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open source hardware

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Sheet: /

File: gmsl-serializer.kicad\_sch

Title: **GSML Serializer**

Size: A3

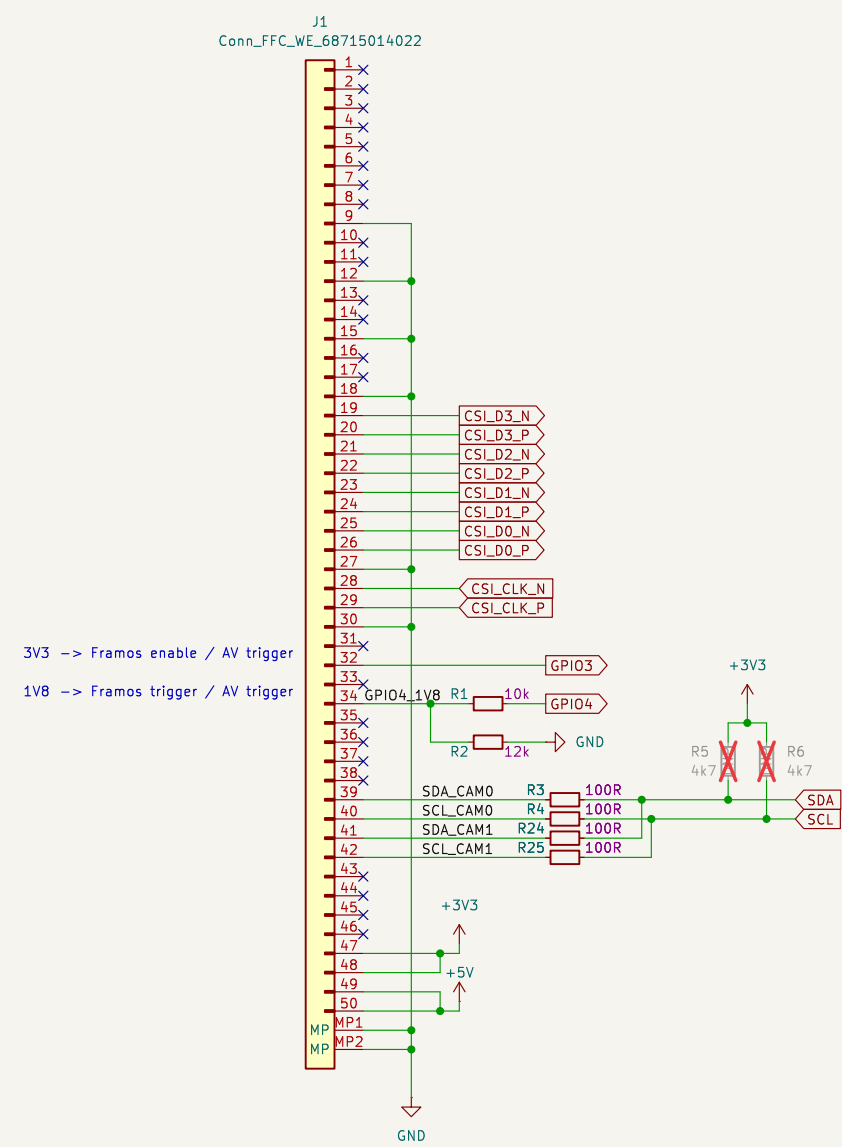
Date: 2024-06-19

Rev: **1.0.1:a7e29**

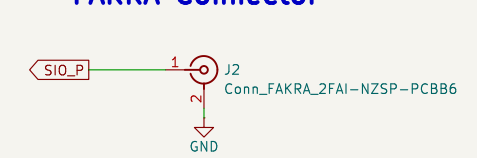
KiCad E.D.A.    kicad-cli 7.0.11

Id: 1/4

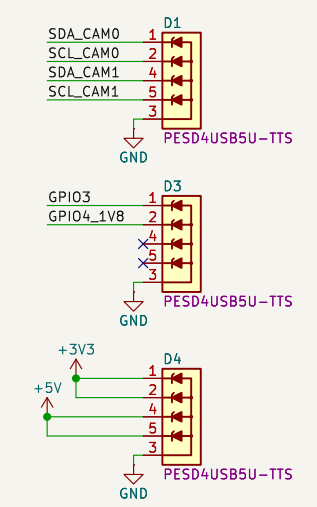
### FFC CSI Connector



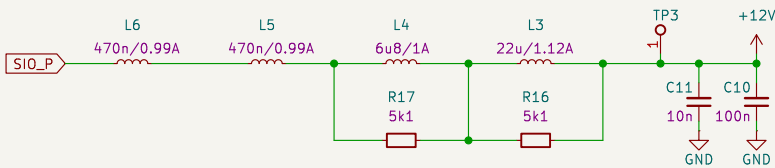
### FAKRA Connector



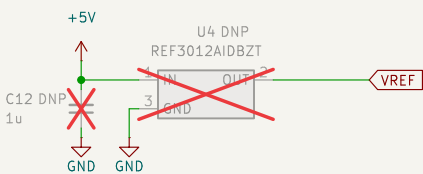
### TVS diodes



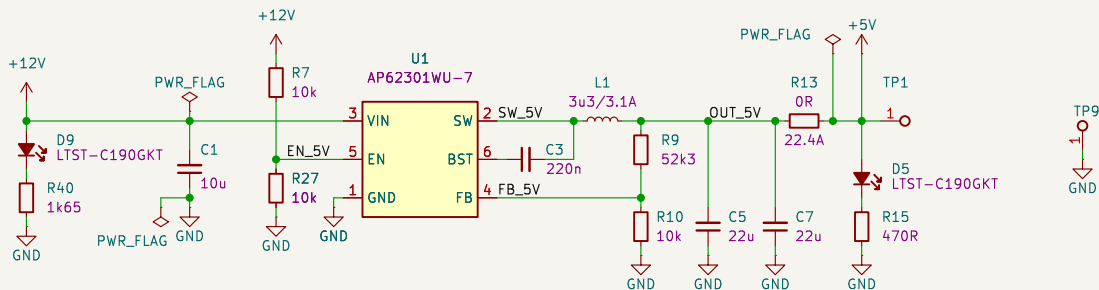
PoC Filter



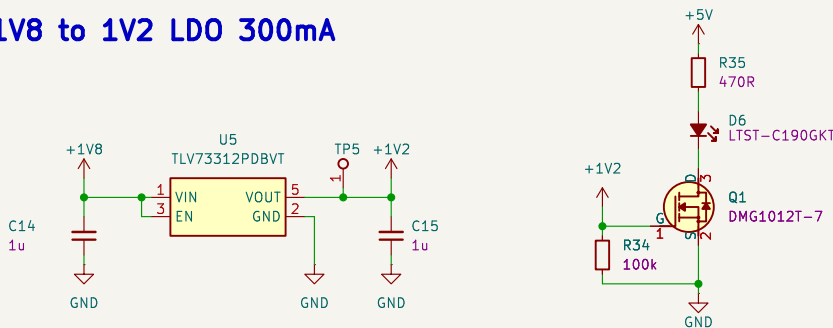
1V25 voltage reference DNP



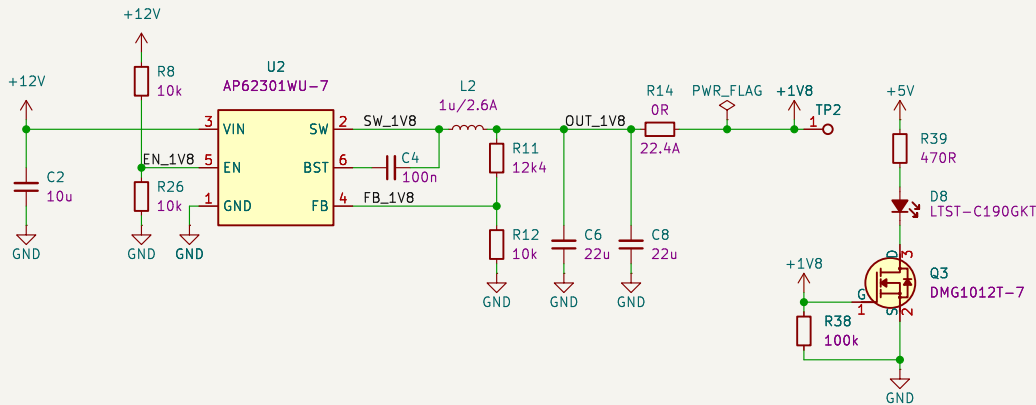
5V BUCK CONVERTER



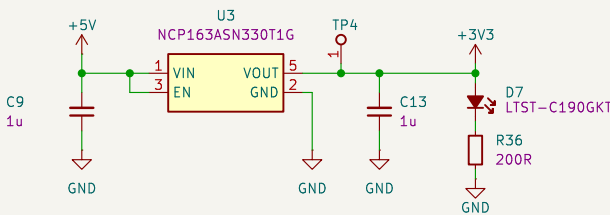
1V8 to 1V2 LDO 300mA



1V8 BUCK CONVERTER



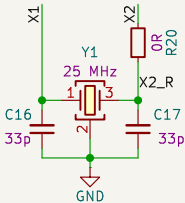
5V to 3V3 LDO 250mA



Crystal

Cinx1 = 3 pF (from MAX96724 data sheet)  
Ctrace = 2 pF (estimated)  
Cinx2 = 1 pF (from MAX96724 data sheet)  
CL = 18 pF (from crystal data sheet)  
Cx1total = Cinx1 + CL1 + Ctrace  
Cx2total = Cinx2 + CL2 + Ctrace  
CL = (Cx1total \* Cx2total) / (Cx1total + Cx2total)

CL1 = 33 pF  
CL2 = 33 pF  
CX1total = 38 pF  
Cx2total = 36 pF  
CL = 18.5 pF (meets the requirements)

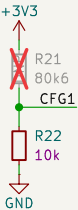


Crystal and crystal load capacitors as close as possible to X1 X2 pins

Config pins

CFG0 – I2C address config  
R1 = OPEN, R2 = 10k  
address = 0x80

CFG1 – GMSL mode config  
R1 = OPEN, R2 = 10k  
mode = COAX GMSL2 6Gbps



Serializer

