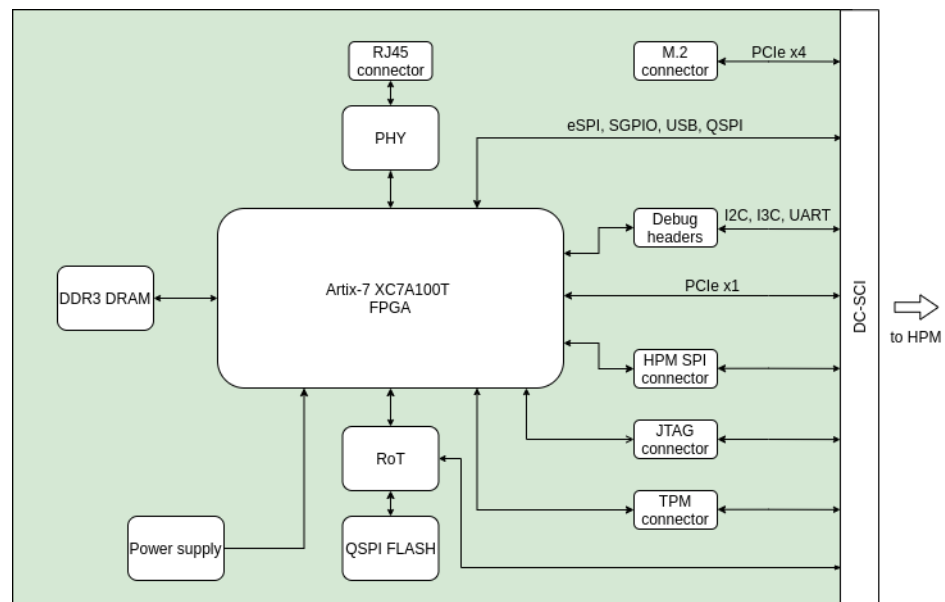


Artix – Datacenter Secure Control Module (DC-SCM)



Sheet: Ethernet



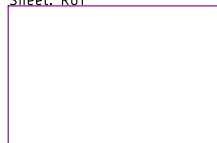
File: ethernet.sch

Sheet: PCIe-connector



File: pcie-conn.sch

Sheet: RoT



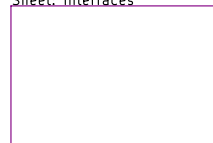
File: rot.sch

Sheet: Edge connector



File: edge-connector.sch

Sheet: Interfaces



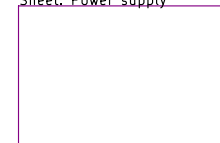
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Sheet: DDR3



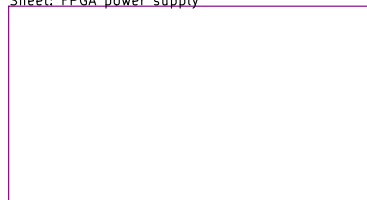
File: ddr3.sch

Sheet: Power supply



File: power-supply.sch

Sheet: FPGA power supply



File: fpga-power-supply.sch

Sheet: FPGA banks



File: fpga-banks.sch

Sheet: /

File: artix-dc-scm.sch

Title: Artix – Datacenter Secure Control Module (DC-SCM)

Size: A4

Date:

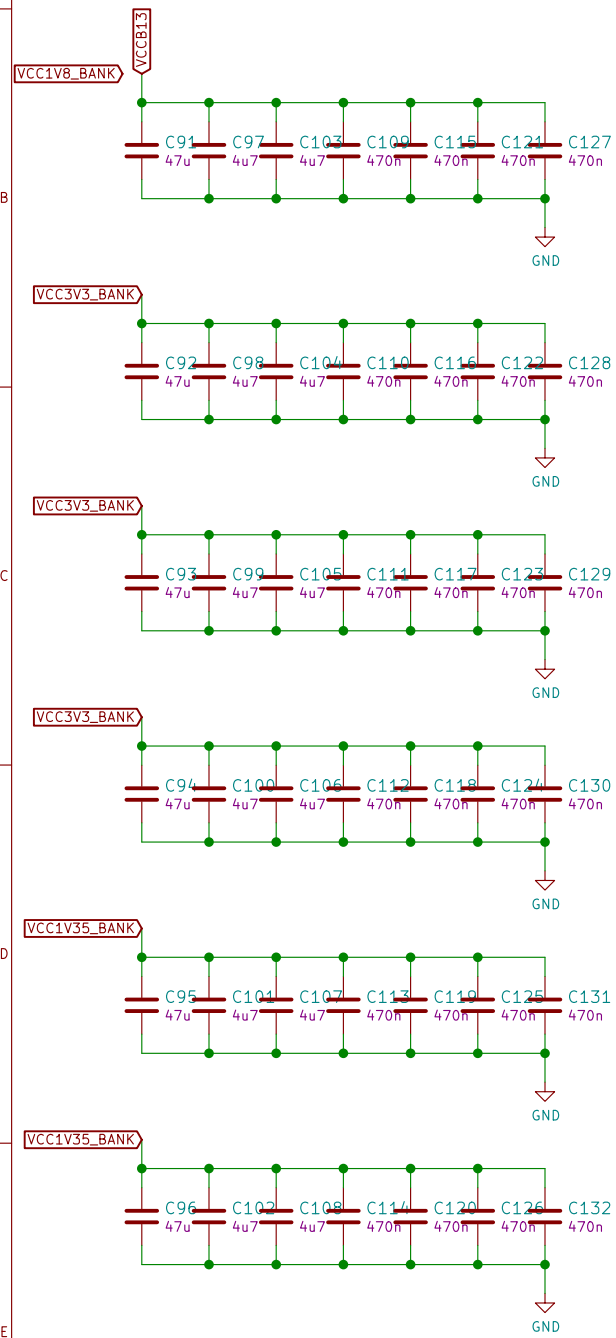
Rev: 1.0.0

KiCad E.D.A. kicad 5.1.5+dfsg1-2bpo10+1

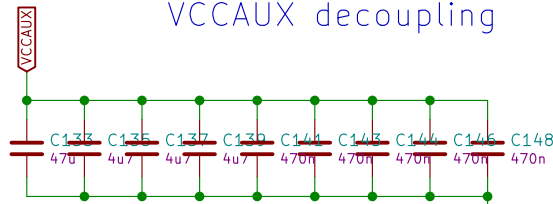
Id: 1/10

FPGA power supply

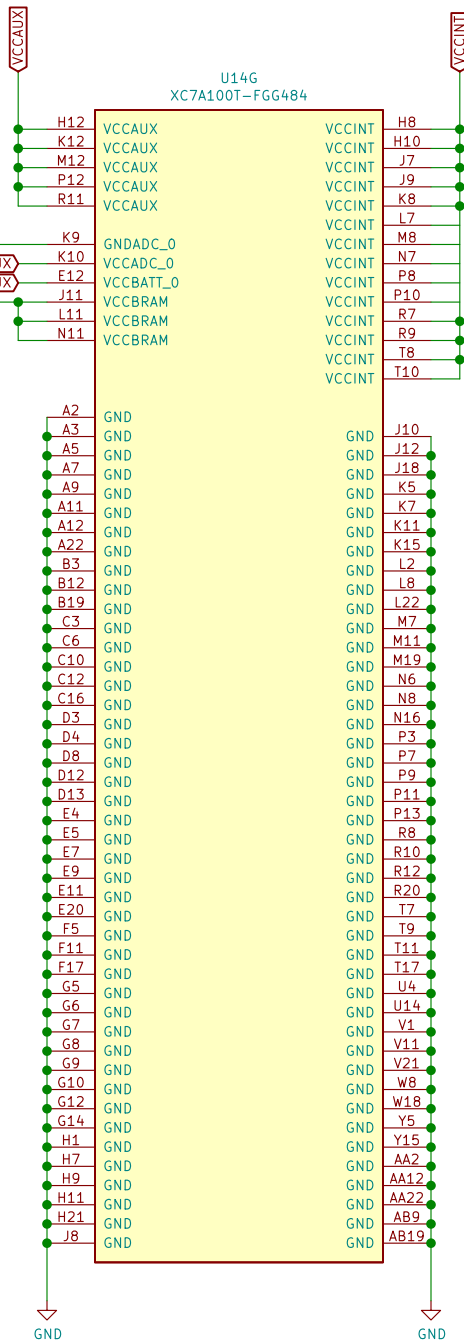
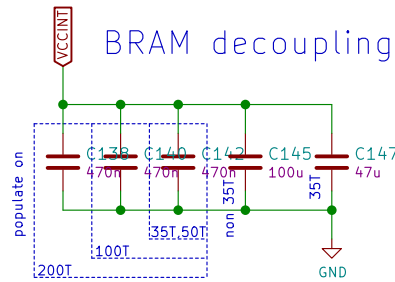
Banks decoupling



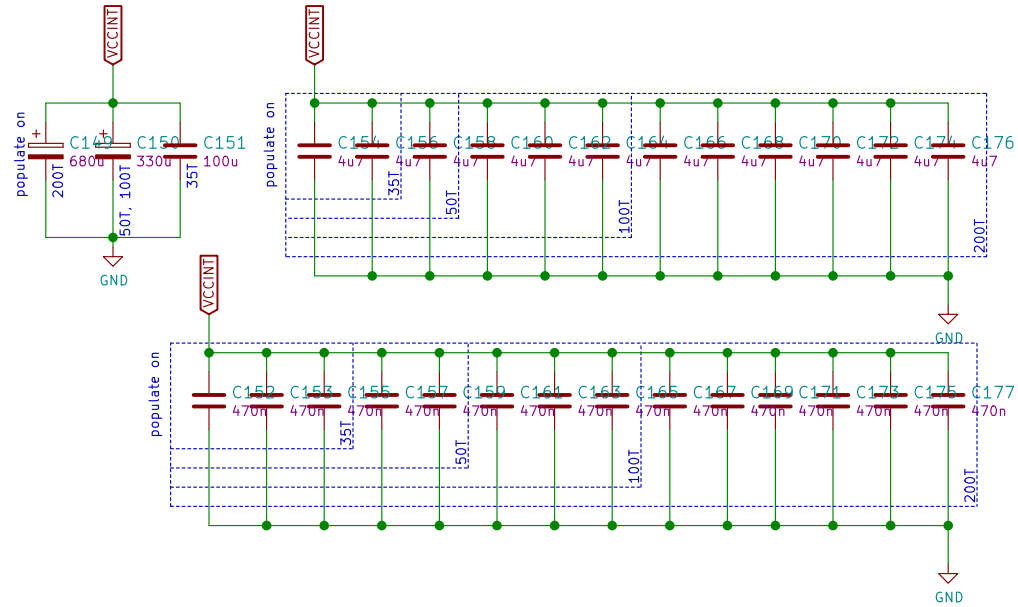
VCCAUX decoupling



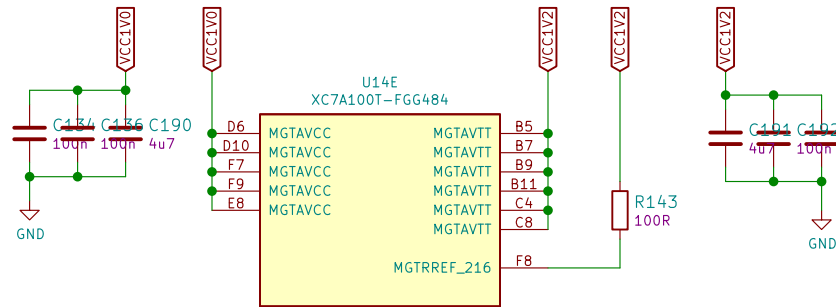
BRAM decoupling

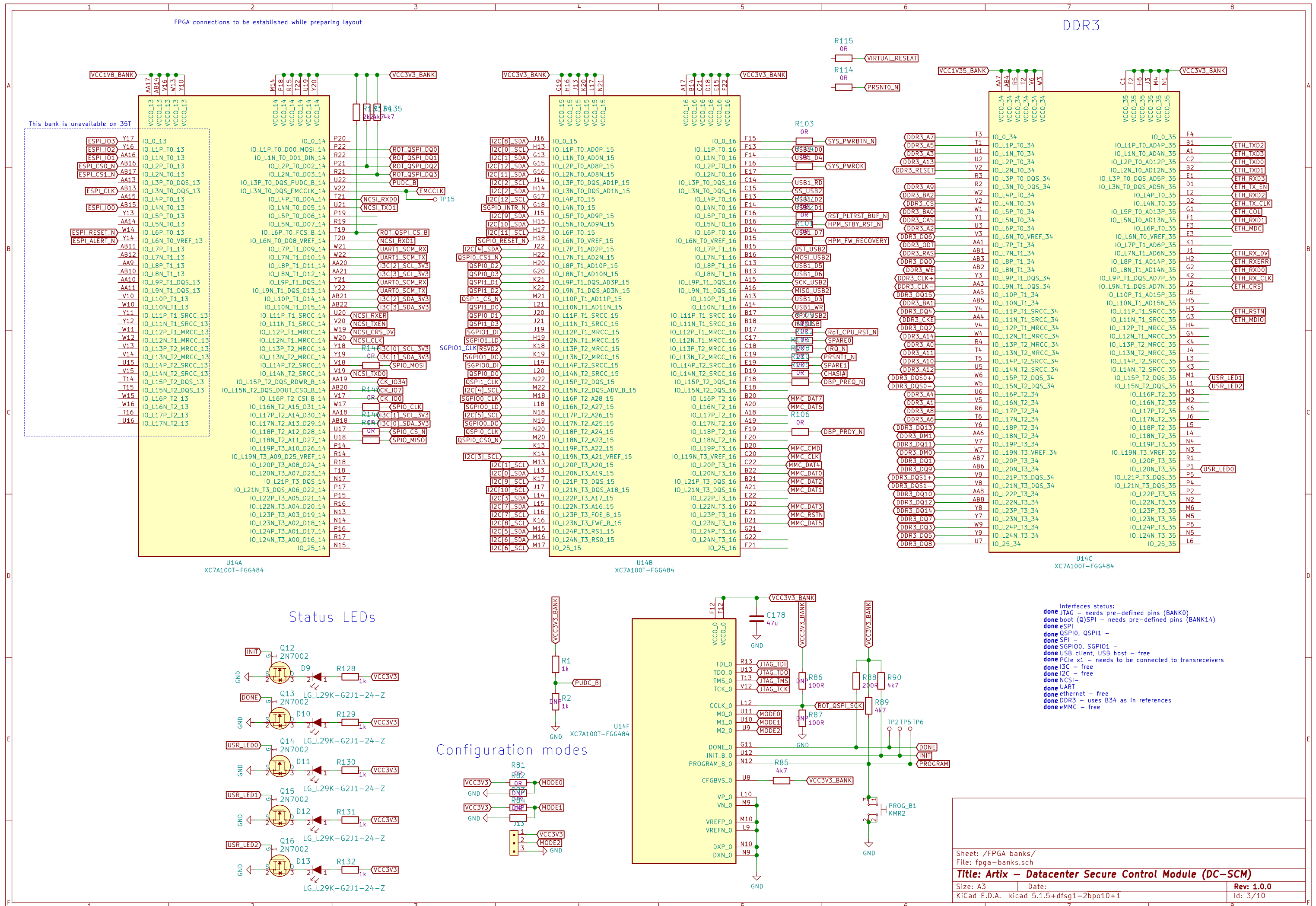


VCCINT decoupling

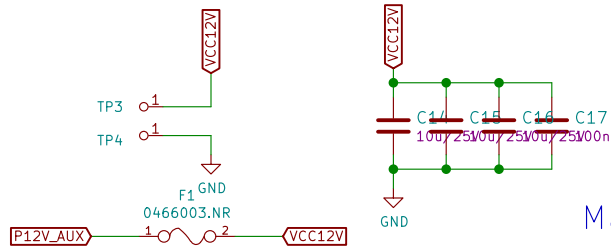


Transceiver supply

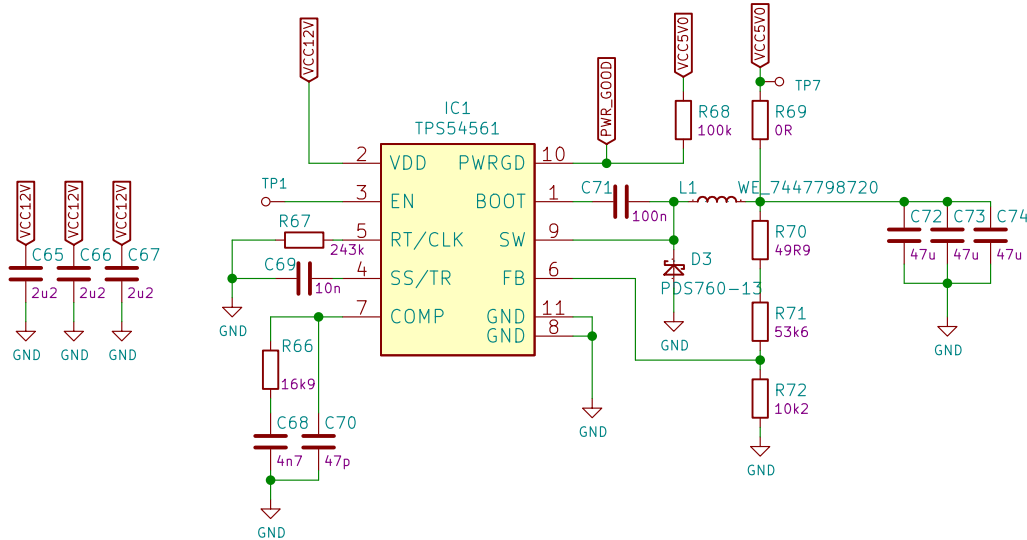




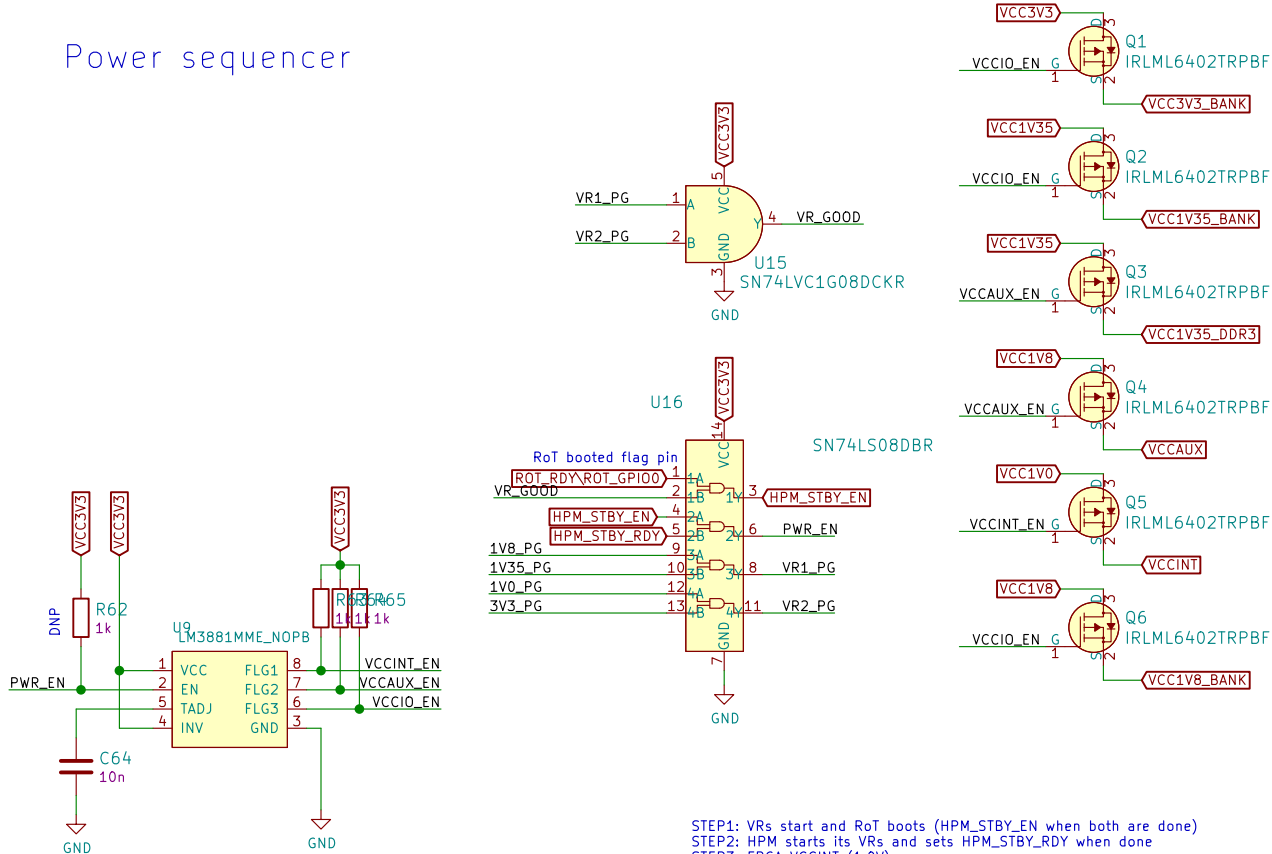
External 12V supply



MainSupply (5V 5A)

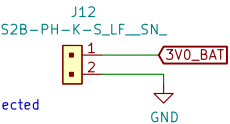


Power sequencer

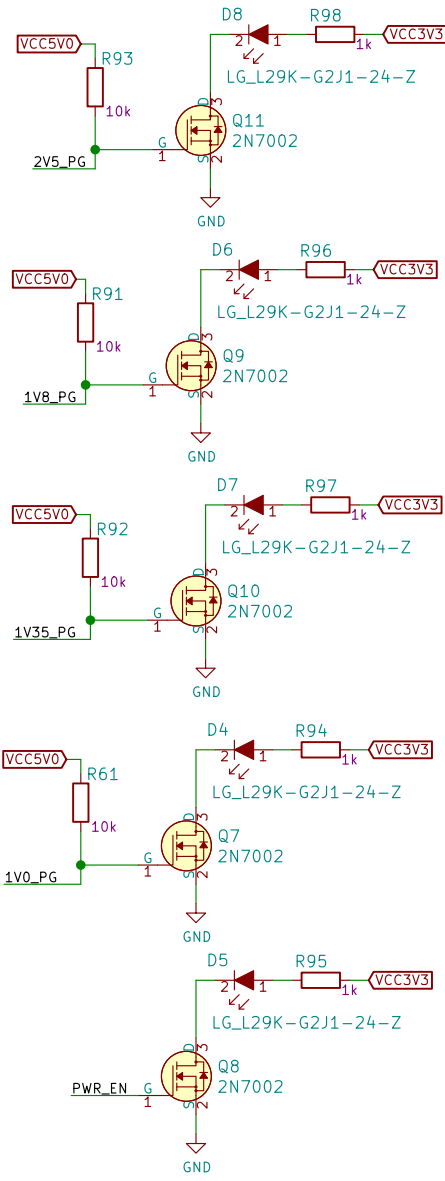


STEP1: VRs start and RoT boots (HPM_STBY_EN when both are done)
STEP2: HPM starts its VRs and sets HPM_STBY_RDY when done
STEP3: FPGA VCCINT (1.0V)
STEP4: FPGA VCCAUX + DDR3 (1.8V, 1.35V)
STEP5: FPGA VCCIO + DDR3 (3.3V, DDRVT), HPM reset is de-asserted
STEP6: HPM boots
TODO: decide which DC-SCI pin connected to FPGA does this

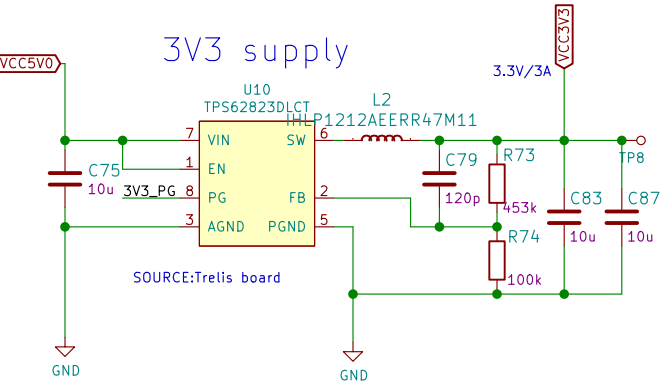
Battery connector



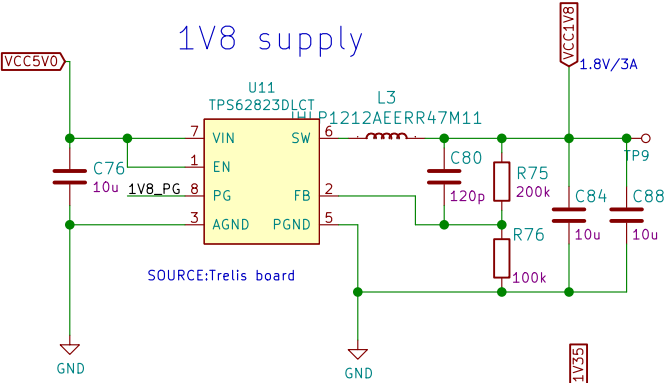
PWR_LED Indicators



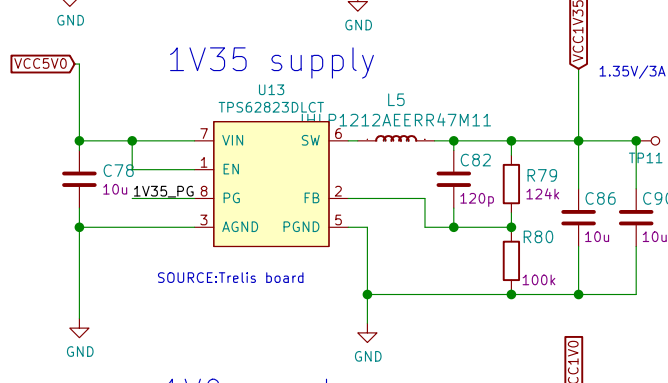
3V3 supply



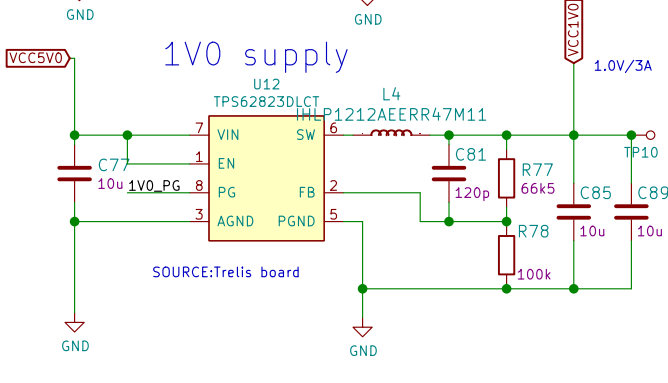
1V8 supply

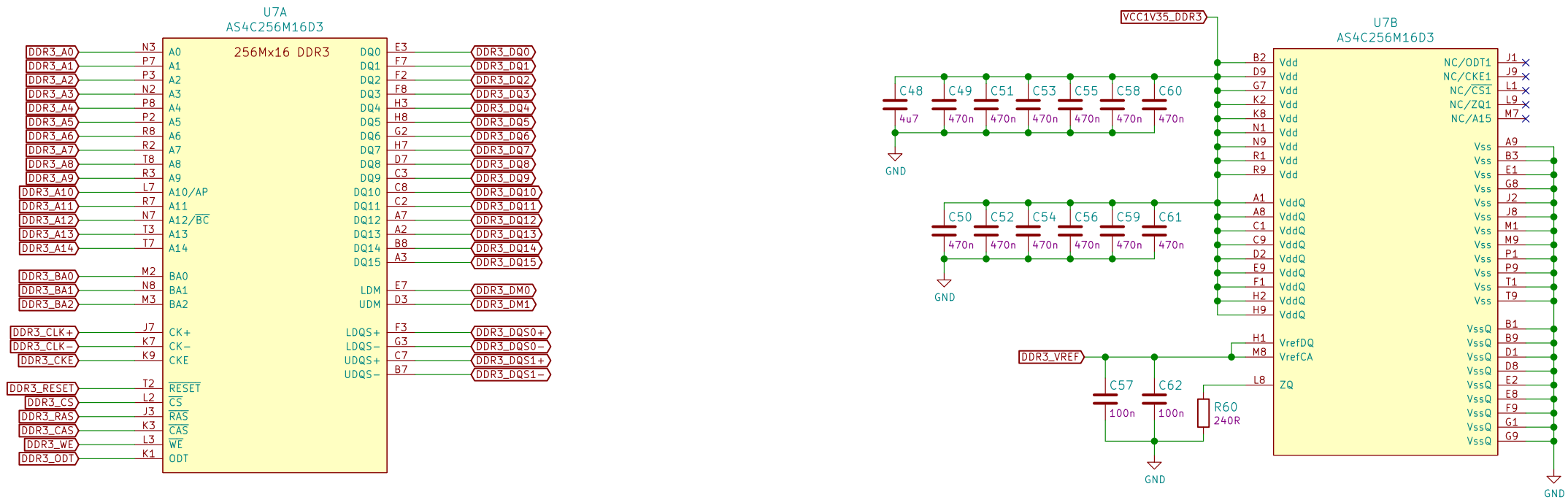


1V35 supply

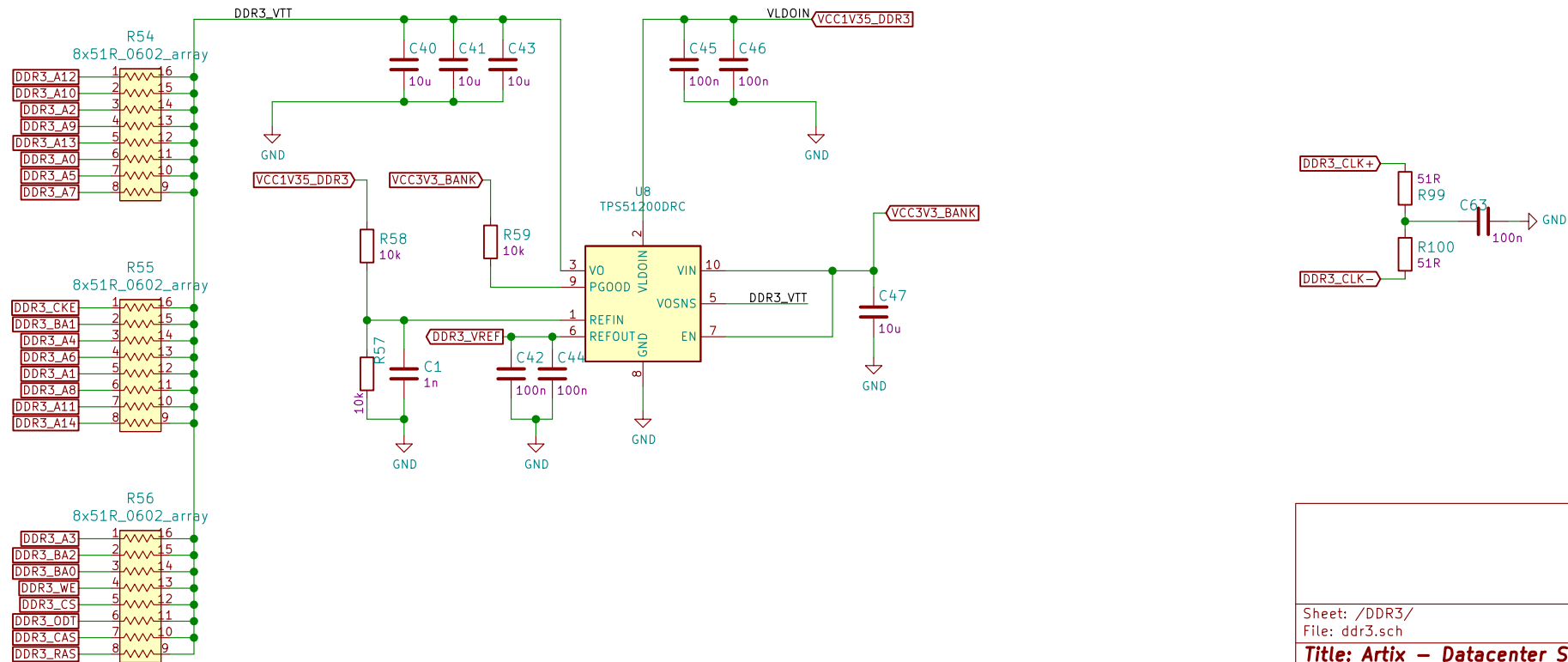


1V0 supply



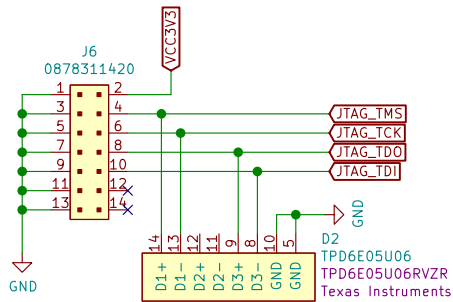


Source:Trellis board

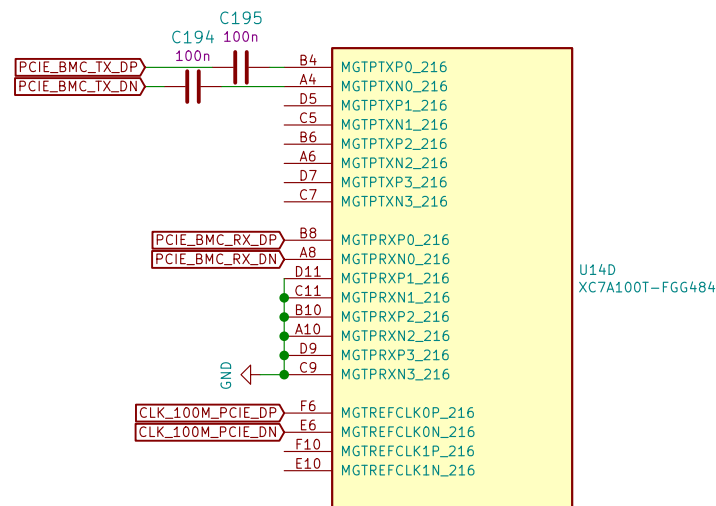


JTAG

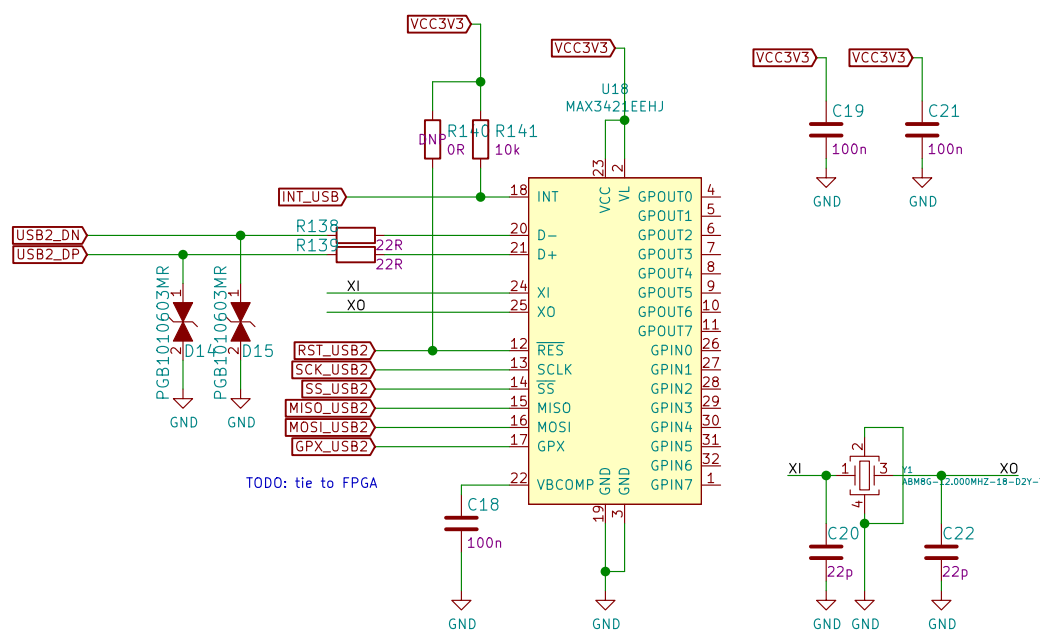
Compatible with Xilinx Platform Cable



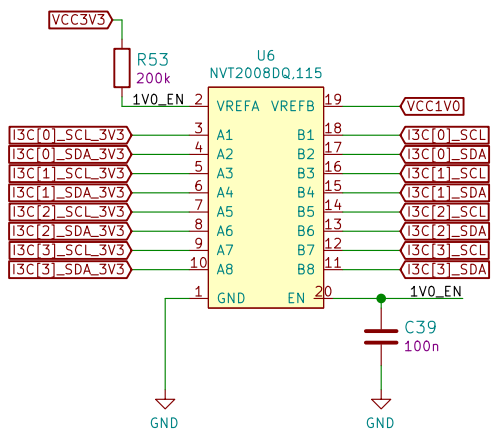
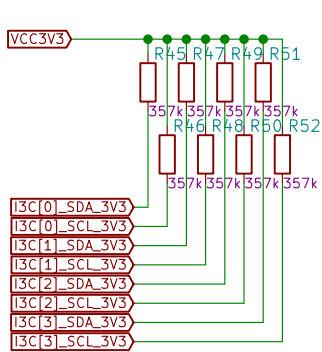
PCIe x1



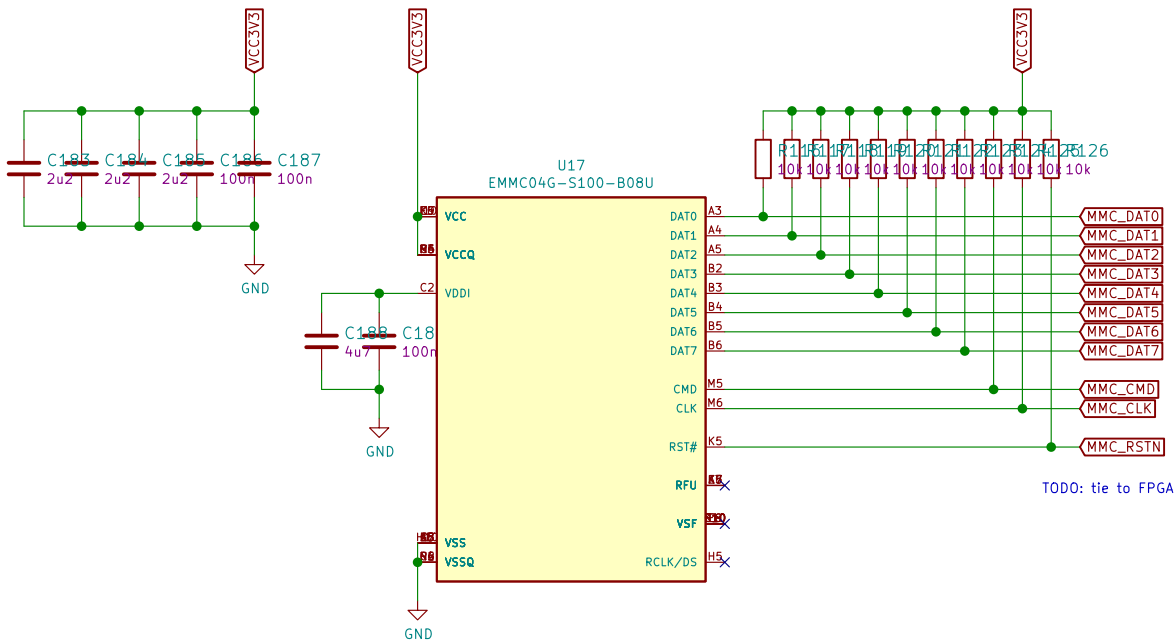
USB HOST



I3C voltage level translation

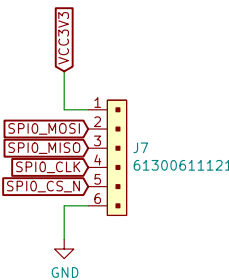


eMMC

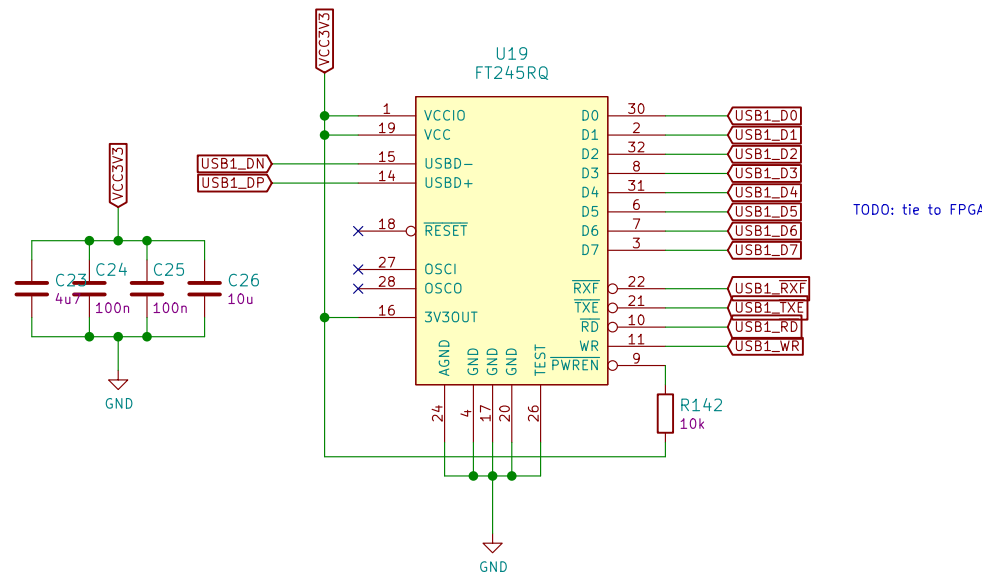


HPM SPI

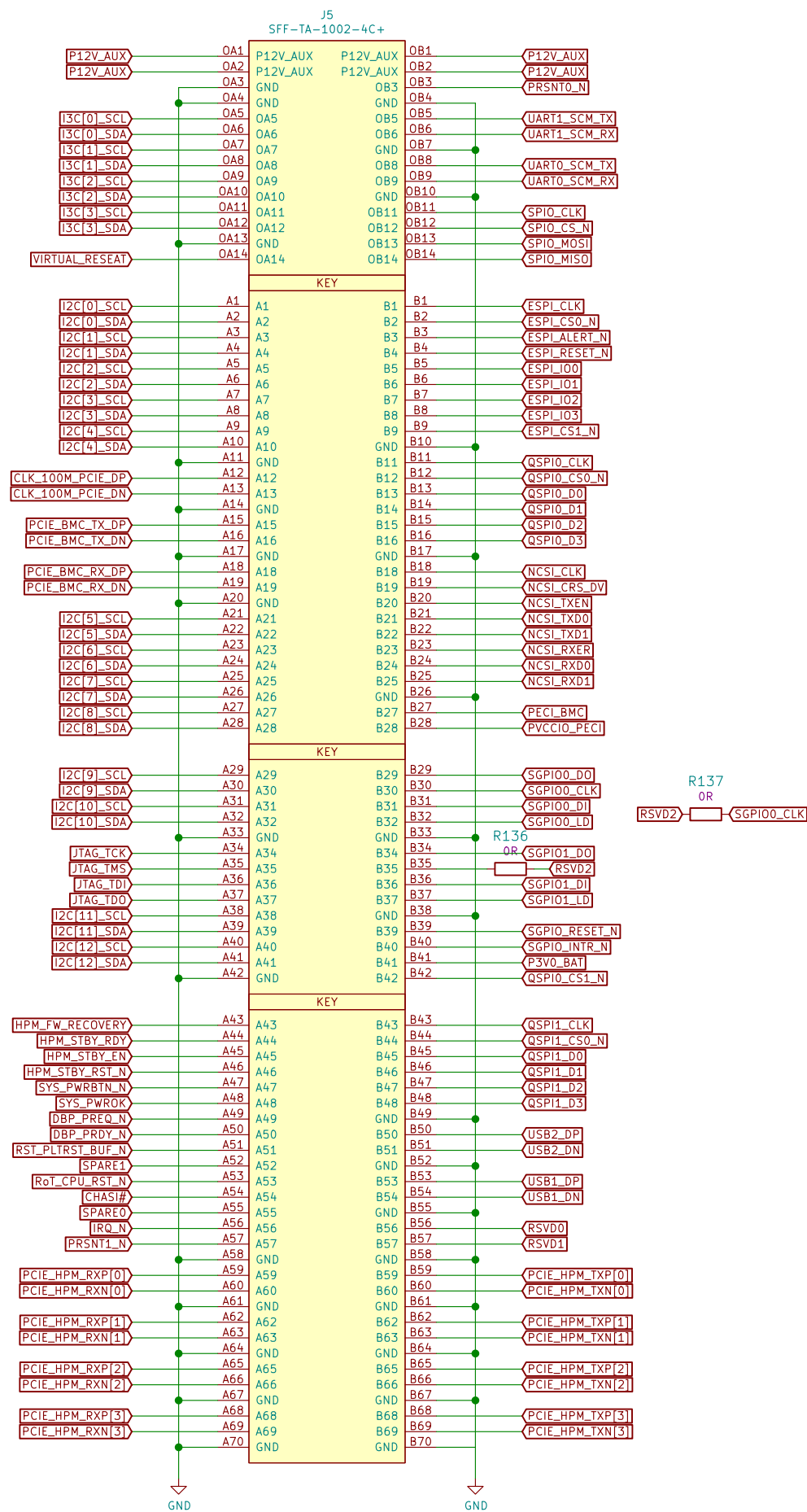
reserved for future use (as of DC-SCI OPC specification)

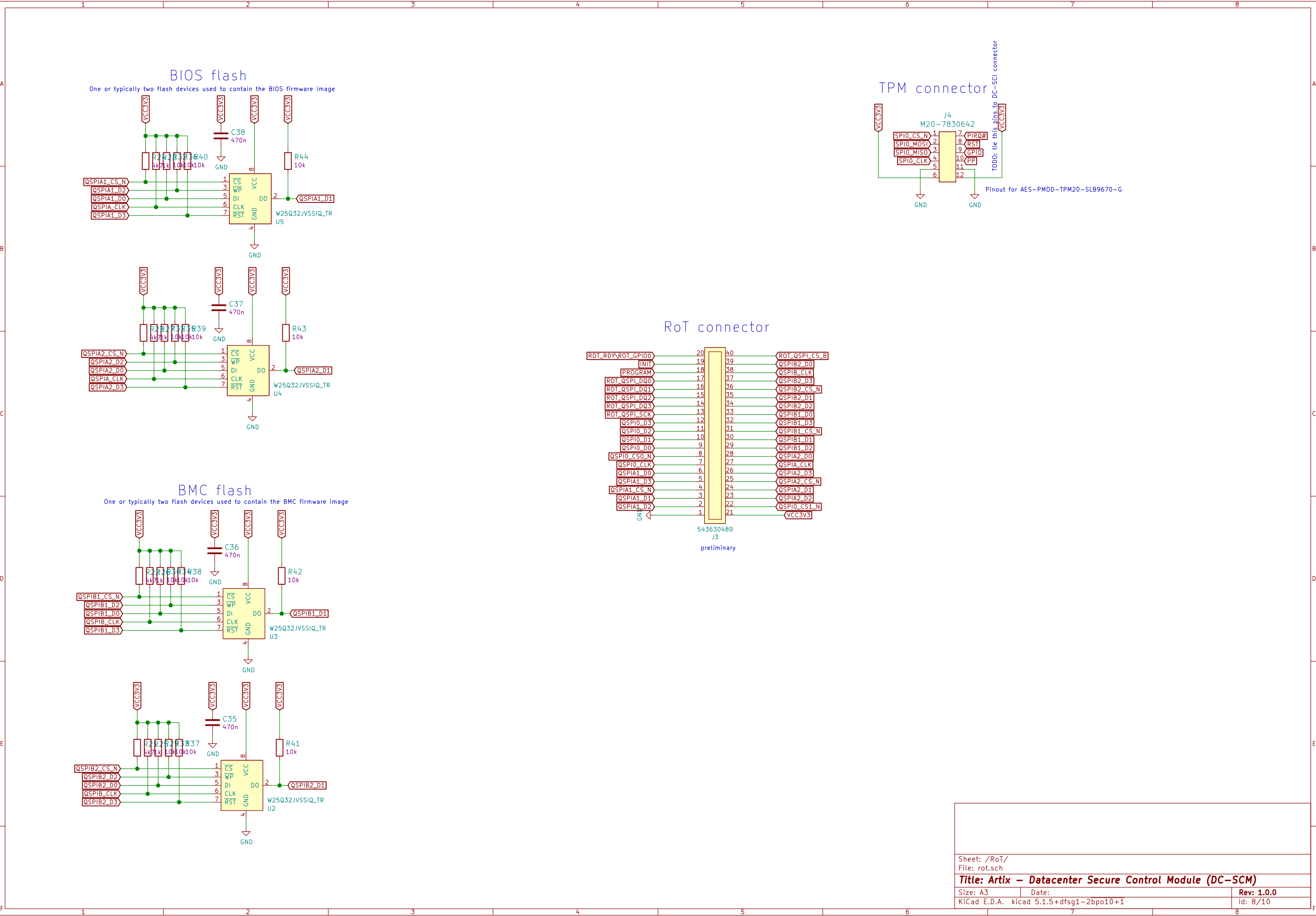


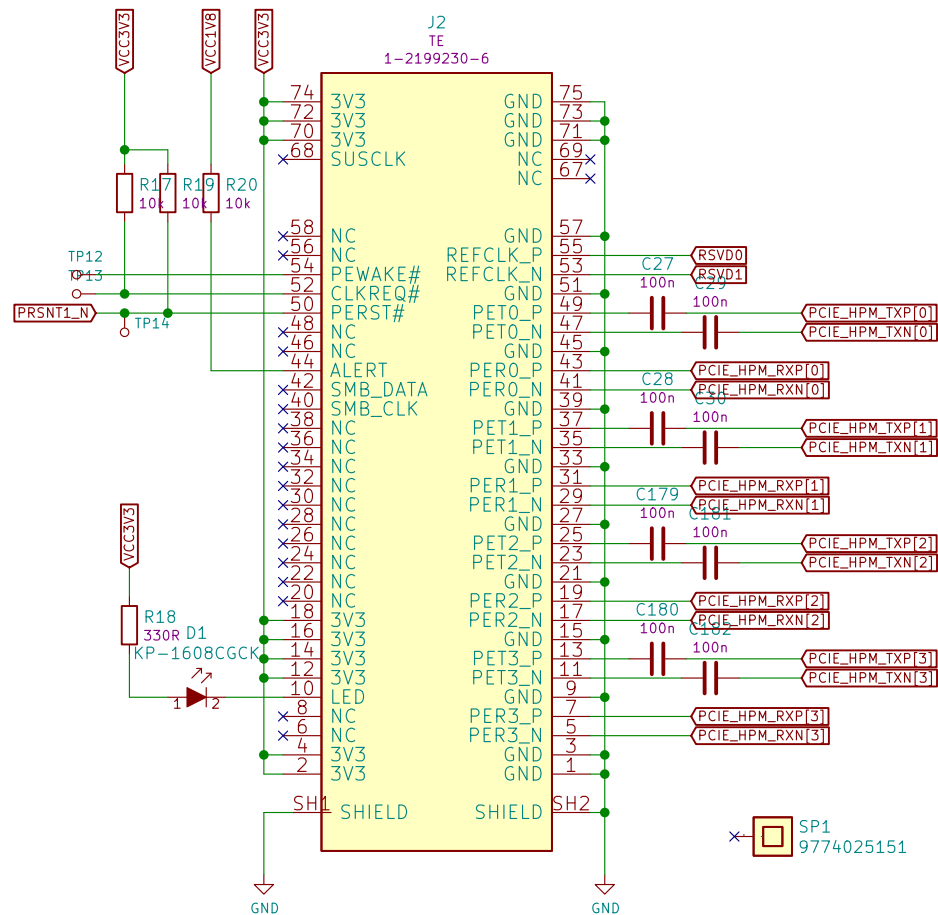
USB client



Edge connector

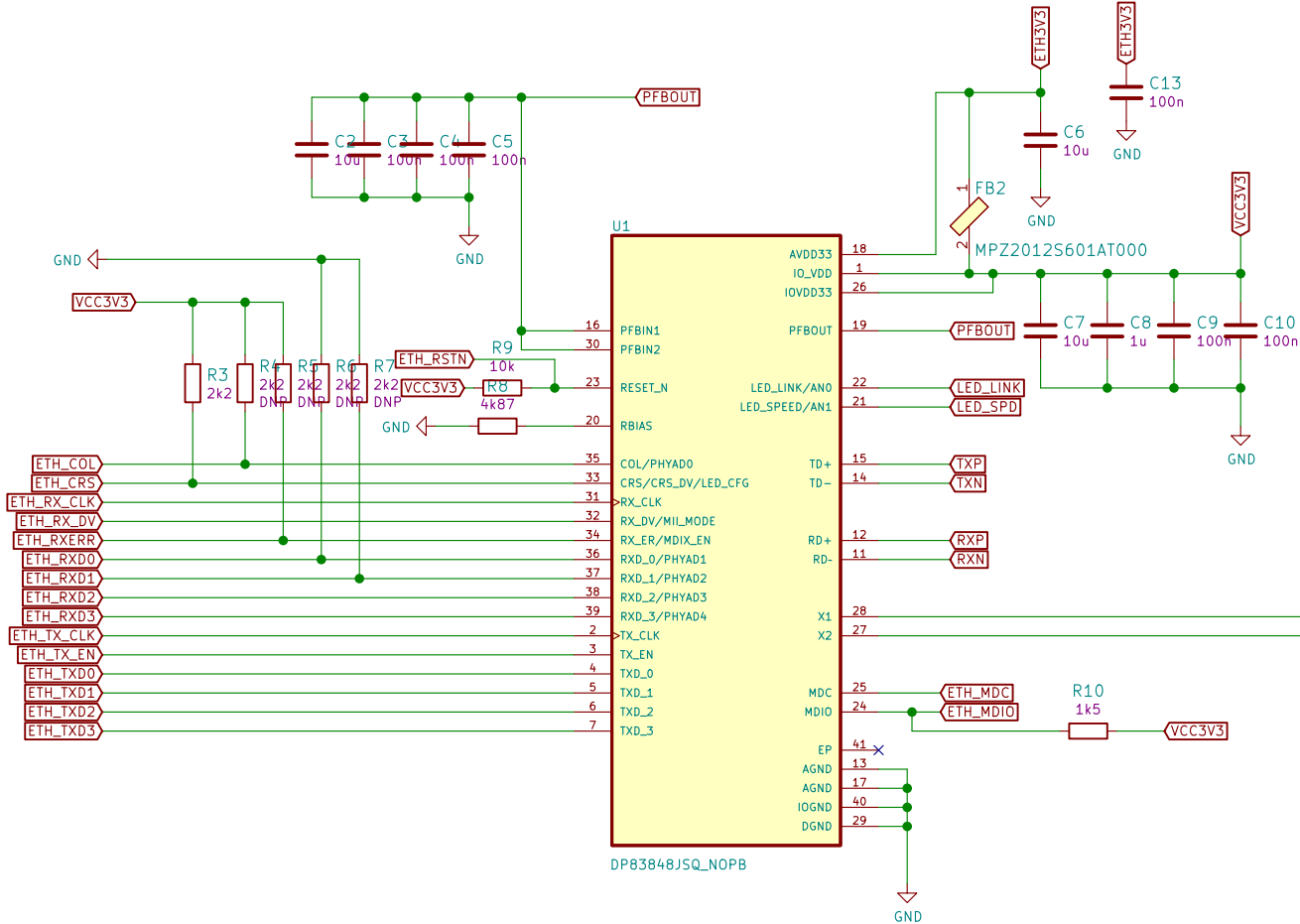






| | | |
|--|-------|------------|
| | | |
| Sheet: /PCIe-connector/ File: pcie-conn.sch | | |
| Title: Artix – Datacenter Secure Control Module (DC-SCM) | | |
| Size: A4 | Date: | Rev: 1.0.0 |
| KiCad E.D.A. kicad 5.1.5+dfsg1-2bpo10+1 | | Id: 9/10 |

Ethernet transceiver



RJ45 Connector

