**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](https://ece-classes.usc.edu/ee254/ee254l_lab_manual/PicoBlaze/Divider_Pico_N4/design_files/Divider_Pico_N4_4bit_A7_supplement.zip)
[Divider\_Pico\_N4\_8bit\_A7\_supplement.zip](https://ece-classes.usc.edu/ee254/ee254l_lab_manual/PicoBlaze/Divider_Pico_N4/design_files/Divider_Pico_N4_8bit_A7_supplement.zip)
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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/ee254l_lab_manual/PicoBlaze/Divider_Pico_N4>

Assignment pdf: [PicoBlaze\_Divider\_handout.pdf](https://ece-classes.usc.edu/ee254/ee254l_lab_manual/PicoBlaze/Divider_Pico_N4/handout_files/PicoBlaze_Divider_handout.pdf)
Videos (more may be added)
1. Introduction to the lab
[Divider\_Pico\_N4\_Intro\_Oct\_12\_2022.mp4](https://ece-classes.usc.edu/ee254/ee254l_lab_manual/PicoBlaze/Divider_Pico_N4/handout_files/Divider_Pico_N4_Intro_Oct_12_2022.mp4)
[~~Divider\_Pico\_N4\_lab\_intro\_March\_16\_2021.mp4~~](https://ece-classes.usc.edu/ee254/ee254l_lab_manual/PicoBlaze/Divider_Pico_N4/handout_files/Divider_Pico_N4_lab_intro_March_16_2021.mp4)**<= OLD**
2. Simulation procedure [Divider\_Pico\_N4\_4bit\_xsim\_operation.mp4](https://ece-classes.usc.edu/ee254/ee254l_lab_manual/PicoBlaze/Divider_Pico_N4/handout_files/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](https://ece-classes.usc.edu/ee254/ee254l_lab_manual/PicoBlaze/Divider_Pico_N4/design_files/Divider_Pico_N4_4bit.zip)
An incomplete 8-bit divider design: [Divider\_Pico\_N4\_8bit.zip](https://ece-classes.usc.edu/ee254/ee254l_lab_manual/PicoBlaze/Divider_Pico_N4/design_files/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](https://viterbi-web.usc.edu/www-classes/engr/ee-s/254/ee254l_lab_manual/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.