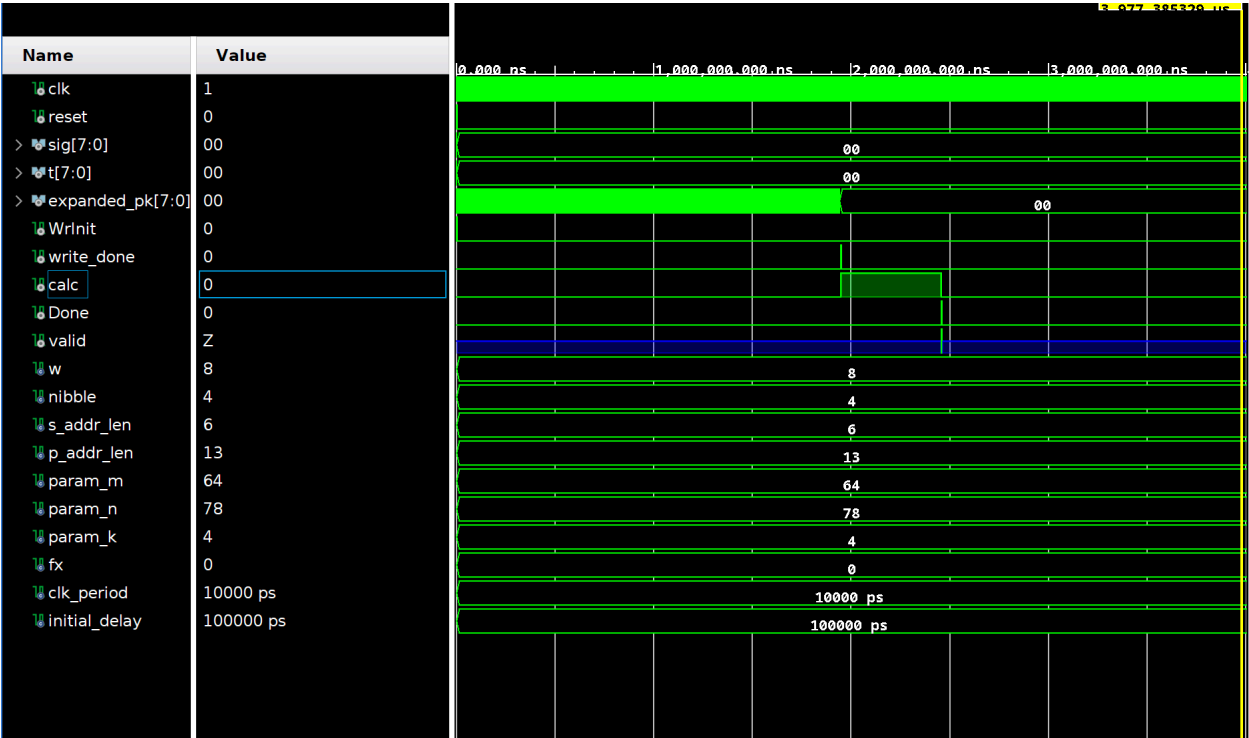
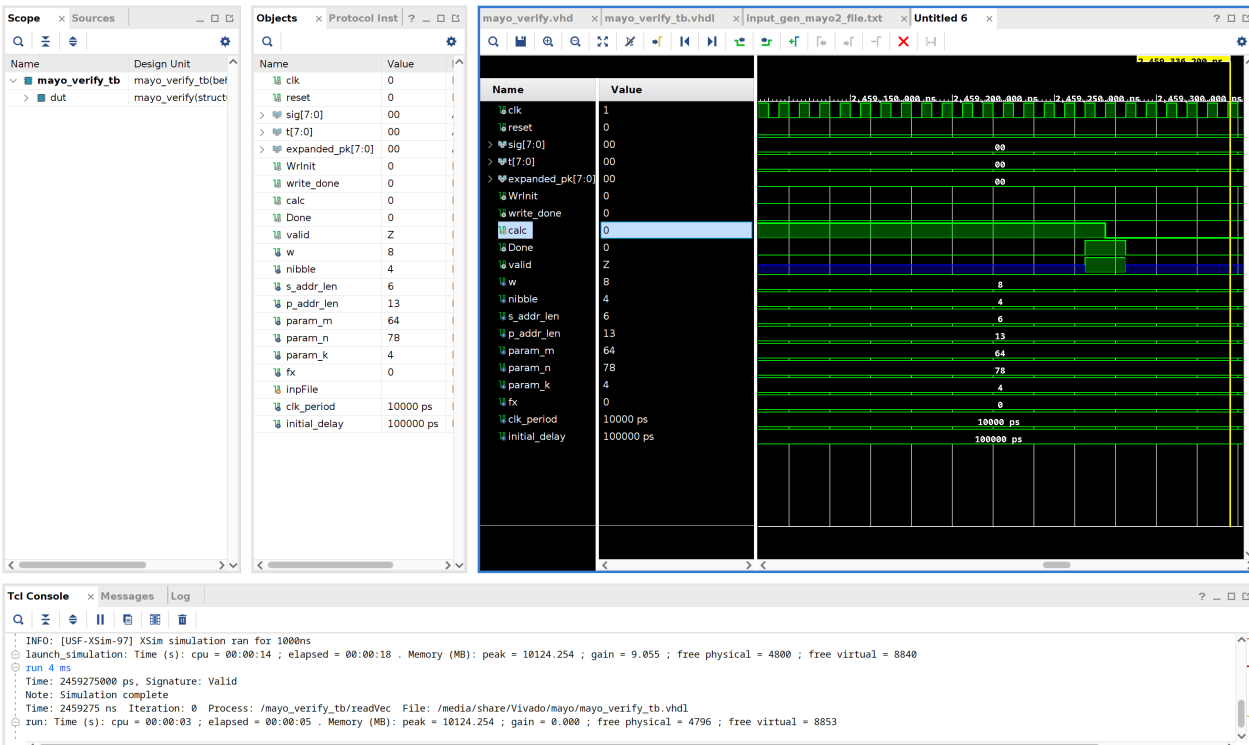


Results

Device used is artix-7 family part **xc7a200tffg1156-3**

MAYO1

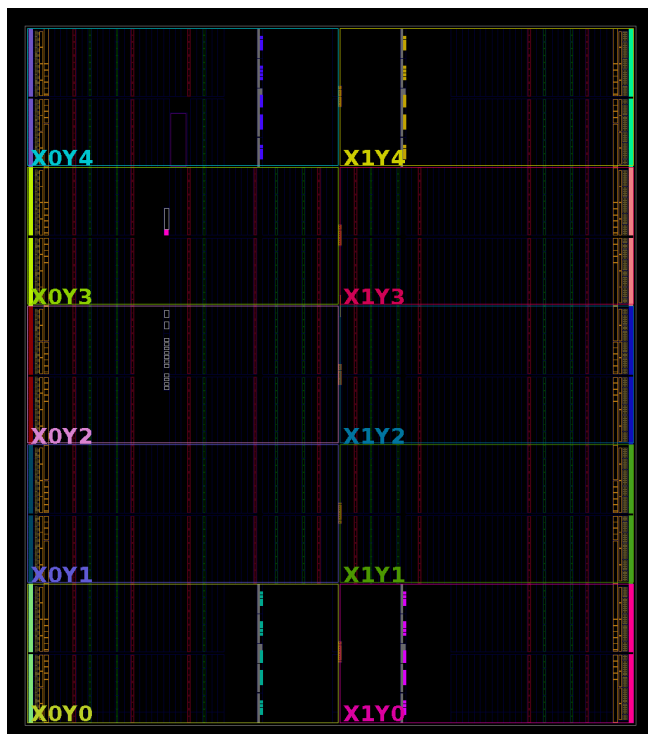
Timing simulation of Mayo1 showing valid signature in waveform and console



Resource Utilization

Resource	Estimation	Available	Utilization %
LUT	40484	134600	30.08
LUTRAM	34320	46200	74.29
FF	1869	269200	0.69
IO	31	500	6.20
BUFG	1	32	3.13

Design



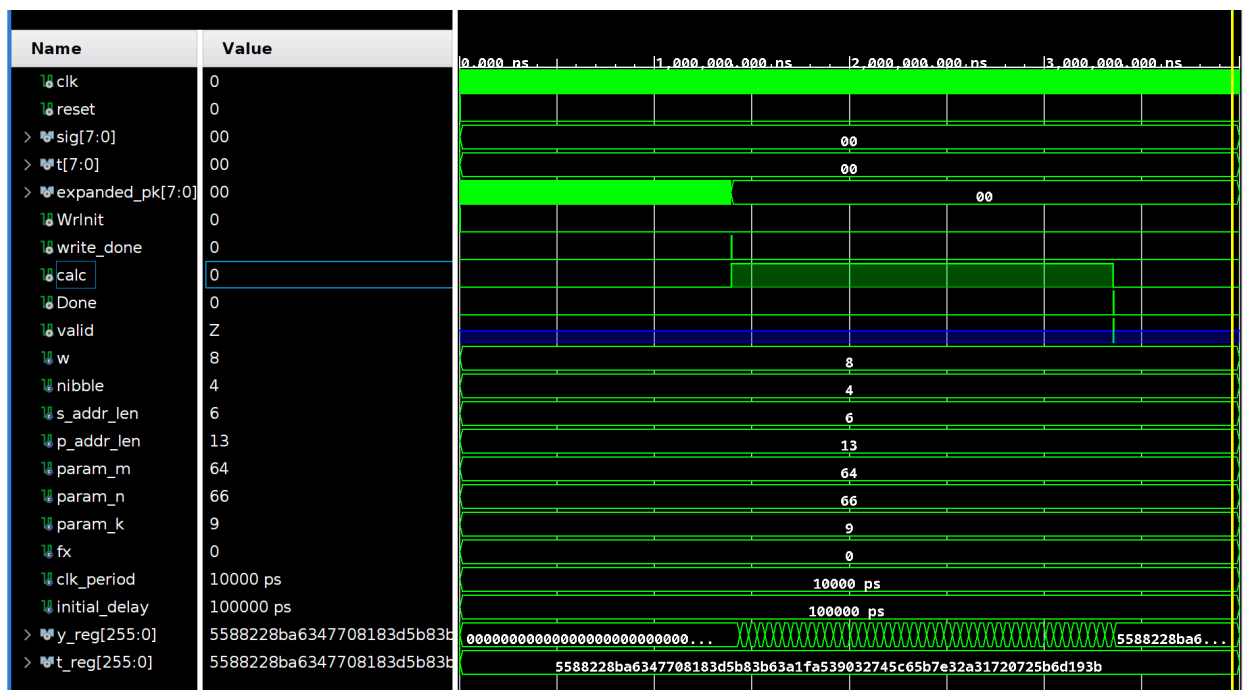
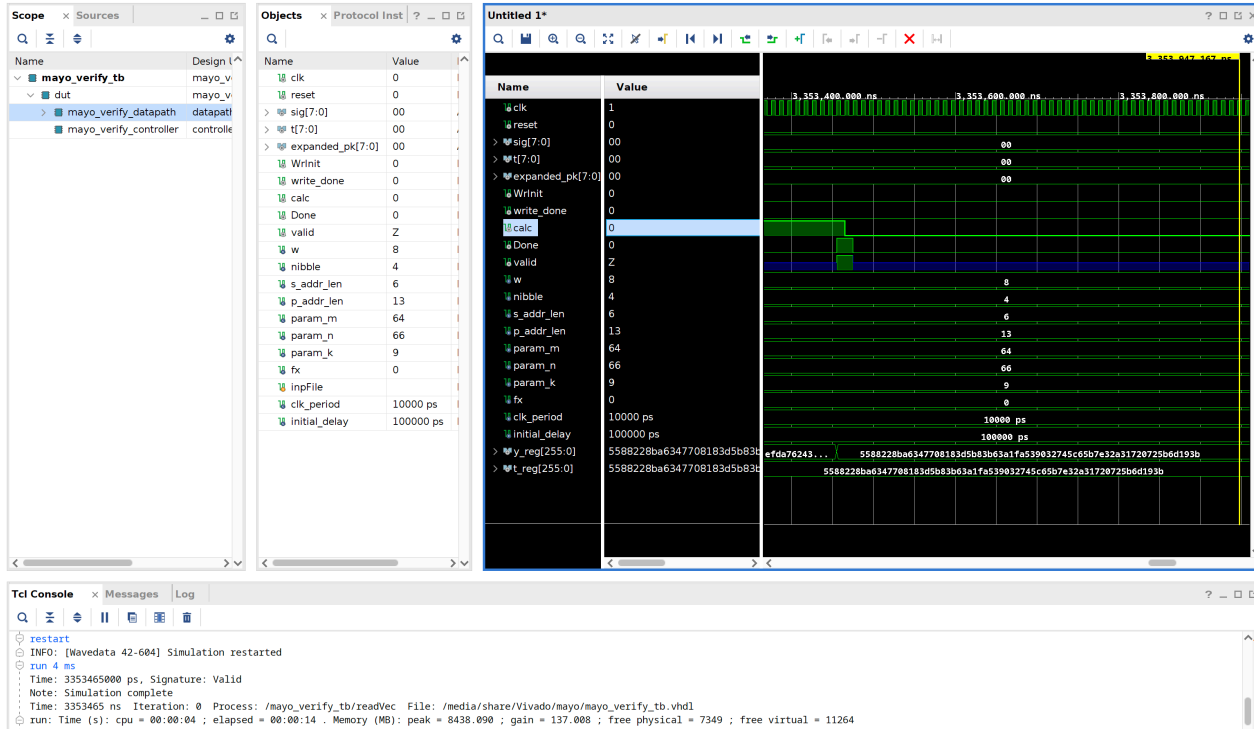
WNS

Setup	Hold	Pulse Width
Worst Negative Slack (WNS): 1.140 ns	Worst Hold Slack (WHS): 0.053 ns	Worst Pulse Width Slack (WPWS): 3.950 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: 345883	Total Number of Endpoints: 345883	Total Number of Endpoints: 36190
All user specified timing constraints are met.		

Minimum clock period : 10ns - 1.14ns = 8.86 ns
Maximum frequency : $1/T_{clk} = 1/8.86ns = 113 \text{ MHz}$

MAYO2

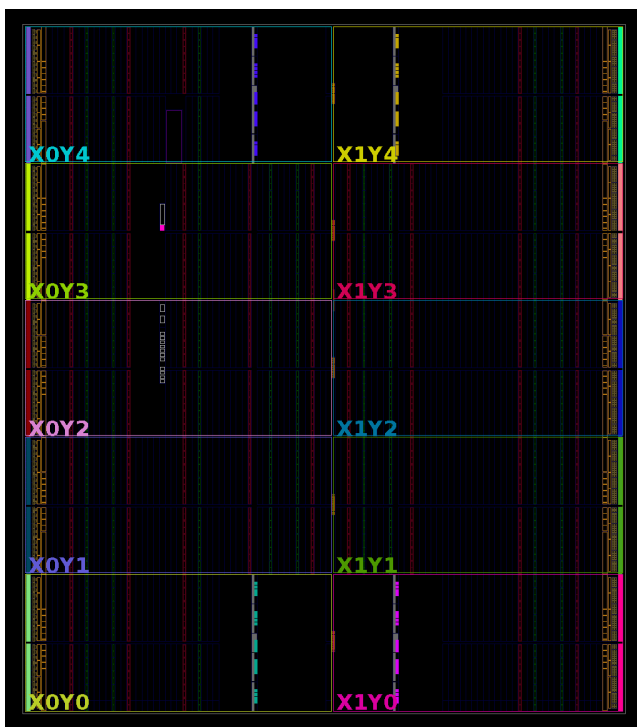
Timing simulation of Mayo2 showing valid signature in waveform and console



Resource Utilization

Resource	Estimation	Available	Utilization %
LUT	47613	134600	35.37
LUTRAM	40560	46200	87.79
FF	2063	269200	0.77
IO	31	500	6.20
BUFG	1	32	3.13

Design



WNS

Timing constraints failed for 10ns clock period

Setup	Hold	Pulse Width
Worst Negative Slack (WNS): -0.443 ns	Worst Hold Slack (WHS): 0.053 ns	Worst Pulse Width Slack (WPWS): 3.950 ns
Total Negative Slack (TNS): -0.749 ns	Total Hold Slack (THS): 0.000 ns	Total Pulse Width Negative Slack (TPWS): 0.000 ns
Number of Failing Endpoints: 4	Number of Failing Endpoints: 0	Number of Failing Endpoints: 0
Total Number of Endpoints: 408481	Total Number of Endpoints: 408481	Total Number of Endpoints: 42624

Timing constraints are not met.

Minimum clock period : $10\text{ns} + 0.443\text{ns} = 10.443\text{ ns}$
Maximum frequency : $1/T_{\text{clk}} = 1/10.443\text{ns} = 95.7\text{ MHz}$