

Z. Metzinger
C. Castillo

AMSAT-NA

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File: primary_tms570.kicad_sch

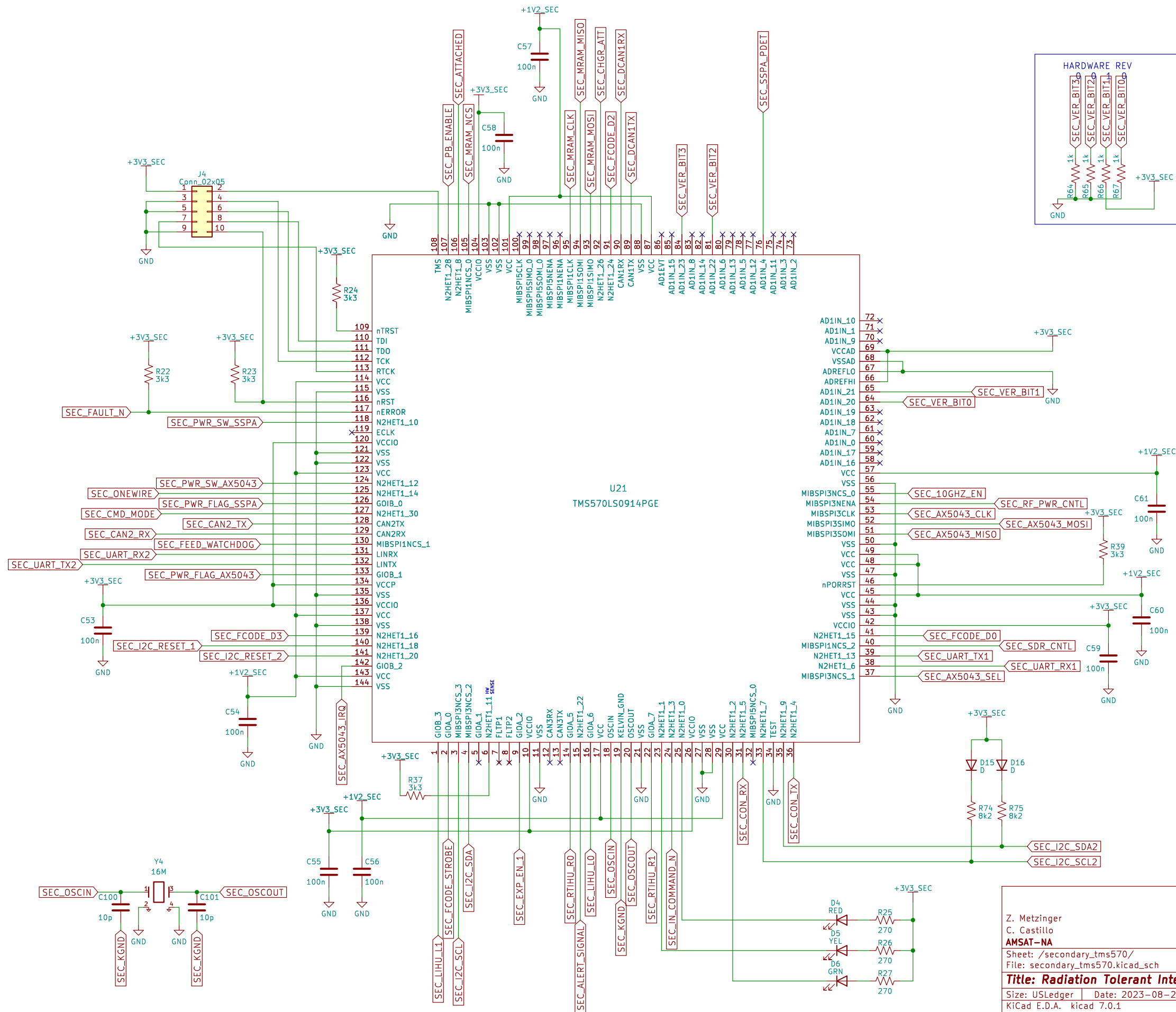
Title: Radiation Tolerant Internal Housekeeping Unit (IHU)

Size: USLedger Date: 2023-08-24

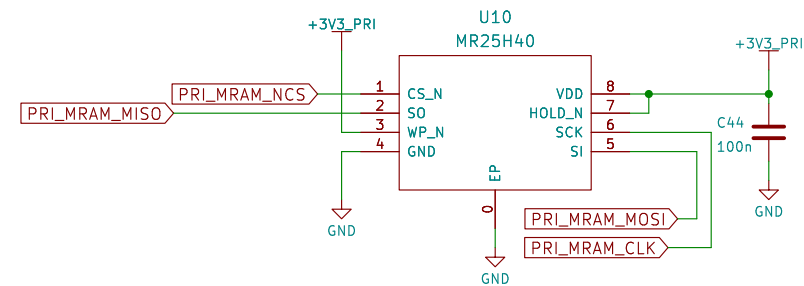
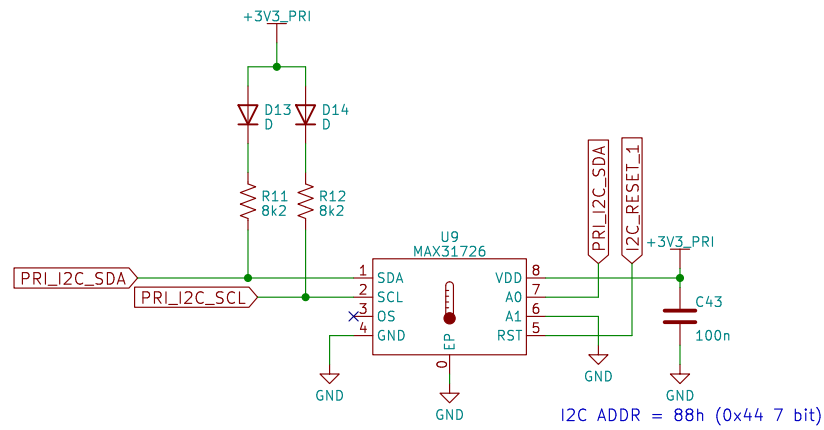
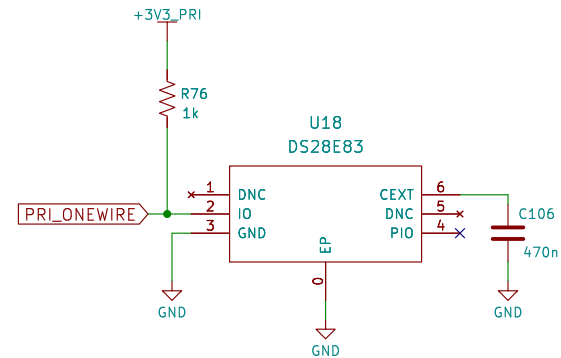
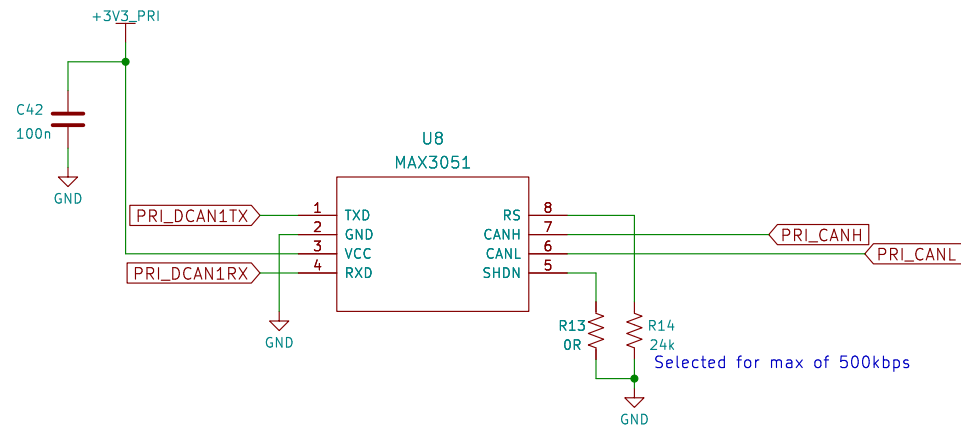
Rev: 1.2A

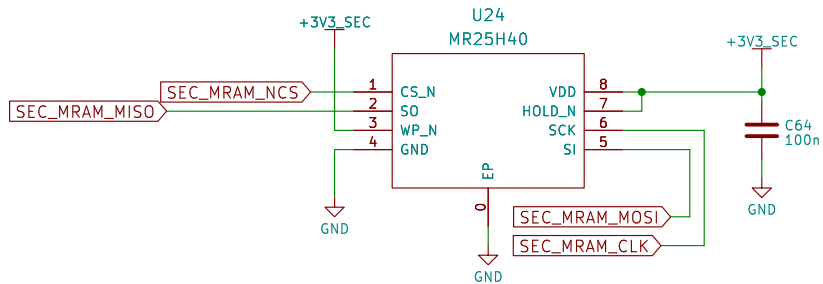
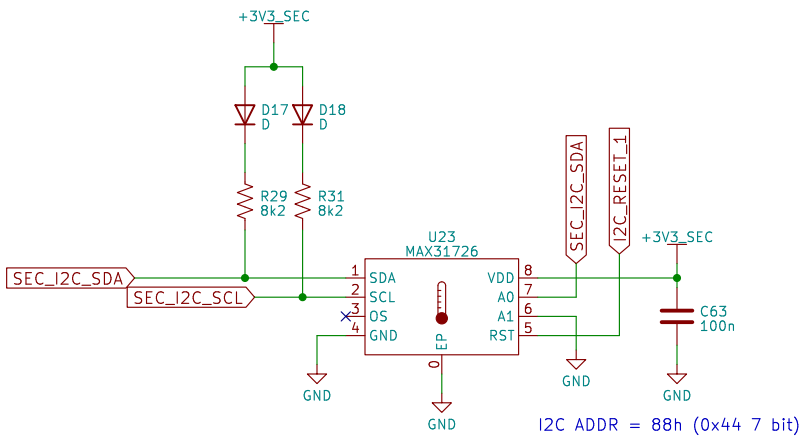
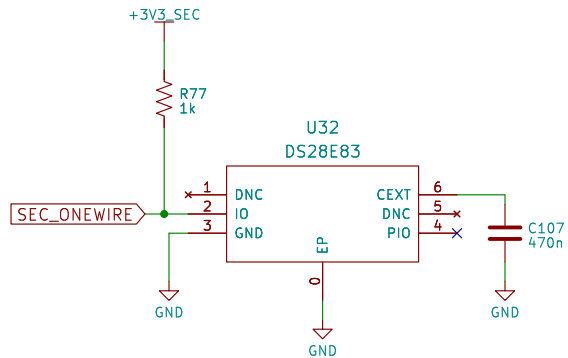
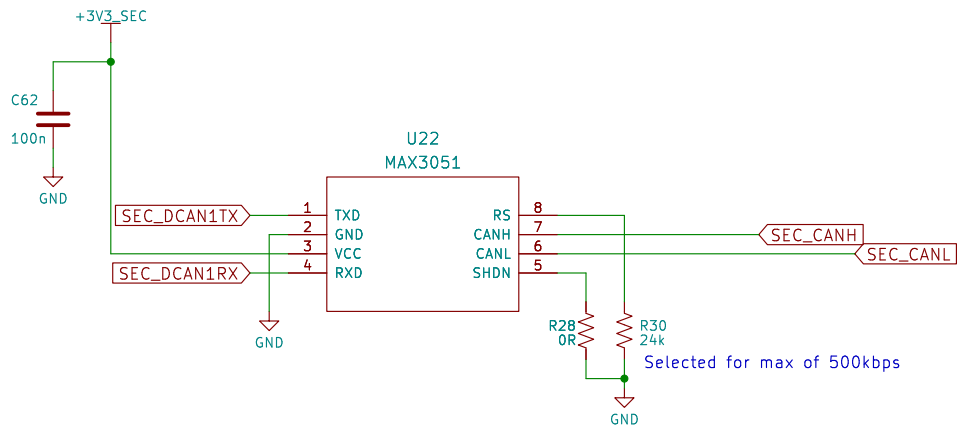
KiCad E.D.A. kicad 7.0.1

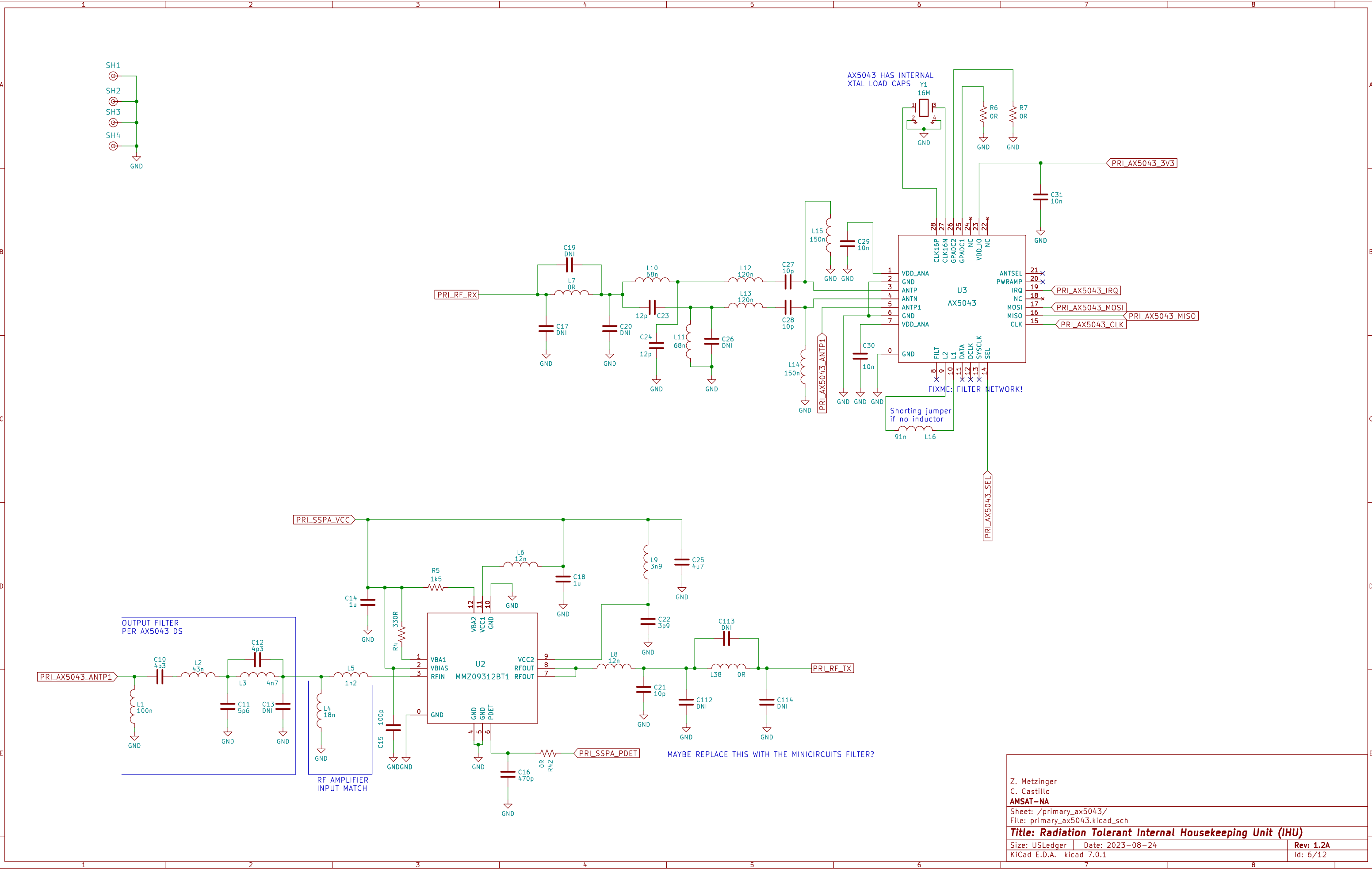
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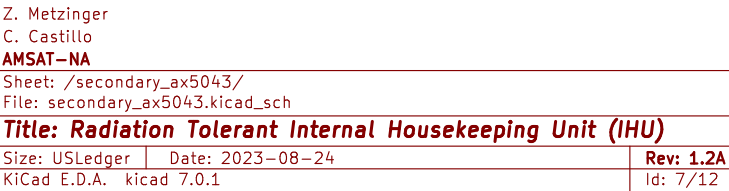


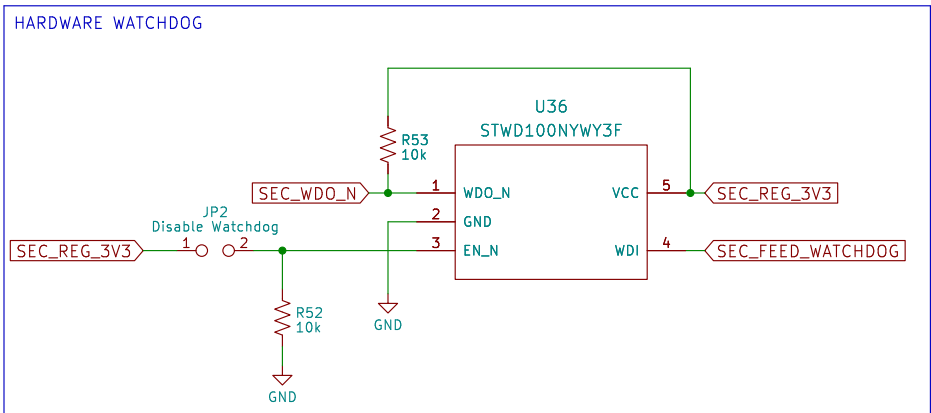
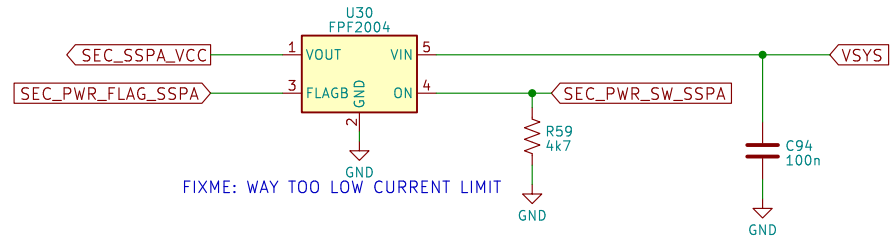
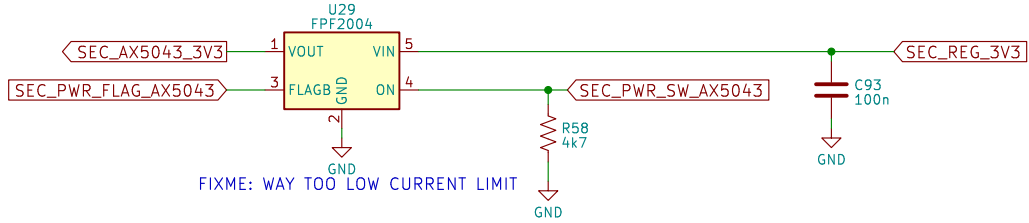
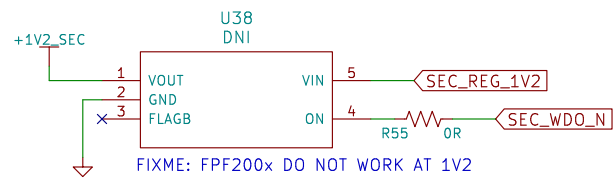
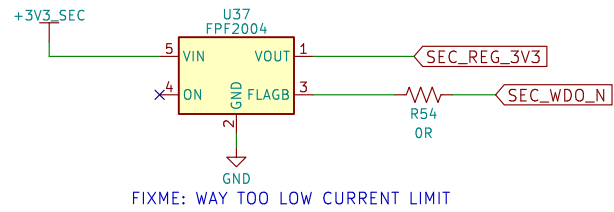
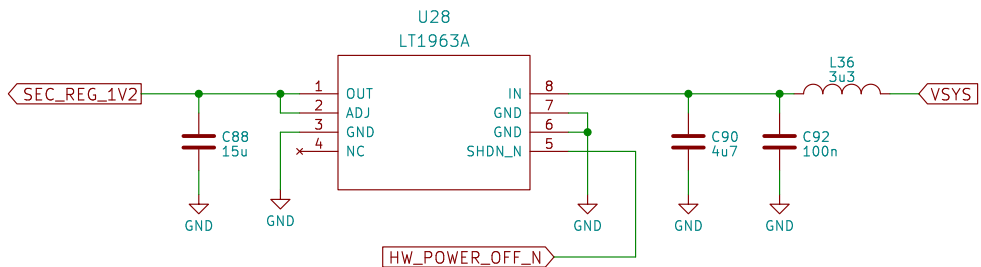
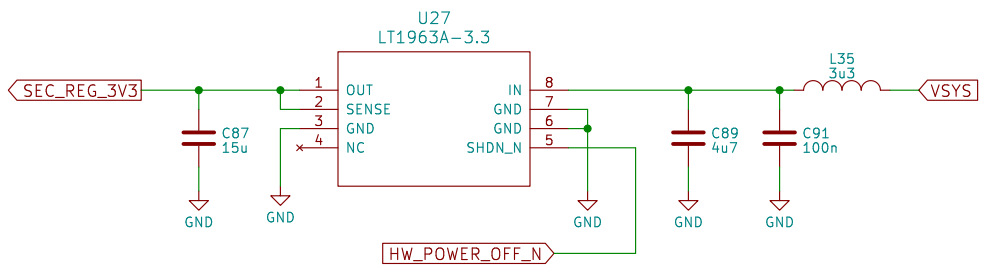
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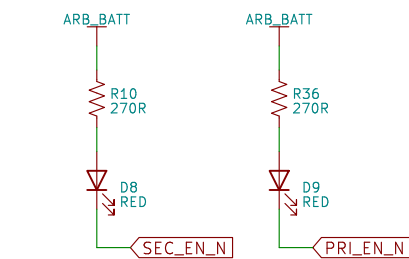
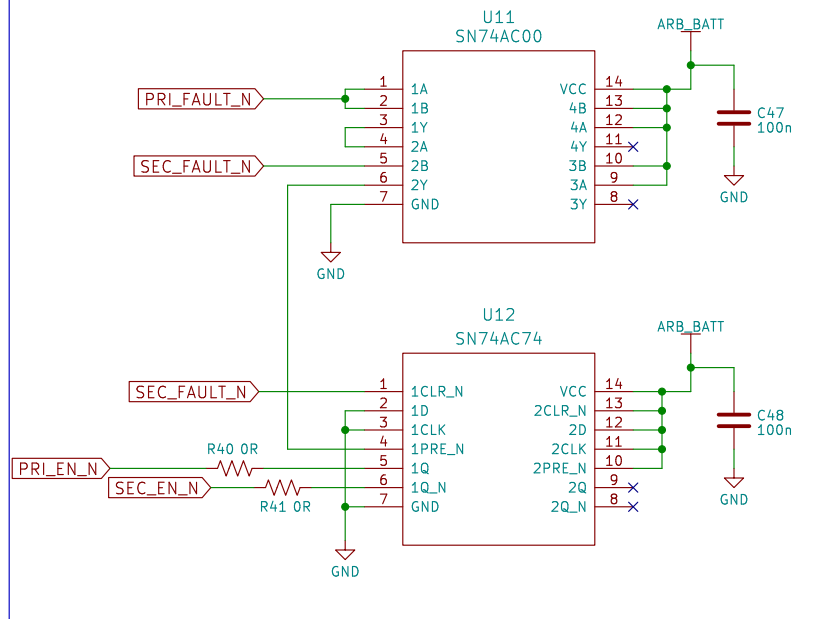
ARBITER DECISION LOGIC

PRI_FAULT_N	SEC_FAULT_N	PRI_EN_N	SEC_EN_N
1	1	N/C	N/C
1	0	N/C	N/C
0	1	0	0
0	0	N/C	N/C

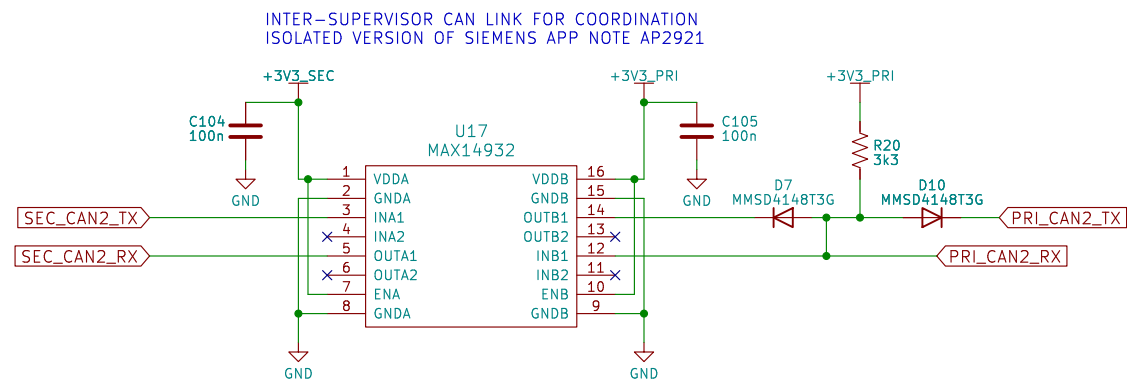
N/C -> No Change in Q/Q_N outputs

CLR_N driven by SEC_FAULT_N is used to switch back to primary control. At power-on, supervisors communicate to assert this condition and give control to primary supervisor.

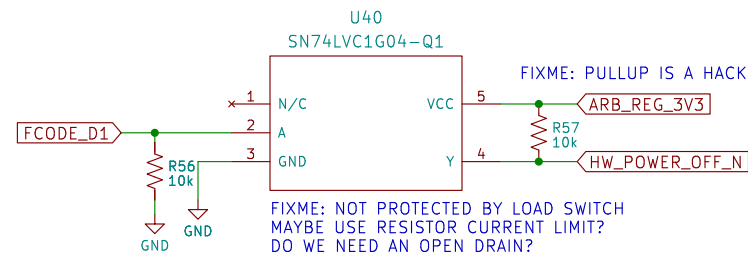
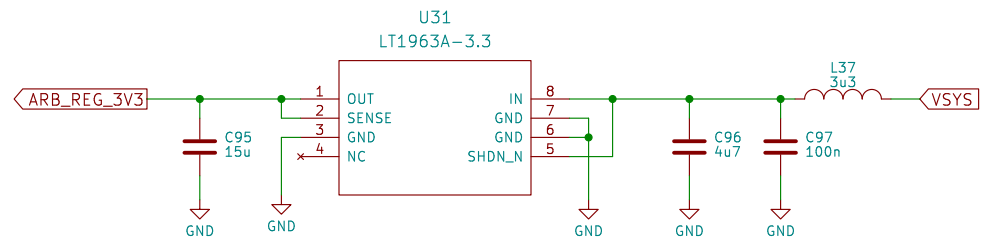
CLR_N and PRE_N (both faulted) isolates both supervisors from the satellite I/O.



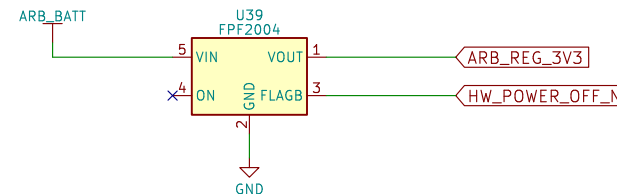
LEDS WILL INDICATE WHICH SUPERVISOR HAS CONTROL FOR GROUND TESTING ONLY, MAY BE REMOVED FOR FLIGHT



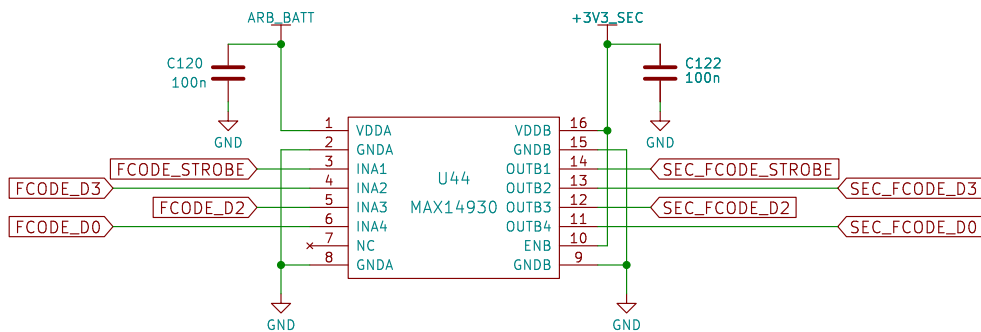
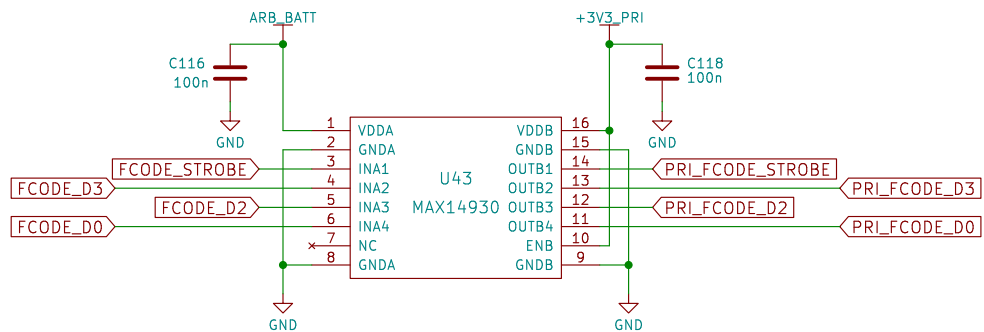
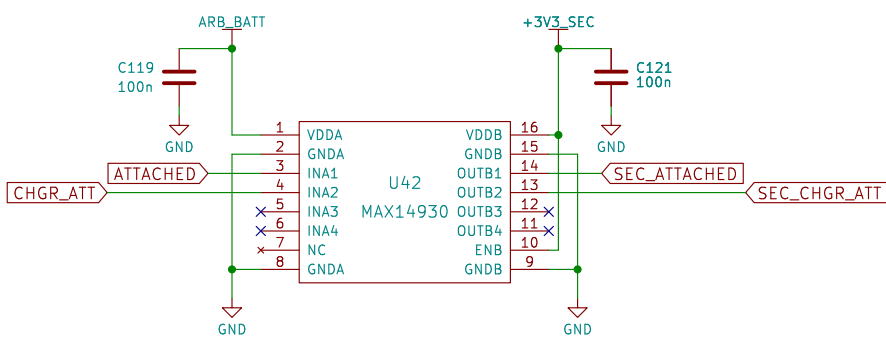
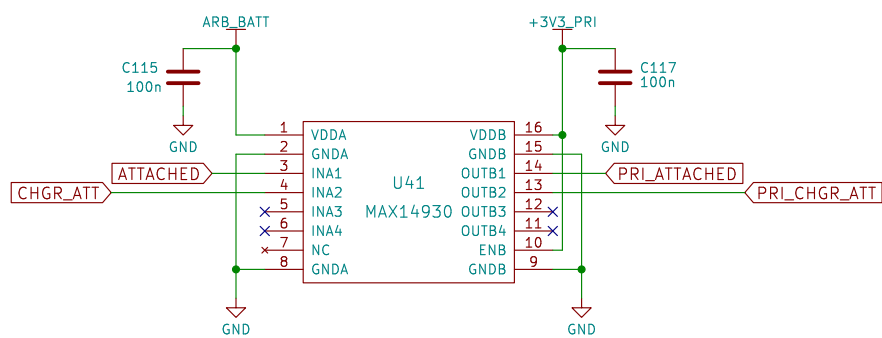
INTER-SUPERVISOR CAN LINK FOR COORDINATION ISOLATED VERSION OF SIEMENS APP NOTE AP2921



FIXME: NOT PROTECTED BY LOAD SWITCH MAYBE USE RESISTOR CURRENT LIMIT? DO WE NEED AN OPEN DRAIN?



FIXME: PULLUP IS A HACK



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Rev: 1.2A

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