

## Controller BOM

Item	Reference	Qty	Pop	Manufacturer	Part Number	Description	Distributor	Stock Number	Value	Modifier
1	L1	1	1	Steward	HZ0805C202R-10	Bead, Ferrite, 2000 Ohms, 300mA, 0805	Gigi-Key	240-2396-1-ND	2000	300mA
2	C5-6	2	1	AVX Corporation	06035C2231AT2A	Capacitor, Ceramic, 0.022uF, 50V, 5%, X7R, 0603	Digi-Key	478-3722-1-ND	0.022uF	50V
3	C20-41	22	1	AVX Corporation	06035C104KAT2A	Capacitor, Ceramic, 0.1uF, 50V, 10%, X7R, 0603	Digi-Key	478-5052-1-ND	0.1uF	50V
4	C7-8	2	1	AVX Corporation	06035A100JAT2A	Capacitor, Ceramic, 10pF, 50V, 5%, C0G/NPO, 0603	Digi-Key	478-1163-1-ND	10pF	50V
5	C10-11	2	1	AVX Corporation	12102C106KAT2A	Capacitor, Ceramic, 10uF, 10V, 10%, X7R, 1210	Digi-Key	478-1625-1-ND	10uF	10V
6	C9	1	1	AVX Corporation	06035C222KAT2A	Capacitor, Ceramic, 2200pF, 50V, 10%, X7R, 0603	Digi-Key	478-1219-1-ND	2200pF	50V
7	C2-4	3	1	AVX Corporation	06036D106MAT2A	Capacitor, Ceramic,10uF, 6.3V, 20%, X5R, 0603	Digi-Key	478-5318-1-ND	10uF	6.3V
8	C1	1	1	Kemet	T520V107M010ATE050	Capacitor, Tantalum, 100uF, 10V, 20%, 50.0mOhm ESR, 2917	Digi-Key	399-4071-1-ND	100uF	10V
9	J1	1	1	Amphenol Commercial Products	6E17C-009S-AJ-120	Connector, D-Sub, RS232 Female, 9-Pin, Right-Angle	Digi-Key	6E17C-009S-AJ-120-ND	9-Pin Female	Right-Angle
10	P1	1	1	3M	N3440-6202RB	Connector, Header, 30-Position, Vertical, Short Latch	Digi-Key	MHS30S-ND	2X15	0.100"
11	P2	1	1	Molex	22-23-2041	Connector, Header, 4-Position, 0.100", Vertical, Tin	Digi-Key	WM4202-ND	0.100"	4-Pos
12	P5-6	2	1	Molex Connector Corporation	90130-3116	Connector, Header, Shrouded, Right-Angle, 0.1", 2X8	Digi-Key	WM8266-ND	2X8	0.1"
13	P3	1	1	TE Connectivity	4-103783-0	Connector, Header, Vertical, Breakaway, 0.1", Gold, 2x40	Digi-Key	A26524-40-ND	Cut 2x3	0.1"
14	Y1	1	1	Abracon Corporation	ABM3B-8.000MHZ-10-1-U-T	Crystal, 8.000MHz, ±10ppm, 10pF, 5.0x3.2mm, SMD	Digi-Key	535-9721-1-ND	8.000MHz	10pF
15	MH1-4	4	0	Part of PCB	Not Applicable	Hole, Mounting, 0.125"	None	Not Applicable	125	
16	U7	1	1	ON Semiconductor	M74VHC1G125DFT2G	IC, Buffer, Non-Inverting, 3-State, SOT353	Digi-Key	M74VHC1G125DFT2GOSCT-ND	2V-5.5V	8mA
17	U9	1	1	Texas Instruments	SN74LVC125ADR	IC, Buffer, Tri-State, Quad, SPIC14	Digi-Key	296-8453-1-ND	1.65V-3.6V	24mA Drive
18	U3	1	1	Texas Instruments	CD74HC112M96	IC, J-K Flip-Flop, Dual, SOIC16	Digi-Key	296-12777-1-ND	60MHz	5.2mA Drive
19	U1	1	1	Freescale	MC9S12E128MFUE	IC, MPU, 128K Flash, 8K RAM, PWM, 3-Serial, QFP80	Digi-Key	MC9S12E128MFUE-ND	25MHz	
20	U11-13	3	1	Analog Devices Inc	AD8544ARZ	IC, OpAmp, Rail-to-Rail, Quad, Low Power, SOIC14	Digi-Key	AD8544ARZ-ND	2.7V-5.5V	45uA Supply
21	U4 U6	2	1	Texas Instruments	SN74HCT08DR	IC, Quad 2-Input AND Gate, SOIC14	Digi-Key	296-14862-1-ND	4.5V-5.5V	4mA Drive
22	U8	1	1	STMicroelectronics	TS3222EBPR	IC, RS-232 Transceiver, 3-5.5V, 2T/2R, SSOP20	Digi-Key	497-6531-1-ND	3V-5.5V	2Dr/2Rcv
23	U5	1	1	Texas Instruments	TPS7A4533KTTR	IC, Voltage Regulator, LDO, 3.3V, 1.5A, TO263-5	Digi-Key	296-23755-1-ND	3.3V	1.5A
24	U2	1	1	Texas Instruments	TPS3808G33DBVR	IC, Voltage Supervisor, 3.3V, SOT23-6	Digi-Key	296-17195-1-ND	3.3V	3.07V Thresh
25	D1-2	2	1	Vishay/Semiconductors	TLHG4405	LED, Round, 3mm, Green, Diffused, T-1	Digi-Key	751-1101-ND	565nm	Green
26	Q1-2	2	1	Diodes Inc	DMP2215L-7	MOSFET, P-Channel, 20V, 2.7A, SOT23-3	Digi-Key	DMP2215LDICT-ND	20V	2.7A
27	U10	1	1	Roving Networks Inc	RN-42	Module, Bluetooth, 2.4GHz, Surface-Mount	Digi-Key	740-1038-ND	3V-3.6V	25mA
28	R30-39	10	1	Panasonic - ECG	ERJ-3EKF1003V	Resistor, Thick Film, 100K, 0.1W, 1%, 0603	Digi-Key	P100KHCT-ND	100K	0.1W
29	R14-21	8	1	Panasonic - ECG	ERJ-3GEYJ103V	Resistor, Thick Film, 10K, 0.1W, 5%, 0603	Digi-Key	P10KGCT-ND	10K	0.1W
30	R5-6	2	1	Panasonic - ECG	ERJ-6GEYJ121V	Resistor, Thick Film, 120 Ohms, 0.125W, 5%, 0805	Digi-Key	P120ACT-ND	120R	0.125W
31	R10-13	4	1	Panasonic - ECG	ERJ-3EKF3302V	Resistor, Thick Film, 33.0K, 0.1W, 1%, 0603	Digi-Key	P33.0KHCT-ND	33K0	0.1W
32	R1	1	1	Panasonic - ECG	ERJ-3GEYJ4R7V	Resistor, Thick Film, 4.7 Ohms, 0.1W, 5%, 0603	Digi-Key	P4.7GCT-ND	4R7	0.1W
33	R2-4	3	1	Panasonic - ECG	ERJ-3GEYJ472V	Resistor, Thick Film, 4.7K, 0.1W, 5%, 0603	Digi-Key	P4.7KGCT-ND	4K7	0.1W
34	R40-43	4	1	Panasonic - ECG	ERJ-3GEYJ510V	Resistor, Thick Film, 51 Ohms, 0.1W, 5%, 0603	Digi-Key	P51GCT-ND	51R	0.1W
35	R22-27	6	1	Panasonic - ECG	ERJ-3EKF6652V	Resistor, Thick Film, 66.5K, 0.1W, 1%, 0603	Digi-Key	P66.5KHCT-ND	66K5	0.1W
36	R7	1	1	Panasonic - ECG	ERJ-3GEYJ820V	Resistor, Thick Film, 82 Ohms, 0.1W, 5%, 0603	Digi-Key	P82GCT-ND	82R	0.1W
37	S1	1	1	Omron Electronics	B3SL-1002P	Switch, Pushbutton, Tactile, 6mm, 200g, SMD	Digi-key	SW1064CT-ND	6mm	200g