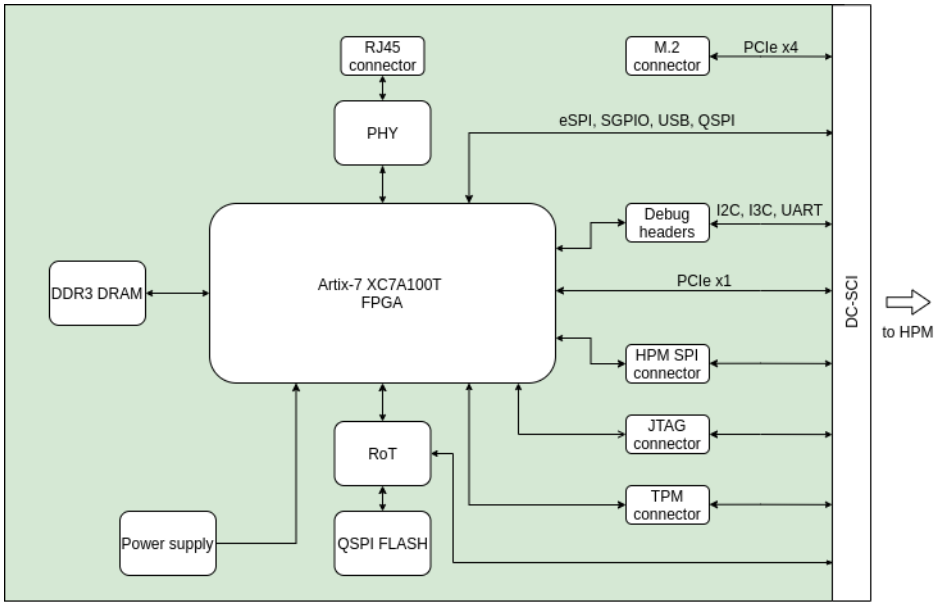
Artix – Datacenter Secure Control Module (DC-SCM)



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
File: interfaces.sch

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

Logo N2 oshw_logo

Logo N1 antmicro_logo

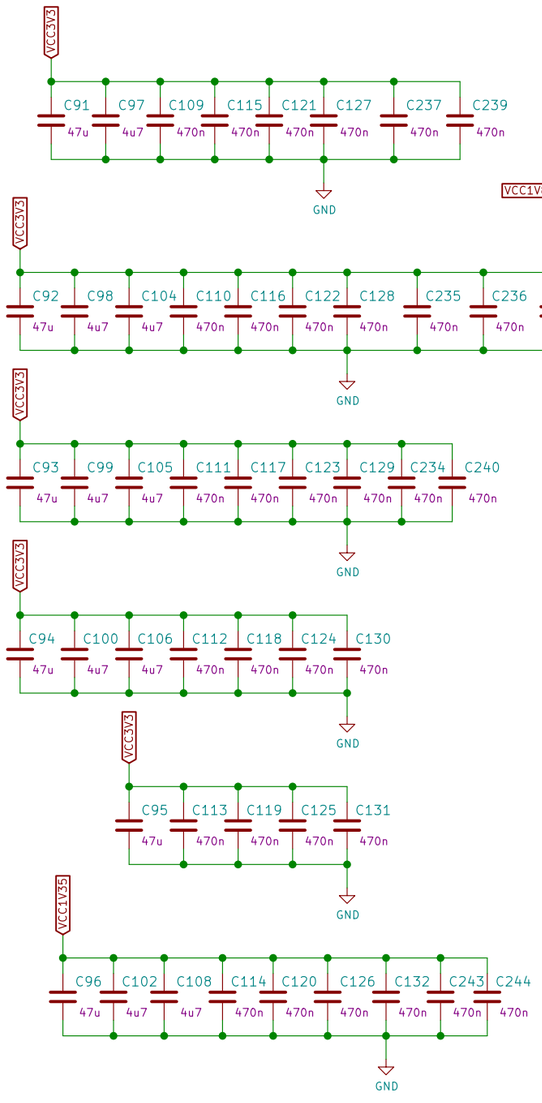
Sheet: /
File: artix-dc-scm.sch

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

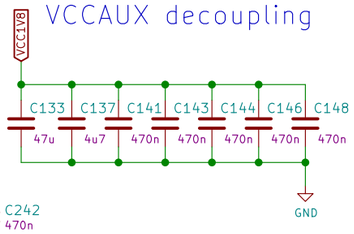
Size: A4	Date:	**Rev: 1.0.3**
KiCad E.D.A. kicad 5.1.5+dfsg1-2bpo10+1		Id: 1/10

FPGA power supply

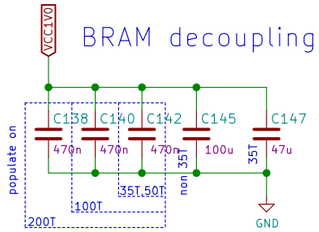
Banks decoupling

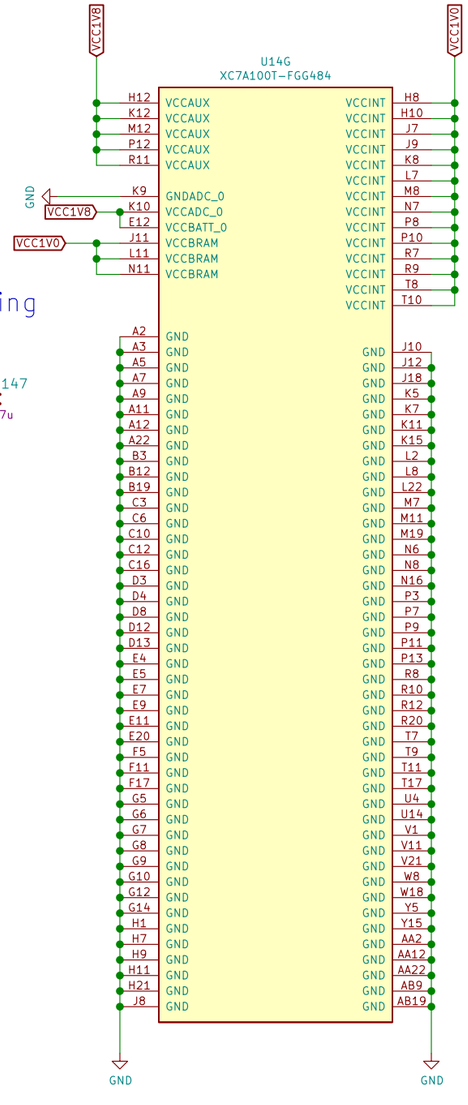


VCCAUX decoupling

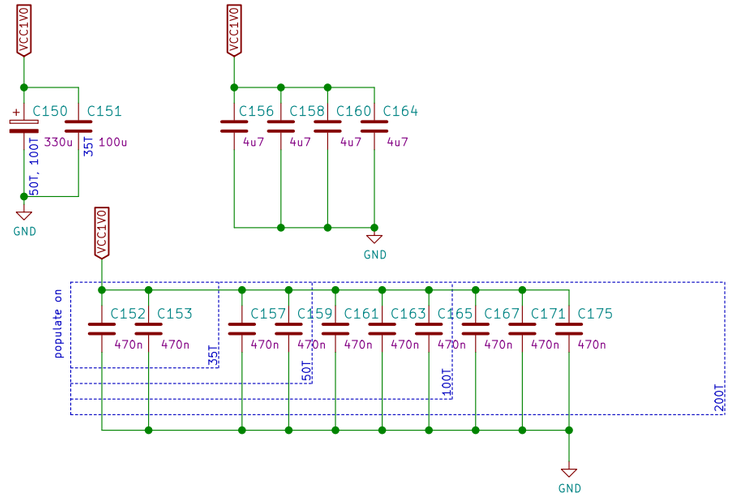


BRAM decoupling

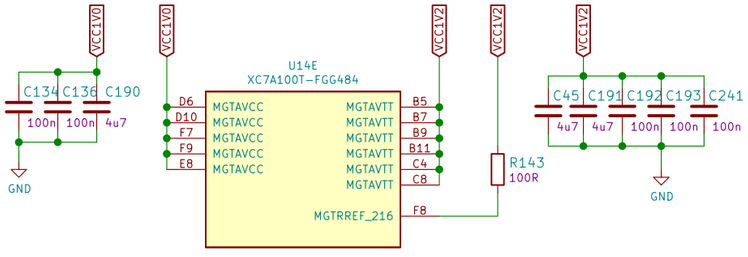




VCCINT decoupling



Transceiver supply



Sheet: /FPGA power supply/		
File: fpga-power-supply.sch		
Title: Artix – Datacenter Secure Control Module (DC-SCM)		
Size: A3	Date:	**Rev: 1.0.3**
KiCad E.D.A. kicad 5.1.5+dfsg1-2bpo10+1		Id: 2/10

DDR3

HPM Control Jumpers

Status LEDs

Configuration modes

U14A
XC7A100T-FGG484

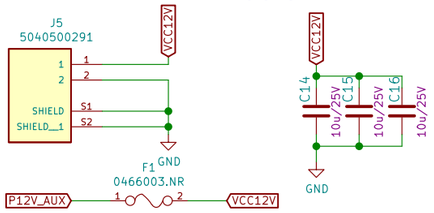
U14B
XC7A100T-FGG484

U14C
XC7A100T-FGG484

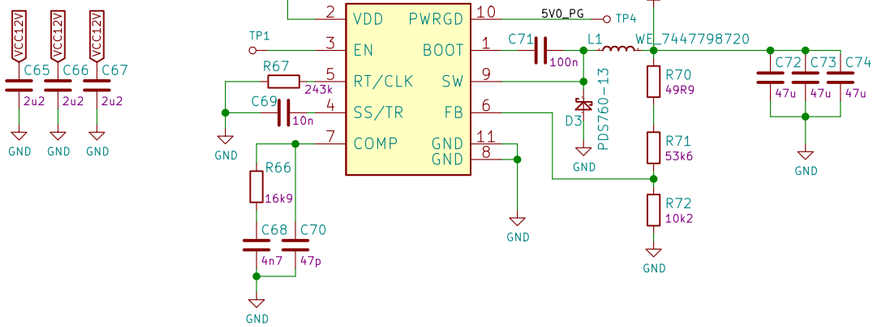
U14F
XC7A100T-FGG484

Sheet: /FPGA banks/		
File: fpga-banks.sch		
Title: Artix – Datacenter Secure Control Module (DC-SCM)		
Size: A3	Date:	**Rev: 1.0.3**
KiCad E.D.A. kicad 5.1.5+dfsg1-2bpo10+1		Id: 3/10

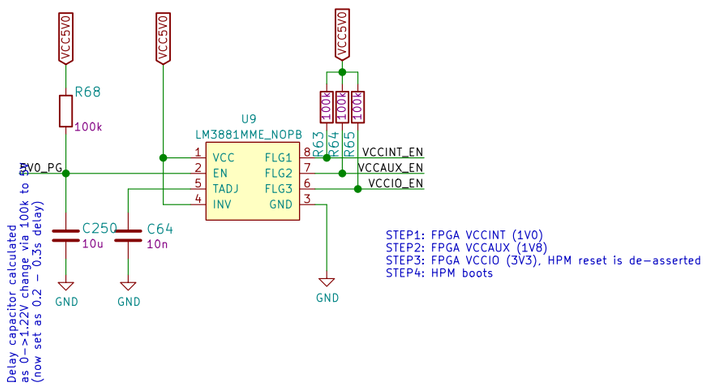
External 12V supply



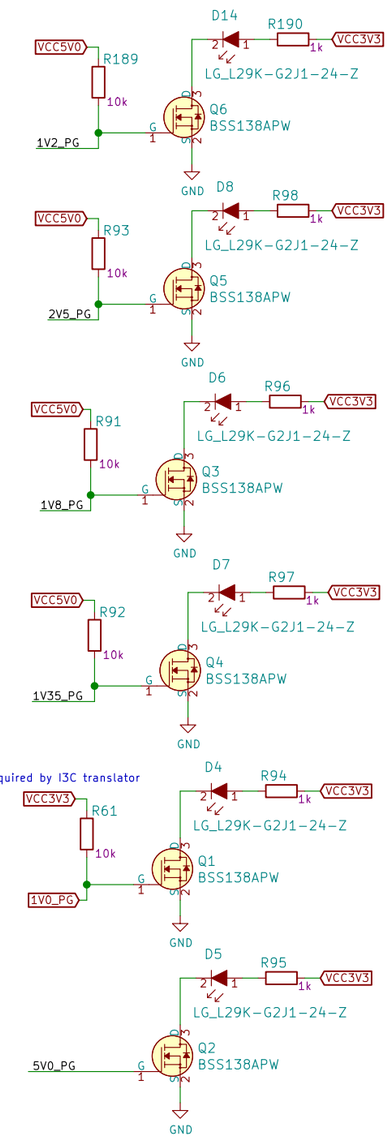
MainSupply (5V 5A)



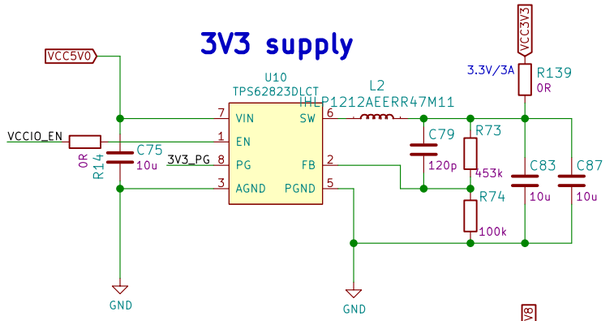
Power sequencer



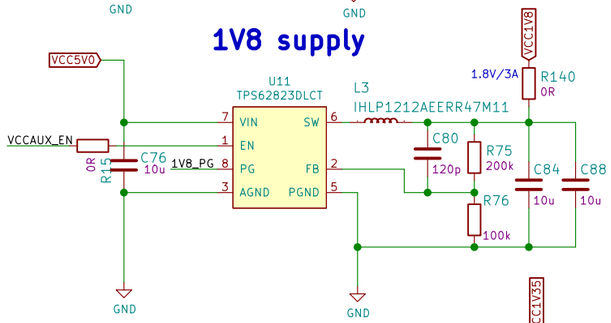
PWR_LED Indicators



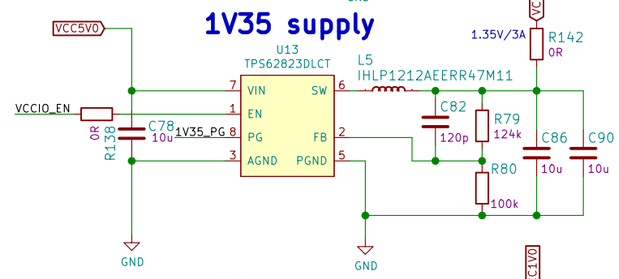
3V3 supply



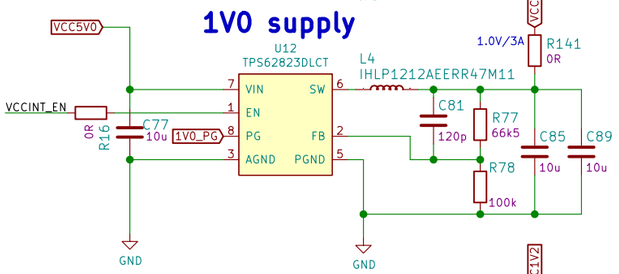
1V8 supply



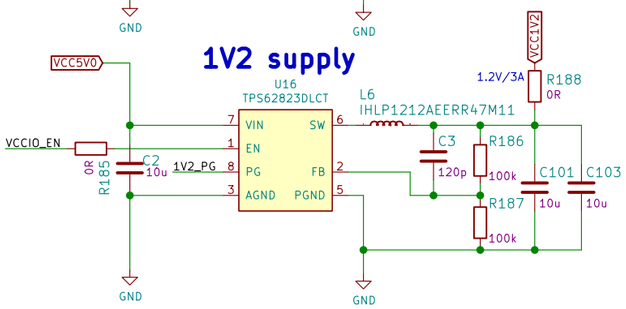
1V35 supply



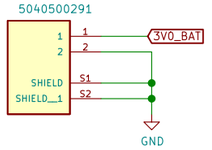
1V0 supply



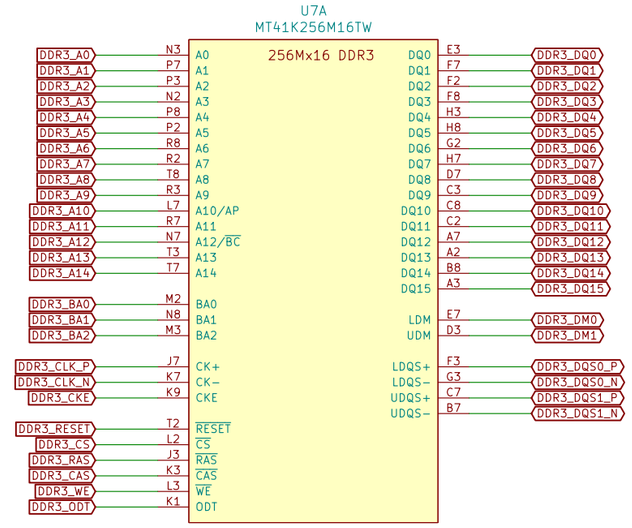
1V2 supply

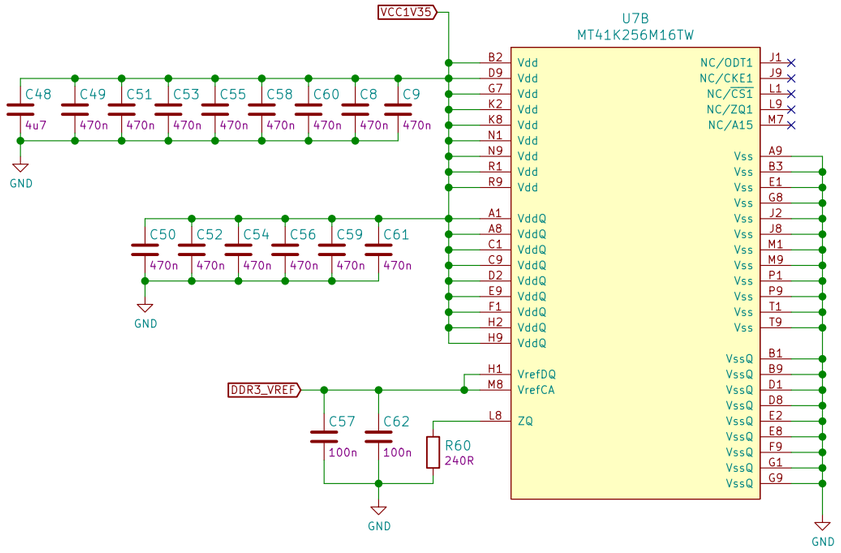


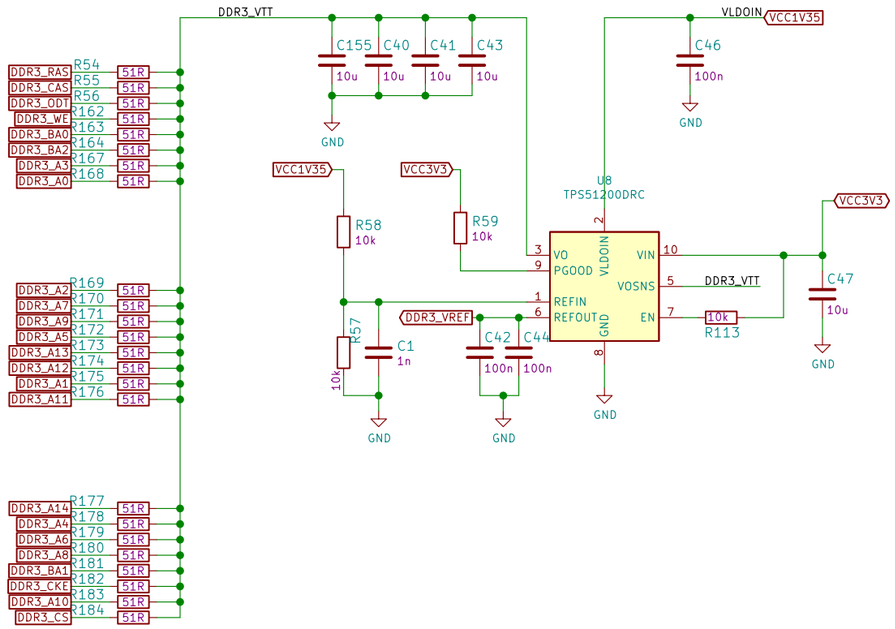
Battery connector

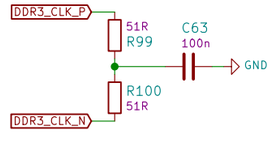


Sheet: /Power supply/	
File: power-supply.sch	
Title: Artix – Datacenter Secure Control Module (DC-SCM)	
Size: A3	Date:
KiCad E.D.A. kicad 5.1.5+dfsg1-2bpo10+1	**Rev: 1.0.3**
	Id: 4/10



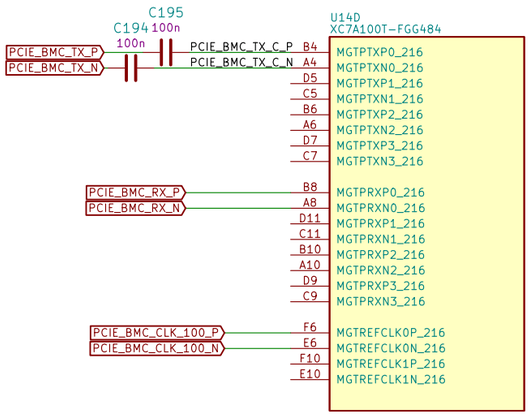




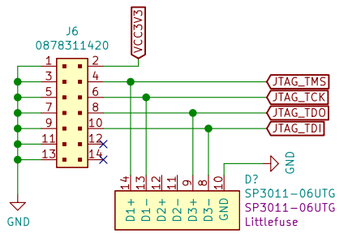


Sheet: /DDR3/		
File: ddr3.sch		
Title: Artix – Datacenter Secure Control Module (DC-SCM)		
Size: A3	Date:	**Rev: 1.0.3**
KiCad E.D.A. kicad 5.1.5+dfsg1-2bpo10+1		Id: 5/10

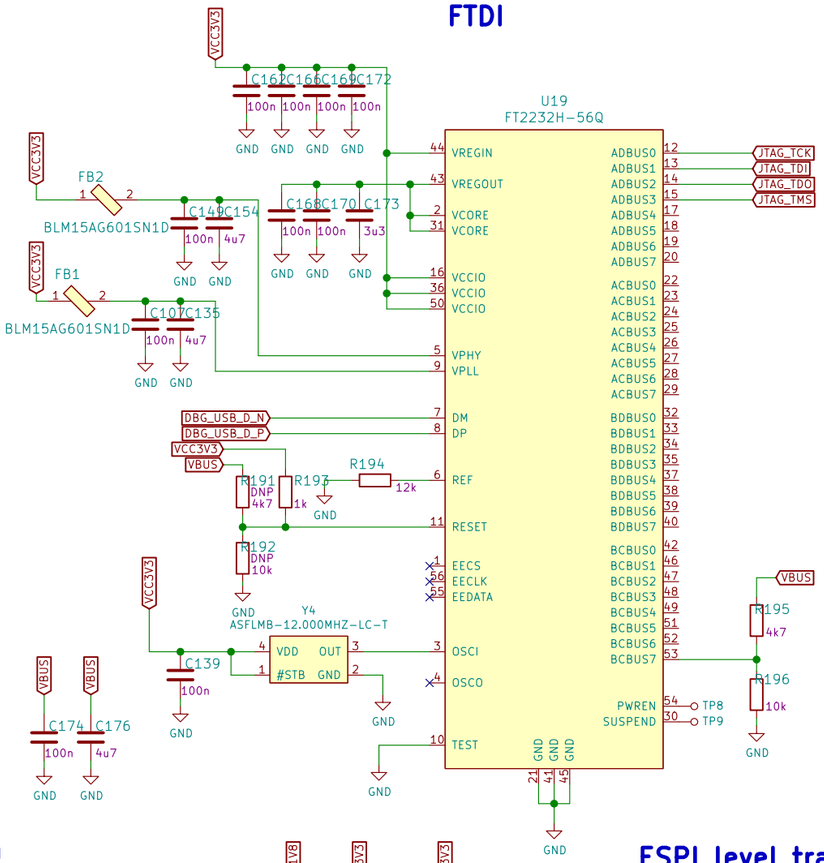
PCIe x1



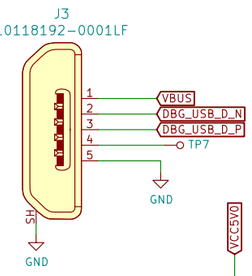
JTAG



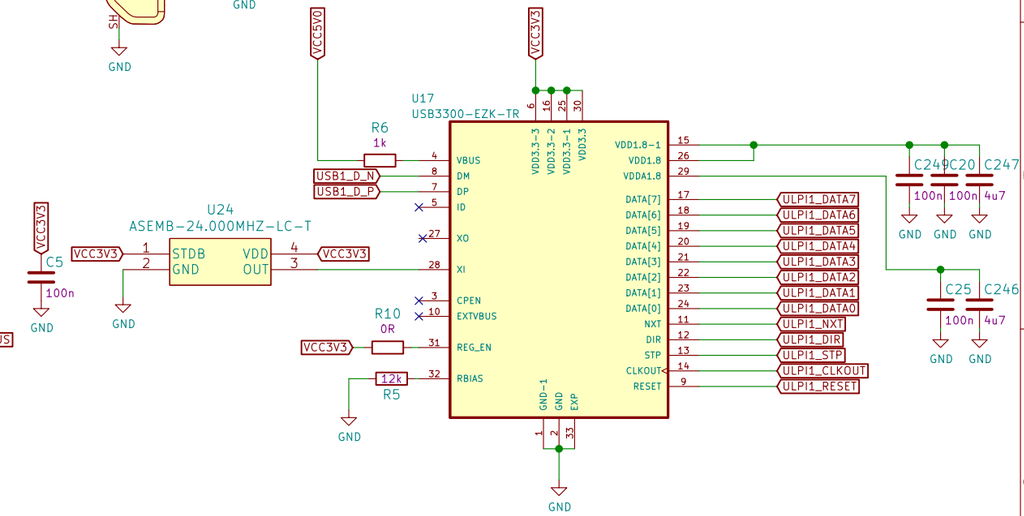
FTDI



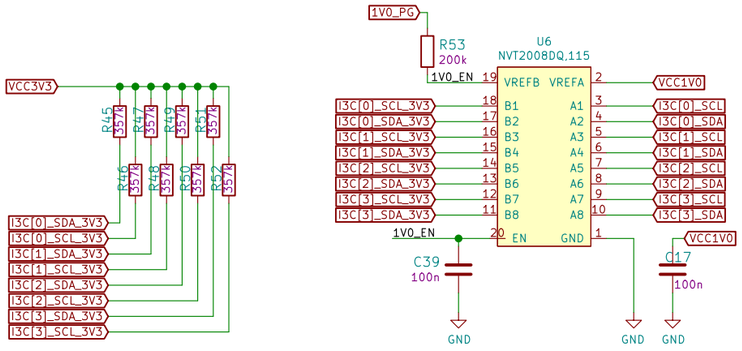
Debug USB



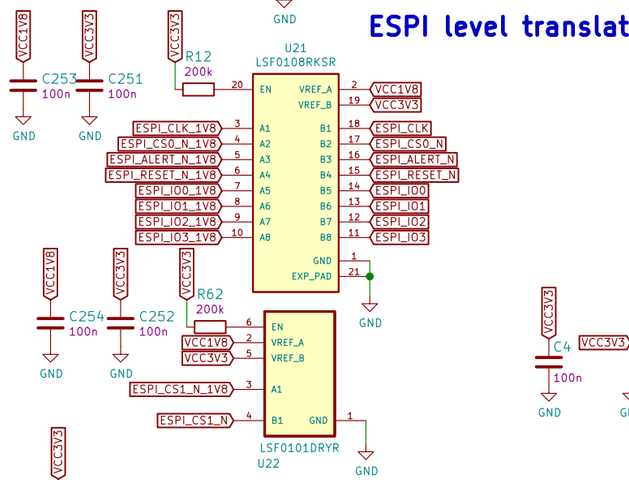
USB HOST



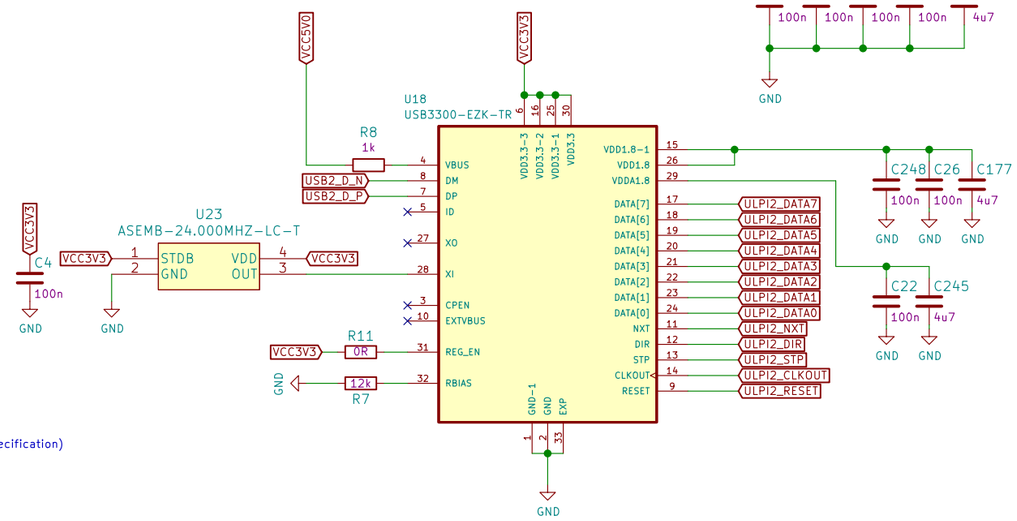
I3C voltage level translation



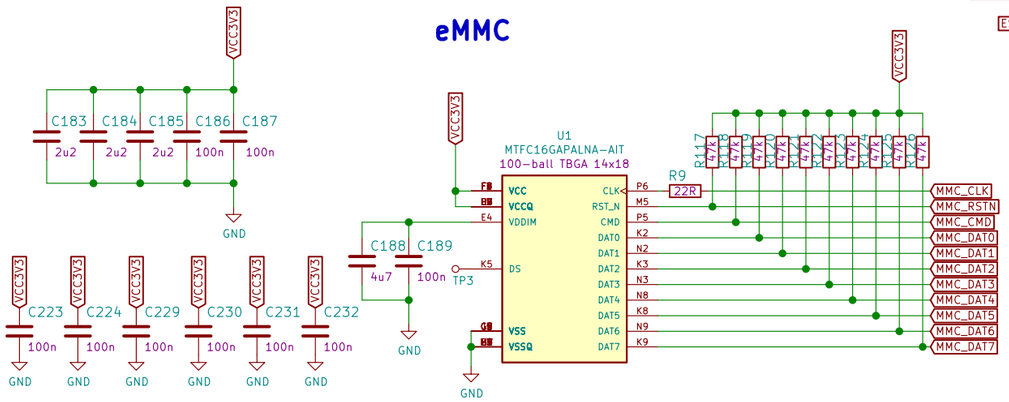
ESPI level translation



USB CLIENT

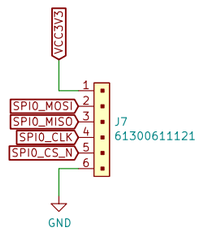


eMMC



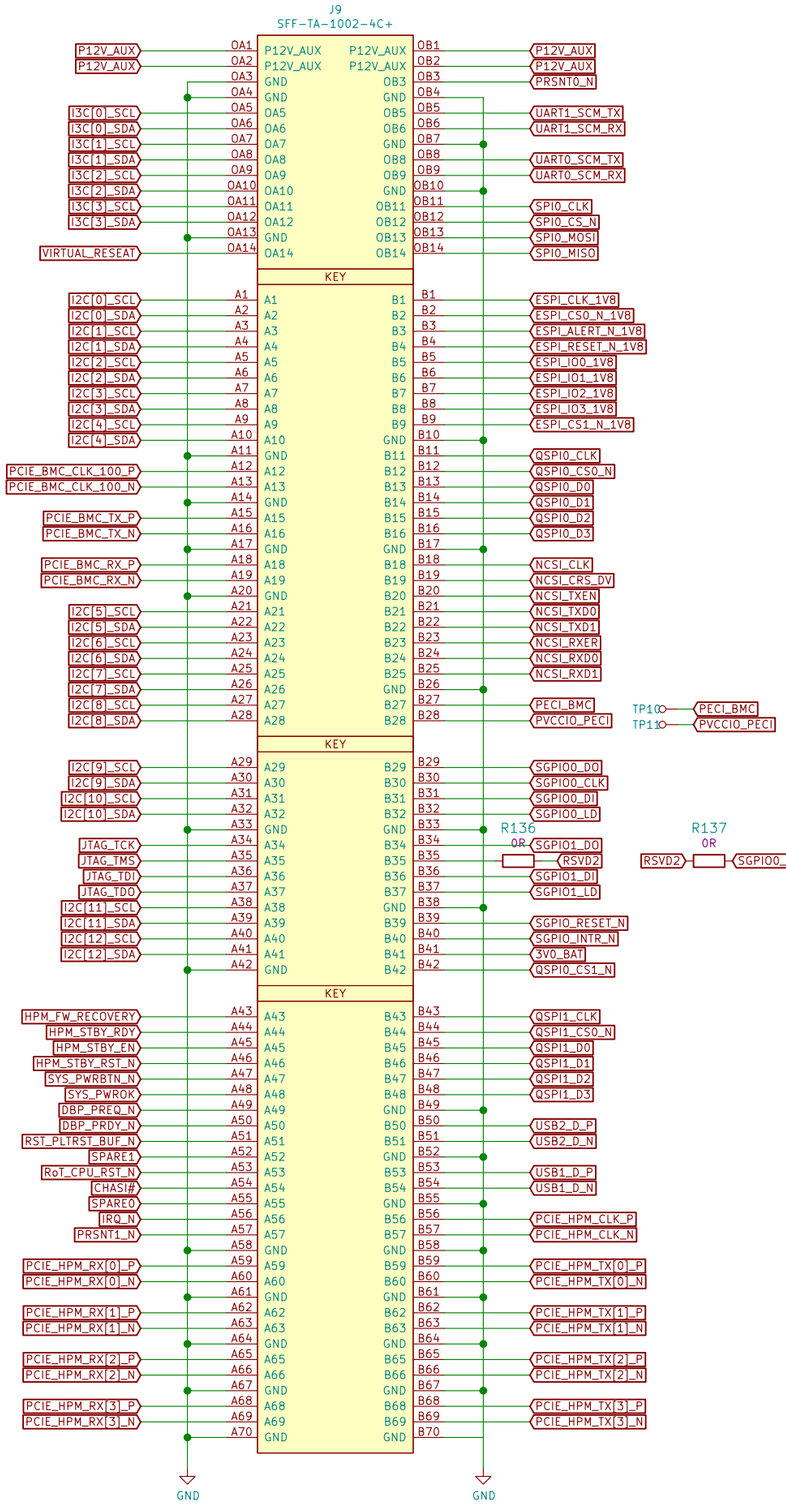
HPM SPI

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



Sheet: /Interfaces/		
File: interfaces.sch		
Title: Artix – Datacenter Secure Control Module (DC-SCM)		
Size: A3	Date:	**Rev: 1.0.3**
KiCad E.D.A. kicad 5.1.5+dfsg1-2bpo10+1		Id: 6/10

Edge connector



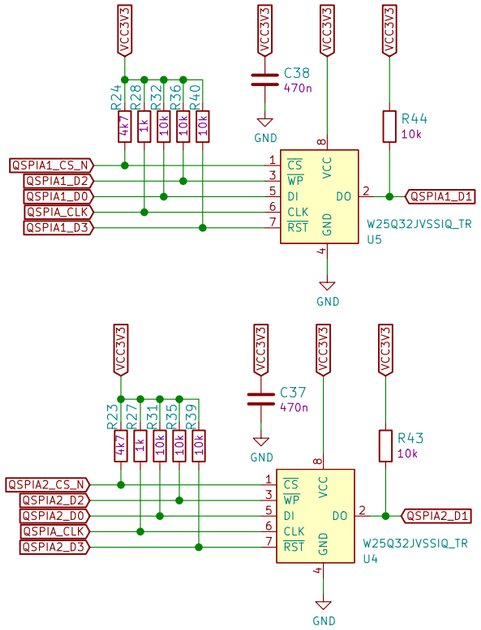
Sheet: /Edge connector/
File: edge-connector.sch

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

Size: A3	Date:	Rev: 1.0.3
KiCad E.D.A. kicad 5.1.5+dfsg1-2bpo10+1		Id: 7/10

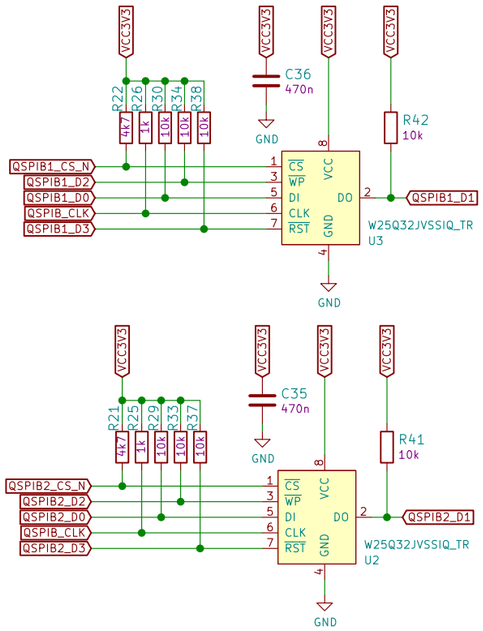
BIOS flash

One or typically two flash devices used to contain the BIOS firmware image

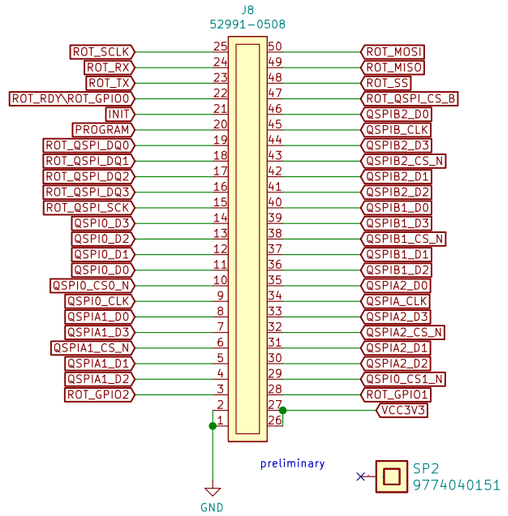


BMC flash

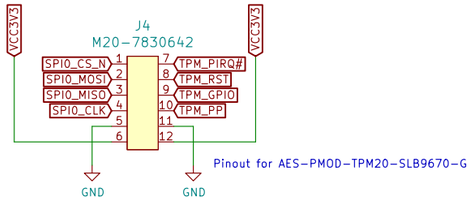
One or typically two flash devices used to contain the BMC firmware image



RoT module connector

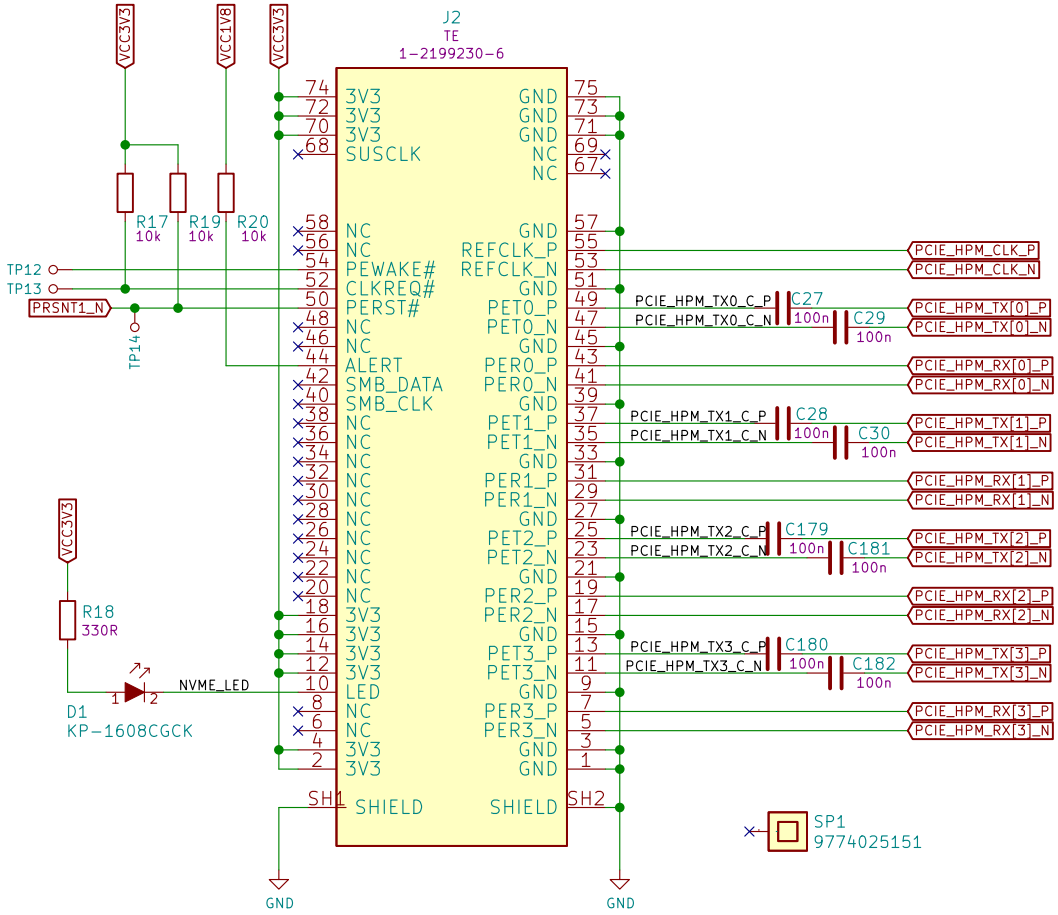


TPM connector



Sheet: /RoT/		
File: rot.sch		
Title: Artix – Datacenter Secure Control Module (DC-SCM)		
Size: A3	Date:	**Rev: 1.0.3**
KiCad E.D.A. kicad 5.1.5+dfsg1-2bpo10+1		Id: 8/10

NVMe SSD



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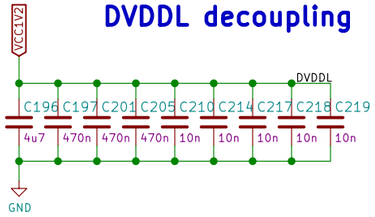
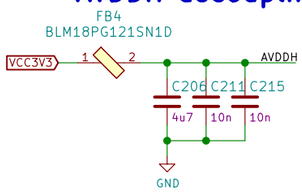
File: pcie-conn.sch		
Title: Artix – Datacenter Secure Control Module (DC-SCM)		
Size: A4	Date:	**Rev: 1.0.3**
KiCad E.D.A. kicad 5.1.5+dfsg1-2bpo10+1		Id: 9/10

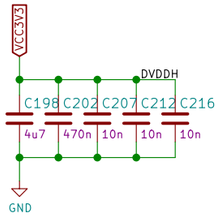
DVDDL decoupling



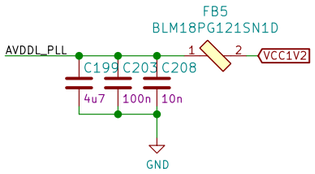
AVDDH decoupling



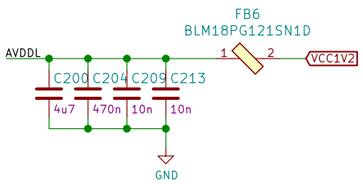
DVDDH decoupling



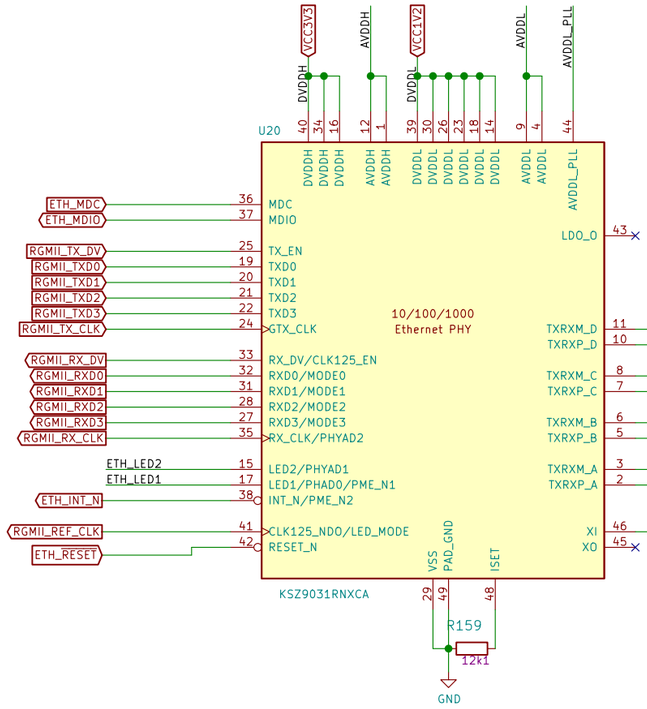
AVDDL_PLL decoupling



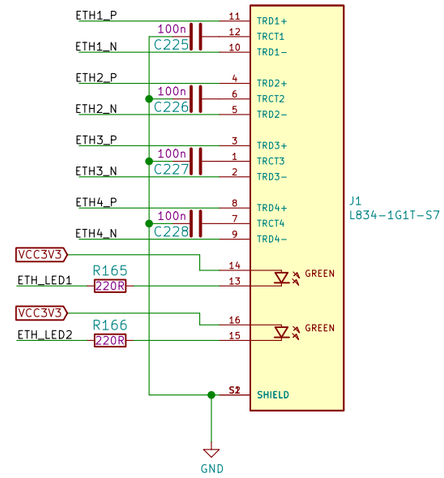
AVDDL decoupling



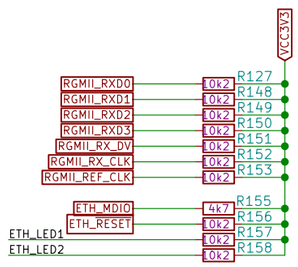
PHY



RJ45 Connector



Pull up resistors



U25
ASEMB-25.000MHZ-LC-T
VDD
OUT
STDB
GND
C6
100n

Sheet: /Ethernet/		
File: ethernet.sch		
Title: Artix – Datacenter Secure Control Module (DC-SCM)		
Size: A3	Date:	**Rev: 1.0.3**
KiCad E.D.A. kicad 5.1.5+dfsg1-2bpo10+1		Id: 10/10