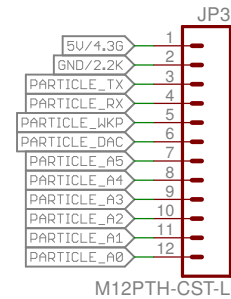
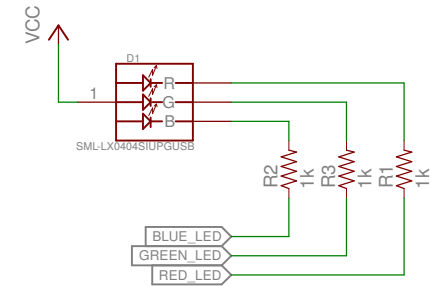
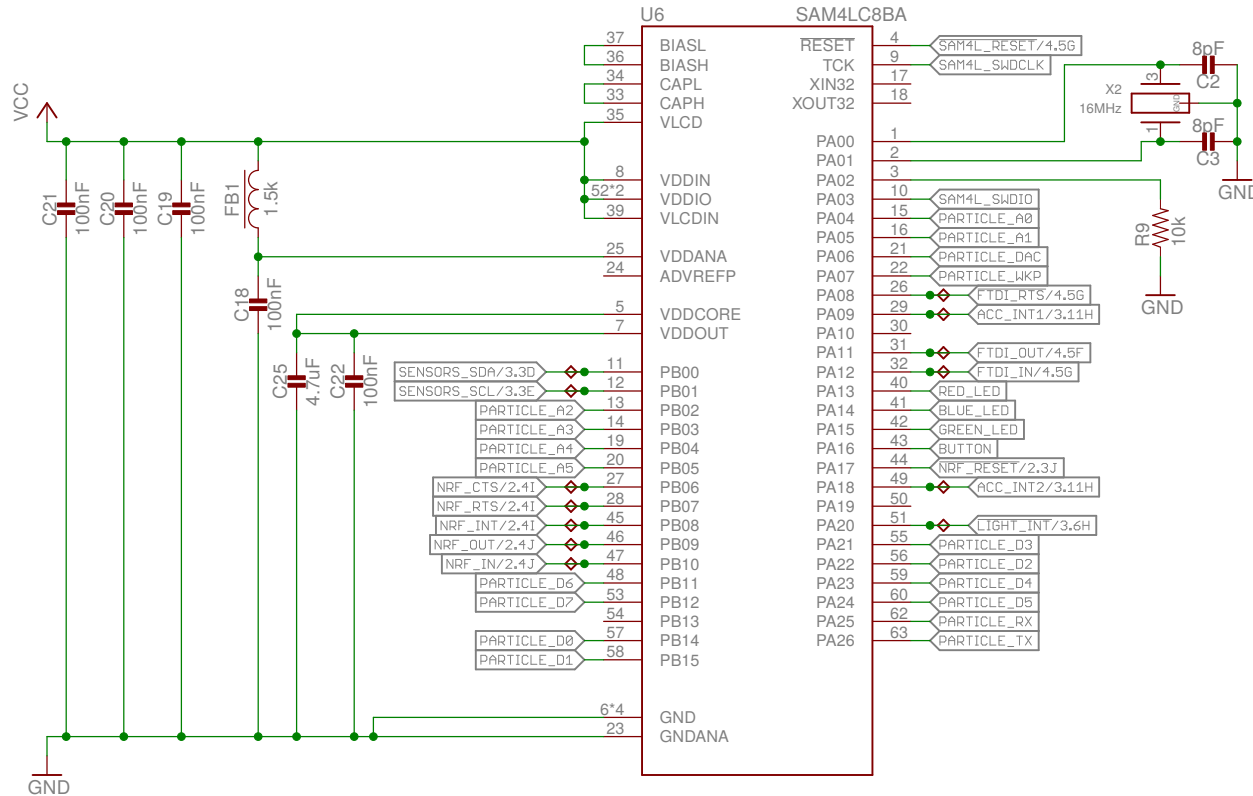
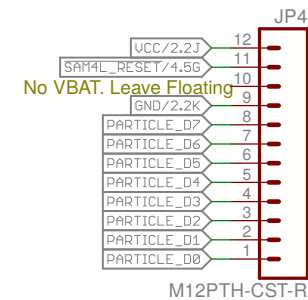


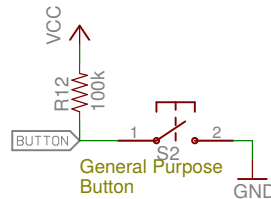
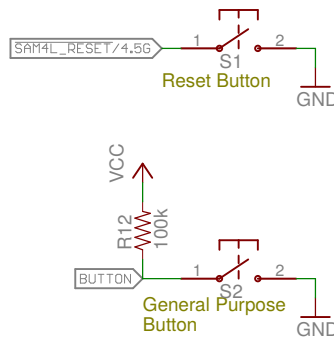
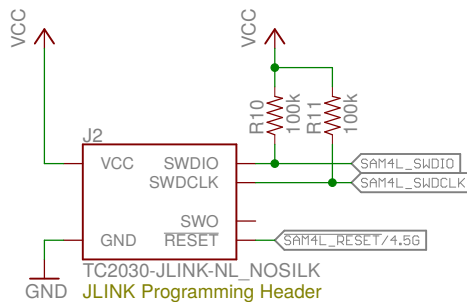
Microcontroller



M12PTH-CST-L



M12PTH-CST-R



M Hail

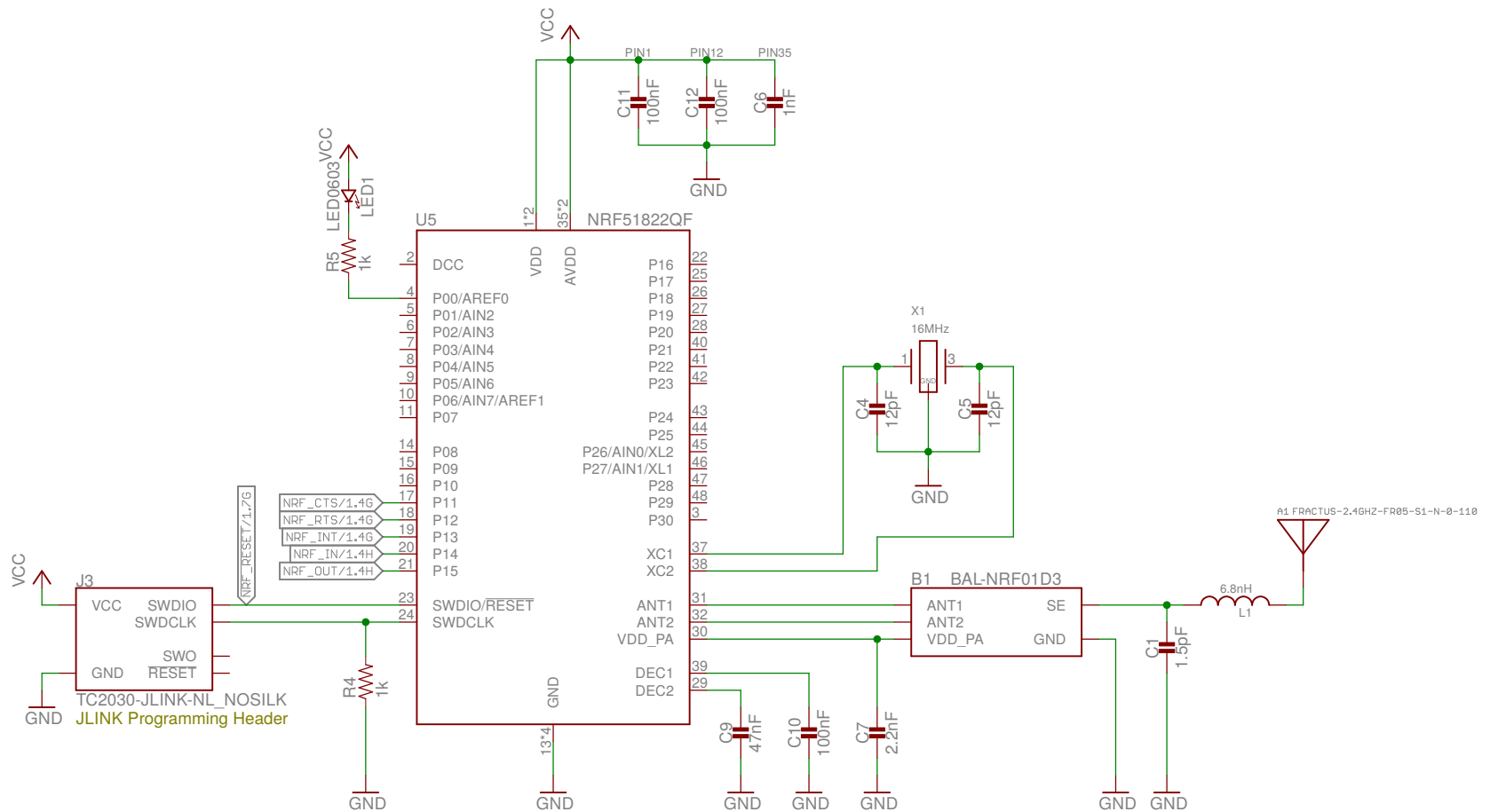
Author: Branden Ghena

Date: 12/16/16 10:27 PM

REV:
A

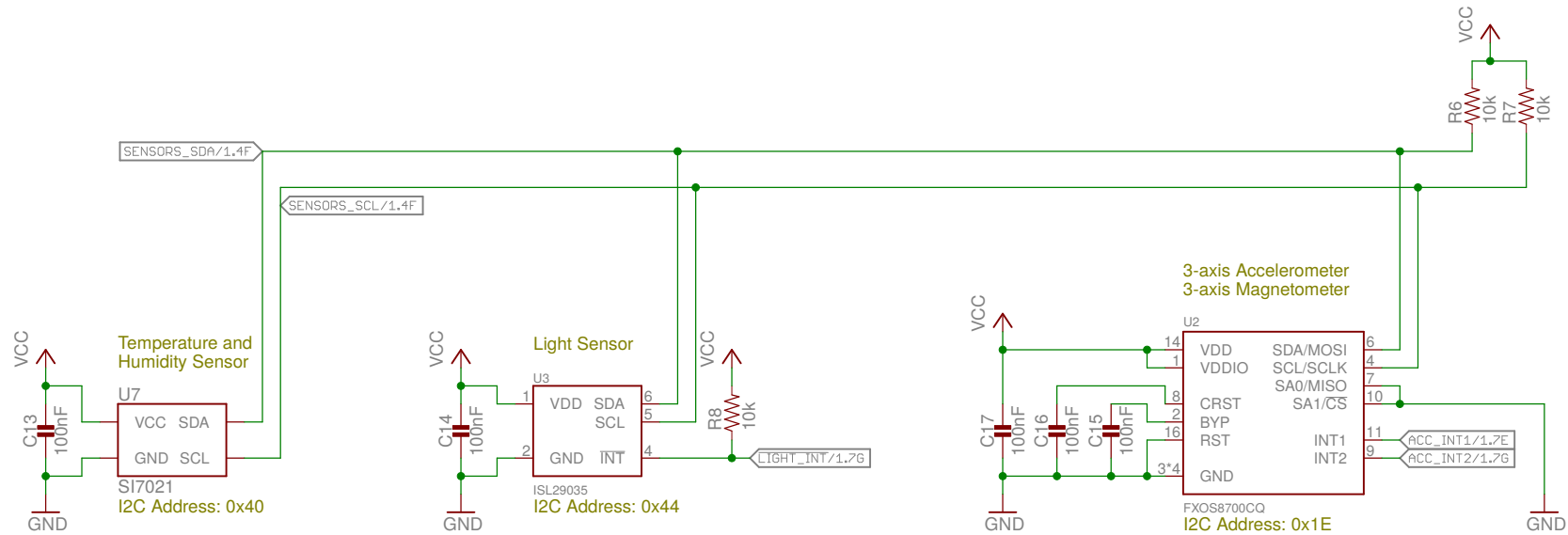
Sheet: 1/4

BLE Radio



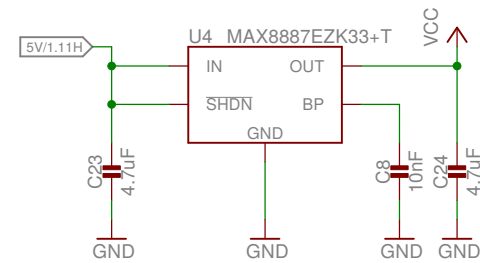
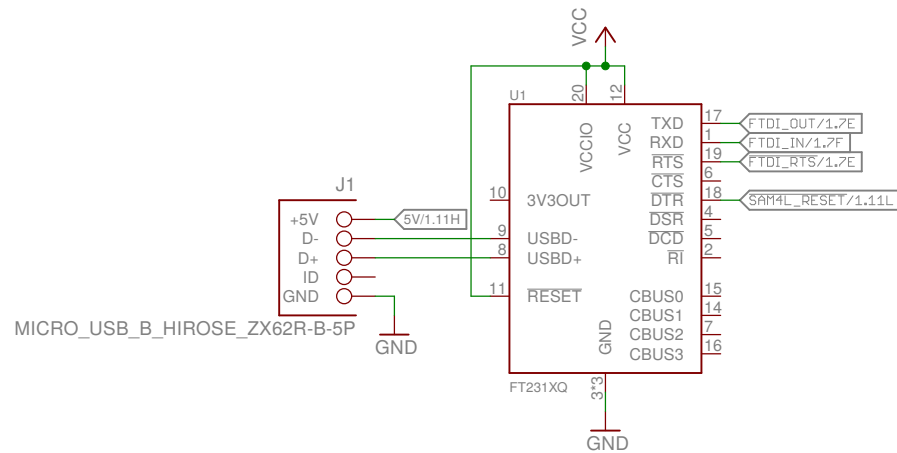
M Hail	REV: A
Author: Branden Ghena	
Date: 12/16/16 10:27 PM	Sheet: 2/4

Sensors

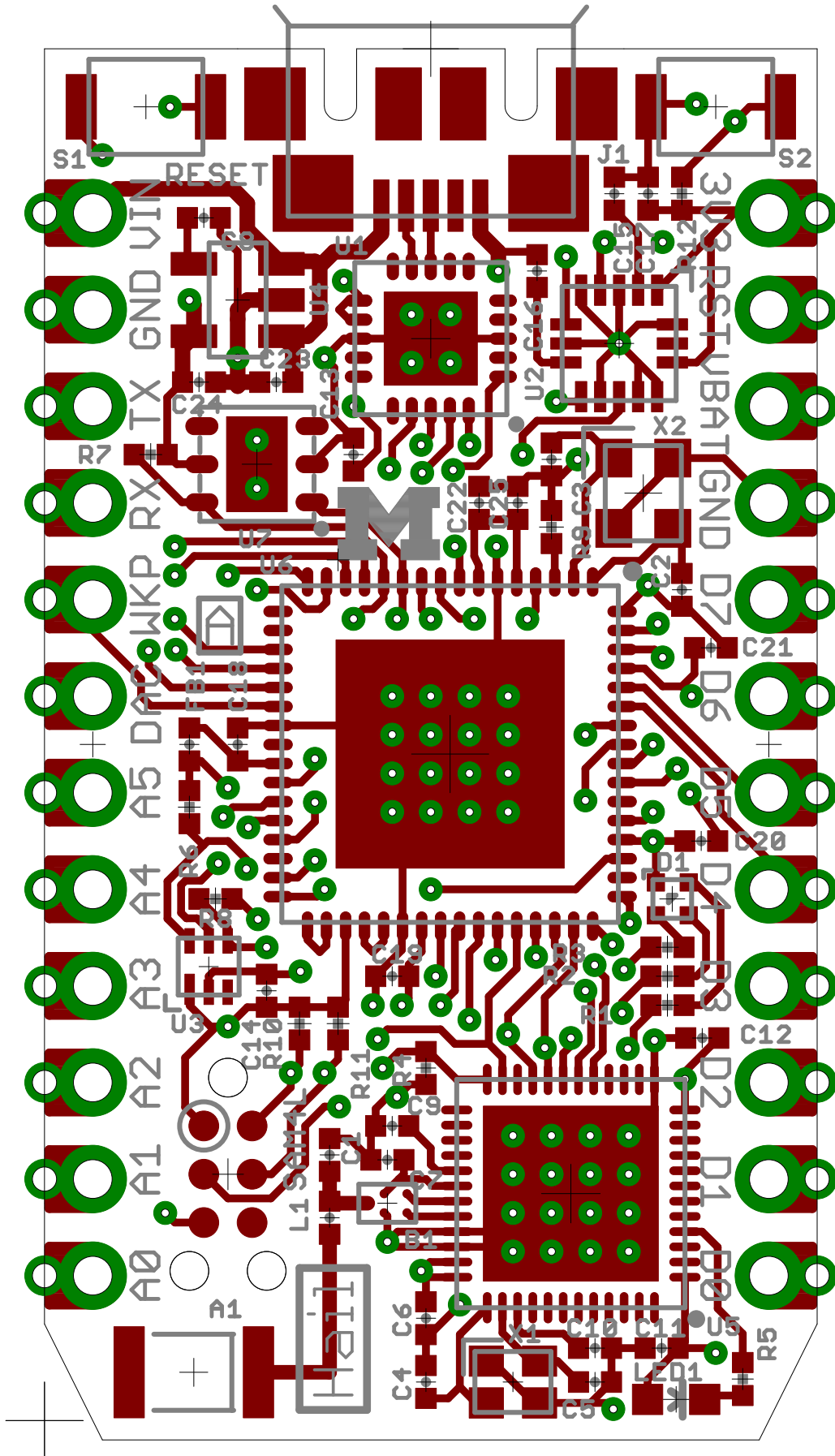


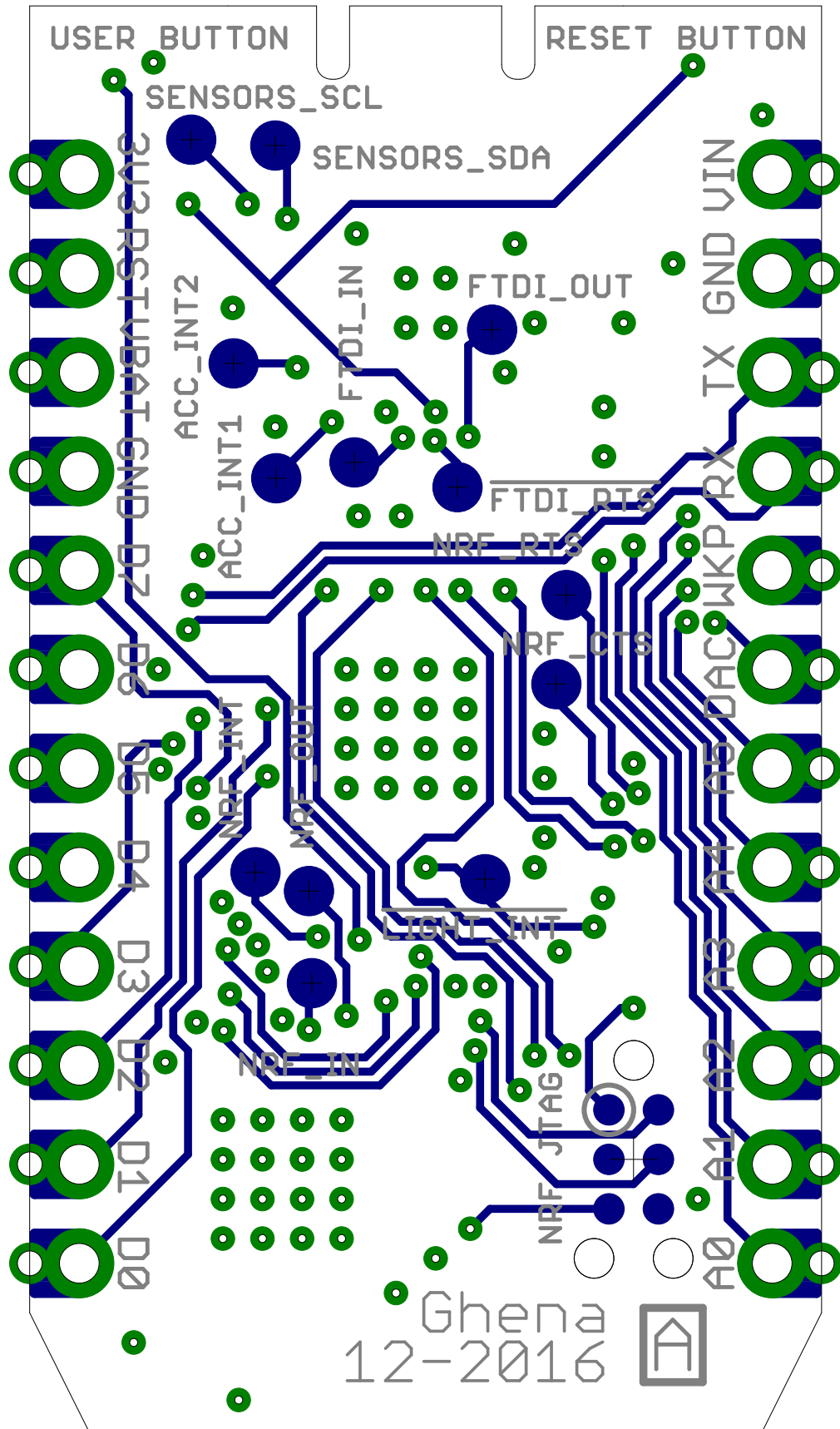
M Hail	REV: A
Author: Branden Ghena	
Date: 12/16/16 10:27 PM	Sheet: 3/4

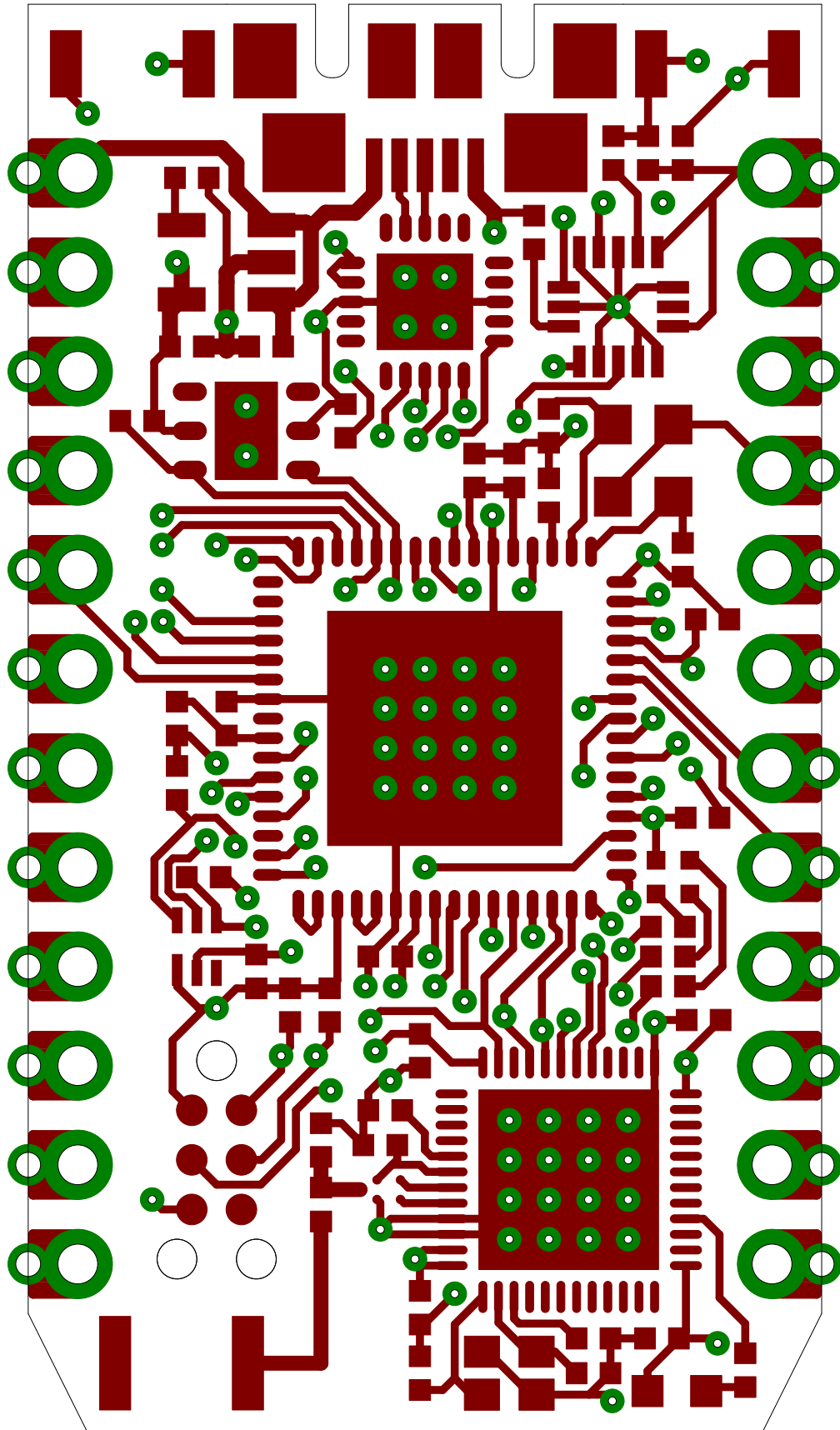
Power and USB

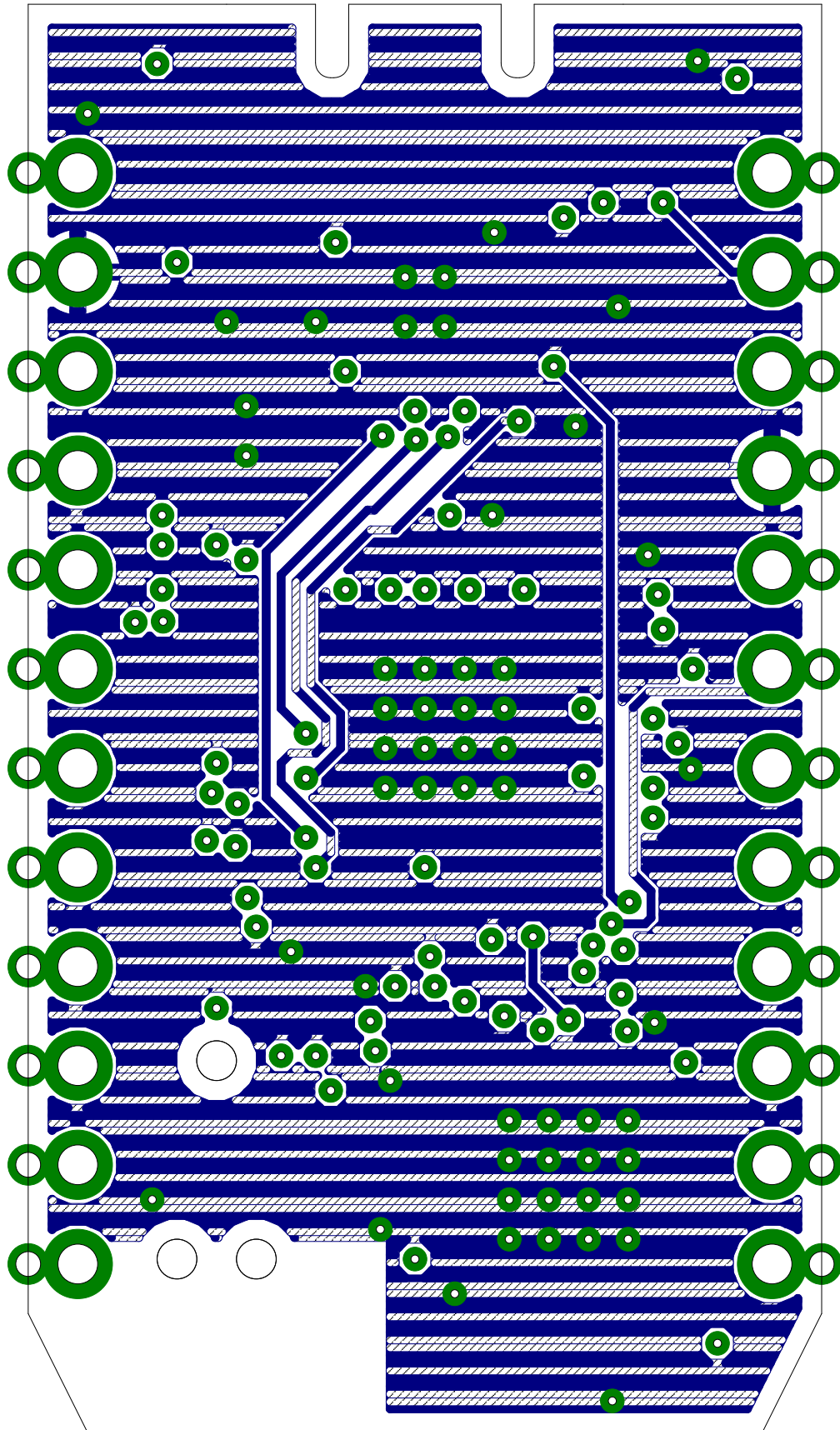


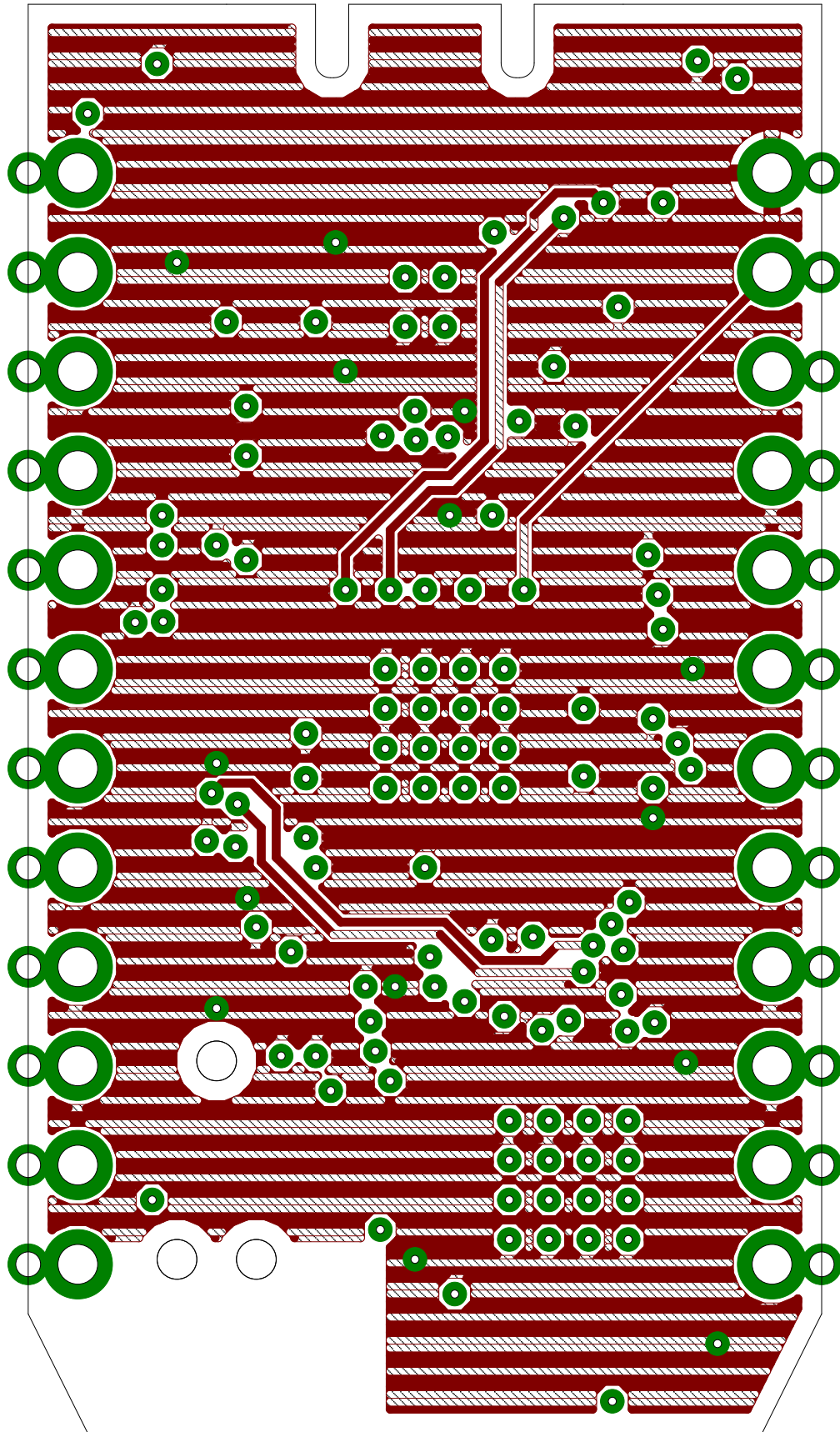
M Hail	REV: A
Author: Branden Ghena	
Date: 12/16/16 10:27 PM	Sheet: 4/4



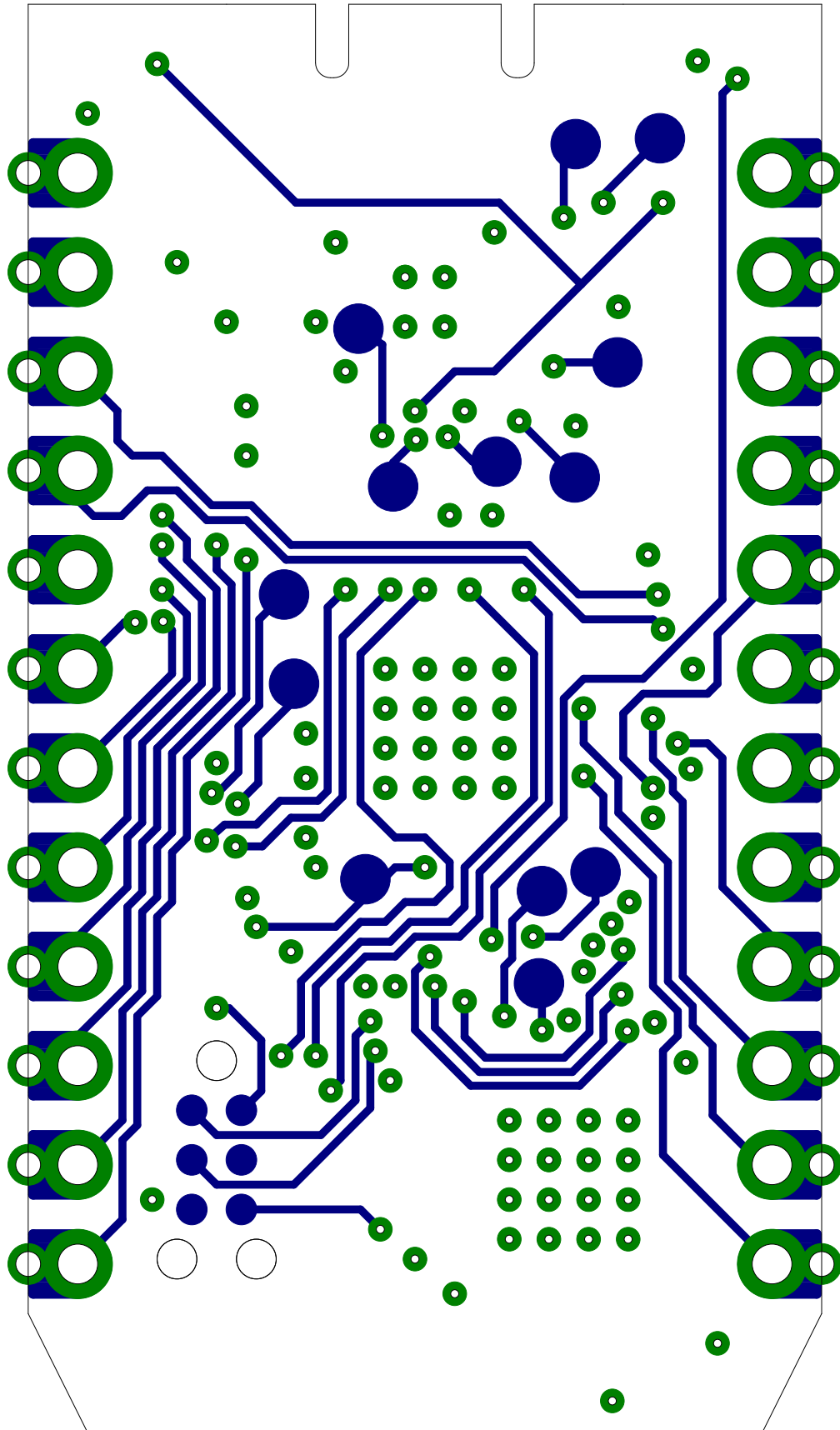


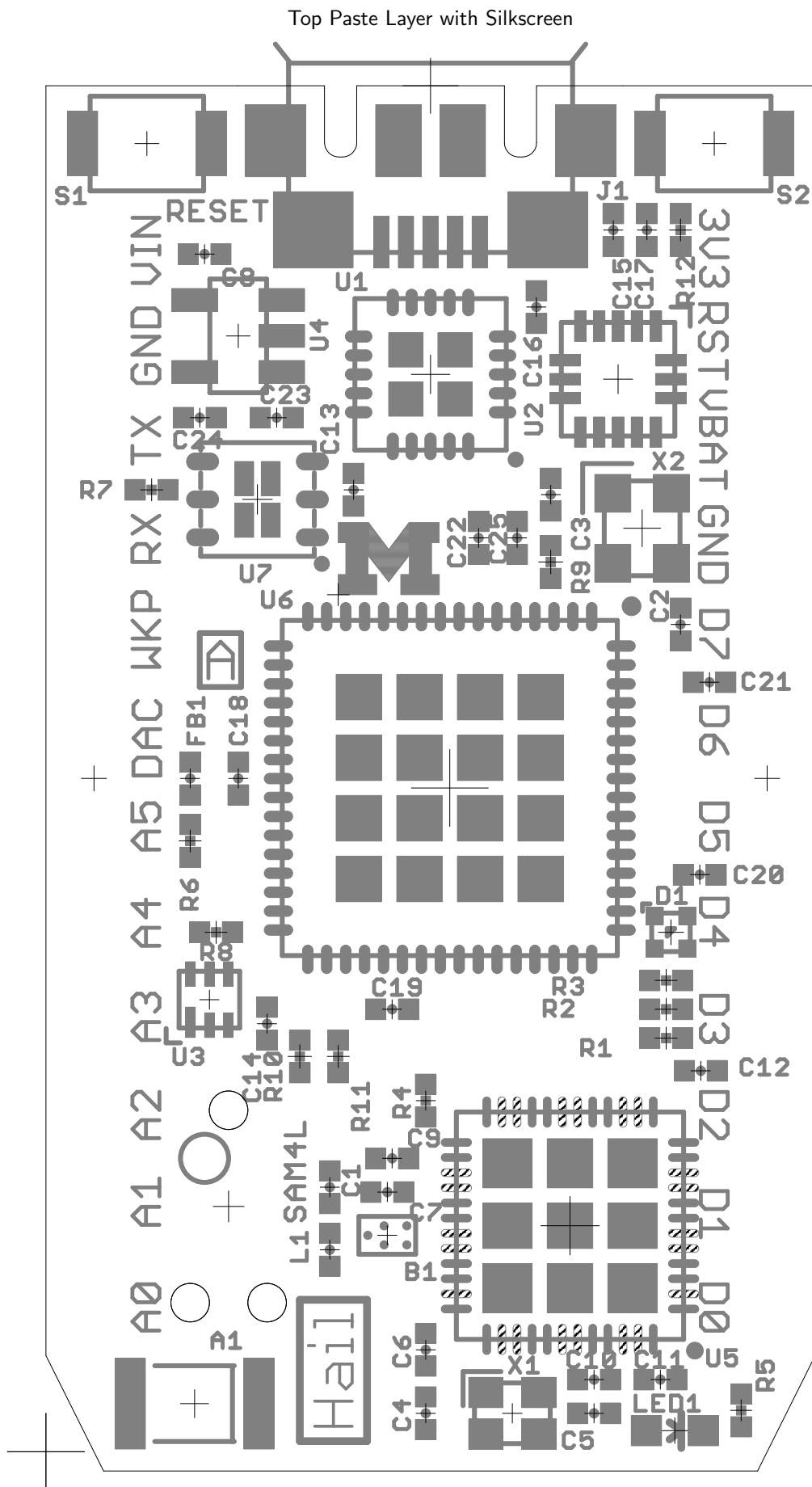


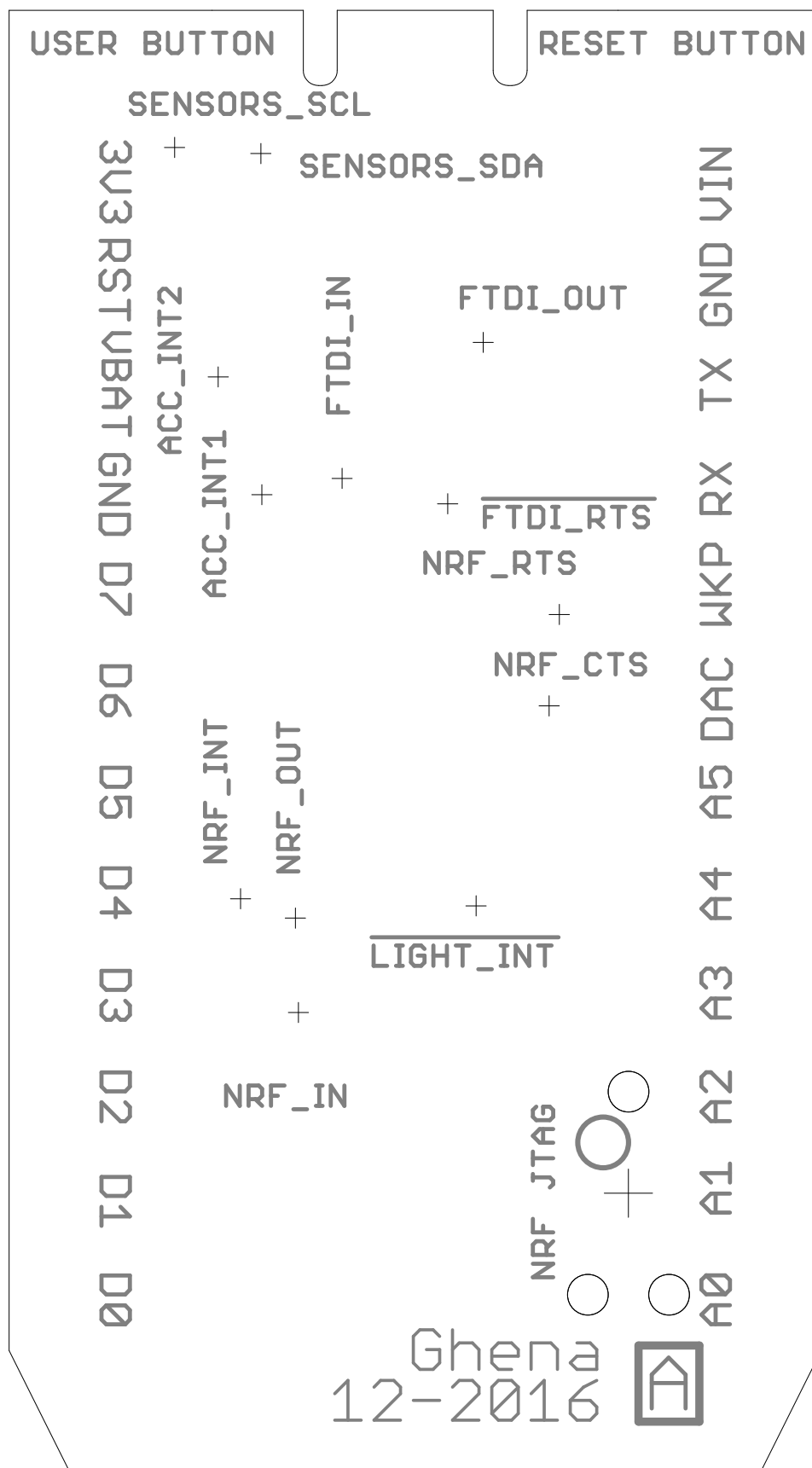




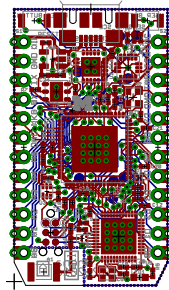
Bottom Copper Layer



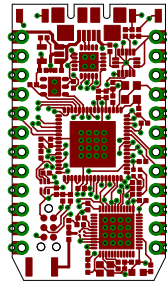


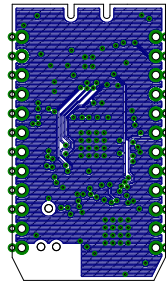


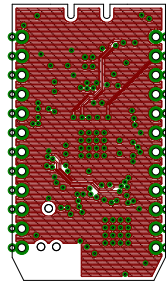
Top and Bottom Layers 1:1 Scale



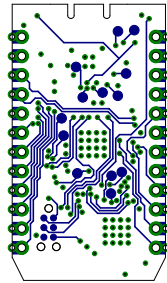
Top Layer 1:1 Scale







Bottom Copper Layer 1:1 Scale



hail_bom							
Qty	Value	Device	Package	Parts	Description	DIGIKEY	RICHARDSON_RFPD Already In Lab
1	FRACTUS-2.4GHZ-FR05	FRACTUS-2.4GHZ-FR05-S1-N-0-110	FRACTUS-ANTENNA-FR05-S1-N-0-110	A1	Fractus Micro Reach Xtend		FR05-S1-N-0110B PowerBlade Supplies
1	BAL-NRF01D3	BAL-NRF01D3	BAL-NRF01D3	B1	50 ohm nominal input / conjugate match balun to nRF51422-QFAA,	497-13637-1-ND	ICs Box
1	1.5pF	CAPACITOR0402_CAP	0402_CAP	C1	0402 Capacitor	490-6212-1-ND	
2	8pF	CAPACITOR0402_CAP	0402_CAP	C2, C3	0402 Capacitor	490-8230-1-ND	
2	12pF	CAPACITOR0402_CAP	0402_CAP	C4, C5	0402 Capacitor	490-6197-1-ND	
1	1nF	CAPACITOR0402_CAP	0402_CAP	C6	0402 Capacitor	490-1303-1-ND	
1	1.2nF	CAPACITOR0402_CAP	0402_CAP	C7	0402 Capacitor	490-5419-1-ND	
1	10nF	CAPACITOR0402_CAP	0402_CAP	C8	0402 Capacitor	490-7763-1-ND	
1	47nF	CAPACITOR0402_CAP	0402_CAP	C9	0402 Capacitor	445-1264-1-ND	
				C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22			
13	100nF	CAPACITOR0402_CAP	0402_CAP	C22	0402 Capacitor	490-10777-1-ND	
3	4.7uF	CAPACITOR0402_CAP	0402_CAP	C23, C24, C25	0402 Capacitor	490-13252-1-ND	
1	SML-LX0404SIUPGUSB	SML-LX0404SIUPGUSB	1MM_SQ_4PAD	D1	1mm^2 RGB LED	67-2125-1-ND	Signpost Controller
1	1.5k	FERRITE_BEAD0402	0402_CAP	FB1	0402 Ferrite Bead	1276-6395-1-ND	
1	MICRO_USB_B_HIROSE	MICRO_USB_B_HIROSE_ZX62R-B-USB	MICRO_B-HIROSE-ZX62R-B-5P	J1	USB Micro B Connector	H125274CT-ND	
2	TC2030-JLINK-NL_NOSI	TC2030-JLINK-NL_NOSILK	TC2030-IDC-NL_NOSILK	J2, J3			
1	M12PTH-CST	M12PTH-CST	1X12-CASTELLATED	JP3, JP4	Header 12	S1011E-12-ND	
1	6.8nH	INDUCTOR0402	0402_CAP	L1	A very specific inductor	490-6840-1-ND	
1	LED0603	LED0603	LED-0603	LED1	LED	160-1837-6-ND	
5	1k	RESISTOR0402_RES	0402_RES	R1, R2, R3, R4, R5	Resistor	1276-3430-1-ND	
4	10k	RESISTOR0402_RES	0402_RES	R6, R7, R8, R9	Resistor	1276-3431-1-ND	
3	100k	RESISTOR0402_RES	0402_RES	R10, R11, R12	Resistor	1276-3432-1-ND	
2	B3U-1000P	B3U-1000P	B3U-1000P	S1, S2	Switch	SW1020CT-ND	
1	FT231XQ	FT231XQ	QFN-20-4MM	U1	USB Bridge, USB to UART USB 2.0 UART Interface	768-1128-1-ND	
1	FXOS8700CQ	FXOS8700CQ	QFN-16-3MM	U2	Accelerometer, Magnetometer, 3 Axis Sensor, I2C/SPI	FXOS8700CQR1CT-ND	
1	ISL29035	ISL29035	ODFN-6-1.5MMX1.6MM	U3	Optical Sensor Ambient 550nm I2C	ISL29035IROZ-T7CT-ND	
1	MAX8887EZK33+T	MAX8887EZK33+T	SOT-23-5	U4	IC REG LDO 3.3V 0.3A TSOT23-5	MAX8887EZK33+TCT-ND	Signpost RF Spectrum
1	NRF51822QF	NRF51822QF	QFN-48-6MM	U5	Multiprotocol Bluetooth 4.0 low energy/2.4 GHz RF SoC	1490-1049-1-ND	ICs Box
1	SAM4LC8BA	SAM4LC8BA	QFN-64-9MM	U6	SAM4L Microcontroller. 64QFN Package. 512 Flash.	ATSAM4LC8BA-MURCT-ND	
1	SI7021	SI7021	DFN-6/3MM	U7	IC TEMP SENSOR RH 2% DFN	336-3141-ND	
1	16MHz	TXC-8Y	TXC-8Y	X1	2mmx1.6mm SMD Crystal	887-2003-1-ND	Other Parts Box
1	16MHz	FH1600015	FHXXX	X2	Pericom Type FH 16 MHz 2.5 x 2.0 mm	FH1600015CT-ND	