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Lab 1 Report: Utility Board Assembly

1 Introduction

This lab consisted of two main components:

1. Assembling the development board
2. Writing a simple program for interfacing LEDs and switches

In the first section of this lab, I assembled the E155 Utility Board from the provide kit. This board serves as a development board for a PIC32 microcontroller and a Cyclone III FPGA. The kit included basic through-hole components such as resistors, capacitors, switches, header pins, and LEDs. Other accessories included a VGA port, JTAG pins, and a jack for programming the PIC. The only surface-mount components were 3 voltage regulators (for 2.5V, 1.2V, and 3.3V). I ran some basic checks to verify that the board performed as expected. These checks included measuring the clock output and voltage regulator outputs.

2 Design and Testing Methodology

3 Technical Documentation

4 Results and Discussion

5 Conclusions