

## RVT AND HVT

COMPILE			
Report	Parameter	NLDM	CCS
report_cell	Top Module cells	<b>5453</b>	<b>5317</b>
get_cells -hierarchical	Total Cells		
report_reference	No of Refernces	<b>79</b>	<b>77</b>
	Levels of Logic	<b>36.00</b>	<b>33.00</b>
	Critical Path Length	<b>5.72</b>	<b>5.33</b>
report_qor	Critical Path Slack	<b>-0.81</b>	<b>-0.36</b>
	Total Negative Slack	<b>18.85</b>	<b>-2.80</b>
	No. of Violating Paths	<b>53.00</b>	<b>11.00</b>
	Combinational Area	20871.575957	<b>21446.449618</b>
report_area	Sequential Area	<b>1827.803657</b>	<b>1835.427986</b>
	Buf/Inv Area	<b>10926.667481</b>	<b>11072.546111</b>
	Net Interconnect Area	<b>9290.181642</b>	<b>8698.929529</b>
	Total area ( $\mu\text{m}^2$ )	<b>41088.425080</b>	<b>41217.925257</b>
	Internal Power ( $\mu\text{W}$ )	<b>976.7583</b>	<b>1.0009E+03</b>
report_power	Switching Power ( $\mu\text{W}$ )	<b>6.3517</b>	<b>5.5400</b>
	Total Dynamic Power (mW)	<b>983.1182</b>	<b>1.0065</b>
	Leakage Power (pW)	<b>4.1695E+07</b>	<b>8.5468E+08</b>
	Total Power ( $\mu\text{W}$ )	<b>1.0248E+03</b>	<b>1.8611E+03</b>
	<b>SETUP</b>		
	Data Required Time	<b>5.91</b>	<b>5.98</b>
	Data Arrival Time	<b>-6.72</b>	<b>-6.33</b>
	Slack(max) - Setup	<b>-0.81</b>	<b>-0.36</b>
report_timing	<b>HOLD</b>		
	Data Required Time	<b>-0.05</b>	<b>-0.02</b>
	Data Arrival Time	<b>-0.18</b>	<b>-0.26</b>
	Slack(min) - Hold	<b>0.24</b>	<b>0.28</b>
	<b>HVT</b>		
	Cell Count	<b>1653 (17.46%)</b>	<b>1554 (16.52%)</b>
	Area	<b>7365.86 (23.16%)</b>	<b>7415.16 (22.80%)</b>
report_threshold_voltage_group	Leakage ( $\mu\text{W}$ )	<b>3.955uW (9.49%)</b>	<b>171.332uW (20.05%)</b>
	<b>RVT</b>		
	Cell Count	<b>7815 (82.54%)</b>	<b>7852 (83.48%)</b>
	Area	<b>24432.39 (76.84%)</b>	<b>25103.84 (77.20%)</b>
	Leakage ( $\mu\text{W}$ )	<b>37.740uW (90.51%)</b>	<b>683.344uW (79.95%)</b>
	No of Sinks	<b>1599</b>	<b>1599</b>
report_clock_tree	Clock Global Skew	<b>0.022</b>	<b>0.009</b>
	Longest Path Delay	<b>0.124</b>	<b>0.109</b>
	Shortest Path Delay	<b>0.102</b>	<b>0.100</b>

In Compile, CCS is better in terms of timing slightly,  
But more area and power consumption  
CCS chose more HVT than NLDM

## RVT AND HVT

COMPILE_ULTRA			
Report	Parameter	NLDM	CCS
report_cell	Top Module cells	<b>8338</b>	<b>6833</b>
get_cells -hierarchical	Total Cells		
report_reference	No of Refernces	<b>89</b>	<b>47</b>
report_qor	Levels of Logic	<b>15.00</b>	<b>41.00</b>
	Critical Path Length	<b>4.92</b>	<b>4.92</b>
	Critical Path Slack	<b>0.00</b>	<b>0.00</b>
	Total Negative Slack	<b>0.00</b>	<b>0.00</b>
	No. of Violating Paths	<b>0.00</b>	<b>0.00</b>
report_area	Combinational Area	<b>24732.023257</b>	<b>21768.450082</b>
	Sequential Area	<b>1560.190026</b>	<b>945.161542</b>
	Buf/Inv Area	<b>10841.020944</b>	<b>10803.661784</b>
	Net Interconnect Area	<b>11337.617419</b>	<b>12963.716499</b>
	Total area ( $\mu\text{m}^2$ )	<b>46910.661620</b>	<b>45535.828365</b>
report_power	Internal Power ( $\mu\text{W}$ )	<b>991.1247</b>	<b>972.9865</b>
	Switching Power ( $\mu\text{W}$ )	<b>5.6776</b>	<b>5.4189</b>
	Total Dynamic Power (mW)	<b>996.8053</b>	<b>978.4088</b>
	Leakage Power (pW)	<b>5.0851E+07</b>	<b>8.6219E+08</b>
	Total Power ( $\mu\text{W}$ )	<b>1.0477E+03</b>	<b>1.8406E+03</b>
report_timing	<b>SETUP</b>		
	Data Required Time	<b>5.92</b>	<b>5.92</b>
	Data Arrival Time	<b>-5.92</b>	<b>-5.92</b>
	Slack(max) - Setup	<b>0.00</b>	<b>0.00</b>
	<b>HOLD</b>		
report_threshold_voltage_group	Data Required Time	<b>0.06</b>	<b>-0.02</b>
	Data Arrival Time	<b>-0.28</b>	<b>-0.26</b>
	Slack(min) - Hold	<b>0.22</b>	<b>0.28</b>
	<b>HVT</b>		
	Cell Count	<b>4872 (44.01%)</b>	<b>145 (1.48%)</b>
report_clock_tree	Area	<b>11347.78 (31.90%)</b>	<b>383.00 (1.18%)</b>
	Leakage ( $\mu\text{W}$ )	<b>2.780uW (5.47%)</b>	<b>10.360uW (1.20%)</b>
	<b>RVT</b>		
	Cell Count	<b>6198 (55.99%)</b>	<b>9630 (98.52%)</b>
	Area	<b>24225.26 (68.10%)</b>	<b>32189.12 (98.82%)</b>
report_clock_tree	Leakage ( $\mu\text{W}$ )	<b>48.071uW (94.53%)</b>	<b>851.826uW (98.80%)</b>
	No of Sinks	<b>1582</b>	<b>1582</b>
	Clock Global Skew	<b>0.224</b>	<b>0.009</b>
	Longest Path Delay	<b>1.247</b>	<b>0.109</b>
report_clock_tree	Shortest Path Delay	<b>1.023</b>	<b>0.100</b>

With Compile\_ultra, CCS is good in terms of timing and area,  
But more power consumption  
NLDM chose more HVT than CCS