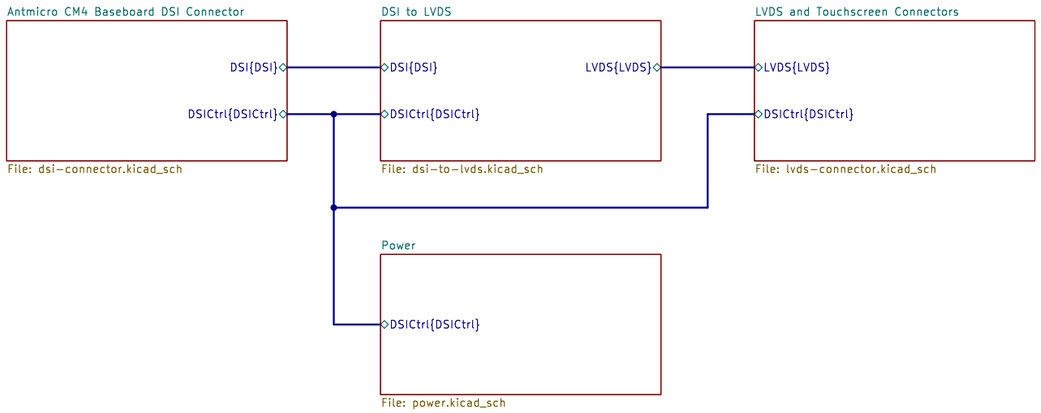

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Sheet: /

File: cm4-lvds-adapter.kicad_sch

Title: CM4 Baseboard LVDS Adapter

Size: A3	Date: 2026-01-07	**Rev: 1.1.4:90351468**
KiCad E.D.A. 9.0.6		Id: 1/5

TFT screen power supply

Boost (9.6V)

Negative charge pump (−6V)

Positve charge pump (18V)

VCom (3.9V)

1V8 LDO

Backlight driver

Required voltages:
Voltage – Current – Pin from TPS6515
– 3V9– 45mA – TPS VCOM
– 9V6– 37mA – TPS VS
– (−6V)– 1mA – TPS VGL
– 18V– 1mA – TPS VGH
– VCC(9–15V)– 180mA – DCDC – backlight

Powering sequence
VDD(3v3) –> VGL(−6V) –> VGH –> Logic signal –> Backlight

Note:
Change R5 with capacitor
to enable fault shutdown

Power backlight after possitive charge pump starts (18V),
Turn off immediately after EN signal goes down.

Backlight should be set to 180mA CC (voltage from 8.55 to 10.65)

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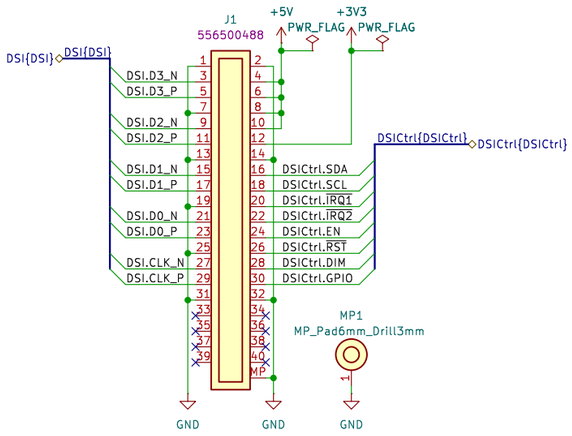
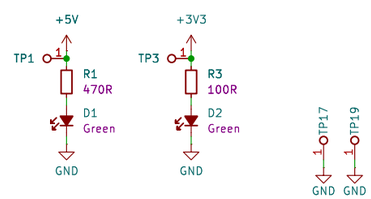
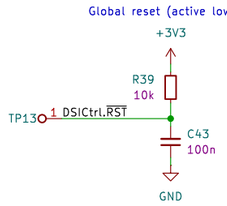
Sheet: /Power/		
File: power.kicad_sch		
Title: CM4 Baseboard LVDS Adapter		
Size: A3	Date: 2026−01−07	**Rev: 1.1.4:90351468**
KiCad E.D.A. 9.0.6		Id: 2/5

Antmicro CM4 Baseboard DSI Connector







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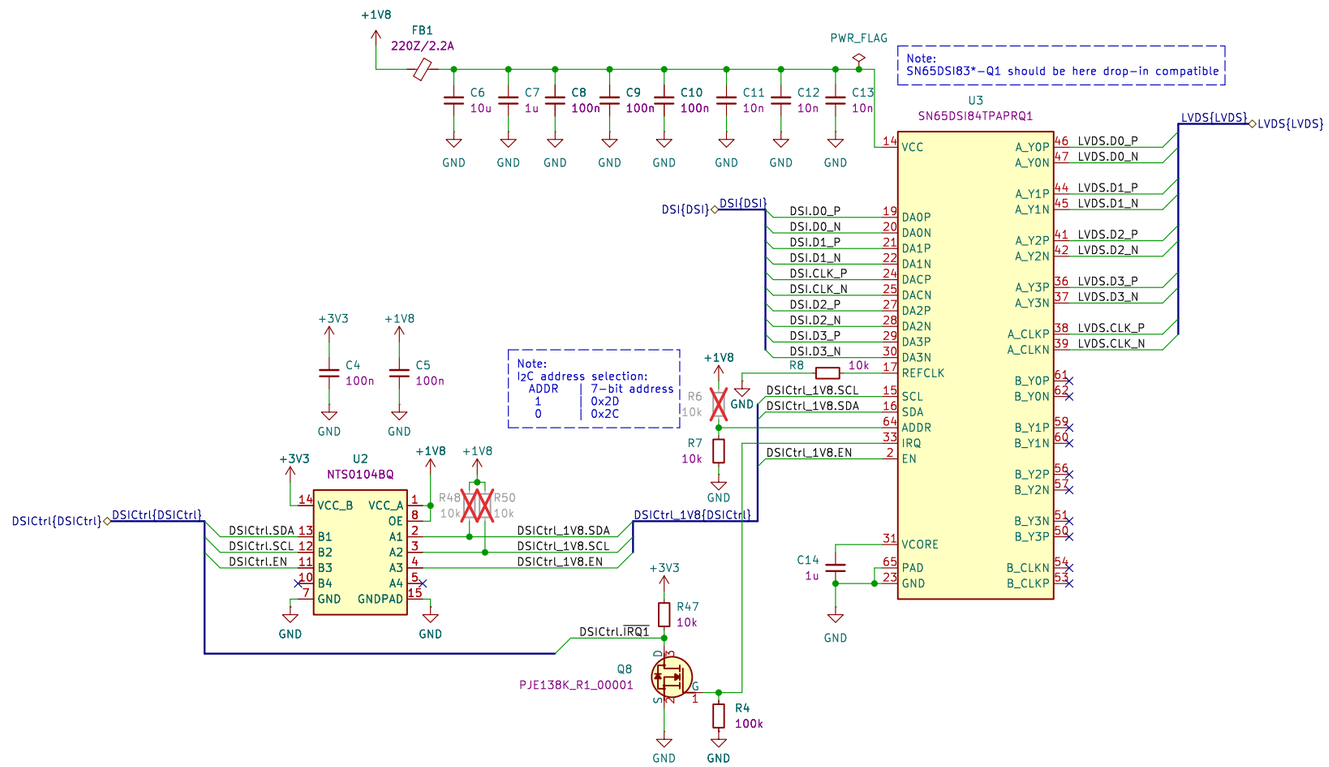
Sheet: /Antmicro CM4 Baseboard DSI Connector /
File: dsi-connector.kicad_sch

Title: CM4 Baseboard LVDS Adapter

Size: A3	Date: 2026-01-07	**Rev: 1.1.4:90351468**
KiCad E.D.A. 9.0.6		Id: 3/5

DSI -> LVDS



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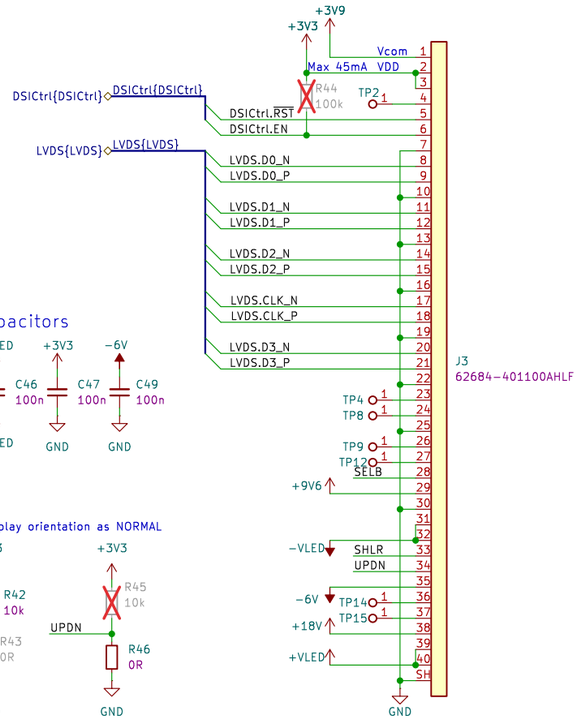
Sheet: /DSI to LVDS/
File: dsi-to-lvds.kicad_sch

Title: CM4 Baseboard LVDS Adapter

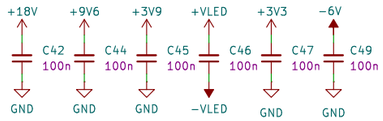
Size: A3	Date: 2026-01-07	**Rev: 1.1.4:90351468**
KiCad E.D.A. 9.0.6		Id: 4/5

LVDS connector

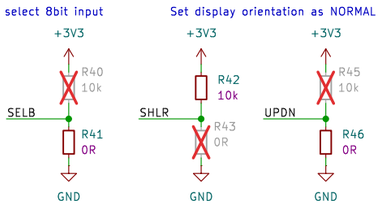
Display MPN: CLAA080XA12LE

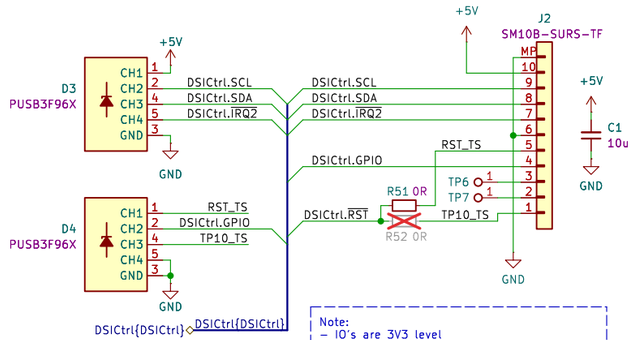


Display decoupling capacitors



Display configuration





Note:
- IO's are 3V3 level
- Connector has reversed pinout because the touchscreen's motherboard has different pin numbering (used harness has crossed configuration)
- RST_TS (TouchScreen) and TP10_TS are pins on the touchscreen

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Sheet: /LVDS and Touchscreen Connectors/

File: lvds-connector.kicad_sch

Title: CM4 Baseboard LVDS Adapter

Size: A3	Date: 2026-01-07	**Rev: 1.1.4:90351468**
KiCad E.D.A. 9.0.6		Id: 5/5