

Label	Qty	Description	Manufacure	MFG #	Digikey #	Cost Each	Total	Mouser #	Cost Each	Total	
U1	1	74HCT14 - Hex schmitt Trigger Inverter 14-DIP	Texas Instruments	SN74HCT14N	296-8394-5-ND	\$ 0.56	\$ 0.56	595-SN74HCT14N	\$ 0.56	\$ 0.56	
U2, U4, U8, U9	4	74HCT540 - Inverter 8-input 20-DIP	Texas Instruments	SN74HCT540E	296-8419-5-ND	\$ 0.86	\$ 3.44	595-SN74HCT540N	\$ 0.61	\$ 2.44	
U3	1	74LS74 - Dual D-type positive trigger flip-flop 14-DIP	Texas Instruments	SN74LS74AN	296-1668-5-ND	\$ 0.61	\$ 0.61	595-SN74LS74AN	\$ 0.61	\$ 0.61	
U5, U15	2	74HCT30 - 8-input NAND 14-DIP	Texas Instruments	CD74HCT30E	296-2111-5-ND	\$ 0.41	\$ 0.82	595-CD74HCT30E	\$ 0.41	\$ 0.82	
U6	1	74LS38 - Quad 2-input NAND 14-DIP	Texas Instruments	SN74LS38N	296-1664-5-ND	\$ 0.90	\$ 1.80	595-SN74LS38N	\$ 0.86	\$ 0.86	
U7	1	74HCT02 - Quad 2-input NOR 14-DIP	Texas Instruments	SN74HCT02N	296-8380-5-ND	\$ 0.47	\$ 0.47	595-SN74HCT02N	\$ 0.48	\$ 0.48	
U10	1	74HCT640 - Transcever Tristate 8-bit 20-DIP	Texas Instruments	CD74HCT640E	296-2155-5-ND	\$ 3.43	\$ 3.43	595-CD74HCT640E	\$ 3.43	\$ 3.43	
U11	0	Not used	N/A	N/A	N/A	\$ -	\$ -	N/A	\$ -	\$ -	
U12	1	74HCT138 - 3 to 8 line decoder 16-DIP	Texas Instruments	SN74HCT138N	296-1608-5-ND	\$ 0.60	\$ 0.60	595-SN74HCT138N	\$ 0.60	\$ 0.60	
U13	1	7805 - 5V @ 1.5A linear regulator	Micro COmmervial Co	MC7805CT-BP	MC7805CT-BPMS-ND	\$ 0.48	\$ 0.48	513-NJM7805FA	\$ 0.75	\$ 0.75	
U14	1	TL7757 - 4.55V Supply monitor TO-92-3	Texas Instruments	TL7757CLP	296-1992-ND	\$ 0.84	\$ 0.84	595-TL7757CLP	\$ 0.84	\$ 0.84	
U16	1	AS6C1008 - SRAM 128K x 8 (1M Bits) 55ns 32-DIP	Alliaance Memory Inc	AS6C1008-55PCN	1450-1017-ND	\$ 2.77	\$ 2.77	913-AS6C1008-55PCN	\$ 2.91	\$ 2.91	
SW1, SW2	2	Switch 8-possion slide SPST 100mA @ 24V 16-DIP	TE Connectivity/Alcoswitch	1825057-7	450-1366-ND	\$ 1.32	\$ 2.64	710-418117270908	\$ 1.95	\$ 3.90	
U1, U3, U5, U6, U7, U15	6	DIP socket 14-pin	Assmann WSW Components	AR 14 HZL-TT	AE10012-ND	\$ 0.80	\$ 4.80	575-1104731441001000	\$ 0.72	\$ 4.32	
U12	1	DIP socket 16-pin	Assmann WSW Components	AR 16 HZL-TT	AE10013-ND	\$ 0.91	\$ 0.91	575-1104731641001000	\$ 0.82	\$ 0.82	
U2, U4, U8, U9, U10	5	DIP socket 20-pin	Assmann WSW Components	AR 20 HZL-TT	AE10015-ND	\$ 1.14	\$ 5.70	575-1104732041001000	\$ 1.01	\$ 5.05	
U16	1	DIP socket 32-pin	Assmann WSW Components	AR 32 HZL/01-TT	AE10030-ND	\$ 2.90	\$ 2.90	575-11043632	\$ 2.97	\$ 2.97	
RP1, RP2	2	Resistor 9 x 1K 10-SIP	Bourns Inc.	431R-101-102LF	4310R-1-102LF-ND	\$ 0.88	\$ 1.76	652-4310R-1LF-1K	\$ 0.87	\$ 1.74	
D1	1	LED green	Kingbright	WP7113LGD	754-1265-ND	\$ 0.48	\$ 0.48	604-WP7113LGD	\$ 0.19	\$ 0.19	
D2	1	LED red	Kingbright	WP7113LID	754-1266-ND	\$ 0.48	\$ 0.48	604-WP7113LID	\$ 0.19	\$ 0.19	
D3, D4, D6, D5, D7	5	1N5819 - Diode Schottky 40V@1A axial	ON Semiconductor	1N5819G	1N5819GOS-ND	\$ 0.46	\$ 2.30	863- 1N5819G	\$ 0.44	\$ 2.20	
D8	1	LED yellow (In place of blue LED)	Kingbright	WP7113LYD	754-1268-ND	\$ 0.48	\$ 0.48	604-WP7113LYD	\$ 0.19	\$ 0.19	
R1, R2	2	Resistor 220 ohms 5% 1/4 watt carbon film axial	Yageo	CFR-25JB-52-220R	220QBK-ND	\$ 0.10	\$ 0.20	603- CFR-25JB-52-220R	\$ 0.10	\$ 0.20	
R3	1	Resistor 330 ohms 5% 1/4 watt axial	Yageo	CFR-25JB-52-330R	330QBK-ND	\$ 0.10	\$ 0.10	603- CFR-25JB-52-330R	\$ 0.10	\$ 0.10	
R4, R9, R10	3	Resistor 2K ohms 5% 1/4 watt axial	Yageo	CFR-25JB-52-2K	2.0KQBK-ND	\$ 0.10	\$ 0.30	603- CFR-25JB-52-2K	\$ 0.10	\$ 0.30	
R5, R7, R12	3	Resistor 680 ohms 5% 1/4 watt axial	Yageo	CFR-25JB-52-680R	680QBK-ND	\$ 0.10	\$ 0.30	603- CFR-25JB-52-680R	\$ 0.10	\$ 0.30	
R6	1	Resistor 100 ohm 5% 1 watt metal film axial	Yageo	FMP100JR-52-100R	100WCR-ND	\$ 0.13	\$ 0.26	603- FMP100JR-52-100R	\$ 0.17	\$ 0.17	
R8, R13, R14	3	Resistor 1K ohms 5% 1/4 watt axial	Yageo	CFR-25JB-52-1K	1.0KQBK-ND	\$ 0.10	\$ 0.30	603- CFR-25JB-52-1K	\$ 0.10	\$ 0.30	
R11	0	Not used	N/A	N/A	N/A	\$ -	\$ -	N/A	\$ -	\$ -	
P1, P2	2	Connector 25-pos x 0.1 right angle single row horizontal	Samtec Inc.	BCS-125-L-S-HE	SAM1009-25-ND	\$ 5.34	\$ 10.68	N/A	\$ -	\$ -	
C1, C2, C5, C20	4	Capacitor tantalum 33uF @ 25V 0.1 lead spacing	AVX Corporation	TAP336K025SCS	478-1896-ND	\$ 3.34	\$ 13.36	581-TAP336K025SCS	\$ 3.18	\$ 12.72	
C6, C7, C8, C9, C10, C11											
C12, C13, C14, C15	15	Capacitor ceramic 0.1uF @ 50V 0.1 lead spacing	Kemet	C315C104M5U5TA	399-4151-ND	\$ 0.21	\$ 3.15	C315C104M5U5TA	\$ 0.21	\$ 3.15	
C16, C17, C18, C19, C21											
C3, C4	0	Not used	N/A	N/A	N/A	\$ -	\$ -	N/A	\$ -	\$ -	
U13	1	Heath sink compact TO-220 x 0.5	Aavid Thermalloy	577202B00000G	HS107-ND	\$ 0.35	\$ 0.35	577202B00000G	\$ 0.35	\$ 0.35	
U13	1	Machine screw pan head philips M3	APM Hexseal	RM3X8MM 2701	335-1149-ND	\$ 0.45	\$ 0.45	534-29311	\$ 0.36	\$ 0.36	
U13	1	Hex nut 0.217" M3	B&F Fastener Supply	MHNZ 003	H762-ND	\$ 0.34	\$ 0.34	N/A	\$ -	\$ -	
JP1, JP2, JP4, JP6	4	2-PIN	3M	961102-6404-AR	3M9447-ND	\$ 0.54	\$ 2.16	538-22-03-2021	\$ 0.24	\$ 0.96	
JP3, JP5	2	3-PIN	3M	961103-6404-AR	3M9448-ND	\$ 0.60	\$ 1.20	538-22-03-2031	\$ 0.28	\$ 0.56	
JP1, JP2, JP3, JP4, JP5	6	Shorting jumper 2-pin x 0.1	Harwin	M7567-46	952-2165-ND	\$ 0.24	\$ 1.44	M7567-46	\$ 0.25	\$ 1.50	
J1	1	Header right angle 3-pin 0.1 pitch friction lock	TE Connectivity/AMP	640457-3	A19480-ND	\$ 0.17	\$ 0.17	571-6404573	\$ 0.16	\$ 0.16	
BT1	1	Battery LIR2032 - Rechargable Li-ion 3.6V 40mAh	N/A	N/A	N/A	\$ -	\$ -	N/A	\$ -	\$ -	
BT1	1	Battery holder coin compact 20m	Keystone Electronics	1066	36-1066-ND	\$ 1.79	\$ 1.79	534-1066	\$ 1.28	\$ 1.28	
						Total:	\$ 74.82			Total:	\$ 58.28

Optional componants

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SW1, SW2	2	DIP socket 16-pin	Assmann WSW Components	AR 16 HZL-TT	AE10013-ND	\$ 0.91	\$ 1.82	575-1104731641001000	\$ 0.82	\$ 1.64
TP1, TP2	2	2-PIN	3M	961102-6404-AR	3M9447-ND	\$ 0.54	\$ 1.08	538-22-03-2021	\$ 0.24	\$ 0.48

H8 Braket	1	Heat sink and card mount	tx836519@bellsouth.net	Not Digikey	N/A	\$ 9.98	\$ 9.98	N/A	\$ 9.98	\$ 9.98
H8 Braket	2	Machine screw pan head philips M3	APM Hexseal	RM3X8MM 2701	335-1149-ND	\$ 0.45	\$ 0.90	534-29311	\$ 0.36	\$ 0.72
H8 Braket	2	Hex nut 0.217" M3	B&F Fastener Supply	MHNZ 003	H762-ND	\$ 0.34	\$ 0.68	N/A	\$ -	\$ -
						Total:	\$ 14.46		Total:	\$ 12.82