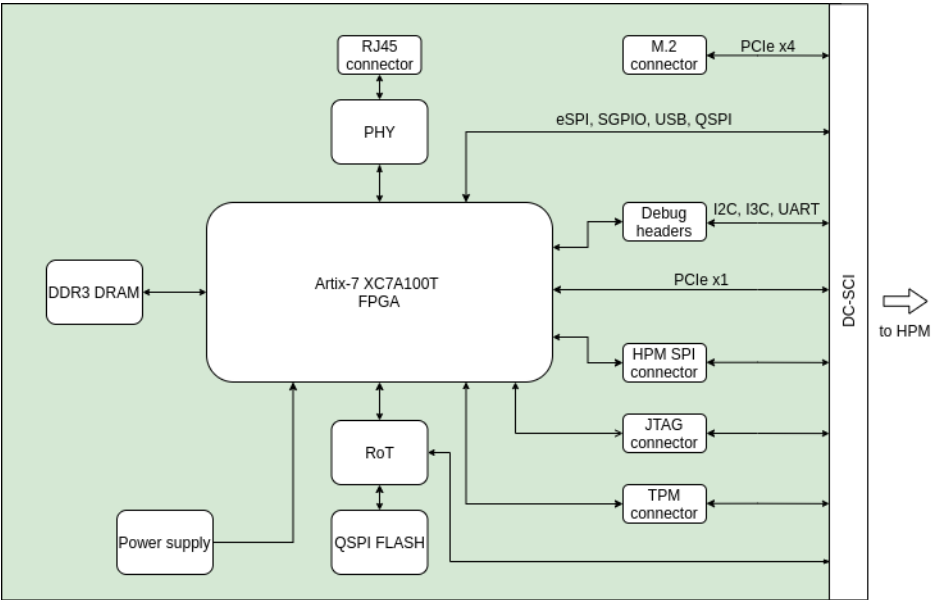


Artix – Datacenter Secure Control Module (DC-SCM)



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



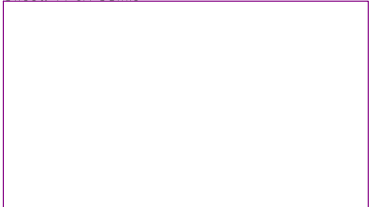
File: power-supply.sch

Sheet: FPGA power supply



File: fpga-power-supply.sch

Sheet: FPGA banks



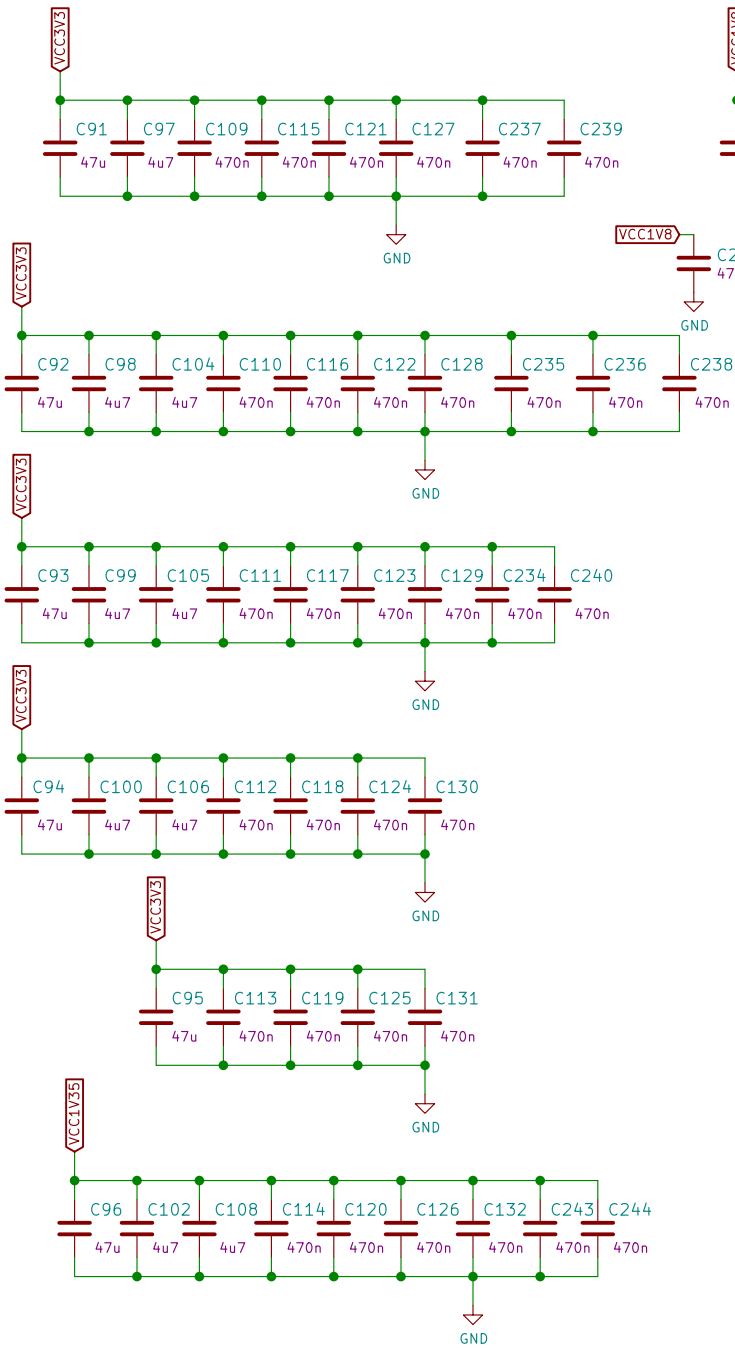
File: fpga-banks.sch

Logo N2 oshw_logo
Logo N1 antmicro_logo

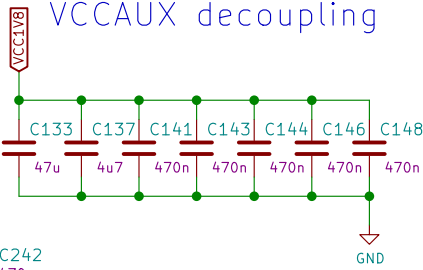
Sheet: /		
File: artix-dc-scm.sch		
Title: Artix – Datacenter Secure Control Module (DC-SCM)		
Size: A4	Date:	Rev: 1.0.3
KiCad E.D.A. kicad 5.1.5+dfsg1-2bpo10+1		Id: 1/10

FPGA power supply

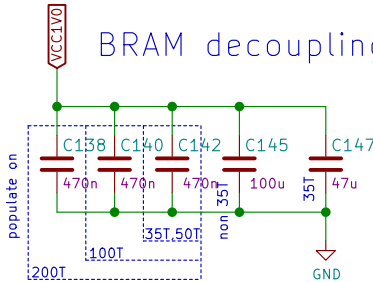
Banks decoupling



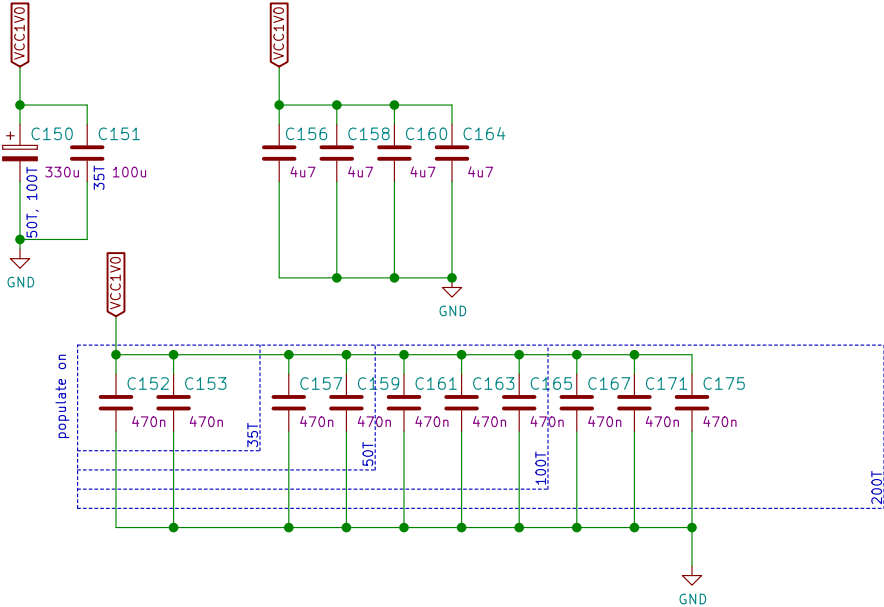
VCCAUX decoupling



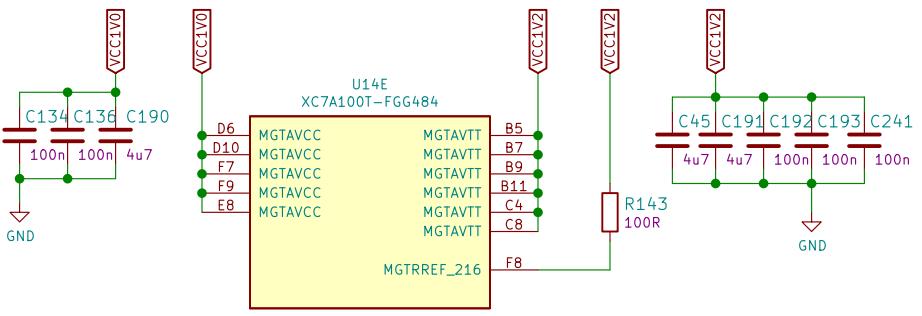
BRAM decoupling



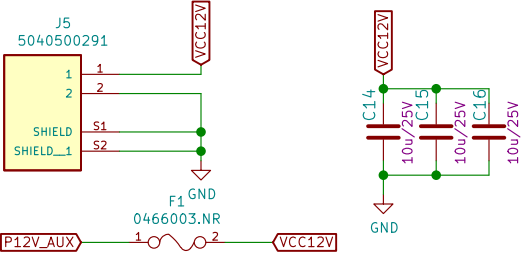
VCCINT decoupling



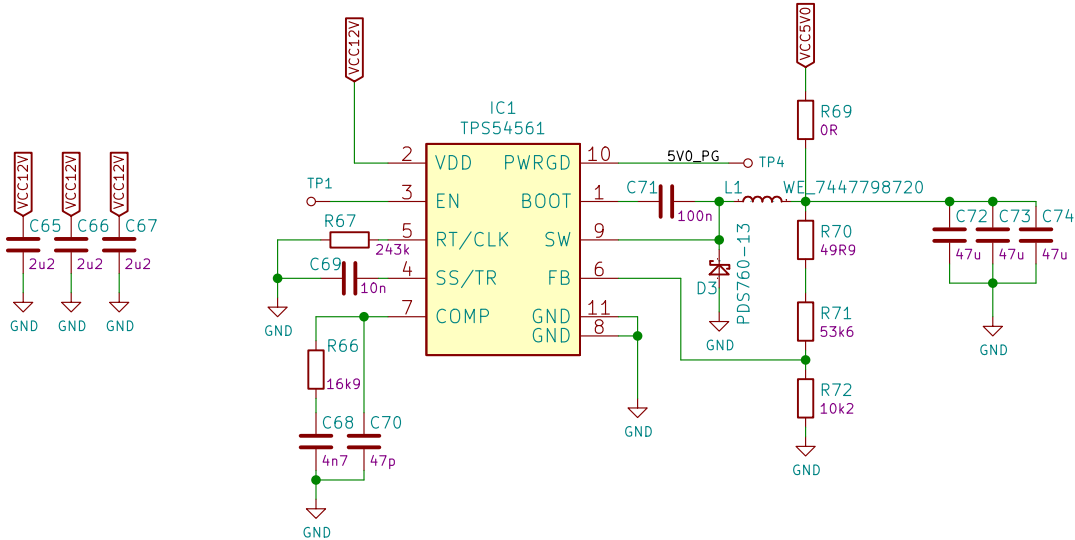
Transceiver supply



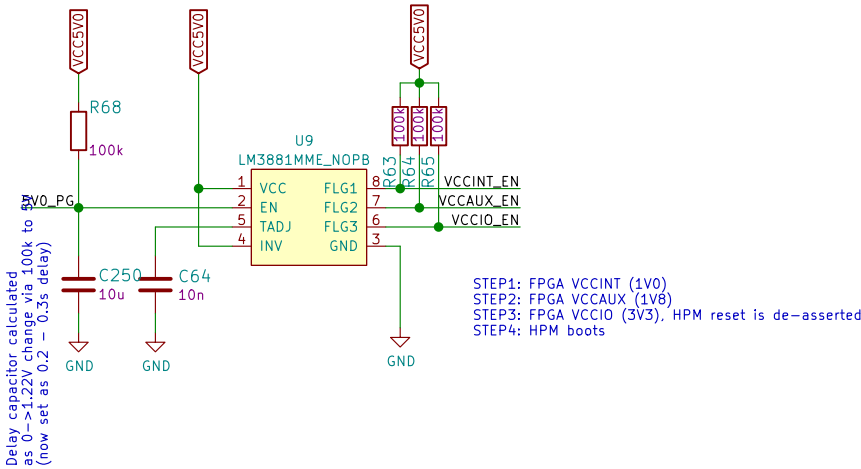
External 12V supply



MainSupply (5V 5A)

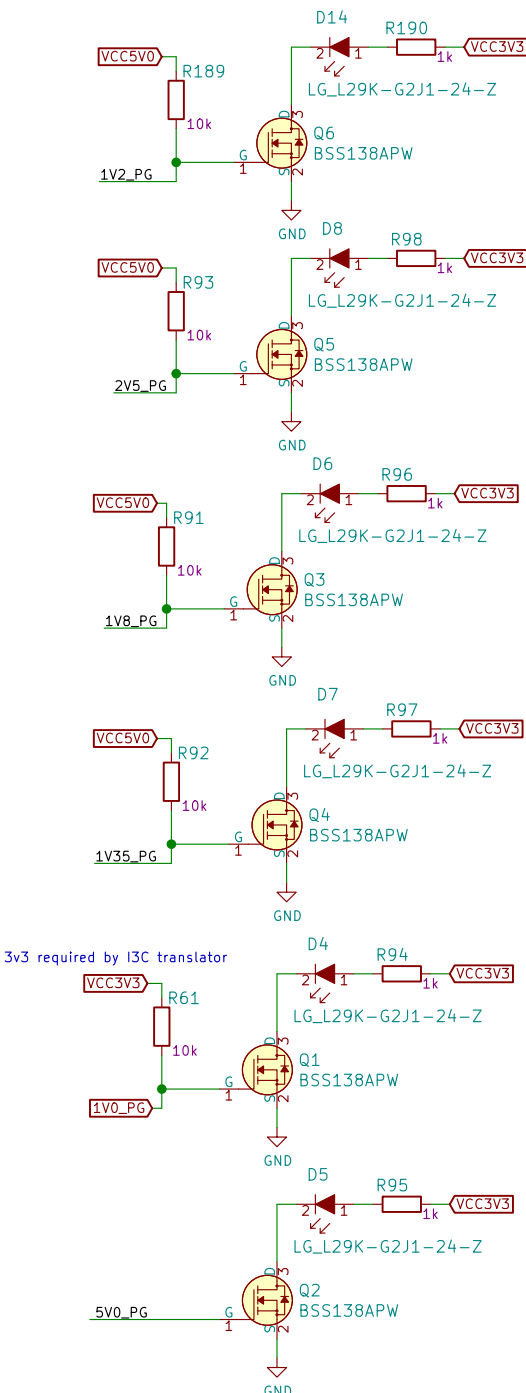


Power sequencer

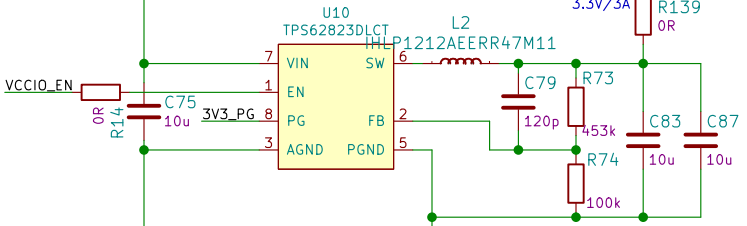


STEP1: FPGA VCCINT (1V0)
STEP2: FPGA VCCAUX (1V8)
STEP3: FPGA VCCIO (3V3), HPM reset is de-asserted
STEP4: HPM boots

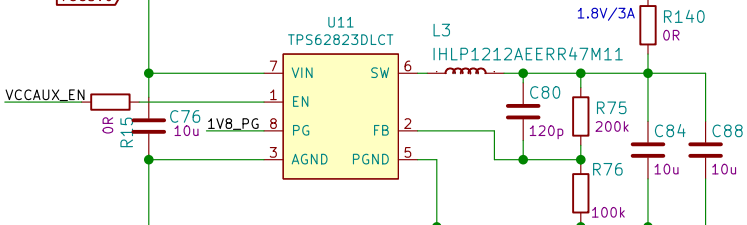
PWR_LED Indicators



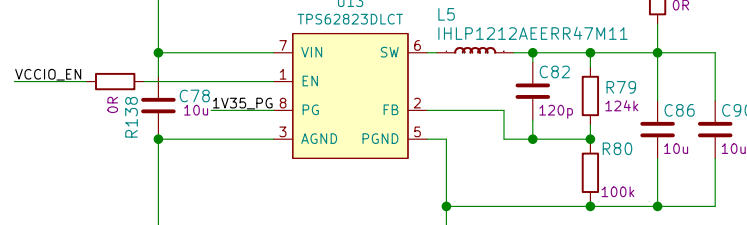
3V3 supply



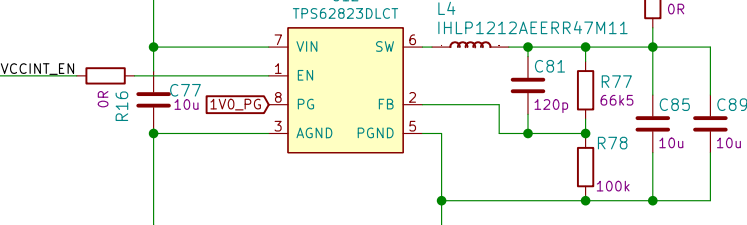
1V8 supply



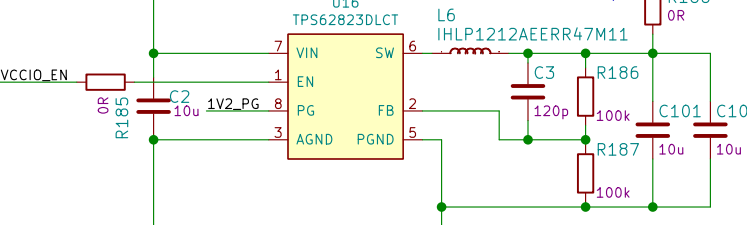
1V35 supply



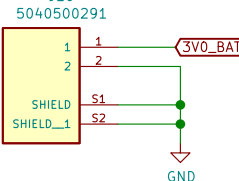
1V0 supply

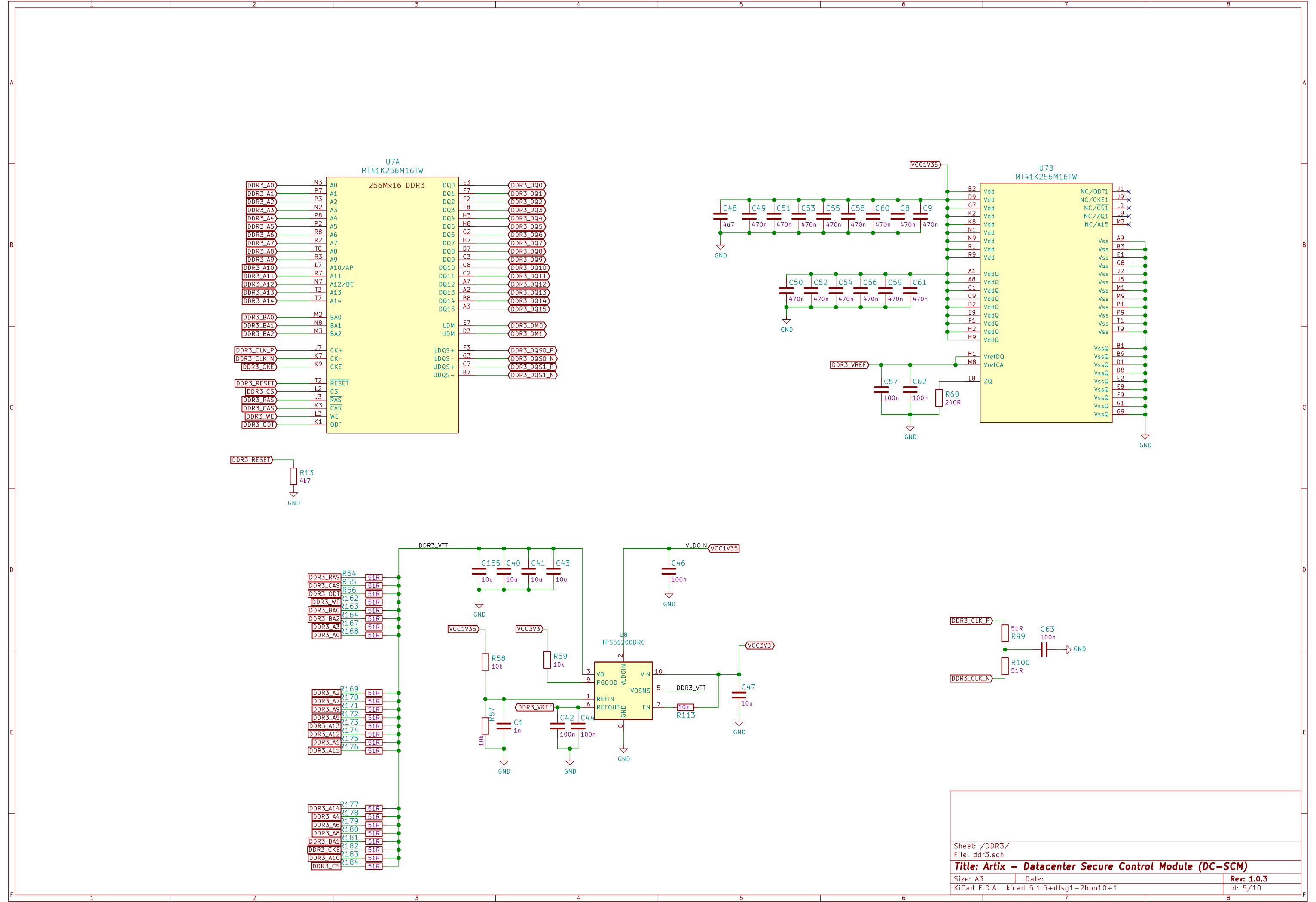


1V2 supply

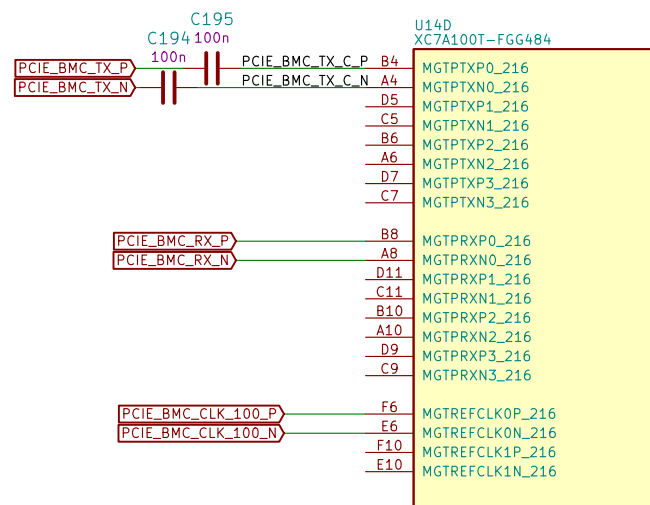


Battery connector

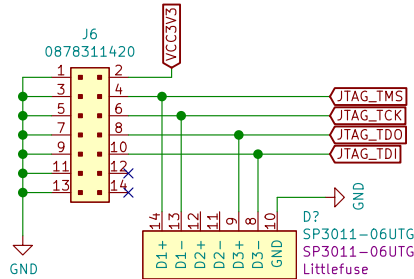




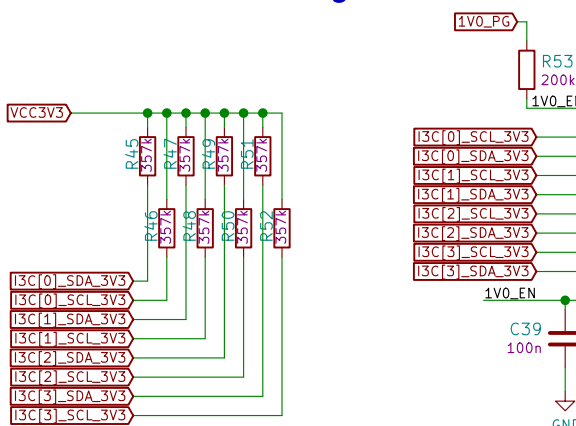
PCIe x1



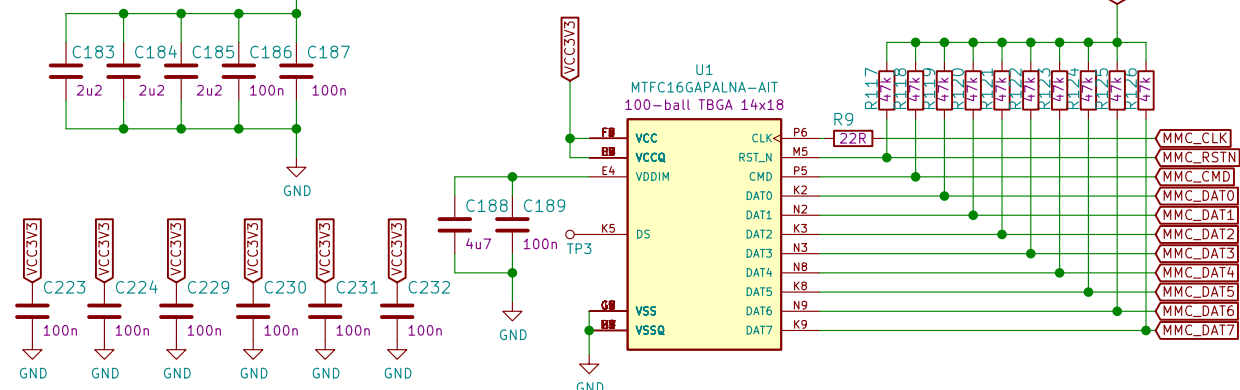
JTAG



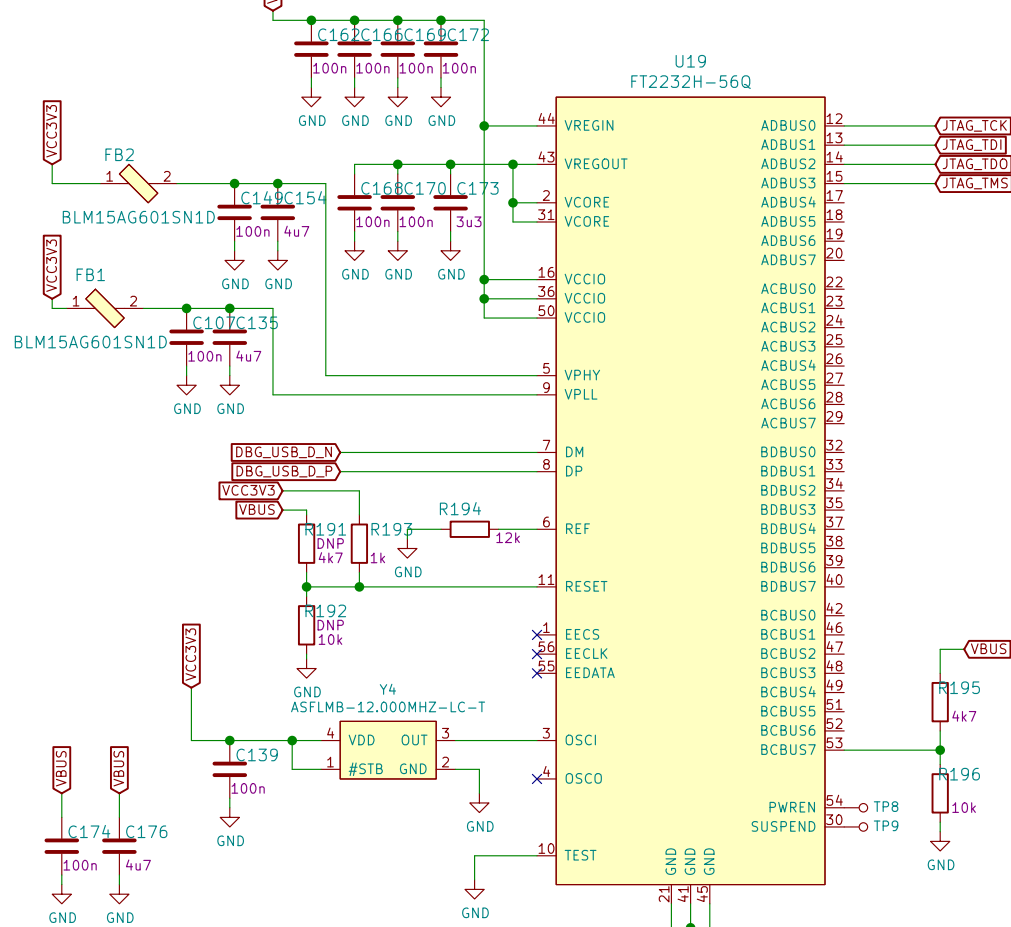
I3C voltage level translation



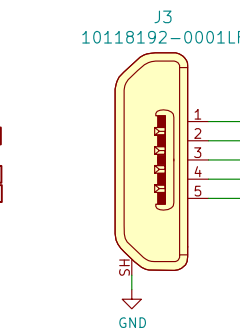
eMMC



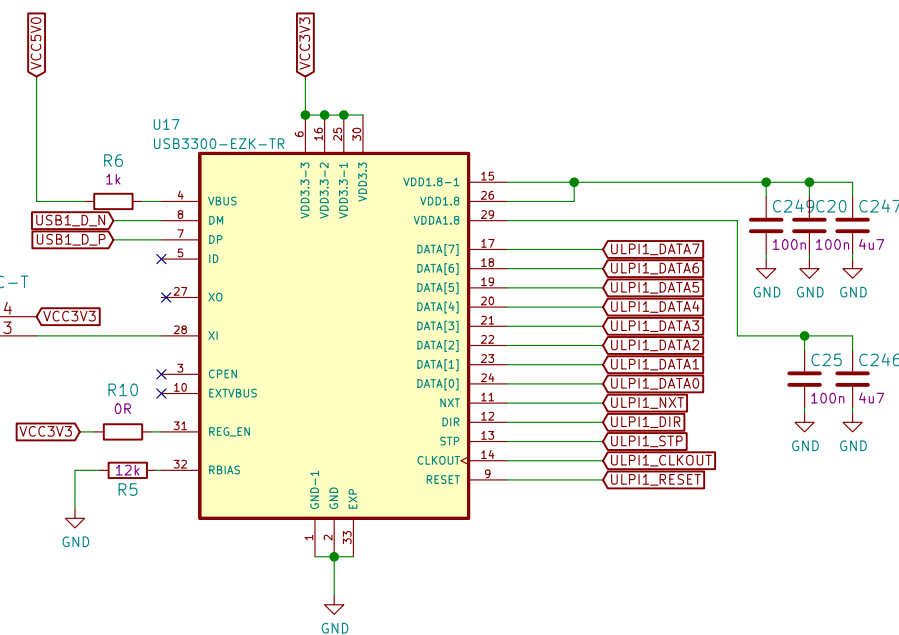
FTDI



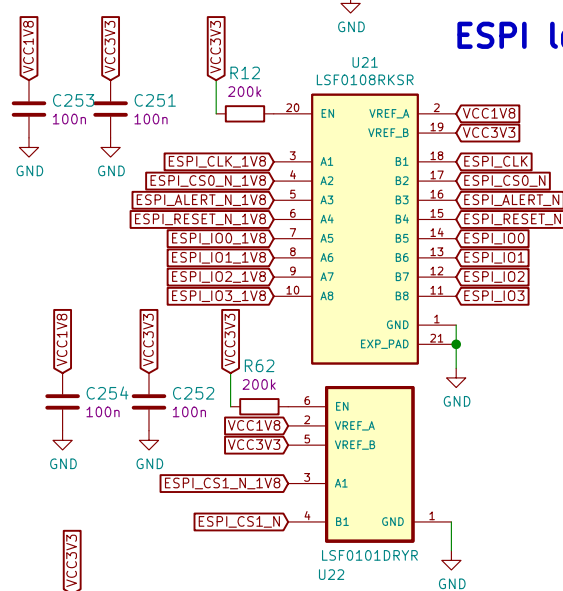
Debug USB



USB HOST

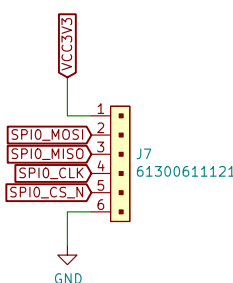


ESPI level translation

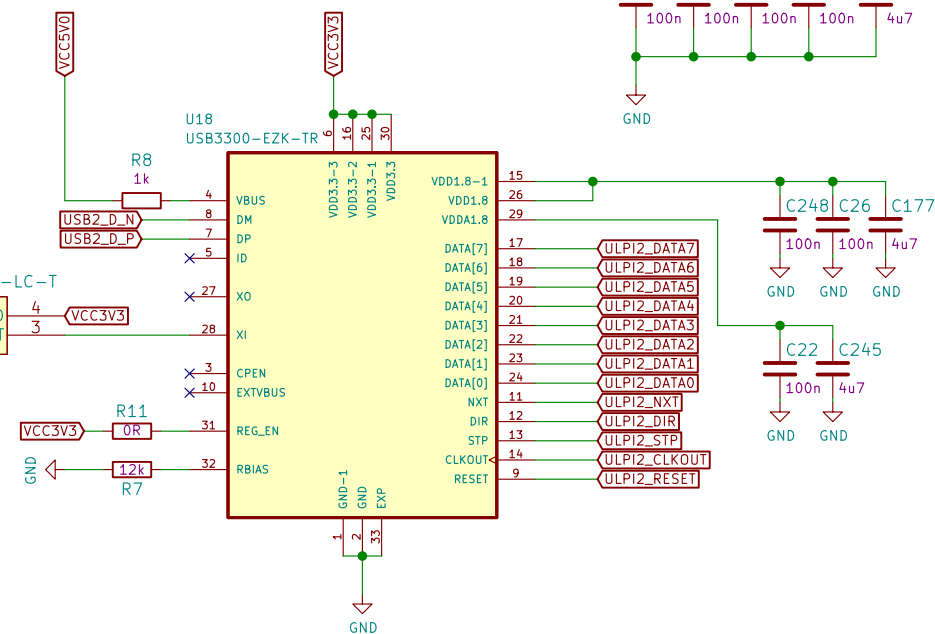


HPM SPI

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



USB CLIENT



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

J9
SFF-TA-1002-4C+

Diagram showing the edge connector (J9) and its connections to various components. The connector is labeled J9 and SFF-TA-1002-4C+.

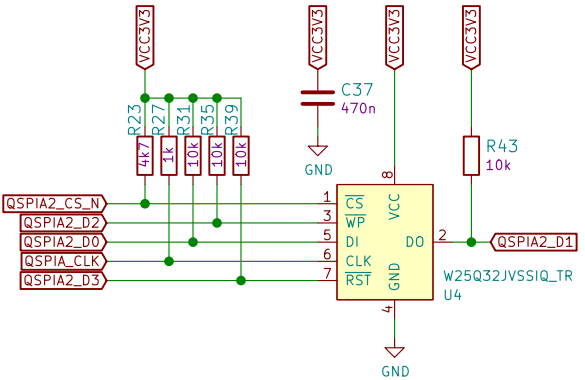
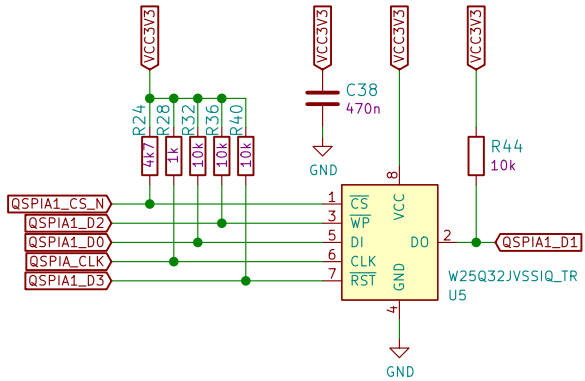
The diagram is organized into sections with 'KEY' labels, indicating pin assignments and signal names.

Key components and signals shown include:

- Power and Ground:** P12V_AUX, GND, VIRTUAL_RESEAT.
- I2C:** I2C[0]_SCL, I2C[0]_SDA, I2C[1]_SCL, I2C[1]_SDA, I2C[2]_SCL, I2C[2]_SDA, I2C[3]_SCL, I2C[3]_SDA, I2C[4]_SCL, I2C[4]_SDA, I2C[5]_SCL, I2C[5]_SDA, I2C[6]_SCL, I2C[6]_SDA, I2C[7]_SCL, I2C[7]_SDA, I2C[8]_SCL, I2C[8]_SDA, I2C[9]_SCL, I2C[9]_SDA, I2C[10]_SCL, I2C[10]_SDA, I2C[11]_SCL, I2C[11]_SDA, I2C[12]_SCL, I2C[12]_SDA.
- SPI and QSPI:** SPI0_CLK, SPI0_CS_N, SPI0_MOSI, SPI0_MISO, QSPI0_CLK, QSPI0_CS0_N, QSPI0_D0, QSPI0_D1, QSPI0_D2, QSPI0_D3, SGPIO0_D0, SGPIO0_CLK, SGPIO0_D1, SGPIO0_LD, SGPIO0_D2, SGPIO0_D3, SGPIO1_D0, SGPIO1_CLK, SGPIO1_D1, SGPIO1_LD, SGPIO1_D2, SGPIO1_D3, SGPIO1_RESET_N, SGPIO1_INTR_N, SGPIO1_CS1_N.
- USB:** USB2_D_P, USB2_D_N, USB1_D_P, USB1_D_N.
- Other Signals:** UART1_SCM_TX, UART1_SCM_RX, UART0_SCM_TX, UART0_SCM_RX, ESPI_CLK_1V8, ESPI_CS0_N_1V8, ESPI_ALERT_N_1V8, ESPI_RESET_N_1V8, ESPI_I00_1V8, ESPI_I01_1V8, ESPI_I02_1V8, ESPI_I03_1V8, ESPI_CS1_N_1V8, NCSI_CLK, NCSI_CRS_DV, NCSI_TXEN, NCSI_TXD0, NCSI_TXD1, NCSI_RXER, NCSI_RXD0, NCSI_RXD1, PECL_BMC, PVCCIO_PECI, R136, R137, RSV02, RSV03, RSV04, RSV05, RSV06, RSV07, RSV08, RSV09, RSV10, RSV11, RSV12, RSV13, RSV14, RSV15, RSV16, RSV17, RSV18, RSV19, RSV20, RSV21, RSV22, RSV23, RSV24, RSV25, RSV26, RSV27, RSV28, RSV29, RSV30, RSV31, RSV32, RSV33, RSV34, RSV35, RSV36, RSV37, RSV38, RSV39, RSV40, RSV41, RSV42, RSV43, RSV44, RSV45, RSV46, RSV47, RSV48, RSV49, RSV50, RSV51, RSV52, RSV53, RSV54, RSV55, RSV56, RSV57, RSV58, RSV59, RSV60, RSV61, RSV62, RSV63, RSV64, RSV65, RSV66, RSV67, RSV68, RSV69, RSV70, RSV71, RSV72, RSV73, RSV74, RSV75, RSV76, RSV77, RSV78, RSV79, RSV80, RSV81, RSV82, RSV83, RSV84, RSV85, RSV86, RSV87, RSV88, RSV89, RSV90, RSV91, RSV92, RSV93, RSV94, RSV95, RSV96, RSV97, RSV98, RSV99, RSV100, RSV101, RSV102, RSV103, RSV104, RSV105, RSV106, RSV107, RSV108, RSV109, RSV110, RSV111, RSV112, RSV113, RSV114, RSV115, RSV116, RSV117, RSV118, RSV119, RSV120, RSV121, RSV122, RSV123, RSV124, RSV125, RSV126, RSV127, RSV128, RSV129, RSV130, RSV131, RSV132, RSV133, RSV134, RSV135, RSV136, RSV137, RSV138, RSV139, RSV140, RSV141, RSV142, RSV143, RSV144, RSV145, RSV146, RSV147, RSV148, RSV149, RSV150, RSV151, RSV152, RSV153, RSV154, RSV155, RSV156, RSV157, RSV158, RSV159, RSV160, RSV161, RSV162, RSV163, RSV164, RSV165, RSV166, RSV167, RSV168, RSV169, RSV170, RSV171, RSV172, RSV173, RSV174, RSV175, RSV176, RSV177, RSV178, RSV179, RSV180, RSV181, RSV182, RSV183, RSV184, RSV185, RSV186, RSV187, RSV188, RSV189, RSV190, RSV191, RSV192, RSV193, RSV194, RSV195, RSV196, RSV197, RSV198, RSV199, RSV200, RSV201, RSV202, RSV203, RSV204, RSV205, RSV206, RSV207, RSV208, RSV209, RSV210, RSV211, RSV212, RSV213, RSV214, RSV215, RSV216, RSV217, RSV218, RSV219, RSV220, RSV221, RSV222, RSV223, RSV224, RSV225, RSV226, RSV227, RSV228, RSV229, RSV230, RSV231, RSV232, RSV233, RSV234, RSV235, RSV236, RSV237, RSV238, RSV239, RSV240, RSV241, RSV242, RSV243, RSV244, RSV245, RSV246, RSV247, RSV248, RSV249, RSV250, RSV251, RSV252, RSV253, RSV254, RSV255, RSV256, RSV257, RSV258, RSV259, RSV260, RSV261, RSV262, RSV263, RSV264, RSV265, RSV266, RSV267, RSV268, RSV269, RSV270, RSV271, RSV272, RSV273, RSV274, RSV275, RSV276, RSV277, RSV278, RSV279, RSV280, RSV281, RSV282, RSV283, RSV284, RSV285, RSV286, RSV287, RSV288, RSV289, RSV290, RSV291, RSV292, RSV293, RSV294, RSV295, RSV296, RSV297, RSV298, RSV299, RSV300, RSV301, RSV302, RSV303, RSV304, RSV305, RSV306, RSV307, RSV308, RSV309, RSV310, RSV311, RSV312, RSV313, RSV314, RSV315, RSV316, RSV317, RSV318, RSV319, RSV320, RSV321, RSV322, RSV323, RSV324, RSV325, RSV326, RSV327, RSV328, RSV329, RSV330, RSV331, RSV332, RSV333, RSV334, RSV335, RSV336, RSV337, RSV338, RSV339, RSV340, RSV341, RSV342, RSV343, RSV344, RSV345, RSV346, RSV347, RSV348, RSV349, RSV350, RSV351, RSV352, RSV353, RSV354, RSV355, RSV356, RSV357, RSV358, RSV359, RSV360, RSV361, RSV362, RSV363, RSV364, RSV365, RSV366, RSV367, RSV368, RSV369, RSV370, RSV371, RSV372, RSV373, RSV374, RSV375, RSV376, RSV377, RSV378, RSV379, RSV380, RSV381, RSV382, RSV383, RSV384, RSV385, RSV386, RSV387, RSV388, RSV389, RSV390, RSV391, RSV392, RSV393, RSV394, RSV395, RSV396, RSV397, RSV398, RSV399, RSV400, RSV401, RSV402, RSV403, RSV404, RSV405, RSV406, RSV407, RSV408, RSV409, RSV410, RSV411, RSV412, RSV413, RSV414, RSV415, RSV416, RSV417, RSV418, RSV419, RSV420, RSV421, RSV422, RSV423, RSV424, RSV425, RSV426, RSV427, RSV428, RSV429, RSV430, RSV431, RSV432, RSV433, RSV434, RSV435, RSV436, RSV437, RSV438, RSV439, RSV440, RSV441, RSV442, RSV443, RSV444, RSV445, RSV446, RSV447, RSV448, RSV449, RSV450, RSV451, RSV452, RSV453, RSV454, RSV455, RSV456, RSV457, RSV458, RSV459, RSV460, RSV461, RSV462, RSV463, RSV464, RSV465, RSV466, RSV467, RSV468, RSV469, RSV470, RSV471, RSV472, RSV473, RSV474, RSV475, RSV476, RSV477, RSV478, RSV479, RSV480, RSV481, RSV482, RSV483, RSV484, RSV485, RSV486, RSV487, RSV488, RSV489, RSV490, RSV491, RSV492, RSV493, RSV494, RSV495, RSV496, RSV497, RSV498, RSV499, RSV500, RSV501, RSV502, RSV503, RSV504, RSV505, RSV506, RSV507, RSV508, RSV509, RSV510, RSV511, RSV512, RSV513, RSV514, RSV515, RSV516, RSV517, RSV518, RSV519, RSV520, RSV521, RSV522, RSV523, RSV524, RSV525, RSV526, RSV527, RSV528, RSV529, RSV530, RSV531, RSV532, RSV533, RSV534, RSV535, RSV536, RSV537, RSV538, RSV539, RSV540, RSV541, RSV542, RSV543, RSV544, RSV545, RSV546, RSV547, RSV54

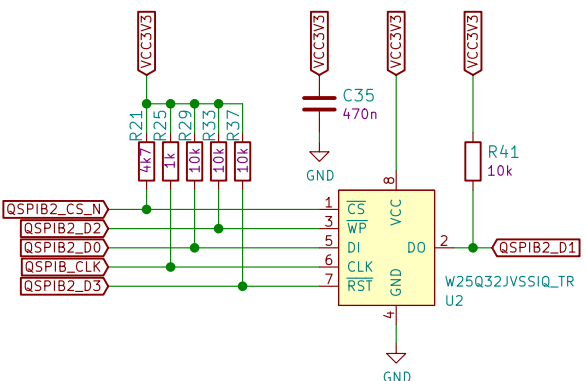
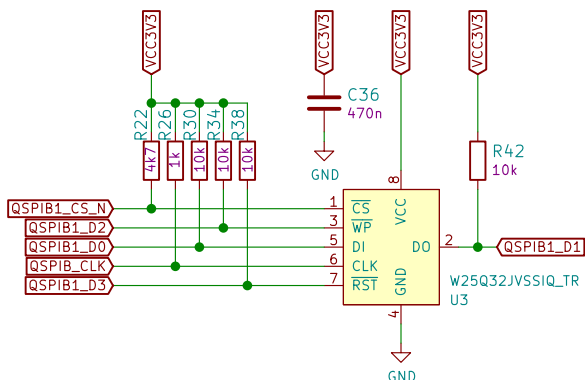
BIOS flash

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

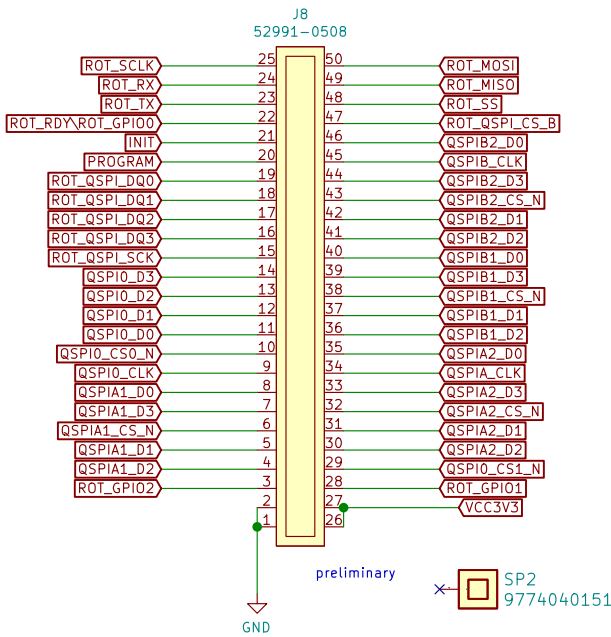


BMC flash

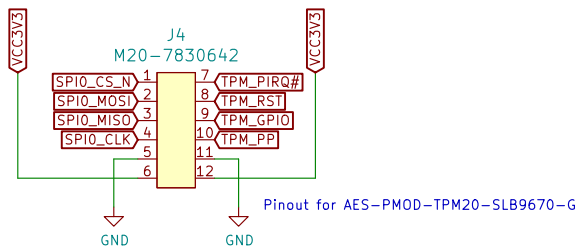
One or typically two flash devices used to contain the BMC firmware image



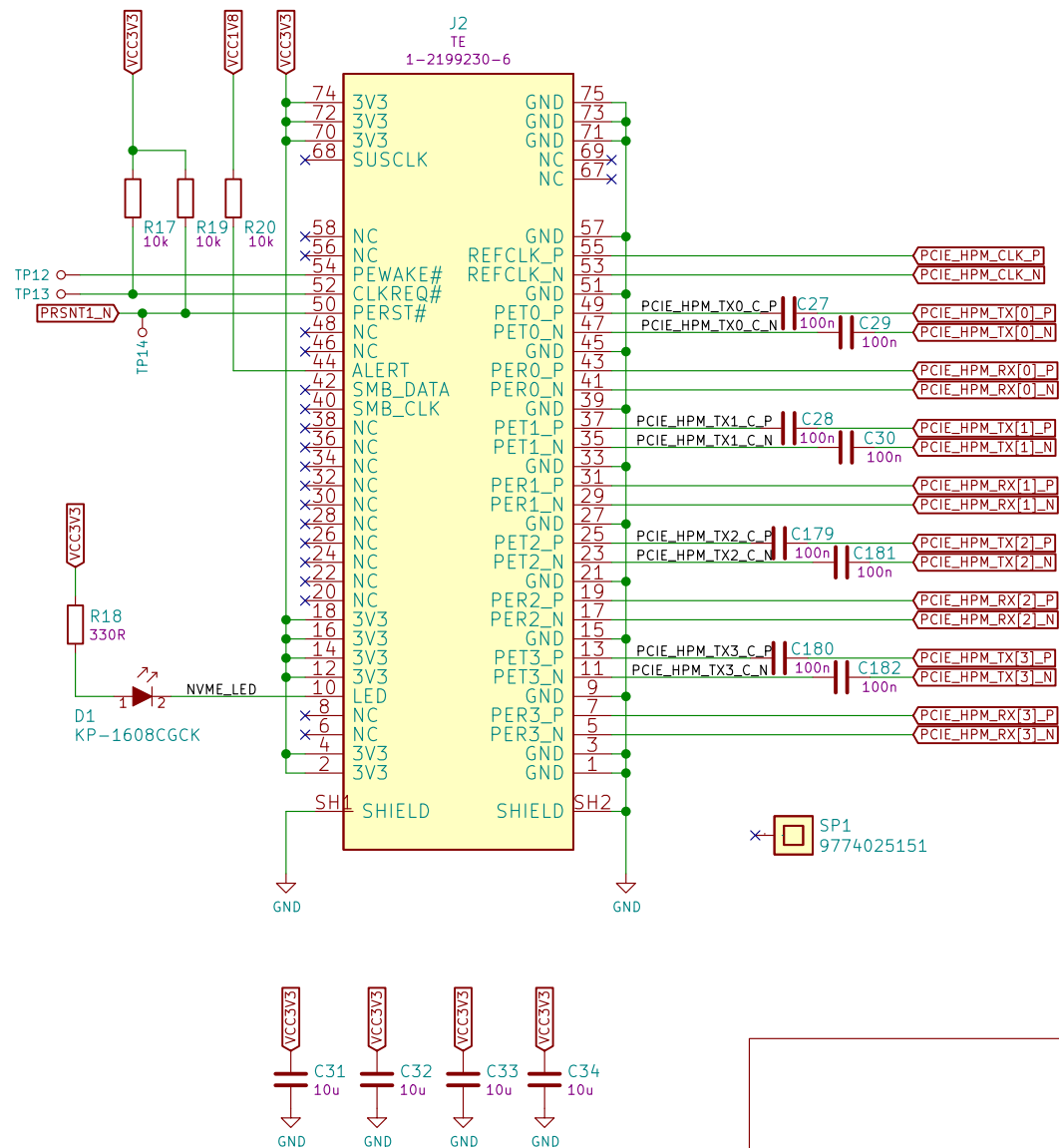
RoT module connector



TPM connector



NVMe SSD



Sheet: /PCle-connector/
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

