

PCIe 5 Compliance Report

Generated by Topology Workbench, Cadence Design Systems Inc.,
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Useful Links

- Cadence website: <http://www.cadence.com>

General Information

- Project File: pcie5.topx
- Circuit Simulator: SPDSIM

Summary of Results

This report shows the results of the compliance testing using Cadence TopXp.
The channel simulated violates one or more compliance requirements.

Channel Tolerancing Eye Mask Values (table 8-14 in PCI Express Base spec.)

Item	Value	Simulation Results	Pass/Fail
Eye Height (at BER=1e-12)	15 mV	41.000 mV	Pass
Eye Width at Zero Crossing (at BER=1e-12)	0.3 UI	0.370 UI	Pass
Peak EH Offset from UI Center (at BER=1e-12)	$\pm T_{RX-DS-OFFSET}$ UI	0.062	Pass
Eye Mask (at BER=1e-12)		Eye Mask	Fail
Skew between P and N Side of Thru Diff Pair	10 ps	0.967	Pass

Differential Insertion Loss

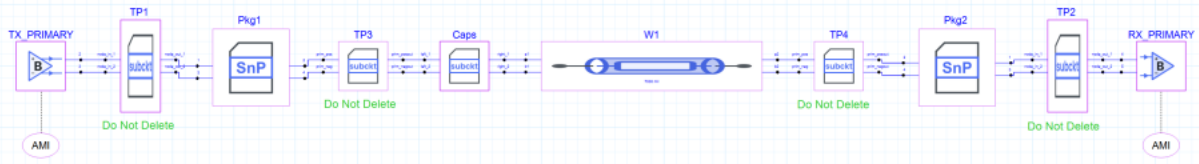
Item	Value	Simulation Results	Pass/Fail
Insertion Loss		SDD21	Fail

Differential Return Loss (figure 8-20 in PCI Express Base spec.)

Item	Value	Simulation Results	Pass/Fail
Tx Return Loss		RL - Tx	Fail
Rx Return Loss		RL - Rx	Pass

Customized Contents

• **Canvas Snapshot:**



• **Channel Model Details:**

Block	File
TX_PRIMARY	C:\Cadence\SPB_23.1\share\topxp\ComplianceKits\pcie5\IBIS\sla_pcie5_em.ibs
TP1	C:\Cadence\SPB_23.1\share\topxp\ComplianceKits\pcie5\pcie5_thru\TP1.sp
TP2	C:\Cadence\SPB_23.1\share\topxp\ComplianceKits\pcie5\pcie5_thru\TP2.sp
RX_PRIMARY	C:\Cadence\SPB_23.1\share\topxp\ComplianceKits\pcie5\IBIS\sla_pcie5_em.ibs
Caps	C:\Cadence\SPB_23.1\share\topxp\ComplianceKits\pcie5\pcie5_thru\ac_cap2.sp
Pkg1	C:\Cadence\SPB_23.1\share\topxp\ComplianceKits\pcie5\pcie5_thru\root_complex_pkg.s4p
Pkg2	C:\Cadence\SPB_23.1\share\topxp\ComplianceKits\pcie5\pcie5_thru\non_root_complex_pkg.s4p
W1	D:\Assignments\EBooks 2022\PCIe4 5 and 6Ebook\pcie5\result\W1.sp
TP3	C:\Cadence\SPB_23.1\share\topxp\ComplianceKits\pcie5\pcie5_thru\TP3_spice.sp
TP4	C:\Cadence\SPB_23.1\share\topxp\ComplianceKits\pcie5\pcie5_thru\TP4_spice.sp

• **AMI Model Details:**

AMI	Executable File
TX_PRIMARY > AMI	C:\Cadence\SPB_23.1\share\topxp\ComplianceKits\pcie5\IBIS\pcie5_Tx_licensed_win64.dll
RX_PRIMARY > AMI	C:\Cadence\SPB_23.1\share\topxp\ComplianceKits\pcie5\IBIS\pcie5_Rx_licensed_win64.dll

• **Simulation Properties:**

Data Rate (Gbps)	Log BER	Ignore Time (ns)	Minimum # of Bits	Bit Sampling Rate	BER Floor
32	-12	200	200000	32	1e-16