

Computer Design Laboratory Project

Levi Balling Robert Christensen T. James Lewis

December 2011

Abstract

We implemented a computer with a 16-bit CPU, block memory, VGA Controller, RS-232 type serial controller, and NES controller for input. Running on this computer is a two player maze game where players on two machines race to find the finish.

- 1 Introduction**
- 2 CPU Design**
- 3 VGA Controller**
- 4 NES Controller**
- 5 Serial Controller**
- 6 Assembler**
- 7 Software**
- 8 System Integration**
- 9 Conclusions and Further Work**
- 10 Individual Contributions**
 - 10.1 Levi Balling**
 - 10.2 Robert Christensen**
 - 10.3 T. James Lewis**

References

- [1] Serial Interface (RS-232) fpga4fun.com/SerialInterface.html