

Department of Electrical and Computer Engineering

ECE 3300L Section 1

Lab 8 – RGB LED PWM Controller

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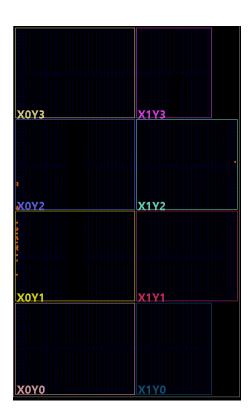
August 14, 2025

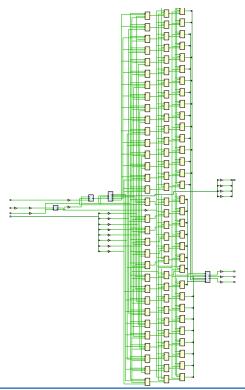
Design:

Testbench:



Simulation:





Implementation:

| Setup | | Hold | | Pulse Width | |
|------------------------------|----------|------------------------------|----------|--|----------|
| Worst Negative Slack (WNS): | 6.517 ns | Worst Hold Slack (WHS): | 0.237 ns | Worst Pulse Width Slack (WPWS): | 4.500 ns |
| Total Negative Slack (TNS): | 0.000 ns | Total Hold Slack (THS): | 0.000 ns | Total Pulse Width Negative Slack (TPWS): | 0.000 ns |
| Number of Failing Endpoints: | 0 | Number of Failing Endpoints: | 0 | Number of Failing Endpoints: | 0 |
| Total Number of Endpoints: | 32 | Total Number of Endpoints: | 32 | Total Number of Endpoints: | 33 |

All user specified timing constraints are met.

Contributions:

Bryan Liu: Code and Testbenching: 50%

Jaden Yeremenko: Synthesis and Testing: 50%