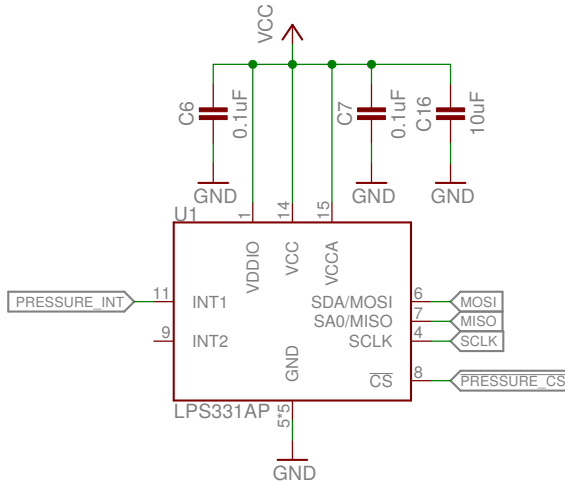
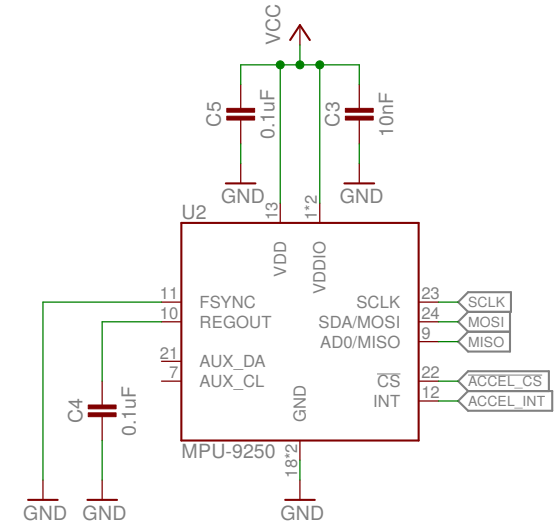


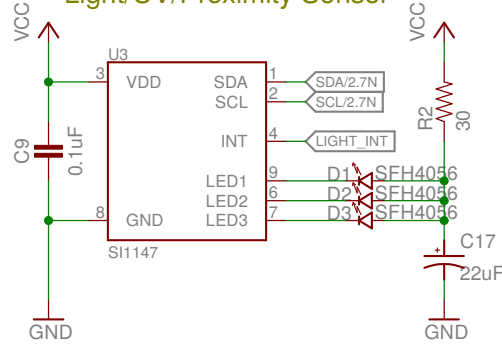
Pressure Sensor



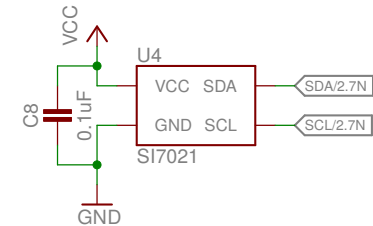
9-DOF Accelerometer



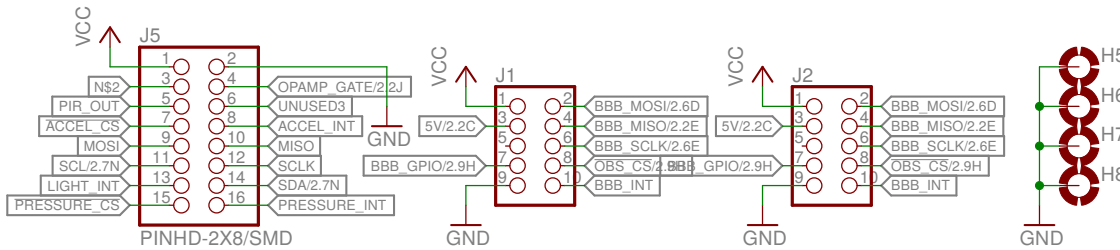
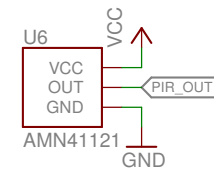
Light/UV/Proximity Sensor



Temperature/Humidity Sensor



PIR Sensor



M Observer

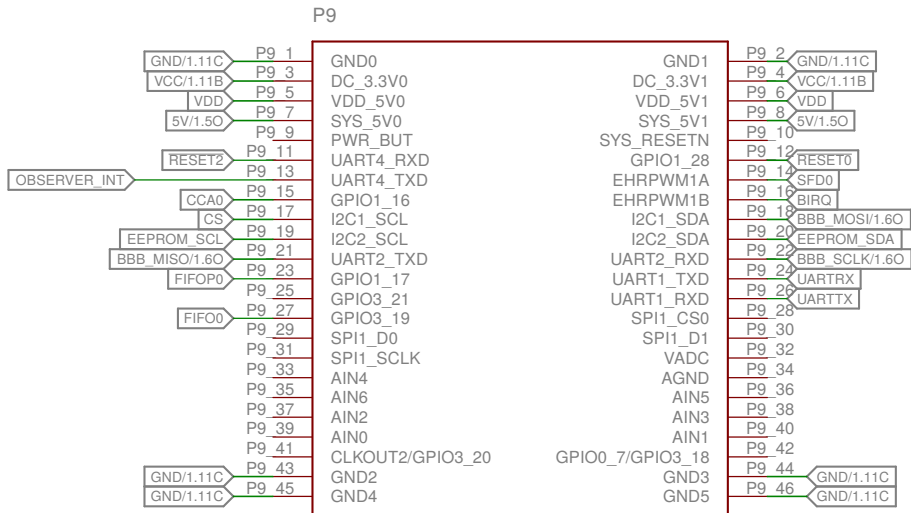
REV:
C

Author: B. Campbell, N. Jackson, C. Kreng, A. Zhen

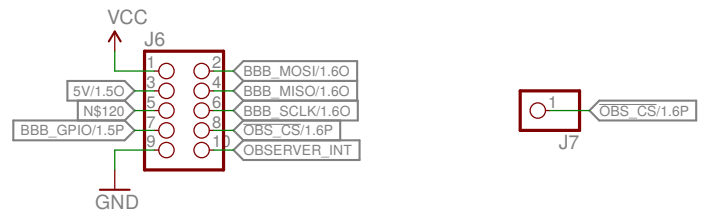
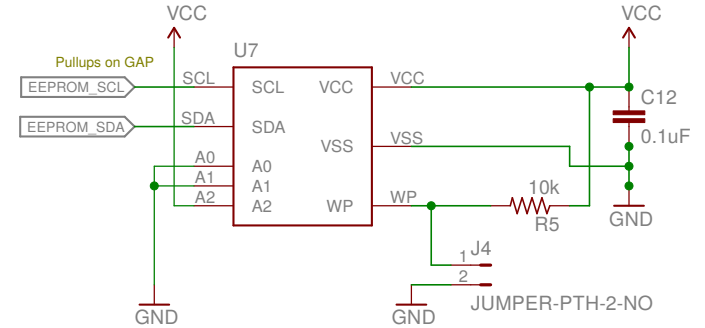
Date: 11/19/15 12:49 AM

Sheet: 1/2

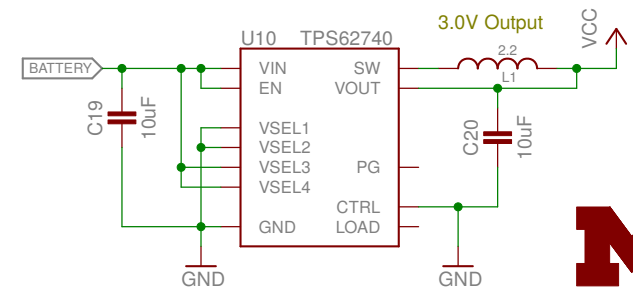
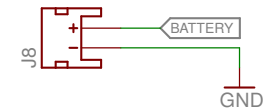
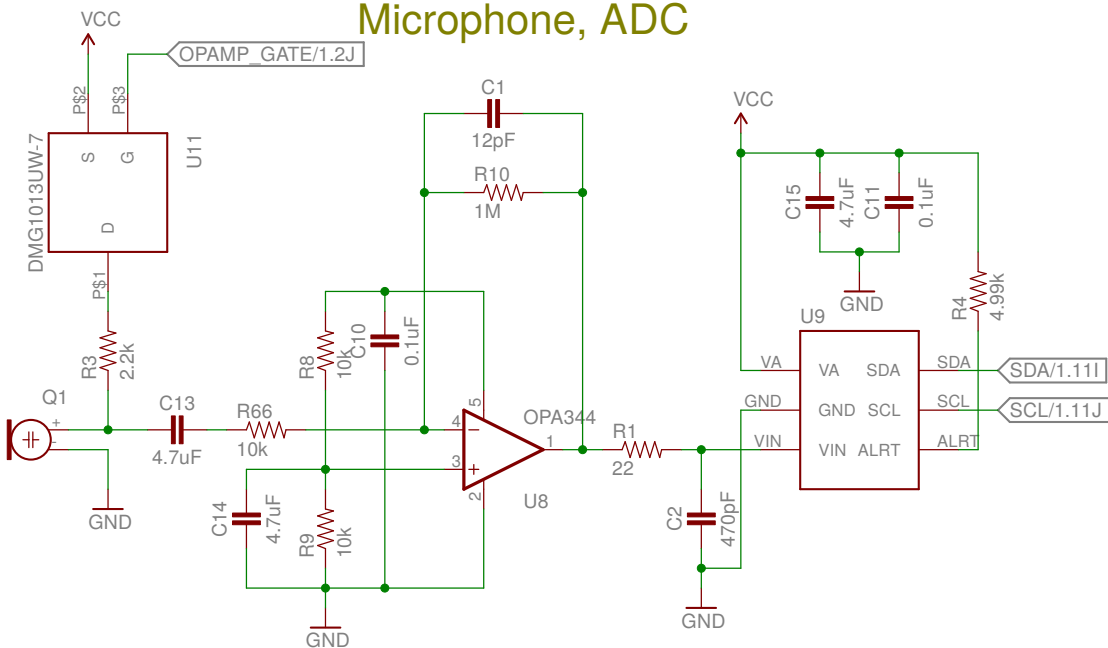
BeagleBone Black Header



EEPROM



Microphone, ADC



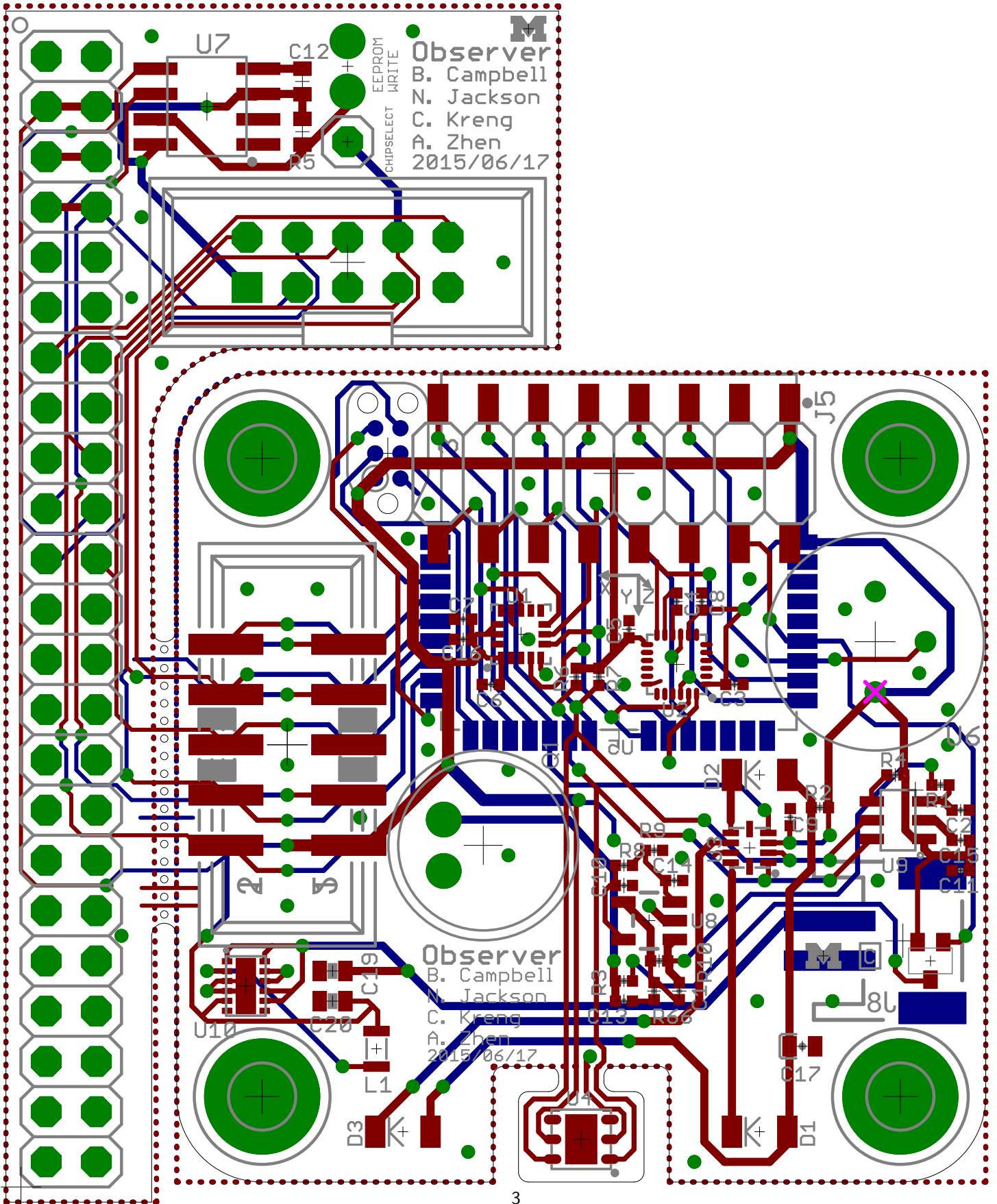
M Observer

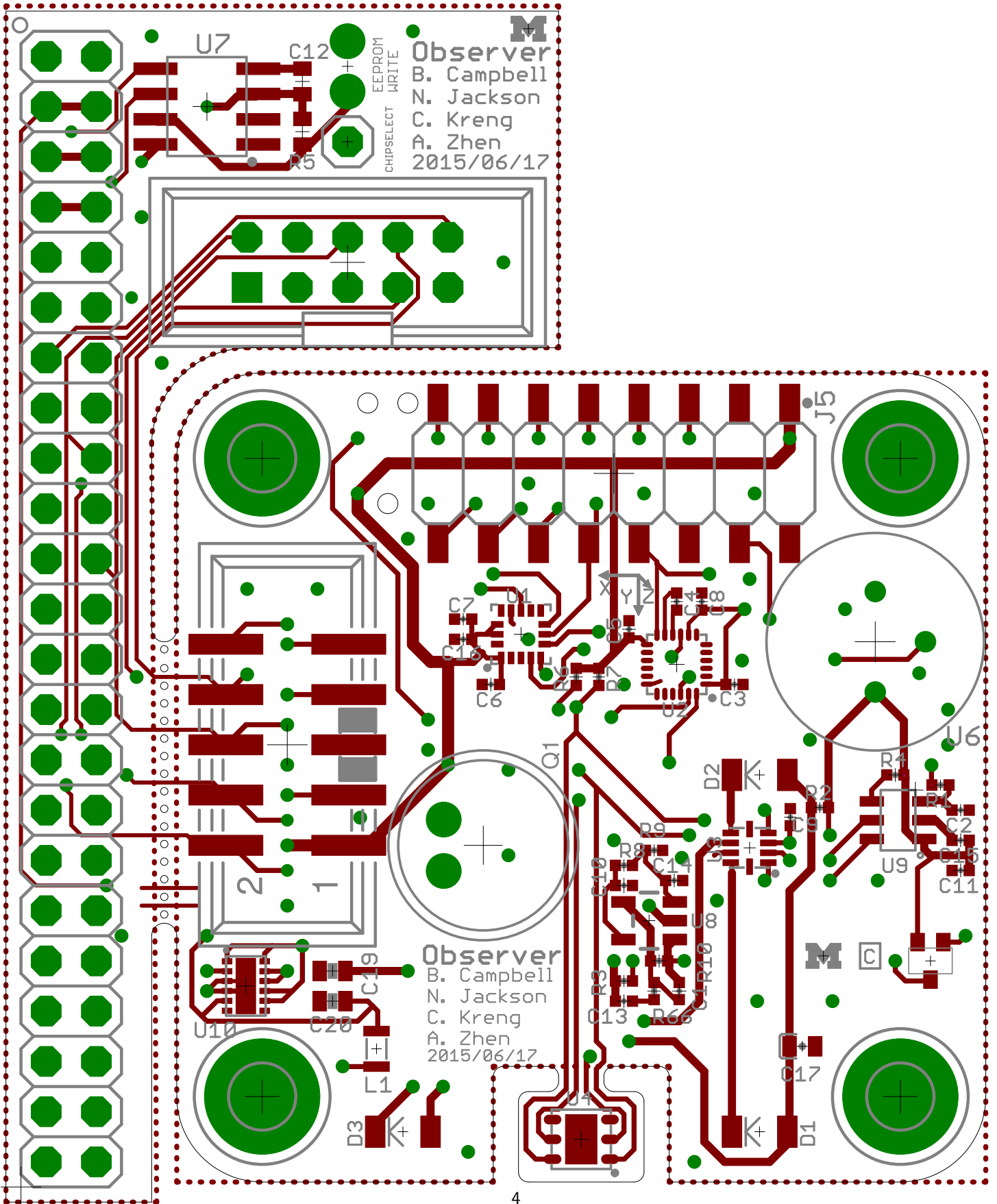
REV:
C

Author: B. Campbell, N. Jackson, C. Kreng, A. Zhen

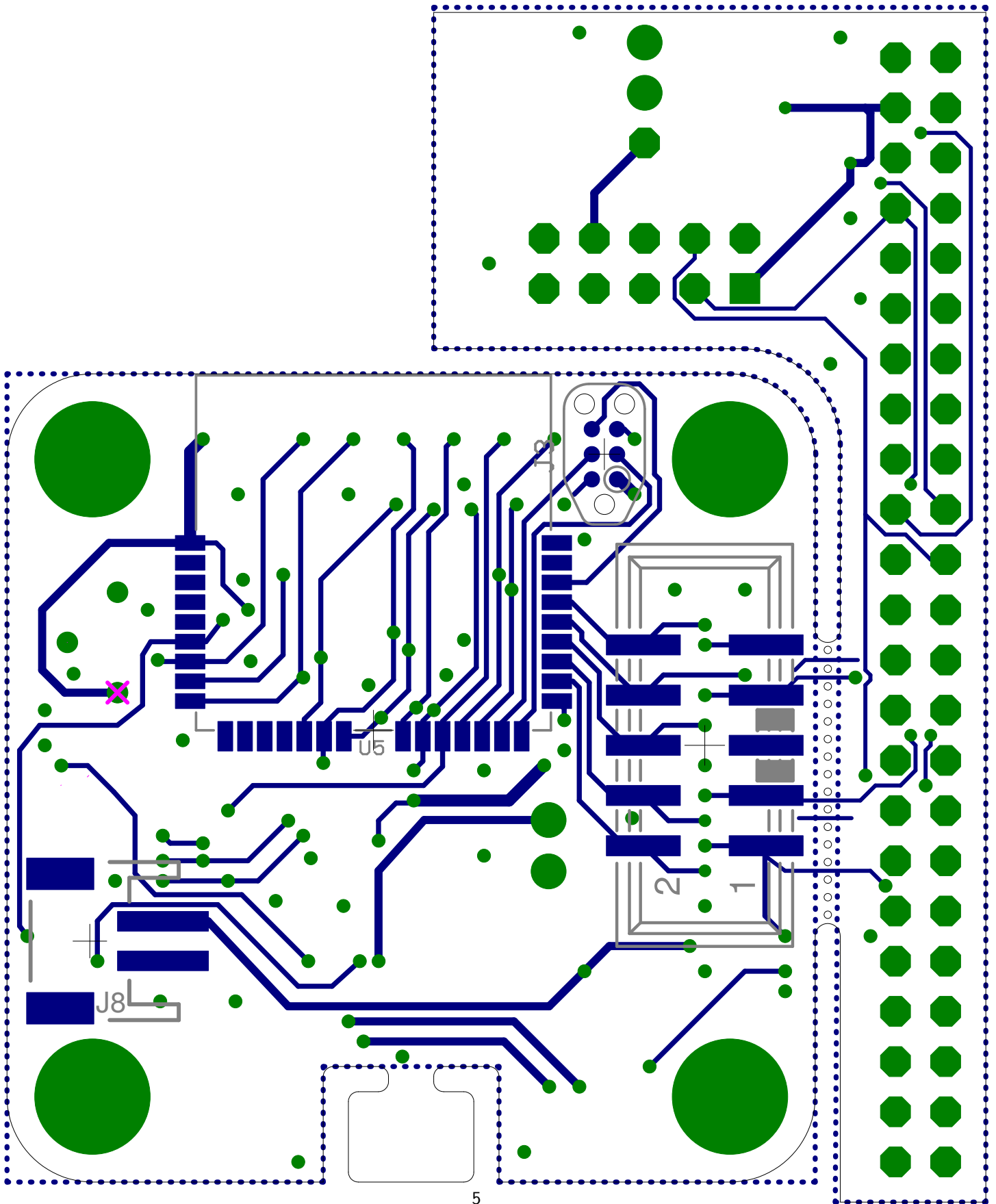
Date: 11/19/15 12:49 AM

Sheet: 2/2

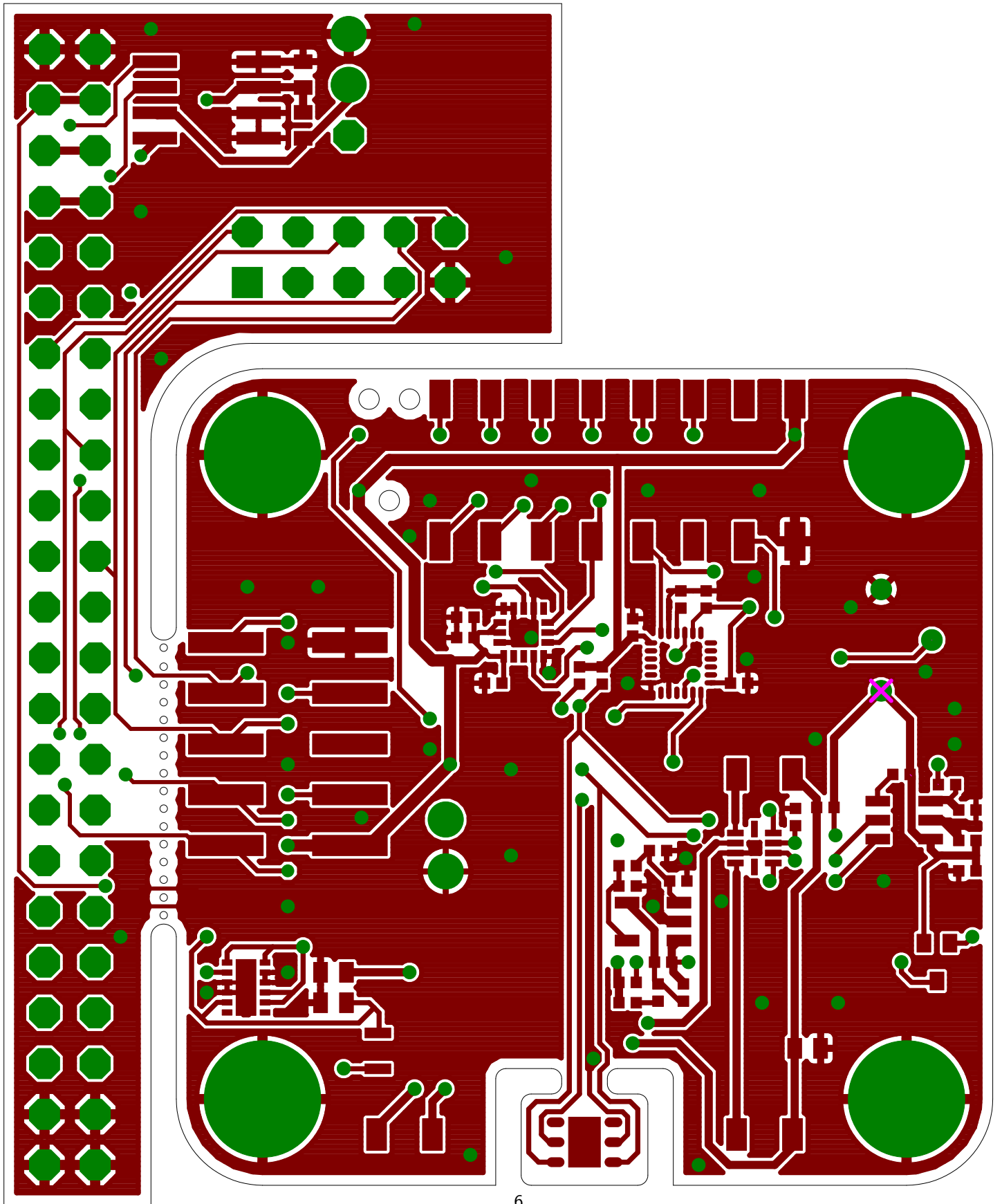




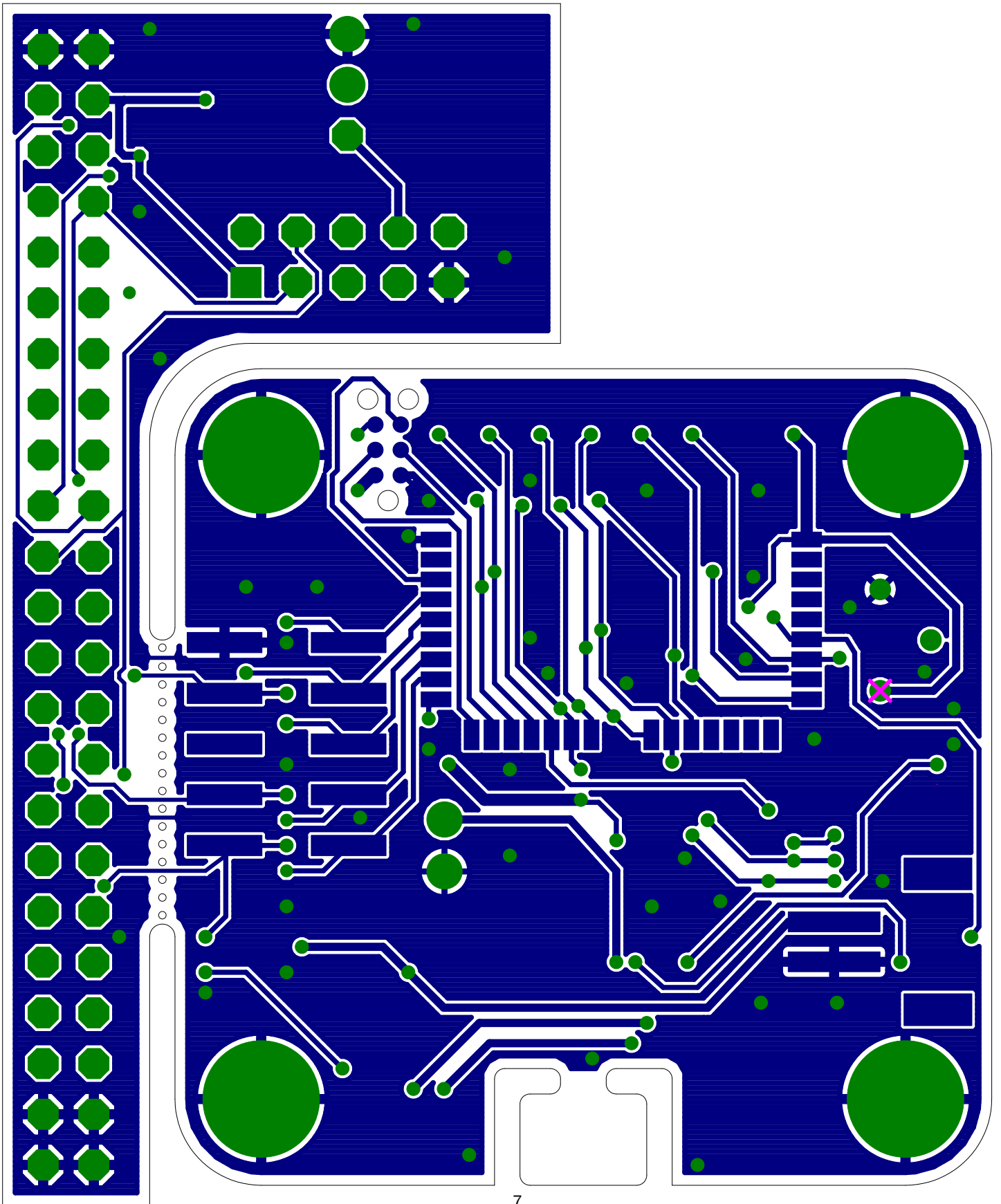
Bottom Layer

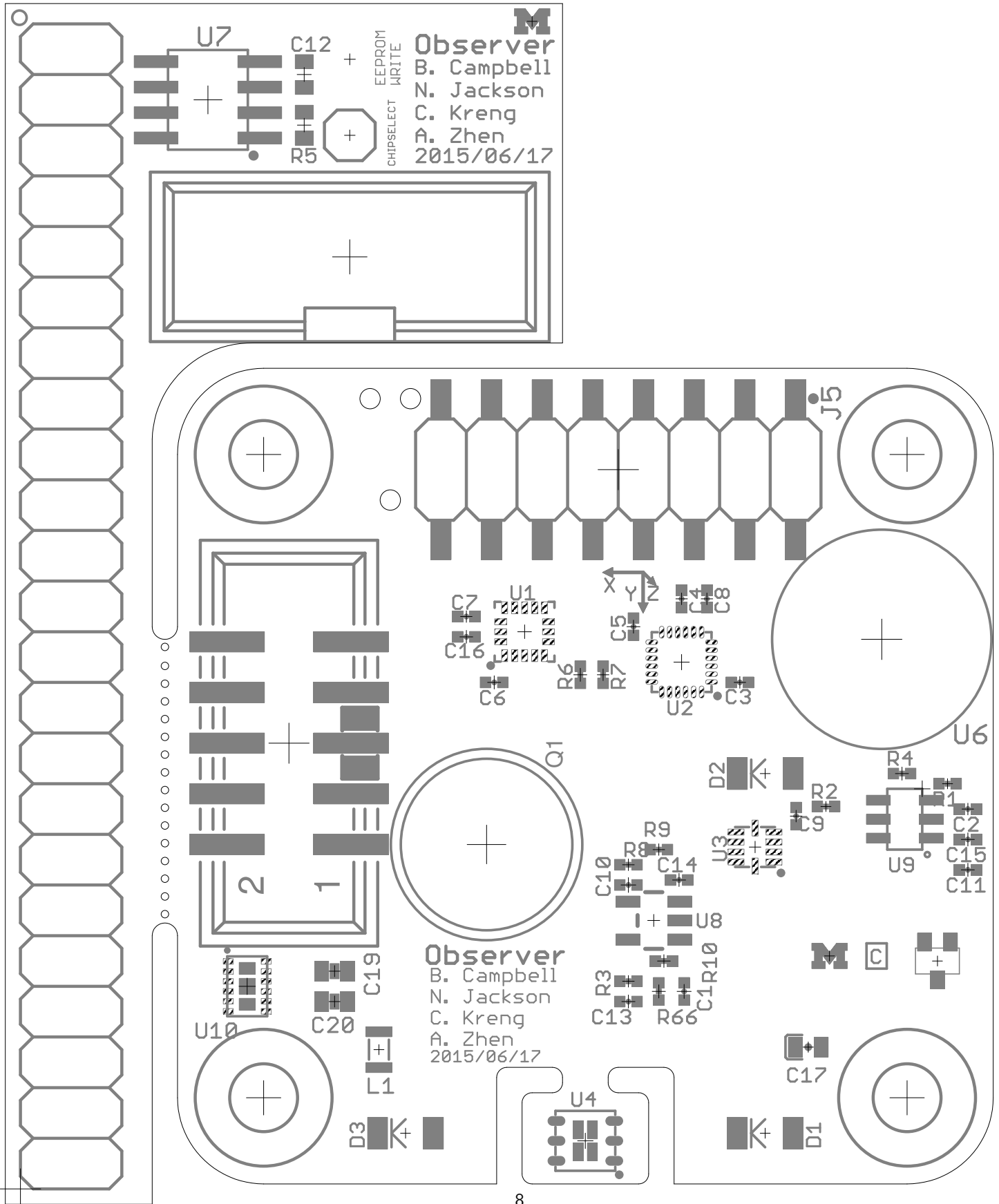


Top Copper Layer

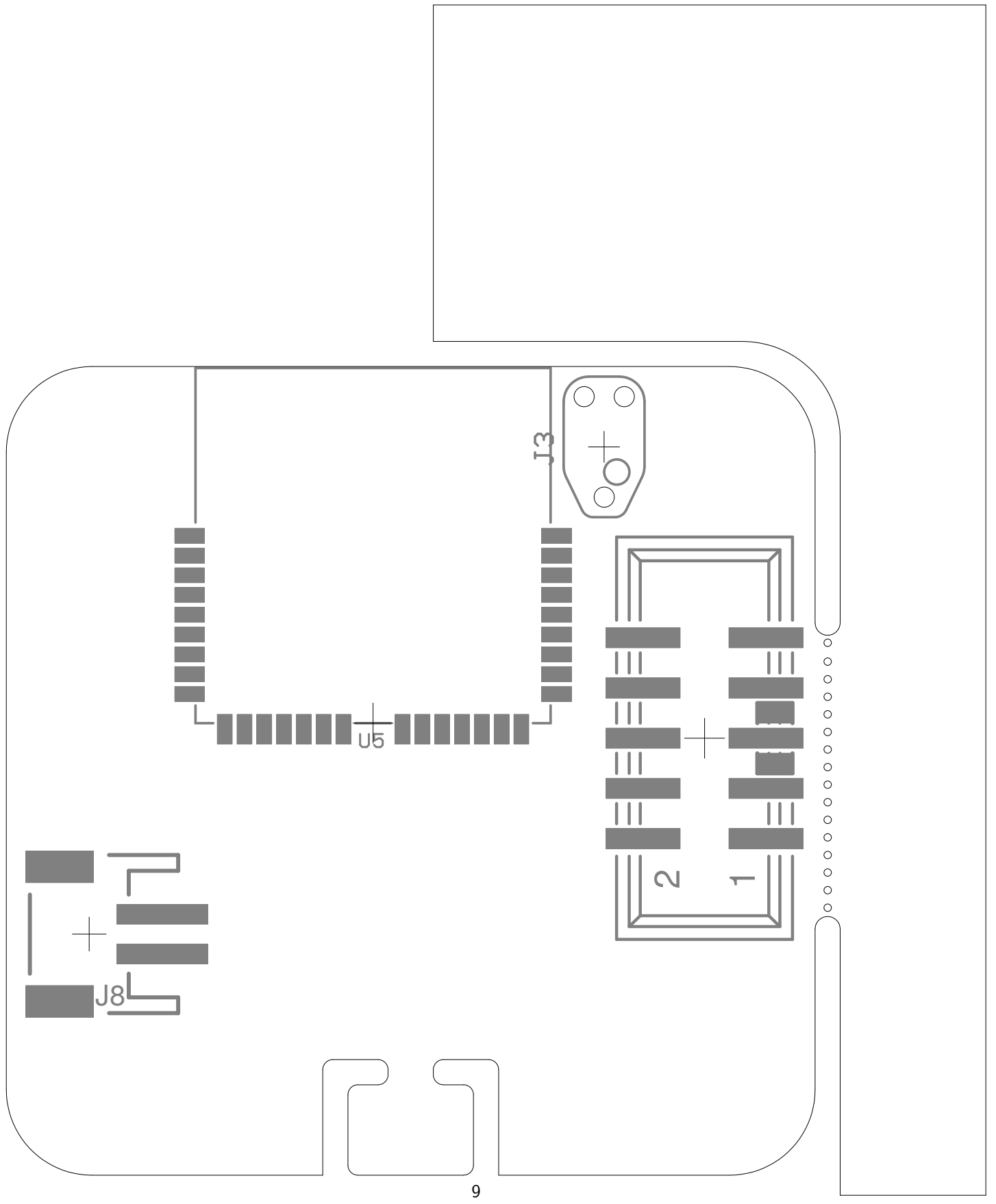


Bottom Copper Layer

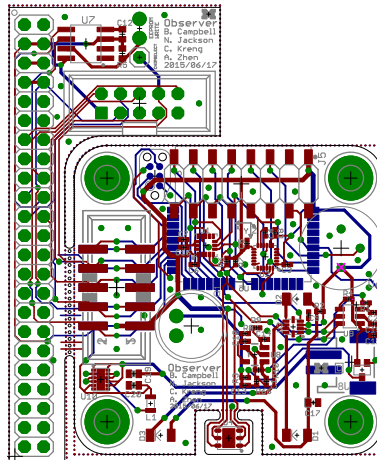




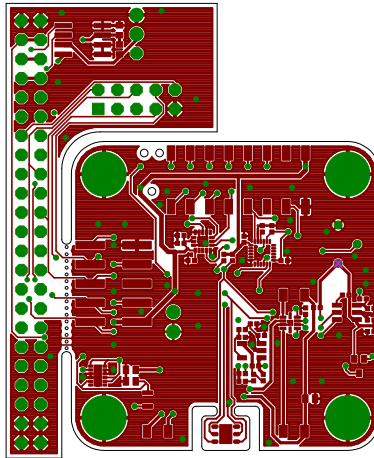
Bottom Paste Layer with Silkscreen



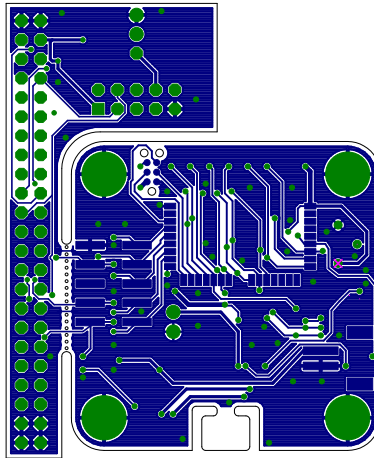
Top and Bottom Layers 1:1 Scale



Top Layer 1:1 Scale



Bottom Copper Layer 1:1 Scale



Qty	Value	
	1 12pF	
	1 470pF	
	1 10nF	
	6 0.1uF	
	2 0.1uF	
	1 .1uF	
	3 4.7uF	
	1 10uF	
	1 22uF	
	2 10uF	
	3 SFH4056	
	4 MOUNT-PAD-ROUND3.2	
	2 CON_HEADER_2X05-SMD+SHROUDED	
	1 TC2030-CC2538-BL-NL	
	1 JUMPER-PTH-2-NO	
	1 PINHD-2X8/SMD	
	1 CON_HEADER_2X05-PTH+SHROUDED_A	
	1	
	1 JST_2MM_MALE	
	1 2.2uH	
	2 UMICH_SOLID_TINY	
	1 BBB_HEADER	
	1	
	1	22
	1	30
	1 2.2k	
	1 4.99k	
	6 10k	
	1 1M	
	1 LPS331AP	
	1 MPU-9250	
	1 SI1147	
	1 SI7021	
	1 ATUM	
	1 AMN41121	
	1 CAT24C256WI-GT3	
	1 OPA344	
	1 ADC121C021	
	1 TPS62740	
	1 DMG1013UW-7	

Device	Package
CAPACITOR	0402_CAP
CAPACITOR	0402_CAP
CAPACITOR	0402_CAP
CAPACITOR	0402_CAP
CAPACITOR	0402_CAP
C-EUC0402	C0402
CAPACITOR	0402_CAP
CAPACITOR	0402_CAP
CAP_POL0603	CAP0603
CAPACITOR0603_CAP	0603_CAP
SFH4056	SFH4056
MOUNT-PAD-ROUND3.2	3,2-PAD
CON_HEADER_2X05-SMD+SHROUDED	PINSHRD_SMT_2X05
TC2030-CC2538-BL-NL	TC2030-IDC-NL
JUMPER-PTH-2-NO	PTH-JUMPER-2-NO_NO_SILK
PINHD-2X8/SMD	2X8/SMD
CON_HEADER_2X05-PTH+SHROUDED_A	PINSHRD_PTH_2X05
PINHD-1X1	1X01
JST_2MM_MALE	JST-2-SMD
MIPSZ2012D	MIPSZ201D
UMICH_SOLID_TINY	UMICH_SOLID_50MIL
BBB_HEADER	BBB_HEADERS
ELECTRET	ELECTRET_9.7
RESISTOR0402_RES	0402_RES
RESISTOR0402_RES	0402_RES
RESISTOR0402_RES	0402_RES
RESISTOR0402_RES	0402_RES
RESISTOR0402_RES	0402_RES
RESISTOR0402_RES	0402_RES
LPS331AP	HCLGA-16/3MM
MPU-9250	QFN-24/3MM
SI1147	QFN-10/2MM
SI7021	DFN-6/3MM
ATUM	ATUM
AMN41121	AMN2
CAT24C256WI-GT3	CAT24C256WI-GT3
OPA344	SOT23-5
ADC121C021	ADC121C021
TPS62740	R-PWSON-12
DMG1013UW-7	SOT-323

Parts	Description
C1	0402 Capacitor
C2	0402 Capacitor
C3	0402 Capacitor
C4, C5, C6, C7, C8, C9	0402 Capacitor
C10, C11	0402 Capacitor
C12	CAPACITOR, European symbol
C13, C14, C15	0402 Capacitor
C16	0402 Capacitor
C17	
C19, C20	0603 Capacitor
D1, D2, D3	LED IR EMITTER 850NM
H5, H6, H7, H8	MOUNTING PAD, round
J1, J2	2x05 pin header
J3	Tag connect programmer for the CC2538 bootloader.
J4	
J5	
J6	2x05 pin header
J7	PIN HEADER
J8	Mates to single-cell LiPo batteries
L1	FDK Multi-layer Power Inductor (Very Small Type)
LOGO1, LOGO2	
P9/P8	Beaglebone Black P9 Pin Header
Q1	Electret microphone
R1	Resistor
R2	Resistor
R3	Resistor
R4	Resistor
R5, R6, R7, R8, R9, R66	Resistor
R10	Resistor
U1	IC PRESSURE SENSOR PIEZO 16HCLGA
U2	GYRO/ACCEL/COMPASS/9-AXIS
U3	SENSOR DGTL UV INDEX 10QFN
U4	IC TEMP SENSOR RH 2% DFN
U5	Atom sensorboard prototyping module.
U6	Passive infrared human detection sensor with built-in amp.
U7	256kb Serial CMOS EEPROM, organized as 32,768 words of 8
U8	Single gate rail-to-rail output op-amp. Inputs extend 300mV p
U9	
U10	360nA Step Down Converter for Low Power Applications
U11	P-CH Mosfet 20V 820MA SOT323

DIGIKEY

MOUSER

NEWARK SPARKFUN

490-1312-1-ND
490-1318-1-ND

490-1318-1-ND

445-8919-1-ND
511-1493-1-ND
490-7316-1-ND
475-3042-1-ND

S9185-ND

PRT-08612

RHM30CECT-ND

RHM10.0KCDCT-ND
RHM1.0MCECT-ND
497-12927-1-ND
1428-1019-1-ND
336-2624-1-ND
336-2542-1-ND

255-2651-ND
bits each
fast rails.

296-37134-1-ND
DMG1013UW-7DICT-ND

595-TPS62740DSST 27X9745