Firmware Compatible Products

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These are the release notes for the NVIDIA Quantum™-2 firmware. This firmware complements the NVIDIA Quantum switch with a set of advanced features, allowing easy and remote management of the switch.

This firmware supports the following protocols:

- InfiniBand—SDR, EDR, HDR, NDR

Supported Switch Systems

This firmware supports the devices listed in the table below:

Model Number	NVIDIA SKU	Description
QM9790	920-9B210-00FN-0D2 920-9B210-00FN-0D0	NVIDIA Quantum 2 based NDR InfiniBand Switch, 64 NDR ports, 32 OSFP ports, 2 Power Supplies (AC), Standard depth

Firmware Interoperability

This firmware version has been validated to work against platforms with the following firmware and software versions.

HCA/Switch	Firmware Version
NVIDIA Quantum-2	31.2012.2318
NVIDIA Quantum	27.2012.2234
ConnectX-7	28.37.1014
ConnectX-6	20.37.1014
Minimal MFT version	4.24.0-72

Supported Cables

> (i) **Note**

Switch and HCAs InfiniBand Cable Connectivity Matrix

NVIDIA Quantum™ based switches and NVIDIA® ConnectX® HCAs support HDR (PAM4, 50Gb/s per lane) and EDR (NRZ, 25Gb/s per lane) technologies. As the ConnectX adapter cards are identified by their maximum supported throughput (e.g., ConnectX-6 VPI 100Gb/s card can support either 2-lanes of 50Gb/s or 4-lanes of 25Gb/s), the exact connectivity will be determined by the cable that is being used.

As a reference:

Speed Mode	Speed Supported	Number of Lanes Used
NDR	400Gb/s InfiniBand	4 lanes of 100Gb/s
NDR200	200Gb/s InfiniBand	2 lanes of 100Gb/s
HDR	200Gb/s InfiniBand	4 lanes of 50Gb/s
HDR100	100Gb/s InfiniBand	2 lanes of 50Gb/s
EDR	100Gb/s InfiniBand	4 lanes of 25Gb/s

The following tables present the connectivity matrix, between NVIDIA Quantum based switches, ConnectX HCA, and the cables.

Switch-to-Switch Connectivity

NVIDIA Quantum-2 switches come with OSFP cages. NVIDIA Quantum and Switch-IB 2 switches come with QSFP cages. The connectivity matrix below are separated into multiple tables due to the above physical differences between the switches.

Switch	Switch	Cable			
		NDR Transceiver	NDR DAC/ACC	HDR DAC/ AOC	EDR DAC/ AOC
NVIDIA Quantum-2	NVIDIA Quantum-2	2 × NDR	2 × NDR	N/A	N/A

Switch	Switch	Cable				
NVIDIA Quantum-2	NVIDIA Quantum	N/A	N/A		2 × HDR	2 × EDR
NVIDIA Quantum-2	Switch-IB 2	N/A	N/A		N/A	2 × EDR

HCA-to-Switch Connectivity

Switch		Adapter	Cable		
			HDR AOC	HDR DAC	HDR100 DAC/AOC (Copper Cables Only)
ConnectX-6 200Gb/s	NDR Switch	NVIDIA Quantum-2	2 × HDR	2 × HDR	4 × HDR100
ConnectX-6 100Gb/s		NVIDIA Quantum-2	N/A	2 × EDR	4 × HDR100
ConnectX-4/ ConnectX-5		NVIDIA Quantum-2	N/A	2 × EDR	N/A

Supported Link Speed

The table below lists the current supported link speed.

Speed	Module	Cable Length [meters]	Limitations
NDR	Optical Transceiver	Up to 50 (in multi mode)	NDR Optical Transceivers support only NDR speed.
		Up to 100 (in single mode)	
	Passive Copper Cable	Up to 3	
	Active Copper Cable	Up to 5	
HDR	Optical	Up to 30	HDR Optical Cables support only HDR speed.

Speed	Module	Cable Length [meters]	Limitations
	Copper	Up to 2	

Validated and Supported NDR Cables

Data Rate	NVIDIA P/N	Legacy OPN	Description	Lifecycle Phase
NDR	980-9I601-00N003	MCA4J80-N003-FTF	NVIDIA active copper cable, IB twin port NDR, up to 800Gb/s, OSFP, 3m, flat to finned	MP
NDR	980-9I949-00N005	MCA7J60-N005	NVIDIA active copper splitter cable, IB twin port NDR 800Gb/s to 2x400Gb/s, OSFP to 2xOSFP, 5m	P-Rel
NDR	980-9I50E-00N005	MCA7J70-N005	NVIDIA active copper splitter cable, IB twin port NDR 800Gb/s to 4x200Gb/s, OSFP to 4xOSFP, 5m	P-Rel
NDR	980-9IA0F-00N001	MCP4Y10-N001	NVIDIA passive Copper cable, IB twin port NDR, up to 800Gb/s, OSFP, 1m	MP
NDR	980-9IA0K-00N00A	MCP4Y10-N00A	NVIDIA passive Copper cable, IB twin port NDR, up to 800Gb/s, OSFP, 0.5m	MP
NDR	980-9I432-00N001	MCP7Y00-N001	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 2x400Gb/s, OSFP to 2xOSFP,1m	P-Rel
NDR	980-9I924-00N002	MCP7Y00-N002	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 2x400Gb/s, OSFP to 2xOSFP, 2m	P-Rel
NDR	980-9I92N-00N003	MCP7Y00-N003	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 2x400Gb/s, OSFP to 2xOSFP, 3m	P-Rel
NDR	980-9I926-00N01A	MCP7Y00-N01A	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 2x400Gb/s, OSFP to 2xOSFP,1.5m	P-Rel

Data Rate	NVIDIA P/N	Legacy OPN	Description	Lifecycle Phase
NDR	980-9I92O-00N02A	MCP7Y00-N02A	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 2x400Gb/s, OSFP to 2xOSFP, 2.5m	P-Rel
NDR	980-9I928-00N001	MCP7Y10-N001	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 2x400Gb/s, OSFP to 2xQSFP112,1m	P-Rel
NDR	980-9I929-00N002	MCP7Y10-N002	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 2x400Gb/s, OSFP to 2xQSFP112,2m	P-Rel
NDR	980-9I80P-00N003	MCP7Y10-N003	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 2x400Gb/s, OSFP to 2xQSFP112,3m	P-Rel
NDR	980-9I80A-00N01A	MCP7Y10-N01A	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 2x400Gb/s, OSFP to 2xQSFP112,1.5m	P-Rel
NDR	980-9I80Q-00N02A	MCP7Y10-N02A	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 2x400Gb/s, OSFP to 2xQSFP112,2.5m	P-Rel
NDR	980-9I80B-00N001	MCP7Y40-N001	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 4x200Gb/s, OSFP to 4xQSFP112, 1m	P-Rel
NDR	980-9I80C-00N002	MCP7Y40-N002	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 4x200Gb/s, OSFP to 4xQSFP112, 2m	P-Rel
NDR	980-9I75R-00N003	MCP7Y40-N003	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 4x200Gb/s, OSFP to 4xQSFP112, 3m	P-Rel
NDR	980-9I75D-00N01A	MCP7Y40-N01A	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 4x200Gb/s, OSFP to 4xQSFP112, 1.5m	P-Rel
NDR	980-9I75S-00N02A	MCP7Y40-N02A	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 4x200Gb/s, OSFP to 4xQSFP112, 2.5m	P-Rel
NDR	980-9I75E-00N001	MCP7Y50-N001	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 4x200Gb/s, OSFP to 4xOSFP, 1m	P-Rel

Data Rate	NVIDIA P/N	Legacy OPN	Description	Lifecycle Phase
NDR	980-9I46G-00N002	MCP7Y50-N002	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 4x200Gb/s, OSFP to 4xOSFP, 2m	P-Rel
NDR	980-9I46I-00N01A	MCP7Y50-N01A	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 4x200Gb/s, OSFP to 4xOSFP, 1.5m	P-Rel
NDR	980-9I73V-000005	MFP7E10-N005	NVIDIA passive fiber cable, MMF, MPO12 APC to MPO12 APC, 5m	MP
NDR	980-9I57W-000007	MFP7E10-N007	NVIDIA passive fiber cable, MMF, MPO12 APC to MPO12 APC, 7m	MP
NDR	980-9I57X-00N010	MFP7E10-N010	NVIDIA passive fiber cable, MMF, MPO12 APC to MPO12 APC, 10m	MP
NDR	980-9I57Y-000015	MFP7E10-N015	NVIDIA passive fiber cable, MMF , MPO12 APC to MPO12 APC, 15m	MP
NDR	980-9I57Z-000020	MFP7E10-N020	NVIDIA passive fiber cable, MMF, MPO12 APC to MPO12 APC, 20m	MP
NDR	980-9I573-00N025	MFP7E10-N025	NVIDIA passive fiber cable, MMF, MPO12 APC to MPO12 APC, 25m	MP
NDR	980-9I570-00N030	MFP7E10-N030	NVIDIA passive fiber cable, MMF, MPO12 APC to MPO12 APC, 30m	MP
NDR	980-9I570-00N035	MFP7E10-N035	NVIDIA passive fiber cable, MMF, MPO12 APC to MPO12 APC, 35m	MP
NDR	980-9I570-00N040	MFP7E10-N040	NVIDIA passive fiber cable, MMF, MPO12 APC to MPO12 APC, 40m	MP
NDR	980-9I57Y-00N050	MFP7E10-N050	NVIDIA passive fiber cable, MMF, MPO12 APC to MPO12 APC, 50m	MP

Data Rate	NVIDIA P/N	Legacy OPN	Description	Lifecycle Phase
NDR	980-9I571-00N003	MFP7E20-N003	NVIDIA passive fiber cable, MMF, MPO12 APC to 2xMPO12 APC, 3m	MP
NDR	980-9I572-00N005	MFP7E20-N005	NVIDIA passive fiber cable, MMF, MPO12 APC to 2xMPO12 APC, 5m	MP
NDR	980-9I573-00N007	MFP7E20-N007	NVIDIA passive fiber cable, MMF, MPO12 APC to 2xMPO12 APC, 7m	MP
NDR	980-9I554-00N010	MFP7E20-N010	NVIDIA passive fiber cable, MMF, MPO12 APC to 2xMPO12 APC, 10m	MP
NDR	980-9I555-00N015	MFP7E20-N015	NVIDIA passive fiber cable, MMF, MPO12 APC to 2xMPO12 APC, 15m	MP
NDR	980-9I556-00N020	MFP7E20-N020	NVIDIA passive fiber cable, MMF, MPO12 APC to 2xMPO12 APC, 20m	MP
NDR	980-9I557-00N030	MFP7E20-N030	NVIDIA passive fiber cable, MMF, MPO12 APC to 2xMPO12 APC, 30m	MP
NDR	980-9I55Z-00N050	MFP7E20-N050	NVIDIA passive fiber cable, MMF, MPO12 APC to 2xMPO12 APC, 50m	MP
NDR	980-9I58C-00N007	MFP7E30-N007	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 7m	MP
NDR	980-9I58D-00N010	MFP7E30-N010	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 10m	MP
NDR	980-9I58E-00N015	MFP7E30-N015	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 15m	MP
NDR	980-9I58F-00N020	MFP7E30-N020	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 20m	MP

Data Rate	NVIDIA P/N	Legacy OPN	Description	Lifecycle Phase
NDR	980-9I58G-00N030	MFP7E30-N030	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 30m	MP
NDR	980-9I580-00N030	MFP7E30-N040	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 40m	MP
NDR	980-9I58H-00N050	MFP7E30-N050	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 50m	MP
NDR	980-9I581-00N050	MFP7E30-N060	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 60m	MP
NDR	980-9I582-00N050	MFP7E30-N070	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 70m	MP
NDR	980-9I58I-00N100	MFP7E30-N100	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 100m	MP
NDR	980-9I58L-00N005	MFP7E40-N005	NVIDIA passive fiber cable, SMF, MPO12 APC to 2xMPO12 APC, 5m	MP
NDR	980-9I693-00NS00	MMA1Z00-NS400	NVIDIA single port transceiver, 400Gbps,NDR, QSFP112, MPO12 APC, 850nm MMF, up to 50m, flat top	P-Rel
NDR	980-9I510-00NS00	MMA4Z00-NS	NVIDIA twin port transceiver, 800Gbps,2xNDR, OSFP, 2xMPO12 APC, 850nm MMF, up to 50m, finned	MP
NDR	980-9I60Z-00N003	MCA4J80-N003	NVIDIA ACTIVE COPPER CABLE, IB TWIN PORT NDR UP TO 800GBS, OSFP, 3M	MP
NDR	980-9I600-00N003	MCA4J80-N003-FLT	NVIDIA ACTIVE COPPER CABLE, IB TWIN PORT NDR UP TO 800GBS, OSFP, 3M, FLAT TOP	MP
NDR	980-9I601-00N004	MCA4J80-N004	NVIDIA ACTIVE COPPER CABLE, IB TWIN PORT NDR, UP TO 800 GB/S, OSFP, 4M	MP

Data Rate	NVIDIA P/N	Legacy OPN	Description	Lifecycle Phase
NDR	980-9I602-00N005	MCA4J80-N005	NVIDIA ACTIVE COPPER CABLE, IB TWIN PORT NDR, UP TO 800 GB/S, OSFP, 5M	MP
NDR	980-9I948-00N004	MCA7J60-N004	NVIDIA ACTIVE COPPER SPLITTER CABLE, IB NDR 800GBS TO 2X400GBS, OSFP TO 2XOSFP, 4M	P-Rel
NDR	980-9I81B-00N004	MCA7J65-N004	NVIDIA ACTIVE COPPER SPLITTER CABLE, IB TWIN PORT NDR 800GB/S TO 2X400GB/S, OSFP TO 2XQSFP112, 4M	Prototype
NDR	980-9I81C-00N005	MCA7J65-N005	NVIDIA ACTIVE COPPER SPLITTER CABLE, IB TWIN PORT NDR 800GB/S TO 2X400GB/S, OSFP TO 2XQSFP112, 5M	Prototype
NDR	980-9I50D-00N004	MCA7J70-N004	NVIDIA ACTIVE COPPER SPLITTER CABLE, IB TWIN PORT NDR 800GBS TO 4X200GBS, OSFP TO 4XOSFP, 4M	P-Rel
NDR	980-9I76G-00N004	MCA7J75-N004	NVIDIA AVTIVE COPPER SPLITTER CABLE, IB TWIN PORT NDR 800GB/S TO 4X200GB/S, OSFP TO 4XQSFP112, 4M	Prototype
NDR	980-9I76H-00N005	MCA7J75-N005	NVIDIA AVTIVE COPPER SPLITTER CABLE, IB TWIN PORT NDR 800GB/S TO 4X200GB/S, OSFP TO 4XQSFP112, 5M	Prototype
NDR	980-9IA0G-00N001	MCP4Y10-N001-FLT	NVIDIA PASSIVE COPPER CABLE, IB TWIN PORT NDR, UP TO 800GB/S, OSFP, 1M, FLAT TOP	MP
NDR	980-9IA0H-00N001	MCP4Y10-N001-FTF	NVIDIA PASSIVE COPPER CABLE, IB TWIN PORT NDR, UP TO 800GB/S, OSFP, 1M, FLAT TO FINNED	MP
NDR	980-9IA0I-00N002	MCP4Y10-N002	NVIDIA PASSIVE COPPER CABLE, IB TWIN PORT NDR, UP TO 800GB/S, OSFP, 2M	MP
NDR	980-9IA0J-00N002	MCP4Y10-N002-FLT	NVIDIA PASSIVE COPPER CABLE, IB TWIN PORT NDR, UP TO 800GB/S, OSFP, 2M, FLAT TOP	MP
NDR	980-9IA0L-00N00A	MCP4Y10-N00A-FLT	NVIDIA PASSIVE COPPER CABLE, IB TWIN PORT NDR, UP TO 800GB/S, OSFP, 0.5M, FLAT TOP	MP

Data Rate	NVIDIA P/N	Legacy OPN	Description	Lifecycle Phase
NDR	980-9IA0Q-00N01A	MCP4Y10-N01A	NVIDIA PASSIVE COPPER CABLE, IB TWIN PORT NDR, UP TO 800GB/S, OSFP, 1.5M	MP
NDR	980-9IA0R-00N01A	MCP4Y10-N01A-FLT	NVIDIA PASSIVE COPPER CABLE, IB TWIN PORT NDR, UP TO 800GB/S, OSFP, 1.5M, FLAT TOP	MP
NDR	980-9I46T-00N003	MCP7Y50-N003	NVIDIA PASSIVE COPPER SPLITTER CABLE, IB NDR 800GB/S TO 4X200GB/S, OSFP TO 4XOSFP, 3M	P-Rel
HDR	980-9I46K-00H001	MCP7Y60-H001	MELLANOX PASSIVE COPPER SPLITTER CABLE, 400(2X200)GBPS TO 2X200GBPS, OSFP TO 2XQSFP56, 1M, FIN TO FLAT	MP
HDR	980-9I46L-00H002	MCP7Y60-H002	MELLANOX PASSIVE COPPER SPLITTER CABLE, 400(2X200)GBPS TO 2X200GBPS, OSFP TO 2XQSFP56, 2M, FIN TO FLAT	MP
HDR	980-9I93M-00H01A	MCP7Y60-H01A	MELLANOX PASSIVE COPPER SPLITTER CABLE, 400(2X200)GBPS TO 2X200GBPS, OSFP TO 2XQSFP56, 1.5M, FIN TO FLAT	MP
HDR	980-9I93N-00H001	MCP7Y70-H001	MELLANOX PASSIVE COPPER SPLITTER CABLE, 400(2X200)GBPS TO 4X100GBPS, OSFP TO 4XQSFP56, 1M, FIN TO FLAT	MP
HDR	980-9I93O-00H002	MCP7Y70-H002	MELLANOX PASSIVE COPPER SPLITTER CABLE, 400(2X200)GBPS TO 4X100GBPS, OSFP TO 4XQSFP56, 2M, FIN TO FLAT	MP
HDR	980-9I47P-00H01A	MCP7Y70-H01A	MELLANOX PASSIVE COPPER SPLITTER CABLE, 400(2X200) GBPS TO 4X100GBPS, OSFP TO 4XQSFP56, 1.5M, FIN TO FLAT	MP
HDR	980-9I41X-00H003	MFA7U10-H003	MELLANOX ACTIVE FIBER SPLITTER CABLE, IB HDR, 400GB/S TO 2X200GB/S, OSFP TO 2XQSFP56, 3M	P-Rel
HDR	980-9I41Y-00H003	MFA7U10-H003-FLT	MELLANOX AOC SPLITTER,IB TWIN PORT HDR, 400GB/S TO 2X200GB/S, OSFP TO 2XQSFP56, 3MM FLAT TOP	P-Rel
HDR	980-9I11Z-00H005	MFA7U10-H005	MELLANOX ACTIVE FIBER SPLITTER CABLE, IB HDR, 400GB/S TO 2X200GB/S, OSFP TO 2XQSFP56, 5M	P-Rel

Data Rate	NVIDIA P/N	Legacy OPN	Description	Lifecycle Phase
HDR	980-9I110-00H005	MFA7U10-H005-FLT	MELLANOX AOC SPLITTER, IB TWIN PORT HDR, 400GB/S TO 2X200GB/S, OSFP TO 2XQSFP56, 5M, FLAT TOP	P-Rel
HDR	980-9I111-00H010	MFA7U10-H010	MELLANOX ACTIVE FIBER SPLITTER CABLE, IB HDR, 400GB/S TO 2X200GB/S, OSFP TO 2XQSFP56, 10M	P-Rel
HDR	980-9I112-00H010	MFA7U10-H010-FLT	MELLANOX AOC SPLITTER, IB TWIN PORT HDR, 400GB/S TO 2X200GB/S, OSFP TO 2XQSFP56, 10M, FLAT TOP	P-Rel
HDR	980-9I113-00H015	MFA7U10-H015	MELLANOX ACTIVE FIBER SPLITTER CABLE, IB HDR, 400GB/S TO 2X200GB/S, OSFP TO 2XQSFP56, 15M	P-Rel
HDR	980-9I114-00H015	MFA7U10-H015-FLT	MELLANOX AOC SPLITTER, IB TWIN PORT HDR, 400GB/S TO 2X200GB/S, OSFP TO 2XQSFP56, 15M, FLAT TOP	P-Rel
HDR	980-9I115-00H020	MFA7U10-H020	MELLANOX ACTIVE FIBER SPLITTER CABLE, IB HDR, 400GB/S TO 2X200GB/S, OSFP TO 2XQSFP56, 20M	P-Rel
HDR	980-9I116-00H020	MFA7U10-H020-FLT	MELLANOX AOC SPLITTER, IB TWIN PORT HDR, 400GB/S TO 2X200GB/S, OSFP TO 2XQSFP56, 20M, FLAT TOP	P-Rel
HDR	980-9I117-00H030	MFA7U10-H030	MELLANOX ACTIVE FIBER SPLITTER CABLE, IB HDR, 400GB/S TO 2X200GB/S, OSFP TO 2XQSFP56, 30M	P-Rel
HDR	980-9I118-00H030	MFA7U10-H030-FLT	MELLANOX AOC SPLITTER, IB TWIN PORT HDR, 400GB/S TO 2X200GB/S, OSFP TO 2XQSFP56, 30M, FLAT TOP	P-Rel
NDR	980-9I73U-000003	MFP7E10-N003	NVIDIA PASSIVE FIBER CABLE, MMF, MPO12 APC TO MPO12 APC, 3M	MP
NDR	980-9I559-00N002	MFP7E30-N002	NVIDIA PASSIVE FIBER CABLE, SMF MPO12 APC TO MPO12 APC, 2M	MP
NDR	980-9I55A-00N003	MFP7E30-N003	NVIDIA PASSIVE FIBER CABLE, SMF, MPO12 APC TO MPO12 APC, 3M	MP

Data Rate	NVIDIA P/N	Legacy OPN	Description	Lifecycle Phase
NDR	980-9I55B-00N005	MFP7E30-N005	NVIDIA PASSIVE FIBER CABLE, SMF, MPO12 APC TO MPO12 APC, 5M	MP
NDR	980-9I58J-00N150	MFP7E30-N150	NVIDIA PASSIVE FIBER CABLE, SMF, MPO12 APC TO MPO12 APC, 150M	MP
NDR	980-9I58K-00N003	MFP7E40-N003	NVIDIA PASSIVE FIBER CABLE, SMF, MPO12 APC TO 2XMPO12 APC, 3M	MP
NDR	980-9I58M-00N007	MFP7E40-N007	NVIDIA PASSIVE FIBER CABLE, SMF, MPO12 APC TO 2XMPO12 APC, 7M	MP
NDR	980-9I58N-00N010	MFP7E40-N010	NVIDIA PASSIVE FIBER CABLE, SMF, MPO12 APC TO 2XMPO12 APC, 10M	MP
NDR	980-9I56O-00N015	MFP7E40-N015	NVIDIA PASSIVE FIBER CABLE, SMF, MPO12 APC TO 2XMPO12 APC, 15M	MP
NDR	980-9I56P-00N020	MFP7E40-N020	NVIDIA PASSIVE FIBER CABLE, SMF, MPO12 APC TO 2XMPO12 APC, 20M	MP
NDR	980-9I56Q-00N030	MFP7E40-N030	NVIDIA PASSIVE FIBER CABLE, SMF, MPO12 APC TO 2XMPO12 APC, 30M	MP
NDR	980-9I56R-000050	MFP7E40-N050	NVIDIA PASSIVE FIBER CABLE, SMF, MPO12 APC TO 2XMPO12 APC, 50M	MP
NDR	980-9I51A-00NS00	MMA4Z00-NS-FLT	NVIDIA TWIN PORT TRANSCEIVER, 800GBPS,2XNDR, OSFP, 2XMPO12 APC, 850NM MMF, UP TO 50M, FLAT TOP	MP
NDR	980-9I51S-00NS00	MMA4Z00-NS400	NVIDIA SINGLE PORT TRANSCEIVER, 400GBPS,NDR, OSFP, MPO12 APC, 850NM MMF, UP TO 50M, FLAT TOP	MP
NDR	980-9I30G-	MMS4X00-NM	NVIDIA TWIN PORT TRANSCEIVER, 800GBPS,2XNDR, OSFP, 2XMPO, 1310NM SMF, UP TO 500M, FINNED	MP

Data Rate	NVIDIA P/N	Legacy OPN	Description	Lifecycle Phase
	00NM00			
NDR	980-9I3O1-00NM00	MMS4X00-NM-FLT	NVIDIA TWIN PORT TRANSCEIVER, 800GBPS,2XNDR, OSFP, 2XMPO 12 APC, 1310NM SMF, UP TO 500M, FLAT TOP	P-Rel
NDR	980-9I3OH-00NM00	MMS4X00-NS	NVIDIA TWIN PORT TRANSCEIVER, 800GBPS,2XNDR, OSFP, 2XMPO12 APC, 1310NM SMF, UP TO 100M, FINNED	MP
NDR	980-9I3OI-00NM00	MMS4X00-NS-FLT	NVIDIA TWIN PORT TRANSCEIVER, 800GBPS,2XNDR, OSFP, 2XMPO, 1310NM SMF, UP TO 100M, FLAT TOP	MP
NDR	980-9I31N-00NM00	MMS4X00-NS400	NVIDIA SINGLE PORT TRANSCEIVER, 400GBPS,NDR, OSFP, MPO12 APC, 1310NM SMF, UP TO 100M, FLAT TOP	MP
NDR	980-9I3OL-00N000	MMS4X50-NM	NVIDIA HYDRA TWIN PORT TRANSCEIVER, 800GBPS,2XFR4, 2XNDR, OSFP, 2XMINI-LC, 1310NM SMF, UP TO 2K, FINNED	P-Rel
NDR	980-9I46U-00N02A	MCP7Y50-N02A	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 4x200Gb/s, OSFP to 4xOSFP, 2.5m	P-Rel

Validated and Supported HDR Cables

Data Rate	NVIDIA P/N	Legacy OPN	Description	Lifecycle Phase
HDR	980-9I86N-00H003*	MCA1J00-H003E*	NVIDIA Active Copper cable, IB HDR, up to 200Gb/s, QSFP56, 3m, yellow pulltab	EOL [MP]
HDR	980-9I86O-00H004*	MCA1J00-H004E*	NVIDIA Active Copper cable, IB HDR, up to 200Gb/s, QSFP56, 4m, yellow pulltab	EOL [MP]

Data Rate	NVIDIA P/N	Legacy OPN	Description	Lifecycle Phase
HDR	980-9I977-00H003*	MCA7J50-H003R*	NVIDIA Active copper hybrid cable, IB HDR 200Gb/s to 2xHDR100 100Gb/s, QSFP56 to 2xQSFP56, 3m, colored	EOL [MP]
HDR	980-9I978-00H004*	MCA7J50-H004R*	NVIDIA Active copper hybrid cable, IB HDR 200Gb/s to 2xHDR100 100Gb/s, QSFP56 to 2xQSFP56, 4m, colored	EOL [MP]
HDR	980-9I979-00H005	MCA7J50-H005R	NVIDIA Active copper hybrid cable, IB HDR 200Gb/s to 2xHDR100 100Gb/s, QSFP56 to 2xQSFP56, 5m, colored	EOL [Prototype]
HDR	980-9I548-00H001	MCP1650-H001E30	Nvidia Passive Copper cable, up to 200Gbps, QSFP56 to QSFP56, 1m	HVM
HDR	980-9I549-00H002	MCP1650-H002E26	Nvidia Passive Copper cable, up to 200Gbps, QSFP56 to QSFP56, 2m	HVM
HDR	980-9I54A-00H00A	MCP1650-H00AE30	Nvidia Passive Copper cable, up to 200Gbps, QSFP56 to QSFP56, 0.5m	HVM
HDR	980-9I54B-00H01A	MCP1650-H01AE30	Nvidia Passive Copper cable, up to 200Gbps, QSFP56 to QSFP56, 1.5 m	HVM
HDR	980-9I39E-00H001	MCP7H50-H001R30	Nvidia Passive copper splitter cable, 200Gbps to 2x100Gbps, QSFP56 to 2xQSFP56, 1m	HVM
HDR	980-9I99F-00H002	MCP7H50-H002R26	Nvidia Passive copper splitter cable, 200Gbps to 2x100Gbps, QSFP56 to 2xQSFP56, 2m	HVM
HDR	980-9I98G-00H01A	MCP7H50-H01AR30	Nvidia Passive copper splitter cable, 200Gbps to 2x100Gbps, QSFP56 to 2xQSFP56, 1.5m	HVM
HDR	980-9I46K-00H001	MCP7Y60-H001	NVIDIA passive copper splitter cable, 400(2x200)Gbps to 2x200Gbps, OSFP to 2xQSFP56, 1m, fin to flat	MP
HDR	980-9I46L-00H002	MCP7Y60-H002	NVIDIA passive copper splitter cable, 400(2x200)Gbps to 2x200Gbps, OSFP to 2xQSFP56, 2m, fin to flat	MP
HDR	980-9I93M-00H01A	MCP7Y60-H01A	NVIDIA passive copper splitter cable, 400(2x200)Gbps to 2x200Gbps, OSFP to 2xQSFP56, 1.5m, fin to flat	MP

Data Rate	NVIDIA P/N	Legacy OPN	Description	Lifecycle Phase
HDR	980-9I93N-00H001	MCP7Y70-H001	NVIDIA passive copper splitter cable, 400(2x200)Gbps to 4x100Gbps, OSFP to 4xQSFP56, 1m, fin to flat	MP
HDR	980-9I93O-00H002	MCP7Y70-H002	NVIDIA passive copper splitter cable, 400(2x200)Gbps to 4x100Gbps, OSFP to 4xQSFP56, 2m, fin to flat	MP
HDR	980-9I47P-00H01A	MCP7Y70-H01A	NVIDIA passive copper splitter cable, 400(2x200)Gbps to 4x100Gbps, OSFP to 4xQSFP56, 1.5m, fin to flat	MP
HDR	980-9I41X-00H003	MFA7U10-H003	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 3m	P-Rel
HDR	980-9I11Z-00H005	MFA7U10-H005	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 5m	P-Rel
HDR	980-9I111-00H010	MFA7U10-H010	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 10m	P-Rel
HDR	980-9I113-00H015	MFA7U10-H015	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 15m	P-Rel
HDR	980-9I115-00H020	MFA7U10-H020	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 20m	P-Rel
HDR	980-9I117-00H030	MFA7U10-H030	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 30m	P-Rel
HDR	980-9I11V-00H050	MFA7U10-H050	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 50m	Prototype
HDR	980-9I124-00H003	MFS1S00-H003E	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 3m	EOL [HVM]
HDR	980-9I123-00H003	MFS1S00-H003-LL	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, low latency, 3m	EOL [P-Rel]

Data Rate	NVIDIA P/N	Legacy OPN	Description	Lifecycle Phase
HDR	980-9I457-00H003	MFS1S00-H003V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 3m	MP
HDR	980-9I45A-00H005	MFS1S00-H005E	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 5m	EOL [HVM]
HDR	980-9I449-00H005	MFS1S00-H005-LL	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, low latency, 5m	EOL [P-Rel]
HDR	980-9I45D-00H005	MFS1S00-H005V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 5m	MP
HDR	980-9I45G-00H010	MFS1S00-H010E	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 10m	EOL [HVM]
HDR	980-9I45H-00H010	MFS1S00-H010E_FF	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 10m	EOL [HVM]
HDR	980-9I44F-00H010	MFS1S00-H010-LL	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, low latency, 10m	EOL [P-Rel]
HDR	980-9I45J-00H010	MFS1S00-H010V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 10m	MP
HDR	980-9I45M-00H015	MFS1S00-H015E	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 15m	EOL [HVM]
HDR	980-9I44L-00H015	MFS1S00-H015-LL	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, low latency, 15m	EOL [P-Rel]
HDR	980-9I45O-00H015	MFS1S00-H015V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 15m	MP
HDR	980-9I45R-00H020	MFS1S00-H020E	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 20m	EOL [HVM]
HDR	980-9I44Q-00H020	MFS1S00-H020-LL	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, low latency, 20m	EOL [P-Rel]

Data Rate	NVIDIA P/N	Legacy OPN	Description	Lifecycle Phase
HDR	980-9I45T-00H020	MFS1S00-H020V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 20m	MP
HDR	980-9I45Y-00H030	MFS1S00-H030E	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 30m	EOL [HVM]
HDR	980-9I45X-00H030	MFS1S00-H030-LL	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, low latency, 30m	EOL [P-Rel]
HDR	980-9I440-00H030	MFS1S00-H030V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 30m	MP
HDR	980-9I455-00H050	MFS1S00-H050E	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 50m	EOL [HVM]
HDR	980-9I447-00H050	MFS1S00-H050V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 50m	MP
HDR	980-9I44G-00H100	MFS1S00-H100E	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 100m	EOL [HVM]
HDR	980-9I44H-00H100	MFS1S00-H100V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 100m	MP
HDR	980-9I44I-00H130	MFS1S00-H130E	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 130m	EOL [HVM]
HDR	980-9I44K-00H130	MFS1S00-H130V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 130m	MP
HDR	980-9I45L-00H150	MFS1S00-H150E	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 150m	EOL [HVM]
HDR	980-9I44N-00H150	MFS1S00-H150V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 150m	MP
HDR	980-9I452-00H003	MFS1S50-H003E	NVIDIA active fiber splitter cable, IB HDR, 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56 , LSZH, 3m	EOL [HVM]
HDR	980-9I445-00H003	MFS1S50-H003V	Nvidia active optical splitter cable, 200Gbps to 2x100Gbps , QSFP56 to 2x	HVM

Data Rate	NVIDIA P/N	Legacy OPN	Description	Lifecycle Phase
			QSFP56, 3m	
HDR	980-9I956-00H005	MFS1S50-H005E	NVIDIA active fiber splitter cable, IB HDR, 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56 , LSZH, 5m	EOL [HVM]
HDR	980-9I969-00H005	MFS1S50-H005V	Nvidia active optical splitter cable, 200Gbps to 2x100Gbps , QSFP56 to 2x QSFP56, 5m	HVM
HDR	980-9I95A-00H010	MFS1S50-H010E	NVIDIA active fiber splitter cable, IB HDR, 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56 , LSZH, 10m	EOL [HVM]
HDR	980-9I96D-00H010	MFS1S50-H010V	Nvidia active optical splitter cable, 200Gbps to 2x100Gbps , QSFP56 to 2x QSFP56, 10m	HVM
HDR	980-9I95E-00H015	MFS1S50-H015E	NVIDIA active fiber splitter cable, IB HDR, 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56 , LSZH, 15m	EOL [HVM]
HDR	980-9I96H-00H015	MFS1S50-H015V	Nvidia active optical splitter cable, 200Gbps to 2x100Gbps , QSFP56 to 2x QSFP56, 15m	HVM
HDR	980-9I95I-00H020	MFS1S50-H020E	NVIDIA active fiber splitter cable, IB HDR, 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56 , LSZH, 20m	EOL [HVM]
HDR	980-9I96L-00H020	MFS1S50-H020V	Nvidia active optical splitter cable, 200Gbps to 2x100Gbps , QSFP56 to 2x QSFP56, 20m	HVM
HDR	980-9I95M-00H030	MFS1S50-H030E	NVIDIA active fiber splitter cable, IB HDR, 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56 , LSZH, 30m	EOL [HVM]
HDR	980-9I96P-00H030	MFS1S50-H030V	Nvidia active optical splitter cable, 200Gbps to 2x100Gbps , QSFP56 to 2x QSFP56, 30m	HVM
HDR	980-9I95S-00H040	MFS1S50-H040V	Nvidia active optical splitter cable, 200Gbps to 2x100Gbps , QSFP56 to 2x QSFP56, 40m	Prototype

Data Rate	NVIDIA P/N	Legacy OPN	Description	Lifecycle Phase
HDR	980-9I95T-00H050	MFS1S50-H050V	Nvidia active optical splitter cable, 200Gbps to 2x100Gbps , QSFP56 to 2x QSFP56, 50m	Prototype
HDR	980-9I95Z-00H003	MFS1S90-H003E	NVIDIA active fiber splitter cable, IB HDR, 2x200Gb/s to 2x200Gb/s, 2xQSFP56 to 2xQSFP56 , LSZH, 3m	EOL [HVM]
HDR	980-9I960-00H005	MFS1S90-H005E	NVIDIA active fiber splitter cable, IB HDR, 2x200Gb/s to 2x200Gb/s, 2xQSFP56 to 2xQSFP56 , LSZH, 5m	EOL [HVM]
HDR	980-9I961-00H010	MFS1S90-H010E	NVIDIA active fiber splitter cable, IB HDR, 2x200Gb/s to 2x200Gb/s, 2xQSFP56 to 2xQSFP56 , LSZH, 10m	LTB [HVM]
HDR	980-9I962-00H015	MFS1S90-H015E	NVIDIA active fiber splitter cable, IB HDR, 2x200Gb/s to 2x200Gb/s, 2xQSFP56 to 2xQSFP56 , LSZH, 15m	EOL [HVM]
HDR	980-9I423-00H020	MFS1S90-H020E	NVIDIA active fiber splitter cable, IB HDR, 2x200Gb/s to 2x200Gb/s, 2xQSFP56 to 2xQSFP56 , LSZH, 20m	LTB [HVM]
HDR	980-9I424-00H030	MFS1S90-H030E	NVIDIA active fiber splitter cable, IB HDR, 2x200Gb/s to 2x200Gb/s, 2xQSFP56 to 2xQSFP56 , LSZH, 30m	EOL [HVM]
HDR	980-9I17S-00HS00	MMA1T00-HS	NVIDIA transceiver, HDR, QSFP56, MPO, 850nm, SR4, up to 100m	HVM
HDR	980-9I055-00H000*	MMS1W50-HM*	NVIDIA transceiver, IB HDR, up to 200Gb/s, QSFP56, LC-LC, 1310nm, FR4	MP

Firmware Upgrade

Firmware upgrade may be performed directly from any previous version to this version. To upgrade firmware, please refer to the NVIDIA Firmware Tools (MFT) package at network.nvidia.com/products/adapter-software/firmware-tools/

PRM Revision Compatibility

This firmware version complies with the NVIDIA Switches Programmer's Reference Manual (PRM), Rev 1.40 or later.

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