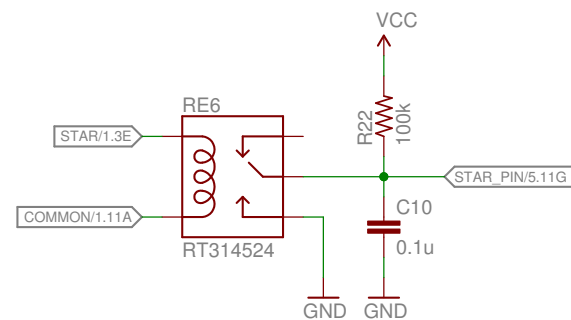
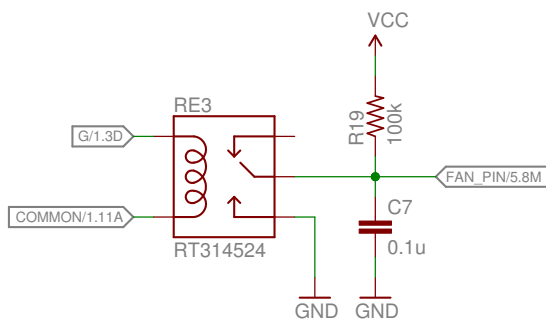
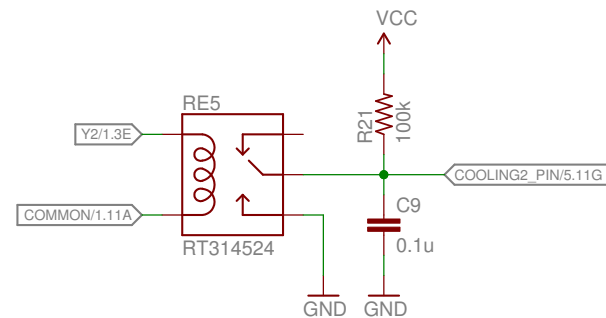
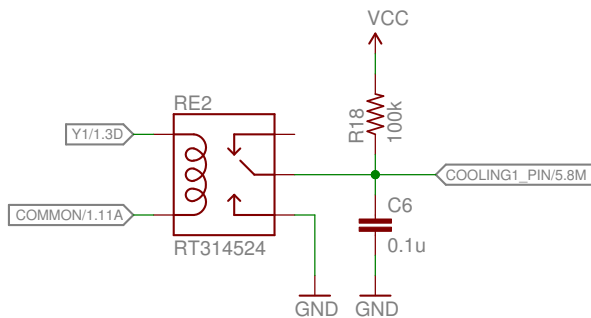
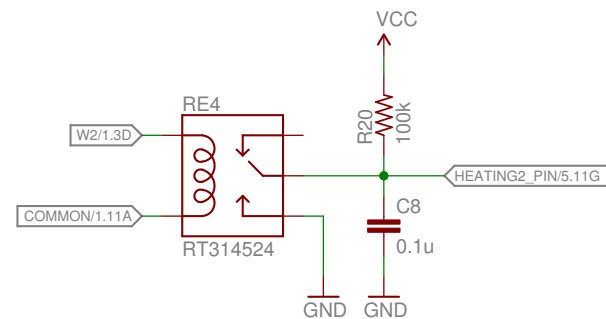
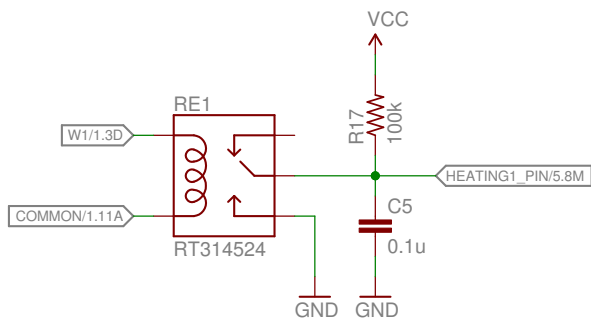


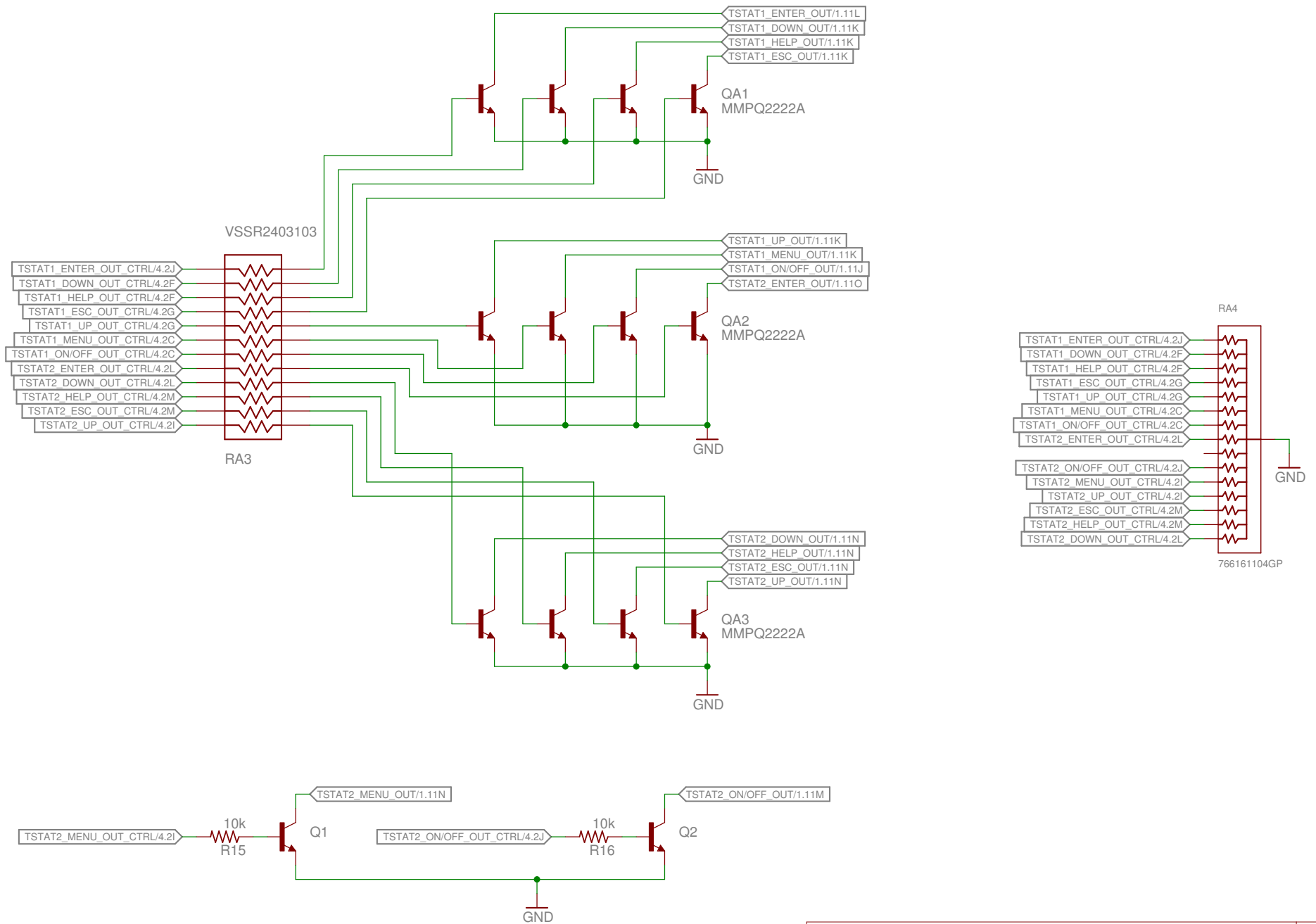
Nest Interface Board

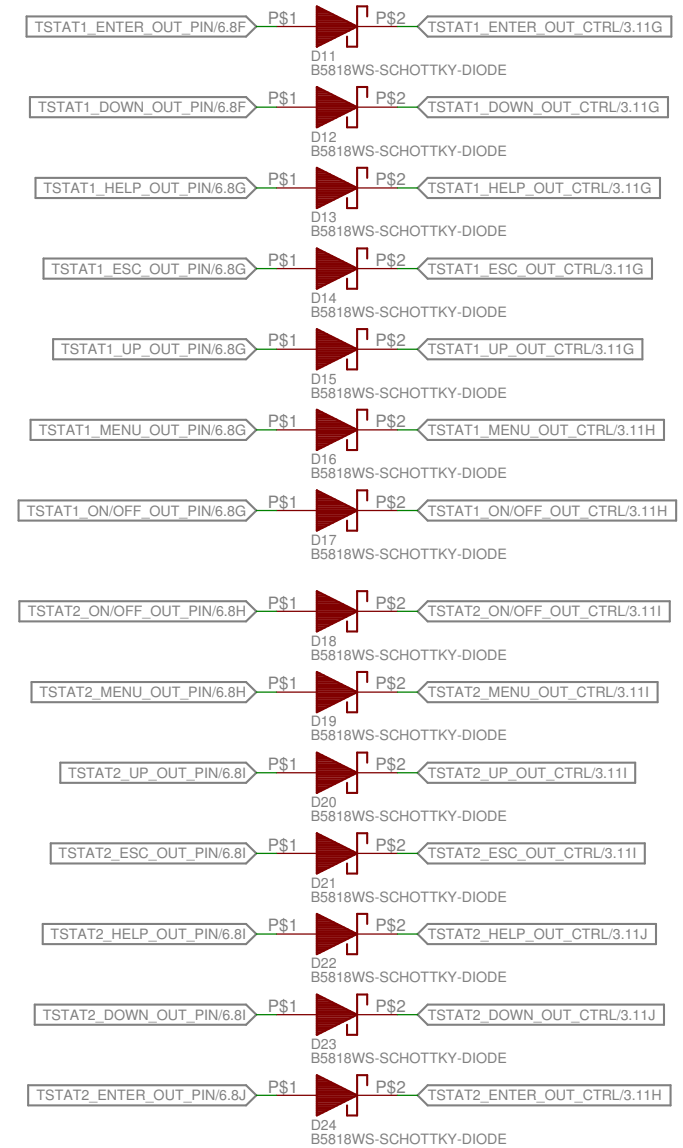
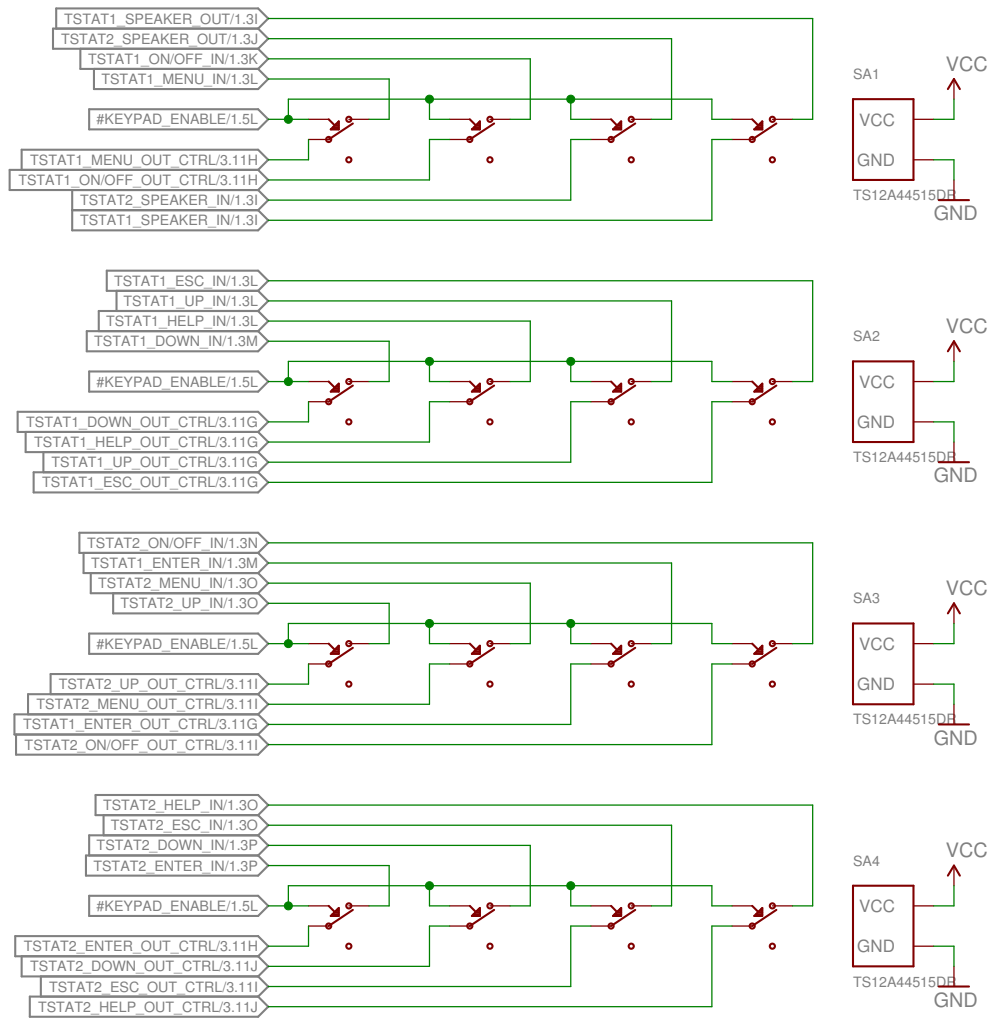
REV:
A

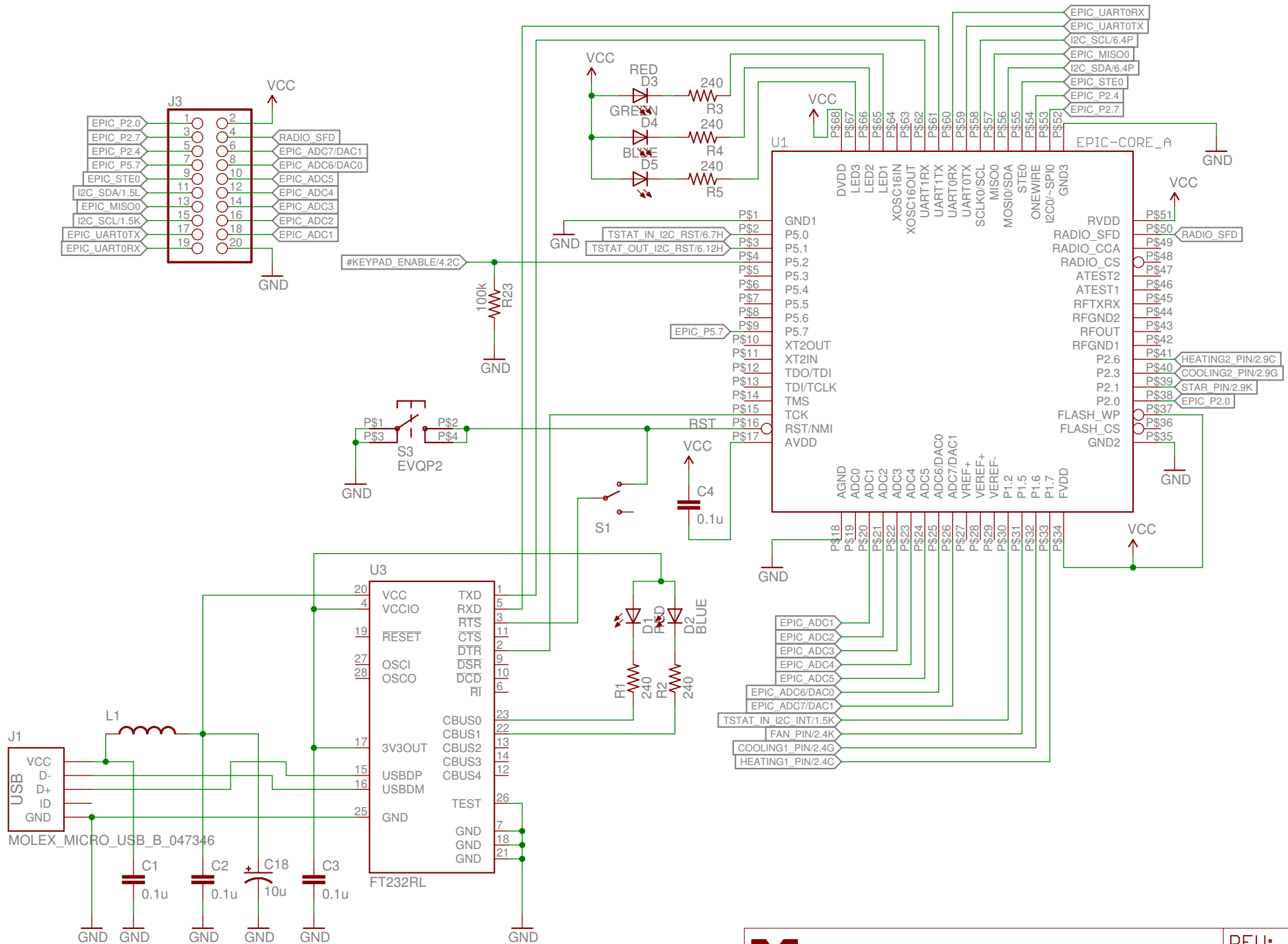
Date: 1/16/14 4:50 PM

Sheet: 1/8



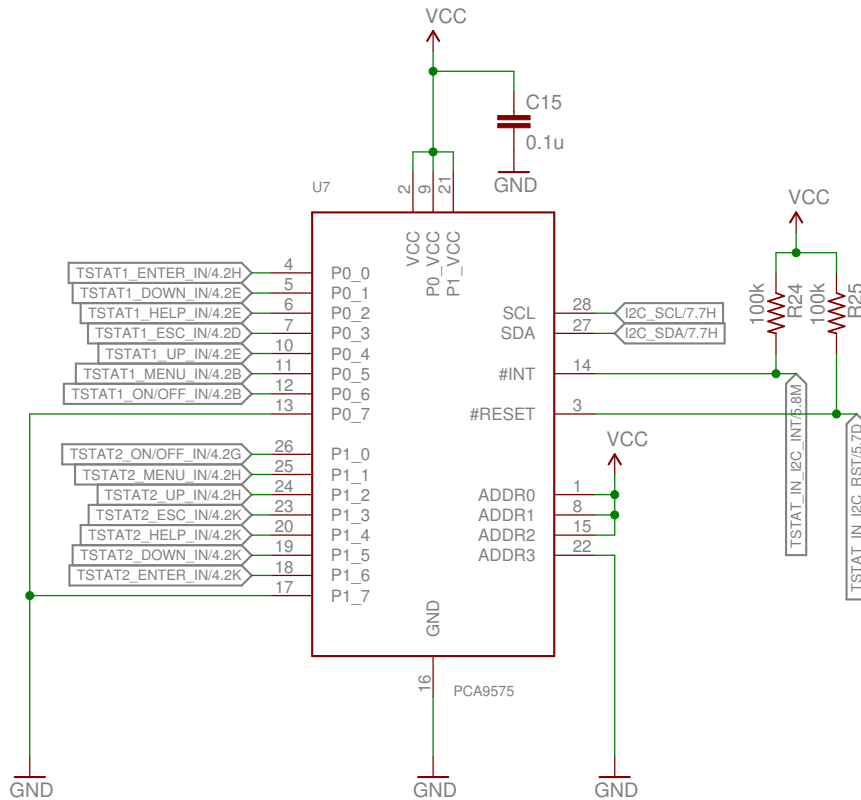






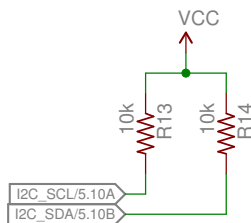
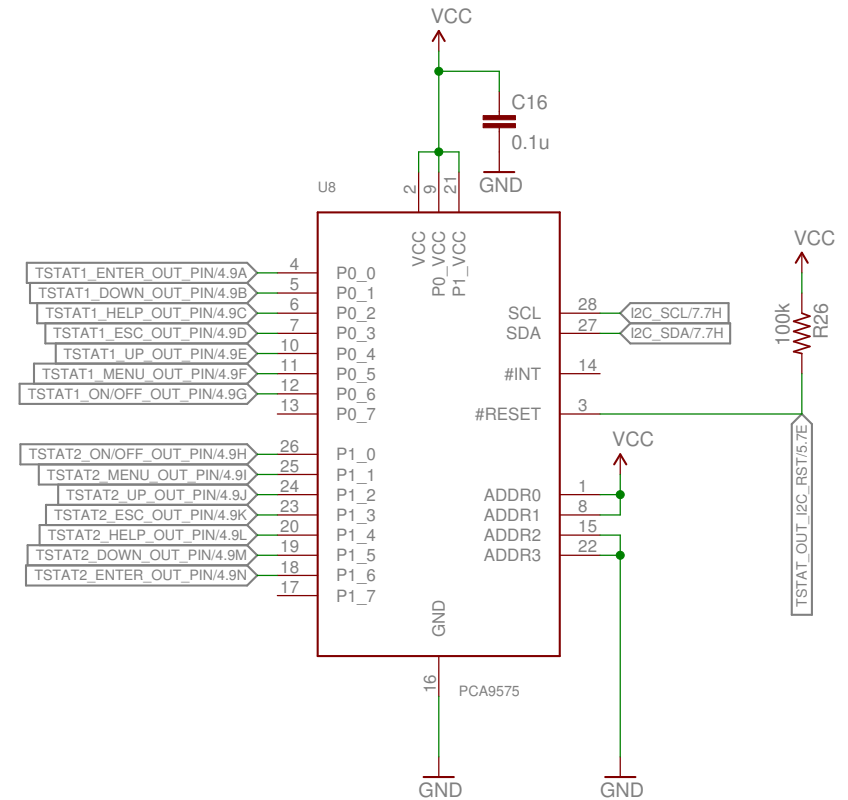
GPIO INPUTS

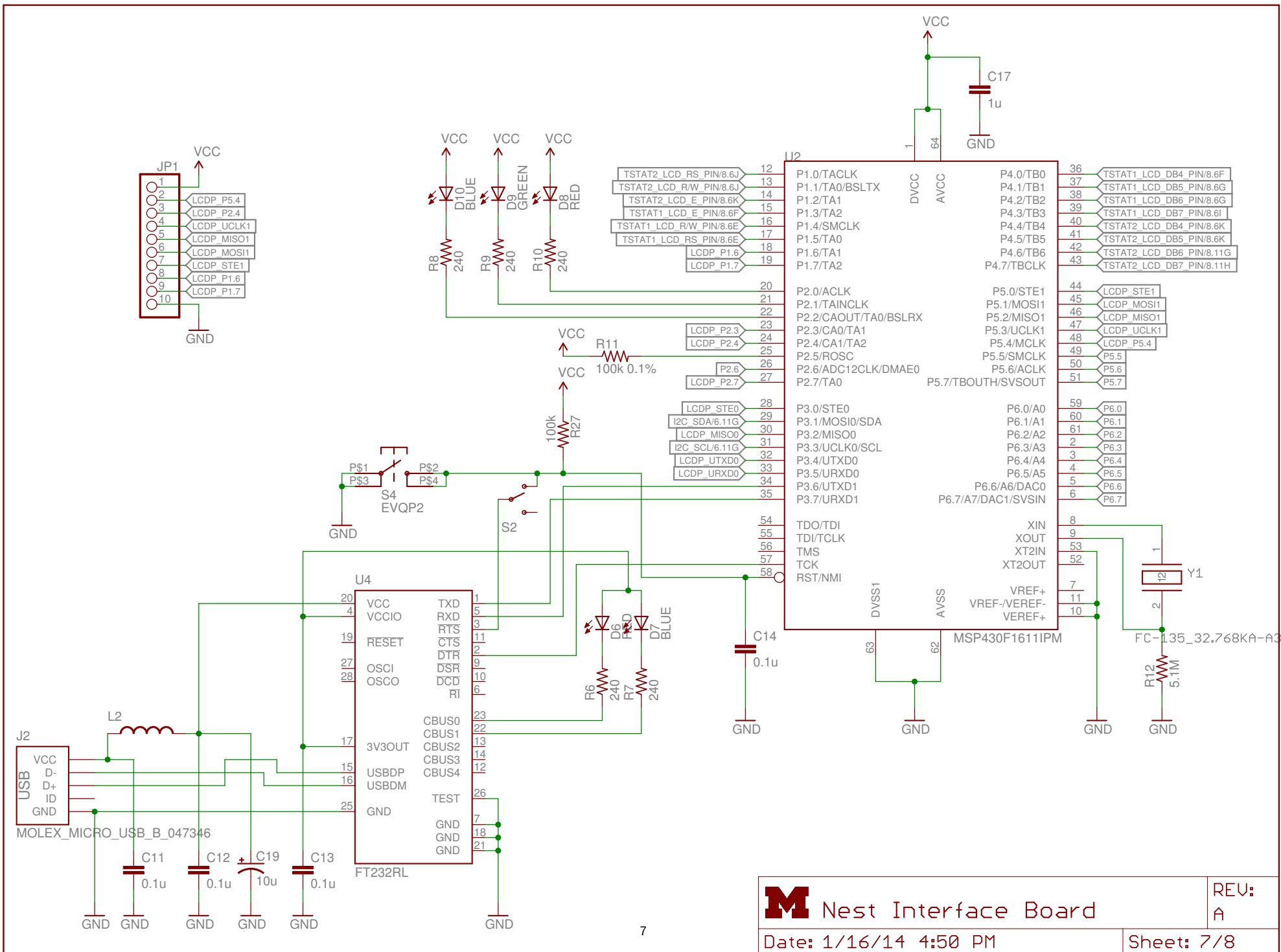
All of the buttons from the thermostats.

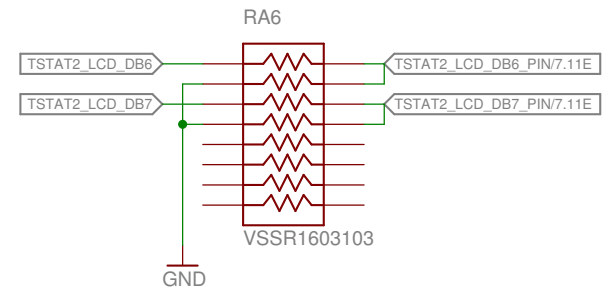
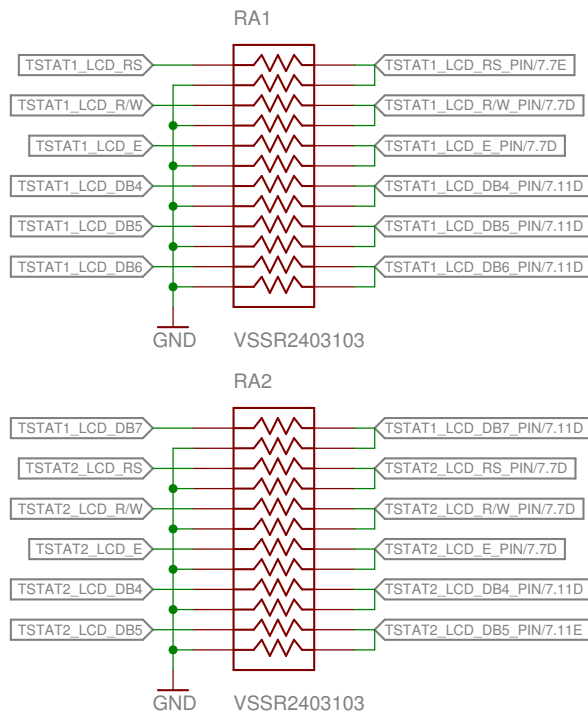
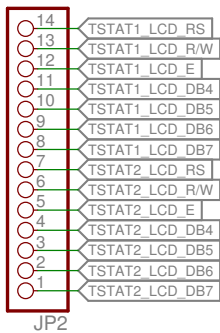
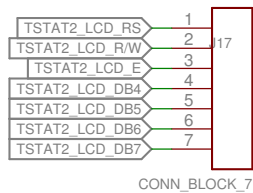
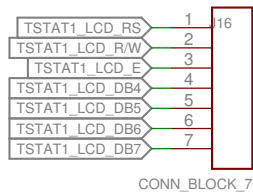


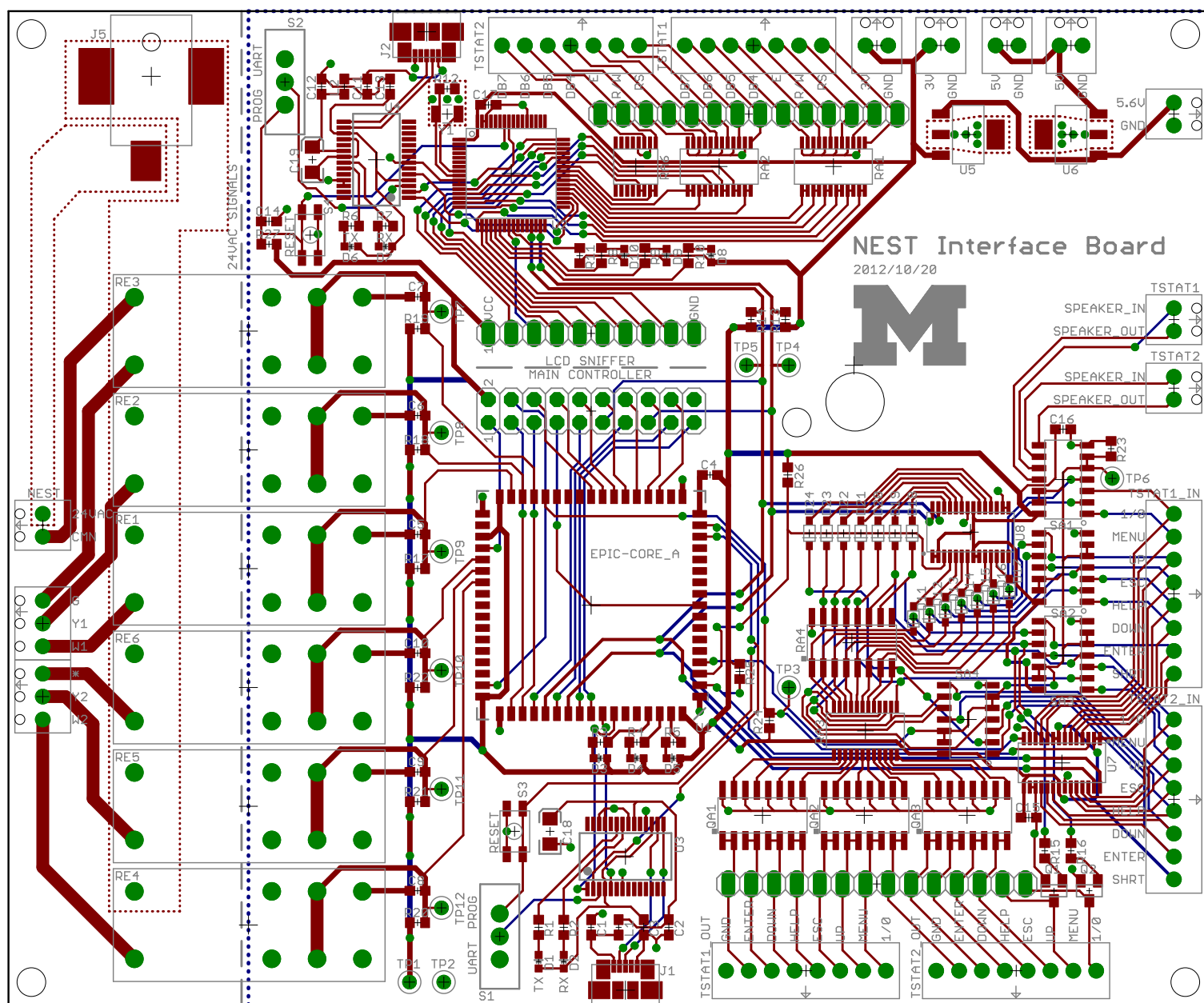
GPIO OUTPUTS

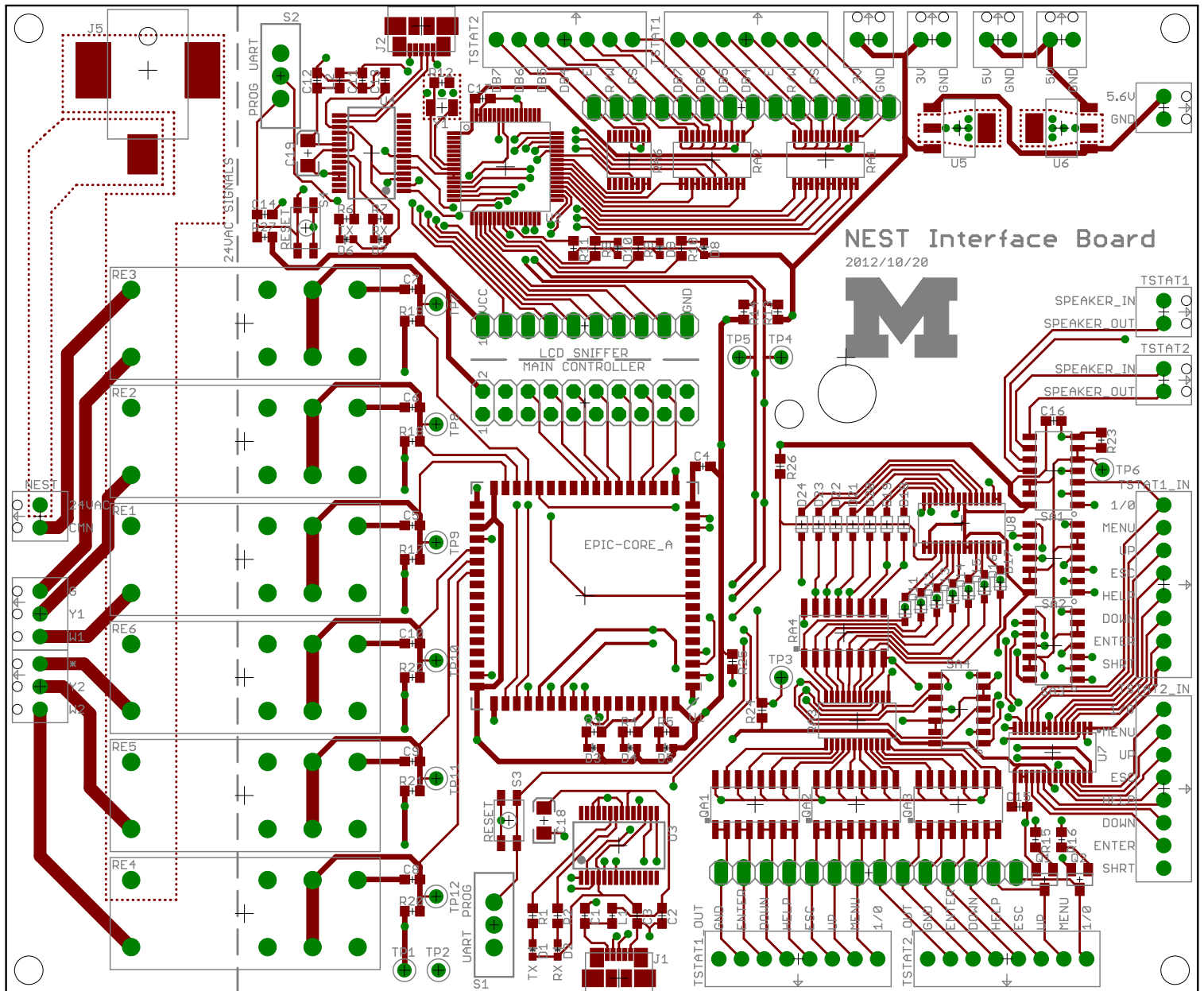
Outputs to make the thermostat think a button is pressed.



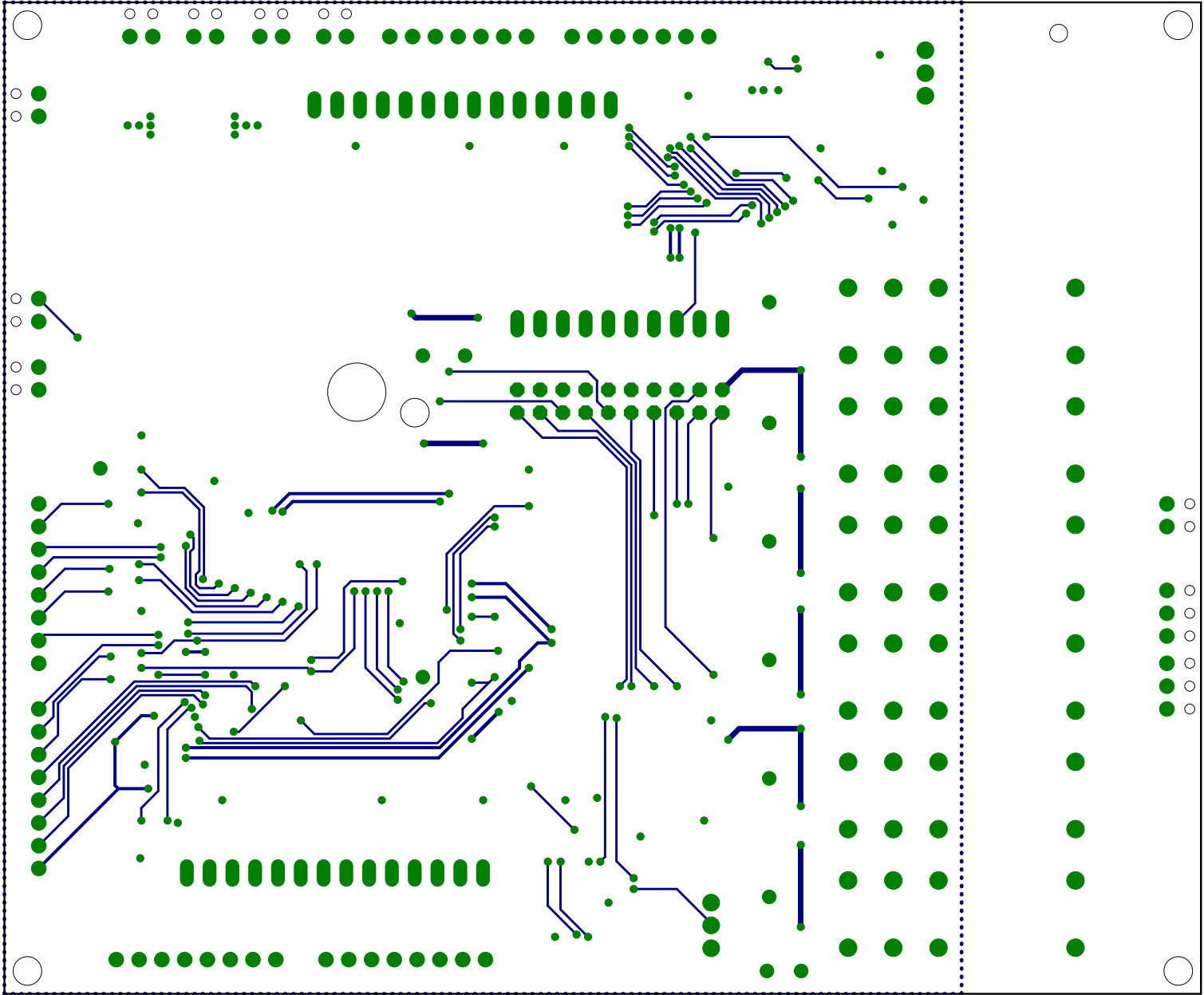




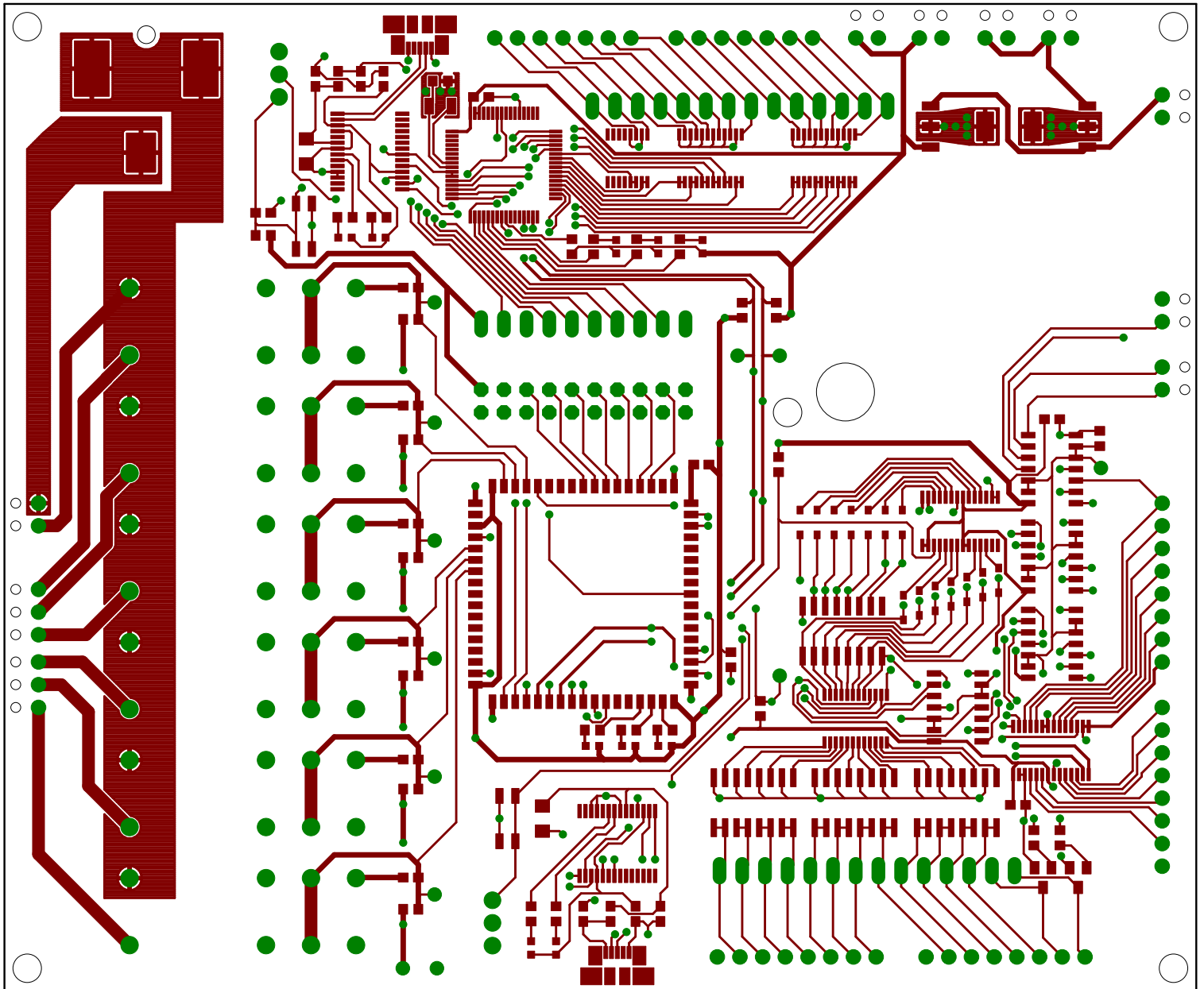




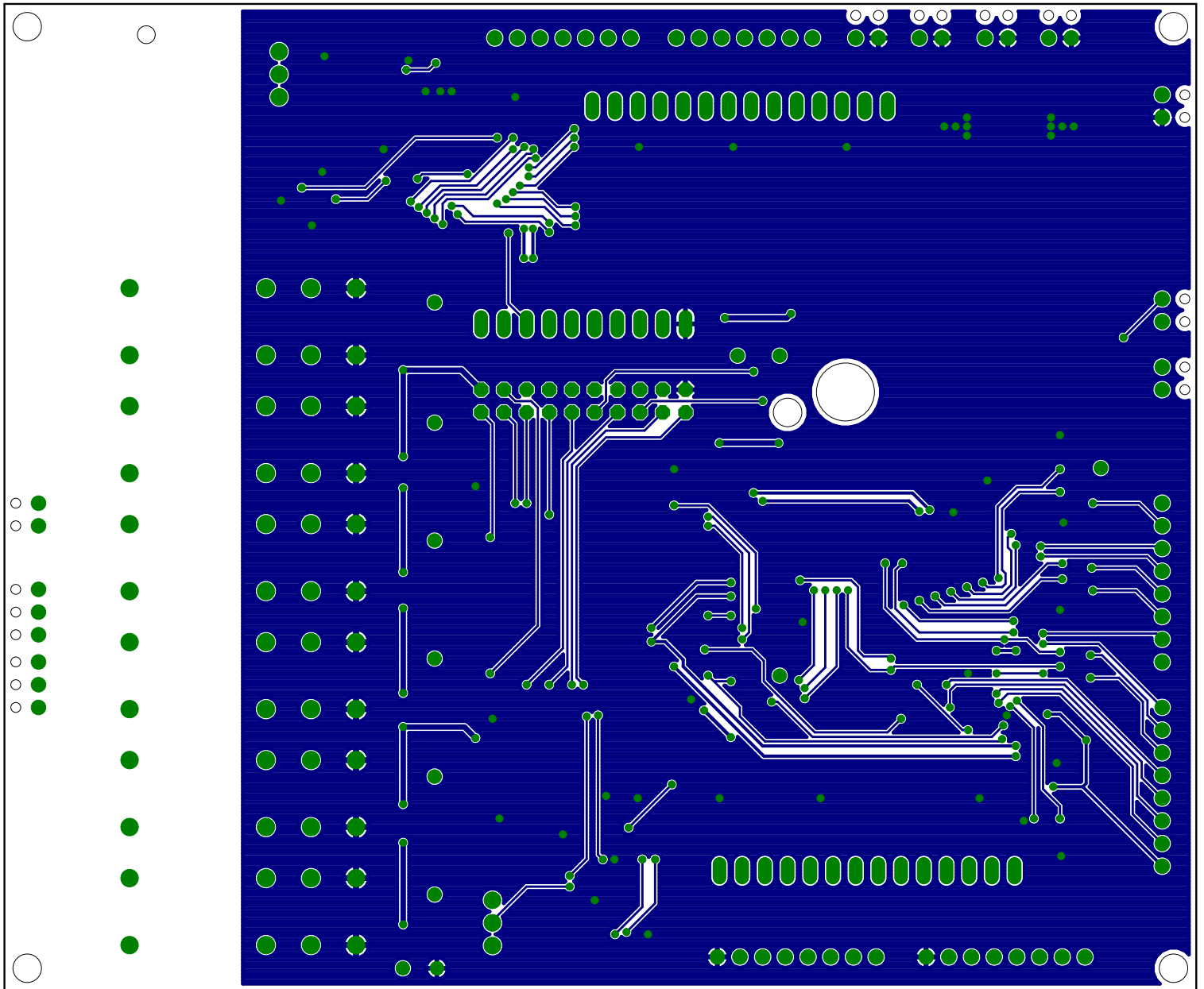
Bottom Layer



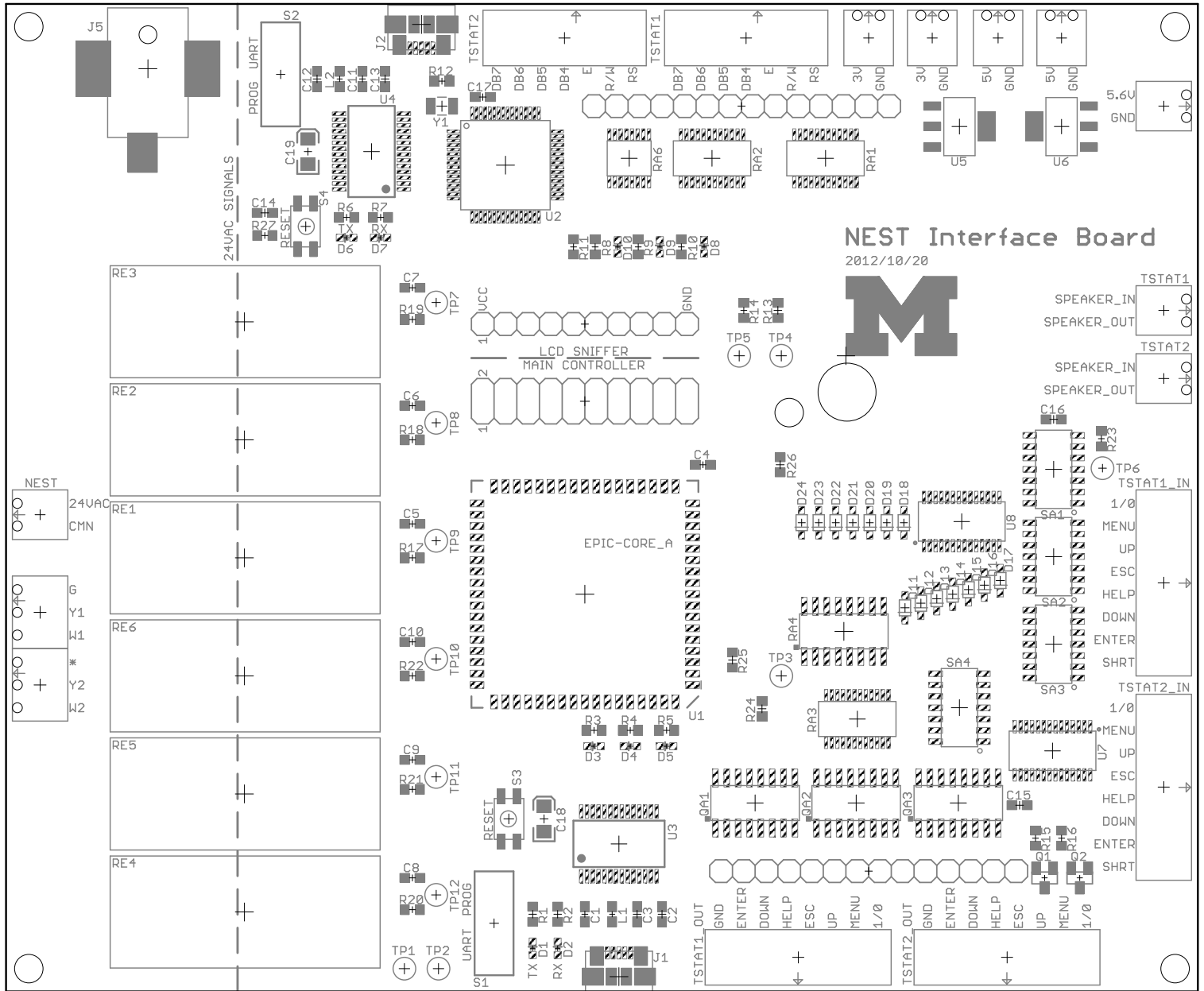
Top Copper Layer



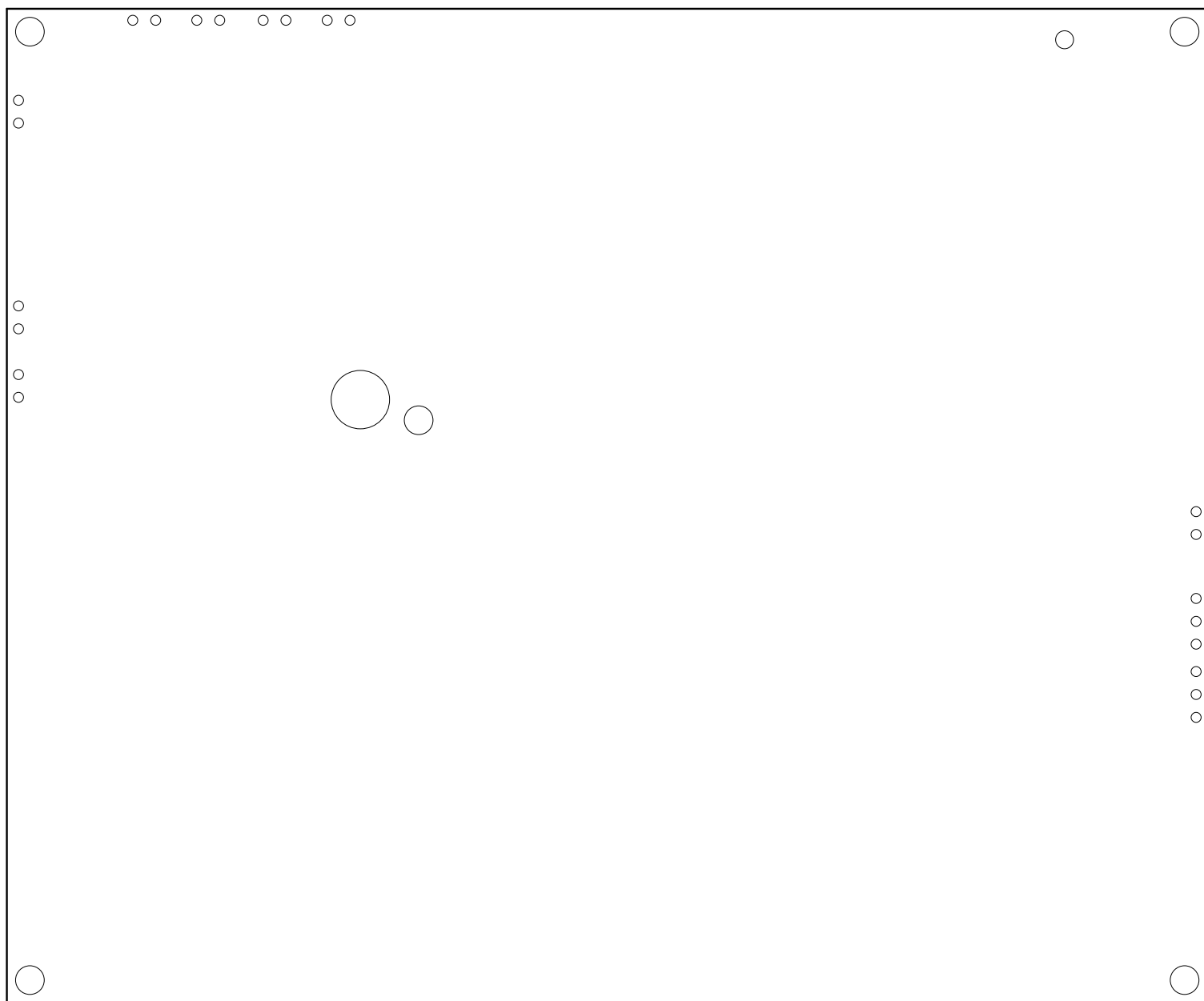
Bottom Copper Layer

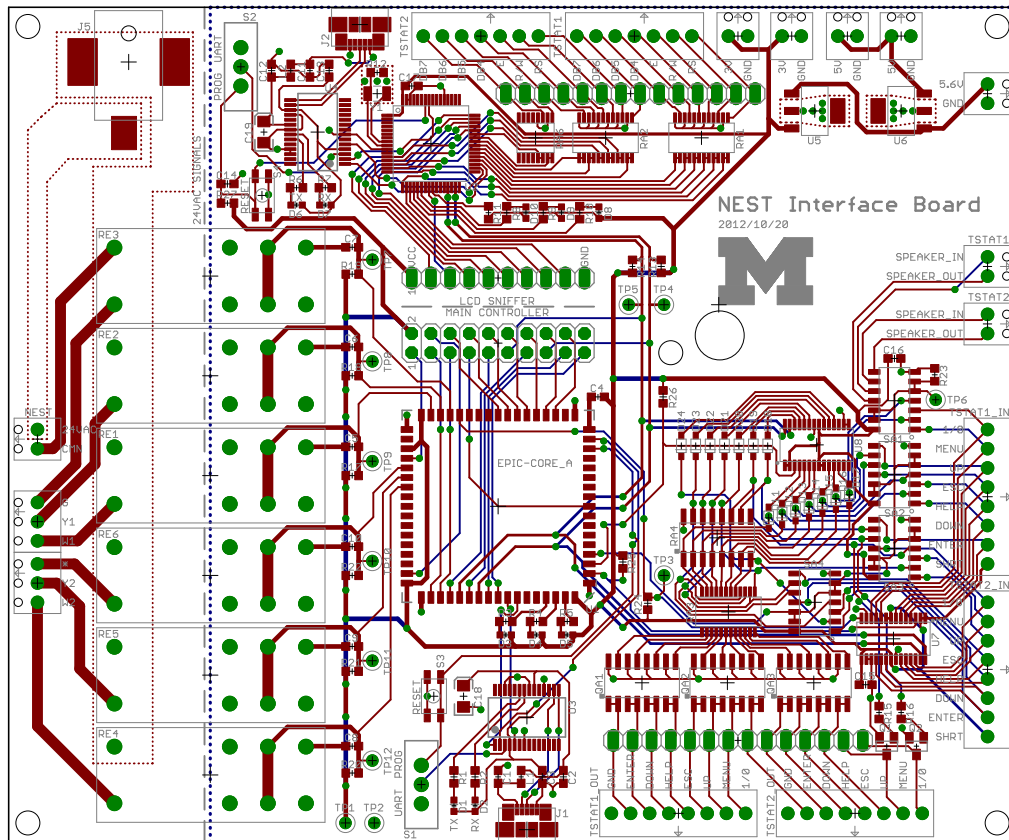


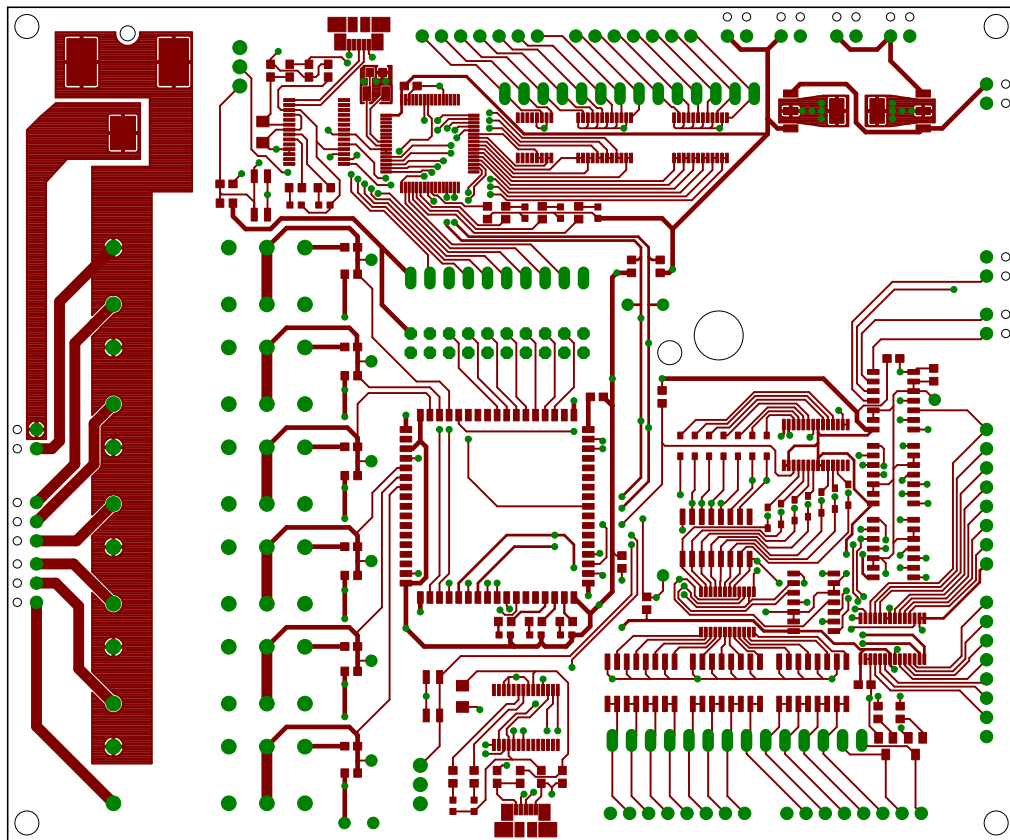
Top Paste Layer with Silkscreen



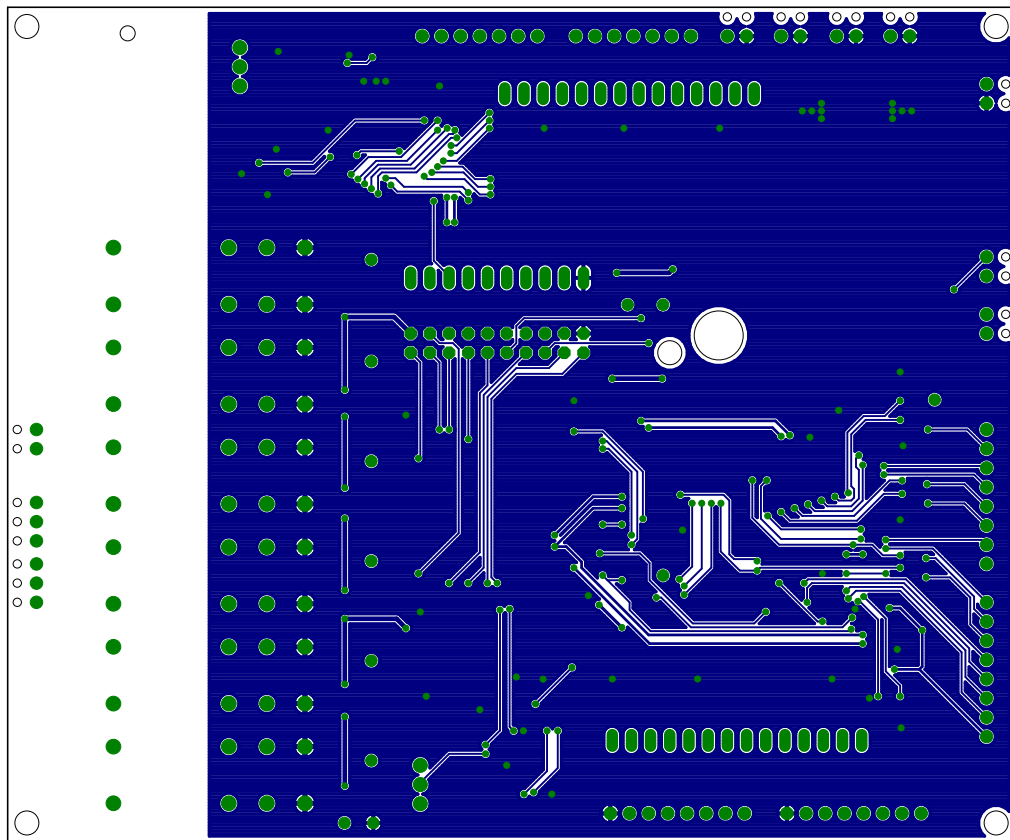
Bottom Paste Layer with Silkscreen







Bottom Copper Layer 1:1 Scale



Qty	Value	Device	Package	Parts	Description	DIGIKEY
	16 0.1u	C-EUC0603	C0603	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16	CAPACITOR, European symbol	
	1 1u	C-EUC0603	C0603	C17	CAPACITOR, European symbol	
	2 10u	CAP_POL1206	EIA3216	C18, C19	Capacitor Polarized	478-1655-1-ND
	4 RED	LED0603	LED-0603	D1, D3, D6, D8	LEDs	
	4 BLUE	LED0603	LED-0603	D2, D5, D7, D10	LEDs	
	2 GREEN	LED0603	LED-0603	D4, D9	LEDs	
	2 MOLEX_MICRO_USB_B_047346	MOLEX_MICRO_USB_B_047346	MOLEX_MICRO_USB_B_047346	J1, J2	Very tiny smd micro USB receptacle.	WM17141CT-ND
	1	PINHD-2X10	2X10	J3	PIN HEADER	
	1	PINHD-1X8	1X08	J4	PIN HEADER	
	1 PJ-036A-SMT	PJ-036A-SMT	PJ-0361-SMT	J5	CONN PWR JACK 2.0X6.3MM SMT	CP-036APJCT-ND
	8 CONN_BLOCK_2	CONN_BLOCK_2	CONN_BLOCK_2	J6, J7, J8, J9, J10, J11, J12, J13	2x 0.100 in screw terminal block	277-1273-ND
	2 CONN_BLOCK_3	CONN_BLOCK_3	CONN_BLOCK_3	J14, J15	3x 0.100 in screw terminal block	277-1274-ND
	2 CONN_BLOCK_7	CONN_BLOCK_7	CONN_BLOCK_7	J16, J17	7x 0.100 in screw terminal block	277-1278-ND
	4 CONN_BLOCK_8	CONN_BLOCK_8	CONN_BLOCK_8	J18, J19, J20, J21	8x 0.100 in screw terminal block	277-1279-ND
	2	INDUCTORR0603	L0603	L1, L2	Inductors	240-2373-1-ND
	2	TRANSISTOR_NPNSOT23	SOT23	Q1, Q2	Transistor NPN	568-1636-1-ND
	3 MMPQ2222A	MMPQ2222A	SOIC-16	QA1, QA2, QA3	4 npn transistor array	MMPQ2222ACT-ND
	4 ALD1107	ALD1107	SOIC-14	QA4, QA5, QA6, QA7	4x P-FET transistor chip	1014-1015-ND
	10	240 R-US_R0603	R0603	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10	RESISTOR, American symbol	
	1 100k 0.1%	R-US_R0603	R0603	R11	RESISTOR, American symbol	
	15.1M	R-US_R0603	R0603	R12	RESISTOR, American symbol	
	4 10k	R-US_R0603	R0603	R13, R14, R15, R16	RESISTOR, American symbol	
	11 100k	R-US_R0603	R0603	R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27	RESISTOR, American symbol	
	3 VSSR2403103	VSSR2403103	LSSOP-24	RA1, RA2, RA3	12x 10k resistor array	VSSR24-10K-JI-ND
	2 766161104GP	766161104GP	SOIC-16	RA4, RA5	15x 100k resistor array bussed	766-161-R100KP-ND
	1 VSSR1603103	VSSR1603103	LSSOP-16	RA6	RES ARRAY 10K OHM 8 RES 16-LSSOP	VSSR16-10K-JI-ND
	6 RT314524	RT314524	S0418-CA	RE1, RE2, RE3, RE4, RE5, RE6	RELAY GEN PURPOSE SPDT 16A 24VAC	PB1238-ND
	2	SWITCH-SPSTPTH	SWITCH-SPDT	S1, S2	SPST Switch	EG1903-ND
	2 EVQP2	EVQP2	EVQP2	S3, S4		P110845CT-ND
	1 EPIC-CORE_A	EPIC-CORE_A	EPIC-LCC68	U1		
	1 MSP430F1611IPM	MSP430F1611IPM	PM/PAG64	U2		768-1007-1-ND
	2 FT232RL	FT232RL	SSOP28	U3, U4		MCP18255-3002E/DB-ND
	1 MPC1825	MPC1825	SOT-223-3	U5	3V 500mA LDO	TC1262-5.0VDB-ND
	1 TC1262	TC1262	SOT-223-3	U6	5V 500mA LDO	
	2 PCA9575	PCA9575	TSSOP28	U7, U8	16 channel I2C GPIO module.	568-6647-1-ND
	1 FC-135_32.768KA-A3	FC-135_32.768KA-A3	FC-135	Y1		535-9543-1-ND