

Picoblaze 4-bit and 8-bit divider

If you are using an A7 board (instead of the N4 board), please download the following two **supplemental** .zip files (in addition to the other .zip files stated further below):

[Divider Pico N4 4bit A7 supplement.zip](#)

[Divider Pico N4 8bit A7 supplement.zip](#)

Given a completed Picoblaze-based 4-bit divider,
design, implement, and simulate a Picoblaze-based 8-bit divider

Directory: https://ece-classes.usc.edu/ee254/ee254/lab_manual/PicoBlaze/Divider_Pico_N4

Assignment pdf: [PicoBlaze Divider handout.pdf](#)

Videos (more may be added)

1. Introduction to the lab

[Divider Pico N4 Intro Oct 12 2022.mp4](#)

[Divider Pico N4 lab intro March 16 2021.mp4](#) <= OLD

2. Simulation procedure [Divider Pico N4 4bit xsim operation.mp4](#)

Two .zip files to be downloaded and extracted into C:\Xilinx_projects:

A completed 4-bit divider design: [Divider Pico N4 4bit.zip](#)

An incomplete 8-bit divider design: [Divider Pico N4 8bit.zip](#)

Both designs contain TA's completed .bit files (with dot points glowing on SSDs).

The incomplete 8bit zip file also contains a completed .xdc file and a completed .wcfg file.

General reference: [PicoBlaze/Picoblaze Design Steps Demo README r1.pdf](#)

Please demonstrate your completed 8-bit design to your TA. Show your simulation waveform and show your FPGA board running the 8-bit divider. Also submit your files to the class Unix account ee201@viterbi-scf1.usc.edu or ee201@viterbi-scf2.usc.edu using the following submit command

```
submit -user ee201 -tag Divider_Pico_N4_8bit prom_divider_8.psm divider_8_top.v
divider_8_top_simulation.v divider_8_top_simulation_tb.v instruction_trace_divider_8.txt
results_divider_8.txt names.txt
```

The last two text (.txt) files can be found in the following project subdirectory **after you finish simulation**.

C:\Xilinx_projects\Divider_Pico_N4_8bit\synthesis\synthesis.sim\sim_1\behav\xsim

Please exit simulation. Then only the results_divider_8.txt file gets populated. **Until then it remains empty.**