Description

In the very near future, we will be connecting the Digilent FPGA board to our MCORE PFB boards. To do this requires us to understand the interface between the two boards. You will be connecting a set of 16 memory mapped registers on the FPGA board to the MCORE bus. For this assignment, you must:

- Go to the Digilent Web site (www.digilent.cc) and print out the schematics and documentation for the FPGA board.
- Note the total number of FPGA inputs and outputs that are available to your application.
- Find the appropriate signals and lines on the PFB board to accomplish the memory mapping of the registers (HINT: Use CS2 to partially decode your address lines – incomplete decoding of the addresses inside the segment decoded by CS2 is fine but you must decode at least 16 addresses!)
- Allow for an interrupt line to be generated by the Digilent board
- Draw the timing diagrams of all the data, control and address signals that you require to interface your FPGA board to the Motorola PFB. Describe what each of these lines are.

Note: You have all the necessary Motorola documentation to do this assignment on the class CDROM.

What to Turn in for This Assignment

For this assignment, you must turn in the following items:

Answers to the above questions. It MUST be typed. No handwritten answers accepted.

How Your Assignment will be Evaluated

Your document will be evaluated on the completeness. This assignment is worth 80 points.