

InfiniBand Trade Association RoCE Integrators' List

May 2022 (Plugfest 39)





IBTA RoCE Integrators' List

PlugFest 39 May 2022



Manufacturer	Description	Model	Type	Speed	FW	SW
Arista	DCS-7060DX4-32-F	DCS-7060DX4	Switch	400 GbE	4.27.3f	Arista EOS
Arista	DCS-7280DR3-24-F	DCS-7280DR3	Switch	400 GbE	4.27.3f	Arista EOS
Broadcom	BCM57508: P2100 (1x200G) - PCIE	P2100 - PCIe	RNIC	200 GbE	222.1.50.0 : 222.0.118.0	BCM957508-P2100G.pkg
Broadcom	BCM57508: N2100 (1x200G) - OCP3.0	N2100 - OCP	RNIC	200 GbE	222.1.50.0 : 222.0.118.0	BCM957508-N2100G.pkg
Broadcom	BCM57508: P2100 (2x100G) - PCIE	P2100 - PCIe	RNIC	100 GbE	222.1.50.0 : 222.0.118.0	BCM957508-P2100G.pkg
Broadcom	BCM57508: N2100 (2x100G) - OCP3.0	N2100 - OCP	RNIC	100 GbE	222.1.50.0 : 222.0.118.0	BCM957508-N2100G.pkg
Broadcom	BCM57504: P425G (4x25G) - PCIE	P425 - PCIe	RNIC	25 GbE	222.1.50.0 : 222.0.118.0	BCM957504-P425G
Nvidia	ConnectX-7 VPI adapter card, 400Gb/s IB and 400GbE dual-port QSFP, single port InfiniBand and second port VPI (IB or Ethernet)	MCX713106AEHEA_QP1	RNIC	200 GbE	28.33 GA	MLNX-OS 5.5-1.0.3.2
Nvidia	ConnectX@-6 Dx EN Single-port QSFP56 PCIe 4.0	MCX623105AC-VDAT	RNIC	200 GbE	22.32.1010	MLNX-OS 5.5-1.0.3.2
Nvidia	ConnectX@-6 EN Single-port QSFP56 Socket Direct 2x PCIe3.0	MCX623105AN-VDAT	RNIC	200 GbE	22.32.1010	MLNX-OS 5.5-1.0.3.2
Nvidia	BlueField@-2 E-Series DPU VPI Dual-Port QSFP56 PCIe 4.0	MBF2M516A-EEEOT	RNIC	100 GbE	22.32.1010	MLNX-OS 5.5-1.0.3.2
Nvidia	Spectrum-3 32 QSFPDD ports Supports 10 to 400GbE Onyx OS	MSN4700-WS2F	Switch	400 GbE	30_2010_2028	MLNX OS 4.5.2028
Nvidia	Spectrum 18 SFP28 ports 4 QSFP28 ports Supports 25 to 100GbE	MSX2010-CB2F	Switch	100 GbE	30_2010_2028	MLNX OS 4.5.2028
Nvidia	Spectrum 48 SFP28 ports 8 QSFP28 ports Supports 10 to 100GbE	MSN2410-CB2F	Switch	100 GbE	30_2010_2028	MLNX OS 4.5.2028
Software	Versions	Performance Software				
Operating System	CentOS 8.3	HPC-Performance Monitor			HPC-PM-2.0.80	
INBOX IB Support	CentOS 8.3	Perftest (OFED)			4.4-0.9	
Mellanox OFED	MLNX-OS 5.5-1.0.3.2	Benchmarks Performed				
Open MPI	Open MPI 4.1.1	PingPong			Gather	
Benchmark	Intel MPI Benchmarks	PingPing			Gatherv	
Test Plan	Software Forge RoCE Interoperability MOI	Sendrecv			Scatter	
Duration	1-3 minutes	Exchange			Scatterv	
Conditions for Passing Interoperability Testing		Allreduce			Alltoall	
		Reduce			Alltoallv	
Performance	Devices must perform at advertised rates and latencies	Reduce_scatter			Bcast	
Link Status	Link rate and width show expected values - i.e. 100GbE (4x)	Allgather			Barrier	
Errors	There must be no errors recorded during any test phases	Allgatherv				
MPI Test	The MPI Benchmark must run to completion	Allgatherv				



IBTA RoCE Compliance PlugFest 39 May 2022



Manufacturer	Product Description	Model	FW	SW	Transport
Broadcom	BCM57508: N2100 (1x200G) - OCP3.0	N2100 - OCP	222.0.118.0	222.0.118.0	✓
Broadcom	BCM57508: P2100 (1x200G) - PCIE	P2100 - PCIe	222.0.118.0	222.0.118.0	✓
Broadcom	BCM57504: P425G (4x25G) - PCIE	P425 - PCIe	222.0.118.0	222.0.118.0	✓

Broadcom RoCE NICs		Model	BCM957508-N2100G	BCM957508-P2100G	BCM957504-P425G
		Date	2022-05-06-01	2022-05-06-01	2022-05-06-01
		Firmware Version	222.0.118.0	222.0.118.0	222.0.118.0
		Overall Results	Pass	Pass	Pass
Test Class	Name	Number	Results	Results	Results
Transport Layer	RC RDMA Send Only after RDMA Read	C09_027_01	Pass	Pass	Pass
	RC RDMA Write Only after RDMA Read	C09_027_02	Pass	Pass	Pass
	RC RDMARead Only after RDMA Read	C09_027_03	Pass	Pass	Pass
	RC Atomic FetchAdd after RDMA Read	C09_027_04	Pass	Pass	Pass
	RC Atomic CompSwap after RDMA Read	C09_027_05	Pass	Pass	Pass
	RC Atomic CompSwap after Atomic CompSwap	C09_027_06	Pass	Pass	Pass
	RC Atomic FetchAdd after Atomic CompSwap	C09_027_07	Pass	Pass	Pass
	RC Atomic FetchAdd after Atomic FetchAdd	C09_027_08	Pass	Pass	Pass
	RC Atomic CompSwap after Atomic FetchAdd	C09_027_09	Pass	Pass	Pass
	RC RDMA Send Only after Atomic CompSwap	C09_027_10	Pass	Pass	Pass
	RC RDMA Write Only after Atomic CompSwap	C09_027_11	Pass	Pass	Pass
	RC RDMA Send Only after Atomic FetchAdd	C09_027_12	Pass	Pass	Pass
	RC RDMA Write Only after Atomic Fetch Add	C09_027_13	Pass	Pass	Pass
	Completion Rules - RC RDMA Send Case	C09_060_01	Pass	Pass	Pass
	Completion Rules - RC RDMA Send Case (inverted)	C09_060_01_01	Pass	Pass	Pass
	Completion Rules - RC RDMA Write Case	C09_060_03	Pass	Pass	Pass
	Completion Rules - RC RDMA Write Case (inverted)	C09_060_03_01	Pass	Pass	Pass
	Completion Rules - RC RDMA Read Case	C09_060_05	Pass	Pass	Pass
	Completion Rules - RC RDMA Read Case (inverted)	C09_060_05_01	Pass	Pass	Pass
	Completion Rules - Atomic FetchAdd Case	C09_060_07	Pass	Pass	Pass
	Completion Rules - Atomic FethcAdd Case (inverted)	C09_060_07_01	Pass	Pass	Pass
	Completion Rules - Atomic CompSwap Case	C09_060_09	Pass	Pass	Pass
	Completion Rules - Atomic CompSwap Case (inverted)	C09_060_09_01	Pass	Pass	Pass
	Requester/Responder RNR NAK Behavior	C09_130_01	Pass	Pass	Pass
	Outstanding Request Timeout	C09_142_01	Pass	Pass	Pass



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Manufacturer	Product Description	Model	FW	SW	Transport
NVIDIA	BlueField®-2 E-Series DPU VPI Dual-Port QSFP56 PCIe 4.0	MBF2M516A-EEEOT	22.32.1010	MLNX-OS 5.5-1.0.3.2	✓
NVIDIA	ConnectX®-6 Dx EN Single-port QSFP56 PCIe 4.0	MCX623105AC-VDAT	22.32.1010	MLNX-OS 5.5-1.0.3.2	✓
NVIDIA	ConnectX®-6 EN Single-port QSFP56 Socket Direct 2x PCIe3.0	MCX623105AN-VDAT	22.32.1010	MLNX-OS 5.5-1.0.3.2	✓

NVIDIA RoCE NICs		Model	MBF2M516A-EEEOT	MCX623105AC-VDAT	MCX623105AN-VDAT
		Date	2022-05-15-01	2022-05-05-01	2022-05-05-01
		Firmware Version	22.32.1010	22.32.1010	22.32.1010
		Overall Results	Pass	Pass	Pass
Test Class	Name	Number	Results	Results	Results
Transport Layer	RC RDMA Send Only after RDMA Read	C09_027_01	Pass	Pass	Pass
	RC RDMA Write Only after RDMA Read	C09_027_02	Pass	Pass	Pass
	RC RDMARead Only after RDMA Read	C09_027_03	Pass	Pass	Pass
	RC Atomic FetchAdd after RDMA Read	C09_027_04	Pass	Pass	Pass
	RC Atomic CompSwap after RDMA Read	C09_027_05	Pass	Pass	Pass
	RC Atomic CompSwap after Atomic CompSwap	C09_027_06	Pass	Pass	Pass
	RC Atomic FetchAdd after Atomic CompSwap	C09_027_07	Pass	Pass	Pass
	RC Atomic FetchAdd after Atomic FetchAdd	C09_027_08	Pass	Pass	Pass
	RC Atomic CompSwap after Atomic FetchAdd	C09_027_09	Pass	Pass	Pass
	RC RDMA Send Only after Atomic CompSwap	C09_027_10	Pass	Pass	Pass
	RC RDMA Write Only after Atomic CompSwap	C09_027_11	Pass	Pass	Pass
	RC RDMA Send Only after Atomic FetchAdd	C09_027_12	Pass	Pass	Pass
	RC RDMA Write Only after Atomic Fetch Add	C09_027_13	Pass	Pass	Pass
	Completion Rules - RC RDMA Send Case	C09_060_01	Pass	Pass	Pass
	Completion Rules - RC RDMA Send Case (inverted)	C09_060_01_01	Pass	Pass	Pass
	Completion Rules - RC RDMA Write Case	C09_060_03	Pass	Pass	Pass
	Completion Rules - RC RDMA Write Case (inverted)	C09_060_03_01	Pass	Pass	Pass
	Completion Rules - RC RDMA Read Case	C09_060_05	Pass	Pass	Pass
	Completion Rules - RC RDMA Read Case (inverted)	C09_060_05_01	Pass	Pass	Pass
	Completion Rules - Atomic FetchAdd Case	C09_060_07	Pass	Pass	Pass
	Completion Rules - Atomic FetchAdd Case (inverted)	C09_060_07_01	Pass	Pass	Pass
	Completion Rules - Atomic CompSwap Case	C09_060_09	Pass	Pass	Pass
	Completion Rules - Atomic CompSwap Case (inverted)	C09_060_09_01	Pass	Pass	Pass
	Requester/Responder RNR NAK Behavior	C09_130_01	Pass	Pass	Pass
	Outstanding Request Timeout	C09_142_01	Pass	Pass	Pass



IBTA PF39 RoCE Interoperability

200 Gigabit Ethernet

Scenario 01



Company	Part Number	Length Meters	AWG	Equalization	Connector Type	RNIC #1	Cable Under Test	Switch	RNIC #2	Link Width	Link Speed	Device Link	Open MPI + IMB Testing	Overall Result	
Nvidia	MCP1650-H00AE30	0.5	30	Copper - Unequalized	QSFP56	MCX623105AC	MCP1650-H00AE30	DCS-7280DR3	P2100 - PCIe	4	200	Pass	Pass	Pass	
Nvidia	MCP1650-H001E30	1	30	Copper - Unequalized	QSFP56		MCP1650-H001E30			4	200	Pass	Pass	Pass	Pass
Nvidia	MCP1650-H01AE30	1.5	30	Copper - Unequalized	QSFP56		MCP1650-H01AE30			4	200	Pass	Pass	Pass	Pass
Nvidia	MCP1650-H002E26	2	26	Copper - Unequalized	QSFP56		MCP1650-H002E26			4	200	Pass	Pass	Pass	Pass
Nvidia	MCP1650-H02AE26	2.5	26	Copper - Unequalized	QSFP56		MCP1650-H02AE26			4	200	Pass	Pass	Pass	Pass
Nvidia	MCP1650-H003E26	3	26	Copper - Unequalized	QSFP56		MCP1650-H003E26			4	200	Pass	Pass	Pass	Pass
Nvidia	MFS1S00-H003E	3	N/A	Fiber - Active	QSFP56		MFS1S00-H003E			4	200	Pass	Pass	Pass	Pass
Nvidia	MFS1S00-H050E	50	N/A	Fiber - Active	QSFP56		MFS1S00-H050E			4	200	Pass	Pass	Pass	Pass
Nvidia	MFS1S00-H100E	100	N/A	Fiber - Active	QSFP56		MFS1S00-H100E			4	200	Pass	Pass	Pass	Pass
Siemon	Q1Q56P-B03.0M01	3	26	Copper - Passive Eq	QSFP56		Q1Q56P-B03.0M01			4	200	Pass	Pass	Pass	Pass
Siemon	Q1Q56P-C02.5M01	2.5	28	Copper - Passive Eq	QSFP56		Q1Q56P-C02.5M01			4	200	Pass	Pass	Pass	Pass
Siemon	Q1Q56P-D01.0M01 -	1	30	Copper - Passive Eq	QSFP56		Q1Q56P-D01.0M01 -			4	200	Pass	Pass	Pass	Pass
Siemon	Q1Q56P-D02.0M01	2	30	Copper - Passive Eq	QSFP56		Q1Q56P-D02.0M01			4	200	Pass	Pass	Pass	Pass
Siemon	Q1Q56F-Y05.0B01	5	N/A	Fiber - Active	QSFP56		Q1Q56F-Y05.0B01			4	200	Pass	Pass	Pass	Pass
TE Connectivity	4-2333842-6	3	26	Copper - Unequalized	QSFP56		4-2333842-6			4	200	Pass	Pass	Pass	Pass

RNIC #1 - NVIDIA	SWITCH - Arista	RNIC #2 - Broadcom
MCX623105AC	DCS-7280DR3	P2100 - PCIe



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200 Gigabit Ethernet

Scenario 02



Company	Part Number	Length Meters	AWG	Equalization	Connector Type	RNIC #1	Cable Under Test	Switch	RNIC #2	Link Width	Link Speed	Device Link	Open MPI + IMB Testing	Overall Result
Nvidia	MCP1650-H00AE30	0.5	30	Copper - Unequalized	QSFP56	P2100 - PCIe	MCP1650-H00AE30	DCS-7280DR3	MCX623105AC	4	200	Pass	Pass	Pass
Nvidia	MCP1650-H001E30	1	30	Copper - Unequalized	QSFP56		MCP1650-H001E30			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H01AE30	1.5	30	Copper - Unequalized	QSFP56		MCP1650-H01AE30			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H002E26	2	26	Copper - Unequalized	QSFP56		MCP1650-H002E26			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H02AE26	2.5	26	Copper - Unequalized	QSFP56		MCP1650-H02AE26			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H003E26	3	26	Copper - Unequalized	QSFP56		MCP1650-H003E26			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H003E	3	N/A	Fiber - Active	QSFP56		MFS1S00-H003E			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H050E	50	N/A	Fiber - Active	QSFP56		MFS1S00-H050E			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H100E	100	N/A	Fiber - Active	QSFP56		MFS1S00-H100E			4	200	Pass	Pass	Pass
Panduit	QSFP-56-1	3	0	Copper - Passive Eq	QSFP56		QSFP-56-1			4	200	Pass	Pass	Pass
Panduit	QSFP-56-2	3	0	Copper - Passive Eq	QSFP56		QSFP-56-2			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-B03.0M01	3	26	Copper - Passive Eq	QSFP56		Q1Q56P-B03.0M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-C02.5M01	2.5	28	Copper - Passive Eq	QSFP56		Q1Q56P-C02.5M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-D01.0M01 -	1	30	Copper - Passive Eq	QSFP56		Q1Q56P-D01.0M01 -			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-D02.0M01	2	30	Copper - Passive Eq	QSFP56		Q1Q56P-D02.0M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56F-Y05.0B01	5	N/A	Fiber - Active	QSFP56		Q1Q56F-Y05.0B01			4	200	Pass	Pass	Pass
TE Connectivity	4-2333842-6	3	26	Copper - Unequalized	QSFP56		4-2333842-6			4	200	Pass	Pass	Pass

RNIC #1 - Broadcom	Cable Under Test	SWITCH - Arista	RNIC #2 - NVIDIA
P2100 - PCIe	See list above	DCS-7280DR3	MCX623105AC



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Scenario 03



Company	Part Number	Length Meters	AWG	Equalization	Connector Type	RNIC #1	Cable Under Test	Switch	RNIC #2	Link Width	Link Speed	Device Link	Open MPI + IMB Testing	Overall Result
Nvidia	MCP1650-H00AE30	0.5	30	Copper - Unequalized	QSFP56	MCX713106	MCP1650-H00AE30	DCS-7280DR3	P2100 - PCIe	4	200	Pass	Pass	Pass
Nvidia	MCP1650-H002E26	2	26	Copper - Unequalized	QSFP56		MCP1650-H002E26			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H02AE26	2.5	26	Copper - Unequalized	QSFP56		MCP1650-H02AE26			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-B03.0M01	3	26	Copper - Passive Eq	QSFP56		Q1Q56P-B03.0M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-C02.5M01	2.5	28	Copper - Passive Eq	QSFP56		Q1Q56P-C02.5M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-D01.0M01 -	1	30	Copper - Passive Eq	QSFP56		Q1Q56P-D01.0M01 -			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-D02.0M01	2	30	Copper - Passive Eq	QSFP56		Q1Q56P-D02.0M01			4	200	Pass	Pass	Pass
TE Connectivity	4-2333842-6	3	26	Copper - Unequalized	QSFP56		4-2333842-6			4	200	Pass	Pass	Pass

RNIC #1 - NVIDIA	Cable Under Test	SWITCH - Arista	RNIC #2 - Broadcom
MCX713106	See list above	DCS-7280DR3	P2100 - PCIe



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Company	Part Number	Length Meters	AWG	Equalization	Connector Type	RNIC #1	Cable Under Test	Switch	RNIC #2	Link Width	Link Speed	Device Link	Open MPI + IMB Testing	Overall Result
Nvidia	MCP1650-H00AE30	0.5	30	Copper - Unequalized	QSFP56	MCX623105AN	MCP1650-H00AE30	DCS-7060DX4	P2100 - PCIe	4	200	Pass	Pass	Pass
Nvidia	MCP1650-H01AE30	1.5	30	Copper - Unequalized	QSFP56		MCP1650-H01AE30			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H002E26	2	26	Copper - Unequalized	QSFP56		MCP1650-H002E26			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H02AE26	2.5	26	Copper - Unequalized	QSFP56		MCP1650-H02AE26			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H003E26	3	26	Copper - Unequalized	QSFP56		MCP1650-H003E26			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H003E	3	N/A	Fiber - Active	QSFP56		MFS1S00-H003E			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H050E	50	N/A	Fiber - Active	QSFP56		MFS1S00-H050E			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H100E	100	N/A	Fiber - Active	QSFP56		MFS1S00-H100E			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-B03.0M01	3	26	Copper - Passive Eq	QSFP56		Q1Q56P-B03.0M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-C02.5M01	2.5	28	Copper - Passive Eq	QSFP56		Q1Q56P-C02.5M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-D01.0M01 -	1	30	Copper - Passive Eq	QSFP56		Q1Q56P-D01.0M01 -			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-D02.0M01	2	30	Copper - Passive Eq	QSFP56		Q1Q56P-D02.0M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56F-Y05.0B01	5	N/A	Fiber - Active	QSFP56		Q1Q56F-Y05.0B01			4	200	Pass	Pass	Pass
TE Connectivity	4-2333842-6	3	26	Copper - Unequalized	QSFP56		4-2333842-6			4	200	Pass	Pass	Pass

RNIC #1 - NVIDIA	Cable Under Test	SWITCH - Arista	RNIC #2 - Broadcom
MCX623105AN	See list above	DCS-7060DX4	P2100 - PCIe



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Scenario 05



Company	Part Number	Length Meters	AWG	Equalization	Connector Type	RNIC #1	Cable Under Test	Switch	RNIC #2	Link Width	Link Speed	Device Link	Open MPI + IMB Testing	Overall Result
Nvidia	MCP1650-H002E26	2	26	Copper - Unequalized	QSFP56	N2100 - OCP	MCP1650-H002E26	DCS-7060DX4	MCX713106	4	200	Pass	Pass	Pass
Nvidia	MCP1650-H02AE26	2.5	26	Copper - Unequalized	QSFP56		MCP1650-H02AE26			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H003E26	3	26	Copper - Unequalized	QSFP56		MCP1650-H003E26			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H003E	3	N/A	Fiber - Active	QSFP56		MFS1S00-H003E			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H050E	50	N/A	Fiber - Active	QSFP56		MFS1S00-H050E			4	200	Pass	Pass	Pass
Panduit	QSFP-56-1	3	0	Copper - Passive Eq	QSFP56		QSFP-56-1			4	200	Pass	Pass	Pass
Panduit	QSFP-56-2	3	0	Copper - Passive Eq	QSFP56		QSFP-56-2			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-B03.0M01	3	26	Copper - Passive Eq	QSFP56		Q1Q56P-B03.0M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-C02.5M01	2.5	28	Copper - Passive Eq	QSFP56		Q1Q56P-C02.5M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-D01.0M01 -	1	30	Copper - Passive Eq	QSFP56		Q1Q56P-D01.0M01 -			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-D02.0M01	2	30	Copper - Passive Eq	QSFP56		Q1Q56P-D02.0M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56F-Y05.0B01	5	N/A	Fiber - Active	QSFP56		Q1Q56F-Y05.0B01			4	200	Pass	Pass	Pass

RNIC #1 - Broadcom	Cable Under Test	SWITCH - Arista	RNIC #2 - NVIDIA
N2100 - OCP	See list above	DCS-7060DX4	MCX713106



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Company	Part Number	Length Meters	AWG	Equalization	Connector Type	RNIC #1	Cable Under Test	Switch	RNIC #2	Link Width	Link Speed	Device Link	Open MPI + IMB Testing	Overall Result
Amphenol	NJAALK-007	1.5	32	Copper - Linear Active	QSFP56	MCX713106	NJAALK-007	MSN4700	N2100 - OCP	4	200	Pass	Pass	Pass
CONNPRO, Inc.	RIHF7TF7T20001	2	30	Copper - Unequalized	QSFP56		RIHF7TF7T20001			4	200	Pass	Pass	Pass
CONNPRO, Inc.	RIHF7TF7T40003	4	26	Copper - Unequalized	QSFP56		RIHF7TF7T40003			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H00AE30	0.5	30	Copper - Unequalized	QSFP56		MCP1650-H00AE30			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H001E30	1	30	Copper - Unequalized	QSFP56		MCP1650-H001E30			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H01AE30	1.5	30	Copper - Unequalized	QSFP56		MCP1650-H01AE30			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H002E26	2	26	Copper - Unequalized	QSFP56		MCP1650-H002E26			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H02AE26	2.5	26	Copper - Unequalized	QSFP56		MCP1650-H02AE26			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H003E26	3	26	Copper - Unequalized	QSFP56		MCP1650-H003E26			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-B03.0M01	3	26	Copper - Passive Eq	QSFP56		Q1Q56P-B03.0M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-C02.5M01	2.5	28	Copper - Passive Eq	QSFP56		Q1Q56P-C02.5M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-D01.0M01 -	1	30	Copper - Passive Eq	QSFP56		Q1Q56P-D01.0M01 -			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-D02.0M01	2	30	Copper - Passive Eq	QSFP56		Q1Q56P-D02.0M01			4	200	Pass	Pass	Pass
TE Connectivity	4-2333842-6	3	26	Copper - Unequalized	QSFP56		4-2333842-6			4	200	Pass	Pass	Pass

RNIC #1 - NVIDIA	Cable Under Test	SWITCH - NVIDIA	RNIC #2 - Broadcom
MCX713106	See list above	MSN4700	N2100 - OCP



IBTA PF39 RoCE Interoperability

200 Gigabit Ethernet

Scenario 09



Company	Part Number	Length Meters	AWG	Equalization	Connector Type	RNIC #1	Cable Under Test	Switch	RNIC #2	Link Width	Link Speed	Device Link	Open MPI + IMB Testing	Overall Result
Nvidia	MCP1650-H00AE30	0.5	30	Copper - Unequalized	QSFP56	N2100 - OCP	MCP1650-H00AE30	MSN4700	MCX623105AN	4	200	Pass	Pass	Pass
Nvidia	MCP1650-H001E30	1	30	Copper - Unequalized	QSFP56		MCP1650-H001E30			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H01AE30	1.5	30	Copper - Unequalized	QSFP56		MCP1650-H01AE30			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H002E26	2	26	Copper - Unequalized	QSFP56		MCP1650-H002E26			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H02AE26	2.5	26	Copper - Unequalized	QSFP56		MCP1650-H02AE26			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H003E26	3	26	Copper - Unequalized	QSFP56		MCP1650-H003E26			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H003E	3	N/A	Fiber - Active	QSFP56		MFS1S00-H003E			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H030E	30	N/A	Fiber - Active	QSFP56		MFS1S00-H030E			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H050E	50	N/A	Fiber - Active	QSFP56		MFS1S00-H050E			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H100E	100	N/A	Fiber - Active	QSFP56		MFS1S00-H100E			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-B03.0M01	3	26	Copper - Passive Eq	QSFP56		Q1Q56P-B03.0M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-C02.5M01	2.5	28	Copper - Passive Eq	QSFP56		Q1Q56P-C02.5M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-D01.0M01 -	1	30	Copper - Passive Eq	QSFP56		Q1Q56P-D01.0M01 -			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-D02.0M01	2	30	Copper - Passive Eq	QSFP56		Q1Q56P-D02.0M01			4	200	Pass	Pass	Pass

RNIC #1 - Broadcom	Cable Under Test	SWITCH - NVIDIA
N2100 - OCP	See list above	MSN4700



IBTA PF39 RoCE Interoperability

200 Gigabit Ethernet

Scenario 10



Company	Part Number	Length Meters	AWG	Equalization	Connector Type	RNIC #1	Switch #1	Cable Under Test	Switch #2	RNIC #2	Link Width	Link Speed	Device Link	Open MPI + IMB Testing	Overall Result
Nvidia	MCP1650-H00AE30	0.5	30	Copper - Unequalized	QSFP56	P2100 - PCIe	DCS-7060DX4	MCP1650-H00AE30	MSN4700	MCX623105AC	4	200	Pass	Pass	Pass
Nvidia	MCP1650-H001E30	1	30	Copper - Unequalized	QSFP56			MCP1650-H001E30			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H01AE30	1.5	30	Copper - Unequalized	QSFP56			MCP1650-H01AE30			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H002E26	2	26	Copper - Unequalized	QSFP56			MCP1650-H002E26			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H02AE26	2.5	26	Copper - Unequalized	QSFP56			MCP1650-H02AE26			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H003E26	3	26	Copper - Unequalized	QSFP56			MCP1650-H003E26			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H003E	3	N/A	Fiber - Active	QSFP56			MFS1S00-H003E			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H050E	50	N/A	Fiber - Active	QSFP56			MFS1S00-H050E			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H100E	100	N/A	Fiber - Active	QSFP56			MFS1S00-H100E			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-B03.0M01	3	26	Copper - Passive Eq	QSFP56			Q1Q56P-B03.0M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-C02.5M01	2.5	28	Copper - Passive Eq	QSFP56			Q1Q56P-C02.5M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-D01.0M01 -	1	30	Copper - Passive Eq	QSFP56			Q1Q56P-D01.0M01 -			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-D02.0M01	2	30	Copper - Passive Eq	QSFP56			Q1Q56P-D02.0M01			4	200	Pass	Pass	Pass
TE Connectivity	4-2333842-6	3	26	Copper - Unequalized	QSFP56			4-2333842-6			4	200	Pass	Pass	Pass

RNIC #1 - Broadcom	SWITCH #1 - Arista	Cable Under Test	SWITCH #2 - NVIDIA	RNIC #2 - NVIDIA
P2100 - PCIe	DCS-7060DX4	See list above	MSN4700	MCX623105AC



IBTA PF39 RoCE Interoperability

400 Gigabit Ethernet

Scenario 10-DD



Company	Part Number	Length Meters	AWG	Equalization	Connector Type	RNIC #1	Switch #1	Cable Under Test	Switch #2	RNIC #2	Link Width	Link Speed	Device Link	Open MPI + IMB Testing	Overall Result
Amphenol	NJYYEK-0001	1	32	Copper - Unequalized	QSFP-DD	P2100 - PCIe	DCS-7060DX4	NJYYEK-0001	DCS-7280DR3	MCX713106	4x/8x	200/400	Pass	Pass	Pass
Amphenol	NJYYE6-0002	2	26	Copper - Unequalized	QSFP-DD			NJYYE6-0002			4x/8x	200/400	Pass	Pass	Pass
CONNPRO,Ind.	RIHF8TF8T10001	1M	30	Copper - Unequalized	QSFP-DD			RIHF8TF8T10001			4x/8x	200/400	Pass	Pass	Pass
CONNPRO,Ind.	RIHF8TF8T15001	1.5M	30	Copper - Unequalized	QSFP-DD			RIHF8TF8T15001			4x/8x	200/400	Pass	Pass	Pass
CONNPRO,Ind.	RIHF8TF8T20001	2M	30	Copper - Unequalized	QSFP-DD			RIHF8TF8T20001			4x/8x	200/400	Pass	Pass	Pass
Nvidia	MCP1660-W00AE30	0.5	30	Copper - Unequalized	QSFP-DD			MCP1660-W00AE30			4x/8x	200/400	Pass	Pass	Pass
Nvidia	MCP1660-W001E30	1	30	Copper - Unequalized	QSFP-DD			MCP1660-W001E30			4x/8x	200/400	Pass	Pass	Pass
Nvidia	MCP1660-W01AE30	1.5	30	Copper - Unequalized	QSFP-DD			MCP1660-W01AE30			4x/8x	200/400	Pass	Pass	Pass
Nvidia	MCP1660-W002E26	2	26	Copper - Unequalized	QSFP-DD			MCP1660-W002E26			4x/8x	200/400	Pass	Pass	Pass
Nvidia	MCP1660-W02AE26	2.5	26	Copper - Unequalized	QSFP-DD			MCP1660-W02AE26			4x/8x	200/400	Pass	Pass	Pass
Panduit	QSFPDD-56-1	2	0	Copper - Passive Eq	QSFP-DD			QSFPDD-56-1			4x/8x	200/400	Pass	Pass	Pass
Panduit	QSFPDD-56-2	2	0	Copper - Passive Eq	QSFP-DD			QSFPDD-56-2			4x/8x	200/400	Pass	Pass	Pass
Siemon	QDD56P-C02.5M01	2.5	28	Copper - Passive Eq	QSFP-DD			QDD56P-C02.5M01			4x/8x	200/400	Pass	Pass	Pass
Siemon	QDD56P-C03.0M01	3	28	Copper - Passive Eq	QSFP-DD			QDD56P-C03.0M01			4x/8x	200/400	Pass	Pass	Pass
Siemon	QDD56P-D01.0M01	1	30	Copper - Passive Eq	QSFP-DD			QDD56P-D01.0M01			4x/8x	200/400	Pass	Pass	Pass
Siemon	QDD56P-D01.5M01	1.5	30	Copper - Passive Eq	QSFP-DD			QDD56P-D01.5M01			4x/8x	200/400	Pass	Pass	Pass
TE Connectivity	2323767-3	2	28	Copper - Unequalized	QSFP-DD			2323767-3			4x/8x	200/400	Pass	Pass	Pass
TE Connectivity	2323766-4	1.25	30	Copper - Unequalized	QSFP-DD			2323766-4			4x/8x	200/400	Pass	Pass	Pass
TE Connectivity	2323767-1	1	28	Copper - Unequalized	QSFP-DD			2323767-1			4x/8x	200/400	Pass	Pass	Pass
TE Connectivity	2323767-2	1.5	28	Copper - Unequalized	QSFP-DD			2323767-2			4x/8x	200/400	Pass	Pass	Pass
TE Connectivity	2393749-1	1.4	28	Copper - Unequalized	QSFP-DD	2393749-1	4x/8x	200/400	Pass	Pass	Pass				

RNIC #1 - Broadcom	200 GbE	SWITCH #1 - Arista	400 GbE Link	SWITCH #2 - Arista	200 GbE	RNIC #2 - NVIDIA
P2100 - PCIe	Link	DCS-7060DX4	Cable Under Test	DCS-7280DR3	Link	MCX713106



IBTA PF39 RoCE Interoperability

200 Gigabit Ethernet

Scenario 12



Company	Part Number	Length Meters	AWG	Equalization	Connector Type	RNIC #1	Switch #1	Cable Under Test	Switch #2	RNIC #2	Link Width	Link Speed	Device Link	Open MPI + IMB Testing	Overall Result
Nvidia	MCP1650-H00AE30	0.5	30	Copper - Unequalized	QSFP56	MCX713106	DCS-7060DX4	MCP1650-H00AE30	DCS-7280DR3	P2100 - PCIe	4	200	Pass	Pass	Pass
Nvidia	MCP1650-H001E30	1	30	Copper - Unequalized	QSFP56			MCP1650-H001E30			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H01AE30	1.5	30	Copper - Unequalized	QSFP56			MCP1650-H01AE30			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H002E26	2	26	Copper - Unequalized	QSFP56			MCP1650-H002E26			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H02AE26	2.5	26	Copper - Unequalized	QSFP56			MCP1650-H02AE26			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H003E26	3	26	Copper - Unequalized	QSFP56			MCP1650-H003E26			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H003E	3	N/A	Fiber - Active	QSFP56			MFS1S00-H003E			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H050E	50	N/A	Fiber - Active	QSFP56			MFS1S00-H050E			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H100E	100	N/A	Fiber - Active	QSFP56			MFS1S00-H100E			4	200	Pass	Pass	Pass
Panduit	QSFP-56-1	3	0	Copper - Passive Eq	QSFP56			QSFP-56-1			4	200	Pass	Pass	Pass
Panduit	QSFP-56-2	3	0	Copper - Passive Eq	QSFP56			QSFP-56-2			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-B03.0M01	3	26	Copper - Passive Eq	QSFP56			Q1Q56P-B03.0M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-C02.5M01	2.5	28	Copper - Passive Eq	QSFP56			Q1Q56P-C02.5M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-D01.0M01 -	1	30	Copper - Passive Eq	QSFP56			Q1Q56P-D01.0M01 -			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-D02.0M01	2	30	Copper - Passive Eq	QSFP56			Q1Q56P-D02.0M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56F-Y05.0B01	5	N/A	Fiber - Active	QSFP56			Q1Q56F-Y05.0B01			4	200	Pass	Pass	Pass
TE Connectivity	4-2333842-6	3	26	Copper - Unequalized	QSFP56			4-2333842-6			4	200	Pass	Pass	Pass

RNIC #1 - NVIDIA	SWITCH #1 - Arista	Cable Under Test	SWITCH #2 - Arista	RNIC #2 - Broadcom
MCX713106	DCS-7060DX4	See list above	DCS-7280DR3	P2100 - PCIe



IBTA PF39 RoCE Interoperability

400 Gigabit Ethernet

Scenario 12-DD



Company	Part Number	Length Meters	AWG	Equalization	Connector Type	RNIC #1	Switch #1	Cable Under Test	Switch #2	RNIC #2	Link Width	Link Speed	Device Link	Open MPI + IMB Testing	Overall Result
Amphenol	NJYYEK-0001	1	32	Copper - Unequalized	QSFP-DD	MCX713106	DCS-7060DX4	NJYYEK-0001	DCS-7280DR3	P2100 - PCIe	4x/8x	200/400	Pass	Pass	Pass
Amphenol	NJYYE6-0002	2	26	Copper - Unequalized	QSFP-DD			NJYYE6-0002			4x/8x	200/400	Pass	Pass	Pass
CONNPRO,Ind.	RIHF8TF8T10001	1M	30	Copper - Unequalized	QSFP-DD			RIHF8TF8T10001			4x/8x	200/400	Pass	Pass	Pass
CONNPRO,Ind.	RIHF8TF8T15001	1.5M	30	Copper - Unequalized	QSFP-DD			RIHF8TF8T15001			4x/8x	200/400	Pass	Pass	Pass
CONNPRO,Ind.	RIHF8TF8T20001	2M	30	Copper - Unequalized	QSFP-DD			RIHF8TF8T20001			4x/8x	200/400	Pass	Pass	Pass
CONNPRO,Ind.	AE6AF8F8L30001	3	N/A	Fiber - Active	QSFP-DD			AE6AF8F8L30001			4x/8x	200/400	Pass	Pass	Pass
Nvidia	MCP1660-W00AE30	0.5	30	Copper - Unequalized	QSFP-DD			MCP1660-W00AE30			4x/8x	200/400	Pass	Pass	Pass
Nvidia	MCP1660-W001E30	1	30	Copper - Unequalized	QSFP-DD			MCP1660-W001E30			4x/8x	200/400	Pass	Pass	Pass
Nvidia	MCP1660-W01AE30	1.5	30	Copper - Unequalized	QSFP-DD			MCP1660-W01AE30			4x/8x	200/400	Pass	Pass	Pass
Nvidia	MCP1660-W002E26	2	26	Copper - Unequalized	QSFP-DD			MCP1660-W002E26			4x/8x	200/400	Pass	Pass	Pass
Nvidia	MCP1660-W02AE26	2.5	26	Copper - Unequalized	QSFP-DD			MCP1660-W02AE26			4x/8x	200/400	Pass	Pass	Pass
Panduit	QSFPDD-56-1	2	0	Copper - Passive Eq	QSFP-DD			QSFPDD-56-1			4x/8x	200/400	Pass	Pass	Pass
Panduit	QSFPDD-56-2	2	0	Copper - Passive Eq	QSFP-DD			QSFPDD-56-2			4x/8x	200/400	Pass	Pass	Pass
Siemon	QDD56P-C02.5M01	2.5	28	Copper - Passive Eq	QSFP-DD			QDD56P-C02.5M01			4x/8x	200/400	Pass	Pass	Pass
Siemon	QDD56P-C03.0M01	3	28	Copper - Passive Eq	QSFP-DD			QDD56P-C03.0M01			4x/8x	200/400	Pass	Pass	Pass
Siemon	QDD56P-D01.0M01	1	30	Copper - Passive Eq	QSFP-DD			QDD56P-D01.0M01			4x/8x	200/400	Pass	Pass	Pass
Siemon	QDD56P-D01.5M01	1.5	30	Copper - Passive Eq	QSFP-DD			QDD56P-D01.5M01			4x/8x	200/400	Pass	Pass	Pass
Siemon	QDD56F-V05.0B01	5	N/A	Fiber - Active	QSFP-DD			QDD56F-V05.0B01			4x/8x	200/400	Pass	Pass	Pass
TE Connectivity	2323767-3	2	28	Copper - Unequalized	QSFP-DD			2323767-3			4x/8x	200/400	Pass	Pass	Pass
TE Connectivity	2323766-4	1.25	30	Copper - Unequalized	QSFP-DD			2323766-4			4x/8x	200/400	Pass	Pass	Pass
TE Connectivity	2323767-1	1	28	Copper - Unequalized	QSFP-DD	2323767-1	4x/8x	200/400	Pass	Pass	Pass				
TE Connectivity	2323767-2	1.5	28	Copper - Unequalized	QSFP-DD	2323767-2	4x/8x	200/400	Pass	Pass	Pass				
TE Connectivity	2393749-1	1.4	28	Copper - Unequalized	QSFP-DD	2393749-1	4x/8x	200/400	Pass	Pass	Pass				

RNIC #1 - NVIDIA	200 GbE	SWITCH #1 - Arista	400 GbE Link	SWITCH #2 - Arista	200 GbE	RNIC #2 - Broadcom
MCX713106	Link	DCS-7060DX4	Cable Under Test	DCS-7280DR3	Link	P2100 - PCIe



IBTA PF39 RoCE Interoperability

200 Gigabit Ethernet

Scenario 12.5



Company	Part Number	Length Meters	AWG	Equalization	Connector Type	RNIC #1	Switch #1	Cable Under Test	Switch #2	RNIC #2	Link Width	Link Speed	Device Link	Open MPI + IMB Testing	Overall Result
Nvidia	MCP1650-H00AE30	0.5	30	Copper - Unequalized	QSFP56	P2100 - PCIe	MSN4700	MCP1650-H00AE30	DCS-7280DR3	MCX713106	4	200	Pass	Pass	Pass
Nvidia	MCP1650-H001E30	1	30	Copper - Unequalized	QSFP56			MCP1650-H001E30			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H01AE30	1.5	30	Copper - Unequalized	QSFP56			MCP1650-H01AE30			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H002E26	2	26	Copper - Unequalized	QSFP56			MCP1650-H002E26			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H02AE26	2.5	26	Copper - Unequalized	QSFP56			MCP1650-H02AE26			4	200	Pass	Pass	Pass
Nvidia	MCP1650-H003E26	3	26	Copper - Unequalized	QSFP56			MCP1650-H003E26			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H003E	3	N/A	Fiber - Active	QSFP56			MFS1S00-H003E			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H050E	50	N/A	Fiber - Active	QSFP56			MFS1S00-H050E			4	200	Pass	Pass	Pass
Nvidia	MFS1S00-H100E	100	N/A	Fiber - Active	QSFP56			MFS1S00-H100E			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-B03.0M01	3	26	Copper - Passive Eq	QSFP56			Q1Q56P-B03.0M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-C02.5M01	2.5	28	Copper - Passive Eq	QSFP56			Q1Q56P-C02.5M01			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-D01.0M01 -	1	30	Copper - Passive Eq	QSFP56			Q1Q56P-D01.0M01 -			4	200	Pass	Pass	Pass
Siemon	Q1Q56P-D02.0M01	2	30	Copper - Passive Eq	QSFP56			Q1Q56P-D02.0M01			4	200	Pass	Pass	Pass
TE Connectivity	4-2333842-6	3	26	Copper - Unequalized	QSFP56			4-2333842-6			4	200	Pass	Pass	Pass

RNIC #1 - Broadcom	SWITCH #1 - NVIDIA	Cable Under Test	SWITCH #2 - Arista	RNIC #2 - NVIDIA
P2100 - PCIe	MSN4700	See list above	DCS-7280DR3	MCX713106



IBTA PF39 RoCE Interoperability

400 Gigabit Ethernet

Scenario 12.5-DD



Company	Part Number	Length Meters	AWG	Equalization	Connector Type	RNIC #1	Switch #1	Cable Under Test	Switch #2	RNIC #2	Link Width	Link Speed	Device Link	Open MPI + IMB Testing	Overall Result
Amphenol	NJYYEK-0001	1	32	Copper - Unequalized	QSFP-DD	P2100 - PCIe	MSN4700	NJYYEK-0001	DCS-7280DR3	MCX713106	4x/8x	200/400	Pass	Pass	Pass
Amphenol	NJYYE6-0002	2	26	Copper - Unequalized	QSFP-DD			NJYYE6-0002			4x/8x	200/400	Pass	Pass	Pass
CONNPRO,Ind.	RIHF8TF8T10001	1M	30	Copper - Unequalized	QSFP-DD			RIHF8TF8T10001			4x/8x	200/400	Pass	Pass	Pass
CONNPRO,Ind.	RIHF8TF8T15001	1.5M	30	Copper - Unequalized	QSFP-DD			RIHF8TF8T15001			4x/8x	200/400	Pass	Pass	Pass
CONNPRO,Ind.	RIHF8TF8T20001	2M	30	Copper - Unequalized	QSFP-DD			RIHF8TF8T20001			4x/8x	200/400	Pass	Pass	Pass
CONNPRO,Ind.	AE6AF8F8L30001	3	N/A	Fiber - Active	QSFP-DD			AE6AF8F8L30001			4x/8x	200/400	Pass	Pass	Pass
Nvidia	MCP1660-W00AE30	0.5	30	Copper - Unequalized	QSFP-DD			MCP1660-W00AE30			4x/8x	200/400	Pass	Pass	Pass
Nvidia	MCP1660-W001E30	1	30	Copper - Unequalized	QSFP-DD			MCP1660-W001E30			4x/8x	200/400	Pass	Pass	Pass
Nvidia	MCP1660-W01AE30	1.5	30	Copper - Unequalized	QSFP-DD			MCP1660-W01AE30			4x/8x	200/400	Pass	Pass	Pass
Nvidia	MCP1660-W002E26	2	26	Copper - Unequalized	QSFP-DD			MCP1660-W002E26			4x/8x	200/400	Pass	Pass	Pass
Nvidia	MCP1660-W02AE26	2.5	26	Copper - Unequalized	QSFP-DD			MCP1660-W02AE26			4x/8x	200/400	Pass	Pass	Pass
Panduit	QSFPDD-56-1	2	0	Copper - Passive Eq	QSFP-DD			QSFPDD-56-1			4x/8x	200/400	Pass	Pass	Pass
Panduit	QSFPDD-56-2	2	0	Copper - Passive Eq	QSFP-DD			QSFPDD-56-2			4x/8x	200/400	Pass	Pass	Pass
Siemon	QDD56P-C02.5M01	2.5	28	Copper - Passive Eq	QSFP-DD			QDD56P-C02.5M01			4x/8x	200/400	Pass	Pass	Pass
Siemon	QDD56P-C03.0M01	3	28	Copper - Passive Eq	QSFP-DD			QDD56P-C03.0M01			4x/8x	200/400	Pass	Pass	Pass
Siemon	QDD56P-D01.0M01	1	30	Copper - Passive Eq	QSFP-DD			QDD56P-D01.0M01			4x/8x	200/400	Pass	Pass	Pass
Siemon	QDD56P-D01.5M01	1.5	30	Copper - Passive Eq	QSFP-DD			QDD56P-D01.5M01			4x/8x	200/400	Pass	Pass	Pass
Siemon	QDD56F-V05.0B01	5	N/A	Fiber - Active	QSFP-DD			QDD56F-V05.0B01			4x/8x	200/400	Pass	Pass	Pass
TE Connectivity	2323767-3	2	28	Copper - Unequalized	QSFP-DD			2323767-3			4x/8x	200/400	Pass	Pass	Pass
TE Connectivity	2323766-4	1.25	30	Copper - Unequalized	QSFP-DD			2323766-4			4x/8x	200/400	Pass	Pass	Pass
TE Connectivity	2323767-1	1	28	Copper - Unequalized	QSFP-DD	2323767-1	4x/8x	200/400	Pass	Pass	Pass				
TE Connectivity	2323767-2	1.5	28	Copper - Unequalized	QSFP-DD	2323767-2	4x/8x	200/400	Pass	Pass	Pass				
TE Connectivity	2393749-1	1.4	28	Copper - Unequalized	QSFP-DD	2393749-1	4x/8x	200/400	Pass	Pass	Pass				

RNIC #1 - Broadcom	200 GbE	SWITCH #1 - NVIDIA	400 GbE Link	SWITCH #2 - Arista	200 GbE	RNIC #2 - NVIDIA
P2100 - PCIe	Link	MSN4700	Cable Under Test	DCS-7280DR3	Link	MCX713106



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Scenario 13



Company	Part Number	Length Meters	AWG	Equalization	Connector Type	RNIC #1	Cable Under Test	Switch	RNIC #2	Link Width	Link Speed	Device Link	Open MPI + IMB Testing	Overall Result
CONNPRO, Inc.	RIEF4TF4T25001	2.5	30	Copper - Unequalized	QSFP28	P2100 - PCIe	RIEF4TF4T25001	DCS-7060DX4	MCX623105AN	4	100	Pass	Pass	Pass
CONNPRO, Inc.	RIEF4TF4T30003	3	26	Copper - Unequalized	QSFP28		RIEF4TF4T30003			4	100	Pass	Pass	Pass
CONNPRO, Inc.	RE4F4TF4T55003	5.5	26	Copper - Unequalized	QSFP28		RE4F4TF4T55003			4	100	Pass	Pass	Pass
CONNPRO, Inc.	RIHF7TF7T20001	2	30	Copper - Unequalized	QSFP56		RIHF7TF7T20001			4	100	Pass	Pass	Pass
CONNPRO, Inc.	RIHF7TF7T40003	4	26	Copper - Unequalized	QSFP56		RIHF7TF7T40003			4	100	Pass	Pass	Pass
CONNPRO, Inc.	AIEAF7F7L30TXX	30	NA	Fiber - Active	QSFP28		AIEAF7F7L30TXX			4	100	Pass	Pass	Pass
CONNPRO, Inc.	AIECF7F7L10HXX	100	NA	Fiber - Active	QSFP28		AIECF7F7L10HXX			4	100	Pass	Pass	Pass
Nvidia	MCP1600-E00AE30	0.5	30	Copper - Unequalized	QSFP28		MCP1600-E00AE30			4	100	Pass	Pass	Pass
Nvidia	MCP1600-E001E30	1	30	Copper - Unequalized	QSFP28		MCP1600-E001E30			4	100	Pass	Pass	Pass
Nvidia	MCP1600-E01AE30	1.5	30	Copper - Unequalized	QSFP28		MCP1600-E01AE30			4	100	Pass	Pass	Pass
Nvidia	MCP1600-E002E30	2	30	Copper - Unequalized	QSFP28		MCP1600-E002E30			4	100	Pass	Pass	Pass
Nvidia	MCP1600-E02AE26	2.5	26	Copper - Unequalized	QSFP28		MCP1600-E02AE26			4	100	Pass	Pass	Pass
Nvidia	MCP1600-E003E26	3	26	Copper - Unequalized	QSFP28		MCP1600-E003E26			4	100	Pass	Pass	Pass
Nvidia	MCP1600-E004E26	4	26	Copper - Unequalized	QSFP28		MCP1600-E004E26			4	100	Pass	Pass	Pass
Nvidia	MCP1650-H00AE30	0.5	30	Copper - Unequalized	QSFP56		MCP1650-H00AE30			4	100	Pass	Pass	Pass
Nvidia	MCP1650-H001E30	1	30	Copper - Unequalized	QSFP56		MCP1650-H001E30			4	100	Pass	Pass	Pass
Nvidia	MCP1650-H01AE30	1.5	30	Copper - Unequalized	QSFP56		MCP1650-H01AE30			4	100	Pass	Pass	Pass
Nvidia	MCP1650-H002E26	2	26	Copper - Unequalized	QSFP56		MCP1650-H002E26			4	100	Pass	Pass	Pass
Nvidia	MCP1650-H02AE26	2.5	26	Copper - Unequalized	QSFP56		MCP1650-H02AE26			4	100	Pass	Pass	Pass
Nvidia	MCP1650-H003E26	3	26	Copper - Unequalized	QSFP56		MCP1650-H003E26			4	100	Pass	Pass	Pass
Nvidia	MFA1A00-E003	3	N/A	Fiber - Active	QSFP28		MFA1A00-E003			4	100	Pass	Pass	Pass
Nvidia	MFA1A00-E030	30	N/A	Fiber - Active	QSFP28		MFA1A00-E030			4	100	Pass	Pass	Pass
Nvidia	MFA1A00-E050	50	N/A	Fiber - Active	QSFP28		MFA1A00-E050			4	100	Pass	Pass	Pass
Nvidia	MFA1A00-E100	100	N/A	Fiber - Active	QSFP28		MFA1A00-E100			4	100	Pass	Pass	Pass
Siemon	Q1Q56P-B03.0M01	3	26	Copper - Passive Eq	QSFP56		Q1Q56P-B03.0M01			4	100	Pass	Pass	Pass
Siemon	Q1Q56P-C02.5M01	2.5	28	Copper - Passive Eq	QSFP56		Q1Q56P-C02.5M01			4	100	Pass	Pass	Pass
Siemon	Q1Q56P-D01.0M01 -	1	30	Copper - Passive Eq	QSFP56		Q1Q56P-D01.0M01 -			4	100	Pass	Pass	Pass
Siemon	Q1Q56P-D02.0M01	2	30	Copper - Passive Eq	QSFP56		Q1Q56P-D02.0M01			4	100	Pass	Pass	Pass
Siemon	Q1Q56F-Y05.0B01	5	N/A	Fiber - Active	QSFP56		Q1Q56F-Y05.0B01			4	100	Pass	Pass	Pass
Siemon	Q2Q56F-Y05.0B01	5	N/A	Fiber - Active	QSFP56		Q2Q56F-Y05.0B01			2	50	Pass	Pass	Pass

RNIC #1 - Broadcom	Cable Under Test	SWITCH - Arista	RNIC #2 - NVIDIA
P2100 - PCIe	See list above	DCS-7060DX4	MCX623105AN



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Scenario 14



Company	Part Number	Length Meters	AWG	Equalization	Connector Type	RNIC #1	Cable Under Test	Switch	RNIC #2	Link Width	Link Speed	Device Link	Open MPI + IMB Testing	Overall Result
CONNPRO, Inc.	RIEF4TF4T25001	2.5	30	Copper - Unequalized	QSFP28	MBF2M516A	RIEF4TF4T25001	MSN2010-100	P2100 - PCIe	4	100	Pass	Pass	Pass
CONNPRO, Inc.	RIEF4TF4T30003	3	26	Copper - Unequalized	QSFP28		RIEF4TF4T30003			4	100	Pass	Pass	Pass
CONNPRO, Inc.	RE4F4TF4T55003	5.5	26	Copper - Unequalized	QSFP28		RE4F4TF4T55003			4	100	Pass	Pass	Pass
CONNPRO, Inc.	RIHF7TF7T20001	2	30	Copper - Unequalized	QSFP56		RIHF7TF7T20001			4	100	Pass	Pass	Pass
CONNPRO, Inc.	RIHF7TF7T40003	4	26	Copper - Unequalized	QSFP56		RIHF7TF7T40003			4	100	Pass	Pass	Pass
CONNPRO, Inc.	AIEAF7F7L30TXX	30	NA	Fiber - Active	QSFP28		AIEAF7F7L30TXX			4	100	Pass	Pass	Pass
CONNPRO, Inc.	AIECF7F7L10HXX	100	NA	Fiber - Active	QSFP28		AIECF7F7L10HXX			4	100	Pass	Pass	Pass
Nvidia	MCP1600-E00AE30	0.5	30	Copper - Unequalized	QSFP28		MCP1600-E00AE30			4	100	Pass	Pass	Pass
Nvidia	MCP1600-E001E30	1	30	Copper - Unequalized	QSFP28		MCP1600-E001E30			4	100	Pass	Pass	Pass
Nvidia	MCP1600-E01AE30	1.5	30	Copper - Unequalized	QSFP28		MCP1600-E01AE30			4	100	Pass	Pass	Pass
Nvidia	MCP1600-E002E30	2	30	Copper - Unequalized	QSFP28		MCP1600-E002E30			4	100	Pass	Pass	Pass
Nvidia	MCP1600-E02AE26	2.5	26	Copper - Unequalized	QSFP28		MCP1600-E02AE26			4	100	Pass	Pass	Pass
Nvidia	MCP1600-E003E26	3	26	Copper - Unequalized	QSFP28		MCP1600-E003E26			4	100	Pass	Pass	Pass
Nvidia	MCP1600-E004E26	4	26	Copper - Unequalized	QSFP28		MCP1600-E004E26			4	100	Pass	Pass	Pass
Nvidia	MCP1650-H00AE30	0.5	30	Copper - Unequalized	QSFP56		MCP1650-H00AE30			4	100	Pass	Pass	Pass
Nvidia	MCP1650-H001E30	1	30	Copper - Unequalized	QSFP56		MCP1650-H001E30			4	100	Pass	Pass	Pass
Nvidia	MCP1650-H01AE30	1.5	30	Copper - Unequalized	QSFP56		MCP1650-H01AE30			4	100	Pass	Pass	Pass
Nvidia	MCP1650-H002E26	2	26	Copper - Unequalized	QSFP56		MCP1650-H002E26			4	100	Pass	Pass	Pass
Nvidia	MCP1650-H02AE26	2.5	26	Copper - Unequalized	QSFP56		MCP1650-H02AE26			4	100	Pass	Pass	Pass
Nvidia	MCP1650-H003E26	3	26	Copper - Unequalized	QSFP56		MCP1650-H003E26			4	100	Pass	Pass	Pass
Nvidia	MFA1A00-E003	3	N/A	Fiber - Active	QSFP28		MFA1A00-E003			4	100	Pass	Pass	Pass
Nvidia	MFA1A00-E030	30	N/A	Fiber - Active	QSFP28		MFA1A00-E030			4	100	Pass	Pass	Pass
Nvidia	MFA1A00-E050	50	N/A	Fiber - Active	QSFP28		MFA1A00-E050			4	100	Pass	Pass	Pass
Nvidia	MFA1A00-E100	100	N/A	Fiber - Active	QSFP28		MFA1A00-E100			4	100	Pass	Pass	Pass
Siemon	Q1Q56P-B03.0M01	3	26	Copper - Passive Eq	QSFP56		Q1Q56P-B03.0M01			4	100	Pass	Pass	Pass
Siemon	Q1Q56P-C02.5M01	2.5	28	Copper - Passive Eq	QSFP56		Q1Q56P-C02.5M01			4	100	Pass	Pass	Pass
Siemon	Q1Q56P-D01.0M01 -	1	30	Copper - Passive Eq	QSFP56		Q1Q56P-D01.0M01 -			4	100	Pass	Pass	Pass
Siemon	Q1Q56P-D02.0M01	2	30	Copper - Passive Eq	QSFP56		Q1Q56P-D02.0M01			4	100	Pass	Pass	Pass

RNIC #1 - NVIDIA	Cable Under Test	SWITCH - NVIDIA	RNIC #2 - Broadcom
MBF2M516A	See list above	MSN2010-100	P2100 - PCIe



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Scenario 18



Company	Part Number	Length Meters	AWG	Equalization	Connector Type	RNIC #1	Cable Under Test	Switch	RNIC #2	Link Width	Link Speed	Device Link	Open MPI + IMB Testing	Overall Result	
CONNPRO, Inc.	RIEF4TF4T25001	2.5	30	Copper - Unequalized	QSFP28	P2100 - PCIe	RIEF4TF4T25001	DCS-7060DX4	MBF2M516A	4	100	Pass	Pass	Pass	
CONNPRO, Inc.	RIEF4TF4T30003	3	26	Copper - Unequalized	QSFP28		RIEF4TF4T30003			4	100	Pass	Pass	Pass	Pass
CONNPRO, Inc.	RE4F4TF4T55003	5.5	26	Copper - Unequalized	QSFP28		RE4F4TF4T55003			4	100	Pass	Pass	Pass	Pass
CONNPRO, Inc.	RIHF7TF7T20001	2	30	Copper - Unequalized	QSFP56		RIHF7TF7T20001			4	100	Pass	Pass	Pass	Pass
CONNPRO, Inc.	RIHF7TF7T40003	4	26	Copper - Unequalized	QSFP56		RIHF7TF7T40003			4	100	Pass	Pass	Pass	Pass
CONNPRO, Inc.	AIEAF7F7L30TXX	30	NA	Fiber - Active	QSFP28		AIEAF7F7L30TXX			4	100	Pass	Pass	Pass	Pass
CONNPRO, Inc.	AIECF7F7L10HXX	100	NA	Fiber - Active	QSFP28		AIECF7F7L10HXX			4	100	Pass	Pass	Pass	Pass
Nvidia	MCP1600-E00AE30	0.5	30	Copper - Unequalized	QSFP28		MCP1600-E00AE30			4	100	Pass	Pass	Pass	Pass
Nvidia	MCP1600-E001E30	1	30	Copper - Unequalized	QSFP28		MCP1600-E001E30			4	100	Pass	Pass	Pass	Pass
Nvidia	MCP1600-E01AE30	1.5	30	Copper - Unequalized	QSFP28		MCP1600-E01AE30			4	100	Pass	Pass	Pass	Pass
Nvidia	MCP1600-E002E30	2	30	Copper - Unequalized	QSFP28		MCP1600-E002E30			4	100	Pass	Pass	Pass	Pass
Nvidia	MCP1600-E02AE26	2.5	26	Copper - Unequalized	QSFP28		MCP1600-E02AE26			4	100	Pass	Pass	Pass	Pass
Nvidia	MCP1600-E003E26	3	26	Copper - Unequalized	QSFP28		MCP1600-E003E26			4	100	Pass	Pass	Pass	Pass
Nvidia	MCP1600-E004E26	4	26	Copper - Unequalized	QSFP28		MCP1600-E004E26			4	100	Pass	Pass	Pass	Pass
Nvidia	MCP1650-H00AE30	0.5	30	Copper - Unequalized	QSFP56		MCP1650-H00AE30			4	100	Pass	Pass	Pass	Pass
Nvidia	MCP1650-H001E30	1	30	Copper - Unequalized	QSFP56		MCP1650-H001E30			4	100	Pass	Pass	Pass	Pass
Nvidia	MCP1650-H01AE30	1.5	30	Copper - Unequalized	QSFP56		MCP1650-H01AE30			4	100	Pass	Pass	Pass	Pass
Nvidia	MCP1650-H002E26	2	26	Copper - Unequalized	QSFP56		MCP1650-H002E26			4	100	Pass	Pass	Pass	Pass
Nvidia	MCP1650-H02AE26	2.5	26	Copper - Unequalized	QSFP56		MCP1650-H02AE26			4	100	Pass	Pass	Pass	Pass
Nvidia	MCP1650-H003E26	3	26	Copper - Unequalized	QSFP56		MCP1650-H003E26			4	100	Pass	Pass	Pass	Pass
Nvidia	MFA1A00-E003	3	N/A	Fiber - Active	QSFP28		MFA1A00-E003			4	100	Pass	Pass	Pass	Pass
Nvidia	MFA1A00-E030	30	N/A	Fiber - Active	QSFP28		MFA1A00-E030			4	100	Pass	Pass	Pass	Pass
Nvidia	MFA1A00-E050	50	N/A	Fiber - Active	QSFP28		MFA1A00-E050			4	100	Pass	Pass	Pass	Pass
Nvidia	MFA1A00-E100	100	N/A	Fiber - Active	QSFP28		MFA1A00-E100			4	100	Pass	Pass	Pass	Pass
Panduit	QSFP-56-1	3	0	Copper - Passive Eq	QSFP56		QSFP-56-1			4	100	Pass	Pass	Pass	Pass
Panduit	QSFP-56-2	3	0	Copper - Passive Eq	QSFP56		QSFP-56-2			4	100	Pass	Pass	Pass	Pass
Siemon	Q1Q56P-B03.0M01	3	26	Copper - Passive Eq	QSFP56		Q1Q56P-B03.0M01			4	100	Pass	Pass	Pass	Pass
Siemon	Q1Q56P-C02.5M01	2.5	28	Copper - Passive Eq	QSFP56		Q1Q56P-C02.5M01			4	100	Pass	Pass	Pass	Pass
Siemon	Q1Q56P-D01.0M01 -	1	30	Copper - Passive Eq	QSFP56		Q1Q56P-D01.0M01 -			4	100	Pass	Pass	Pass	Pass
Siemon	Q1Q56P-D02.0M01	2	30	Copper - Passive Eq	QSFP56		Q1Q56P-D02.0M01			4	100	Pass	Pass	Pass	Pass
Siemon	Q1Q56F-Y05.0B01	5	N/A	Fiber - Active	QSFP56		Q1Q56F-Y05.0B01			4	100	Pass	Pass	Pass	Pass

RNIC #1 - Broadcom	Cable Under Test	SWITCH - Arista
P2100 - PCIe	See list above	DCS-7060DX4
		RNIC #2 - NVIDIA
		MBF2M516A



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Scenario 19 - SFP to QSFP-DD



Company	Part Number	Length Meters	AWG	Equalization	Connector Type	RNIC #1	Cable Under Test	Switch	RNIC #2	Link Width	Link Speed	Device Link	Open MPI + IMB Testing	Overall Result
Panduit	QSFPDD-56-SFP28-1	1.5	0	Copper - Passive Eq	QSFP-DD	P425 - PCIe	QSFPDD-56-SFP28-1	MSN4700	MCX623105AC	1	25	Pass	Pass	Pass
Panduit	QSFPDD-56-SFP28-2	1.5	0	Copper - Passive Eq	QSFP-DD		QSFPDD-56-SFP28-2			1	25	Pass	Pass	Pass
TE Connectivity	2327689-4	2.5	28	Copper - Unequalized	QSFP-DD		2327689-4			1	25	Pass	Pass	Pass
TE Connectivity	2327688-3	2	28	Copper - Unequalized	QSFP-DD		2327688-3			1	25	Pass	Pass	Pass
TE Connectivity	4-2334236-4	2	30	Copper - Unequalized	QSFP56		4-2334236-4			1	25	Pass	Pass	Pass

RNIC #1 - Broadcom	Cable Under Test	SWITCH - NVIDIA	RNIC #2 - NVIDIA
P425 - PCIe	See list above	MSN4700	MCX623105AC



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Scenario 20 - QSFP to QSFP-DD



Company	Part Number	Length Meters	AWG	Equalization	Connector Type	RNIC #1	Cable Under Test	Switch	RNIC #2	Link Width	Link Speed	Device Link	Open MPI + IMB Testing	Overall Result
CONNPRO,Ind.	RIHF8TF7210001	1M	30	Copper - Unequalized	QSFP-DD	P2100 - PCIe	RIHF8TF7210001	MSN4700	MCX623105AC	4	100	Pass	Pass	Pass
CONNPRO,Ind.	RIHF8TF7215001	1.5M	30	Copper - Unequalized	QSFP-DD		RIHF8TF7215001			4	100	Pass	Pass	Pass
CONNPRO,Ind.	RIHF8TF7220001	2M	30	Copper - Unequalized	QSFP-DD		RIHF8TF7220001			4	100	Pass	Pass	Pass
Siemon	Q2D56P-C03.0M01	3	28	Copper - Passive Eq	QSFP-DD		Q2D56P-C03.0M01			4	100	Pass	Pass	Pass
Siemon	Q2D56P-D01.0M01	1	30	Copper - Passive Eq	QSFP-DD		Q2D56P-D01.0M01			4	100	Pass	Pass	Pass
Siemon	Q2D56P-D02.0M01	2	30	Copper - Passive Eq	QSFP-DD		Q2D56P-D02.0M01			4	100	Pass	Pass	Pass
TE Connectivity	2821988-4	2.5	28	Copper - Unequalized	QSFP-DD		2821988-4			4	100	Pass	Pass	Pass

RNIC #1 - Broadcom	Cable Under Test	SWITCH - NVIDIA	RNIC #2 - NVIDIA
P2100 - PCIe	See list above	MSN4700	MCX623105AC