

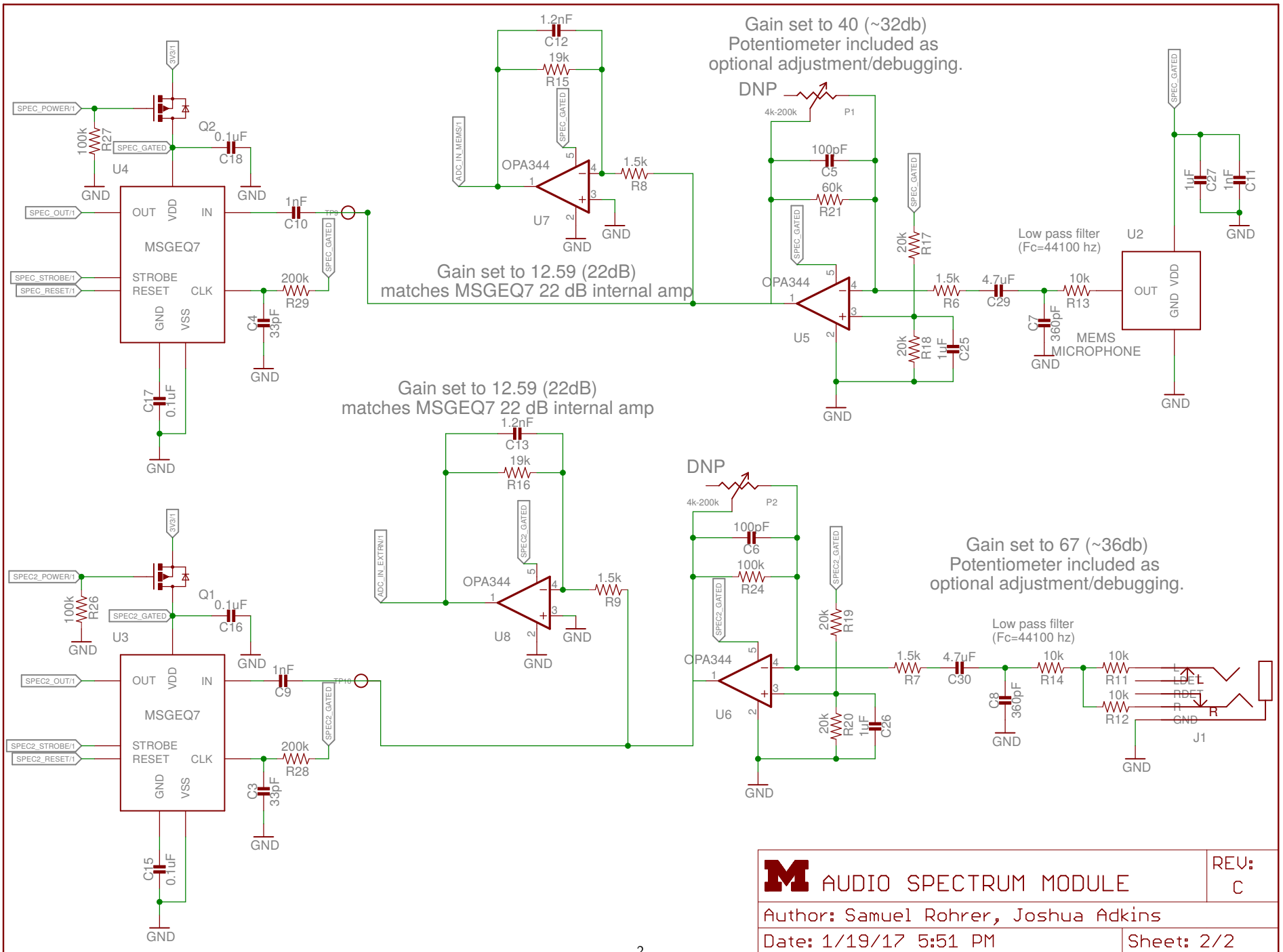
M AUDIO SPECTRUM MODULE

REV:
C

Author: Samuel Rohrer, Joshua Adkins

Date: 1/19/17 5:51 PM

Sheet: 1/2



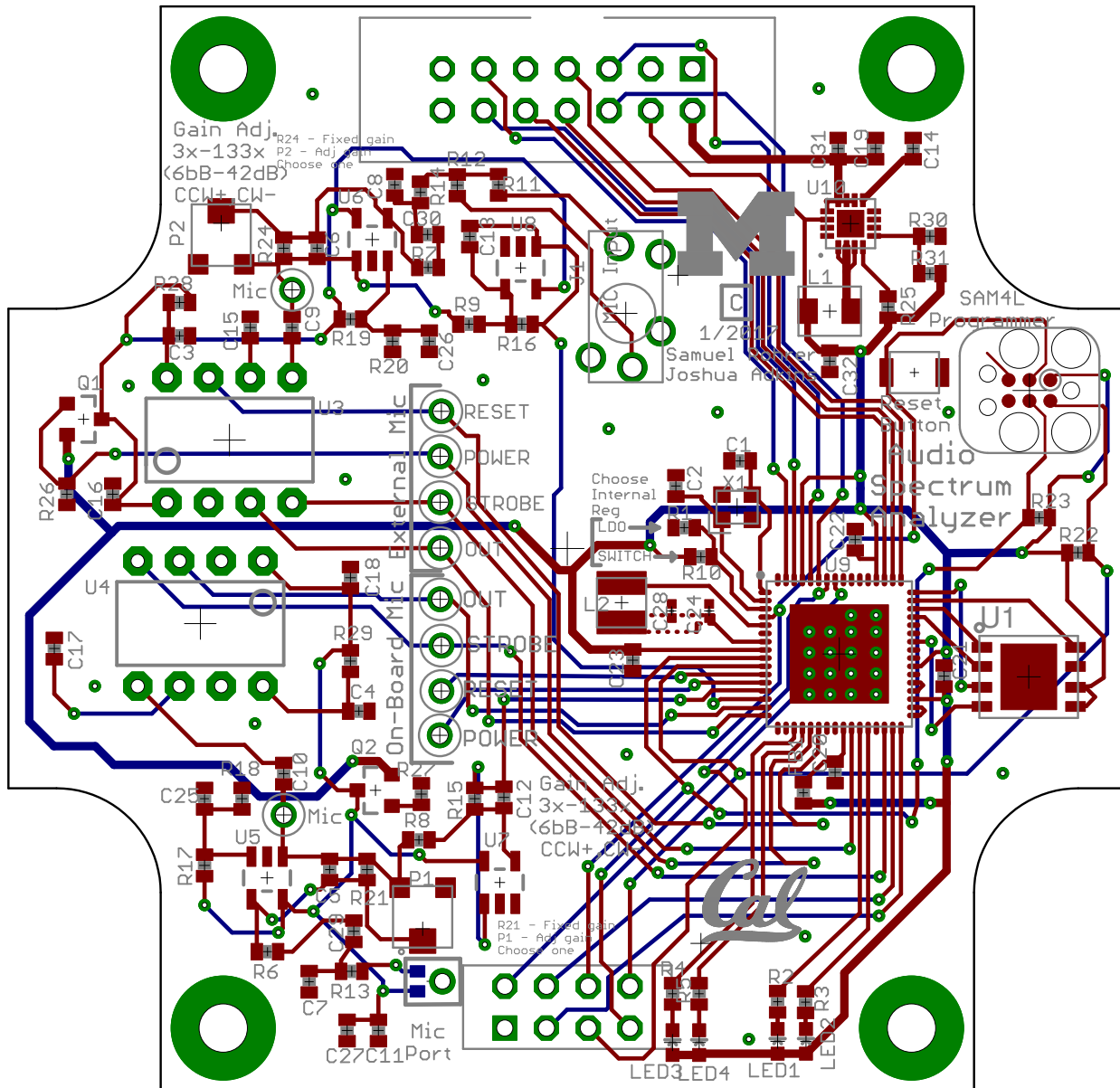
M AUDIO SPECTRUM MODULE

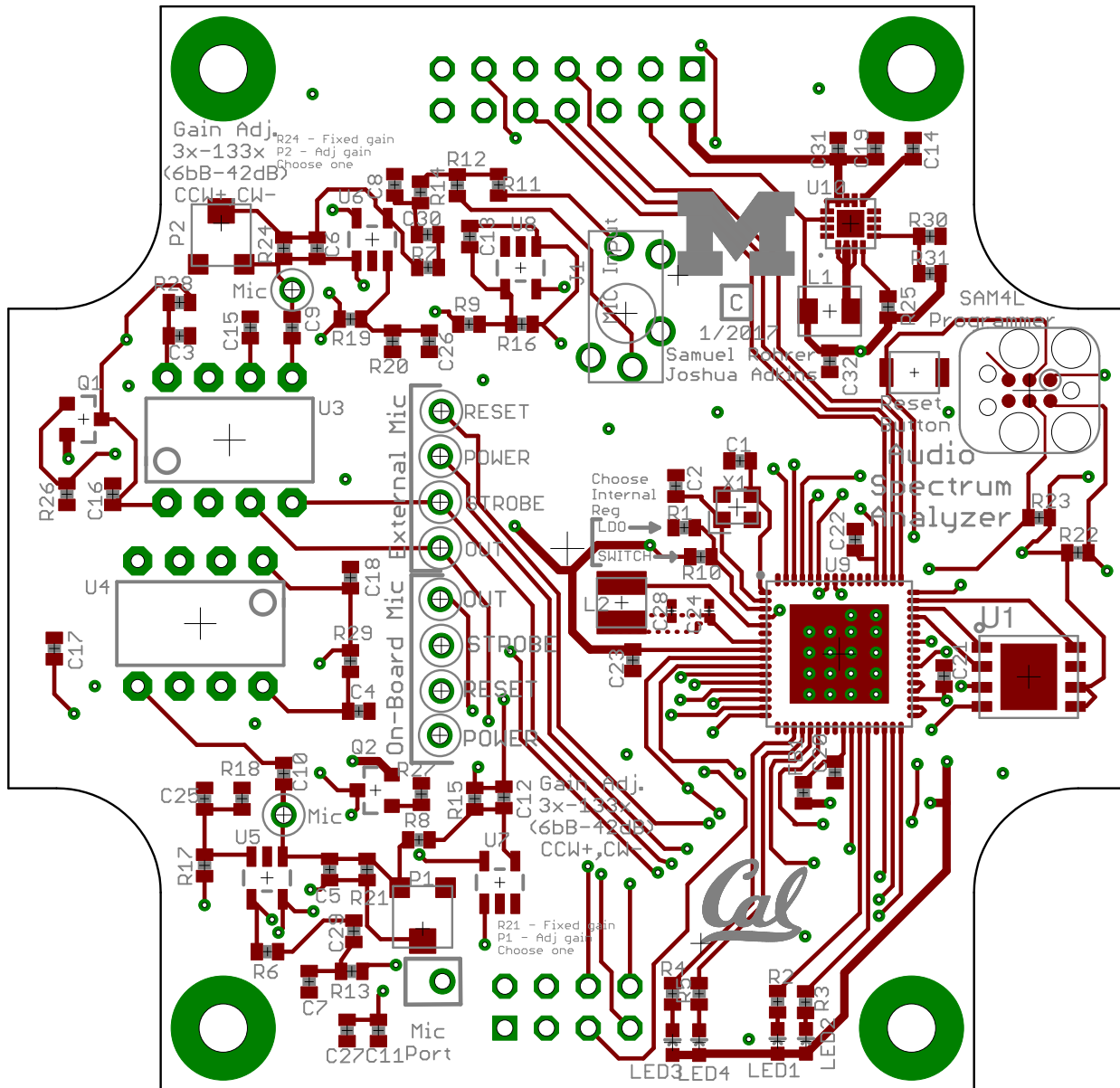
REV:
C

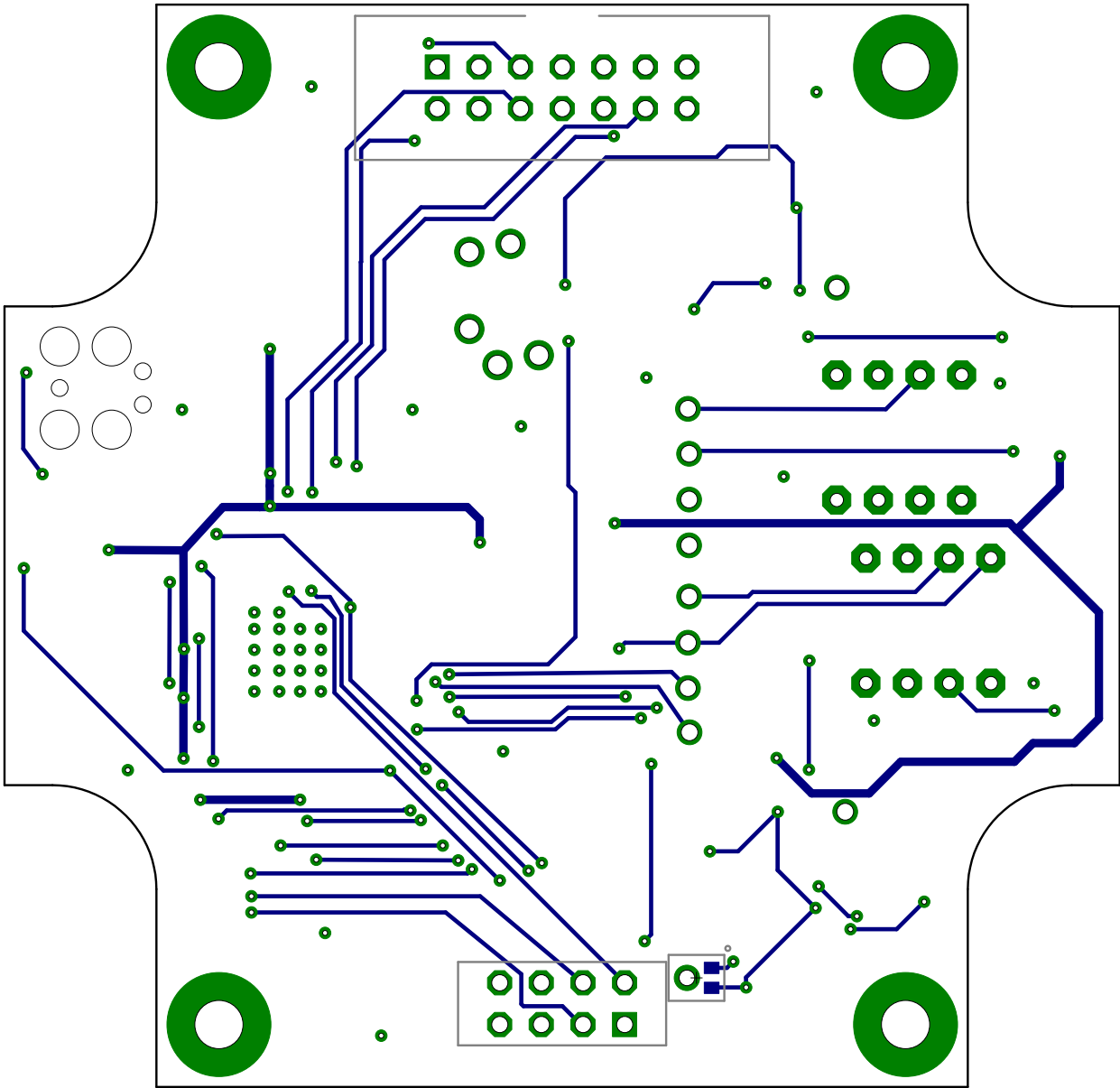
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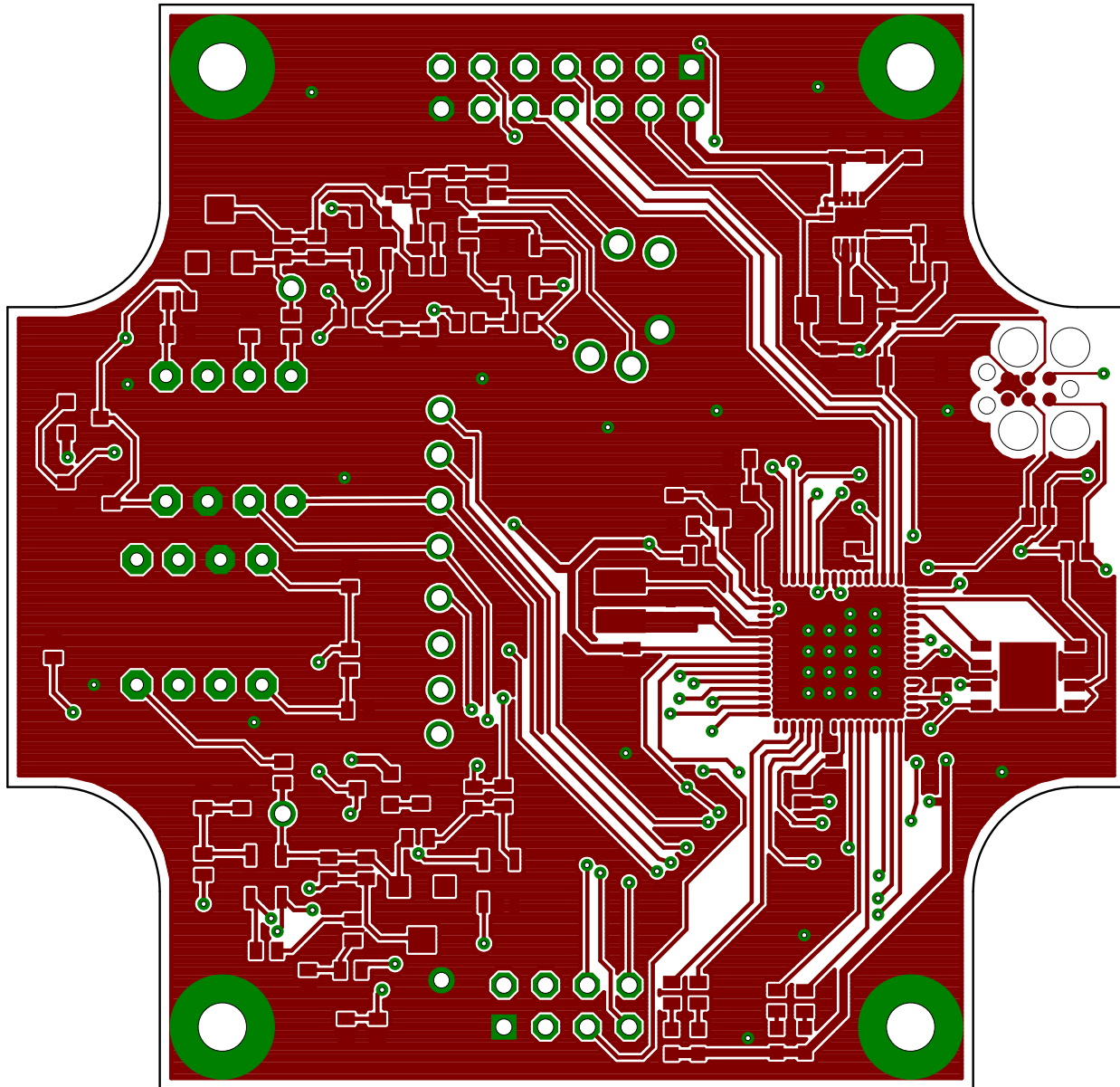
Date: 1/19/17 5:51 PM

Sheet: 2/2

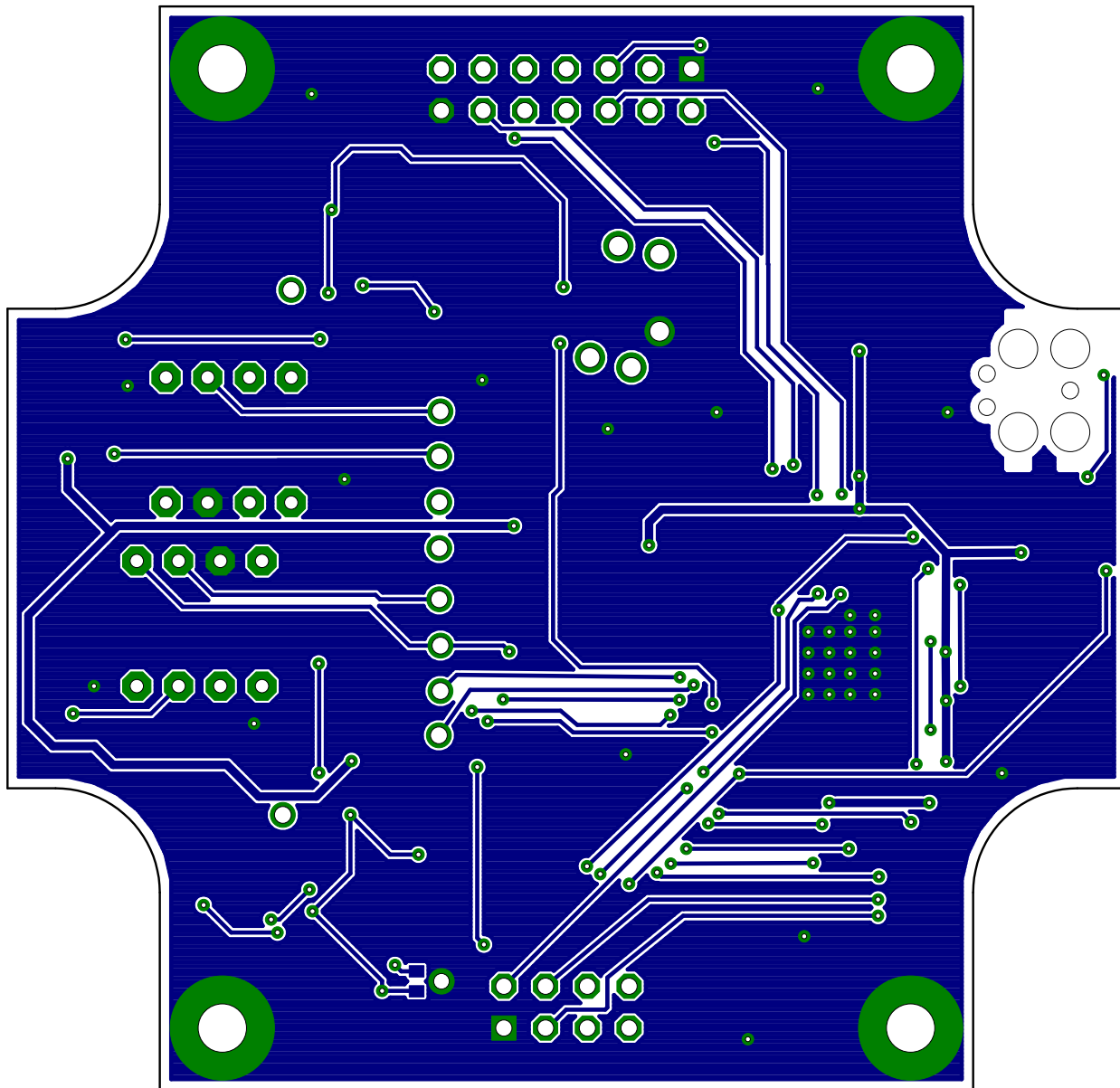


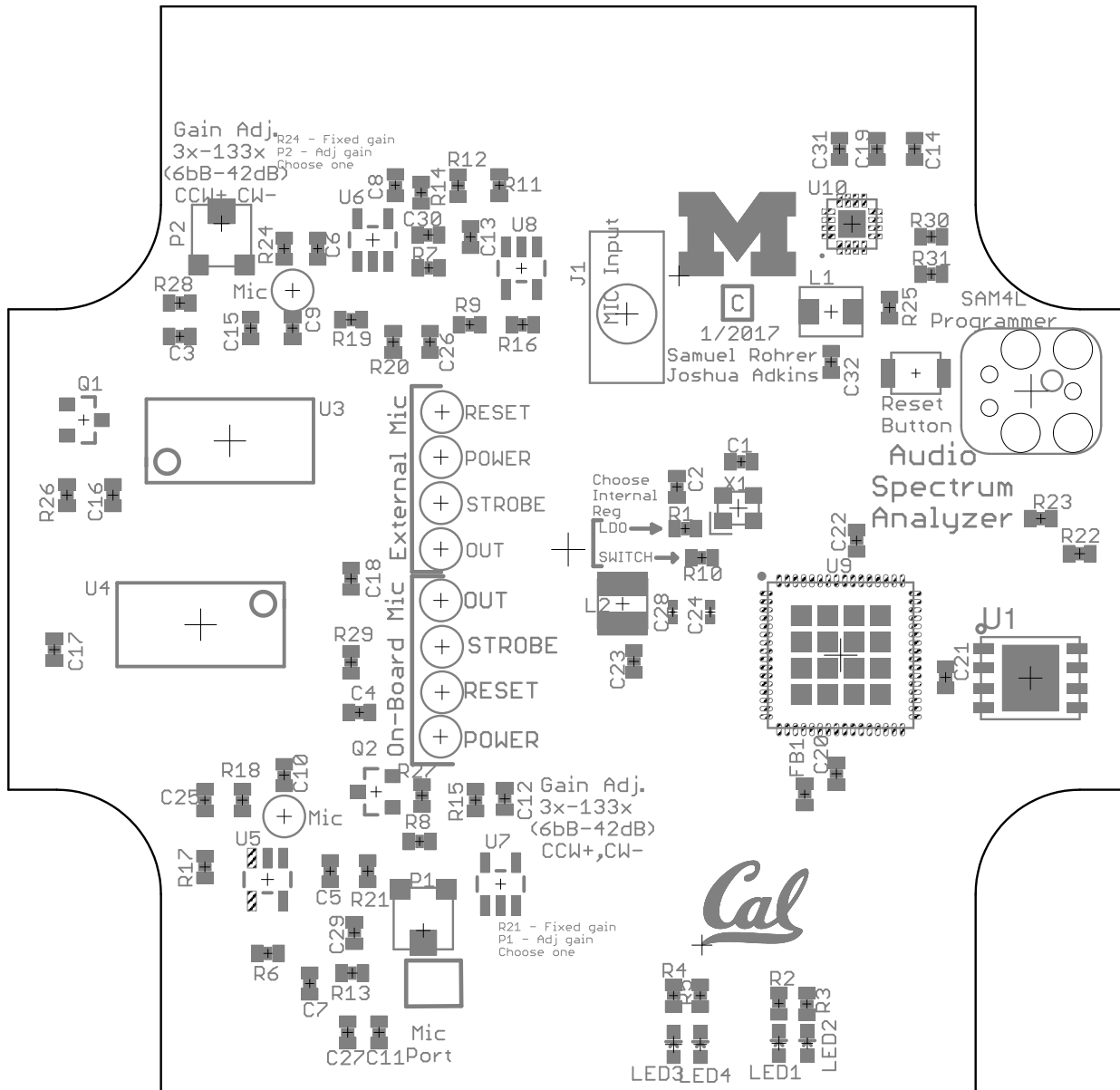




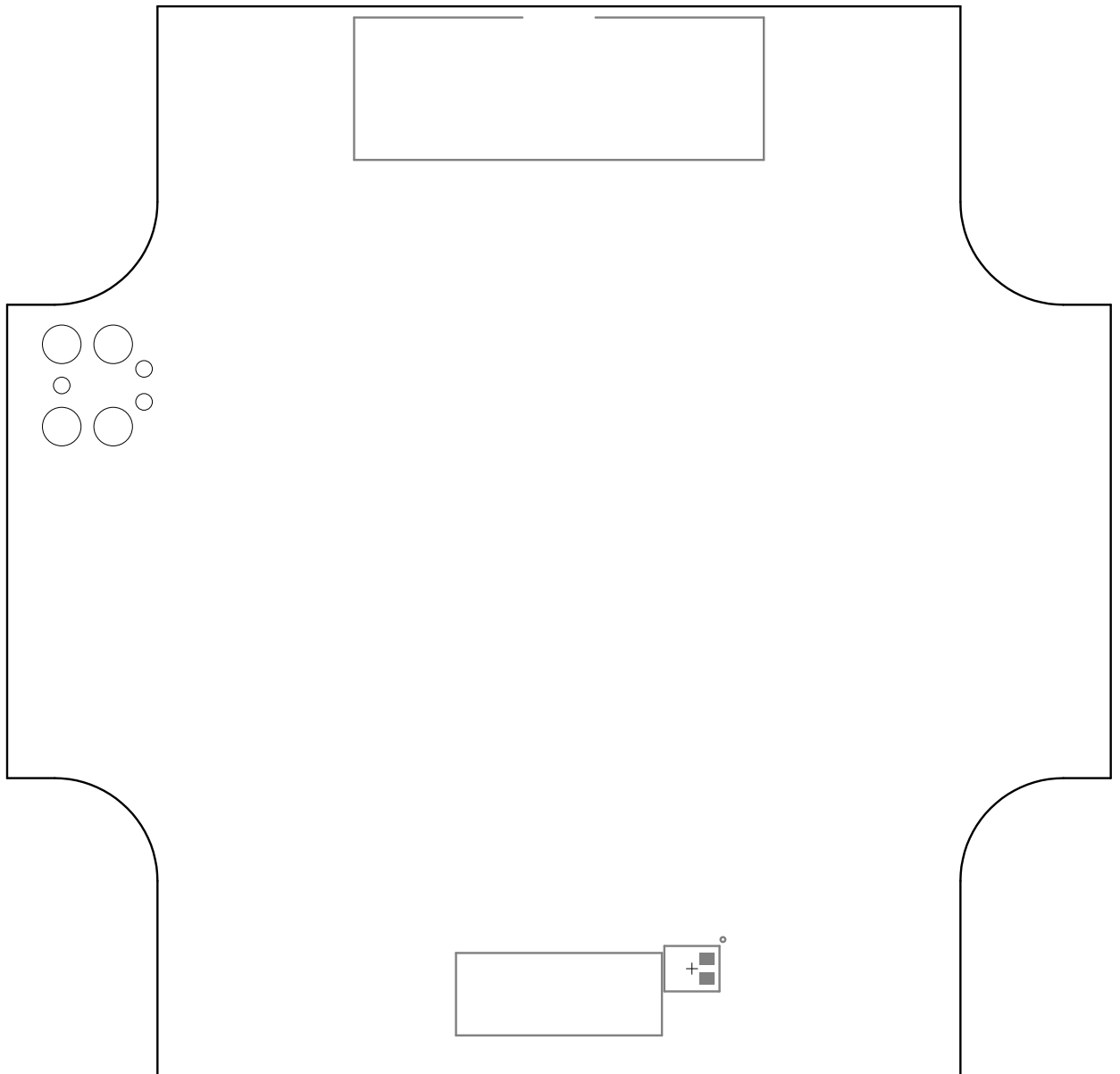


Bottom Copper Layer

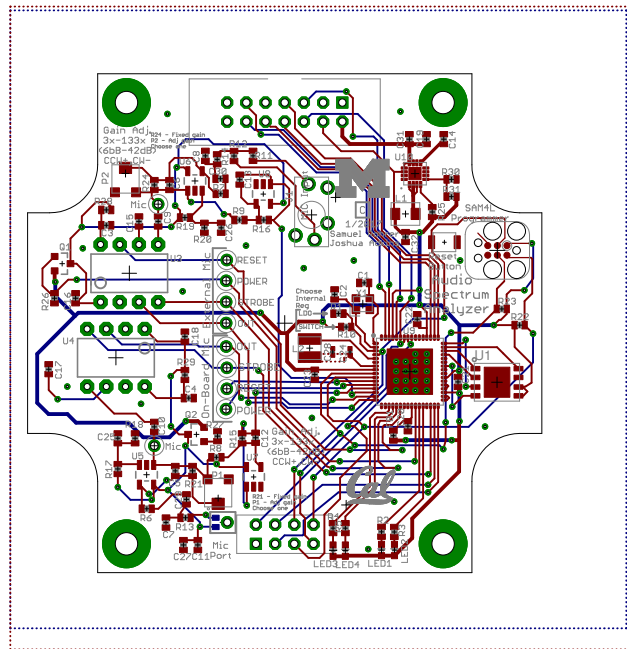


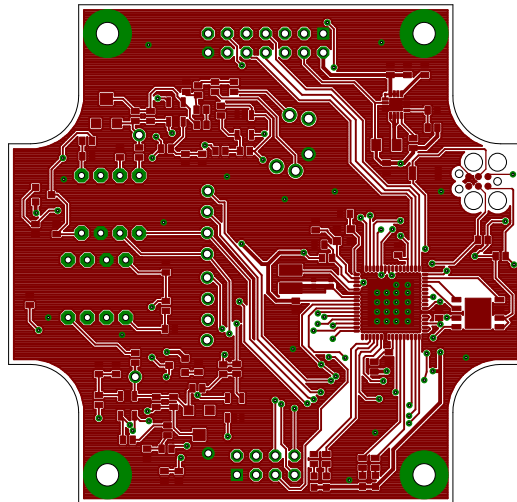


Bottom Paste Layer with Silkscreen

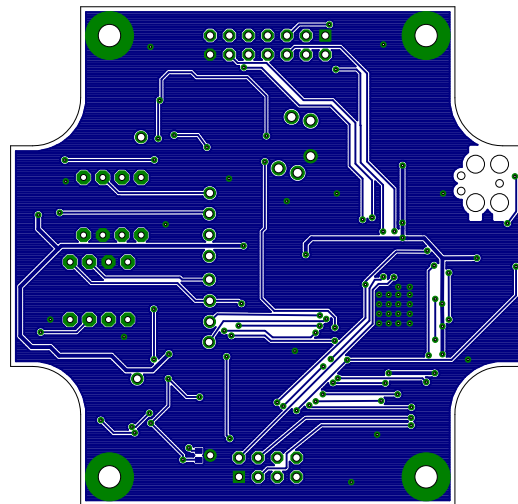


Top and Bottom Layers 1:1 Scale





Bottom Copper Layer 1:1 Scale



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Qty	Value	Device	Package	
1	8pF	CAPACITOR0603_CAP	0603_CAP	
5	1.2nF	CAPACITOR0603_CAP	0603_CAP	
2	3.3nF	CAPACITOR0603_CAP	0603_CAP	
4	0.1uF	CAPACITOR0603_CAP	0603_CAP	
1	100nF	CAPACITOR0603_CAP	0603_CAP	
6	100nF	CAPACITOR0402_CAP	0402_CAP	
1	1uF	CAPACITOR0603_CAP	0603_CAP	
4	4.7uF	CAPACITOR0402_CAP	0402_CAP	
2	4.7uF	CAPACITOR0603_CAP	0603_CAP	
1	33pF	CAPACITOR0603_CAP	0603_CAP	
4	10uF	CAPACITOR0603_CAP	0603_CAP	
1	22uF	CAPACITOR0603_CAP	0603_CAP	
1	100pF	CAPACITOR0603_CAP	0603_CAP	
2	360pF	CAPACITOR0603_CAP	0603_CAP	
1	1nF	CAPACITOR0603_CAP	0603_CAP	
3	1.5k	FERRITE_BEAD0603	0603_CAP	
3	AUDIO-JACK-VERTICAL	AUDIO-JACK-VERTICAL	AUDIO-JACK-VERTICAL	
3	MODULE_GENERIC_DEBUG	MODULE_GENERIC_DEBUG	MODULE_GENERIC_DEBUG	
1	TC2030-JLINK-L	TC2030-JLINK-L	TC2030-IDC	
2	2.2uH	INDUCTOR0603	IHL-1212BZ-11	
4	22uH	LHQ3NP		1212
1	LED0603	LED0603	LED-0603	
1	LED0603	LED0603	LED-0603	
1	4k-200k	POTTC33X	TC33X-2	
1	NX3008PBK	NX3008PBK	SOT23-3	
2		0 RESISTOR0603_RES	0603-RES	
2	10k	RESISTOR0603_RES	0603-RES	
1	10k	RESISTOR0603_RES	0603-RES	
2	19k	RESISTOR0603_RES	0603-RES	
2	20k	RESISTOR0603_RES	0603-RES	
1	1k	RESISTOR0603_RES	0603-RES	
1	60k	RESISTOR0603_RES	0603-RES	
2	100k	RESISTOR0603_RES	0603-RES	
1	200k	RESISTOR0603_RES	0603-RES	
1	1k	RESISTOR0603_RES	0603-RES	
1	240k	RESISTOR0603_RES	0603-RES	
2	750k	RESISTOR0603_RES	0603-RES	
2	1.5k	RESISTOR0603_RES	0603-RES	
1	B3U-1000P	B3U-1000P	B3U-1000P	
1	TEST_POINT_0.040IN	TEST_POINT_0.040IN	TESTPOINT_0.040IN	
2	AT45DB641EUDFN	AT45DB641EUDFN	UDFN-8-5MMX6MM	
2	TLV62130	TLV62130	TQFN-16/3MM	
4	MP23AB02B	MP23AB02B	MP23AB02B	
1	MSGEQ7	MSGEQ7	DIP-8	
1	OPA344	OPA344	SOT23-5	
10	SAM4LC8BA	SAM4LC8BA	QFN-64-9MM	
1	16MHz	FH1600015	FHXXX	

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Parts

C1, C2
C12, C13
C14
C15, C16, C17, C18, C19
C20, C21, C22, C23
C24
C25, C26, C27
C28
C29, C30
C3, C4
C31
C32
C5, C6
C7, C8
C9, C10, C11
FB1
J1
J2
J3
L1
L2
LED1, LED3
LED2, LED4
P1, P2
Q1, Q2
R1
R10, R11, R13, R14
R12
R15, R16
R17, R18, R19, R20
R2
R21
R22, R23, R24, R25, R26, R27
R28, R29
R3, R4, R5
R30
R31
R6, R7, R8, R9
S1
TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10
U1
U10
U2
U3, U4
U5, U6, U7, U8
U9
X1

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Description	DIGIKEY
0402 Capacitor	478-1215-1-ND
0402 Capacitor	490-13298-1-ND
0402 Capacitor	490-1503-1-ND
0402 Capacitor	490-1532-1-ND
0402 Capacitor	490-1532-1-ND
0402 Capacitor	490-10777-1-ND
0402 Capacitor	490-1536-1-ND
0402 Capacitor	490-13252-1-ND
0402 Capacitor	490-3297-1-ND
0402 Capacitor	490-1415-1-ND
0402 Capacitor	490-6405-1-ND
0402 Capacitor	490-13241-1-ND
0402 Capacitor	490-1427-1-ND
0402 Capacitor	490-1440-1-ND
0402 Capacitor	490-1494-1-ND
	490-5216-1-ND
A vertical audio jack	
The debug version of the signpost module header	S9170-ND
A very specific inductor	541-1322-1-ND
LHQ3NP Inductor	490-5350-1-ND
LED	160-1446-1-ND
LED	160-1447-1-ND
Potentiometer	TC33X-2-204ECT-ND
MOSFET - P Channel	568-10499-1-ND
Resistor	1276-3431-1-ND
Resistor	RHM10.0KHCT-ND
Resistor	RHM10.0KHCT-ND
Resistor	RHM19.1KCFCT-ND
Resistor	RHM20KCGCT-ND
Resistor	RHM1.0KDCT-N
Resistor	RHM60.4KCLCT-ND
Resistor	RHM100KCGCT-ND
Resistor	RHM200KCFCT-ND
Resistor	RHM1.0KDCT-ND
Resistor	RHM240KCFCT-ND
Resistor	RHM750KCFCT-ND
Resistor	RHM1.5KCGCT-ND
Switch	SW1020CT-ND
0.040in Test Point	5001K-ND
64 Mbit flash memory	AT45DB641E-MHN-TCT-ND
High Efficient 3A switching step-down regulator. 1V-5V out, 4V-17V in.	296-35978-1-ND
A pretty normal mems microphone	497-14947-1-ND
A CMOS spectrum analyzer	1568-1335-ND
Single gate rail-to-rail output op-amp. Inputs extend 300mV past rails.	OPA344NACT-ND
SAM4L Microcontroller. 64QFN Package. 512 Flash.	ATSAM4LC8BA-MURCT-ND
Pericom Type FH 16 MHz 2.5 x 2.0 mm	FH1600015CT-ND

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MOUSER

NEWARK

806-STX-3790-5N

771-NX3008PBK,215 74T4665