

ECE474/574 - Lab 7

Due Wednesday, June 8th 2016

Introduction

For the final lab you will implement a 9600 baud UART transmitter and receiver along with your lab 6 ADC.

Assignment

You will need to design your own transmit and receive UART interface to communicate to and from your PC. You will select the desired ADC analog input channel by sending a single number from your laptop to the UART in the FPGA. For example, if the user sends a '0' over UART, channel 0 is selected; if the user sends a '3' over UART, channel 3 is selected, etc. The voltage reading is sent back to the laptop via UART to the computer twice a second (2Hz).

Checkoff

You will need to upload your code and a block diagram to TEACH along with getting it checked off in person. Program the FPGA in front of a TA and demonstrate the working code.