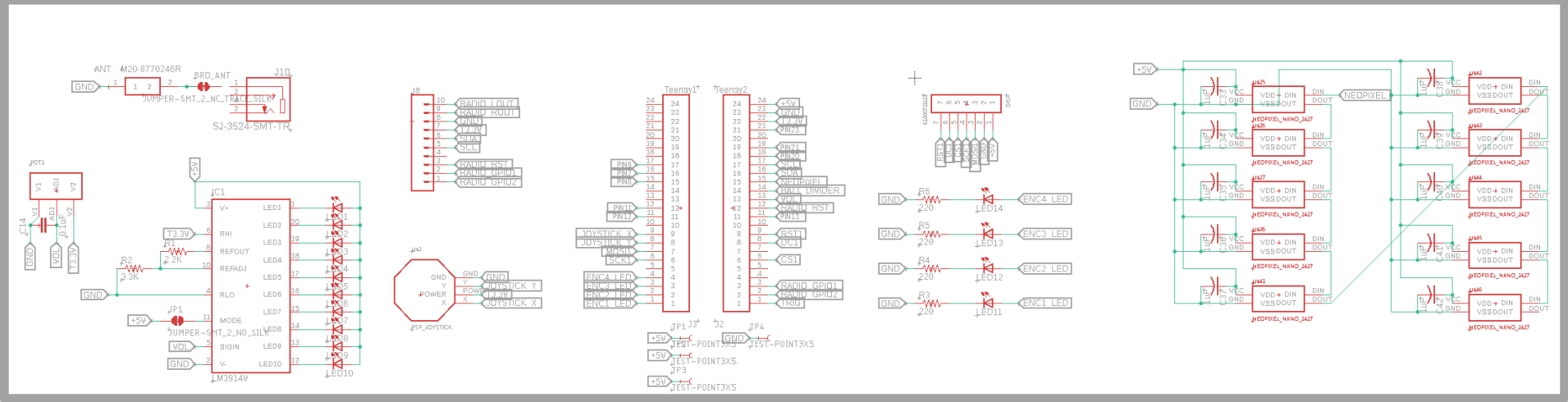


V2.3 Electronics Summary

Prajwal Tumkur Mahesh
January 2020

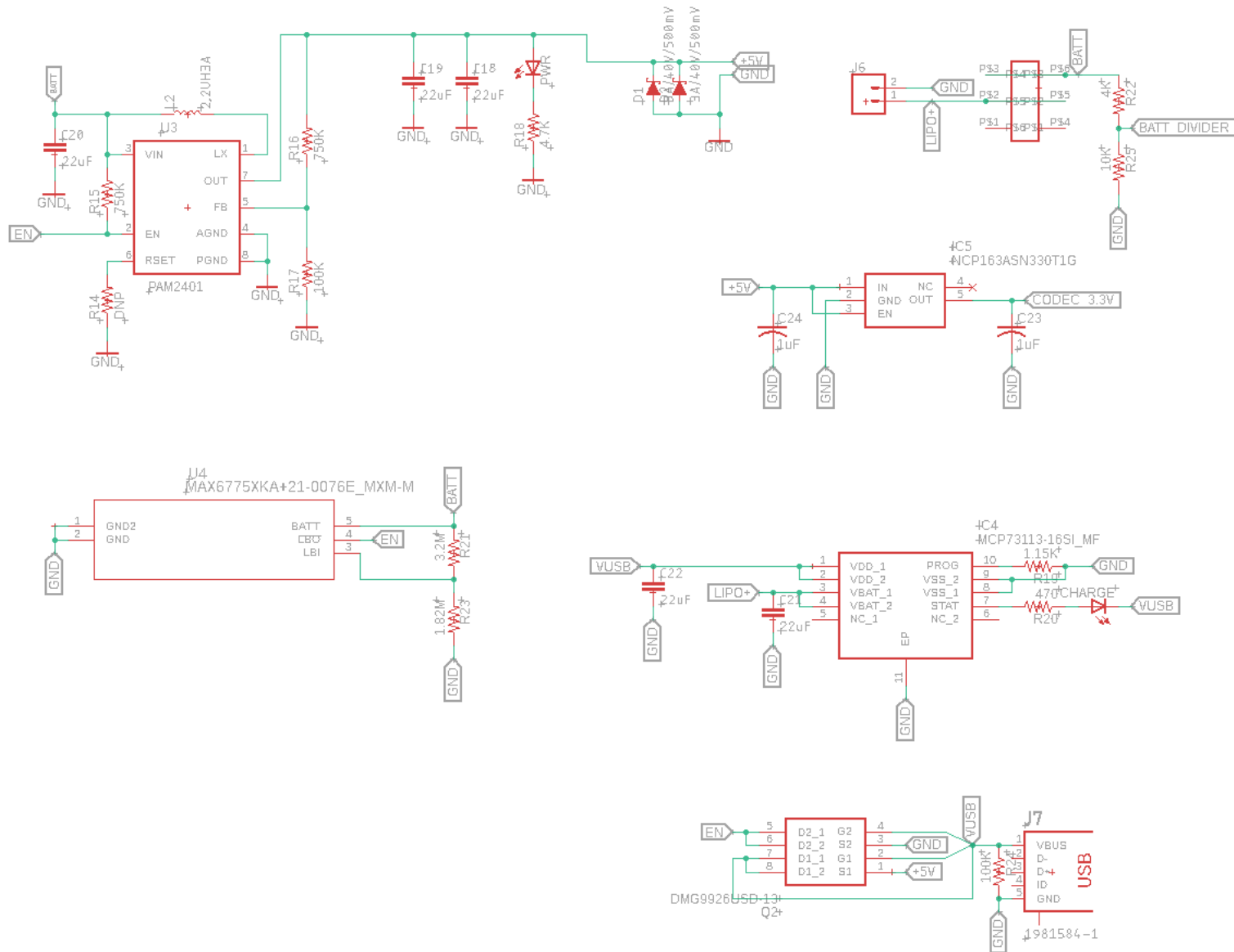
Schematics

TEENSY

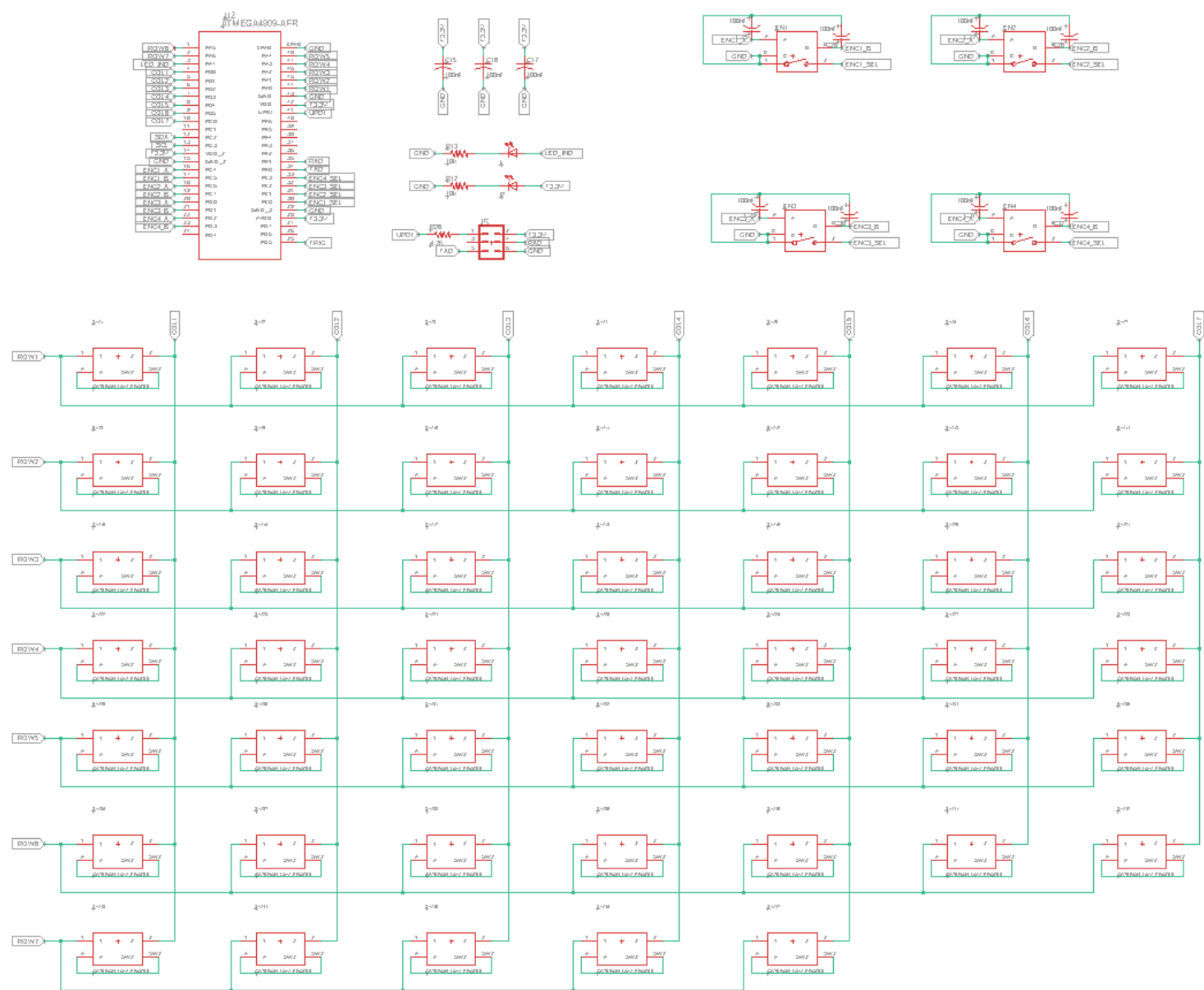


AUDIO CODEC

POWER

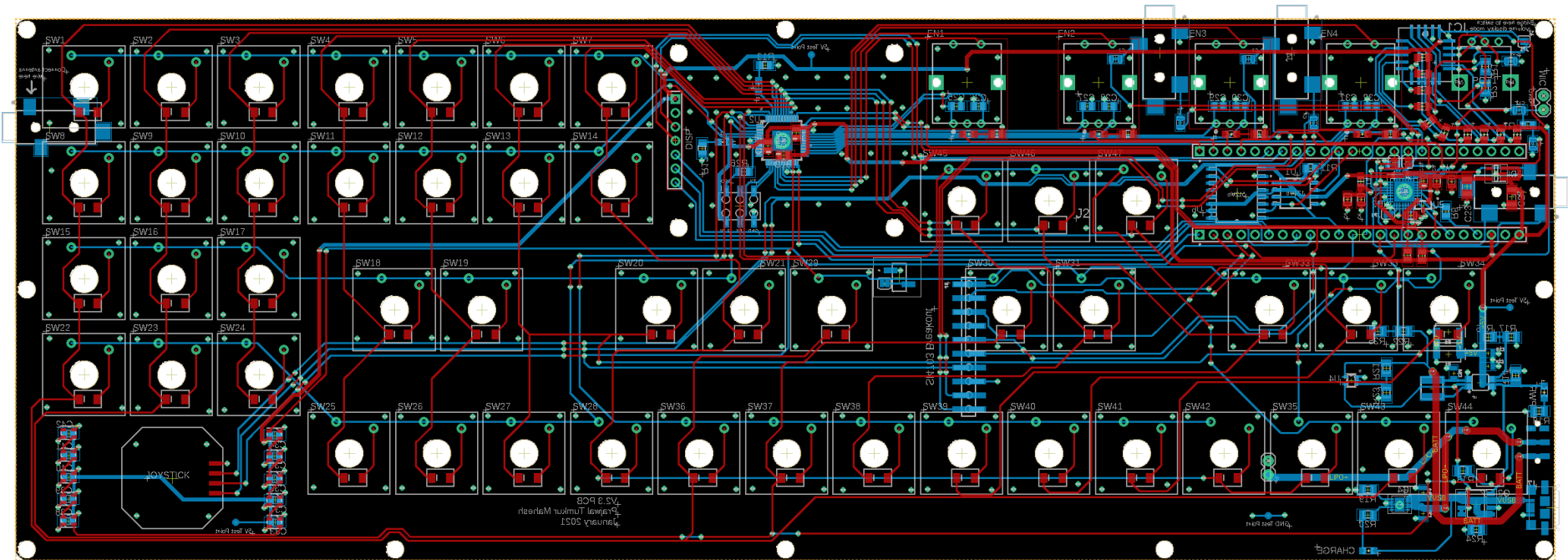


INPUTS

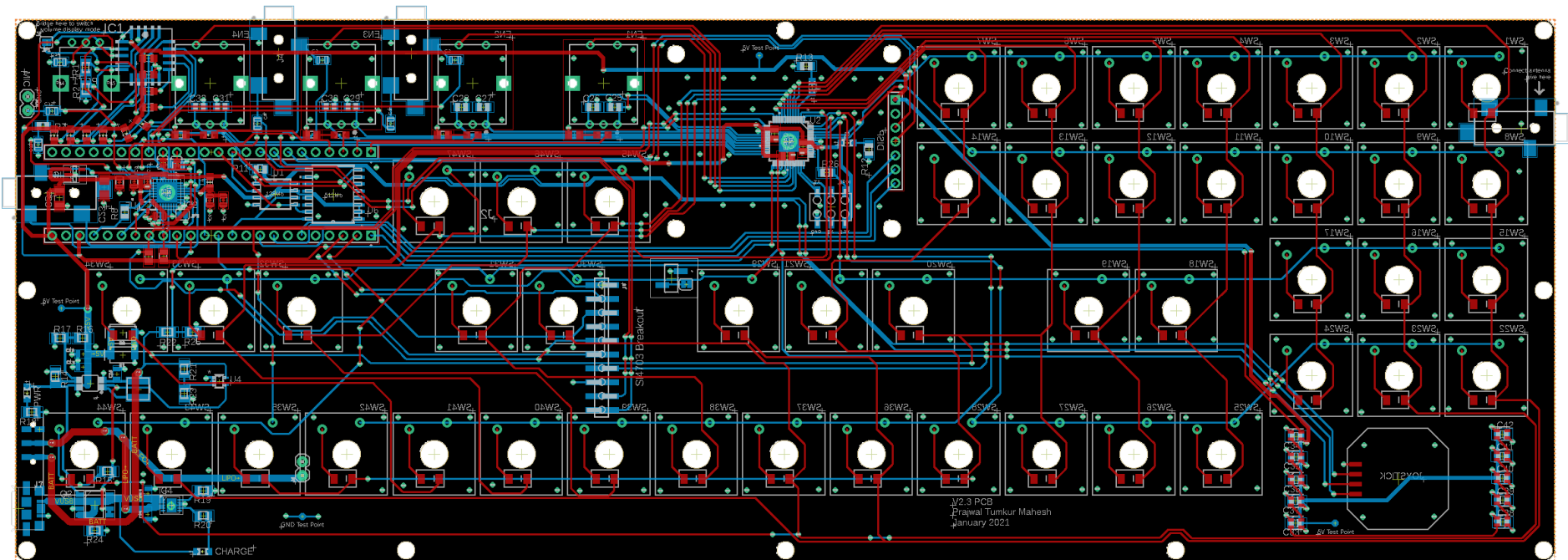


Board Layout

FRONT:



BACK:



BOM

DIGIKEY

Manufacturer Part Number	Manufacturer	Digi-Key Part Number	Reference Designator	Quantity	Unit Price	Extended Price	Description
CL21B225KPFNNNE	Samsung Electro-Mechanics	1276-1188-1-ND	C1,C2,C3,C4,C6,C7,C10,C11	8	0.11	\$0.88	CAP CER 2.2UF 10V X7R 0805
CL21B104KACNNNC	Samsung Electro-Mechanics	1276-1099-1-ND	C5,C8,C9,C12,C14,C15,C16,C17,C25,C26,C27,C28,C29,	26	0.04	\$1.04	CAP CER 0.1UF 25V X7R 0805
CL21B154KBFNNNG	Samsung Electro-Mechanics	1276-6476-1-ND	C30,C31,C32,C33,C34,C35,C36,C37,C38,C39,C40,C41,C42	1	0.1	\$0.10	CAP CER 0.15UF 50V X7R 0805
CL31B105KBHNFNE	Samsung Electro-Mechanics	1276-3091-1-ND	C13	2	0.15	\$0.30	CAP CER 1UF 50V X7R 1206
3484	Adafruit Industries LLC	1528-2291-ND	C23,C24	1	4.95	\$4.95	ADDRESS LED DISCRETE SERIAL RGB
LH R974-LP-1	OSRAM Opto Semiconductors Inc.	475-1415-1-ND	PWR,P,LED11	3	0.25	\$0.75	LED RED DIFFUSED 0805 SMD
SML-LXT0805YW-TR	Lumex Opto/Components Inc.	67-1554-1-ND	CHARGE,L,LED13	3	0.28	\$0.84	LED YELLOW DIFFUSED SMD
QBLP631-IW	QT Brightek (QTB)	1516-1085-1-ND	LED1,LED2,LED3,LED4,LED5,LED6,LED7,LED8,LED9,LED10	10	0.286	\$2.86	LED WHITE 0805 SMD
LG R971-KN-1	OSRAM Opto Semiconductors Inc.	475-1410-1-ND	LED12	1	0.25	\$0.25	LED GREEN DIFFUSED 0805 SMD
HSMR-C170	Broadcom Limited	516-1445-1-ND	LED14	1	0.8	\$0.80	LED BLUE DIFFUSED CHIP SMD
PEC11R-4115F-S0018	Bourns Inc.	PEC11R-4115F-S0018-ND	EN1,EN2,EN3,EN4	4	1.57	\$6.28	ROTARY ENCODER MECHANICAL 18PPR
P0915N-FC15BR10K	TT Electronics/BI	987-1649-ND	POT1	1	1.36	\$1.36	POT 10K OHM 1/20W PLASTIC LINEAR
B340A-13-F	Diodes Incorporated	B340A-FDICT-ND	D1,D2	2	0.41	\$0.82	DIODE SCHOTTKY 40V 3A SMA
SGTL5000XNAA3	NXP USA Inc.	SGTL5000XNAA3-ND	IC2	1	3.37	\$3.37	IC AUDIO CODEC STEREO 32-QFN
ATMEGA4809-AFR	Microchip Technology	ATMEGA4809-AFRCT-ND	U2	1	1.59	\$1.59	IC MCU 8BIT 48KB FLASH 48TQFP
IFSC1515AHER2R2M01	Vishay Dale	541-1404-1-ND	L2	1	0.56	\$0.56	FIXED IND 2.2UH 3A 45 MOHM SMD
742792040	Würth Elektronik	732-1620-1-ND	L1	1	0.22	\$0.22	FERRITE BEAD 600 OHM 0805 1LN
RNCP0805FTD10K0	Stackpole Electronics Inc	RNCP0805FTD10K0CT-ND	R11,R12,R13,R25	4	0.1	\$0.40	RES 10K OHM 1% 1/4W 0805
ERA-6AEB104V	Panasonic Electronic Components	P100KDACT-ND	R17,R24	3	0.31	\$0.93	RES 100K OHM 0.1% 1/8W 0805
ESR10EZPJ222	Rohm Semiconductor	RHM2.2KKCT-ND	R1,R7,R9,R10	4	0.1	\$0.40	RES SMD 2.2K OHM 5% 0.4W 0805
RC0805FR-07750KL	Yageo	311-750KCRCT-ND	R15,R16	2	0.1	\$0.20	RES SMD 750K OHM 1% 1/8W 0805
CRGQ0805F3K3	TE Connectivity Passive Product	A129755CT-ND	R2	2	0.1	\$0.20	CRGQ 0805 3K3 1%
RC0805JR-074K7L	Yageo	311-4.7KARCT-ND	R18,R26	2	0.1	\$0.20	RES SMD 4.7K OHM 5% 1/8W 0805
RC0805FR-071K15L	Yageo	311-1.15KCRCT-ND	R19	1	0.1	\$0.10	RES SMD 1.15K OHM 1% 1/8W 0805
CRCW08054K00FKTA	Vishay Dale	541-CRCW08054K00FKTACT-ND	R22	1	0.13	\$0.13	RES SMD 4K OHM 1% 1/8W 0805
JS202011JAQN	C&K	CKN10722CT-ND		1	0.58	\$0.58	SWITCH SLIDE DPDT 300MA 6V
W25Q128JVSQ TR	Winbond Electronics	W25Q128JVSQCT-ND	U1	1	1.42	\$1.42	IC FLASH 128MBIT SPI/QUAD 8SOIC
PAM2401SCADJ	Diodes Incorporated	PAM2401SCADJDICT-ND	U3	1	0.99	\$0.99	IC REG BOOST ADJUSTABLE 1A 8MSOP
AP7313-15SAG-7	Diodes Incorporated	AP7313-15SAG-7DICT-ND	U5	1	0.39	\$0.39	IC REG LINEAR 1.5V 150MA SOT23-3
MCP73113-16SI/MF	Microchip Technology	MCP73113-16SI/MF-ND	IC4	1	1.12	\$1.12	IC BATT CONTRL LI-ION 1CEL 10DFN
NCP163ASN330T1G	ON Semiconductor	NCP163ASN330T1GOSCT-ND	IC5	1	0.49	\$0.49	LDO REG ULTRA-LOW NOISE & HIGH P
SJ-3524-SMT-TR	CUI Devices	CP-3524SJCT-ND		4	0.95	\$3.80	CONN JACK STEREO 3.5MM SMD R/A
10118192-0001LF	Amphenol ICC (FCI)	609-4613-1-ND		1	0.48	\$0.48	CONN RCPT USB2.0 MICRO B SMD R/A
10129380-910001ALF	Amphenol ICC (FCI)	609-10129380-910001ALFCT-ND		1	0.26	\$0.26	CONN HEADER SMD 10POS 2.54MM
DM3CS-SF	Hirose Electric Co Ltd	HR1972CT-ND		1	1.43	\$1.43	CONN MICRO SD CARD HINGED TYPE
MAX6775XKB+T	Maxim Integrated	MAX6775XKB+TCT-ND	U4	1	2.18	\$2.18	IC BATT MON MULTI-CHEM 1C SC70-5
POM-5046P-C3310-R	PUI Audio, Inc.	668-1677-ND	MIC	1	1.69	\$1.69	MIC COND ANALOG OMNI -46DB 6MM D
LL4148	ON Semiconductor	LL4148FSCT-ND		50	0.068	\$3.40	DIODE GEN PURP 100V 200MA SOD80
RC0805FR-073M16L	Yageo	311-3.16MCRCT-ND	R21	1	0.1	\$0.10	RES SMD 3.16M OHM 1% 1/8W 0805
CRCW08051M82FKEA	Vishay Dale	541-1.82MCCT-ND	R23	1	0.1	\$0.10	RES SMD 1.82M OHM 1% 1/8W 0805
LM3914VX/NOPB	Texas Instruments	LM3914VX/NOPBCT-ND	IC1	1	3.71	\$3.71	IC DRVR DOT/BAR DISPLAY 20PLCC
CRGQ0805F220R	TE Connectivity Passive Product	A129741CT-ND	R3,R4,R5,R6	10	0.044	\$0.44	CRGQ 0805 220R 1%
CRGQ0805J100R	TE Connectivity Passive Product	A130128CT-ND	R8	1	0.1	\$0.10	CRGQ 0805 100R 5%
CRGQ0805F470R	TE Connectivity Passive Product	A129745CT-ND	R20	1	0.1	\$0.10	CRGQ 0805 470R 1%
CL21A226MQQNNNE	Samsung Electro-Mechanics	1276-1100-1-ND	C18,C19,C20,C21,C22	5	0.14	\$0.70	CAP CER 22UF 6.3V X5R 0805
444	Adafruit Industries LLC	1528-444-ND	JOYSTICK	1	3.5	\$3.50	PSP 2-AXIS ANALOG THUMB JOYSTICK
S25FL512SAGMFIR13	Cypress Semiconductor Corp	428-S25FL512SAGMFIR13CT-ND	U6	1	7.72	\$7.72	IC FLASH 512MBIT SPI/QUAD 16SOIC
22284245	Molex	900-0022284245-ND		2	1.41	\$2.82	CONN HEADER VERT 24POS 2.54MM
61300711121	Würth Elektronik	732-5320-ND		1	0.37	\$0.37	CONN HEADER VERT 7POS 2.54MM

CART LINK: <https://www.digikey.com/short/4734rh>

KEYCHRON

ITEM	QUANTITY	UNIT PRICE	EXTENDED PRICE	LINK
Low Profile Gateron Mechanical Switch Set	4	\$4.00	\$16.00	http://bit.ly/38GNrUU

AMAZON

ITEM	QUANTITY	UNIT PRICE	EXTENDED PRICE	LINK
Waveshare 1.5inch RGB OLED Display Module	4	\$18.90	18.9	https://amzn.to/3qhuBcX

PJRC

ITEM	QUANTITY	UNIT PRICE	EXTENDED PRICE	LINK
Teensy 4.1	1	\$26.85	\$26.85	http://bit.ly/3ibYI2y
PSRAM Chip	2	\$1.20	\$2.40	http://bit.ly/3nQR6nC