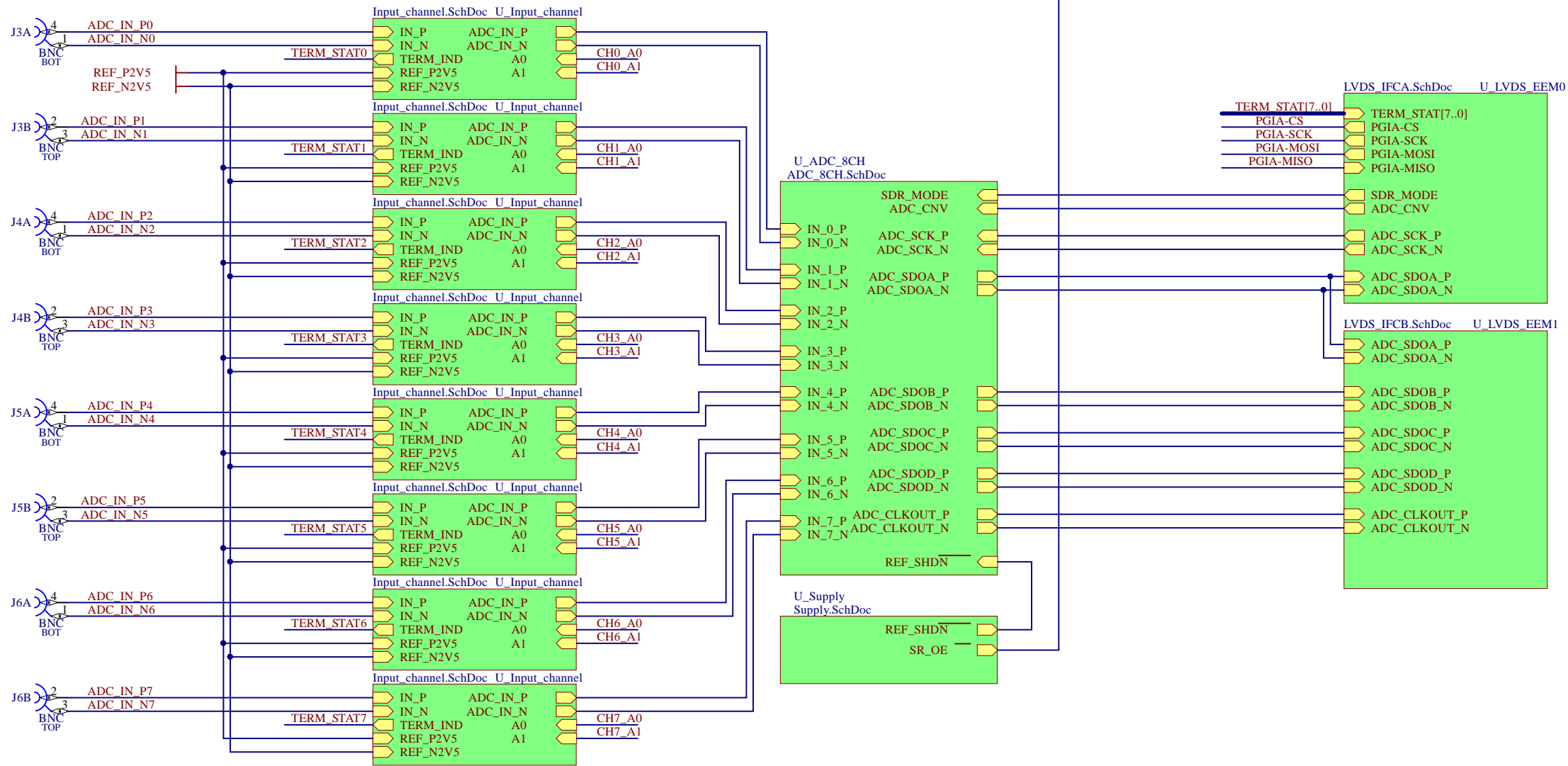
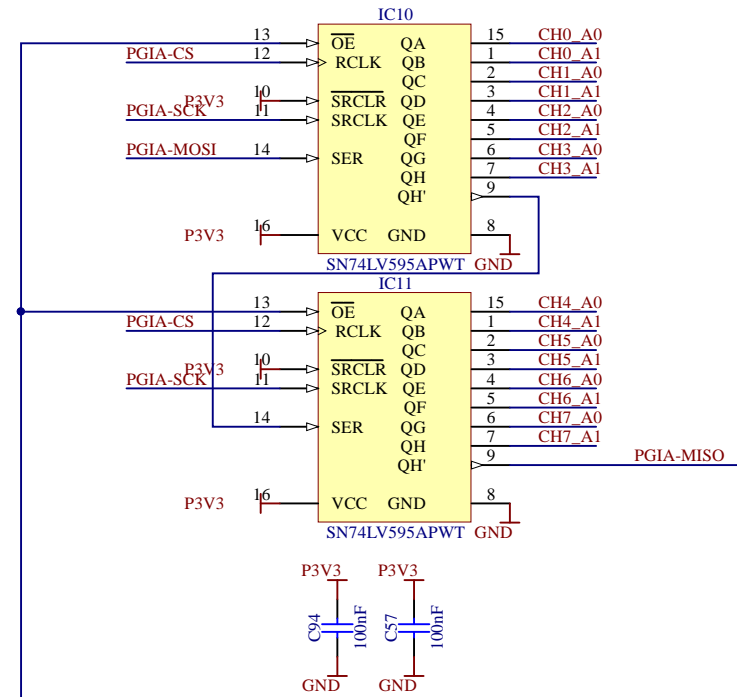
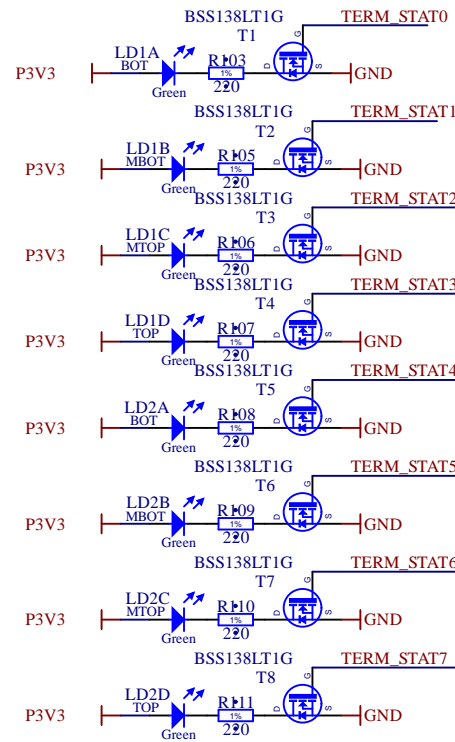
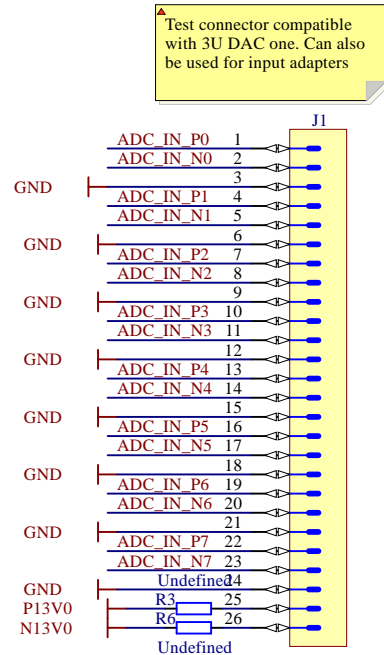
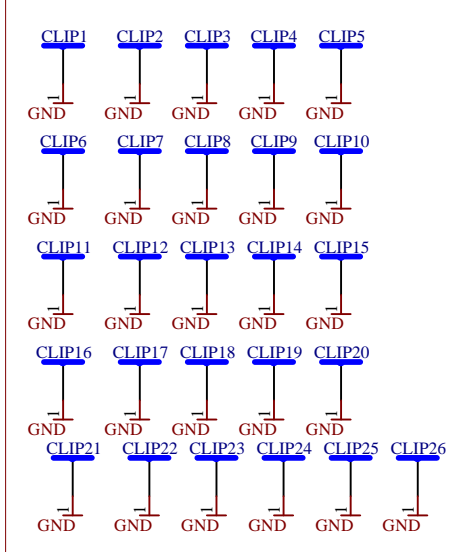


shield clips



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FTG17
FTG18
FTG19
FTG20

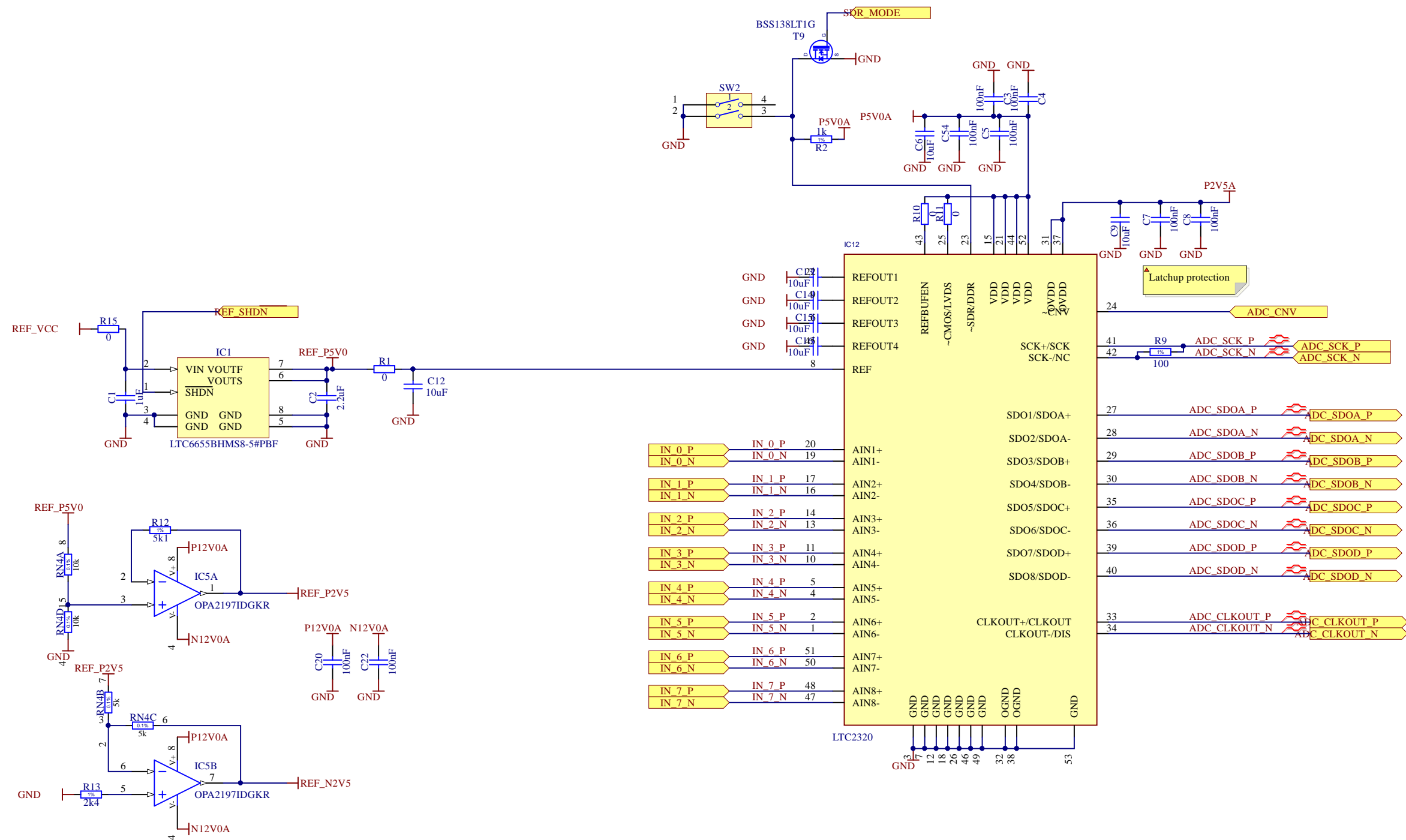
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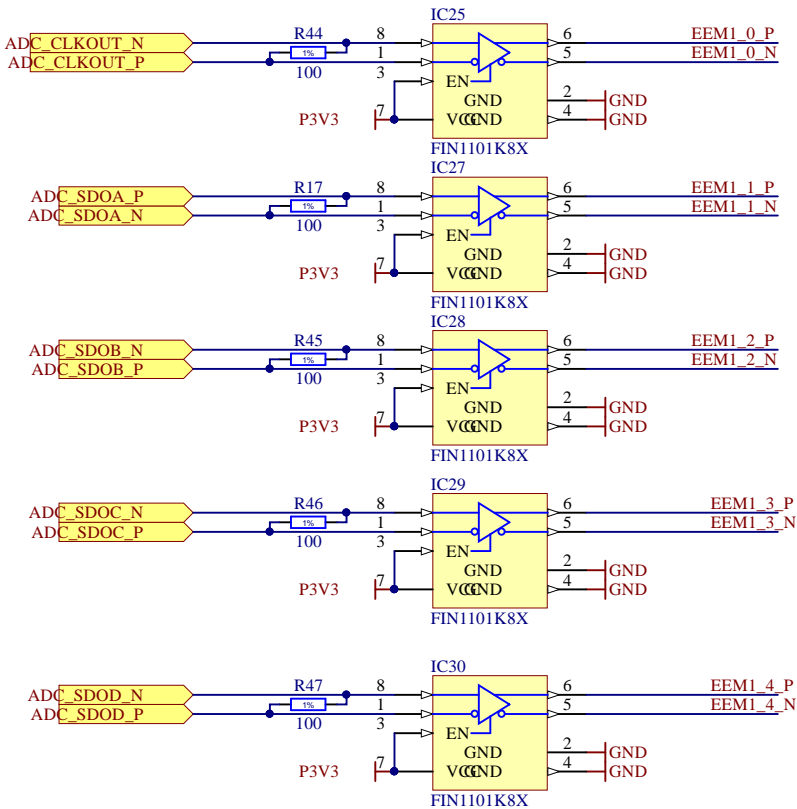
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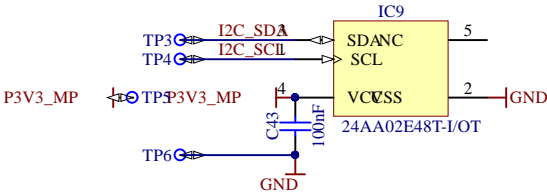
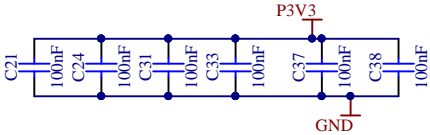
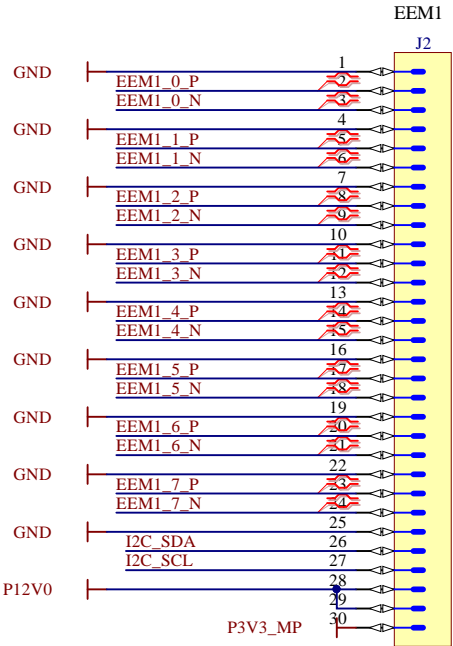
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EEM connector: IO are LVDS, I2C is 3V3 LVCMOS, P3V3_MP up to 20mA, P12V up to 1A



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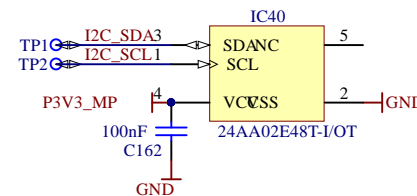
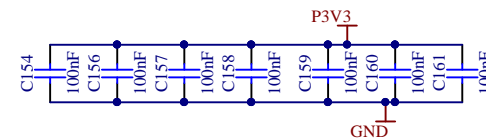
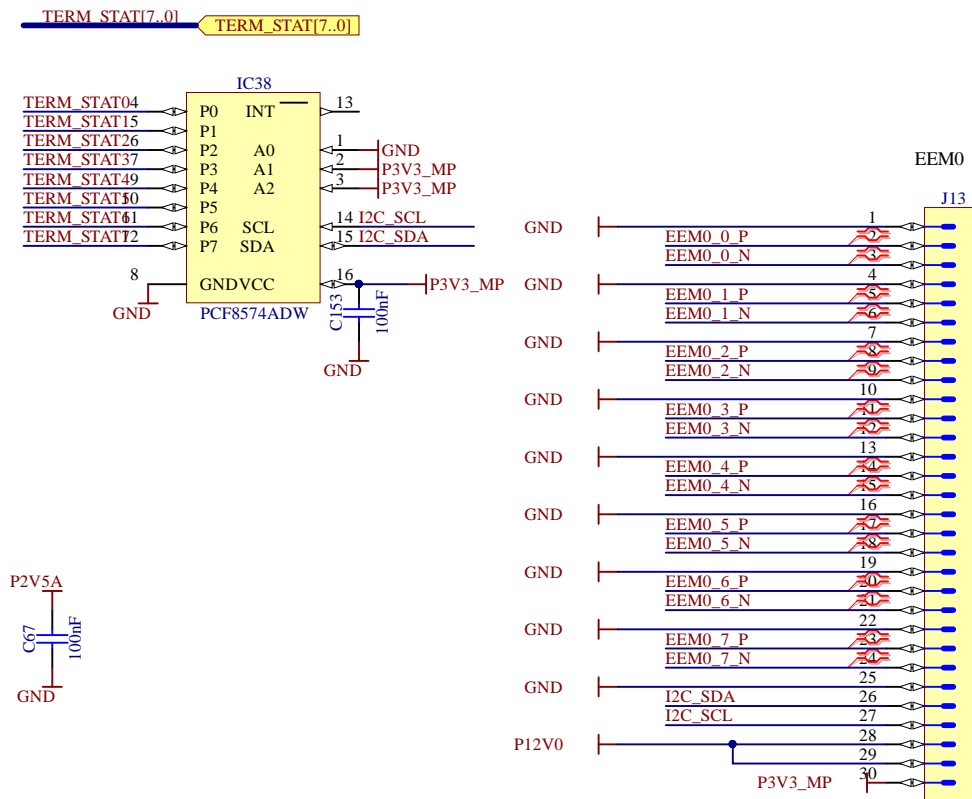
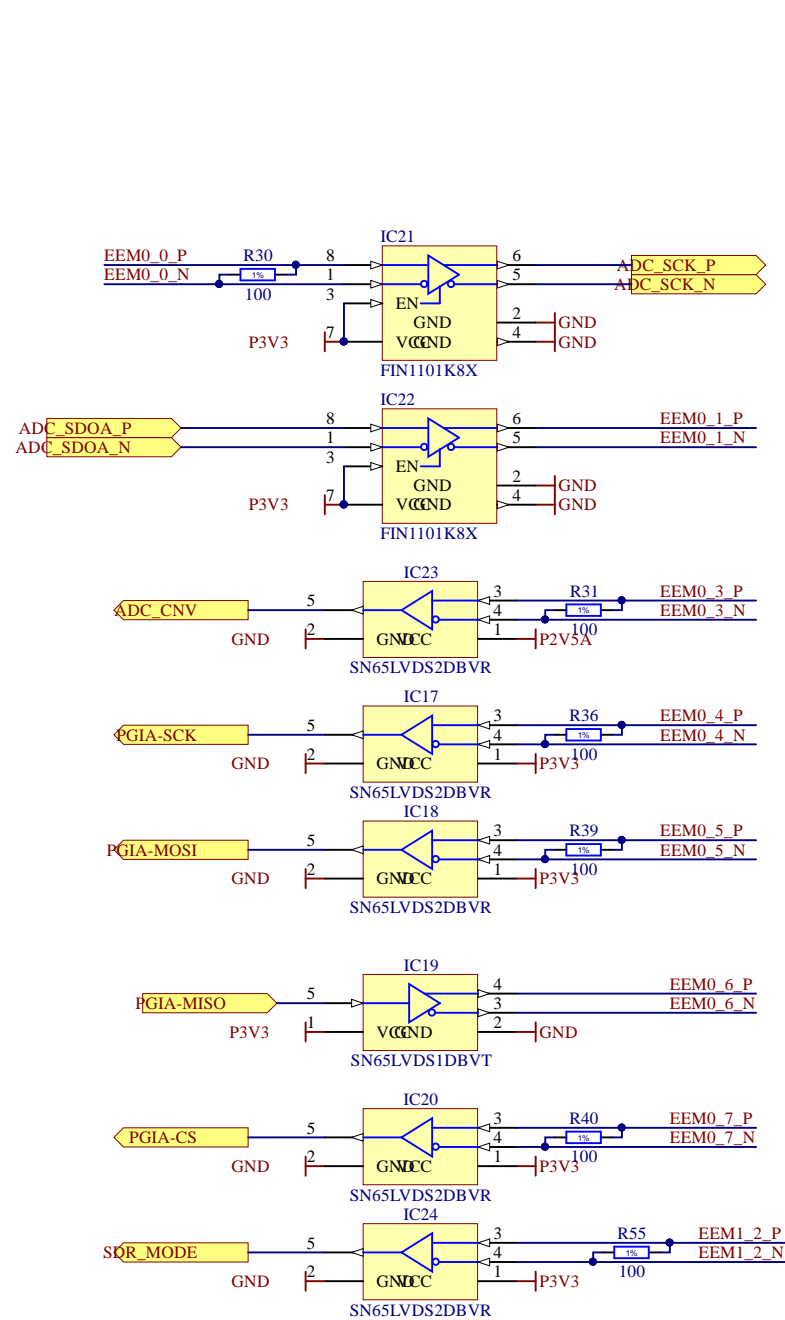
LVDS Interface
I2C logic

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EEM connector: IO are LVDS, I2C is 3V3 LVC MOS, P3V3_MP up to 20mA, P12V up to 1A



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LVDS Interface I2C logic

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▲ Power budget (max ratings):	
P2V5	
LTC2320	38
RAIL POWER	38mA*2.5=0.095W
P3V3:	[mA,W]
SN65LVDS20DRFT	7*13.5=94.5
SN65LVDS2DBVR	5*8=40
SN65LVDS1DBVT	8
LEDs	8*5=40
RAIL POWER	183mA*3.3=0.603W
P5V0	
LTC2320	60
RAIL POWER	60*5=0.3W
P12V0	
AD8253ARMZ	8*4mA=32mA
OPA2197	8*2mA=16mA
AD8253 load (10V/20k)	8*0.5mA=4mA
OPA2197 load (500k:0.3V/50R)	8*4mA=32mA
RAIL POWER	84*12 = 1W
N12V0	
AD8253ARMZ	8*4mA=32mA
OPA2197	8*2mA=16mA
OPA2197 load (500k:0.3V/50R)	8*4mA=32mA
RAIL POWER	84*12 = 1W
DC/DC converter losses	
TPS62175:3.3 eff. 95	0.05*(0.18+0.038)*2.5+26e-6*12=0.022W
TPS62175:6 eff. 95	0.05*0.06*6+26e-6*12=0.018W
CC6-1212DF-E:13V eff 70%	0.3*13*0.084=0.33W
CC6-1212DF-E:-13V eff 70%	0.3*13*0.084=0.33W
LDO losses	
6V->5V	0.06*1V = 60mW
13V->12V	84mW
-13V->12V	84mW
3.3V -> 2.5V	(3.3-2.5)*38 =30mW
Total power from 12V rail	12V 4.16W
Total current from 12V rail	0.35A

Ra = 53.55 / (Vout - 12.02) - 18
We want +/- 13V so Ra = 36R

▲ SHDN threshold is 0.8V

▲ SHDN threshold is 1.6V

▲ Power sequencing:
1. P5V0,
2. P2V5, P3V3
3. ADC_REF
4. P12V0, N12V0
5. output enable of serial registers

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