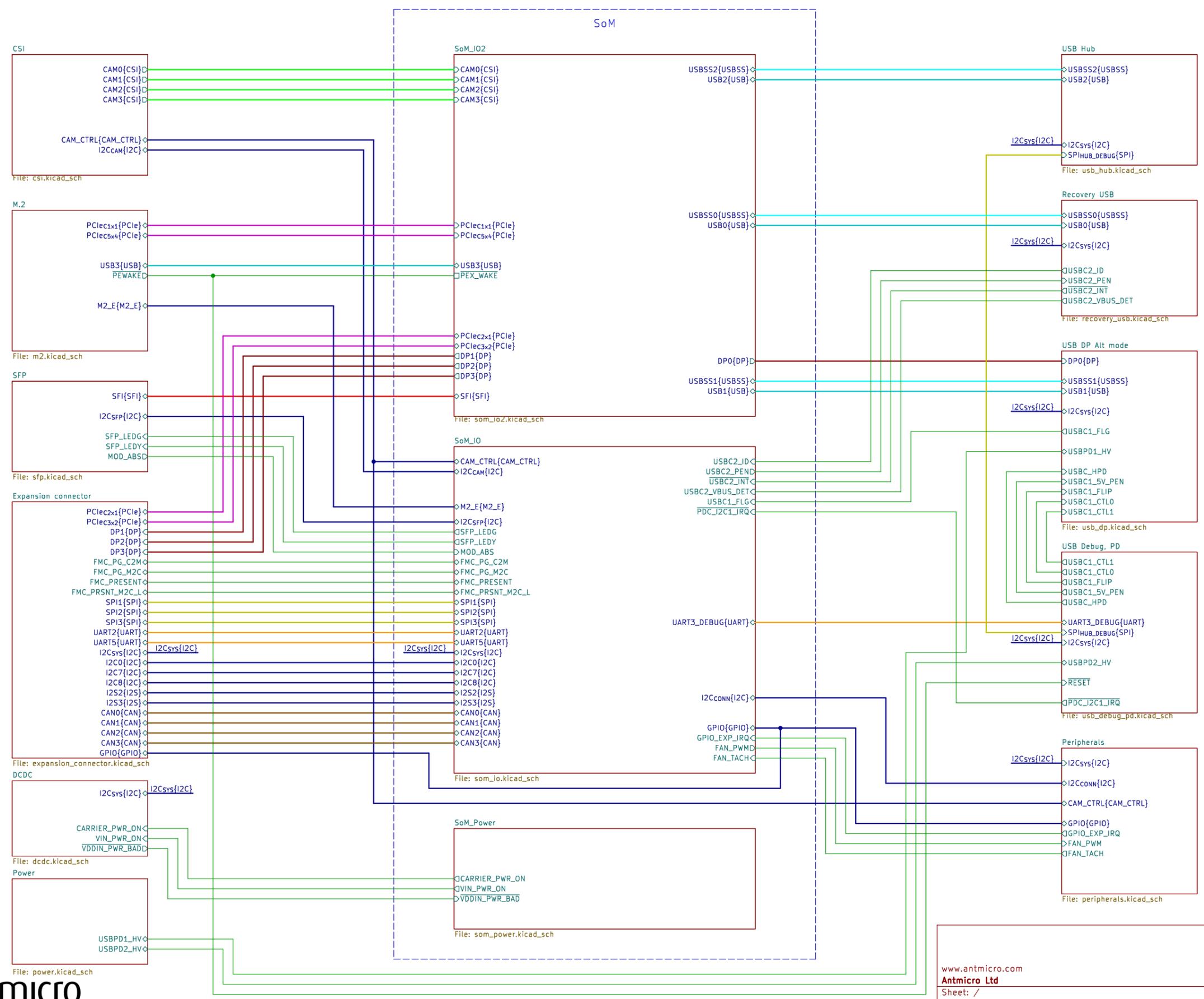


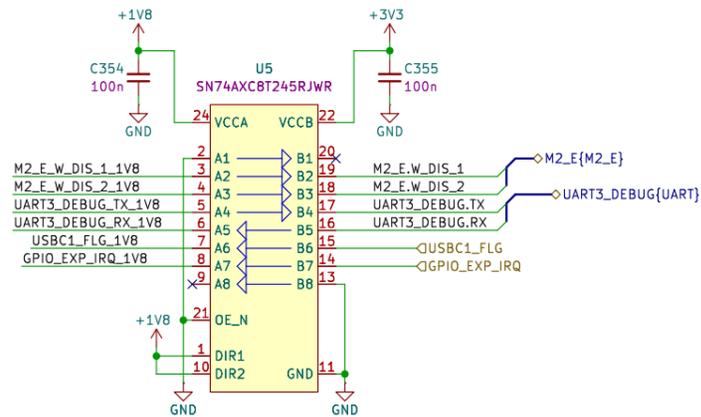
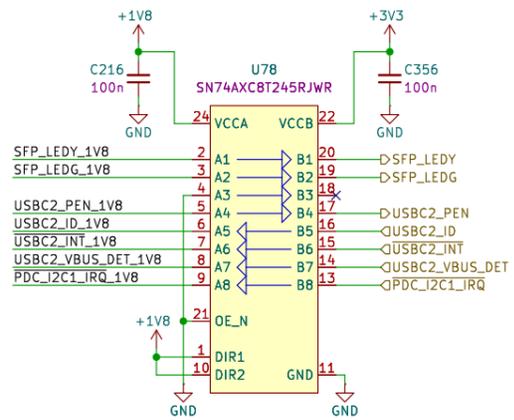
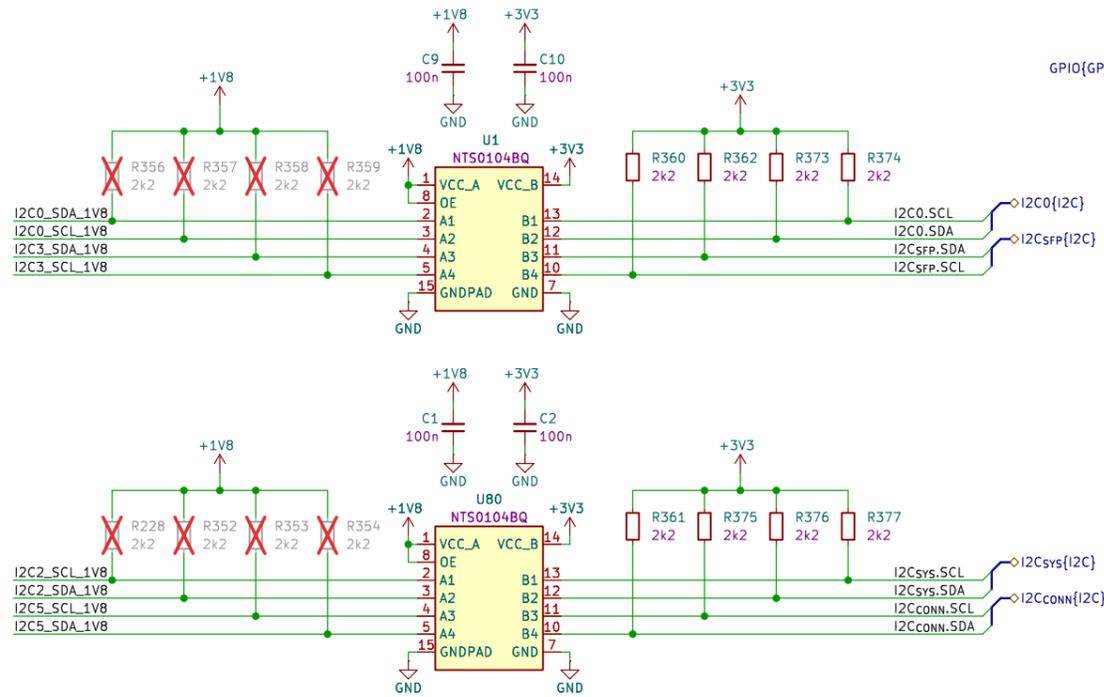
- FD1 Fiducial_1mm_Mask3mm
- FD2 Fiducial_1mm_Mask3mm
- FD3 Fiducial_1mm_Mask3mm
- FD4 Fiducial_1mm_Mask3mm
- FD5 Fiducial_1mm_Mask3mm
- FD6 Fiducial_1mm_Mask3mm
- FD7 Fiducial_1mm_Mask3mm
- FD8 Fiducial_1mm_Mask3mm



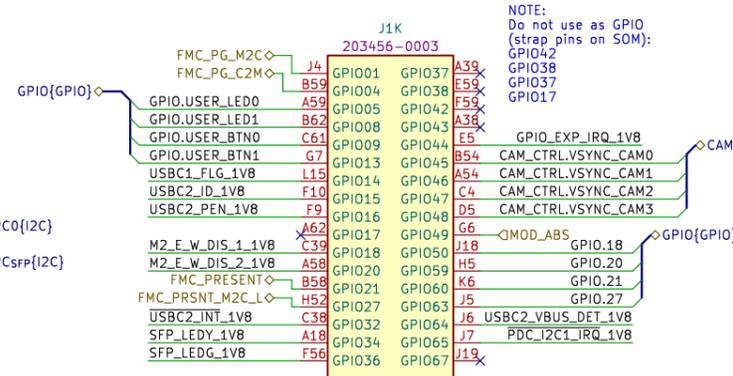
- 1 H1 9774080151R
- 1 H2 9774080151R
- 1 H3 9774080151R
- 1 H4 9774080151R
- 1 H11 9774080151R
- 1 H12 9774080151R
- 1 H13 9774080151R
- GND



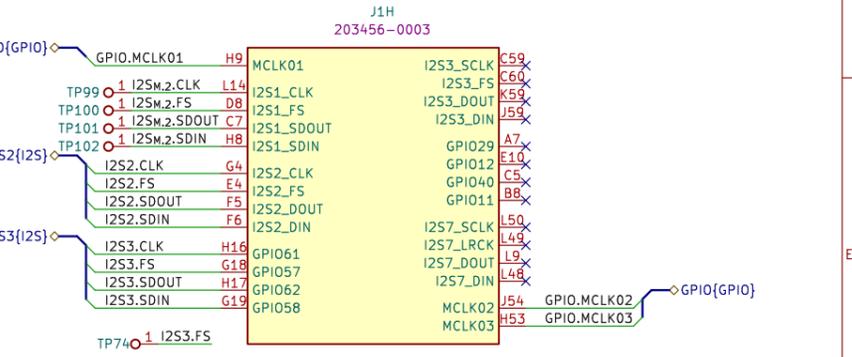
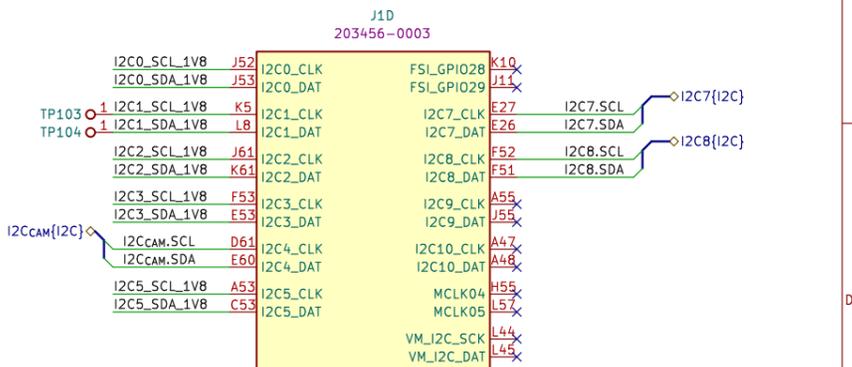
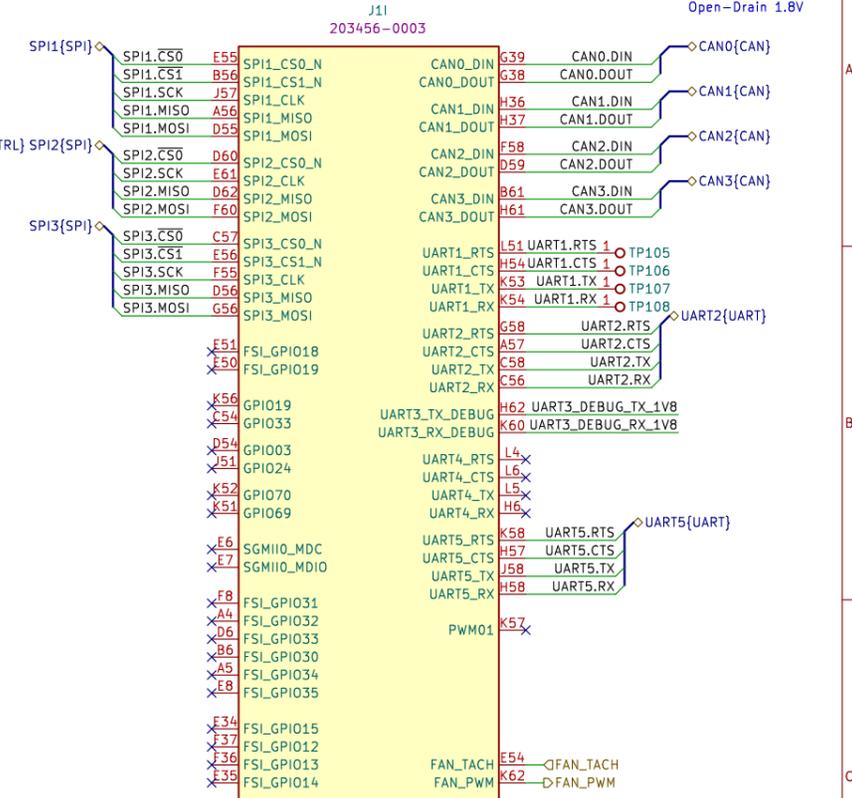
Level shifters



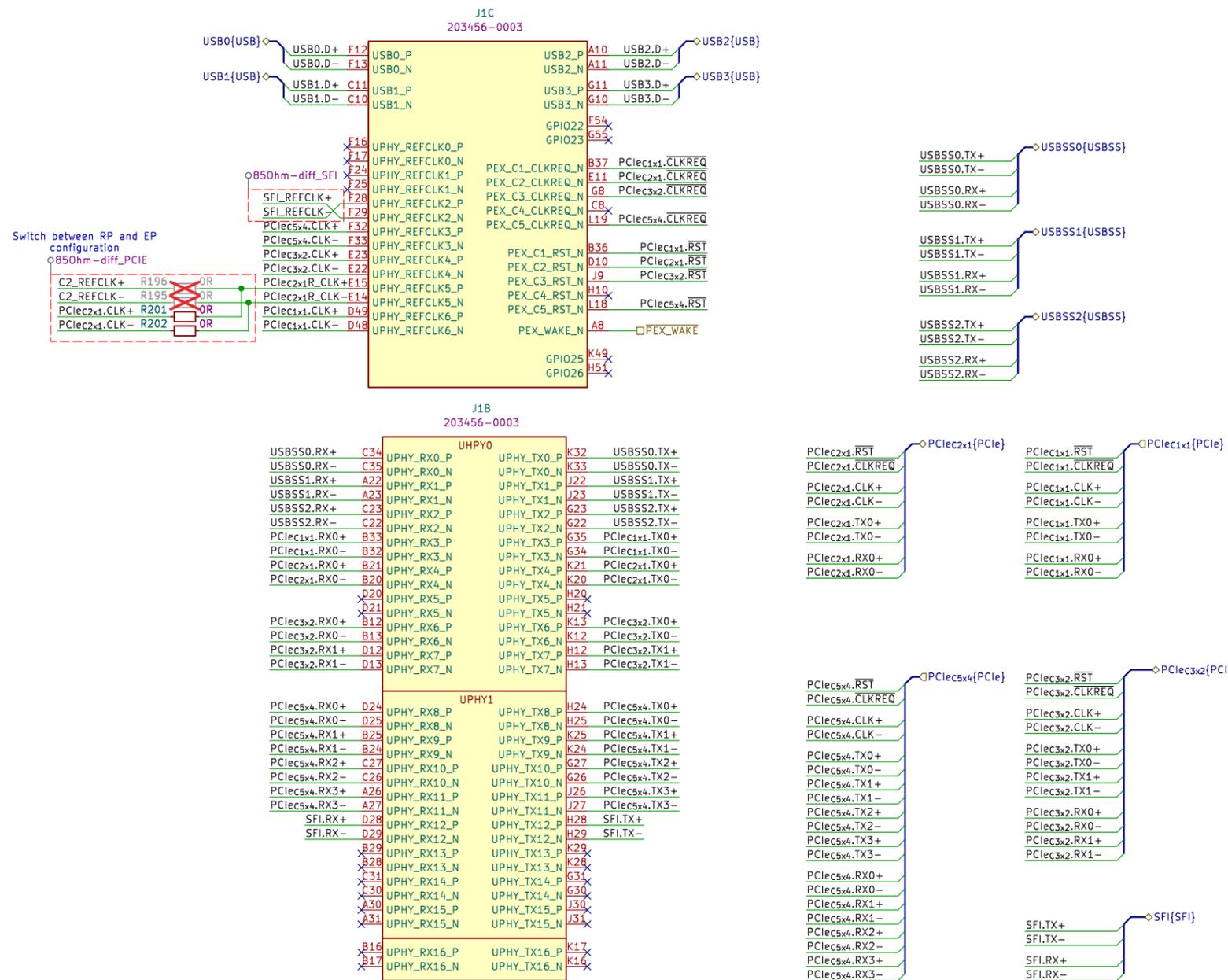
GPIO



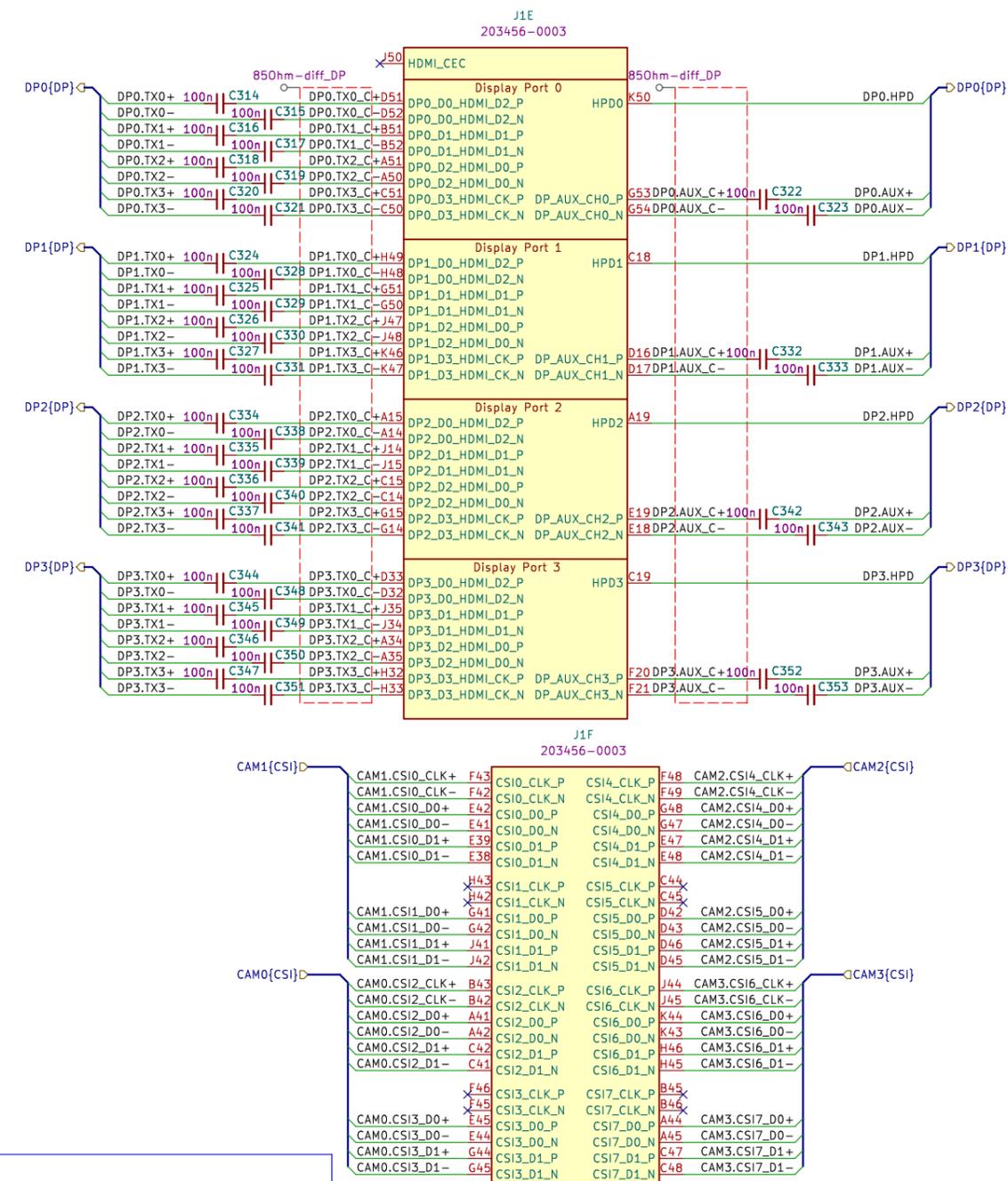
UART/I2C/SPI/CAN/FAN



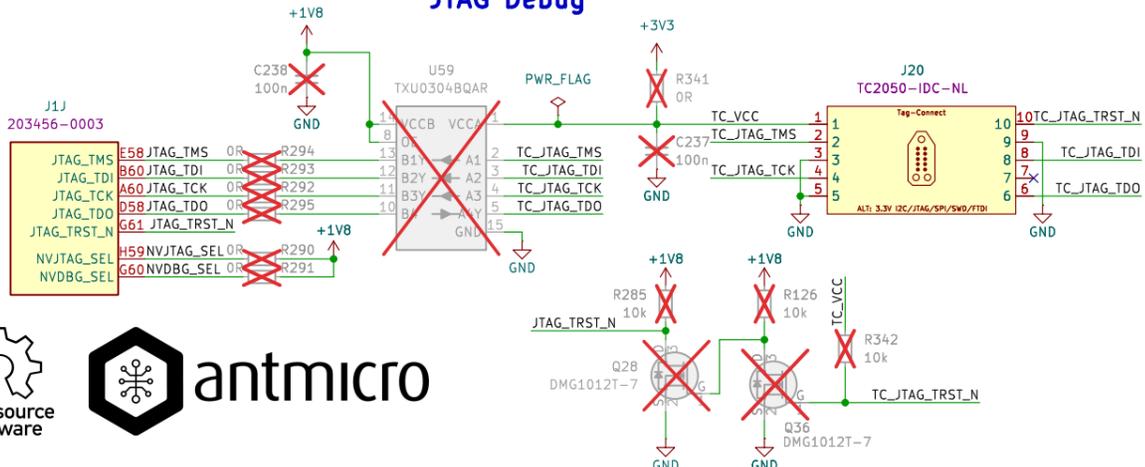
PCIe and USB3.0 SOM connections



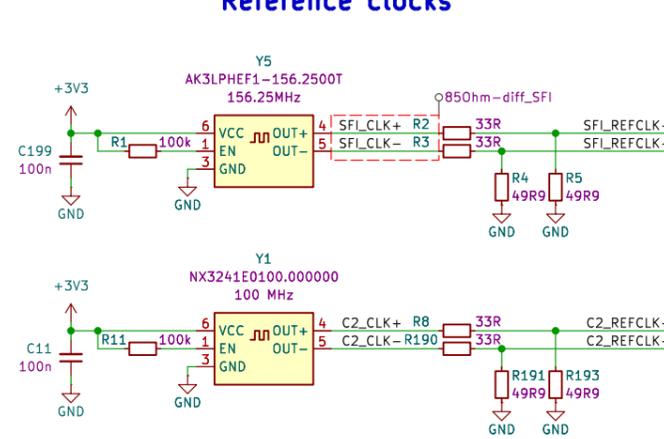
DP and CSI SOM connections



JTAG Debug



Reference clocks



www.antmicro.com

Antmicro Ltd

Sheet: /SoM_I02/

File: som_io2.kicad_sch

Title: Antmicro Baseboard for Jetson AGX Thor

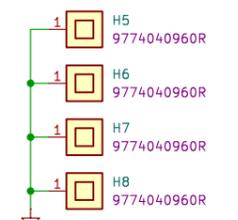
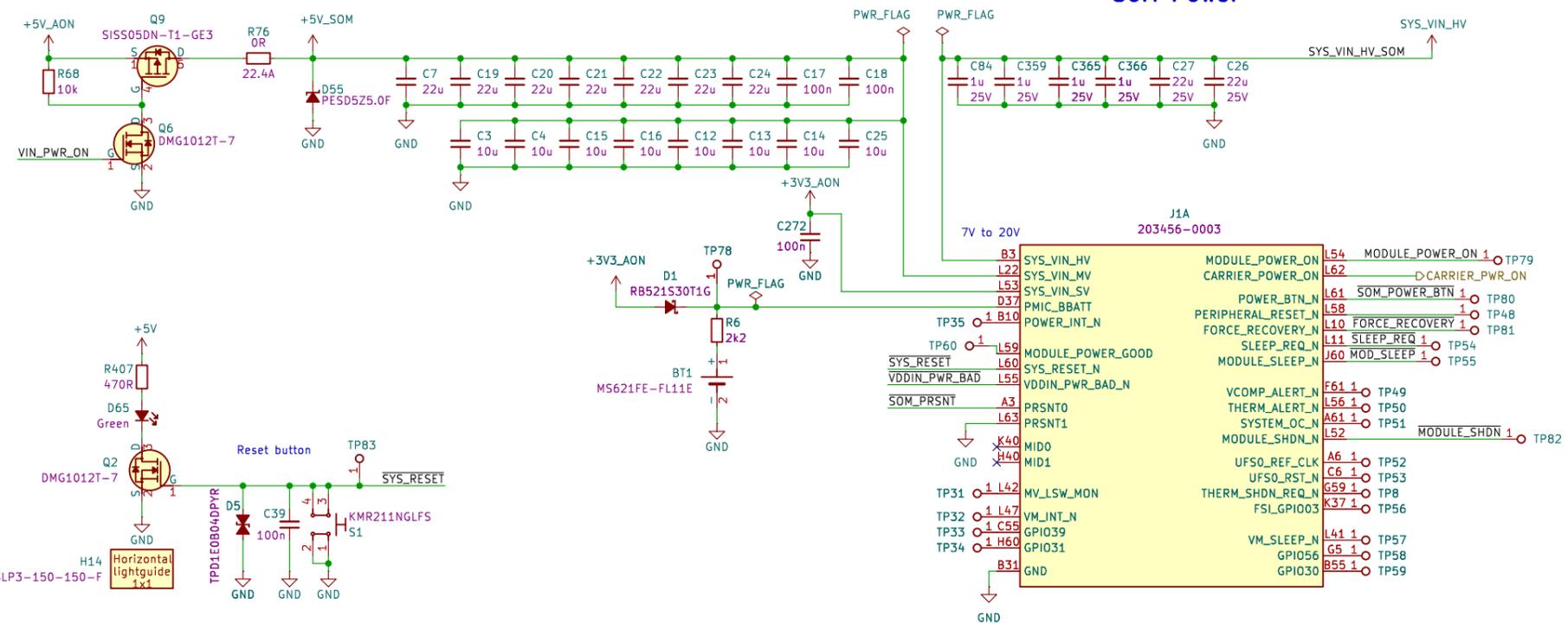
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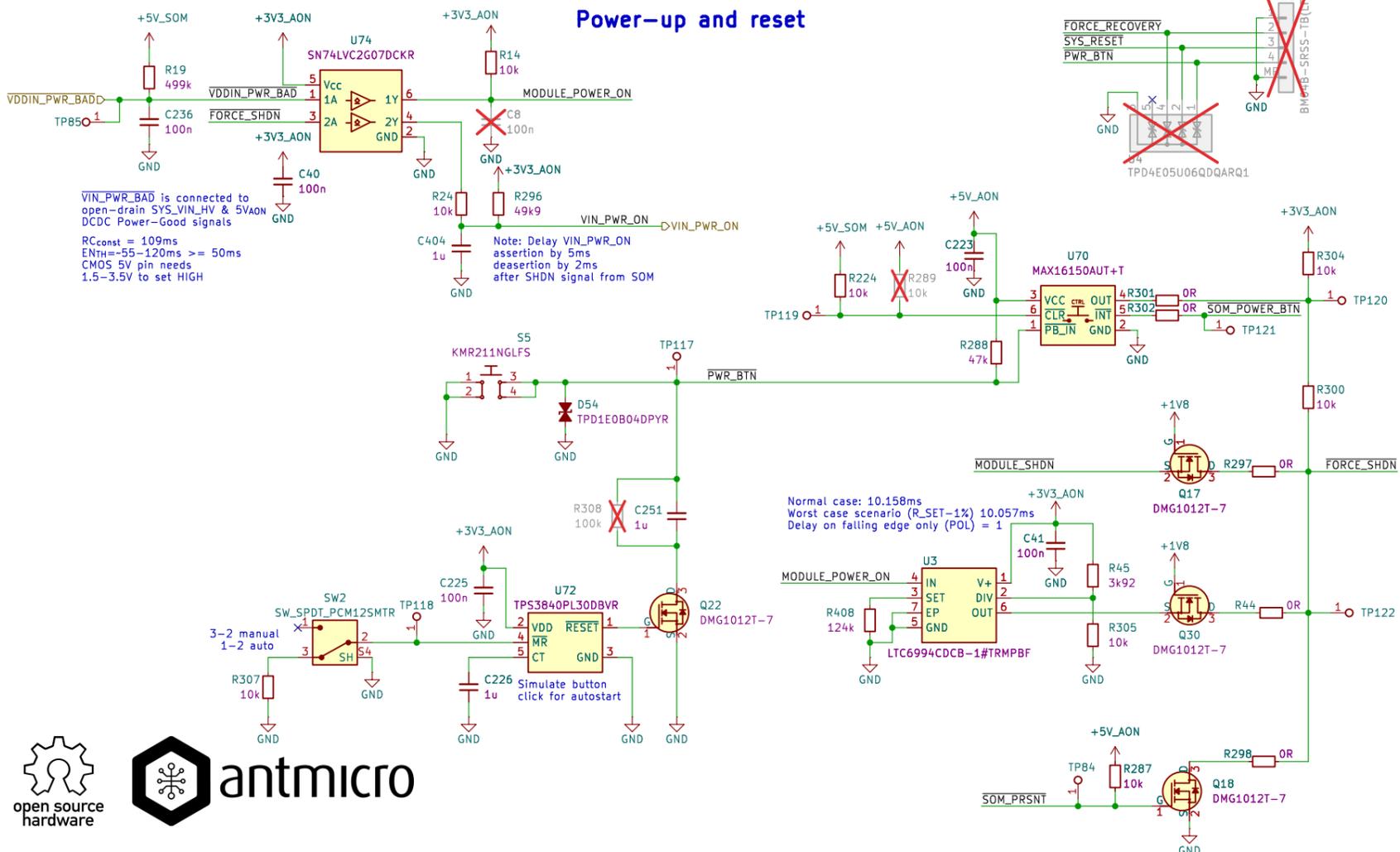
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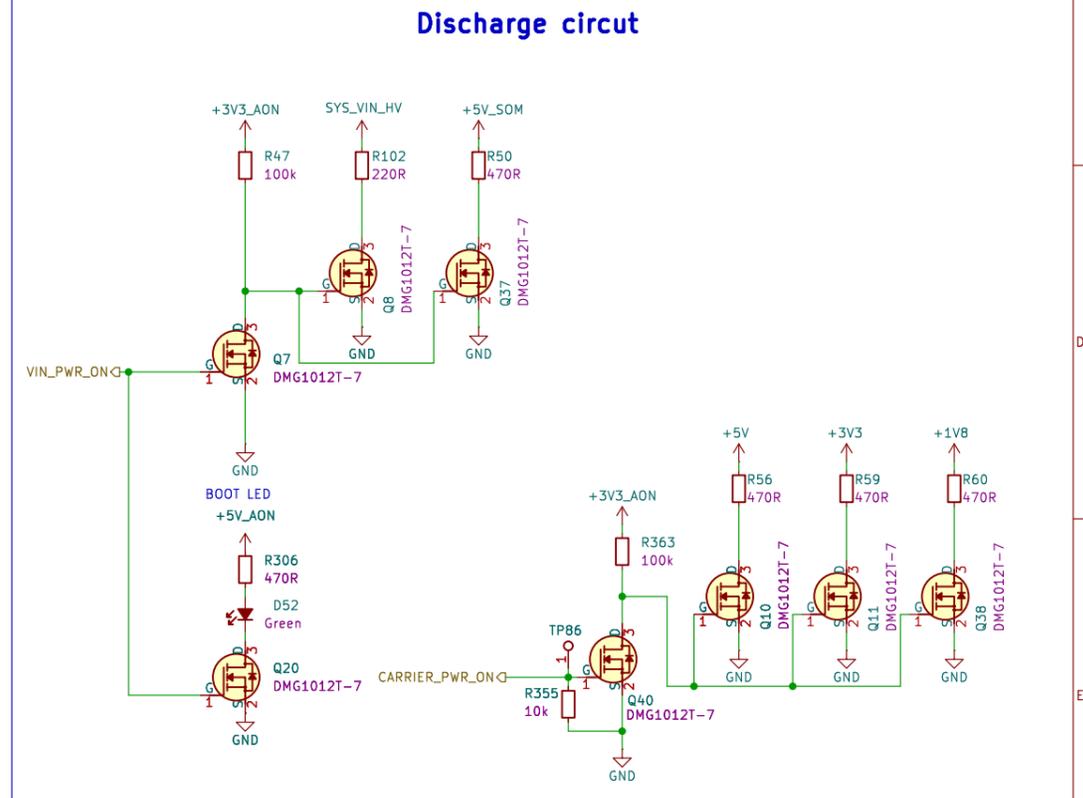
SoM Power



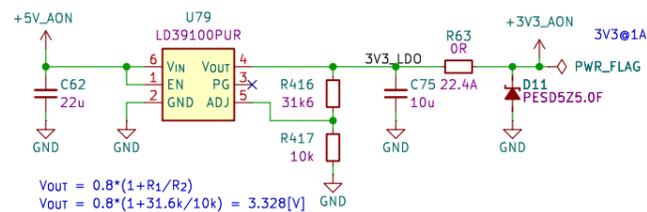
Power-up and reset



Discharge circuit



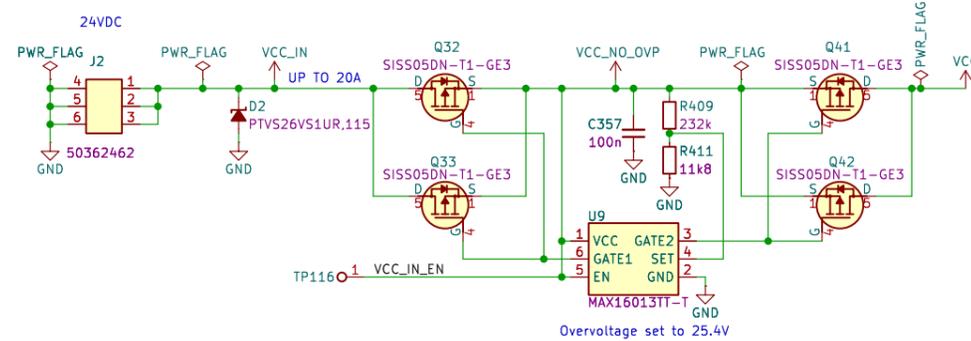
3V3 standby LDO



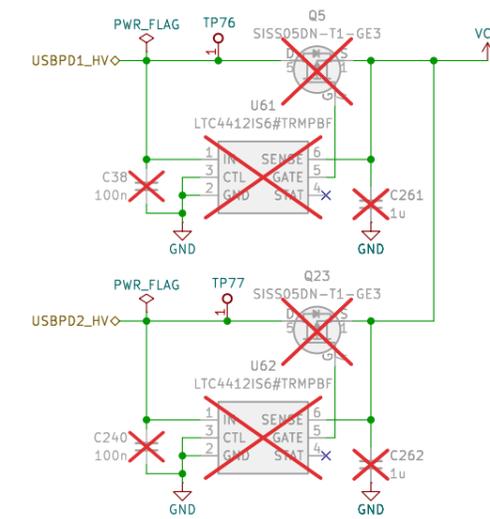
$$V_{out} = 0.8 \cdot (1 + R_1/R_2)$$

$$V_{out} = 0.8 \cdot (1 + 31.6k/10k) = 3.328[V]$$

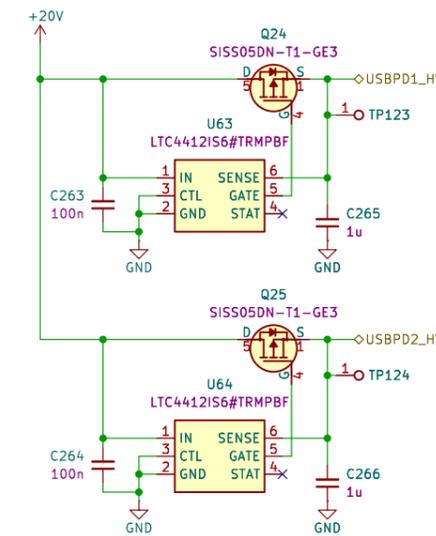
Input selector



Overvoltage set to 25.4V



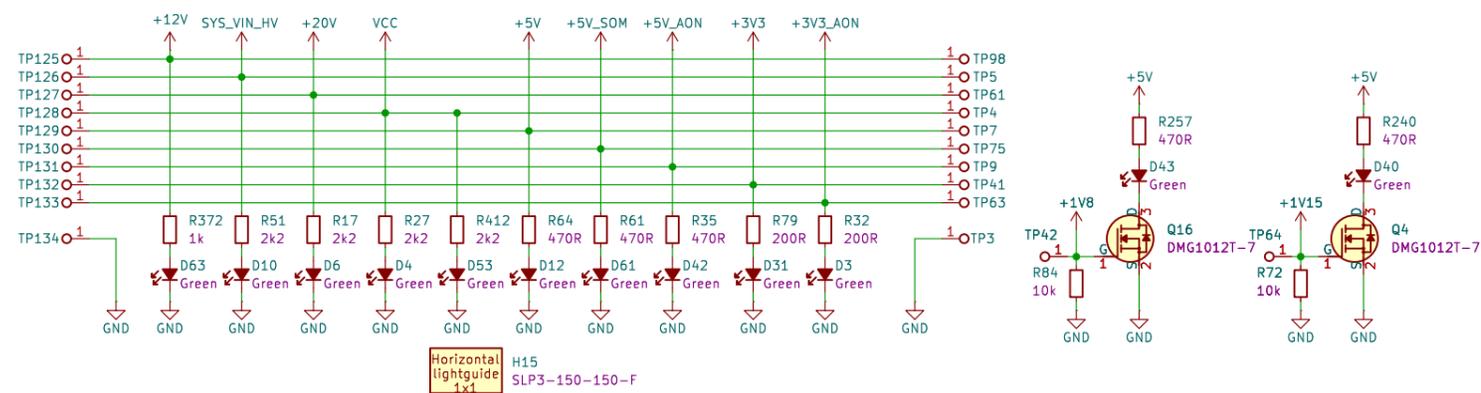
USB PD Power Ideal Diodes



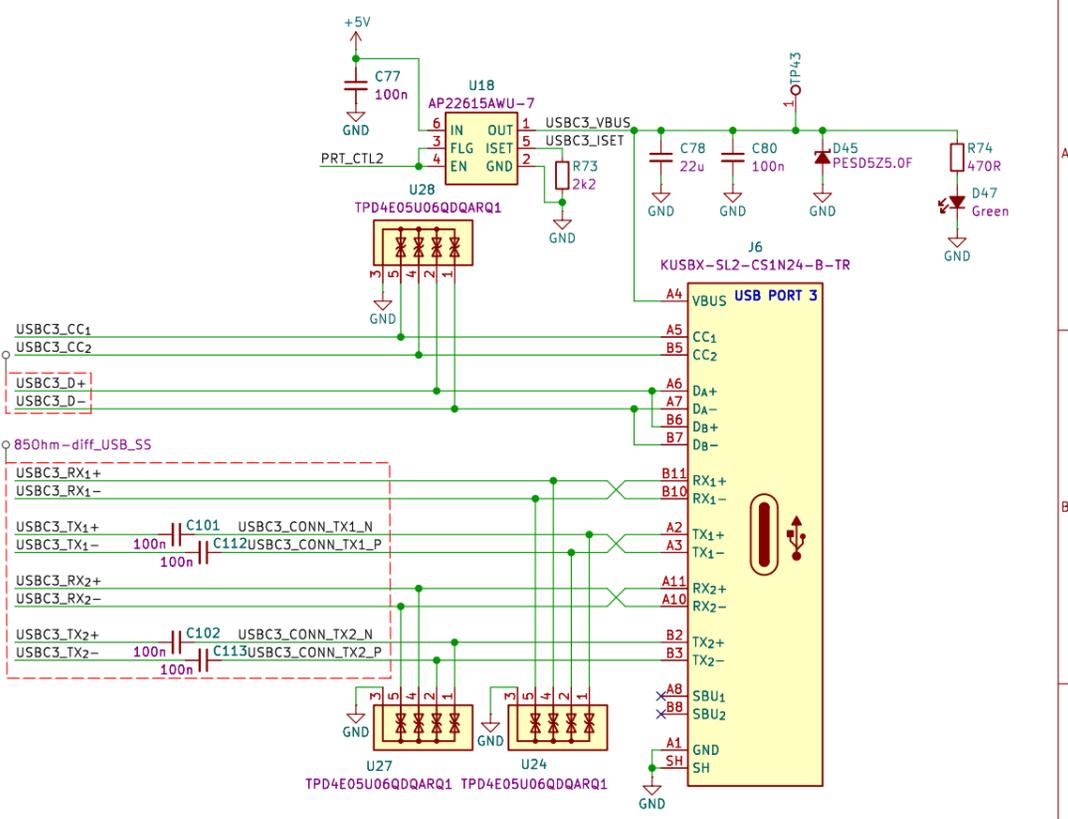
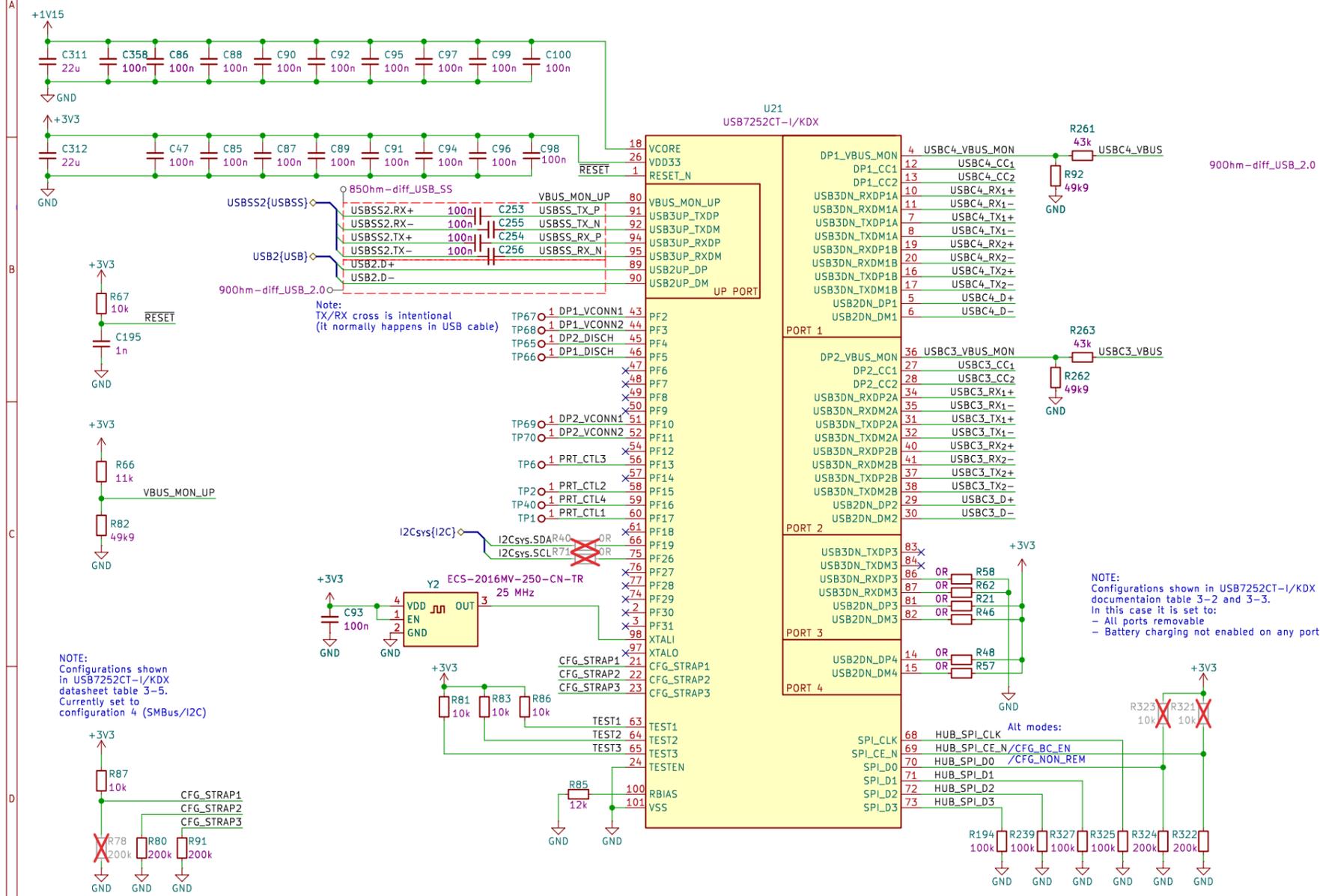
Power sequencing

Sequence	Power rail	EN_signal	Delay
1	VCC(24V)	-	0
2	+5V_AON	VCC pull-up	0
3	+3V3_AON	5V_AON	0
4	+5V_SOM	VIN_PWR_ON	>=20ms
	SYS_VIN_HV	VIN_PWR_ON	>=20ms
5	MODULE_POWER_ON	+5V_SOM & PG(SYS_VIN_HV)	>=50ms
6	+3V3	CARRIER_POWER_ON	
	+1V8	CARRIER_POWER_ON	
	+12V	CARRIER_POWER_ON	
	+5V	CARRIER_POWER_ON	

Power LEDs and testpoints



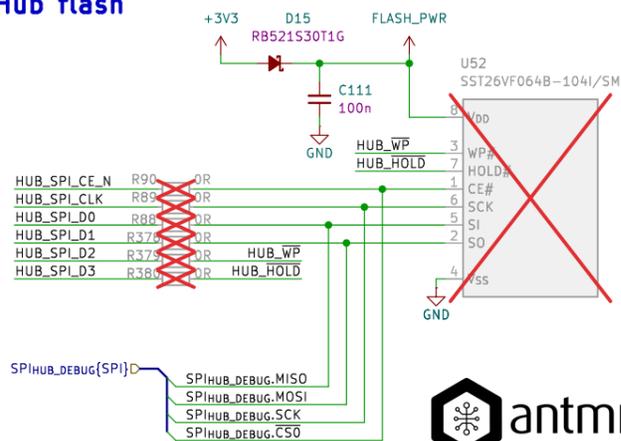
USB hub



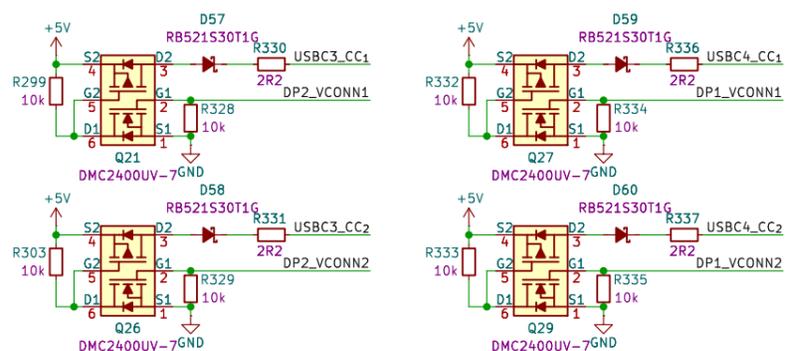
NOTE: Configurations shown in USB7252CT-1/KDX datasheet table 3-5. Currently set to configuration 4 (SMBus/I2C)

NOTE: Configurations shown in USB7252CT-1/KDX documentaion table 3-2 and 3-3. In this case it is set to:
 - All ports removable
 - Battery charging not enabled on any port

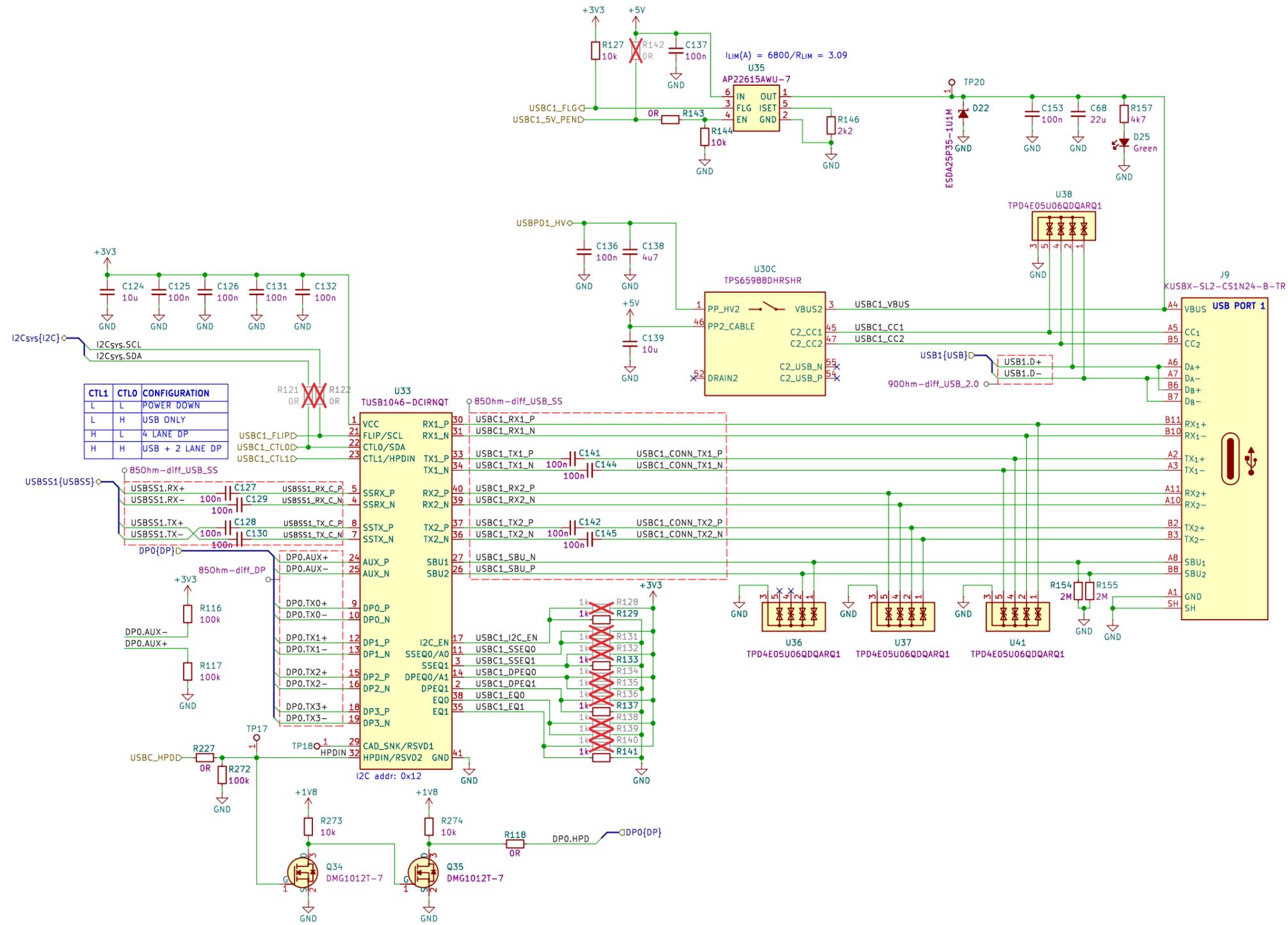
USB Hub flash



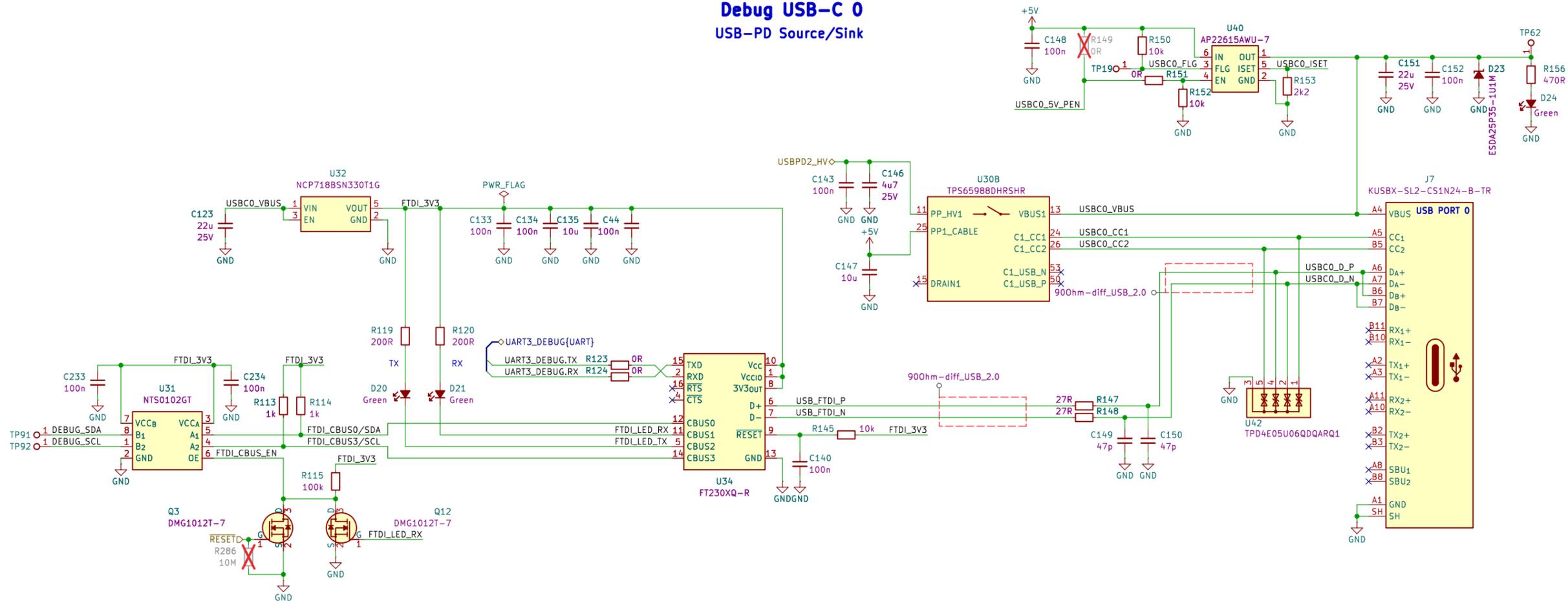
VCONN Switches



USB Display port alt mode

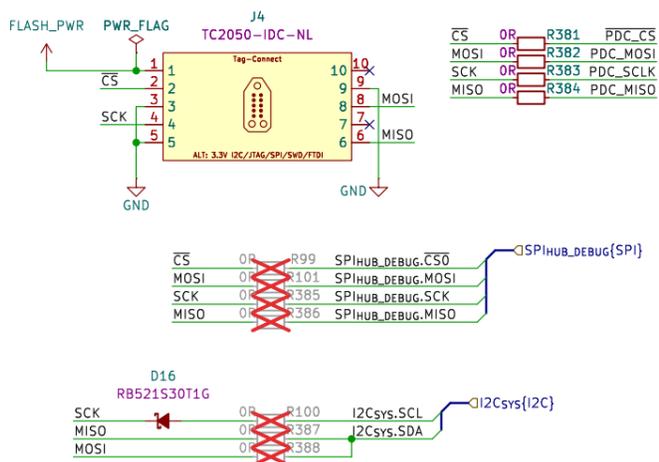


Debug USB-C 0 USB-PD Source/Sink

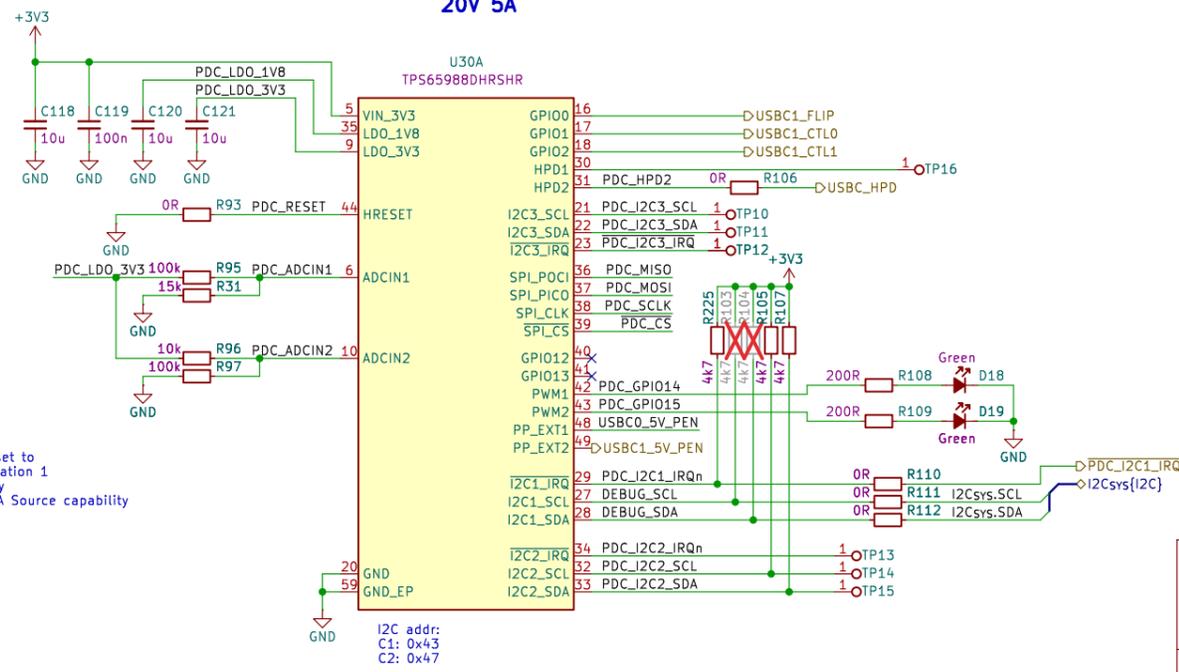


Debug connector

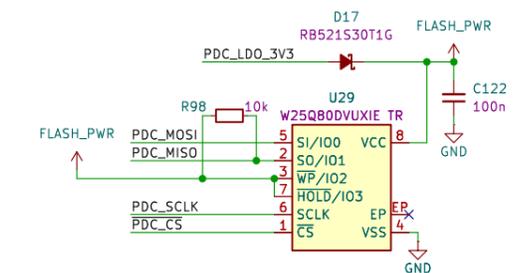
pinout compatible with www.github.com/antmicro/ftdi-toolkit

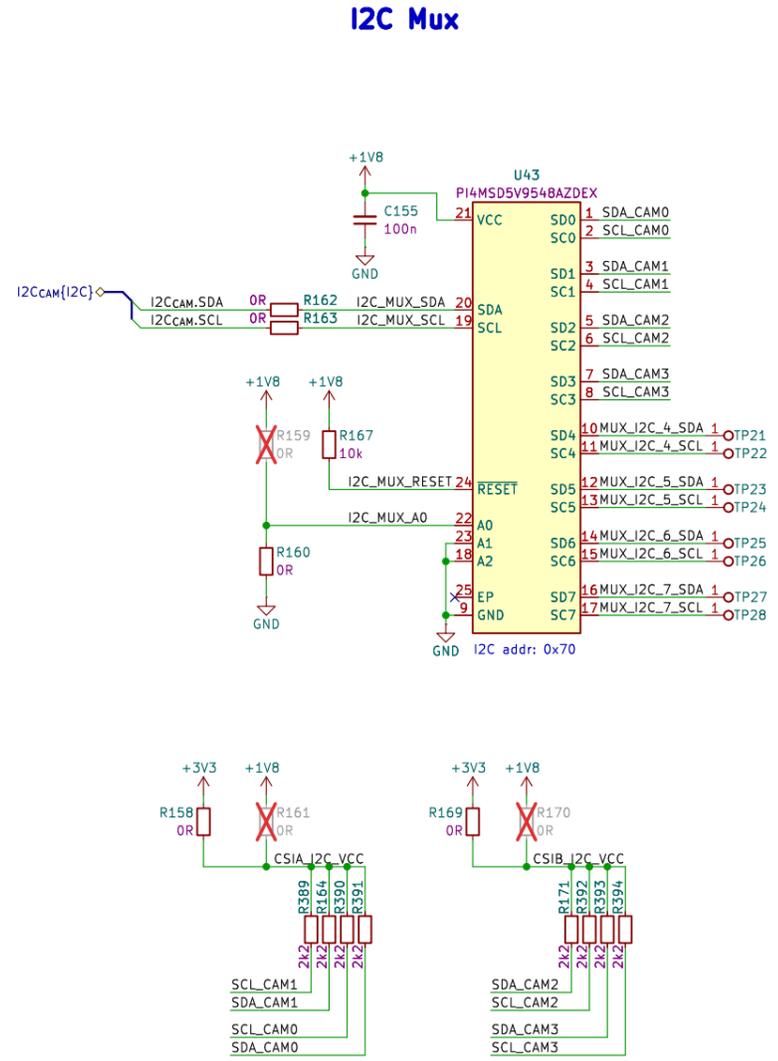


USB PD controller 20V 5A

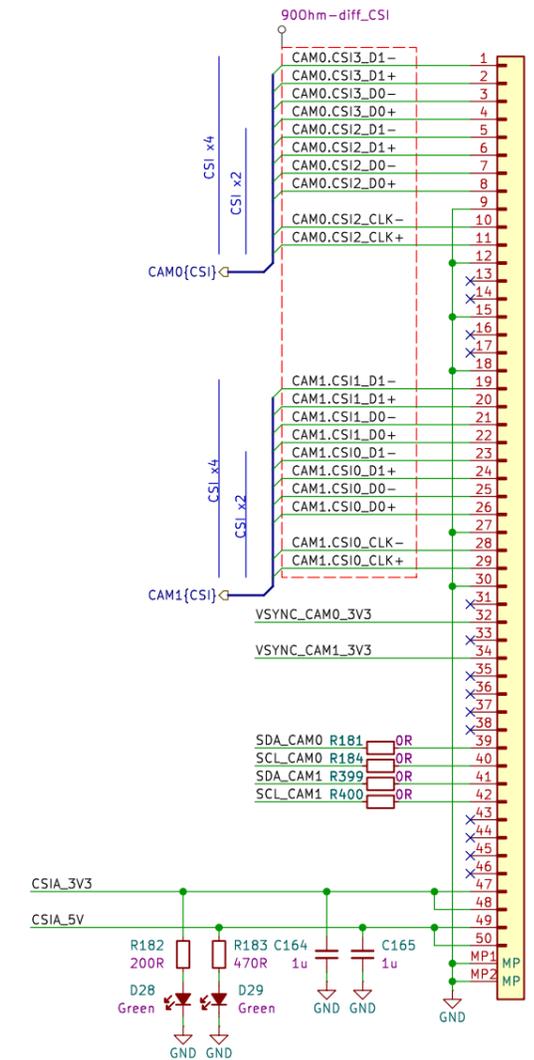


NOTE:
Device set to configuration 1
DFP only
5V at 3A Source capability

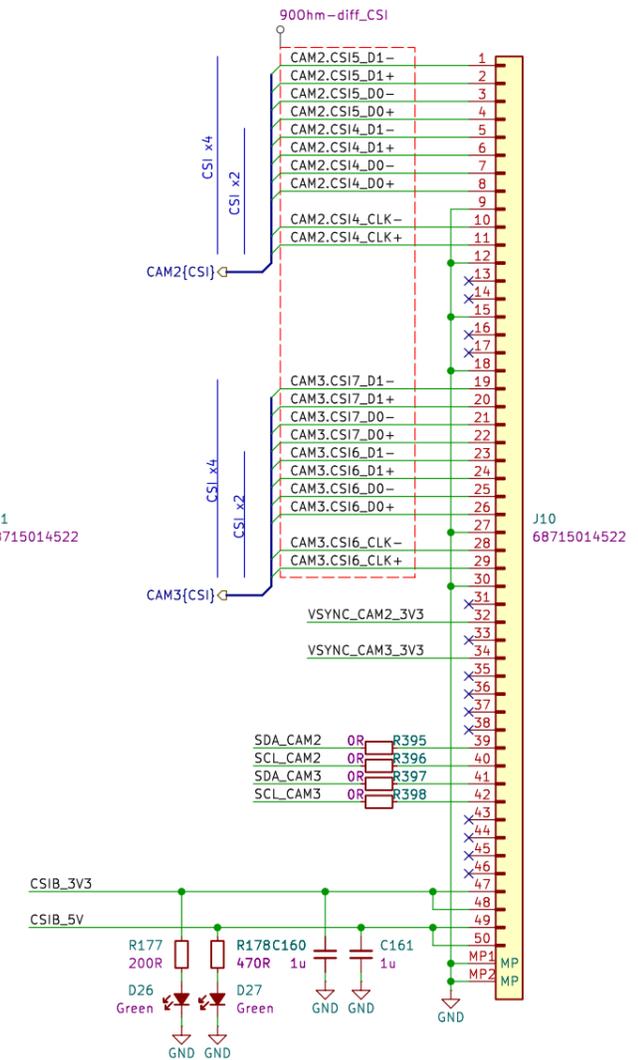




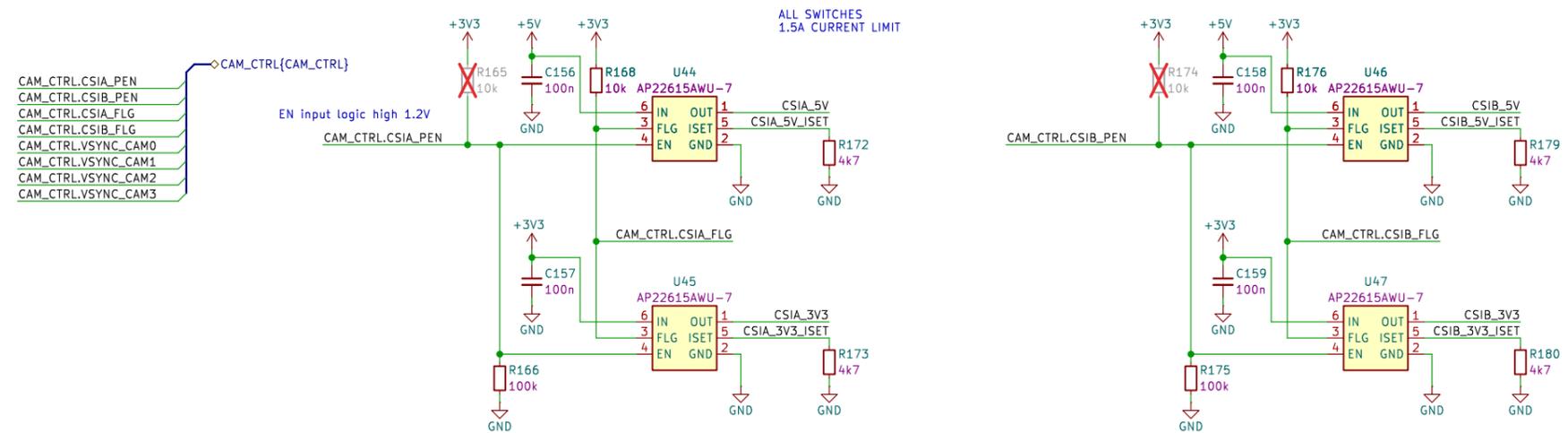
CSI Connector A



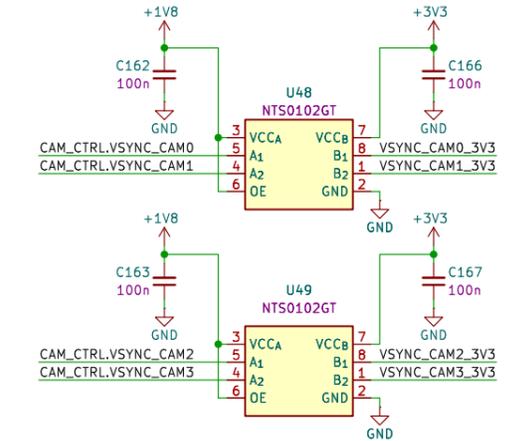
CSI Connector B

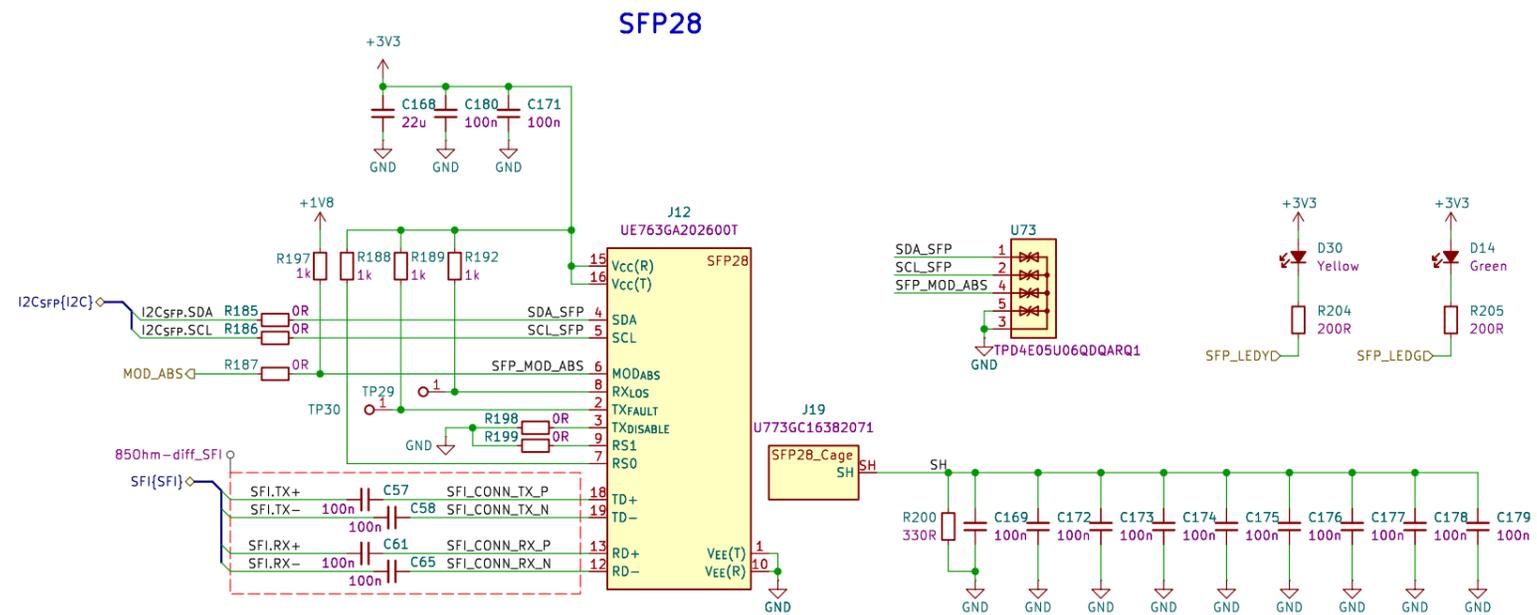


Power switches



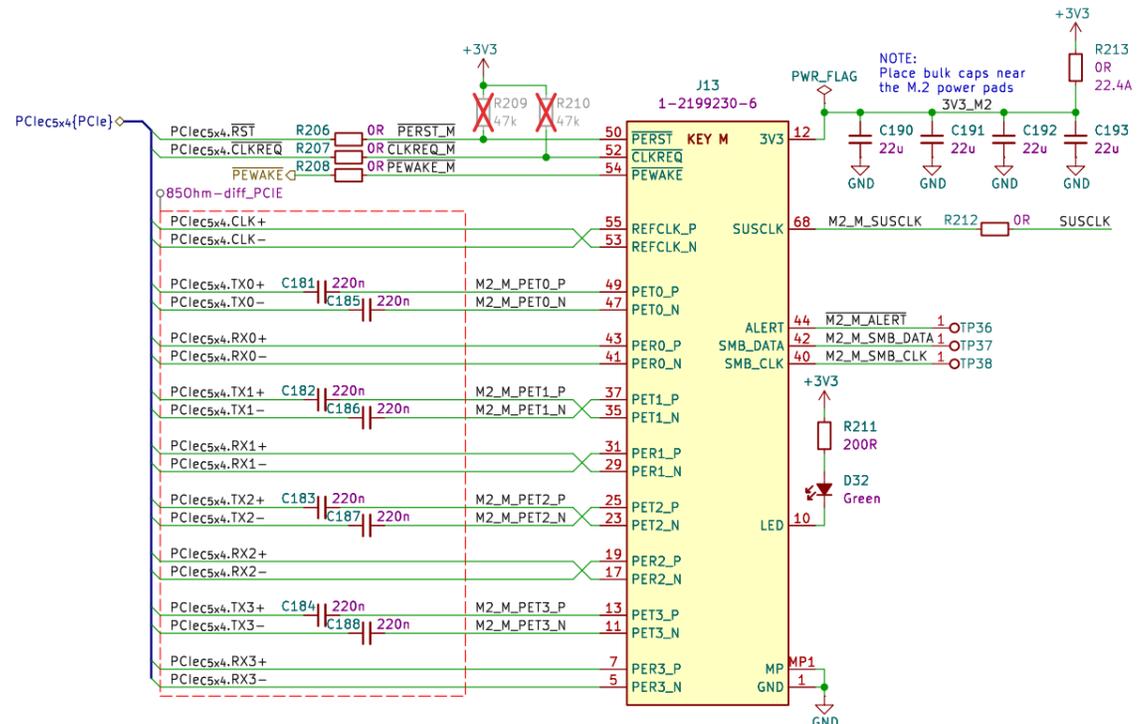
Level shifters





M.2 key M

PCIe x4

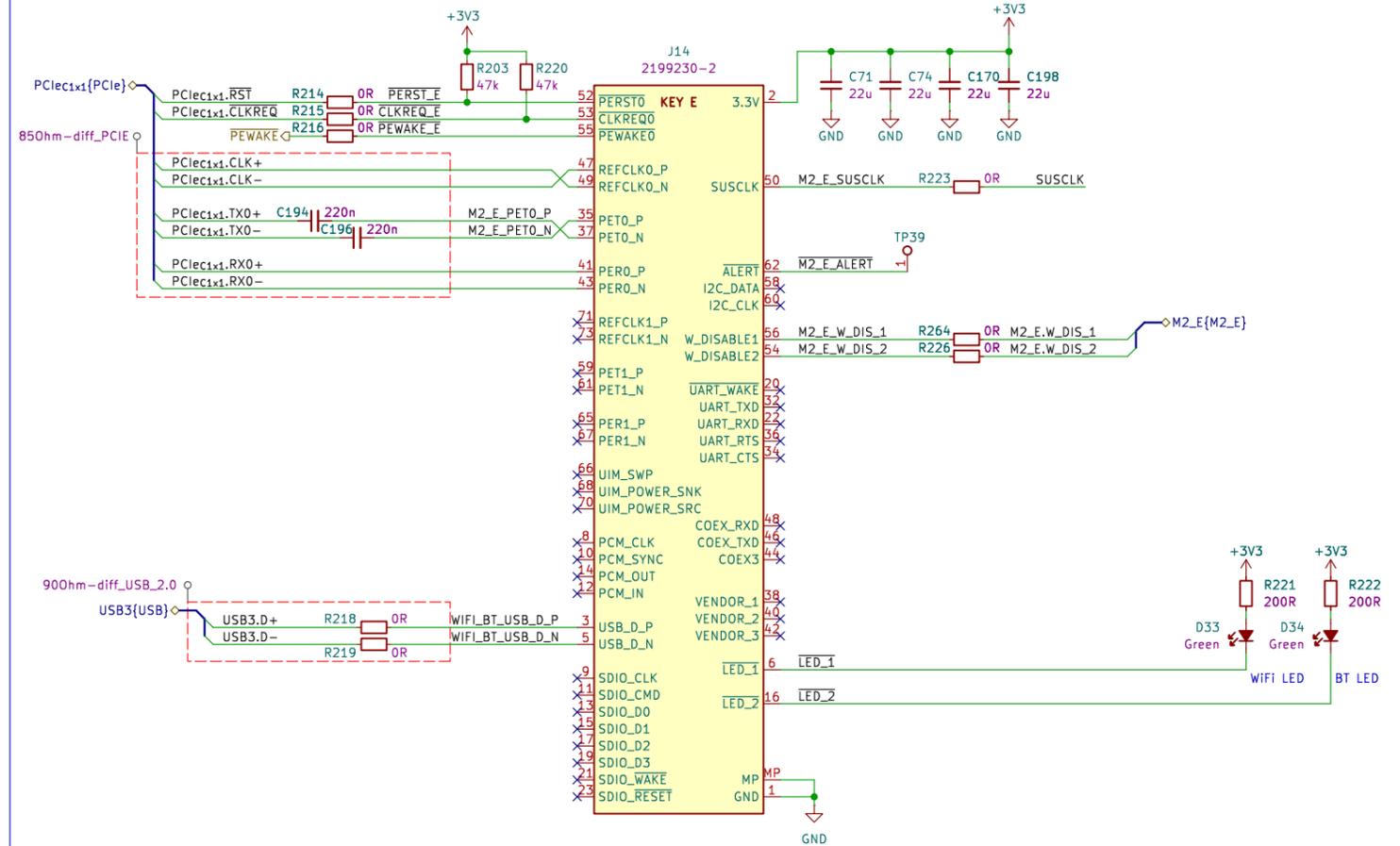


NOTE:
Nvidia Jetson AGX Thor
supports polarity inversion

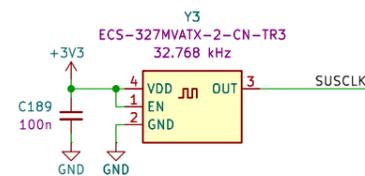


M.2 key E

2x PCIe x1, USB 2.0, I2C, UART and PCM



SUSCLK SOURCE



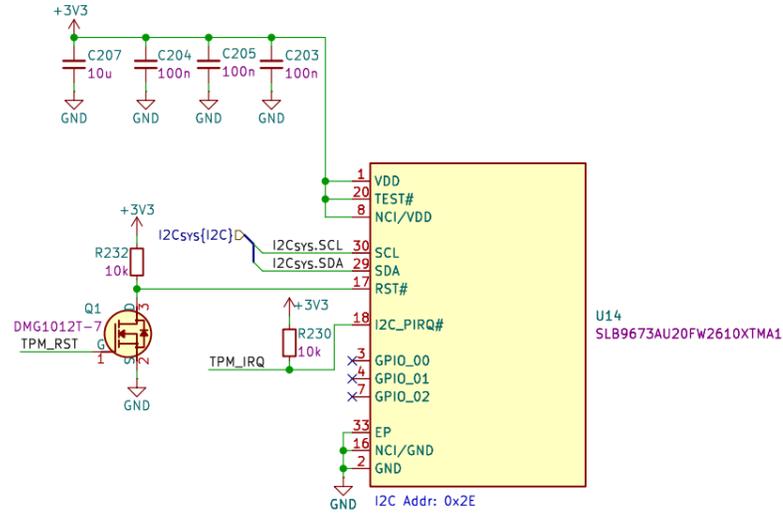
www.antmicro.com
Antmicro Ltd
Sheet: /M.2/
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Title: Antmicro Baseboard for Jetson AGX Thor

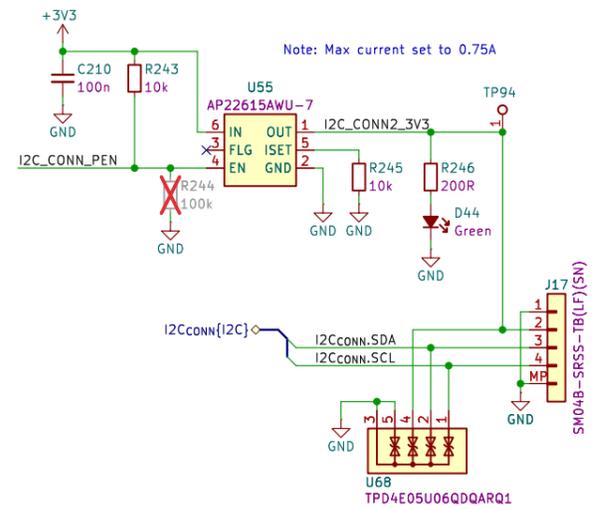
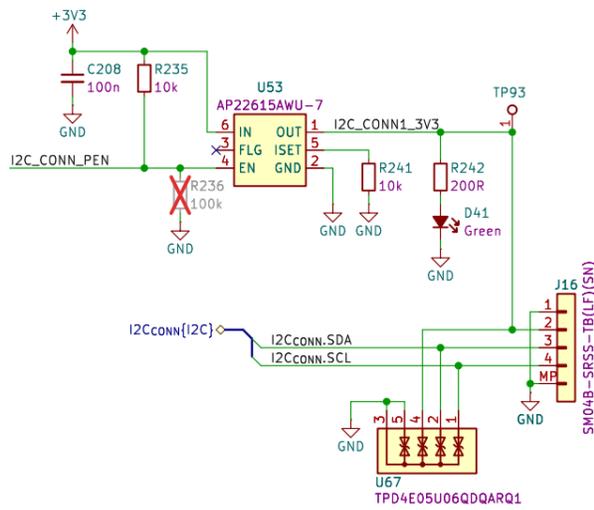
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Rev: 1.1.0:f256sec7
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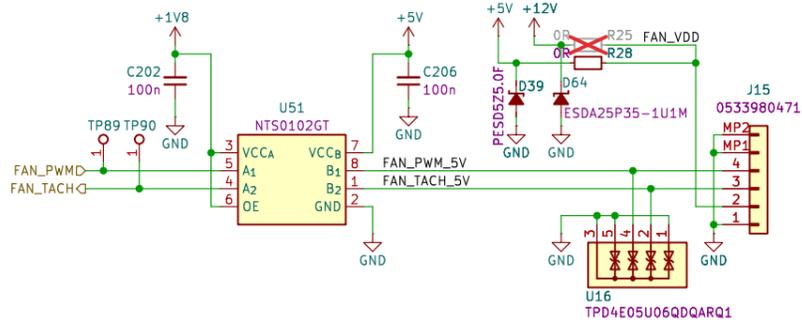
TPM



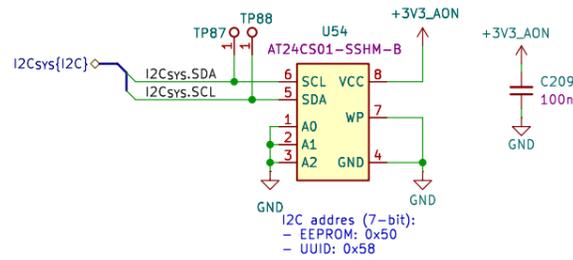
I2C connectors



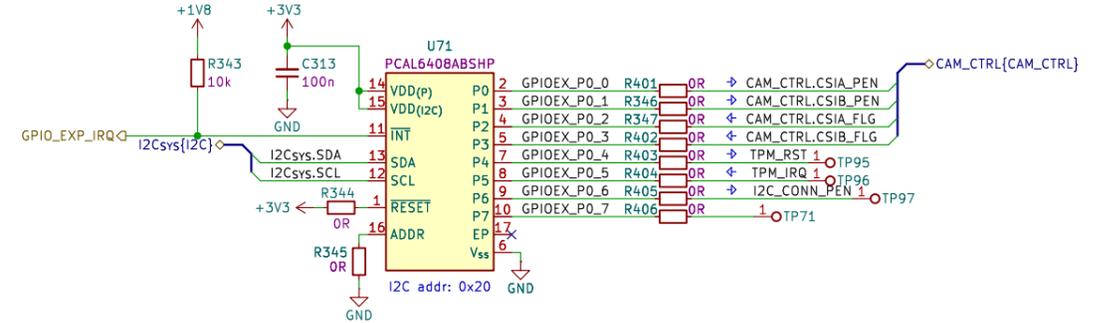
Fan connector



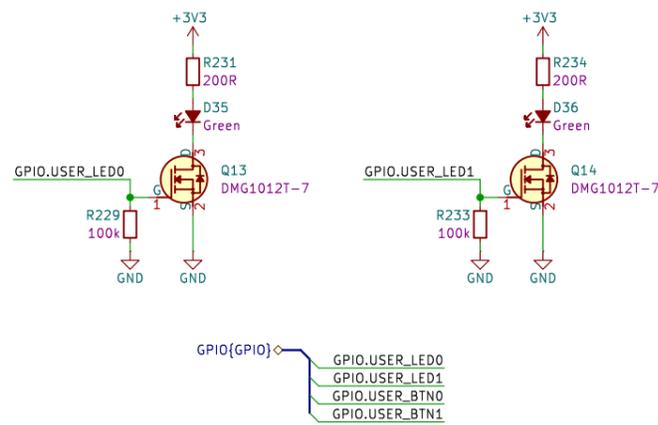
ID EEPROM



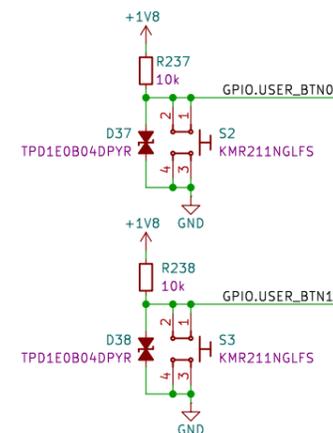
GPIO Expander



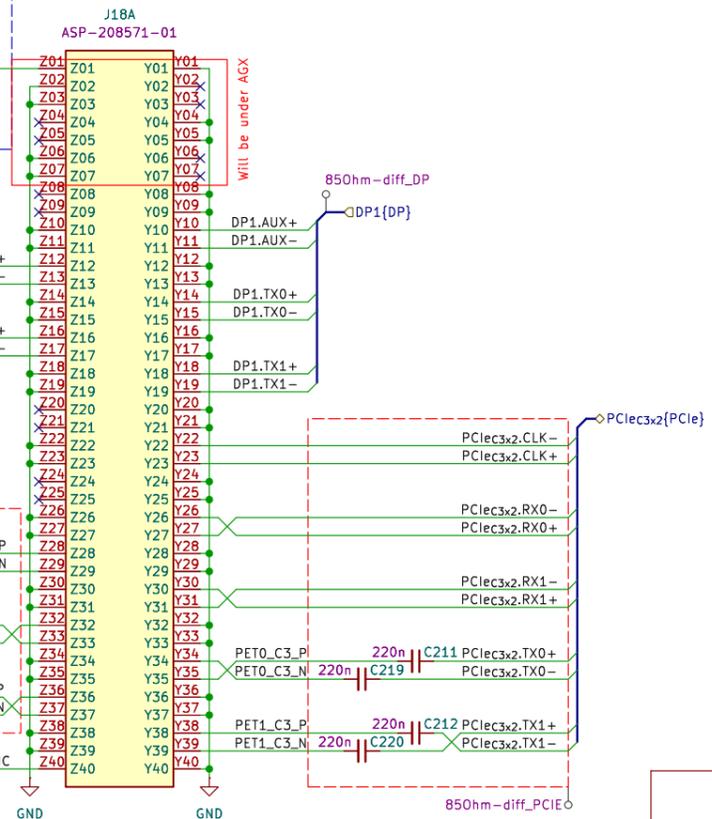
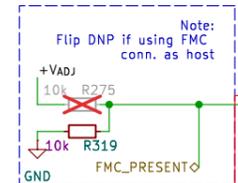
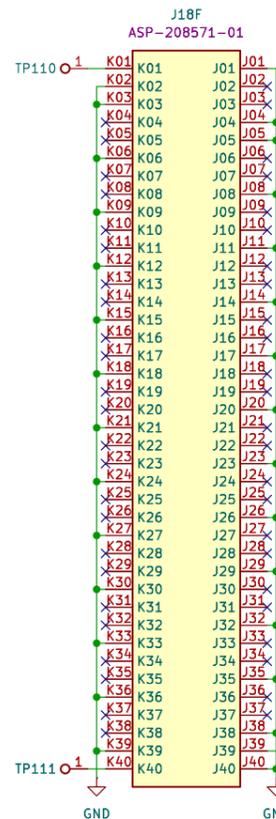
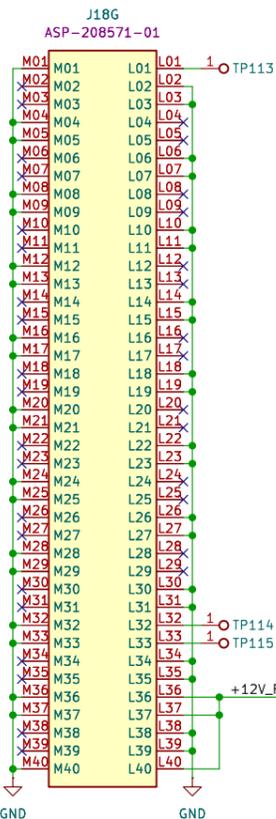
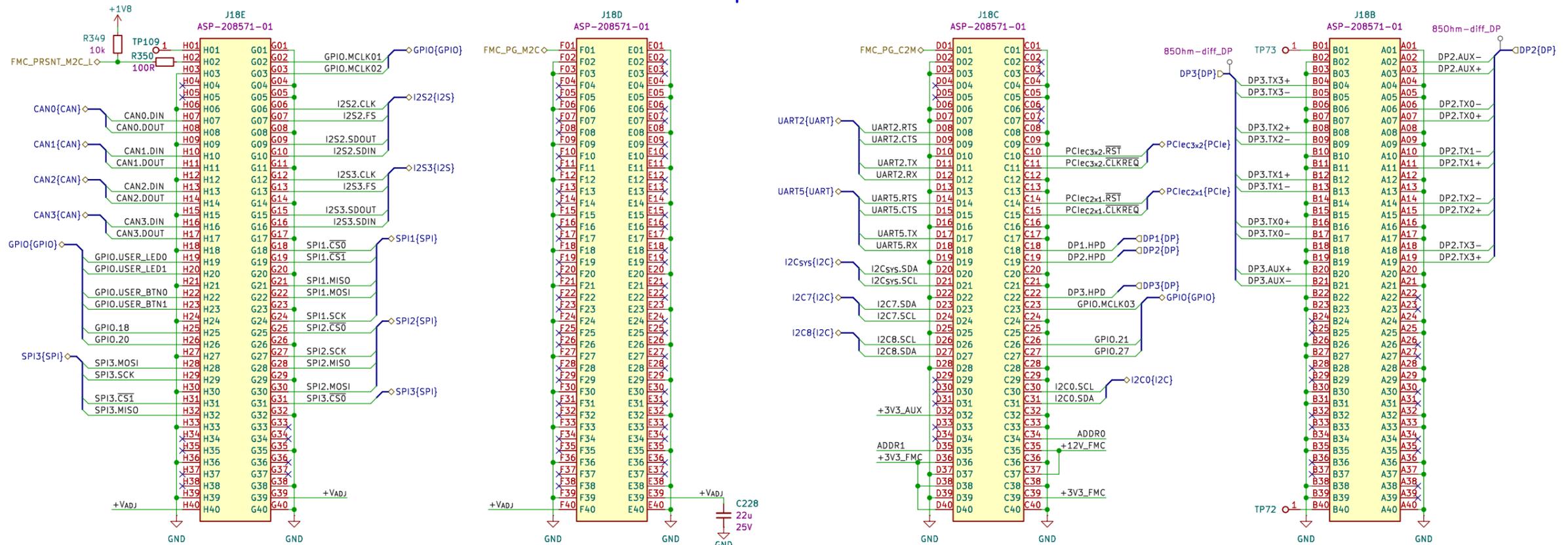
User LEDs



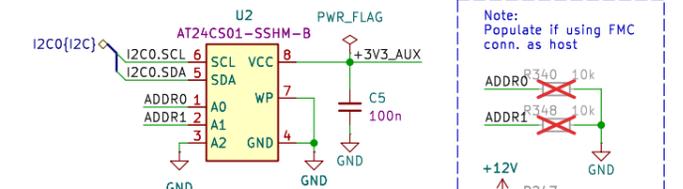
User Buttons



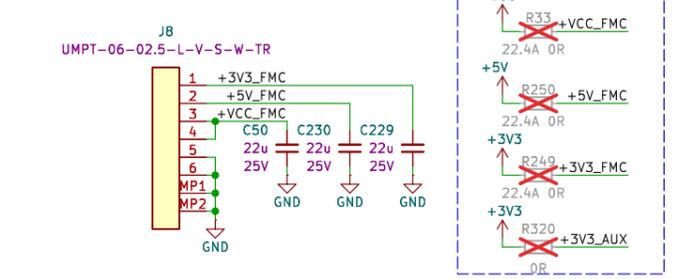
FMC+ expansion connector



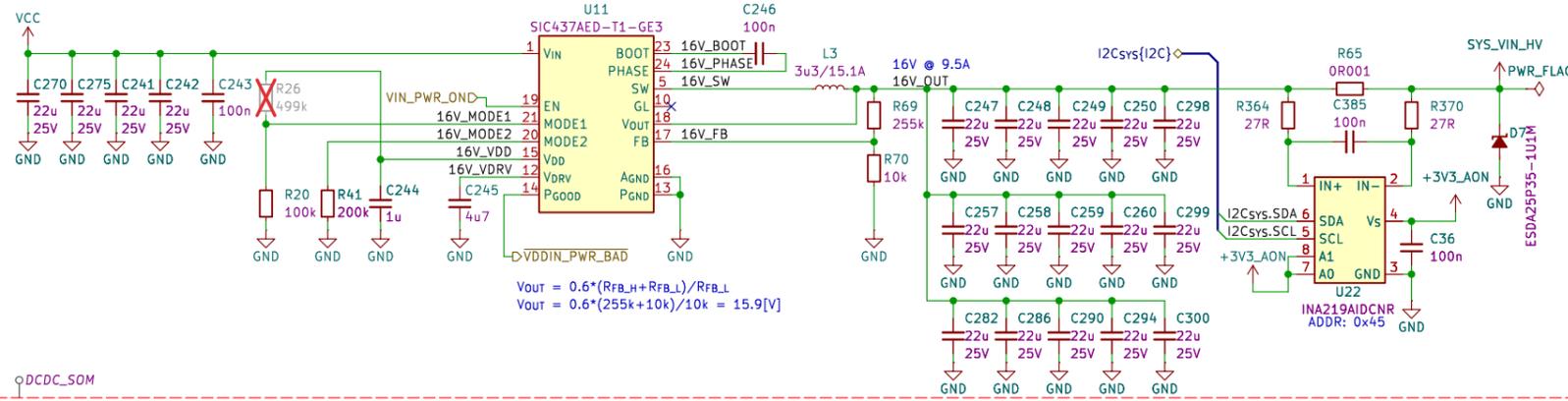
FMC Module ID



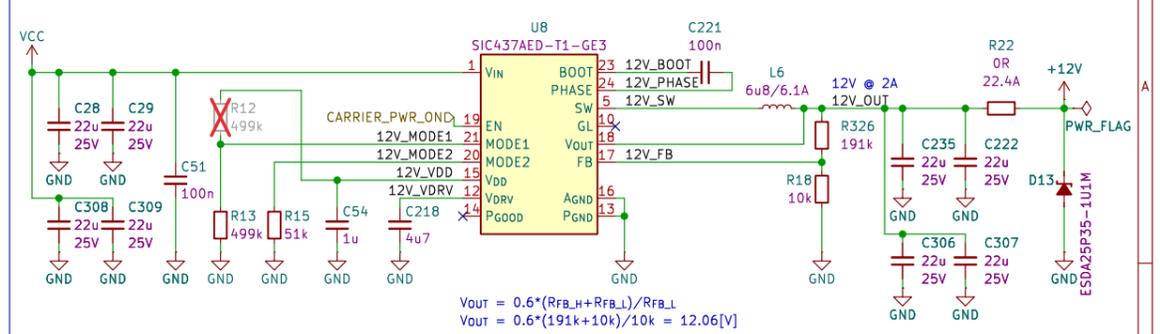
Power connector



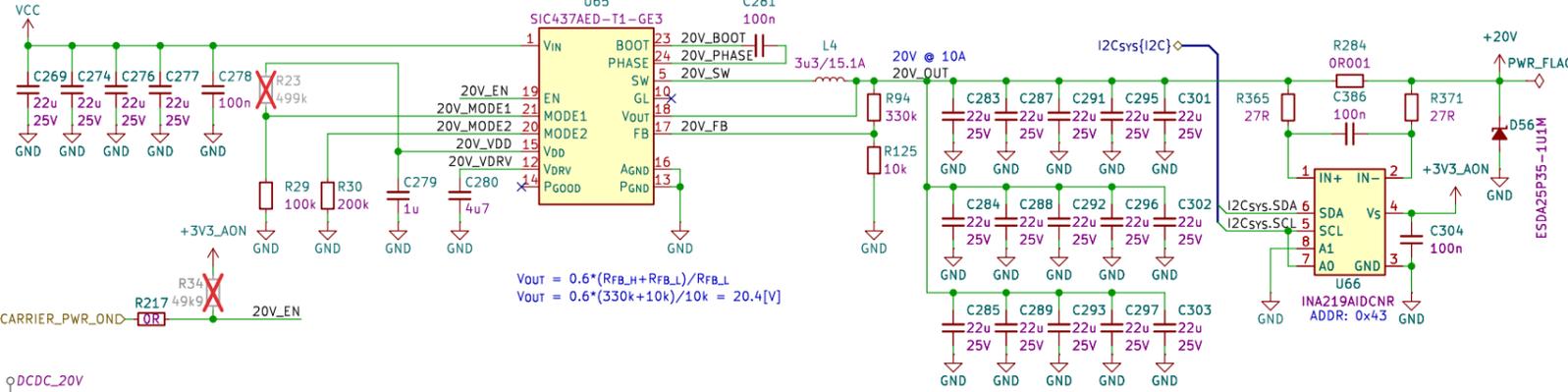
SoM High voltage DC/DC converter



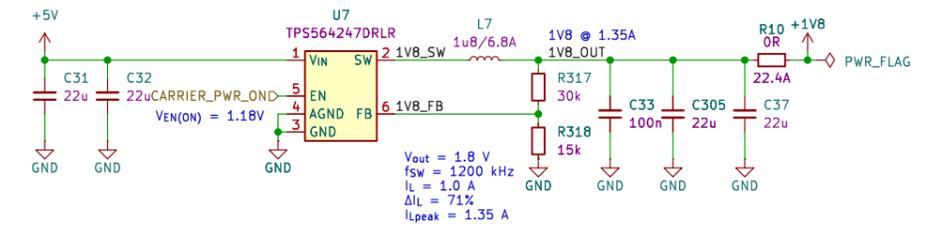
+12V DC/DC converter



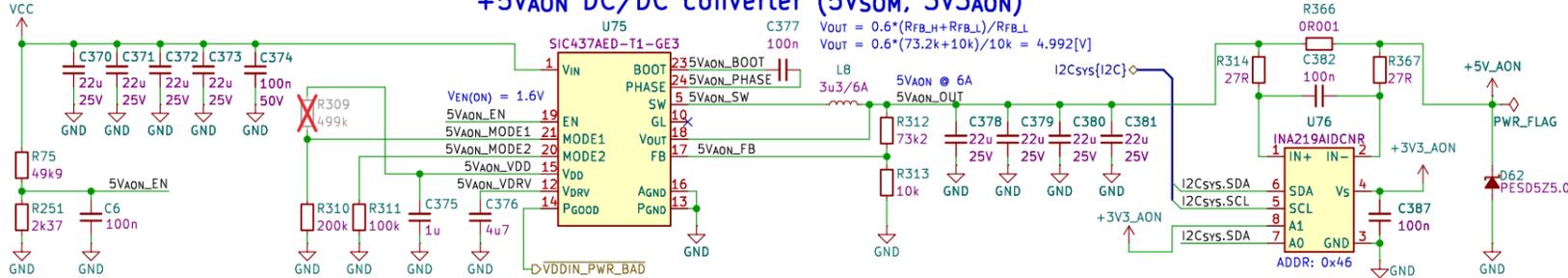
+20V DC/DC converter (USB PD)



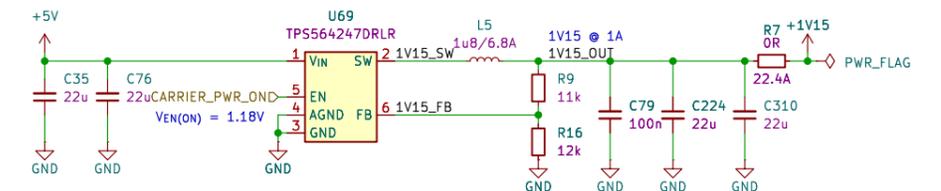
+1V8 DC/DC converter



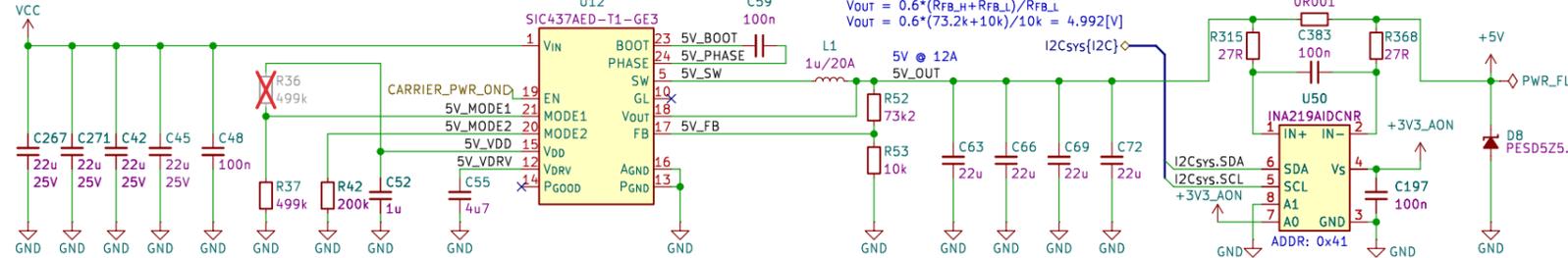
+5VAON DC/DC converter (5Vsom, 3V3AON)



+1V15 DC/DC converter (USB hub)



+5V DC/DC converter (peripherals)



+3V3 DC/DC converter (peripherals)

