$9.53	\$9.53	25-Apr-16
4	1	08J0944	Omron 10A 24V G2RS SPDT Relay	\$10.50	\$10.50	25-Apr-16
5	1	74C6102	Thomas & Betts Cable Clamp	\$3.62	\$3.62	25-Apr-16
6	4	08J0962	Omron 10A 12V G2RS Relay	\$10.11	\$40.44	25-Apr-16
7					\$0.00	
8					\$0.00	
9					\$0.00	
10					\$0.00	
				<b>Shipping Fees</b>	\$7.87	
				<b>Grand Total:</b>	\$112.03	
<b>Instructor Approval:</b>						
<b>Department Approval:</b>						
(Over \$500)						

## ECE Department Material Request

	<b>Course:</b> ECE 492		<b>Req Number</b>	021		
	<b>Professor:</b> Nadovich/Yu					
	<b>Requested By:</b> Joseph Cericola on behalf of Timothy Andrews		<b>Vendor:</b> Digi-Key			
	<b>Requested Date:</b> 21-Apr-16		<b>Web Site</b> <a href="http://www.digikey.com">www.digikey.com</a>			
	<b>Ship By:</b> Ground		<b>Phone</b> 1-800-344-4539			
#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	4	WM2803-ND	Molex 5-Pos Connector Housing	\$0.4700	\$1.88	26-Apr-16
2	10	296-29034-1-ND	Texas Instruments Current Monitor	\$3.0870	\$30.87	26-Apr-16
3	2	Q503-ND	Qualtek Panel Mount Circuit Breaker	\$2.2300	\$4.46	26-Apr-16
4	50	P10.0KFCT-ND	Panasonic 10KOhm 1% Chip Resistor 1206	\$0.0282	\$1.41	26-Apr-16
5	4	P120FCT-ND	Panasonic 120Ohm 1% Chip Resistor 1206	\$0.1000	\$0.40	26-Apr-16
6	50	P2.00KHCT-ND	Panasonic 2KOhm 1% Chip Resistor 0603	\$0.0114	\$0.57	26-Apr-16
7	50	P3.00KHCT-ND	Panasonic 3KOhm 1% Chip Resistor 0603	\$0.0114	\$0.57	26-Apr-16
8	10	490-7202-1-ND	Murata 10uF 25V Ceramic Cap 0603	\$0.3150	\$3.15	26-Apr-16
9	10	490-12737-1-ND	Murata 22uF 25V Ceramic Cap 0603	\$0.3150	\$3.15	26-Apr-16
10	25	311-1343-1-ND	Yageo 0.1uF 50V Ceramic Cap 0603	\$0.0128	\$0.32	26-Apr-16
11	10	311-1186-1-ND	Yageo 330pF 50V Ceramic Cap 0603	\$0.0480	\$0.48	26-Apr-16
12	6	445-2304-1-ND	TDK 1uF 250V Ceramic Cap 2220	\$1.2500	\$7.50	26-Apr-16
13	2	WM3789CT-ND	Molex 6-Pos Vertical Surface Mount RJ12 Receptacle	\$1.1600	\$2.32	26-Apr-16
14	1	1470-3083-5-ND	XP Power DC/DC Converter 12V 665mA	\$39.0000	\$39.00	26-Apr-16
15	2	AZ1117CH-5.0TRG1DICT-ND	Diodes Incorporated Linear Voltage Regulator 5V 0.8A	\$0.3800	\$0.76	26-Apr-16
16	2	MCP6001T-I/OTCT-ND	Microchip Technology Low-Power Op Amp SOT-23-5	\$0.2400	\$0.48	26-Apr-16

17	3	TLP2361(TPLE CT-ND	Toshiba 3.75KV Optoisolator	\$1.1000	\$3.30	26-Apr-16
18	3	296-38822-5- ND	Texas Instruments Isolation Amplifier	\$5.7200	\$17.16	26-Apr-16
19	3	516-2578-5- ND	Broadcom Optically Isolated Voltage Sensor	\$5.6700	\$17.01	26-Apr-16
20	4	A111927-ND	TE Connectivity 10-Pos Connector Receptacle, Panel Mount	\$0.2700	\$1.08	26-Apr-16
21	4	A30594-ND	TE Connectivity 10-Pos Connector Plug, Free Hanging	\$0.2700	\$1.08	26-Apr-16
22	5	CWI502-ND	CW Panel Mount LED Green 14V	\$3.3000	\$16.50	26-Apr-16
23	3	CWI496-ND	CW Panel Mount LED Red 14V	\$3.3000	\$9.90	26-Apr-16
24	100	RMCF0805FT1 R00CT-ND	Stackpole 10hm 1% Chip Resistor 0805	\$0.0091	\$0.91	26-Apr-16
25	50	A27817CT-ND	TE Connectovity 18-22AWG Quick Connect, Female, Fully Insulated	\$0.1866	\$9.33	26-Apr-16
26	10	S9308-ND	Sullins 16-Pos Connector Socket with Strain Relief	\$0.7610	\$7.61	26-Apr-16
				Shipping Fees	\$10.60	
				Grand Total:	\$191.80	
		Instructor Approval:				
		Department Approval:				
		(Over \$500)				

## ECE Department Material Request

<b>Course:</b>	ECE 492	<b>Req Number</b>	022			
<b>Professor:</b>	Nadovich/Yu					
<b>Requested By:</b>	Joseph Cericola on behalf of Timothy Andrews	<b>Vendor:</b>	McMaster-Carr			
<b>Requested Date:</b>	22-Apr-16	<b>Web Site</b>	<a href="http://www.mcmaster.com">www.mcmaster.com</a>			
<b>Ship By:</b>	Ground	<b>Phone</b>	(609) 259-8900			
#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	1	7113K32	Ring Terminal 12-10AWG 3/8" (pack of 25)	\$7.26	\$7.26	25-Apr-16
2	1	69145K66	Spade Terminal 22-18AWG #6 (pack of 100)	\$13.67	\$13.67	25-Apr-16
3	1	7060K26	Insulated Barrel Quick Connect 22-18AWG Male (pack of 100)	\$11.96	\$11.96	25-Apr-16
4	1	7480T11	Emergency Stop Switch with Panel Cutout	\$28.71	\$28.71	25-Apr-16
5	1	89015K48	6061 Aluminum Sheet 24"x24"x1/8"	\$79.97	\$79.97	25-Apr-16
6	1	8082K14	Continuous-Flex Unshielded Cable, 12 Wires, 20AWG (30')	\$57.60	\$57.60	25-Apr-16
7	1	7343K184	Toggle Switch 1/4" Quick Connect SPST	\$6.53	\$6.53	25-Apr-16
8	1	8560K261	Acrylic Sheet 24"x36"x1/8" Clear	\$33.24	\$33.24	25-Apr-16
9	2	85635K451	Acrylic Sheet 12"x24"x1/8" Semi-Clear Red	\$14.37	\$28.74	25-Apr-16
10					\$0.00	
				<b>Shipping Fees</b>	\$15.37	
				<b>Grand Total:</b>	\$283.05	
	<b>Instructor Approval:</b>					
	<b>Department Approval:</b>					
	(Over \$500)					

## ECE Department Material Request

<b>Course:</b>	ECE 492	<b>Req Number</b>	023			
<b>Professor:</b>	Nadovich/Yu					
<b>Requested By:</b>	Joseph Cericola on behalf of Timothy Andrews	<b>Vendor:</b>	Amazon			
<b>Requested Date:</b>	25-Apr-16	<b>Web Site</b>	<a href="http://www.amazon.com">www.amazon.com</a>			
<b>Ship By:</b>	Ground	<b>Phone</b>	1-734-414-0900			
#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	1	B0032JJS50	12" X 24" 6 Sheets of Matte Black Permanent Adhesive-Backed Vinyl	\$12.31	\$12.31	2-May-16
2	1	B00511QVVK	Inlet Male Power Socket with Fuse Switch 10A 250V 3 Pin IEC320 C14	\$6.00	\$6.00	2-May-16
3					\$0.00	
4					\$0.00	
5					\$0.00	
6					\$0.00	
7					\$0.00	
8					\$0.00	
9					\$0.00	
10					\$0.00	
				<b>Shipping Fees</b>	\$6.03	
				<b>Grand Total:</b>	\$24.34	
	<b>Instructor Approval:</b>					
	<b>Department Approval:</b>					
	(Over \$500)					

## ECE Department Material Request

<b>Course:</b> ECE 492		<b>Req Number</b> 024				
<b>Professor:</b> Nadovich/Yu						
<b>Requested By:</b> Joseph Cericola on behalf of Timothy Andrews		<b>Vendor:</b> WireCare				
<b>Requested Date:</b> 27-Apr-16		<b>Web Site:</b> <a href="http://www.wirecare.com">www.wirecare.com</a>				
<b>Ship By:</b> Ground		<b>Phone:</b> 973-300-9782				
#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	2	DT04-4P-L012	Deutsch DT 4-Pin Receptacle, Gray Flange	\$7.970	\$15.94	3-May-16
2	2	DT04-12PA-L012	Deutsch DT 12-Pin Receptacle, A Key Gray Flange	\$13.430	\$26.86	3-May-16
3	6	DT04-6P-CL09	Deutsch DT 6-Pin Receptacle, Black Sealed Flange	\$24.574	\$147.44	3-May-16
4	3	DT06-6S	Deutsch DT 6-Pin Socket Plug, Gray	\$3.580	\$10.74	3-May-16
5	150	0462-201-16141	Deutsch Size 16 Solid Socket, 16-18-20AWG	\$0.336	\$50.40	3-May-16
6	150	0460-202-16141	Deutsch Size 16 Solid Pin, 16-18-20AWG	\$0.264	\$39.60	3-May-16
7					\$0.00	
8					\$0.00	
9					\$0.00	
10					\$0.00	
				<b>Shipping Fees</b>	<b>\$11.37</b>	
				<b>Grand Total:</b>	<b>\$302.35</b>	
<b>Instructor Approval:</b>						
<b>Department Approval:</b>						
(Over \$500)						

## ECE Department Material Request

<b>Course:</b> ECE 492		<b>Req Number</b> 025				
<b>Professor:</b> Nadovich/Yu						
<b>Requested By:</b> Joseph Cericola on behalf of Timothy Andrews		<b>Vendor:</b> McMaster-Carr				
<b>Requested Date:</b> 2-May-16		<b>Web Site:</b> <a href="http://www.mcmaster.com">www.mcmaster.com</a>				
<b>Ship By:</b> Ground		<b>Phone:</b> (609) 259-8900				
#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	1	24795T41	Wrap-on Wire Markers, 1-33, pack of 330	\$13.16	\$13.16	3-May-16
2	1	92000A103	18-8 Stainless Steel Metric Pan Head Phillips Machine Screw, M2.5, 5mm (pack of 100)	\$3.40	\$3.40	3-May-16
3	20	95947A015	Aluminum Female Threaded Hex Standoff, M2.5, 20mm	\$0.66	\$13.20	3-May-16
4	4	91075A012	18-8 Stainless Steel Male-Female Threaded Hex Standoff, 8-32, 3"	\$4.00	\$16.00	3-May-16
5	1	8560K257	Clear Acrylic Sheet 12x24 (1/8 in thick)	\$15.76	\$15.76	3-May-16
6	1	8710K144	High Temperature Garolite (G-11) Sheet 12"x24"x1/8" Opaque Green	\$86.88	\$86.88	3-May-16
7	1	4974T77	USB 2.0 MaleA-MaleA Cable, 3ft	\$12.78	\$12.78	3-May-16
8					\$0.00	
9					\$0.00	
10					\$0.00	
				<b>Shipping Fees</b>	\$7.19	
				<b>Grand Total:</b>	\$168.37	
<b>Instructor Approval:</b>						
<b>Department Approval:</b>						
(Over \$500)						



## ECE Department Material Request

<b>Course:</b>	ECE 492	<b>Req Number</b>	026			
<b>Professor:</b>	Nadovich/Yu					
<b>Requested By:</b>	Joseph Cericola	<b>Vendor:</b>	Digi-Key			
<b>Requested Date:</b>	3-May-16	<b>Web Site</b>	<a href="http://www.digikey.com">www.digikey.com</a>			
<b>Ship By:</b>	Overnight	<b>Phone</b>	1-800-344-4539			
#	Quantity	Vendor Part	Description	Unit Price	Total Price	Rcvd
1	4	1053-1378-ND	Orion Fans 60mm Steel Fan Guard	\$0.60	\$2.40	4-May-16
2	2	CWI499-ND	CW Panel Mount LED Amber 14V	\$3.30	\$6.60	4-May-16
3	10	F4191-ND	Littlefuse 1A Blade Fuse	\$0.26	\$2.60	4-May-16
4					\$0.00	
5					\$0.00	
6					\$0.00	
7					\$0.00	
8					\$0.00	
9					\$0.00	
10					\$0.00	
				<b>Shipping Fees</b>	\$0.00	
				<b>Grand Total:</b>	\$11.60	
<b>Instructor Approval:</b>						
<b>Department Approval:</b>						
(Over \$500)						

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Description	Supplier	Supplier Part Number	Request Number	Date Ordered	Date Received	Quantity	Unit Price	Total Cost		Total Expenses	\$859.30
Pacman 0.4 PCB Fabrication	Advanced Circuits	n/a	n/a	3/8/2016	3/16/2016	1	\$83.00000	\$83.00		Week 1	\$0.00
Panasonic 0.00Ohm Chip Resistor 0603	Digi-Key	P0.0GCT-ND	006	3/9/2016	3/15/2016	10	\$0.01260	\$0.13		Week 2	\$0.00
Panasonic 120Ohm 1% Chip Resistor 0805	Digi-Key	P120CCT-ND	006	3/9/2016	3/15/2016	10	\$0.02200	\$0.22		Week 3	\$0.00
Panasonic 10KOhm 1% Chip Resistor 0603	Digi-Key	P10.0KHCT-ND	006	3/9/2016	3/15/2016	20	\$0.00840	\$0.17		Week 4	\$0.00
Panasonic 10KOhm 1% Chip Resistor 0805	Digi-Key	P10.0KCCT-ND	006	3/9/2016	3/15/2016	10	\$0.02200	\$0.22		Week 5	\$0.00
Panasonic 113KOhm 1% Chip Resistor 0603	Digi-Key	P113KHCT-ND	006	3/9/2016	3/15/2016	10	\$0.01140	\$0.11		Week 6	\$0.00
Panasonic 115KOhm 1% Chip Resistor 0603	Digi-Key	P115KHCT-ND	006	3/9/2016	3/15/2016	10	\$0.01140	\$0.11		Week 7	\$245.20
Panasonic 300KOhm 1% Chip Resistor 0603	Digi-Key	P300KHCT-ND	006	3/9/2016	3/15/2016	10	\$0.01140	\$0.11		Week 8	\$0.00
Stackpole 0.001Ohm 1% Chip Resistor 1206	Digi-Key	CSNL1206FT1L00CT-ND	006	3/9/2016	3/15/2016	2	\$0.53900	\$1.08		Week 9	\$0.00
Stackpole 10M0hm 1% Chip Resistor 0603	Digi-Key	RMCF0603FT10M0CT-ND	006	3/9/2016	3/15/2016	2	\$0.01900	\$0.04		Week 10	\$23.75
Murata 10pF 50V Ceramic Cap 0603	Digi-Key	490-12530-1-ND	006	3/9/2016	3/15/2016	10	\$0.04380	\$0.44		Week 11	\$505.16
Murata 220pF 50V Ceramic Cap 0805	Digi-Key	490-1616-1-ND	006	3/9/2016	3/15/2016	2	\$0.11000	\$0.22		Week 12	\$16.95
Murata 1uF 50V Ceramic Cap 0603	Digi-Key	490-12330-1-ND	006	3/9/2016	3/15/2016	2	\$0.16300	\$0.33		Week 13	\$41.70
Murata 10uF 50V Ceramic Cap 1210	Digi-Key	490-1891-1-ND	006	3/9/2016	3/15/2016	2	\$0.58000	\$1.16		Week 14	\$0.00
Nichicon 220uF 20% 16V Aluminum Cap	Digi-Key	493-6214-1-ND	006	3/9/2016	3/15/2016	2	\$0.29300	\$0.59		Week 15	\$26.54
Nichicon 220uF 20% 50V Aluminum Cap	Digi-Key	493-9379-1-ND	006	3/9/2016	3/15/2016	2	\$0.75700	\$1.51			
TDK 220uH Fixed Inductor	Digi-Key	445-173047-1-ND	006	3/9/2016	3/15/2016	2	\$0.46000	\$0.92			
Micro Commercial 100V 3A Schottky Diode	Digi-Key	SK310A-LTPMSCT-ND	006	3/9/2016	3/15/2016	10	\$0.32880	\$3.29			
Rohm 35V 1W Zener Diode	Digi-Key	PTZTE2533BCT-ND	006	3/9/2016	3/15/2016	2	\$0.38500	\$0.77			
NXP 5.1V 500MW Zener Diode	Digi-Key	568-6370-1-ND	006	3/9/2016	3/15/2016	2	\$0.16600	\$0.33			
Würth LED Green 0603	Digi-Key	732-4980-1-ND	006	3/9/2016	3/15/2016	2	\$0.24000	\$0.48			
Rohm P-Fet 30V 1.5A SC-96	Digi-Key	RRR015P03TLCT-ND	006	3/9/2016	3/15/2016	5	\$0.37200	\$1.86			
Würth Flyback Transformer LT8302	Digi-Key	1297-1132-1-ND	006	3/9/2016	3/15/2016	2	\$4.55000	\$9.10			
Bel Fuse 1A Board Mount Fuse 1206	Digi-Key	507-1077-1-ND	006	3/9/2016	3/15/2016	5	\$0.26800	\$1.34			
Omron 10A 3V Relay	Digi-Key	Z3697-ND	006	3/9/2016	3/15/2016	2	\$1.43000	\$2.86			
TE Connectivity 30A 5V Relay	Digi-Key	PB1014-ND	006	3/9/2016	3/15/2016	2	\$4.22000	\$8.44			
TXC 10MHz Surface Mount Crystal	Digi-Key	887-1741-1-ND	006	3/9/2016	3/15/2016	2	\$0.60500	\$1.21			
C&K 0.1A 42V Pushbutton Switch	Digi-Key	CKN9363CT-ND	006	3/9/2016	3/15/2016	2	\$2.43000	\$4.86			
On Shore Technology 4-Pos USB Receptacle	Digi-Key	ED2983-ND	006	3/9/2016	3/15/2016	2	\$0.58000	\$1.16			
Norcomp 37-Pos D-Sub Receptacle	Digi-Key	5237FE-ND	006	3/9/2016	3/15/2016	1	\$4.08000	\$4.08			
Molex 6-Pos Vertical Surface Mount RJ12 Receptacle	Digi-Key	WM3789CT-ND	006	3/9/2016	3/15/2016	2	\$1.16000	\$2.32			
TE Connectivity 4-Pos Blade Socket Receptacle	Digi-Key	A113982-ND	006	3/9/2016	3/15/2016	1	\$8.66000	\$8.66			
Molex 2-Pos Connector Header	Digi-Key	WM1340-ND	006	3/9/2016	3/15/2016	1	\$2.61000	\$2.61			
Molex 6-Pos Connector Header	Digi-Key	WM1344-ND	006	3/9/2016	3/15/2016	1	\$4.20000	\$4.20			
Sullins 16-Pos Connector Header	Digi-Key	3M11931-ND	006	3/9/2016	3/15/2016	1	\$0.55000	\$0.55			
Amphenol 10-Pos Connector Header	Digi-Key	609-4054-ND	006	3/9/2016	3/15/2016	2	\$0.96800	\$1.94			
Atmel 128KB Microcontroller	Digi-Key	AT90CAN128-16AURCT-ND	006	3/9/2016	3/15/2016	1	\$10.40000	\$10.40			
Analog Devices External Watchdog	Digi-Key	ADM6320CY29ARJZ-R7CT-N	006	3/9/2016	3/15/2016	1	\$1.44000	\$1.44			
NXP I2C I/O Expander	Digi-Key	568-1074-1-ND	006	3/9/2016	3/15/2016	1	\$1.22000	\$1.22			
Texas Instruments Current Monitor	Digi-Key	296-29034-1-ND	006	3/9/2016	3/15/2016	2	\$3.44000	\$6.88			
Texas Instruments 16-Bit ADC	Digi-Key	296-38849-1-ND	006	3/9/2016	3/15/2016	1	\$5.65000	\$5.65			
Linear Technology Buck Converter	Digi-Key	LTC3638EMSE#PBF-ND	006	3/9/2016	3/15/2016	1	\$7.79000	\$7.79			
Silicon Labs 3.75KV Digital Isolator	Digi-Key	336-2048-5-ND	006	3/9/2016	3/15/2016	2	\$3.33000	\$6.66			
ON 3.3V Voltage Regulator	Digi-Key	NCP1117ST33T3GOSCT-ND	006	3/9/2016	3/15/2016	1	\$0.46000	\$0.46			
Texas Instruments Inverter	Digi-Key	296-13493-1-ND	006	3/9/2016	3/15/2016	2	\$0.54000	\$1.08			
Microchip Technology Can Transceiver	Digi-Key	MCP2551-I/SN-ND	006	3/9/2016	3/15/2016	2	\$1.02000	\$2.04			
FTDI USB/UART Serial Interface	Digi-Key	768-1007-1-ND	006	3/9/2016	3/15/2016	1	\$4.50000	\$4.50			
Toshiba 3.75KV Optoisolator	Digi-Key	TLP2361(V4-TPLECT-ND	006	3/9/2016	3/15/2016	2	\$1.14000	\$2.28			
Delta 5VDC 200mA Fan	Digi-Key	603-1284-ND	006	3/9/2016	3/15/2016	1	\$12.08000	\$12.08			
Littlefuse 30A In-Line Blade Fuseholder	Digi-Key	F5984-ND	006	3/9/2016	3/15/2016	2	\$4.45500	\$8.91			

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Description	Supplier	Supplier Part Number	Request Numbe	Date Ordere	Date Receive	Quantity	Unit Price	Total Cost	Total Expenses
Littlefuse 25A Blade Fuse	Digi-Key	F4195-ND	006	3/9/2016	3/15/2016	5	\$0.24000	\$1.20	\$859.30
TE Connectivity 4-Pos Blade Plug	Digi-Key	556879-4-ND	006	3/9/2016	3/15/2016	2	\$4.83000	\$9.66	
TE Connectivity Blade Pin	Digi-Key	A104027CT-ND	006	3/9/2016	3/15/2016	5	\$0.63200	\$3.16	
Amphenol 10-Pos Connector Receptacle	Digi-Key	609-4055-ND	006	3/9/2016	3/15/2016	2	\$2.38800	\$4.78	
Norcomp 37-Pos D-Sub Connector Header	Digi-Key	237ME-ND	006	3/9/2016	3/15/2016	2	\$2.30000	\$4.60	
Littlefuse 5A Blade Fuse	Digi-Key	F4197-ND	012	3/29/2016	4/4/2016	2	\$0.26000	\$0.52	
MPD Blade Fuse PCB Block	Digi-Key	BK-6010-ND	012	3/29/2016	4/4/2016	1	\$0.54000	\$0.54	
Murata DC/DC Converter 5V 1.2A	Digi-Key	811-2109-5-ND	012	3/29/2016	4/4/2016	1	\$22.00000	\$22.00	
Micro Commercial 30V Zener Diode	Digi-Key	SMAZ30-TPMSCT-ND	012	3/29/2016	4/4/2016	2	\$0.34500	\$0.69	
Pacman 0.5 PCB Fabrication	Advanced Circuits	n/a	n/a	4/2/2016	4/11/2016	1	\$116.0000	\$116.00	
Display Panel 0.1 PCB Fabrication	Advanced Circuits	n/a	n/a	4/2/2016	4/11/2016	1	\$41.50000	\$41.50	
Anderson Powerpole PP15/45 Red and Black Housings with 45A Pins (set of 1	Amazon	B00HZ9A0FY	013	4/4/2016	4/11/2016	1	\$8.97000	\$8.97	
Anderson Powerpole Receptacle Retaining Pin	Amazon	B00LQPUL84	013	4/4/2016	4/12/2016	5	\$0.49000	\$2.45	
Anderson Powerpole 2-4P Housing Plug With Latch	Mouser Electronics	879-1460G1	014	4/6/2016	4/11/2016	3	\$1.70000	\$5.10	
Anderson Powerpole 2-4P Housing Plug, No Latch	Mouser Electronics	879-1461G1	014	4/6/2016	4/11/2016	2	\$1.54000	\$3.08	
Anderson PP15/45 Ground Housing, Green	Mouser Electronics	879-1827GA-BK	014	4/6/2016	4/11/2016	3	\$0.50000	\$1.50	
Anderson Powerpole 2-4P Housing Snap-In Receptacle	Newark	05M6458	015	4/6/2016	4/8/2016	2	\$2.57000	\$5.14	
Anderson PPMX 2-Piece Housing Only, Black	Newark	22T8520	015	4/6/2016	4/8/2016	2	\$0.89500	\$1.79	
Anderson PPMX Socket Contact	Newark	22T8518	015	4/6/2016	4/8/2016	6	\$1.57000	\$9.42	
Anderson PPMX Pin Contact	Newark	22T8519	015	4/6/2016	4/8/2016	6	\$1.56000	\$9.36	
ITT Cannon Powerlock Line Source, Green	Newark	44W4346	015	4/6/2016	4/18/2016	1	\$52.89000	\$52.89	
Veam Powerlock Panel Drain, Blue	Newark	04X2126	015	4/6/2016	4/11/2016	1	\$79.84000	\$79.84	
ITT Cannon Powerlock Panel Source, Green	Newark	44W4363	015	4/6/2016	4/18/2016	1	\$50.23000	\$50.23	
ITT Cannon Powerlock Line Drain, Gray	Newark	44W4342	015	4/6/2016	4/18/2016	1	\$52.43000	\$52.43	
C&K Pushbutton Plunger	Digi-Key	CKN9207-ND	016	4/6/2016	4/12/2016	5	\$0.45400	\$2.27	
C&K SPST Pushbutton	Digi-Key	CKN9363CT-ND	016	4/6/2016	4/12/2016	5	\$2.27100	\$11.36	
Harting USB 2.0 FemaleA-FemaleA Panel Mount Receptacle	Digi-Key	1195-3481-ND	016	4/6/2016	4/12/2016	1	\$21.65000	\$21.65	
Harting USB Receptacle Cap	Digi-Key	1195-2189-ND	016	4/6/2016	4/12/2016	1	\$8.14000	\$8.14	
Kingbright LED Red, 5mm	Digi-Key	754-1883-ND	016	4/6/2016	4/12/2016	3	\$0.54600	\$1.64	
Lumex Panel Mount 5mm LED Holder	Digi-Key	67-1332-ND	016	4/6/2016	4/12/2016	3	\$0.20900	\$0.63	
Molex 4-Pos Connector Housing	Digi-Key	WM2902-ND	016	4/6/2016	4/12/2016	2	\$0.27000	\$0.54	
Molex 4-Pos Connector Header	Digi-Key	WM1342-ND	016	4/6/2016	4/12/2016	2	\$2.99000	\$5.98	
On Shore 16-Pos Connector Socket	Digi-Key	ED10502-ND	016	4/6/2016	4/12/2016	3	\$0.33600	\$1.01	
TE Connectivity 10-Pos Connector Receptacle, Panel Mount	Digi-Key	A111927-ND	016	4/6/2016	4/12/2016	3	\$0.27000	\$0.81	
TE Connectivity 10-Pos Connector Plug, Free Hanging	Digi-Key	A30594-ND	016	4/6/2016	4/12/2016	3	\$0.25400	\$0.76	
TE Connectivity 2-Pos Connector Receptacle, Free Hanging	Digi-Key	A30590-ND	016	4/6/2016	4/12/2016	3	\$0.17800	\$0.53	
TE Connectivity 2-Pos Connector Plug, Free Hanging	Digi-Key	A30654-ND	016	4/6/2016	4/12/2016	3	\$0.11600	\$0.35	
TE Connectivity 10-12AWG Crimp Connector Ring	Digi-Key	A27284CT-ND	016	4/6/2016	4/12/2016	3	\$0.34800	\$1.04	
3M Connector Tap	Digi-Key	920074-07-ND	016	4/6/2016	4/12/2016	3	\$0.55100	\$1.65	
Molex 2-Pos Connector Header	Digi-Key	WM1340-ND	016	4/6/2016	4/12/2016	1	\$2.61000	\$2.61	
TE Connectivity 16AWG Socket	Digi-Key	A100459CT-ND	016	4/6/2016	4/12/2016	50	\$0.03956	\$1.98	
TE Connectivity 16AWG Pin	Digi-Key	A110999CT-ND	016	4/6/2016	4/12/2016	50	\$0.03956	\$1.98	
TE Connectivity 22-26AWG Socket	Digi-Key	A30638-ND	016	4/6/2016	4/12/2016	5	\$0.05080	\$0.25	
TE Connectivity 22-26AWG Pin	Digi-Key	A30646-ND	016	4/6/2016	4/12/2016	5	\$0.05640	\$0.28	
Molex 24-30AWG Socket	Digi-Key	WM2562-ND	018	4/13/2016	4/19/2016	100	\$0.08760	\$8.76	
Qualtek USB 2.0 MaleA-MaleB Cable, 3ft	Digi-Key	Q361-ND	018	4/13/2016	4/19/2016	1	\$2.15000	\$2.15	
On Shore 16-Pos Connector Header	Digi-Key	ED10523-ND	018	4/13/2016	4/19/2016	2	\$0.37500	\$0.75	
YCS Basics USB 2.0 MaleA-MaleB Cable, 6in, Right Angle	Amazon	B00B5HS7TI	019	4/14/2016	4/18/2016	1	\$5.29000	\$5.29	
Texas Instruments Current Monitor	Digi-Key	296-29034-1-ND	021	4/21/2016	4/26/2016	2	\$3.08700	\$6.17	
TE Connectivity 10-Pos Connector Receptacle, Panel Mount	Digi-Key	A111927-ND	021	4/21/2016	4/26/2016	1	\$0.27000	\$0.27	

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Description	Supplier	Supplier Part Number	Request Numbe	Date Ordere	Date Receive	Quantity	Unit Price	Total Cost		Total Expenses	\$859.30
TE Connectivity 10-Pos Connector Plug, Free Hanging	Digi-Key	A30594-ND	021	4/21/2016	4/26/2016	1	\$0.27000	\$0.27			
Stackpole 10hm 1% Chip Resistor 0805	Digi-Key	RMCF0805FT1R00CT-ND	021	4/21/2016	4/26/2016	25	\$0.00910	\$0.23			
Sullins 16-Pos Connector Socket with Strain Relief	Digi-Key	S9308-ND	021	4/21/2016	4/26/2016	2	\$0.76100	\$1.52			
Acrylic Sheet 24"x36"x1/8" Clear	McMaster-Carr	8560K261	022	4/22/2016	4/25/2016	1	\$33.24000	\$33.24			
Wrap-on Wire Markers, 1-33, pack of 330	McMaster-Carr	24795T41	024	5/2/2016	5/3/2016	1	\$13.16000	\$13.16			
USB 2.0 MaleA-MaleA Cable, 3ft	McMaster-Carr	4974T77	024	5/2/2016	5/3/2016	1	\$12.78000	\$12.78			
Orion Fans 60mm Steel Fan Guard	Digi-Key	1053-1378-ND	026	5/3/2016	5/4/2016	1	\$0.60000	\$0.60			

**VSCADA (Page 1 of 1)**

Description	Supplier	Supplier Part Number	Request Numbe	Date Ordere	Date Receive	Quantity	Unit Price	Total Cost		Total Expenses	\$270.99
USB/CAN adapter	8devices	usb2can	001	2/8/2016	2/19/2016	1	\$65.00000	\$65.00		Week 1	\$0.00
Raspberry Pi 3 Model B Board	Amazon	B01C6FRVQM	005	3/3/2016	3/14/2016	1	\$49.99000	\$49.99		Week 2	\$0.00
Raspberry Pi Foundation 7" Touchscreen LCD Display	Amazon	B0153R2A9I	005	3/3/2016	3/14/2016	1	\$88.62000	\$88.62		Week 3	\$65.00
AmazonBasics High-Speed HDMI Cable, 3 Feet	Amazon	B00870ZHQC	005	3/3/2016	3/14/2016	1	\$4.99000	\$4.99		Week 4	\$0.00
Samsung 64GB EVO Class 10 Micro SDXC Card with Adapter	Amazon	B00IVPU7AO	005	3/3/2016	3/14/2016	1	\$17.95000	\$17.95		Week 5	\$0.00
Transcend Information USB 3.0 Card Reader	Amazon	B009D79VH4	005	3/3/2016	3/14/2016	1	\$6.95000	\$6.95		Week 6	\$168.50
USB WiFi Module with Antenna for Raspberry Pi	Adafruit	1030	009	3/29/2016	4/1/2016	1	\$19.95000	\$19.95		Week 7	\$0.00
LoveRPi Heatsink Set for Raspberry Pi 2/3 Model B CPU and LA	Amazon	B018BGRDVS	010	3/29/2016	4/8/2016	1	\$4.99000	\$4.99		Week 8	\$0.00
Aurum High Speed HDMI Cable 2-Pack, 1 Foot	Amazon	B00HZ26N2U	013	4/4/2016	4/11/2016	1	\$7.99000	\$7.99		Week 9	\$0.00
AIM-Cambridge Cat 5e RJ45-RJ45 Ethernet Cable, Blue, 1 Foot	Mouser Electronics	601-737792-1	014	4/6/2016	4/11/2016	2	\$1.34000	\$2.68		Week 10	\$24.94
Molex 5-Pos Connector Housing	Digi-Key	WM2803-ND	021	4/21/2016	4/26/2016	4	\$0.47000	\$1.88		Week 11	\$10.67
										Week 12	\$0.00
										Week 13	\$1.88
										Week 14	\$0.00
										Week 15	\$0.00

**GLV (Page 1 of 2)**

Description	Supplier	Supplier Part Number	Request Numbe	Date Ordere	Date Receive	Quantity	Unit Price	Total Cost		Total Expenses	\$865.69
TE Connectivity 40A 24V Automotive Relay SPDT	Digi-Key	PB1800-ND	002	2/18/2016	2/24/2016	2	\$3.94000	\$7.88	Week 1	\$0.00	
Gigavac GX 24V Contactor Relay	Gigavac	GX14CA	003	2/18/2016	2/26/2016	1	\$92.00000	\$92.00	Week 2	\$0.00	
Hella 100A Heavy Duty Battery Master Switch	Amazon	B0000AYAFE	004	2/18/2016	2/24/2016	1	\$17.99000	\$17.99	Week 3	\$0.00	
Mallory Sonalert 2.9KHz Buzzer	Digi-Key	458-1150-ND	006	3/9/2016	3/15/2016	1	\$16.66000	\$16.66	Week 4	\$117.87	
Lumex Panel Mount LED Green	Digi-Key	67-1184-ND	006	3/9/2016	3/15/2016	2	\$1.32000	\$2.64	Week 5	\$0.00	
Switchcraft Panel Mount HDMI Receptacle	Digi-Key	SC2106-ND	006	3/9/2016	3/15/2016	1	\$19.74000	\$19.74	Week 6	\$0.00	
Conec Panel Mount USB Receptacle	Digi-Key	626-1355-ND	006	3/9/2016	3/15/2016	2	\$13.16000	\$26.32	Week 7	\$99.18	
Conec Panel Mount RJ45 Coupler	Digi-Key	626-1461-ND	006	3/9/2016	3/15/2016	1	\$15.77000	\$15.77	Week 8	\$14.95	
Switchcraft RJ45 Connector Dust Cap	Digi-Key	SC2102-ND	006	3/9/2016	3/15/2016	1	\$2.05000	\$2.05	Week 9	\$0.00	
TE Connectivity Female Crimp Quick Connect	Digi-Key	A27828-ND	006	3/9/2016	3/15/2016	100	\$0.16000	\$16.00	Week 10	\$81.97	
Pi Camera HDMI Cable Extension	freto (via Tindie)	n/a	008	3/18/2016	4/12/2016	1	\$14.95000	\$14.95	Week 11	\$116.30	
Orion 5VDC 40mm-Square Fan	Digi-Key	1053-1202-ND	012	3/29/2016	4/4/2016	1	\$9.98000	\$9.98	Week 12	\$156.00	
Orion 40mm-Square Fan Filter	Digi-Key	1053-1390-ND	012	3/29/2016	4/4/2016	1	\$1.35000	\$1.35	Week 13	\$264.22	
Lumex Panel Mount LED Red	Digi-Key	67-1183-ND	012	3/29/2016	4/4/2016	1	\$1.20000	\$1.20	Week 14	\$6.00	
Littlefuse 15A Blade Fuse	Digi-Key	F4200-ND	012	3/29/2016	4/4/2016	10	\$0.26000	\$2.60	Week 15	\$9.20	
MPD Blade Fuse PCB Block	Digi-Key	BK-6010-ND	012	3/29/2016	4/4/2016	1	\$0.54000	\$0.54			
Omron 10A 24V G5LE SPST Relay	Digi-Key	Z2254-ND	012	3/29/2016	4/4/2016	1	\$1.30000	\$1.30			
Omron 10A 5V G5LE SPST Relay	Digi-Key	Z3115-ND	012	3/29/2016	4/4/2016	1	\$1.41000	\$1.41			
Texas Instruments High Side Switch	Digi-Key	296-34970-1-ND	012	3/29/2016	4/4/2016	2	\$0.54000	\$1.08			
Assmann 9-Pos D-Sub Receptacle	Digi-Key	AE10924-ND	012	3/29/2016	4/4/2016	1	\$0.78000	\$0.78			
On Shore Technology 2-Pos 5.08mm PCB Terminal Block	Digi-Key	ED2609-ND	012	3/29/2016	4/4/2016	50	\$0.29080	\$14.54			
On Shore Technology 3-Pos 5.08mm PCB Terminal Block	Digi-Key	ED2610-ND	012	3/29/2016	4/4/2016	10	\$0.51000	\$5.10			
CUI DC/DC Converter 5V 4A	Digi-Key	102-2348-ND	012	3/29/2016	4/4/2016	1	\$19.91000	\$19.91			
CUI DC/DC Converter 12V 2.5A	Digi-Key	102-2421-ND	012	3/29/2016	4/4/2016	1	\$22.18000	\$22.18			
GLV_Power/VSCADA/Safety BoB 0.1 PCB Fabrication	Advanced Circuits	n/a	n/a	4/2/2016	4/11/2016	1	\$41.50000	\$41.50			
Omron 3-Pos Rotary Switch	Mouser Electronics	653-A165S-T3M-2	014	4/6/2016	4/11/2016	1	\$28.80000	\$28.80			
Omron 3-Pos Rotary Switch Socket	Mouser Electronics	653-A16S-3N-2	014	4/6/2016	4/11/2016	1	\$9.91000	\$9.91			
Assmann USB 2.0 MaleA-MaleA Cable, 1m	Digi-Key	AE10623-ND	016	4/6/2016	4/12/2016	2	\$2.36000	\$4.72			
Judco SPST Switch, 14V, 2A	Digi-Key	502PB-ND	016	4/6/2016	4/12/2016	1	\$1.34000	\$1.34			
Lumex Panel Mount LED Red	Digi-Key	67-1183-ND	016	4/6/2016	4/12/2016	2	\$1.20000	\$2.40			
Lumex Panel Mount LED Yellow	Digi-Key	67-1185-ND	016	4/6/2016	4/12/2016	2	\$1.32000	\$2.64			
Lumex Panel Mount LED Green	Digi-Key	67-1184-ND	016	4/6/2016	4/12/2016	2	\$1.32000	\$2.64			
Molex 2-Pos Connector Header	Digi-Key	WM1340-ND	016	4/6/2016	4/12/2016	1	\$2.61000	\$2.61			
Switchcraft Panel Mount HDMI Receptacle	Digi-Key	SC2106-ND	016	4/6/2016	4/12/2016	1	\$19.74000	\$19.74			
TE Connectivity AMP 2-Pos Micro MATE-N-LOK Connector Receptacl	Digi-Key	A30258-ND	018	4/13/2016	4/19/2016	4	\$0.31000	\$1.24			
TE Connectivity AMP 8-Pos Micro MATE-N-LOK Connector Receptacl	Digi-Key	A30264-ND	018	4/13/2016	4/19/2016	2	\$0.65000	\$1.30			
TE Connectivity AMP Micro MATE-N-LOK 18-22AWG Socket	Digi-Key	A107960CT-ND	018	4/13/2016	4/19/2016	25	\$0.19640	\$4.91			
Atmel-ICE Programmer Basic Kit	Digi-Key	ATATMEL-ICE-BASIC-ND	018	4/13/2016	4/19/2016	1	\$53.58000	\$53.58			
Meind 24V 20A Power Supply	Amazon	B0052KC1ZC	019	4/14/2016	4/18/2016	1	\$44.99000	\$44.99			
Bayite LCD Display Multimeter 6.5-100V 0-20A	Amazon	B013PKYAV6	019	4/14/2016	4/18/2016	1	\$16.98000	\$16.98			
TSI_Iso PCB Fabrication	Advanced Circuits	n/a	n/a	4/15/2016	4/25/2016	1	\$33.00000	\$33.00			
Omron 10A 24V G2RS DPDT Relay	Newark	08J0991	020	4/21/2016	4/25/2016	1	\$17.27000	\$17.27			
Omron Relay Socket	Newark	67K9453	020	4/21/2016	4/25/2016	6	\$3.80000	\$22.80			
Omron Din Rail Relay Socket	Newark	35K4862	020	4/21/2016	4/25/2016	1	\$9.53000	\$9.53			
Omron 10A 24V G2RS SPDT Relay	Newark	08J0944	020	4/21/2016	4/25/2016	1	\$10.50000	\$10.50			
Omron 10A 12V G2RS Relay	Newark	08J0962	020	4/21/2016	4/25/2016	4	\$10.11000	\$40.44			
Qualtek Panel Mount Circuit Breaker	Digi-Key	Q503-ND	021	4/21/2016	4/26/2016	2	\$2.23000	\$4.46			
Panasonic 10KOhm 1% Chip Resistor 1206	Digi-Key	P10.0KFCT-ND	021	4/21/2016	4/26/2016	50	\$0.02820	\$1.41			

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Description	Supplier	Supplier Part Number	Request Numbe	Date Ordere	Date Receive	Quantity	Unit Price	Total Cost		Total Expenses	\$865.69
Panasonic 120Ohm 1% Chip Resistor 1206	Digi-Key	P120FCT-ND	021	4/21/2016	4/26/2016	4	\$0.10000	\$0.40			
Panasonic 2KOhm 1% Chip Resistor 0603	Digi-Key	P2.00KHCT-ND	021	4/21/2016	4/26/2016	50	\$0.01140	\$0.57			
Panasonic 3KOhm 1% Chip Resistor 0603	Digi-Key	P3.00KHCT-ND	021	4/21/2016	4/26/2016	50	\$0.01140	\$0.57			
Murata 10uF 25V Ceramic Cap 0603	Digi-Key	490-7202-1-ND	021	4/21/2016	4/26/2016	10	\$0.31500	\$3.15			
Murata 22uF 25V Ceramic Cap 0603	Digi-Key	490-12737-1-ND	021	4/21/2016	4/26/2016	10	\$0.31500	\$3.15			
Yageo 0.1uF 50V Ceramic Cap 0603	Digi-Key	311-1343-1-ND	021	4/21/2016	4/26/2016	25	\$0.01280	\$0.32			
Yageo 330pF 50V Ceramic Cap 0603	Digi-Key	311-1186-1-ND	021	4/21/2016	4/26/2016	10	\$0.04800	\$0.48			
TDK 1uF 250V Ceramic Cap 2220	Digi-Key	445-2304-1-ND	021	4/21/2016	4/26/2016	6	\$1.25000	\$7.50			
Molex 6-Pos Vertical Surface Mount RJ12 Receptacle	Digi-Key	WM3789CT-ND	021	4/21/2016	4/26/2016	2	\$1.16000	\$2.32			
XP Power DC/DC Converter 12V 665mA	Digi-Key	1470-3083-5-ND	021	4/21/2016	4/26/2016	1	\$39.00000	\$39.00			
Diodes Incorporated Linear Voltage Regulator 5V 0.8A	Digi-Key	AZ1117CH-5.0TRG1DICT-N	021	4/21/2016	4/26/2016	2	\$0.38000	\$0.76			
Microchip Technology Low-Power Op Amp SOT-23-5	Digi-Key	MCP6001T-I/OTCT-ND	021	4/21/2016	4/26/2016	2	\$0.24000	\$0.48			
Toshiba 3.75KV Optoisolator	Digi-Key	TLP2361(TPLECT-ND	021	4/21/2016	4/26/2016	3	\$1.10000	\$3.30			
Texas Instruments Isolation Amplifier	Digi-Key	296-38822-5-ND	021	4/21/2016	4/26/2016	3	\$5.72000	\$17.16			
Broadcom Optically Isolated Voltage Sensor	Digi-Key	516-2578-5-ND	021	4/21/2016	4/26/2016	3	\$5.67000	\$17.01			
CW Panel Mount LED Green 14V	Digi-Key	CWI502-ND	021	4/21/2016	4/26/2016	5	\$3.30000	\$16.50			
CW Panel Mount LED Red 14V	Digi-Key	CWI496-ND	021	4/21/2016	4/26/2016	3	\$3.30000	\$9.90			
Emergency Stop Switch with Panel Cutout	McMaster-Carr	7480T11	022	4/22/2016	4/25/2016	1	\$28.71000	\$28.71			
Toggle Switch 1/4" Quick Connect SPST	McMaster-Carr	7343K184	022	4/22/2016	4/25/2016	1	\$6.53000	\$6.53			
Inlet Male Power Socket with Fuse Switch 10A 250V 3 Pin IEC320 C1	Amazon	B00511QVVK	023	4/25/2016	5/2/2016	1	\$6.00000	\$6.00			
CW Panel Mount LED Amber 14V	Digi-Key	CWI499-ND	026	5/3/2016	5/4/2016	2	\$3.30000	\$6.60			
Littlefuse 1A Blade Fuse	Digi-Key	F4191-ND	026	5/3/2016	5/4/2016	10	\$0.26000	\$2.60			

## Cabling (Page 1 of 1)

Description	Supplier	Supplier Part Number	Request Numbe	Date Ordere	Date Receive	Quantity	Unit Price	Total Cost		Total Expenses	\$491.05
2-Way Receptacle Assembly, Flange Mount, Gray	Deutsch Connectors	DT04-2P-L012-Assy	011	3/29/2016	4/1/2016	2	\$10.03000	\$20.06	Week 1	\$0.00	
4-Way Receptacle Assembly, Flange Mount, Gray	Deutsch Connectors	DT04-4P-L012-Assy	011	3/29/2016	4/1/2016	1	\$9.66000	\$9.66	Week 2	\$0.00	
6-Way Receptacle Assembly, Flange Mount, Gasketed, Black	Deutsch Connectors	DT04-6P-CL09-Assy	011	3/29/2016	4/1/2016	1	\$22.07000	\$22.07	Week 3	\$0.00	
8-Way Receptacle Assembly, Flange Mount, Gray	Deutsch Connectors	DT04-08PA-L012-Assy	011	3/29/2016	4/1/2016	2	\$13.38000	\$26.76	Week 4	\$0.00	
Neoprene Gasket for 2-Way and 3-Way Flange Mount Recaptacle	Deutsch Connectors	DT3P-L012-GKT	011	3/29/2016	4/1/2016	2	\$0.96000	\$1.92	Week 5	\$0.00	
Neoprene Gasket for 4-Way Flange Mount Recaptacle	Deutsch Connectors	DT4P-L012-GKT	011	3/29/2016	4/1/2016	8	\$1.10000	\$8.80	Week 6	\$0.00	
Neoprene Gasket for 8-Way Flange Mount Recaptacle	Deutsch Connectors	DT8P-L012-GKT	011	3/29/2016	4/1/2016	2	\$1.92000	\$3.84	Week 7	\$0.00	
Harwin 25mm 3M Hex Standoff	Digi-Key	952-1512-ND	012	3/29/2016	4/4/2016	10	\$0.60800	\$6.08	Week 8	\$0.00	
Keystone Electronics M3 Machine Screw	Digi-Key	36-9191-4-ND	012	3/29/2016	4/4/2016	10	\$0.21800	\$2.18	Week 9	\$0.00	
Thomas & Betts Cable Clamp	Newark	74C6102	020	4/21/2016	4/25/2016	1	\$3.62000	\$3.62	Week 10	\$101.37	
TE Connectivity 18-22AWG Quick Connect, Female, Fully Insulated	Digi-Key	A27817CT-ND	021	4/21/2016	4/26/2016	50	\$0.18660	\$9.33	Week 11	\$0.00	
Ring Terminal 12-10AWG 3/8" (pack of 25)	McMaster-Carr	7113K32	022	4/22/2016	4/25/2016	1	\$7.26000	\$7.26	Week 12	\$0.00	
Spade Terminal 22-18AWG #6 (pack of 100)	McMaster-Carr	69145K66	022	4/22/2016	4/25/2016	1	\$13.67000	\$13.67	Week 13	\$212.15	
Insulated Barrel Quick Connect 22-18AWG Male (pack of 100)	McMaster-Carr	7060K26	022	4/22/2016	4/25/2016	1	\$11.96000	\$11.96	Week 14	\$129.17	
6061 Aluminum Sheet 24"x24"x1/8"	McMaster-Carr	89015K48	022	4/22/2016	4/25/2016	1	\$79.97000	\$79.97	Week 15	\$48.36	
Continuous-Flex Unshielded Cable, 12 Wires, 20AWG (30')	McMaster-Carr	8082K14	022	4/22/2016	4/25/2016	1	\$57.60000	\$57.60			
Acrylic Sheet 12"x24"x1/8" Semi-Clear Red	McMaster-Carr	85635K451	022	4/22/2016	4/25/2016	1	\$28.74000	\$28.74			
12" X 24" 6 Sheets of Matte Black Permanent Adhesive-Backed Vinyl	Amazon	B0032JJS5O	023	4/25/2016	5/2/2016	1	\$12.31000	\$12.31			
Deutsch DT 12-Pin Receptacle, A Key Gray Flange	WireCare	DT04-12PA-L012	024	4/27/2016	5/3/2016	2	\$13.43000	\$26.86			
Deutsch Size 16 Solid Socket, 16-18-20AWG	WireCare	0462-201-16141	024	4/27/2016	5/3/2016	150	\$0.33600	\$50.40			
Deutsch Size 16 Solid Pin, 16-18-20AWG	WireCare	0460-202-16141	024	4/27/2016	5/3/2016	150	\$0.26400	\$39.60			
18-8 Stainless Steel Metric Pan Head Phillips Machine Screw, M2.5, 5mm (pack of 100)	McMaster-Carr	92000A103	025	5/2/2016	5/3/2016	1	\$3.40000	\$3.40			
Aluminum Female Threaded Hex Standoff, M2.5, 20mm	McMaster-Carr	95947A015	025	5/2/2016	5/3/2016	20	\$0.66000	\$13.20			
18-8 Stainless Steel Male-Female Threaded Hex Standoff, 8-32, 3"	McMaster-Carr	91075A012	025	5/2/2016	5/3/2016	4	\$4.00000	\$16.00			
Clear Acrylic Sheet 12x24 (1/8 in thick)	McMaster-Carr	8560K257	025	5/2/2016	5/3/2016	1	\$15.76000	\$15.76			



**Motor Characterization and Modeling (Page 1 of 1)**

Description	Supplier	Supplier Part Number	Request Numbe	Date Ordere	Date Receive	Quantity	Unit Price	Total Cost		Total Expenses	\$86.88
High Temperature Garolite (G-11) Sheet 12"x24"x1/8" Opaque Gre	McMaster-Carr	8710K144	025	5/2/2016	5/3/2016	1	\$86.88000	\$86.88		Week 1	\$0.00
										Week 2	\$0.00
										Week 3	\$0.00
										Week 4	\$0.00
										Week 5	\$0.00
										Week 6	\$0.00
										Week 7	\$0.00
										Week 8	\$0.00
										Week 9	\$0.00
										Week 10	\$0.00
										Week 11	\$0.00
										Week 12	\$0.00
										Week 13	\$0.00
										Week 14	\$0.00
										Week 15	\$86.88

**Shipping, Tax, General (Page 1 of 1)**

Description	Supplier	Request Numbe	Date Ordere	Date Receive	Quantity	Unit Price	Total Cost		Total Expenses	\$410.21
Shipping	8devices	001	2/8/2016	2/19/2016	1	\$9.50000	\$9.50		Week 1	\$0.00
Shipping	Gigavac	003	2/18/2016	2/26/2016	1	\$16.88000	\$16.88		Week 2	\$0.00
Shipping	Amazon	004	2/18/2016	2/24/2016	1	\$6.66000	\$6.66		Week 3	\$9.50
Sales Tax	Amazon	004	2/18/2016	2/24/2016	1	\$1.48000	\$1.48		Week 4	\$25.02
Sales Tax	Amazon	005	3/3/2016	3/14/2016	1	\$1.80000	\$1.80		Week 5	\$0.00
Shipping and Handlin	Advanced Circuits	n/a	3/8/2016	3/16/2016	1	\$43.48000	\$43.48		Week 6	\$1.80
Shipping	freto (via Tindie)	008	3/18/2016	4/12/2016	1	\$3.00000	\$3.00		Week 7	\$43.48
Shipping	Adafruit	009	3/29/2016	4/1/2016	1	\$9.51000	\$9.51		Week 8	\$3.00
Shipping/Handling	Deutsch Connectors	011	3/29/2016	4/1/2016	1	\$11.83000	\$11.83		Week 9	\$0.00
Shipping	Digi-Key	012	3/29/2016	4/4/2016	1	\$11.59000	\$11.59		Week 10	\$32.93
Shipping and Handlin	Advanced Circuits	n/a	4/2/2016	4/11/2016	1	\$43.48000	\$43.48		Week 11	\$160.23
Shipping and Handlin	Advanced Circuits	n/a	4/2/2016	4/11/2016	1	\$43.48000	\$43.48		Week 12	\$75.82
Shipping and Handlin	Amazon	013	4/4/2016	4/12/2016	1	\$19.13000	\$19.13		Week 13	\$33.84
Freight	Mouser	014	4/6/2016	4/11/2016	1	\$7.99000	\$7.99		Week 14	\$17.40
Freight	Newark	015	4/6/2016	4/18/2016	1	\$29.02000	\$29.02		Week 15	\$7.19
Sales Tax	Newark	015	4/6/2016	4/18/2016	1	\$4.68000	\$4.68			
Shipping	Digi-Key	016	4/6/2016	4/12/2016	1	\$12.45000	\$12.45			
Shipping	DFRobot	017	4/11/2016	4/14/2016	1	\$12.00000	\$12.00			
Shipping	Digi-Key	018	4/13/2016	4/19/2016	1	\$10.60000	\$10.60			
Shipping	Amazon	019	4/14/2016	4/18/2016	1	\$8.06000	\$8.06			
Sales Tax	Amazon	019	4/14/2016	4/18/2016	1	\$1.68000	\$1.68			
Shipping and Handlin	Advanced Circuits	n/a	4/15/2016	4/25/2016	1	\$43.48000	\$43.48			
Freight	Newark	020	4/21/2016	4/25/2016	1	\$7.87000	\$7.87			
Shipping	Digi-Key	021	4/21/2016	4/26/2016	1	\$10.60000	\$10.60			
Shipping	McMaster-Carr	022	4/22/2016	4/25/2016	1	\$15.37000	\$15.37			
Shipping	Amazon	023	4/25/2016	5/2/2016	1	\$6.03000	\$6.03			
Shipping	WireCare	024	4/27/2016	5/3/2016	1	\$11.37000	\$11.37			
Shipping	McMaster-Carr	025	5/2/2016	5/3/2016	1	\$7.19000	\$7.19			

## Extra-Budgetary (Page 1 of 3)

Description	Supplier	Serial Number/Product Code	Request Numbe	Date Ordere	Date Receive	Quantity	Unit Price	Total Cost		Total Expenses	\$1,336.47
Panasonic 0.00hm Chip Resistor 0603	Digi-Key	P0.0GCT-ND	006	3/9/2016	3/15/2016	40	\$0.01260	\$0.50	Week 1	\$0.00	
Panasonic 120Ohm 1% Chip Resistor 0805	Digi-Key	P120CCT-ND	006	3/9/2016	3/15/2016	40	\$0.02200	\$0.88	Week 2	\$0.00	
Panasonic 10KOhm 1% Chip Resistor 0603	Digi-Key	P10.0KHCT-ND	006	3/9/2016	3/15/2016	80	\$0.00840	\$0.67	Week 3	\$0.00	
Panasonic 10KOhm 1% Chip Resistor 0805	Digi-Key	P10.0KCCT-ND	006	3/9/2016	3/15/2016	40	\$0.02200	\$0.88	Week 4	\$0.00	
Panasonic 113KOhm 1% Chip Resistor 0603	Digi-Key	P113KHCT-ND	006	3/9/2016	3/15/2016	40	\$0.01140	\$0.46	Week 5	\$0.00	
Panasonic 115KOhm 1% Chip Resistor 0603	Digi-Key	P115KHCT-ND	006	3/9/2016	3/15/2016	40	\$0.01140	\$0.46	Week 6	\$0.00	
Panasonic 300KOhm 1% Chip Resistor 0603	Digi-Key	P300KHCT-ND	006	3/9/2016	3/15/2016	40	\$0.01140	\$0.46	Week 7	\$501.63	
Stackpole 0.001Ohm 1% Chip Resistor 1206	Digi-Key	CSNL1206FT1L00CT-ND	006	3/9/2016	3/15/2016	8	\$0.53900	\$4.31	Week 8	\$0.00	
Stackpole 10M0hm 1% Chip Resistor 0603	Digi-Key	RMCF0603FT10M0CT-ND	006	3/9/2016	3/15/2016	8	\$0.01900	\$0.15	Week 9	\$0.00	
Murata 10pF 50V Ceramic Cap 0603	Digi-Key	490-12530-1-ND	006	3/9/2016	3/15/2016	40	\$0.04380	\$1.75	Week 10	\$72.46	
Murata 220pF 50V Ceramic Cap 0805	Digi-Key	490-1616-1-ND	006	3/9/2016	3/15/2016	8	\$0.11000	\$0.88	Week 11	\$447.01	
Murata 1uF 50V Ceramic Cap 0603	Digi-Key	490-12330-1-ND	006	3/9/2016	3/15/2016	8	\$0.16300	\$1.30	Week 12	\$106.36	
Murata 10uF 50V Ceramic Cap 1210	Digi-Key	490-1891-1-ND	006	3/9/2016	3/15/2016	8	\$0.58000	\$4.64	Week 13	\$33.09	
Nichicon 220uF 20% 16V Aluminum Cap	Digi-Key	493-6214-1-ND	006	3/9/2016	3/15/2016	8	\$0.29300	\$2.34	Week 14	\$174.12	
Nichicon 220uF 20% 50V Aluminum Cap	Digi-Key	493-9379-1-ND	006	3/9/2016	3/15/2016	8	\$0.75700	\$6.06	Week 15	\$1.80	
TDK 220uH Fixed Inductor	Digi-Key	445-173047-1-ND	006	3/9/2016	3/15/2016	8	\$0.46000	\$3.68			
Micro Commercial 100V 3A Schottky Diode	Digi-Key	SK310A-LTPMSCT-ND	006	3/9/2016	3/15/2016	40	\$0.32880	\$13.15			
Rohm 35V 1W Zener Diode	Digi-Key	PTZTE2533BCT-ND	006	3/9/2016	3/15/2016	8	\$0.38500	\$3.08			
NXP 5.1V 500MW Zener Diode	Digi-Key	568-6370-1-ND	006	3/9/2016	3/15/2016	8	\$0.16600	\$1.33			
Würth LED Green 0603	Digi-Key	732-4980-1-ND	006	3/9/2016	3/15/2016	8	\$0.24000	\$1.92			
Rohm P-Fet 30V 1.5A SC-96	Digi-Key	RRR015P03TLCT-ND	006	3/9/2016	3/15/2016	20	\$0.37200	\$7.44			
Würth Flyback Transformer LT8302	Digi-Key	1297-1132-1-ND	006	3/9/2016	3/15/2016	4	\$4.55000	\$18.20			
Bel Fuse 1A Board Mount Fuse 1206	Digi-Key	507-1077-1-ND	006	3/9/2016	3/15/2016	20	\$0.26800	\$5.36			
Omron 10A 3V Relay	Digi-Key	Z3697-ND	006	3/9/2016	3/15/2016	4	\$1.43000	\$5.72			
TE Connectivity 30A 5V Relay	Digi-Key	PB1014-ND	006	3/9/2016	3/15/2016	4	\$4.22000	\$16.88			
TXC 10MHz Surface Mount Crystal	Digi-Key	887-1741-1-ND	006	3/9/2016	3/15/2016	8	\$0.60500	\$4.84			
C&K 0.1A 42V Pushbutton Switch	Digi-Key	CKN9363CT-ND	006	3/9/2016	3/15/2016	4	\$2.43000	\$9.72			
On Shore Technology 4-Pos USB Receptacle	Digi-Key	ED2983-ND	006	3/9/2016	3/15/2016	4	\$0.58000	\$2.32			
Norcomp 37-Pos D-Sub Receptacle	Digi-Key	5237FE-ND	006	3/9/2016	3/15/2016	4	\$4.08000	\$16.32			
Molex 6-Pos Vertical Surface Mount RJ12 Receptacle	Digi-Key	WM3789CT-ND	006	3/9/2016	3/15/2016	4	\$1.16000	\$4.64			
TE Connectivity 4-Pos Blade Socket Receptacle	Digi-Key	A113982-ND	006	3/9/2016	3/15/2016	4	\$8.66000	\$34.64			
Molex 2-Pos Connector Header	Digi-Key	WM1340-ND	006	3/9/2016	3/15/2016	4	\$2.61000	\$10.44			
Molex 6-Pos Connector Header	Digi-Key	WM1344-ND	006	3/9/2016	3/15/2016	4	\$4.20000	\$16.80			
Sullins 16-Pos Connector Header	Digi-Key	3M11931-ND	006	3/9/2016	3/15/2016	2	\$0.55000	\$1.10			
Amphenol 10-Pos Connector Header	Digi-Key	609-4054-ND	006	3/9/2016	3/15/2016	8	\$0.96800	\$7.74			
Atmel 128KB Microcontroller	Digi-Key	AT90CAN128-16AURCT-ND	006	3/9/2016	3/15/2016	2	\$10.40000	\$20.80			
Analog Devices External Watchdog	Digi-Key	ADM6320CY29ARJZ-R7CT-N	006	3/9/2016	3/15/2016	4	\$1.44000	\$5.76			
NXP I2C I/O Expander	Digi-Key	568-1074-1-ND	006	3/9/2016	3/15/2016	4	\$1.22000	\$4.88			
Texas Instruments Current Monitor	Digi-Key	296-29034-1-ND	006	3/9/2016	3/15/2016	4	\$3.44000	\$13.76			
Texas Instruments 16-Bit ADC	Digi-Key	296-38849-1-ND	006	3/9/2016	3/15/2016	4	\$5.65000	\$22.60			
Linear Technology Buck Converter	Digi-Key	LTC3638EMSE#PBF-ND	006	3/9/2016	3/15/2016	4	\$7.79000	\$31.16			
Silicon Labs 3.75KV Digital Isolator	Digi-Key	336-2048-5-ND	006	3/9/2016	3/15/2016	4	\$3.33000	\$13.32			
ON 3.3V Voltage Regulator	Digi-Key	NCP1117ST33T3GOSCT-ND	006	3/9/2016	3/15/2016	1	\$0.46000	\$0.46			
Texas Instruments Inverter	Digi-Key	296-13493-1-ND	006	3/9/2016	3/15/2016	4	\$0.54000	\$2.16			
Microchip Technology Can Transceiver	Digi-Key	MCP2551-I/SN-ND	006	3/9/2016	3/15/2016	4	\$1.02000	\$4.08			
FTDI USB/UART Serial Interface	Digi-Key	768-1007-1-ND	006	3/9/2016	3/15/2016	4	\$4.50000	\$18.00			
Toshiba 3.75KV Optoisolator	Digi-Key	TLP2361(V4-TPLECT-ND	006	3/9/2016	3/15/2016	4	\$1.14000	\$4.56			
Delta 5VDC 200mA Fan	Digi-Key	603-1284-ND	006	3/9/2016	3/15/2016	4	\$12.08000	\$48.32			
Littlefuse 30A In-Line Blade Fuseholder	Digi-Key	F5984-ND	006	3/9/2016	3/15/2016	8	\$4.45500	\$35.64			
Littlefuse 25A Blade Fuse	Digi-Key	F4195-ND	006	3/9/2016	3/15/2016	20	\$0.24000	\$4.80			

## Extra-Budgetary (Page 2 of 3)

Description	Supplier	Serial Number/Product Code	Request Numbe	Date Ordere	Date Receive	Quantity	Unit Price	Total Cost		Total Expenses
TE Connectivity 4-Pos Blade Plug	Digi-Key	556879-4-ND	006	3/9/2016	3/15/2016	4	\$4.83000	\$19.32		\$1,336.47
TE Connectivity Blade Pin	Digi-Key	A104027CT-ND	006	3/9/2016	3/15/2016	20	\$0.63200	\$12.64		
Amphenol 10-Pos Connector Receptacle	Digi-Key	609-4055-ND	006	3/9/2016	3/15/2016	8	\$2.38800	\$19.10		
Norcomp 37-Pos D-Sub Connector Header	Digi-Key	237ME-ND	006	3/9/2016	3/15/2016	4	\$2.30000	\$9.20		
Littlefuse 5A Blade Fuse	Digi-Key	F4197-ND	012	3/29/2016	4/4/2016	8	\$0.26000	\$2.08		
MPD Blade Fuse PCB Block	Digi-Key	BK-6010-ND	012	3/29/2016	4/4/2016	3	\$0.54000	\$1.62		
Murata DC/DC Converter 5V 1.2A	Digi-Key	811-2109-5-ND	012	3/29/2016	4/4/2016	3	\$22.00000	\$66.00		
Micro Commercial 30V Zener Diode	Digi-Key	SMAZ30-TPMSCT-ND	012	3/29/2016	4/4/2016	8	\$0.34500	\$2.76		
Anderson Powerpole PP15/45 Red and Black Housings with 45A Pins (set of 1	Amazon	B00HZ9A0FY	013	4/4/2016	4/11/2016	1	\$8.97000	\$8.97		
Anderson Powerpole Receptacle Retaining Pin	Amazon	B00LQPUL84	013	4/4/2016	4/12/2016	12	\$0.49000	\$5.88		
Anderson Powerpole 2-4P Housing Plug With Latch	Mouser Electronics	879-1460G1	014	4/6/2016	4/11/2016	4	\$1.70000	\$6.80		
Anderson Powerpole 2-4P Housing Plug, No Latch	Mouser Electronics	879-1461G1	014	4/6/2016	4/11/2016	3	\$1.54000	\$4.62		
Anderson PP15/45 Ground Housing, Green	Mouser Electronics	879-1827GA-BK	014	4/6/2016	4/11/2016	4	\$0.50000	\$2.00		
Anderson Powerpole 2-4P Housing Snap-In Receptacle	Newark	05M6458	015	4/6/2016	4/8/2016	3	\$2.57000	\$7.71		
Anderson PPMX 2-Piece Housing Only, Black	Newark	22T8520	015	4/6/2016	4/8/2016	6	\$0.89500	\$5.37		
Anderson PPMX Socket Contact	Newark	22T8518	015	4/6/2016	4/8/2016	10	\$1.57000	\$15.70		
Anderson PPMX Pin Contact	Newark	22T8519	015	4/6/2016	4/8/2016	10	\$1.56000	\$15.60		
ITT Cannon Powerlock Line Source, Green	Newark	44W4346	015	4/6/2016	4/18/2016	2	\$52.89000	\$105.78		
Veam Powerlock Panel Drain, Blue	Newark	04X2126	015	4/6/2016	4/11/2016	1	\$79.84000	\$79.84		
C&K Pushbutton Plunger	Digi-Key	CKN9207-ND	016	4/6/2016	4/12/2016	15	\$0.45400	\$6.81		
C&K SPST Pushbutton	Digi-Key	CKN9363CT-ND	016	4/6/2016	4/12/2016	15	\$2.27100	\$34.07		
Harting USB 2.0 FemaleA-FemaleA Panel Mount Receptacle	Digi-Key	1195-3481-ND	016	4/6/2016	4/12/2016	3	\$21.65000	\$64.95		
Harting USB Receptacle Cap	Digi-Key	1195-2189-ND	016	4/6/2016	4/12/2016	3	\$8.14000	\$24.42		
Kingbright LED Red, 5mm	Digi-Key	754-1883-ND	016	4/6/2016	4/12/2016	7	\$0.54600	\$3.82		
Lumex Panel Mount 5mm LED Holder	Digi-Key	67-1332-ND	016	4/6/2016	4/12/2016	7	\$0.20900	\$1.46		
Molex 4-Pos Connector Housing	Digi-Key	WM2902-ND	016	4/6/2016	4/12/2016	4	\$0.27000	\$1.08		
Molex 4-Pos Connector Header	Digi-Key	WM1342-ND	016	4/6/2016	4/12/2016	4	\$2.99000	\$11.96		
On Shore 16-Pos Connector Socket	Digi-Key	ED10502-ND	016	4/6/2016	4/12/2016	7	\$0.33600	\$2.35		
TE Connectivity 10-Pos Connector Receptacle, Panel Mount	Digi-Key	A111927-ND	016	4/6/2016	4/12/2016	7	\$0.27000	\$1.89		
TE Connectivity 10-Pos Connector Plug, Free Hanging	Digi-Key	A30594-ND	016	4/6/2016	4/12/2016	7	\$0.25400	\$1.78		
TE Connectivity 2-Pos Connector Receptacle, Free Hanging	Digi-Key	A30590-ND	016	4/6/2016	4/12/2016	7	\$0.17800	\$1.25		
TE Connectivity 2-Pos Connector Plug, Free Hanging	Digi-Key	A30654-ND	016	4/6/2016	4/12/2016	7	\$0.11600	\$0.81		
TE Connectivity 10-12AWG Crimp Connector Ring	Digi-Key	A27284CT-ND	016	4/6/2016	4/12/2016	7	\$0.34800	\$2.44		
3M Connector Tap	Digi-Key	920074-07-ND	016	4/6/2016	4/12/2016	7	\$0.55100	\$3.86		
Molex 2-Pos Connector Header	Digi-Key	WM1340-ND	016	4/6/2016	4/12/2016	3	\$2.61000	\$7.83		
TE Connectivity 16AWG Socket	Digi-Key	A100459CT-ND	016	4/6/2016	4/12/2016	200	\$0.03956	\$7.91		
TE Connectivity 16AWG Pin	Digi-Key	A110999CT-ND	016	4/6/2016	4/12/2016	200	\$0.03956	\$7.91		
TE Connectivity 22-26AWG Socket	Digi-Key	A30638-ND	016	4/6/2016	4/12/2016	20	\$0.05080	\$1.02		
TE Connectivity 22-26AWG Pin	Digi-Key	A30646-ND	016	4/6/2016	4/12/2016	20	\$0.05640	\$1.13		
DFRobot LCD Display	DFRobot	DFR0154	017	4/11/2016	4/14/2016	2	\$23.00000	\$46.00		
Molex 24-30AWG Socket	Digi-Key	WM2562-ND	018	4/13/2016	4/19/2016	400	\$0.08760	\$35.04		
Qualtek USB 2.0 MaleA-MaleB Cable, 3ft	Digi-Key	Q361-ND	018	4/13/2016	4/19/2016	3	\$2.15000	\$6.45		
On Shore 16-Pos Connector Header	Digi-Key	ED10523-ND	018	4/13/2016	4/19/2016	8	\$0.37500	\$3.00		
YCS Basics USB 2.0 MaleA-MaleB Cable, 6in, Right Angle	Amazon	B00B5HS7TI	019	4/14/2016	4/18/2016	3	\$5.29000	\$15.87		
Texas Instruments Current Monitor	Digi-Key	296-29034-1-ND	021	4/21/2016	4/26/2016	8	\$3.08700	\$24.70		
TE Connectivity 10-Pos Connector Receptacle, Panel Mount	Digi-Key	A111927-ND	021	4/21/2016	4/26/2016	3	\$0.27000	\$0.81		
TE Connectivity 10-Pos Connector Plug, Free Hanging	Digi-Key	A30594-ND	021	4/21/2016	4/26/2016	3	\$0.27000	\$0.81		
Stackpole 10Ohm 1% Chip Resistor 0805	Digi-Key	RMCF0805FT1R00CT-ND	021	4/21/2016	4/26/2016	75	\$0.00910	\$0.68		
Sullins 16-Pos Connector Socket with Strain Relief	Digi-Key	S9308-ND	021	4/21/2016	4/26/2016	8	\$0.76100	\$6.09		
Deutsch DT 4-Pin Receptacle, Gray Flange	WireCare	DT04-4P-L012	024	4/27/2016	5/3/2016	2	\$7.97000	\$15.94		

**Extra-Budgetary (Page 3 of 3)**

Description	Supplier	Serial Number/Product Code	Request Numbe	Date Ordere	Date Receive	Quantity	Unit Price	Total Cost		Total Expenses	\$1,336.47
Deutsch DT 6-Pin Receptacle, Black Sealed Flange	WireCare	DT04-6P-CL09	024	4/27/2016	5/3/2016	6	\$24.57400	\$147.44			
Deutsch DT 6-Pin Socket Plug, Gray	WireCare	DT06-6S	024	4/27/2016	5/3/2016	3	\$3.58000	\$10.74			
Orion Fans 60mm Steel Fan Guard	Digi-Key	1053-1378-ND	026	5/3/2016	5/4/2016	3	\$0.60000	\$1.80			

**Weekly Breakdown and Statistics**

Week	Spent This Week	Spent To Date	Remaining To Date	Statistics	
1	\$0.00	\$0.00	\$3,000.00	Total Number of Parts Ordered	3329
2	\$0.00	\$0.00	\$3,000.00	Average Cost Per Part	\$1.17
3	\$74.50	\$74.50	\$2,925.50	Average Elapsed Delivery Days Per Part	5.75
4	\$142.89	\$217.39	\$2,782.61	Total Shipping Charges	\$400.57
5	\$0.00	\$217.39	\$2,782.61	Average Shipping Cost Per Part	\$0.12
6	\$170.30	\$387.69	\$2,612.31	Total Sales Tax	\$9.64
7	\$387.86	\$775.55	\$2,224.45		
8	\$17.95	\$793.50	\$2,206.50		
9	\$0.00	\$793.50	\$2,206.50		
10	\$264.96	\$1,058.46	\$1,941.54		
11	\$792.36	\$1,850.82	\$1,149.18		
12	\$248.77	\$2,099.59	\$900.41		
13	\$553.79	\$2,653.38	\$346.62		
14	\$152.57	\$2,805.95	\$194.05		
15	\$178.17	\$2,984.12	\$15.88		