

ECSE485 Lab 3 Report Rev. 2

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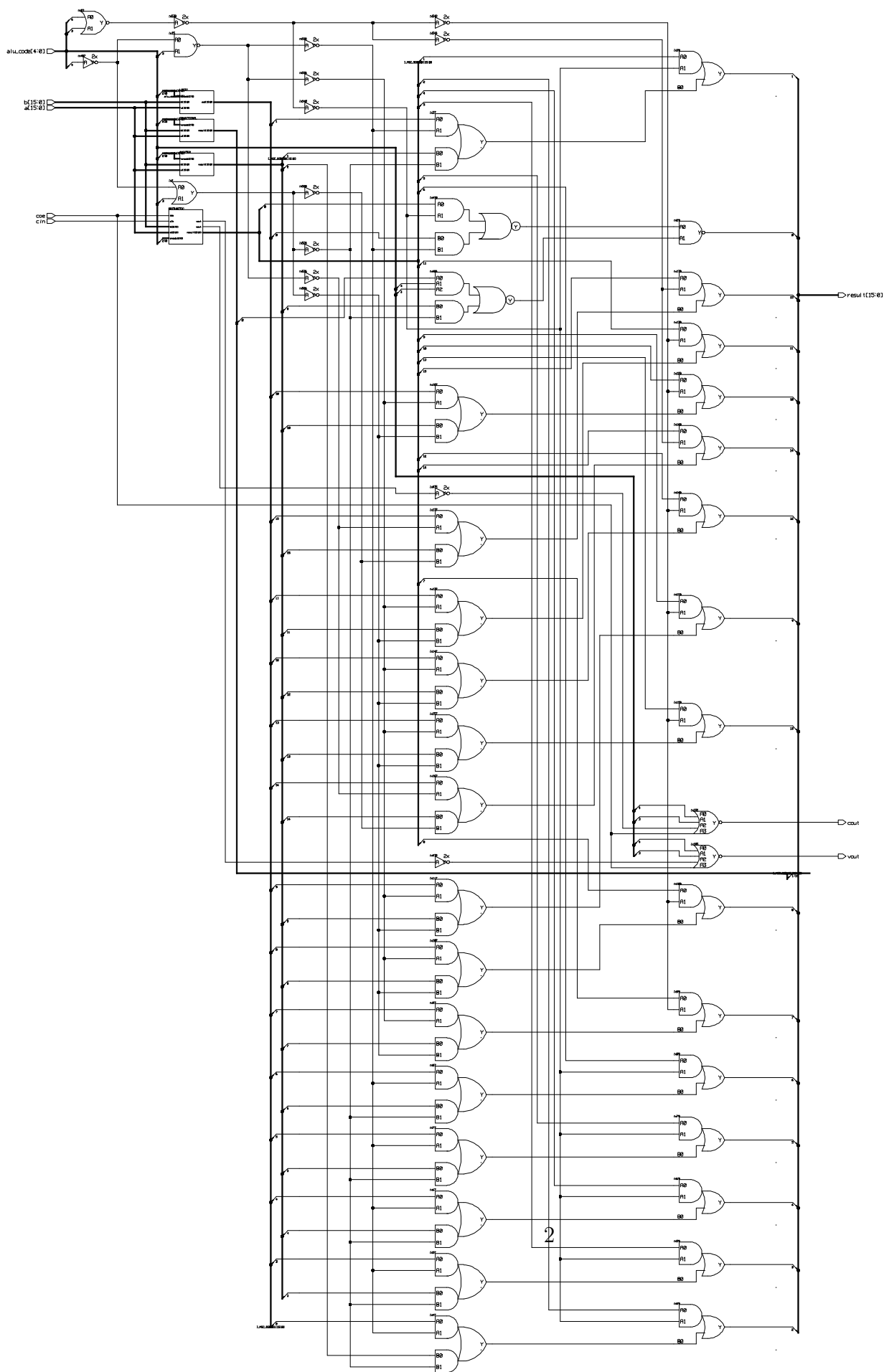
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1 Schematics

The next few pages include the schematics generated from the verilog code. In order, they are:

1. ALU Top Level Schematic
2. Arithmetic Block Schematics 1 and 2
3. Logic Block Schematic
4. Shifter Block Schematics 1, 2, and 3
5. Conditional Block Schematics 1 and 2



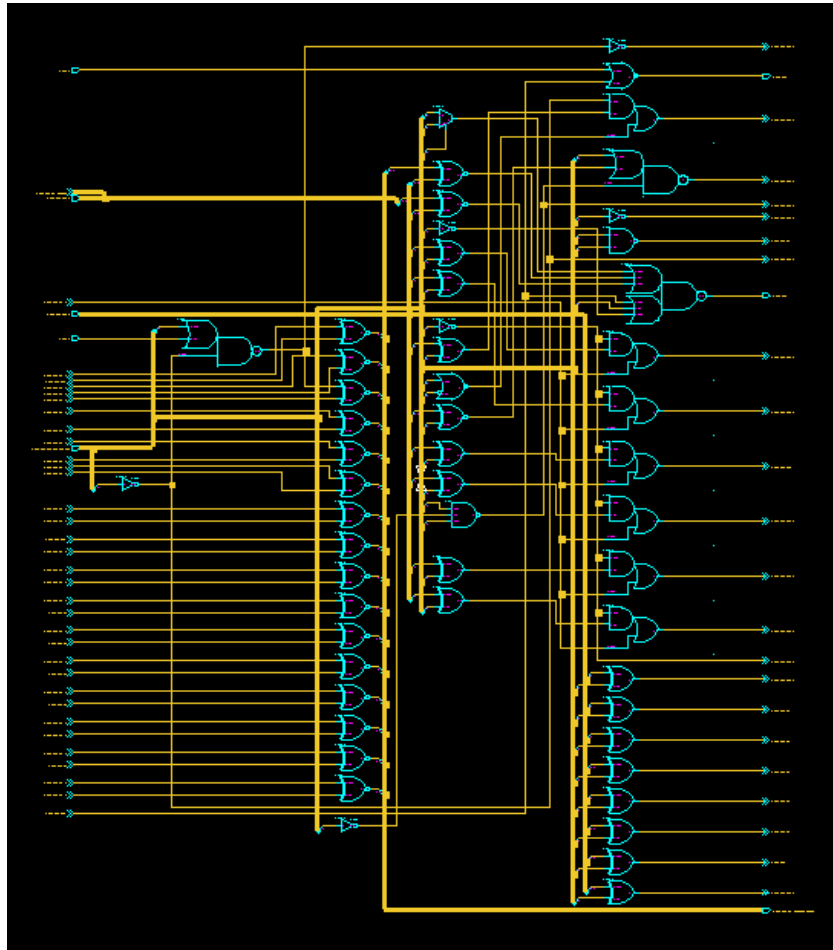
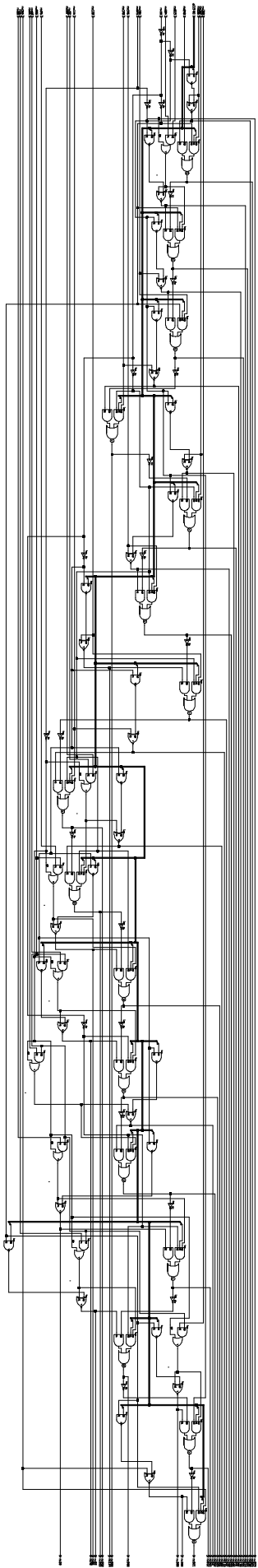
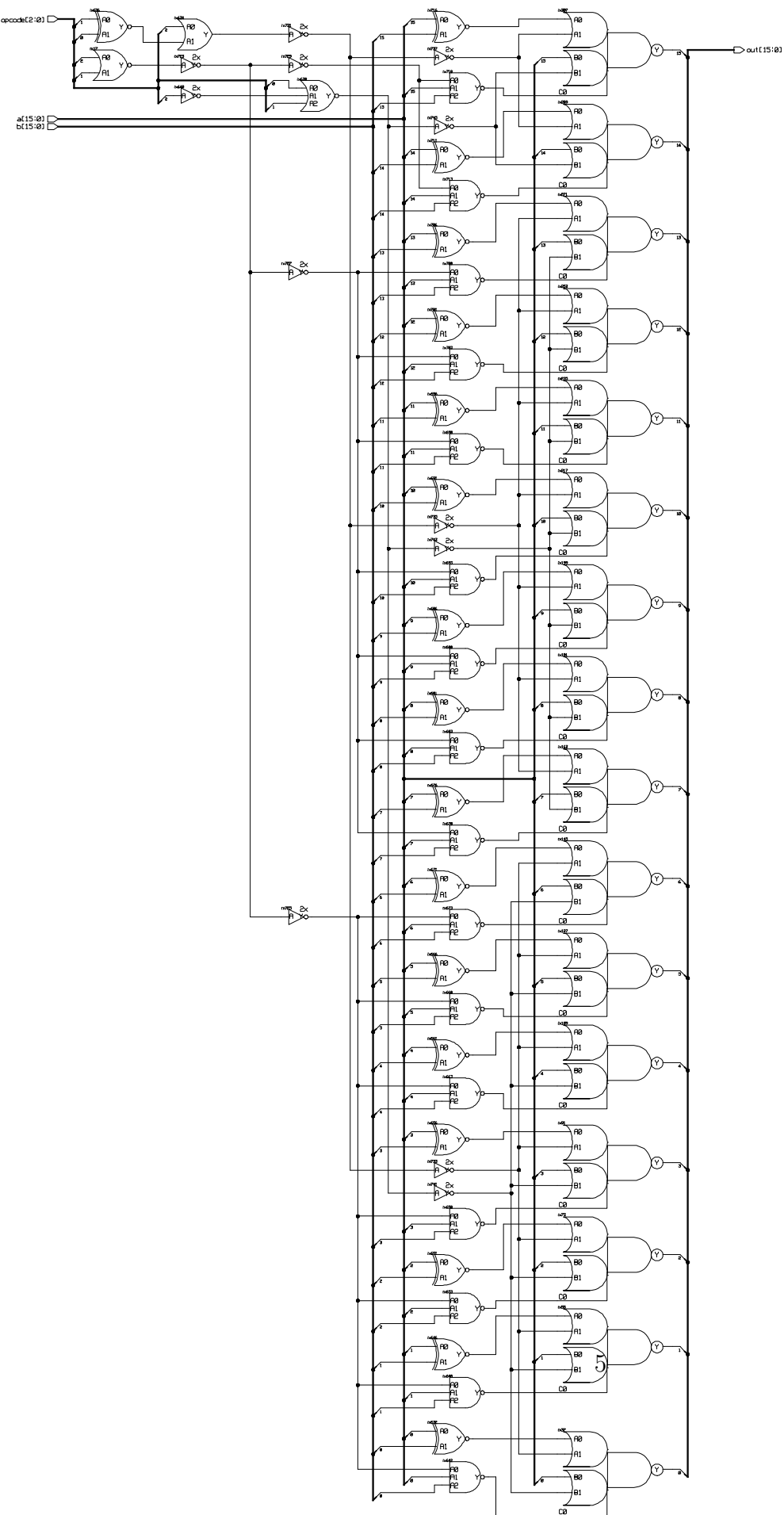
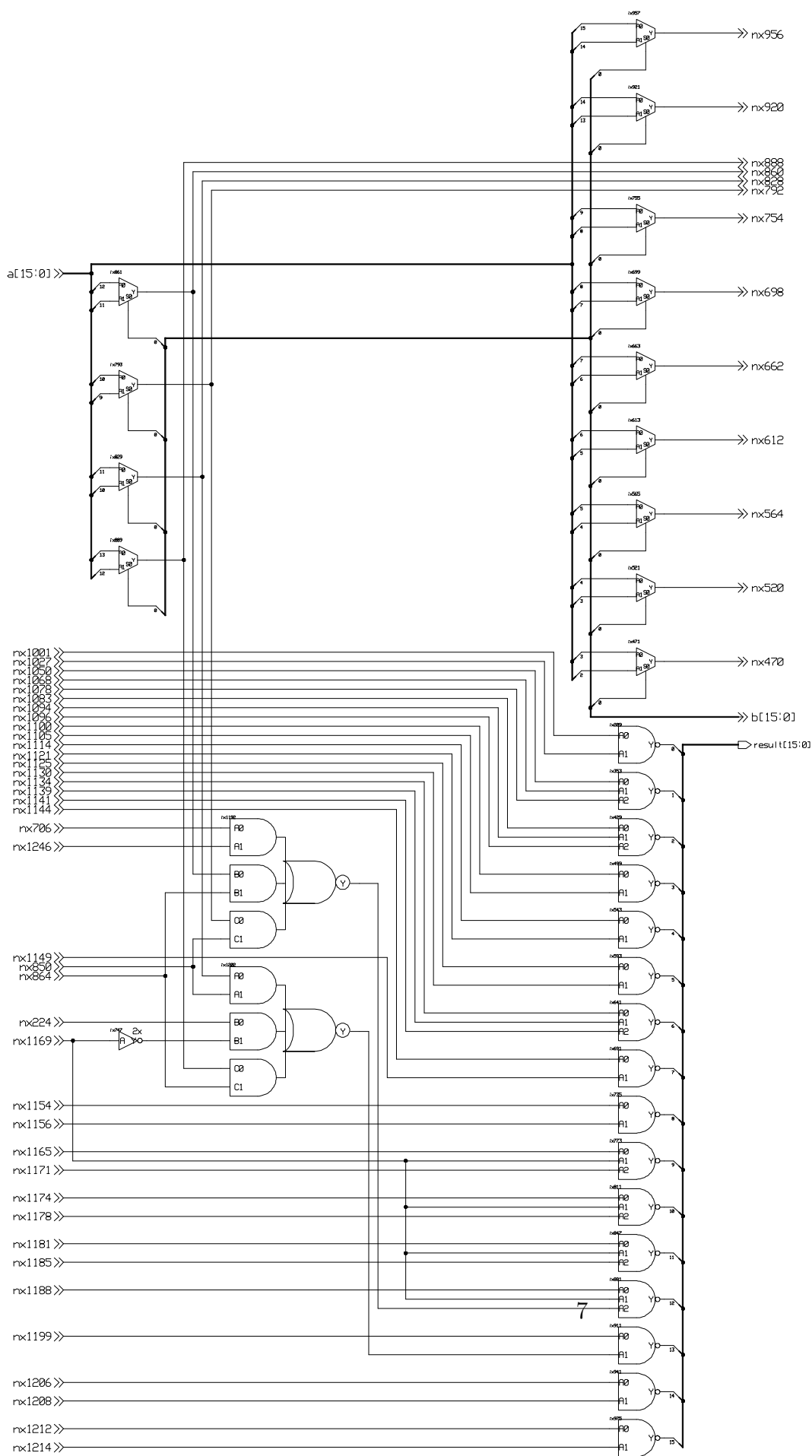


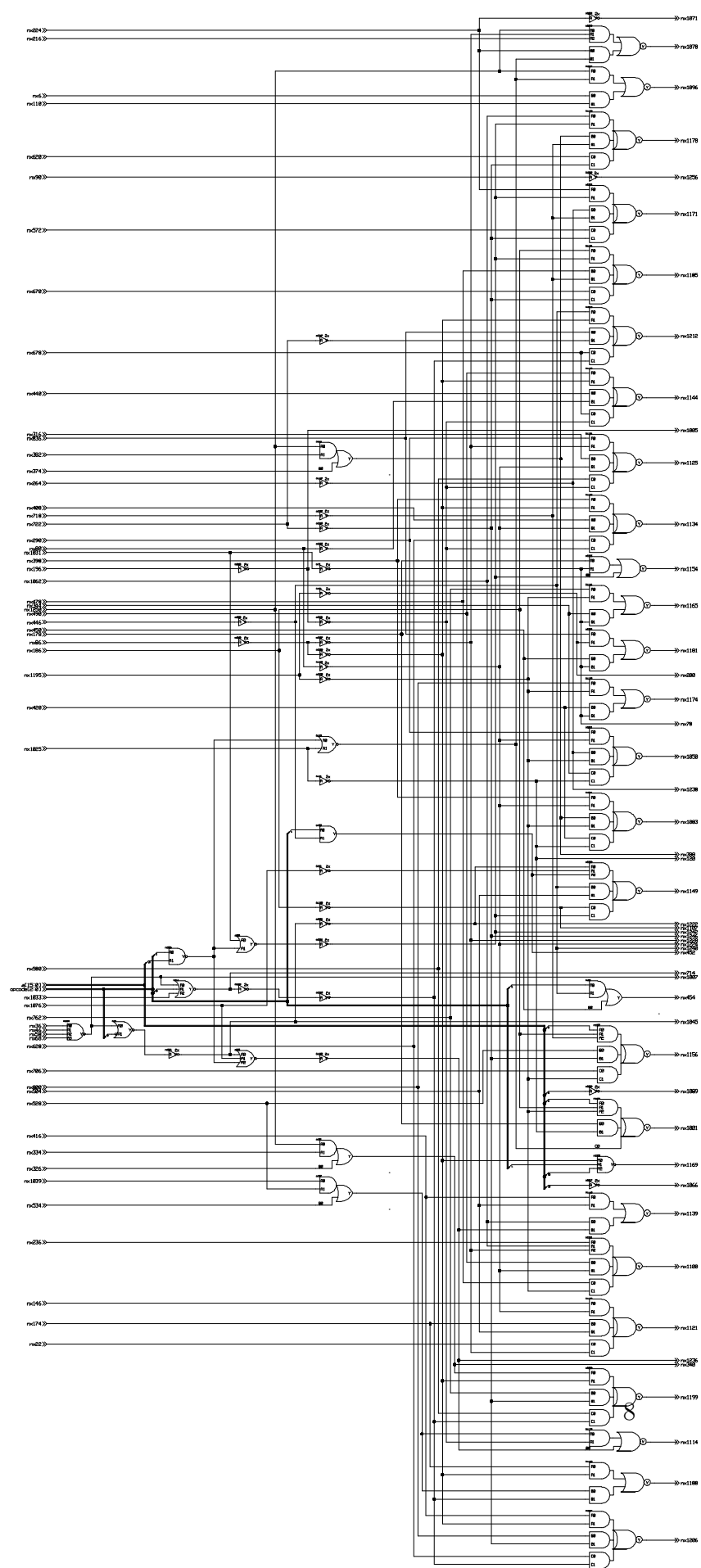
Figure 1: Arithmetic module sheet 1

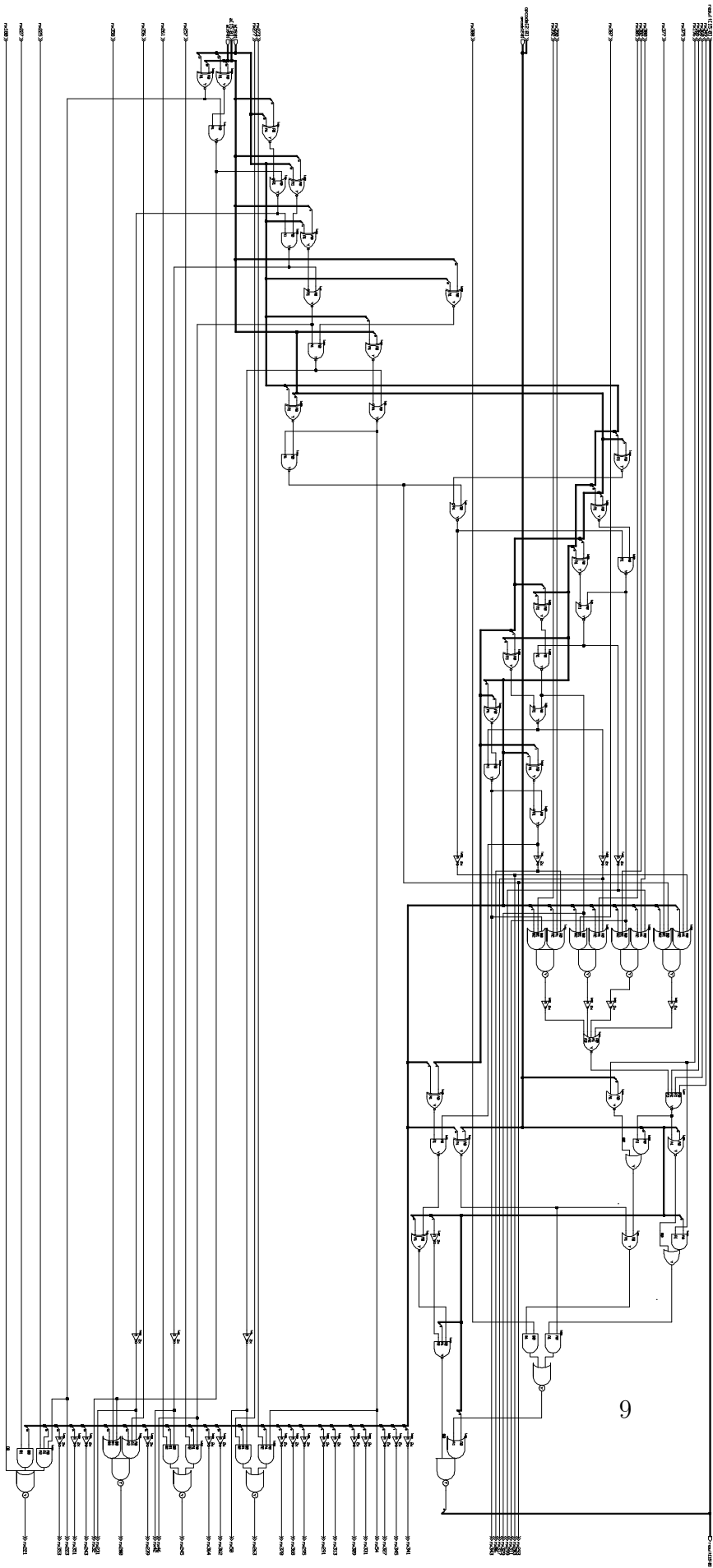


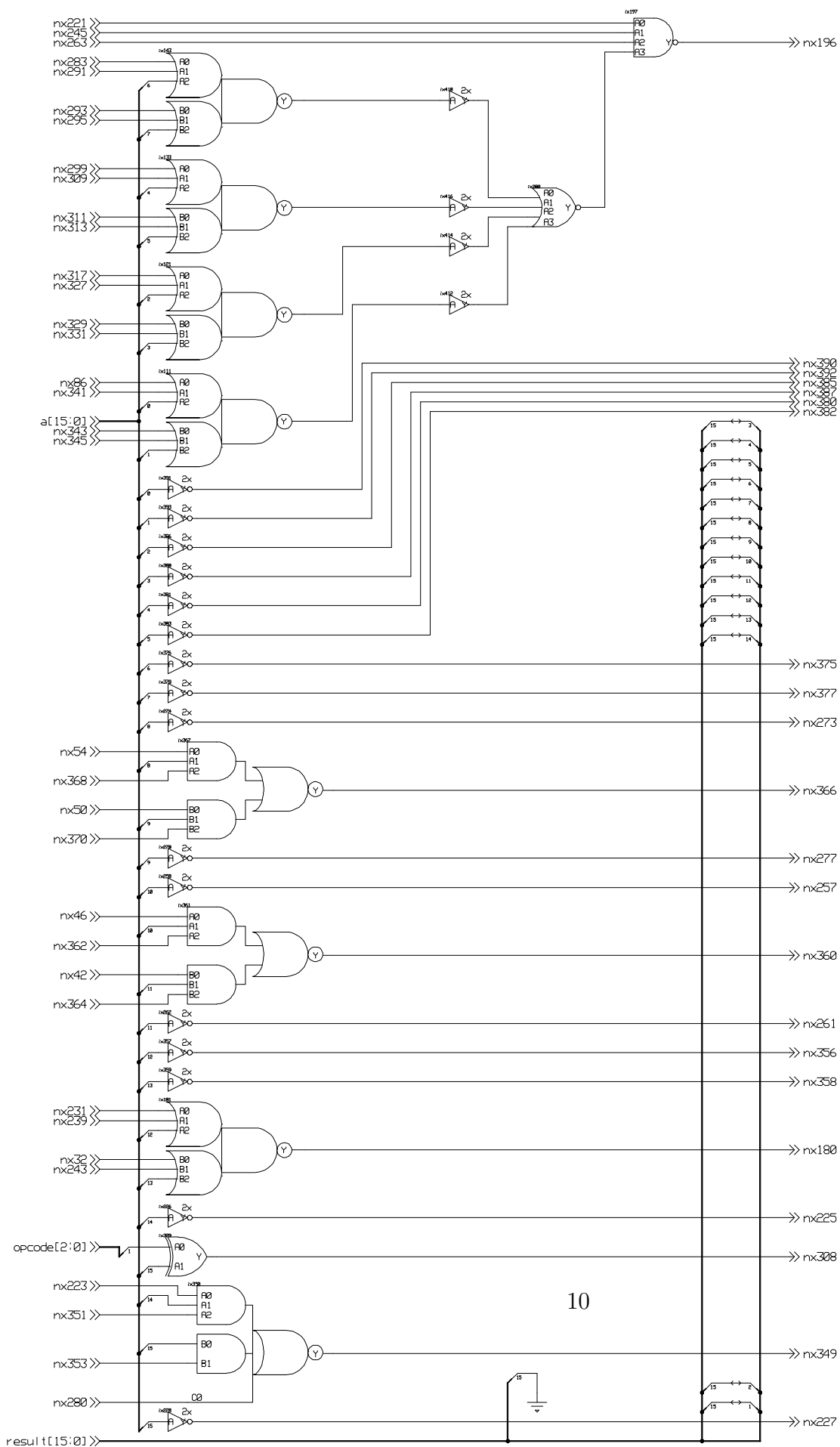












2 Critical Path

Figure 2 shows the critical path report from Leonardo.

Critical Path Report				
Critical path #1, (unconstrained path)				
NAME	GATE	ARRIVAL		LOAD
alu_code_1/		0.00	0.00 dn	0.93
ARITHMETIC/ix221/Y	xor2	0.76	0.76 up	0.01
ARITHMETIC/ix227/Y	ao21	0.68	1.45 up	0.05
ARITHMETIC/ix231/Y	xnor2	0.50	1.95 dn	0.06
ARITHMETIC/ix930/Y	aol32	0.59	2.54 up	0.06
ARITHMETIC/ix245/Y	inv02	0.20	2.75 dn	0.01
ARITHMETIC/ix933/Y	aol32	0.43	3.18 up	0.06
ARITHMETIC/ix249/Y	inv02	0.20	3.38 dn	0.01
ARITHMETIC/ix936/Y	aol32	0.43	3.81 up	0.06
ARITHMETIC/ix253/Y	inv02	0.20	4.01 dn	0.01
ARITHMETIC/ix939/Y	aol32	0.43	4.44 up	0.06
ARITHMETIC/ix257/Y	inv02	0.20	4.64 dn	0.01
ARITHMETIC/ix942/Y	aol32	0.43	5.07 up	0.06
ARITHMETIC/ix261/Y	inv02	0.20	5.28 dn	0.01
ARITHMETIC/ix945/Y	aol32	0.43	5.71 up	0.06
ARITHMETIC/ix265/Y	inv02	0.20	5.91 dn	0.01
ARITHMETIC/ix948/Y	aol32	0.43	6.34 up	0.06
ARITHMETIC/ix269/Y	inv02	0.20	6.54 dn	0.01
ARITHMETIC/ix951/Y	aol32	0.43	6.97 up	0.06
ARITHMETIC/ix273/Y	inv02	0.20	7.17 dn	0.01
ARITHMETIC/ix954/Y	aol32	0.43	7.60 up	0.06
ARITHMETIC/ix277/Y	inv02	0.20	7.80 dn	0.01
ARITHMETIC/ix957/Y	aol32	0.43	8.23 up	0.06
ARITHMETIC/ix281/Y	inv02	0.20	8.44 dn	0.01
ARITHMETIC/ix960/Y	aol32	0.43	8.87 up	0.06
ARITHMETIC/ix285/Y	inv02	0.20	9.07 dn	0.01
ARITHMETIC/ix963/Y	aol32	0.43	9.50 up	0.06
ARITHMETIC/ix289/Y	inv02	0.20	9.70 dn	0.01
ARITHMETIC/ix966/Y	aol32	0.43	10.13 up	0.06
ARITHMETIC/ix293/Y	inv02	0.20	10.33 dn	0.01
ARITHMETIC/ix969/Y	aol32	0.43	10.76 up	0.06
ARITHMETIC/ix297/Y	inv02	0.20	10.96 dn	0.01
ARITHMETIC/ix813/Y	aol32	0.43	11.39 up	0.06
ARITHMETIC/ix369/Y	xnor2	0.68	12.07 dn	0.05
ARITHMETIC/ix371/Y	xnor2	0.27	12.35 up	0.03
ARITHMETIC/ix397/Y	oal33	0.39	12.73 dn	0.02
ix472/Y	inv02	0.24	12.97 up	0.03
ix185/Y	nor04	0.31	13.28 dn	0.00
vout/		0.00	13.28 dn	0.00
data arrival time			13.28	
data required time		not specified		
data required time		not specified		
data arrival time			13.28	
		unconstrained path		

Figure 2: Critical Path Report from Leonardo