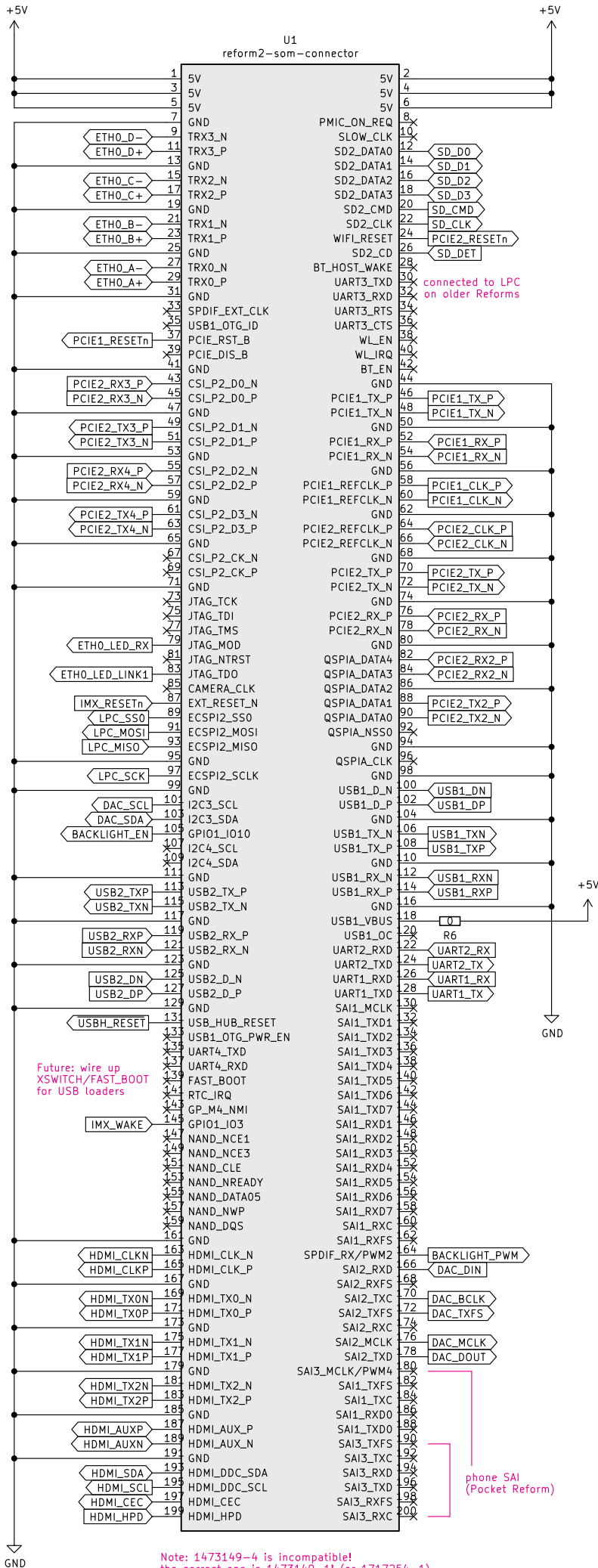
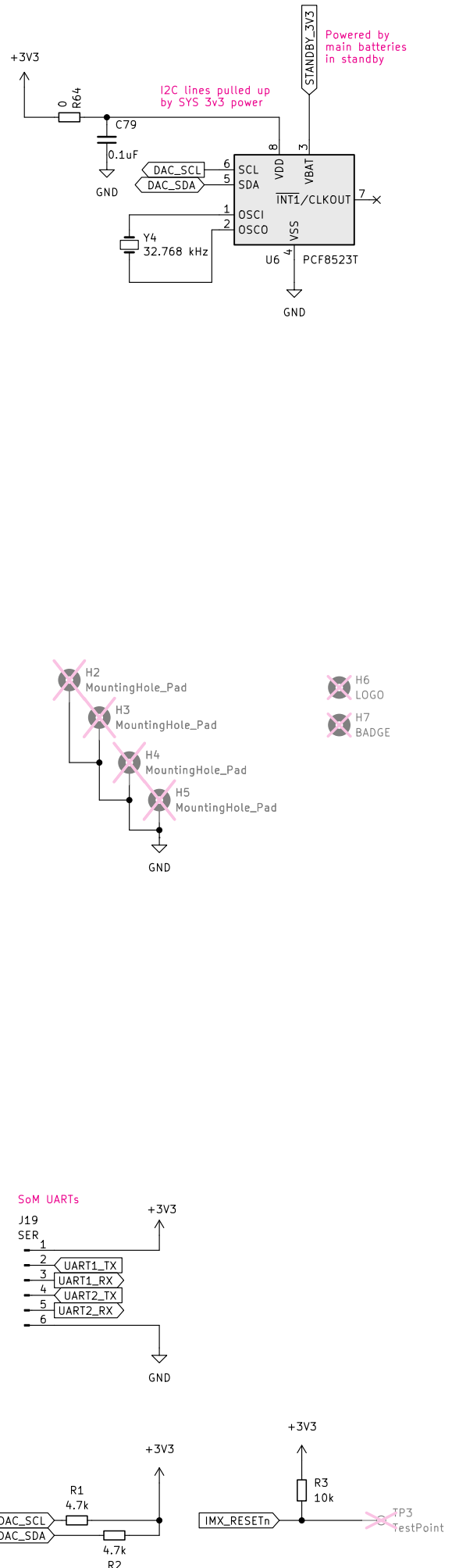


Processor Module Slot



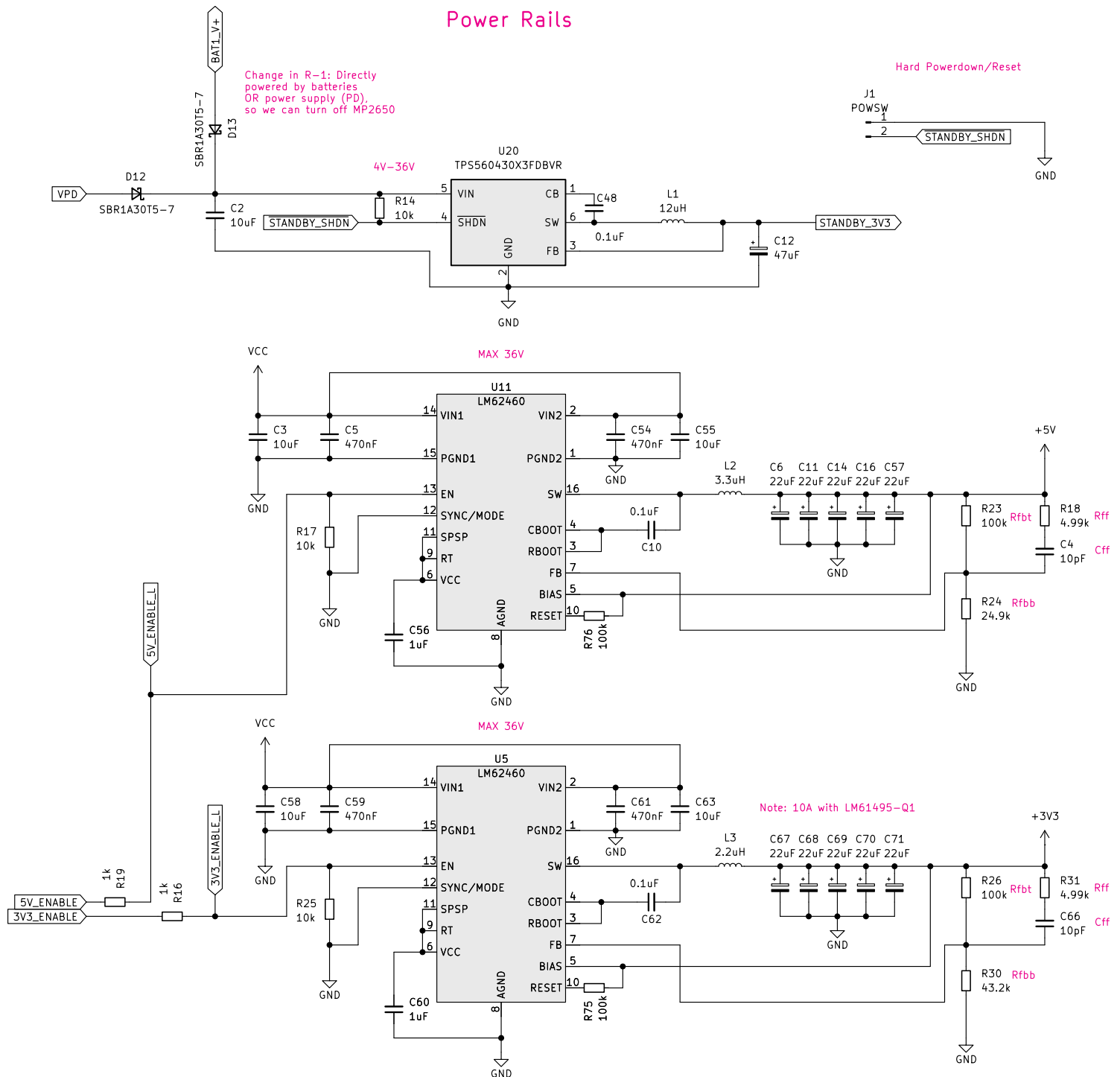
Realtime Clock



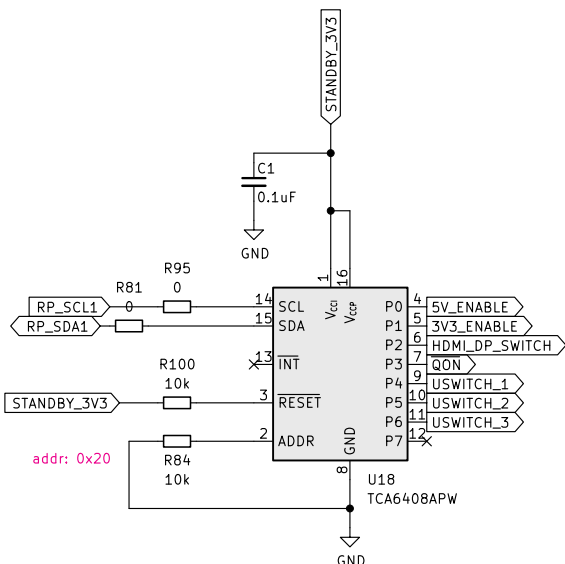
Power Rails

Change in R-1: Directly
powered by batteries
OR power supply (PD),
so we can turn off MP2650

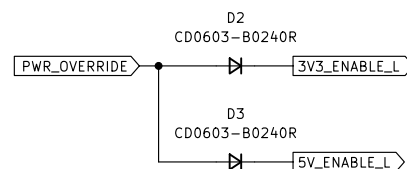
Hard Powerdown/Reset



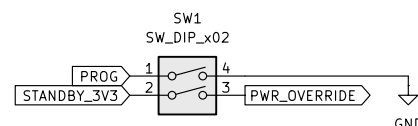
Enable Switches



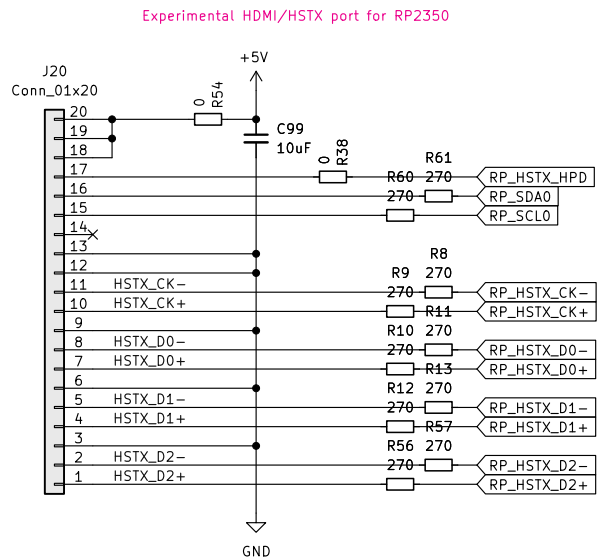
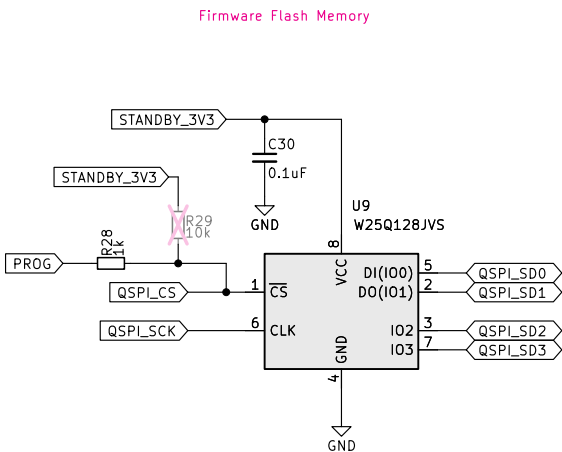
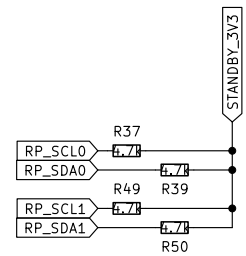
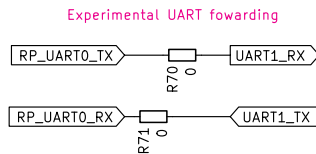
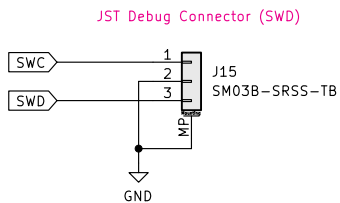
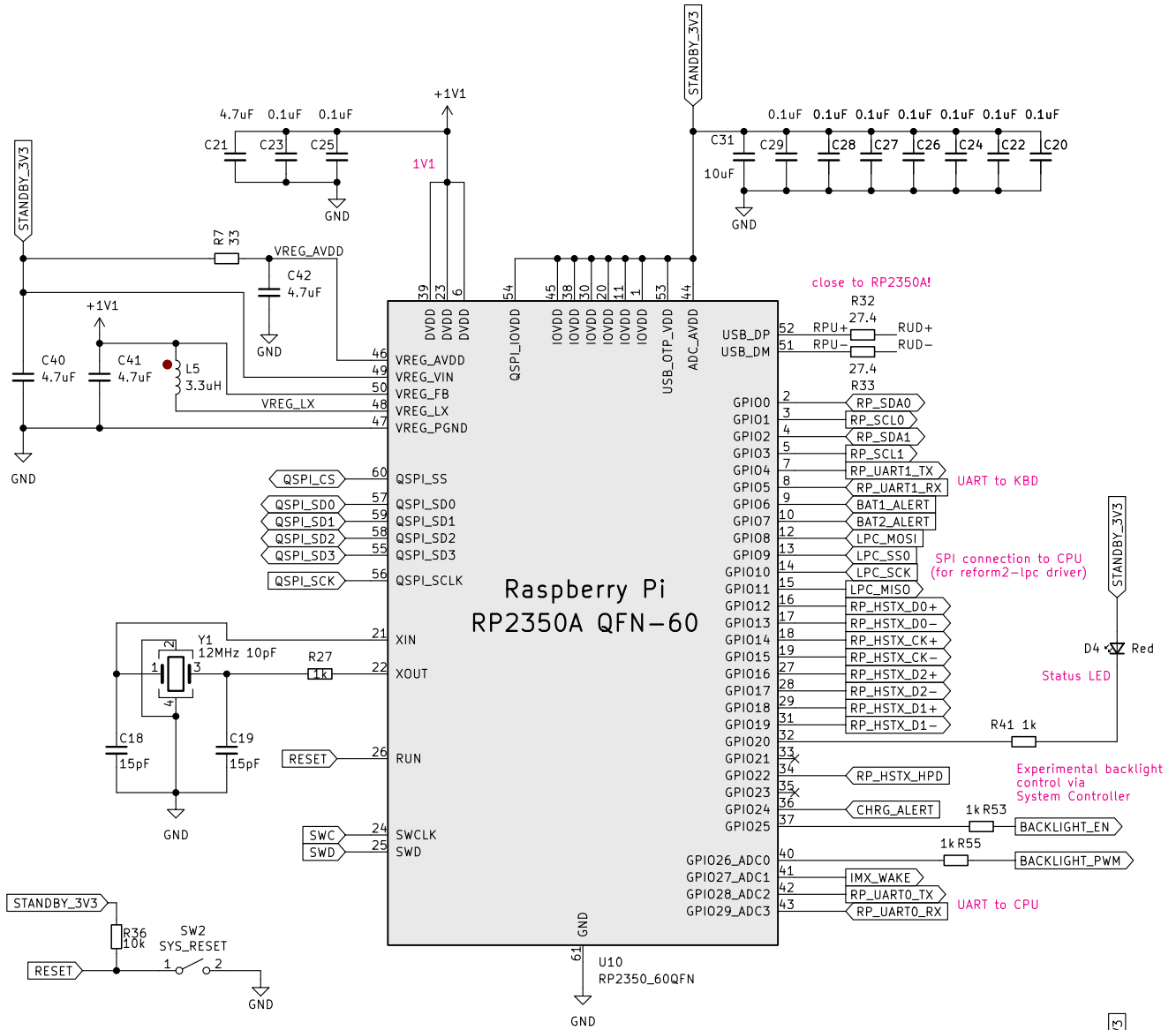
Force Power (for Sysctl Bringup)



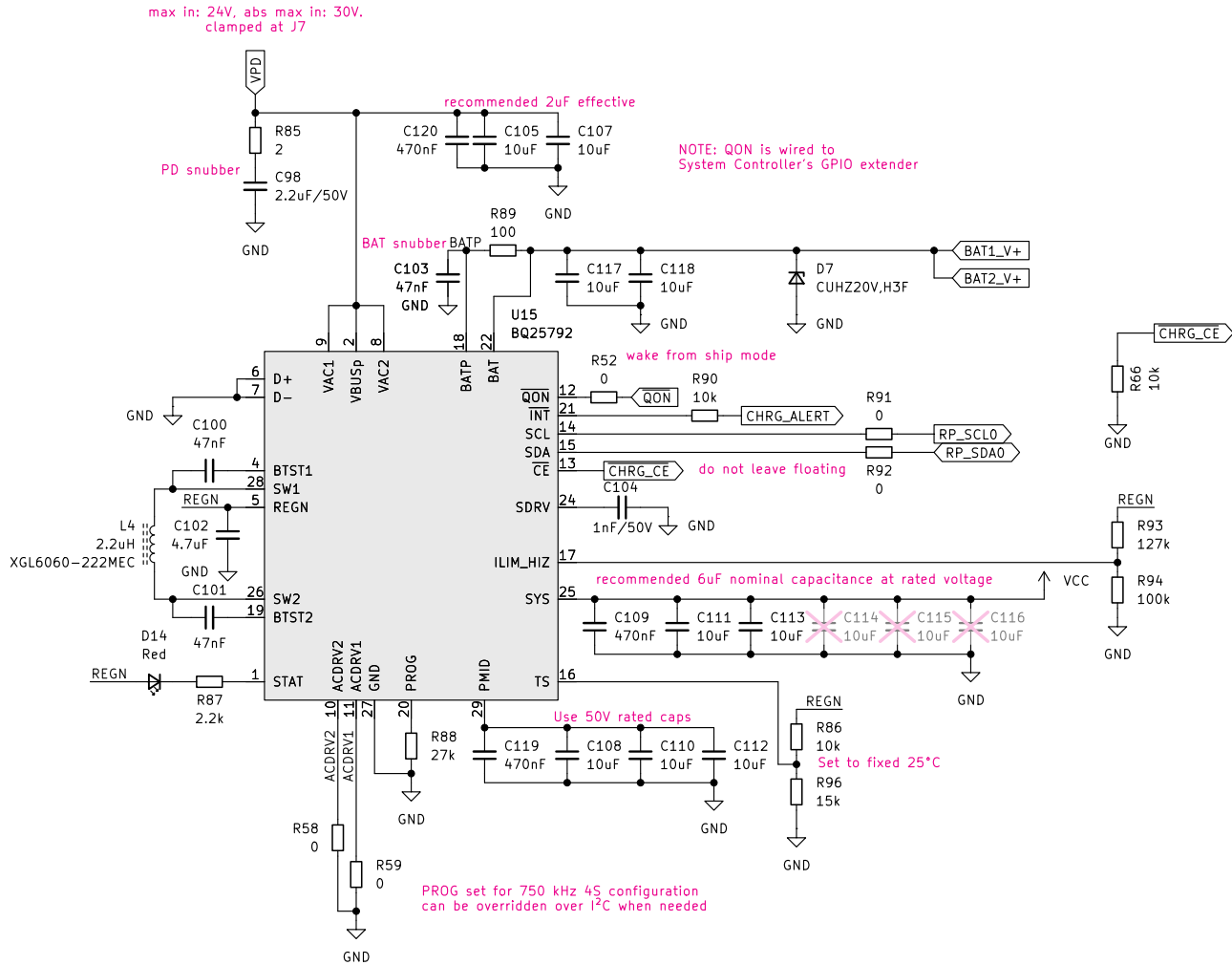
Control DIP Switches



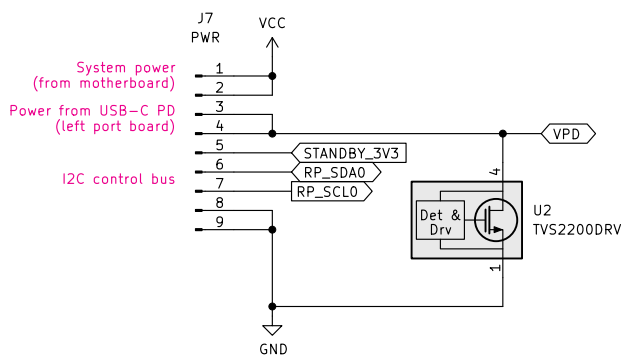
System Controller



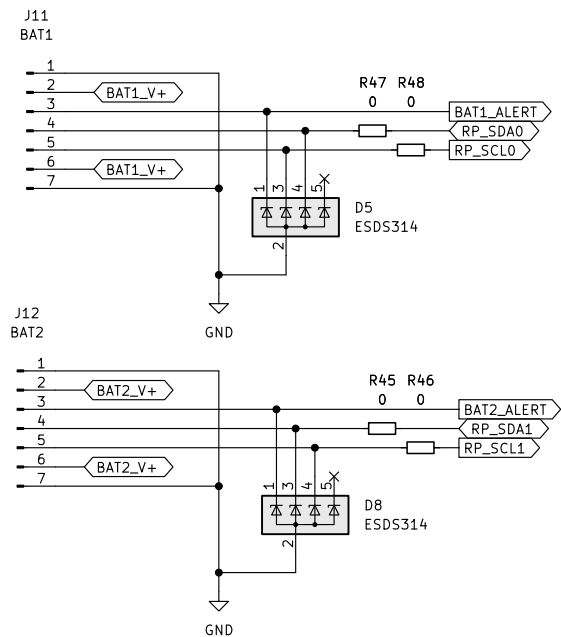
Buck/Boost Charger/DCDC



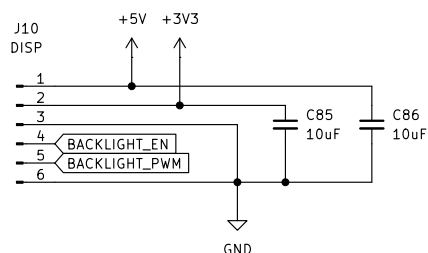
Power Interface



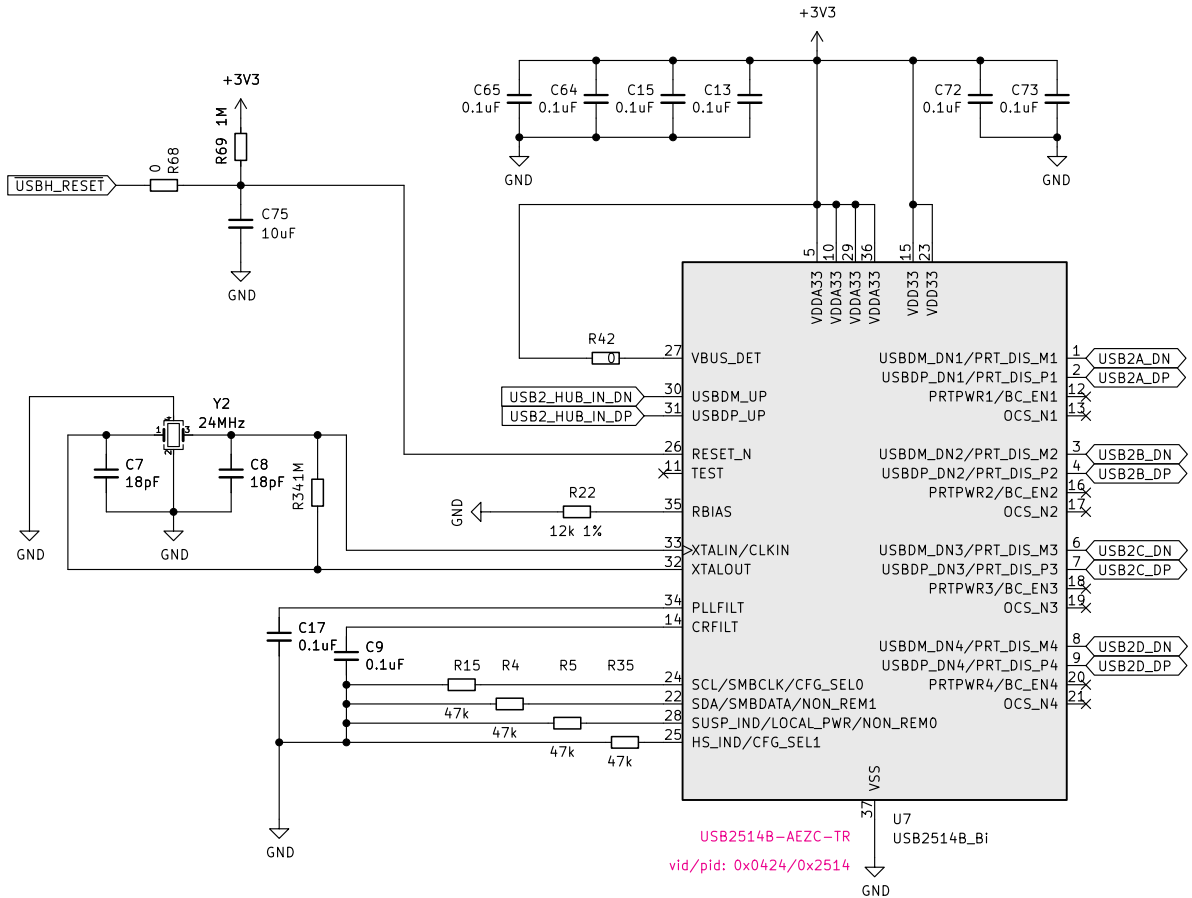
Battery Pack Interfaces



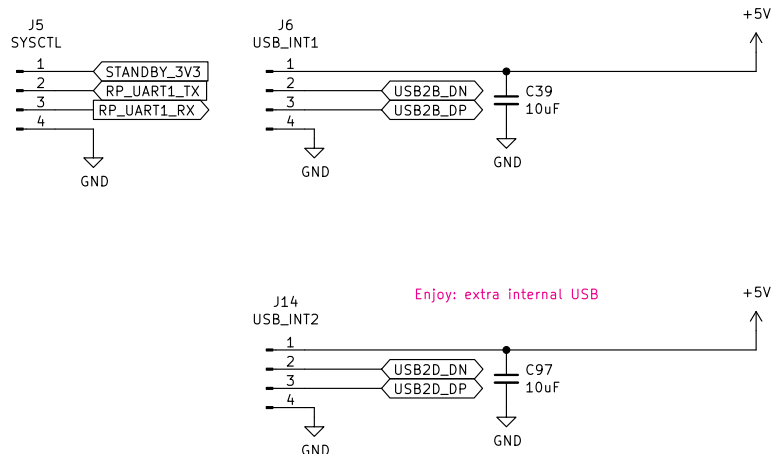
Display Power/Backlight



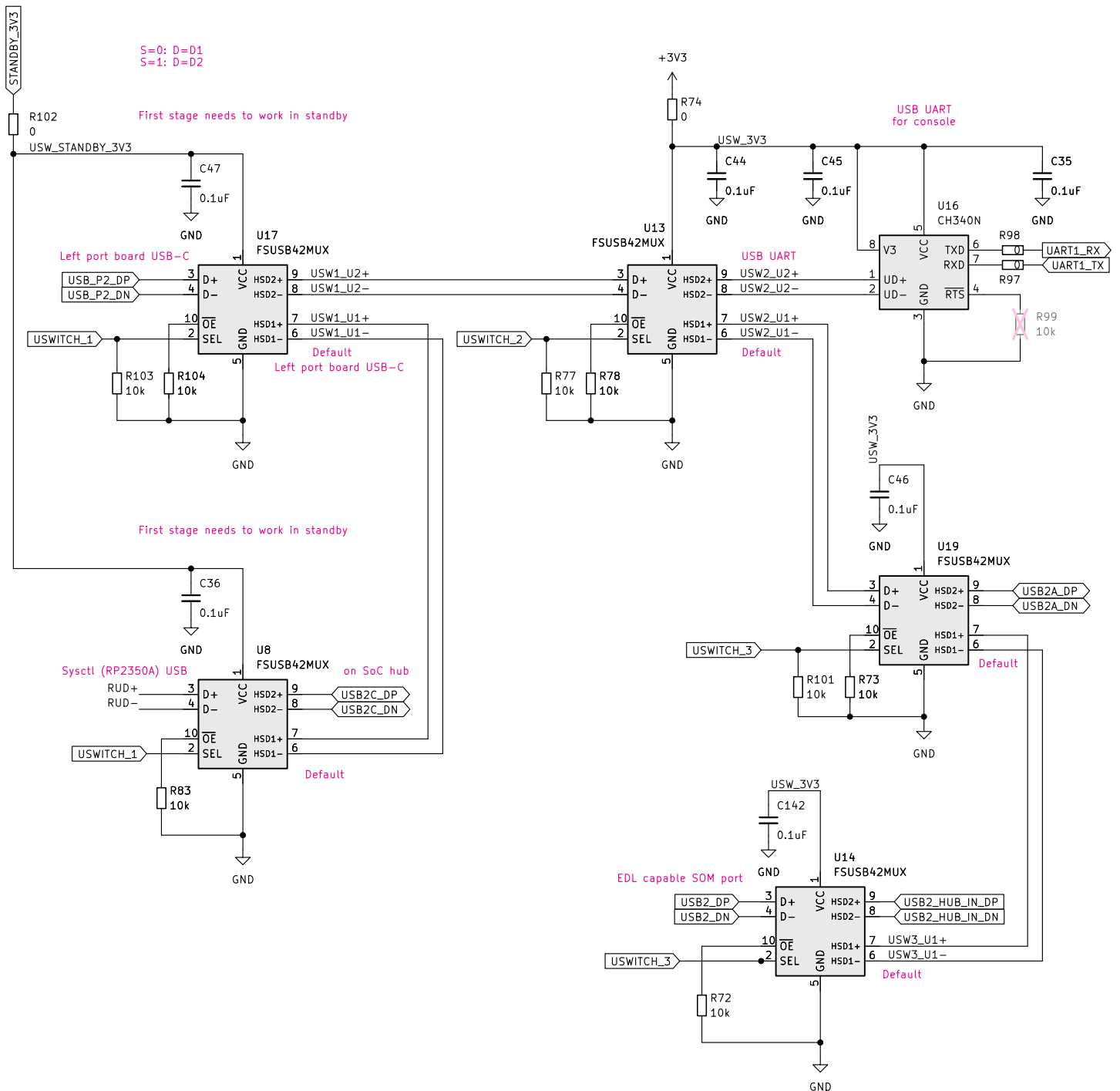
USB2.0 hub for Keyboard and System Controller



Internal USB/UART (Keyboard/Trackpad Interface)

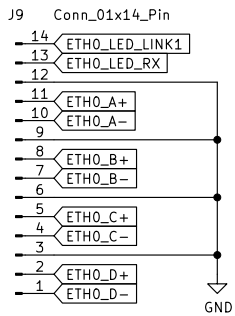


USB Muxing Dungeon

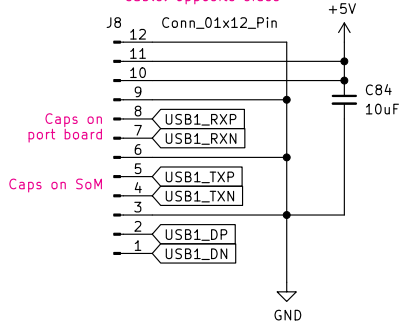


Internal Data Interfaces

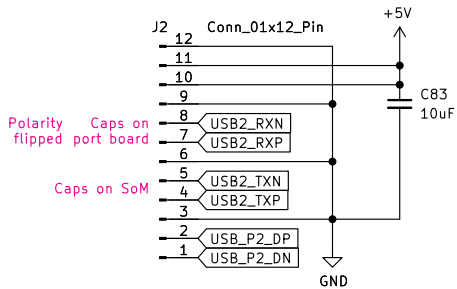
1GBe to port board left
cable: opposite sides



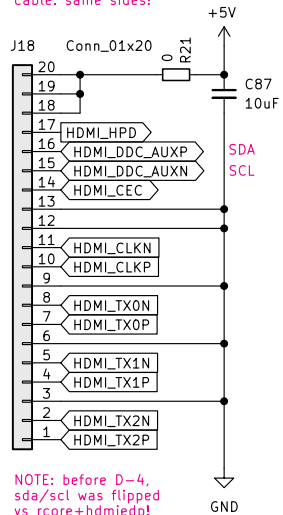
USB3 A, to port board right
cable: opposite sides



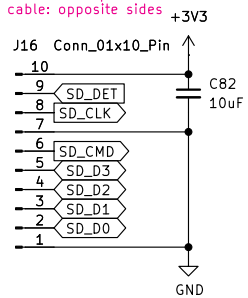
USB3 B, to port board left
cable: opposite sides



HDMI/DP to port board right
cable: same sides!

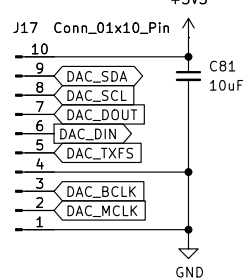


SD Card, to port board left
cable: opposite sides +3V3

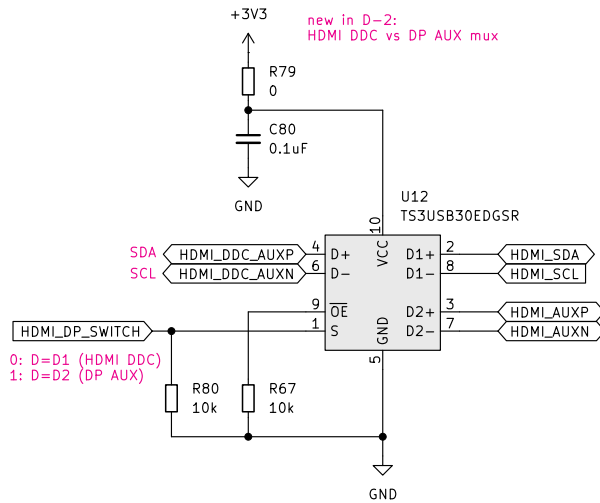


NOTE: before D-4,
sda/scl was flipped
vs rcore+hdmiedp!

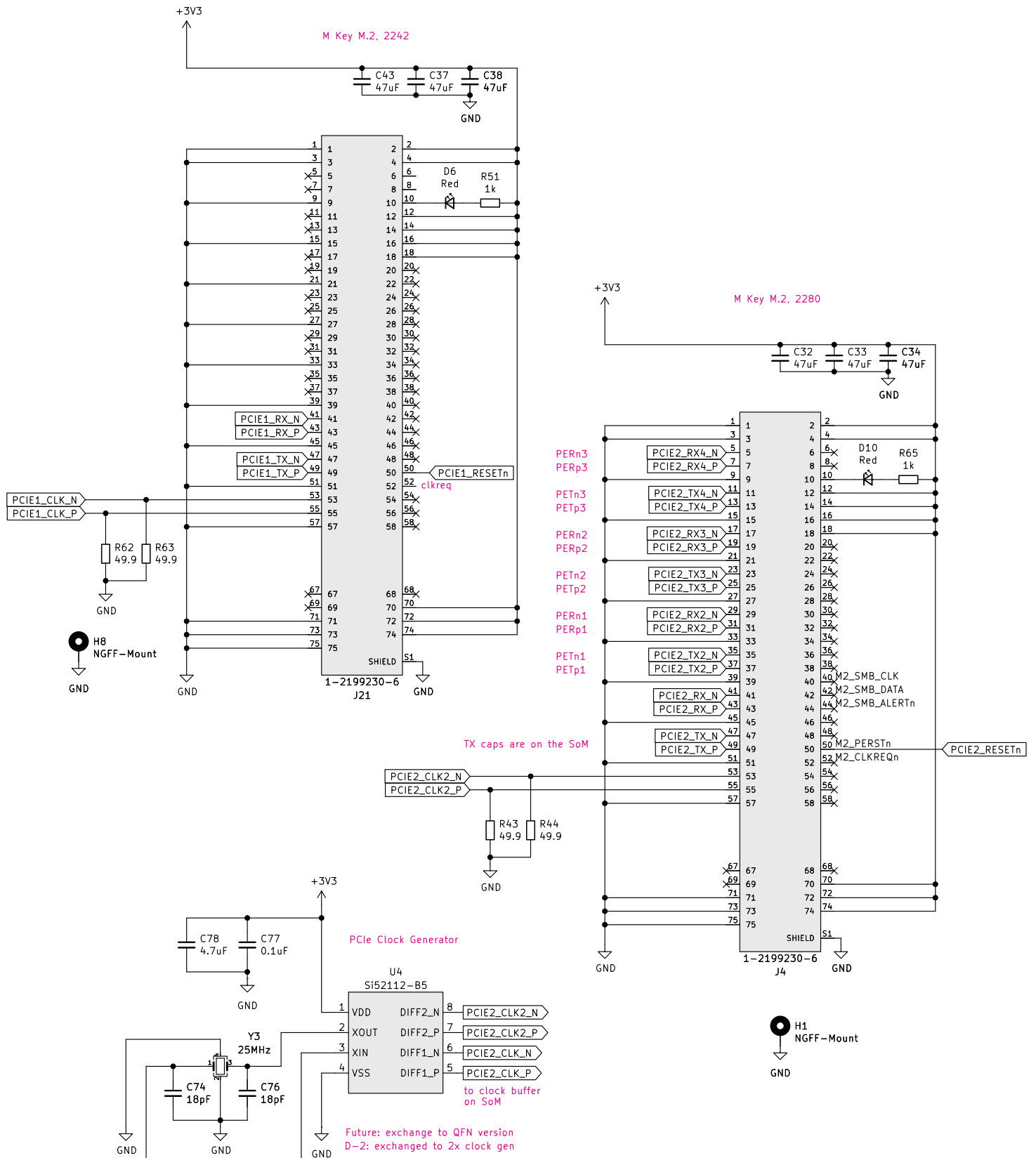
I2S Audio to port board left
cable: opposite sides +3V3



+3V3
↑
new in D-2:
HDMI DDC vs DP AUX mux



M.2 Card Slots



<https://mntre.com>
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Engineer: Lucie L. Hartmann
MNT Research GmbH, Copyright 2026

Sheet: /
File: nref-motherboard.kicad_sch

Title: MNT Reform Next Mainboard

Size: A1 Date: 2026-03-25
KiCad E.D.A. 10.0.4

Rev: R-1
Id: 1/1