FPGA Implementation of the Fast Fourier Transform

Garrett Massman and Cory Walker September 13, 2014 Introduction

Stuff That's Already Been Done (change section name plz)

Motivation

System Overview

Macro-Component Descriptions

Micro-Component Descriptions

Simulation Results

Roadblocks

Future Improvements

Conclusion

Appendix

References

- [1] Doin, Jonny. SPI Master/Slave Interface. OpenCores, 16 May 2011. Web. 13 Sept. 2014. http://opencores.org/project.spi_master_slave.
- [2] Reynwar, Ben. FFT on an FPGA. FFT on an FPGA. N.p., n.d. Web. 13 Sept. 2014. http://www.reynwar.net/ben/docs/fft_dit/index.html.
- [3] Roberts, Michael J. Signals and Systems: Analysis Using Transform Methods and MATLAB. New York: McGraw Hill, 2012. Print.
- [4] Satoh, Keiichi, Jubee Tada, Kenta Yamaguchi, and Yasutaka Tamura. Complex Multiplier Suited for FPGA Structure. Computers and Communications (2008): 341-44. Web. 13 Sept. 2014.
- [5] Wikipedia contributors. *Cooley–Tukey FFT algorithm*. Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, 27 Jun. 2014. Web. 13 Sep. 2014.
- [6] Wikipedia contributors. Discrete Fourier transform. Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, 2 Sep. 2014. Web. 13 Sep. 2014.