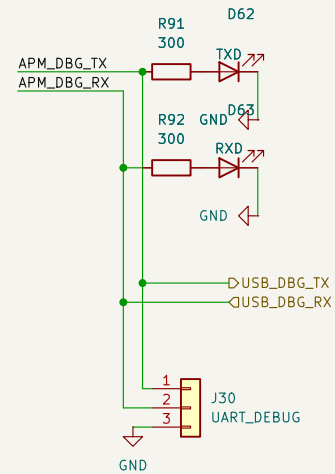


UART -> USB Debug Port

UART debug messages available via a USB port and a 3 pin jumper for TX, RX, and GND UART connections

USB2.0 DBG PORT



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File: USB_debug_APM.kicad_sch

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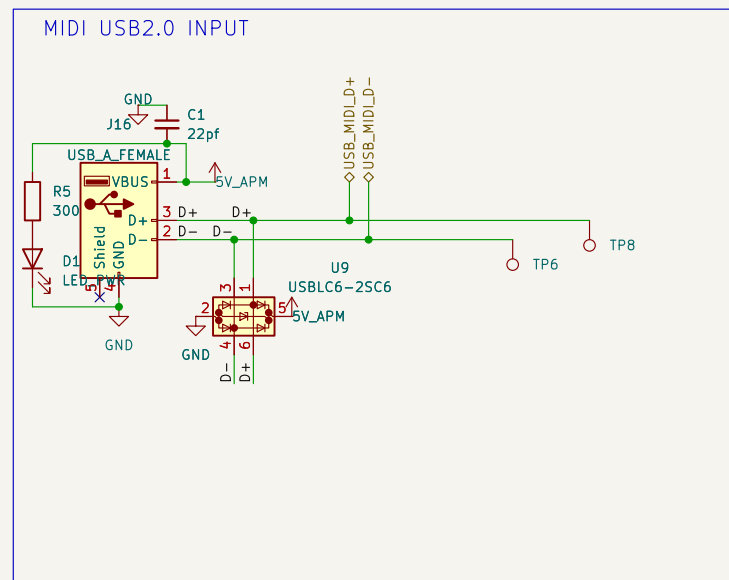
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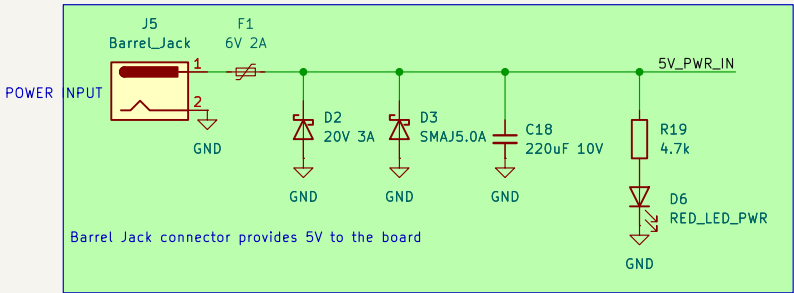
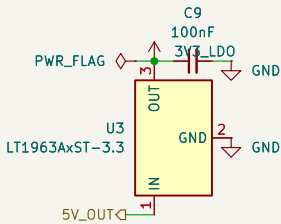
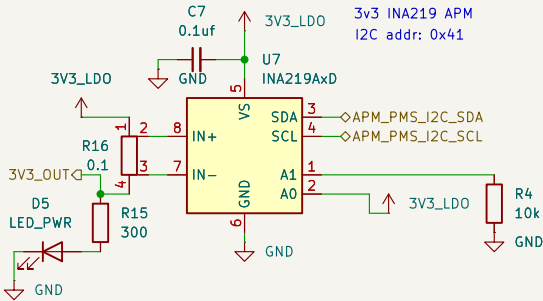
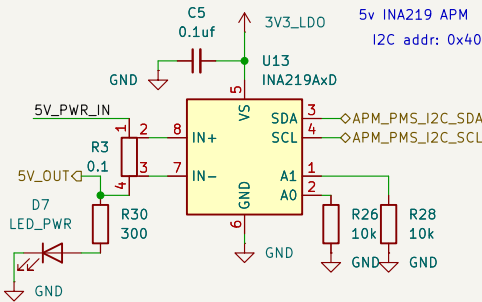
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Power Monitor and Supply

PMS has an INA219 current sensor
for each board/node in the
PCB. Each takes in the 5V from it's
parent board and supplies 5V to said
board's circuit (its peripherals)
thus enabling monitoring



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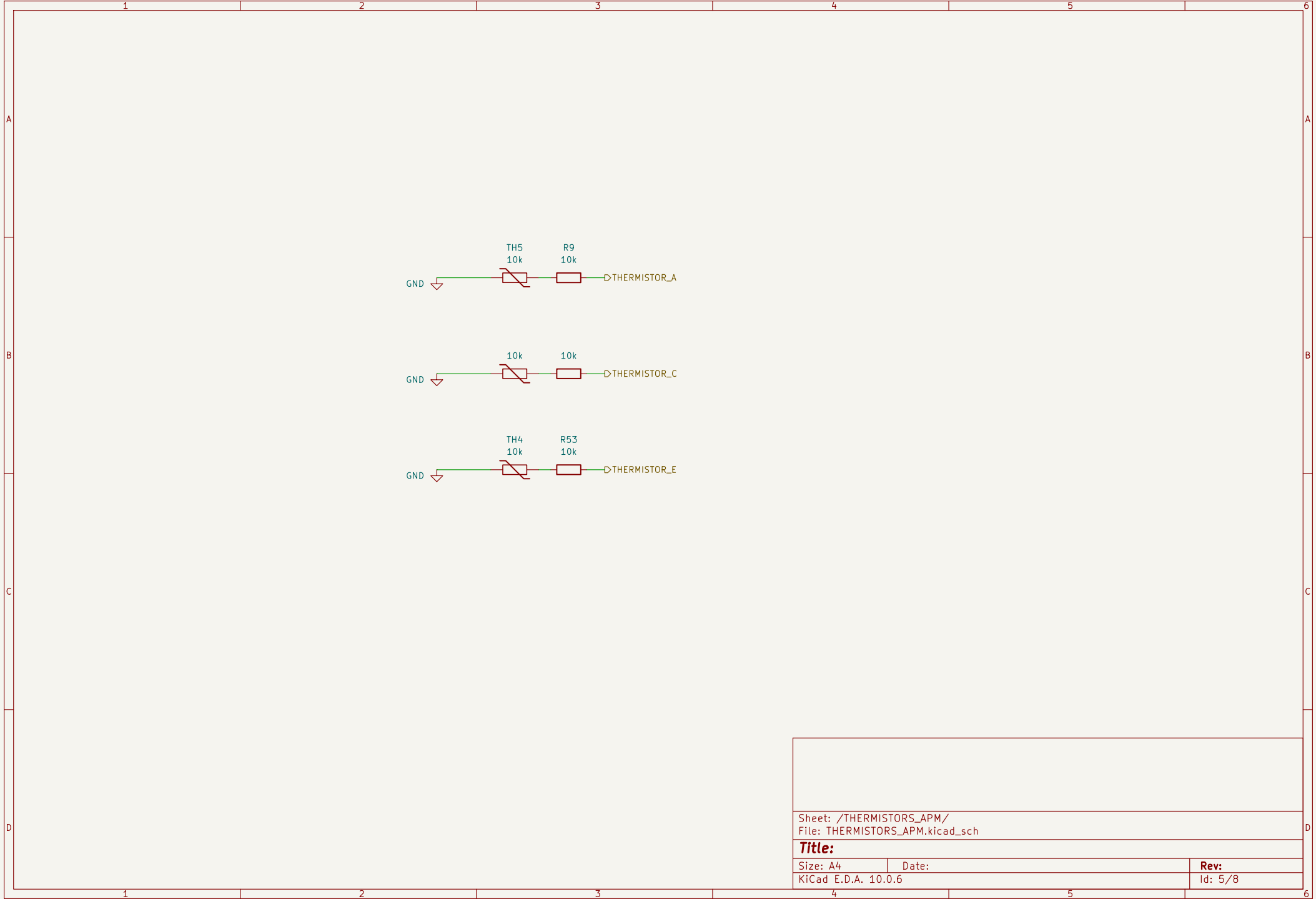
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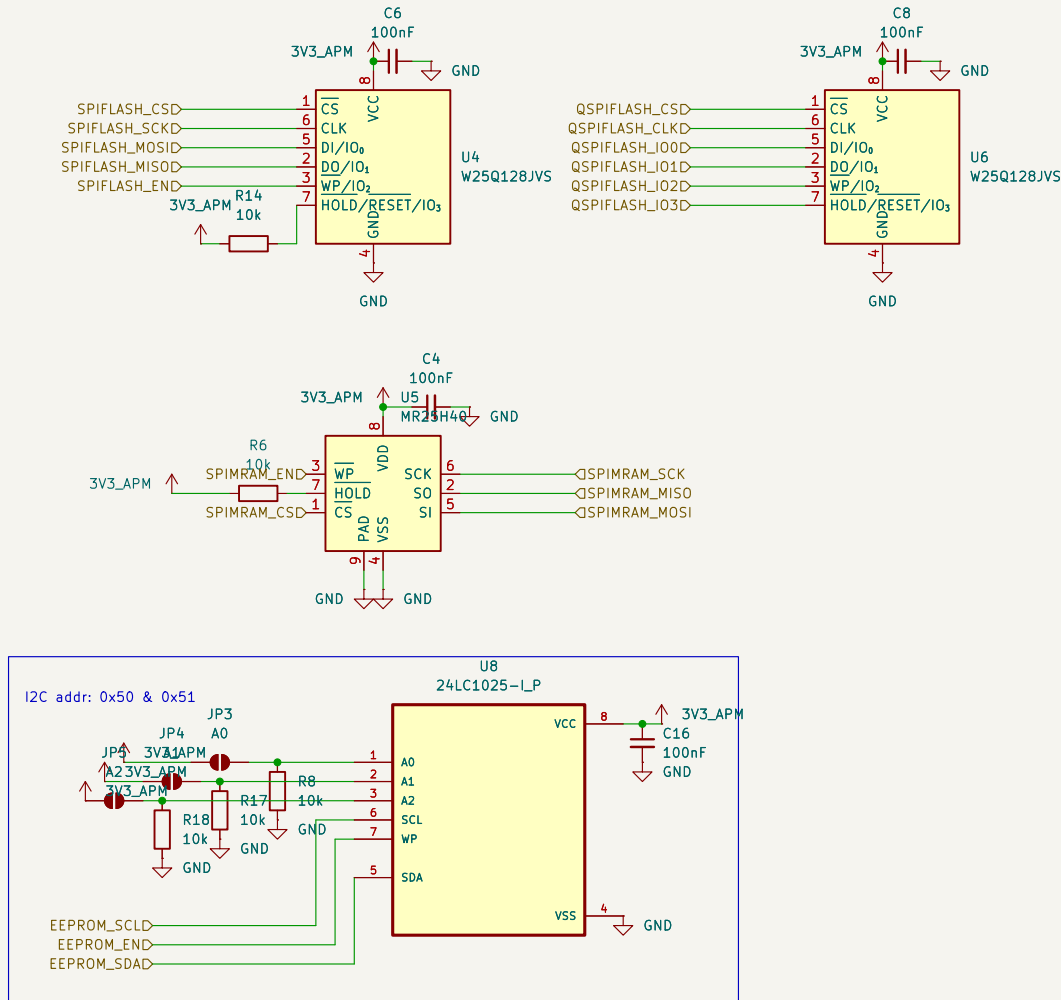
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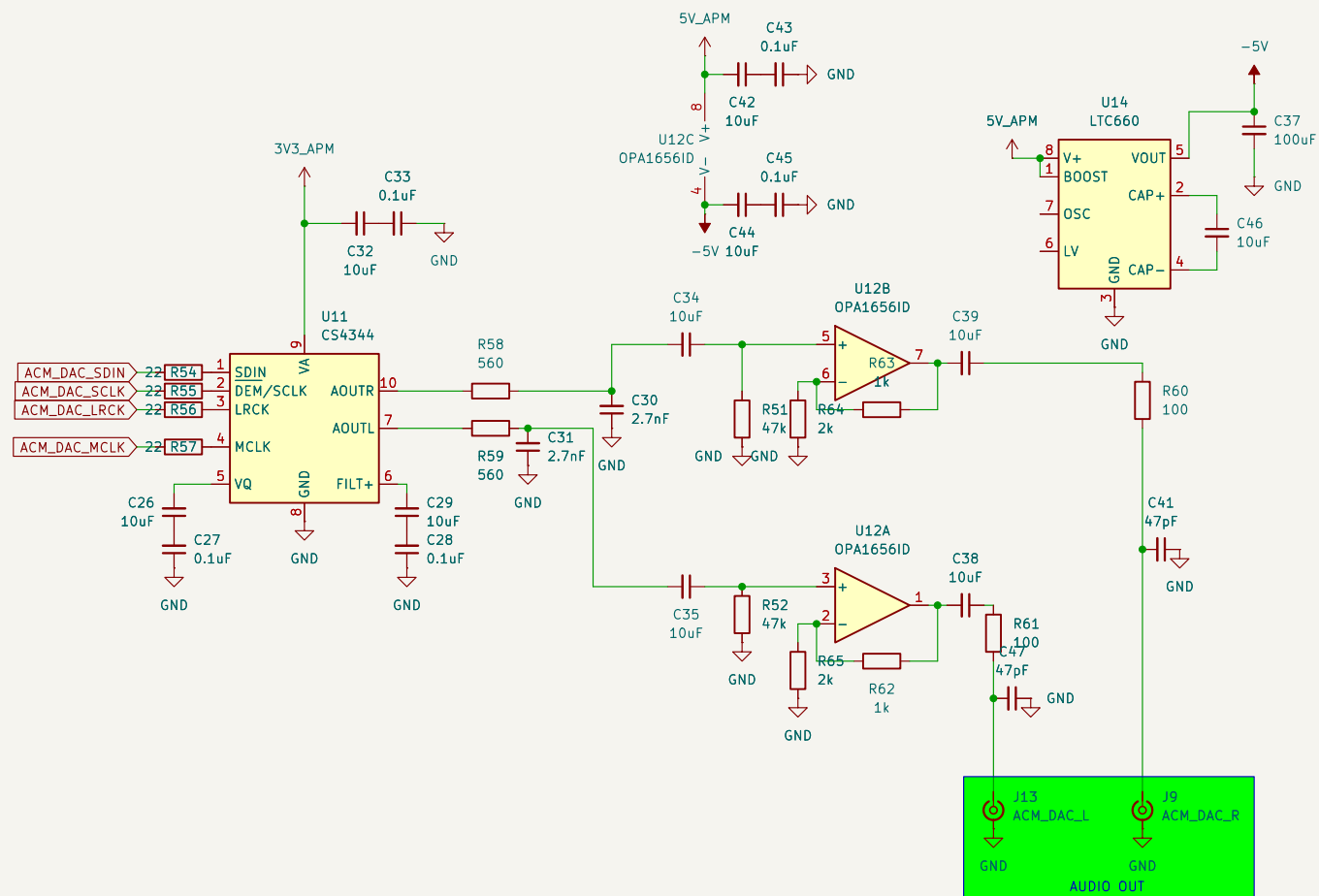
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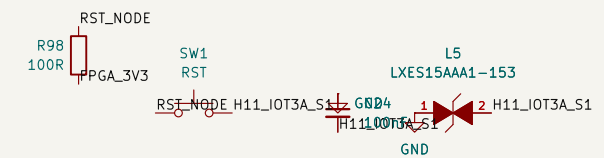
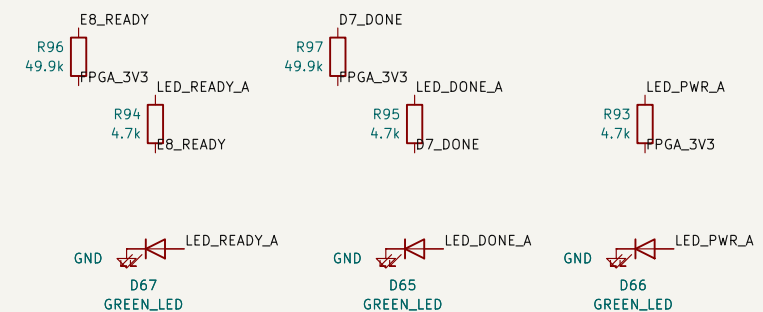
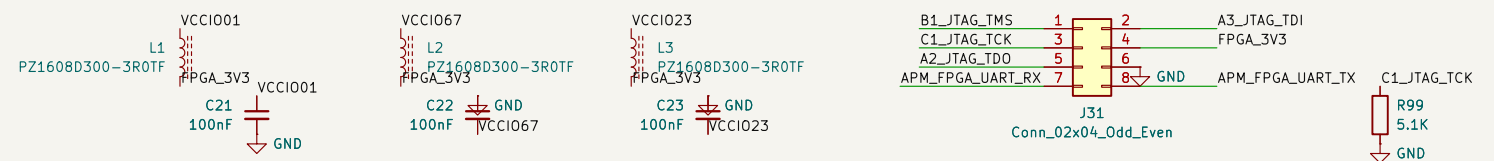
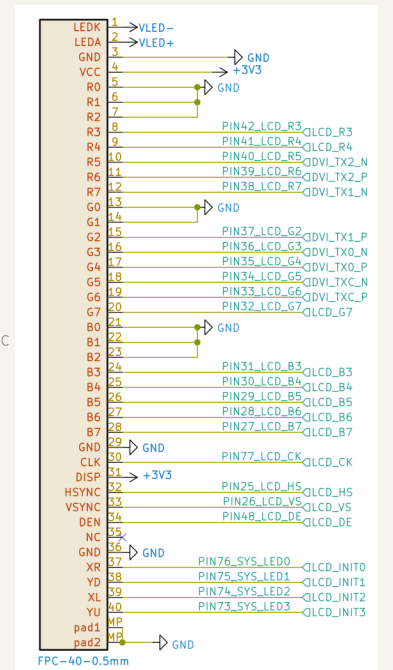
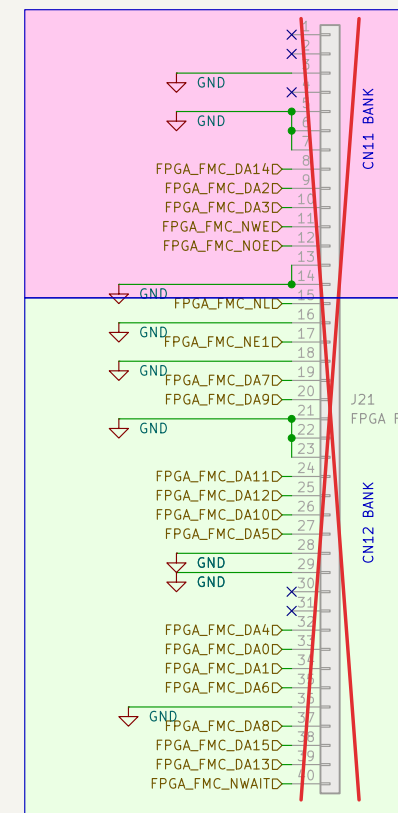
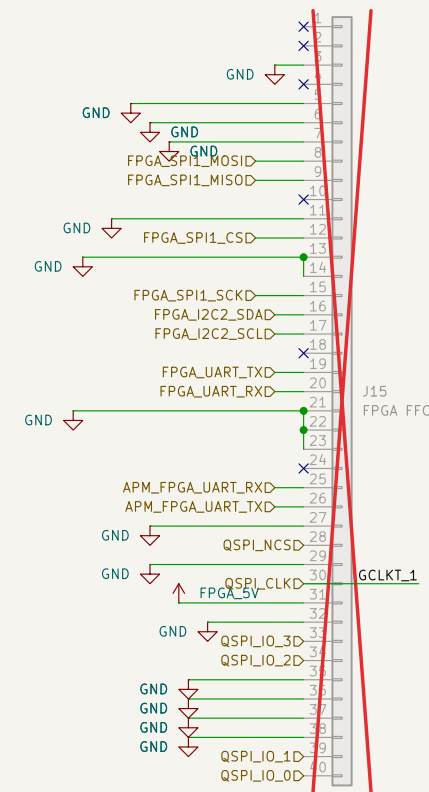
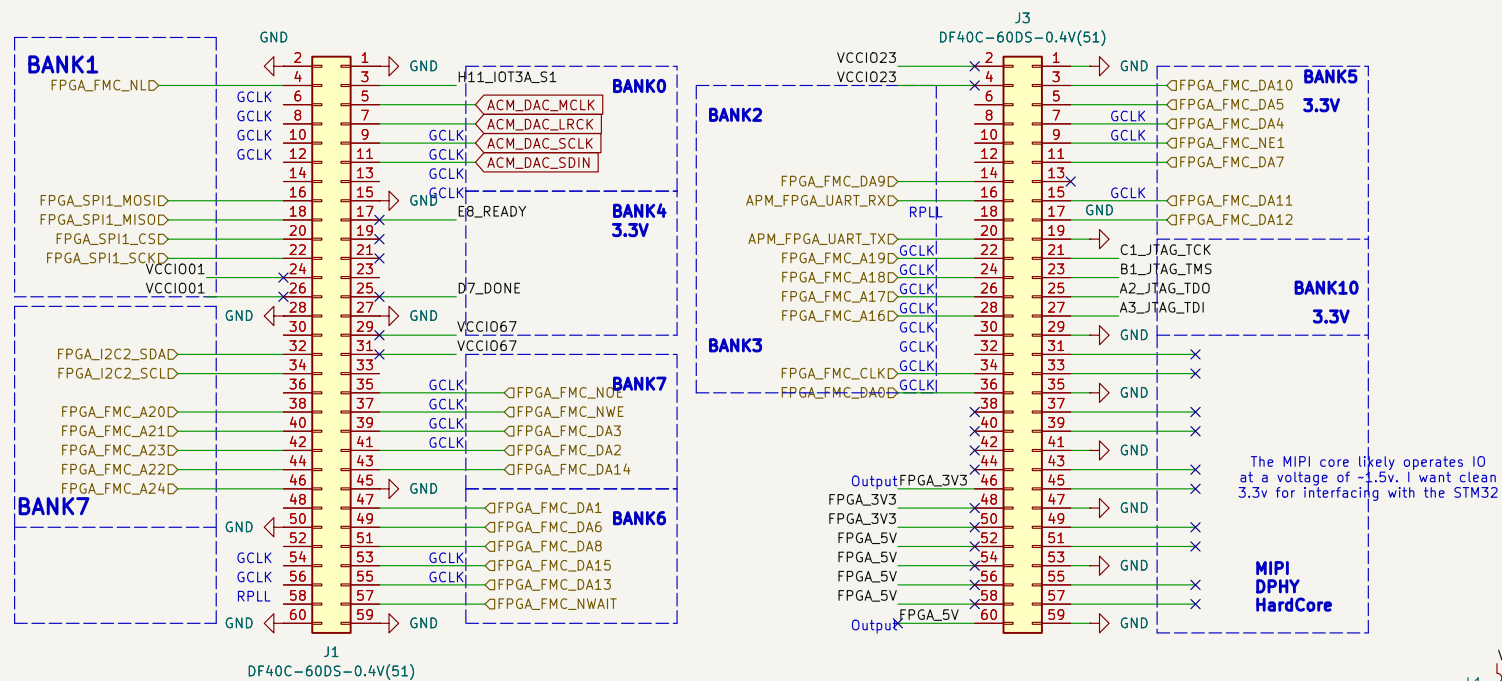


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ACM FPGA Interface

Dual FPC STM32 $\leftrightarrow$ Tang Nano 20K FPGA connection configuration. The STM32 side has two connectors where only one can be active at a time

- Configuration 1: FPGA_FFC with SPI, QSPI, UART connections.
- Configuration 2: FPGA_FMC with:
 - 16 bit muxed data
 - and async FMCconfiguration resulting in a 64MB shared address space between the STM32 & FPGA



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