

ASSIGNMENT 4

GROUP - 50

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BOARD SPECIFICATIONS

Board: Nexys 4 DDR; FPGA: Artix-7 (XC7A100TCSG324-1)

1. Two's Complement Converter FSM :

1. HARDWARE REQUIREMENTS:

Resource	Utilization	Available	Utilization %
LUT	2	63400	0.00
FF	2	126800	0.00
IO	4	210	1.90

2. CRITICAL PATH DELAY: 4.090 ns

2. Multiple-of-three Detector FSM:

1. HARDWARE REQUIREMENTS:

Resource	Utilization	Available	Utilization %
LUT	3	63400	0.00
FF	3	126800	0.00
IO	4	210	1.90

2. CRITICAL PATH DELAY: 4.090 ns

3. Sequential GCD Calculator:

1. HARDWARE REQUIREMENTS:

Resource	Utilization	Available	Utilization %
LUT	32	63400	0.05
FF	29	126800	0.02
IO	29	210	13.81

2. CRITICAL PATH DELAY: 4.734 ns

Speed of operation is inversely proportional to the critical path delay. We are not comparing the speed of operation since each of the problems are different.