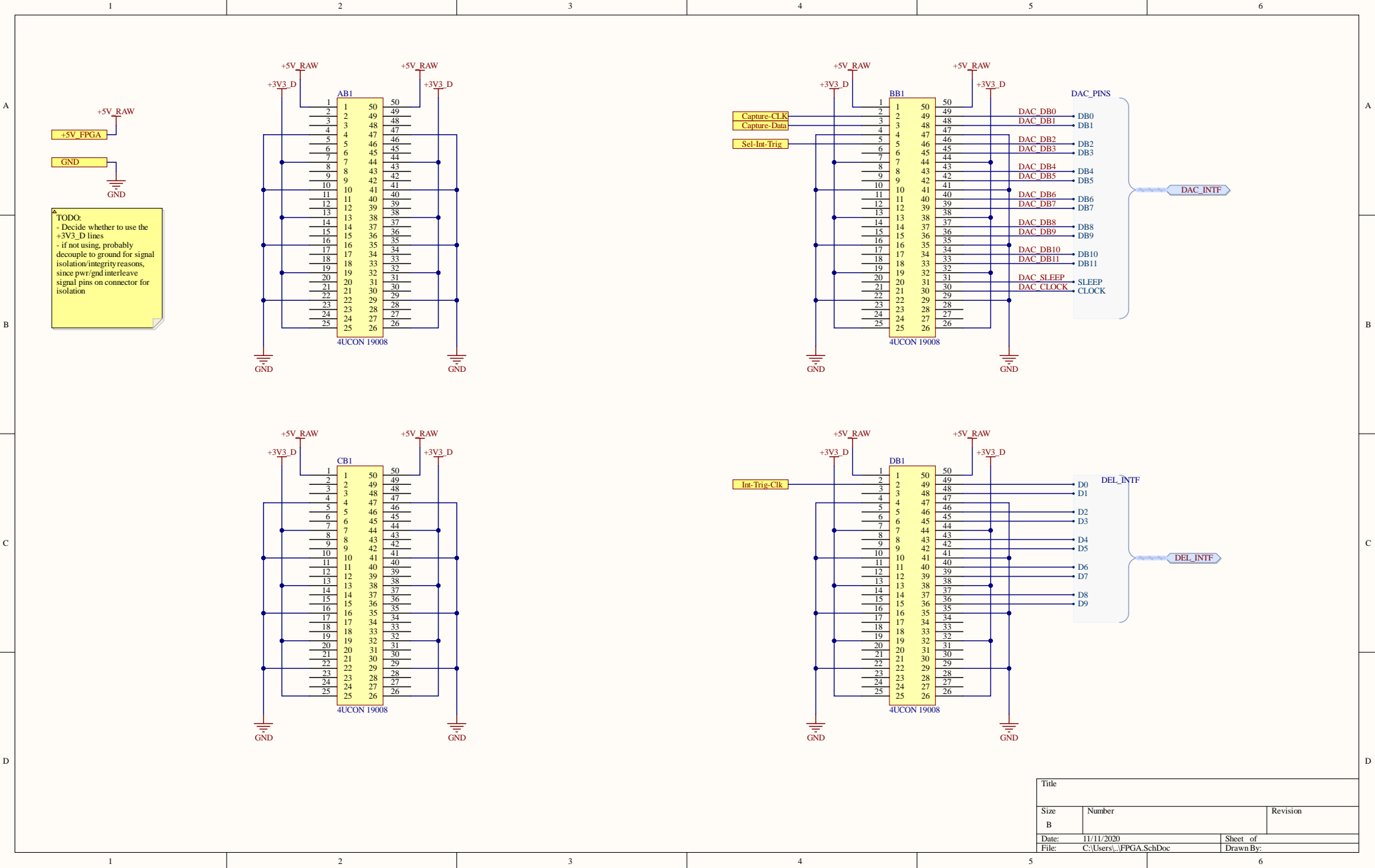
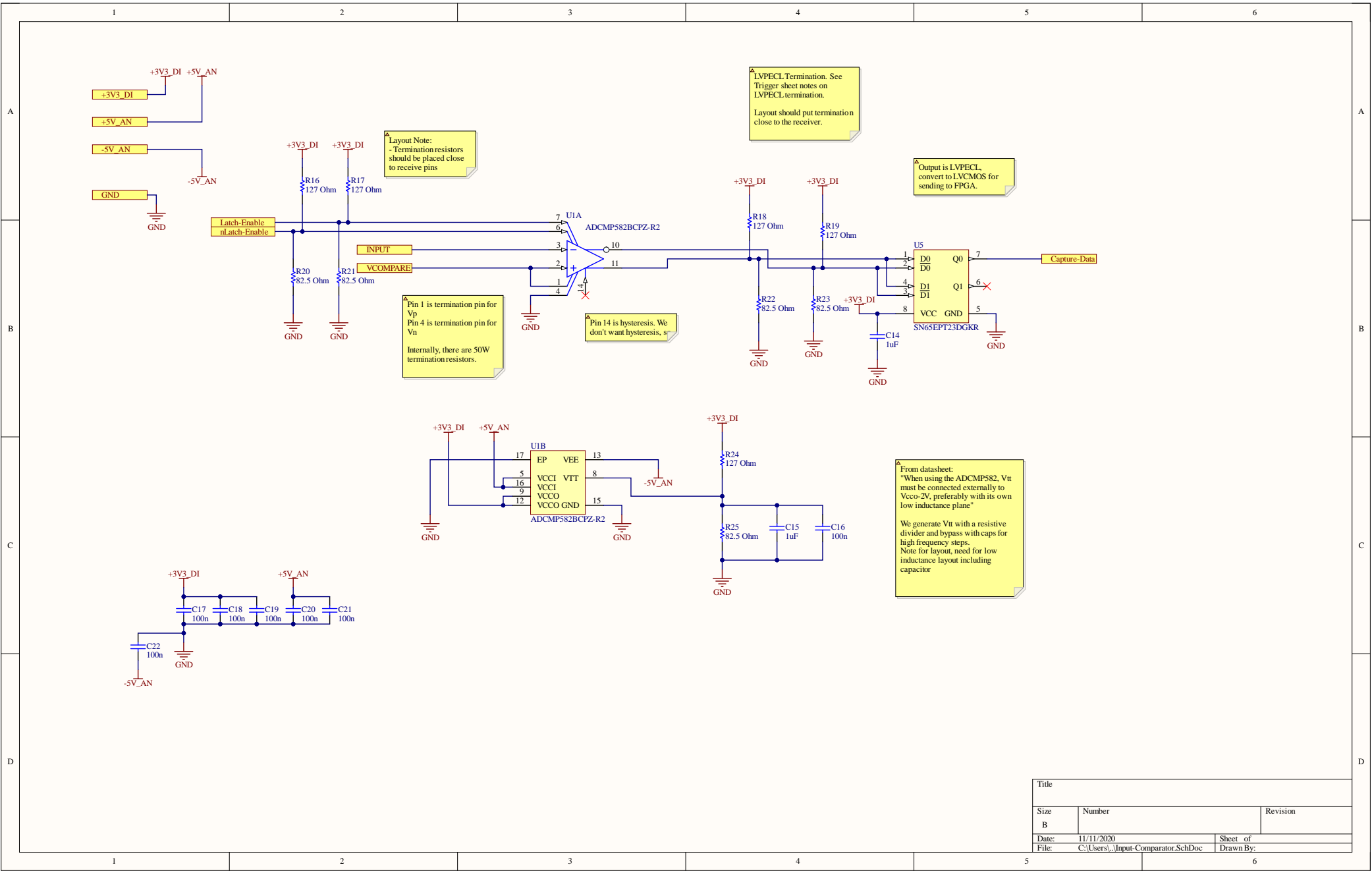


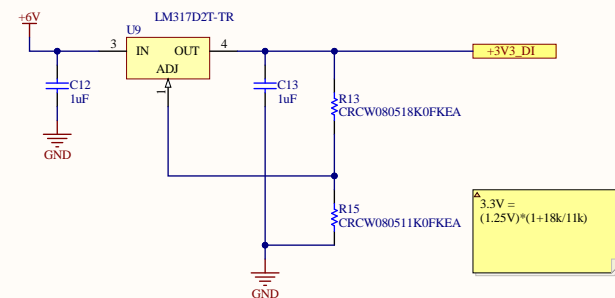
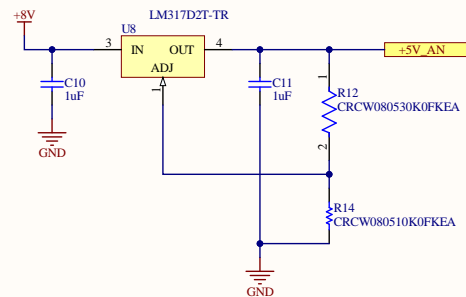
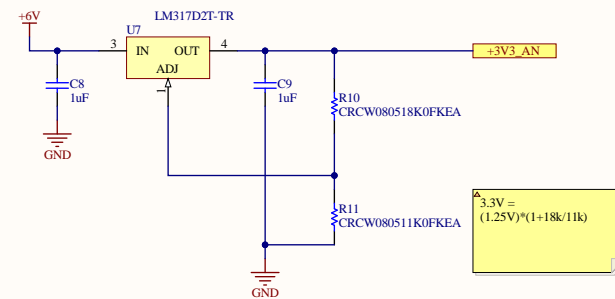
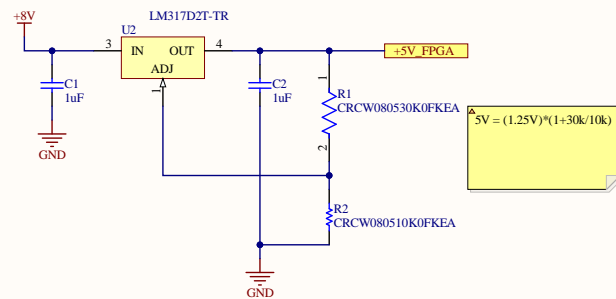
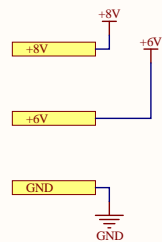
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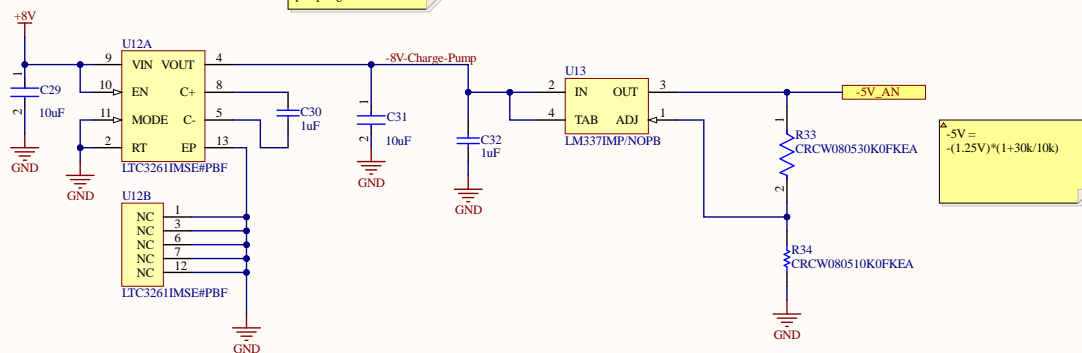


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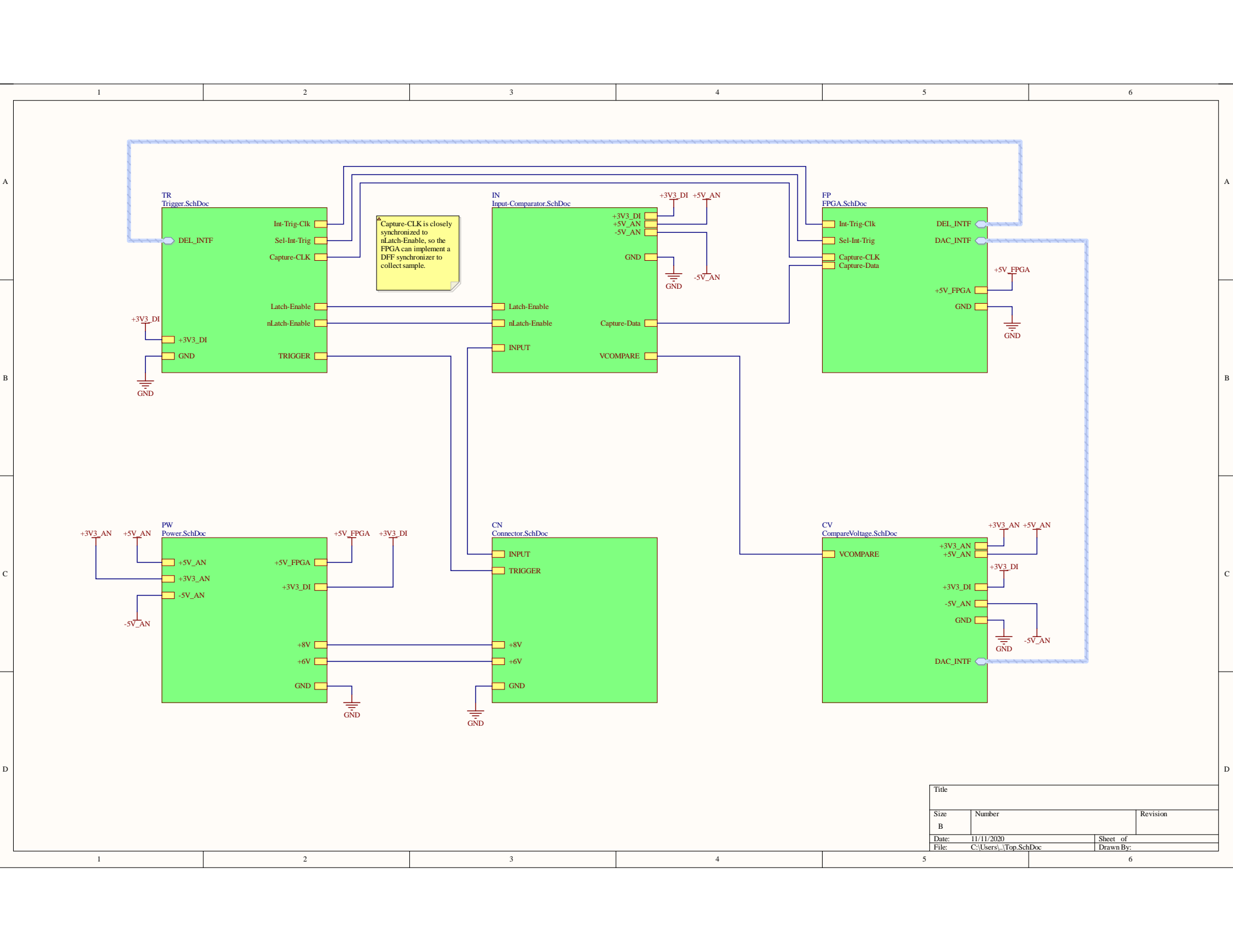


See LTSpice Sim of inverting charge pump

Use LTC3261 inverting charge pump and then LM337 LDO to regulate to accurate 5V (the charge pump sags about 1 volt)



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PECL termination guidelines  
(<http://ww1.microchip.com/downloads/en/AppNotes/High-Speed%20PECL%20and%20LVPECL%20Termination.pdf>):

- Unused PECL outputs generally should be pulled to ground via 2-4k resistor, but sometimes (see datasheet) can be left unconnected).
- Loads on PECL outputs should always be balanced (if using only one, terminate opposite with 130/82 ohm divider from +3.3V to GND)
- Unused PECL inputs should be connected to

SY89296U is a variable delay from 3.2ns to 14.8ns

Convert LVCMOS to LVPECL

U6 note: If Sel-Int-Trig, then CLK1 is selected. Else, CLK0.

This allows the FPGA to supply its own input clock for sampling.

This chip is used to select between clocks, not fan out anything.

OE has an internal pull-up, leave unconnected.

Connection notes:

- VCF/VEF: Control inputs are LVCMOS, so VCF and VEF are NC.
- LEN: Enables latching of D inputs. Since the FPGA is always driving these, no need for latching, so disable by pull to ground.
- FTUNE: Not using, states leave floating
- D10: Not using, internal pulldown.
- VBB: Input signals are differential, so not using, states leave floating.

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