NVIDIA ConnectX-7 Adapter Cards Firmware Release Notes v28.44.1036

Table of Contents

1 Release Notes Update History

Version	Date	Description
28.44.1036	February 2025	Initial release of this Release Notes version,

2 Overview

Firmware which is added at the time of manufacturing, is used to run user programs on the device and can be thought of as the software that allows hardware to run. Embedded firmware is used to control the functions of various hardware devices and systems, much like a computer's operating system (OS) controls the function of software applications. Firmware may be written into read-only memory (ROM), erasable programmable read-only memory (EPROM) or flash memory.

The ConnectX-7 smart host channel adapter (HCA) provides up to four ports of connectivity and 400Gb/s of throughput, hardware-accelerated networking, storage, security, and manageability services at data center scale for cloud, telecommunications, AI, and enterprise workloads. ConnectX-7 empowers agile and high-performance networking solutions with features such as Accelerated Switching and Packet Processing (ASAP2), advanced RoCE, GPUDirect Storage, and in-line hardware acceleration for Transport Layer Security (TLS), IP Security (IPsec), and MAC Security (MACsec) encryption and decryption. ConnectX-7 enables organizations to meet their current and future networking needs in both high-bandwidth and high-density environments.

The ConnectX-7 smart host channel adapter (HCA), featuring the NVIDIA Quantum-2 InfiniBand architecture, provides the highest networking performance available to take on the world's most challenging workloads. ConnectX-7 provides ultra-low latency, 400Gb/s throughput, and innovative NVIDIA In-Network Computing acceleration engines to provide additional acceleration to deliver the scalability and feature-rich technology needed for supercomputers, artificial intelligence, and hyperscale cloud data centers.

2.1 Firmware Download

Please visit Firmware Downloads.

2.2 Document Revision History

A list of the changes made to this document are provided in Document Revision History.

3 Firmware Compatible Products

These are the release notes for the NVIDIA® ConnectX®-7 adapters firmware. This firmware supports the following protocols:

- InfiniBand - EDR, HDR100[2], HDR[2], NDR200[2], NDR[2]
- Ethernet - 1GbE, 10GbE, 25GbE, 40GbE, 50GbE[1], 100GbE[1], 200GbE[2], 400GbE[2]
- PCI Express 5.0, supporting backwards compatibility for v4.0, v3.0, v2.0 and v1.1

[1]. Speed that supports both NRZ and PAM4 modes in Force mode and Auto-Negotiation mode.

[2]. Speed that supports PAM4 mode only.

> ⚠ When connecting an NVIDIA-to-NVIDIA adapter card in ETH PAM4 speeds, Auto-Neg should always be enabled.

3.1 Supported Devices

NVIDIA SKU	Legacy OPN	PSID	Device Description
900-24768-0002-000	N/A	NVD0000000054	Nvidia Dual ConnectX-7 Mezzanine Board for GB200 NVL systems, Crypto Enabled, Secure Boot Enabled, Partner Cool
900-9X7AH-004N-CT0	MCX713114TC-GEAT	MT_0000001048	NVIDIA ConnectX-7 Ethernet adapter card; FHHL; 25GbE/50GbE; quad-port SFP with enhanced-SyncE & PTP; PPS In/Out; PCIe 5.0 x16; Crypto and Secure Boot
900-9X760-0078-MB1	MCX753436MS-HEBB	MT_0000001221	NVIDIA ConnectX-7 OCP3.0 SFF Adapter Card;200GbE (default mode) / NDR200 IB; Dual-port QSFP112; Multi-Host and Port Split capable; PCIe 5.0 x16; Crypto Disabled; Secure Boot Enabled; Thumbscrew (Pull Tab) Bracket
900-9X7AH-0078-DTZ	MCX755106AS-HEAT	MT_0000000834	NVIDIA ConnectX-7 HHHL Adapter Card; 200GbE (default mode) / NDR200 IB; Dual-port QSFP112; PCIe 5.0 x16 with x16 PCIe extension option; Crypto Disabled; Secure Boot Enabled
900-9X7AH-0078-ST0	MCX713106AS-VEAT	MT_0000000840	NVIDIA ConnectX-7 HHHL Adapter Card; 200GbE; Dual-port QSFP112; PCIe 5.0 x16; Crypto Disabled; Secure Boot Enabled
900-9X767-003N-DT0	MCX75210AAS-NEAT	MT_0000000851	NVIDIA ConnectX-7 HHHL Adapter Card; NDR IB; Single-port OSFP; PCIe 5.0 2x8 in a row (Socket Direct); Crypto Disabled; Secure Boot Enabled
900-9X766-001N-ST0	MCX75310AAS-HEAT-N	NVD0000000024	NVIDIA ConnectX-7 InfiniBand adapter card; 200Gb/s NDR200; single-port OSFP; PCIe 5.0 x 16; secure boot; no crypto; for Nvidia DGX

NVIDIA SKU	Legacy OPN	PSID	Device Description
900-9X720-00E0-S0B / 900-9X720-007N-SN1 / 900-9X720-00E0-S00 / 900-9X720-007N-SN0	MCX750500B-0D0K / MCX750500C-0D0K / MCX750500B-0D00 / MCX750500C-0D00	MT_0000000891	Nvidia adapter card with four ConnectX-7; each up to 400Gb/s IB (default mode) or 400GbE; PCIe 5.0 x32; PCIe switch; crypto disabled; secure boot enabled
900-9X7AH-0058-DT1	MCX753106AS-HEAT-N	NVD0000000023	NVIDIA ConnectX-7 VPI adapter card; 200Gb/s; dual-port QSFP; single port InfiniBand and second port VPI (InfiniBand or Ethernet); PCIe 5.0 x16; secure boot; no crypto; for Nvidia DGX storage
900-9X7AX-004NMC0	MCX75343AMC-NEAC	MT_0000001059	NVIDIA ConnectX-7 OCP3.0 TSFF Adapter Card; 400GbE / NDR IB (default mode); Single-port OSFP; Multi-Host and Socket Direct capable; PCIe 5.0 x16; Crypto Enabled; Secure Boot Enabled
900-9X7AH-0076-ST0	MCX713106AS-CEAT	MT_0000000843	NVIDIA ConnectX-7 HHHL Adapter Card; 100GbE; Dual-port QSFP112; PCIe 5.0 x16; Crypto Disabled; Secure Boot Enabled
900-9X7AO-0003-ST0	MCX713104AS-ADAT	MT_0000000849	NVIDIA ConnectX-7 HHHL Adapter Card; 25/50GbE; Quad-Port SFP56; PCIe 4.0 x16; Crypto Disabled; Secure Boot Enabled
900-9X766-003N-SR0	MCX75310AAC-NEAT	MT_0000001046	NVIDIA ConnectX-7 HHHL Adapter card; 400GbE / NDR IB (default mode); Single-port OSFP; PCIe 5.0 x16; Crypto Enabled; Secure Boot Enabled;
900-9X760-0078-MB0	MCX753436MS-HEAB	MT_0000000833	NVIDIA ConnectX-7 OCP3.0 SFF Adapter Card; 200GbE (default mode) / NDR200 IB; Dual-port QSFP112; Multi-Host and Socket Direct capable; PCIe 5.0 x16; Crypto Disabled; Secure Boot Enabled
900-9X721-003N-DT0	MCX75510AAS-NEAT	MT_0000000800	NVIDIA ConnectX-7 adapter card; 400Gb/s NDR IB; Single-port OSFP; PCIe 5.0 x16 with x16 Extension option (Socket Direct ready); Secure boot; No Crypto
900-9X766-003N-SQ0	MCX75310AAS-NEAT	MT_0000000838	NVIDIA ConnectX-7 HHHL Adapter card; 400GbE / NDR IB (default mode); Single-port OSFP; PCIe 5.0 x16; Crypto Disabled; Secure Boot Enabled;
900-9X7AH-0088-ST0	MCX713106AC-VEAT	MT_0000000841	NVIDIA ConnectX-7 HHHL Adapter Card; 200GbE; Dual-port QSFP112; PCIe 5.0 x16; Crypto Enabled; Secure Boot Enabled
900-9X7AH-0086-SQ0	MCX713106AC-CEAT	MT_0000000842	NVIDIA ConnectX-7 HHHL Adapter Card; 100GbE; Dual-port QSFP112; PCIe 5.0 x16; Crypto Enabled; Secure Boot Enabled
900-9X760-0018-MB2	MCX753436MC-HEAB	MT_0000001030	NVIDIA ConnectX-7 OCP3.0 SFF Adapter Card; 200GbE (default mode) / NDR200 IB; Dual-port QSFP112; Multi-Host and Socket Direct capable; PCIe 5.0 x16; Crypto Enabled; Secure Boot Enabled;
900-9X7AX-003NMC0	MCX75343AMS-NEAC	MT_0000001058	NVIDIA ConnectX-7 OCP3.0 TSFF Adapter Card; 400GbE / NDR IB (default mode); Single-port OSFP; Multi-Host and Socket Direct capable; PCIe 5.0 x16; Crypto Disabled; Secure Boot Enabled

NVIDIA SKU	Legacy OPN	PSID	Device Description
900-9X7AX-0039-SB0	MCX75343AAS-NEAC	MT_0000000784	NVIDIA ConnectX-7 VPI adapter card; NDR IB/400GbE OCP3.0 TSFF; Single-port OSFP; PCIe 5.0 x16; Secure boot; No Crypto
900-9X721-003N-DT1	MCX75510AAS-HEAT	MT_0000000839	NVIDIA ConnectX-7 adapter card; 200Gb/s NDR200 IB; Single-port OSFP; PCIe 5.0 x16 Extension option (Socket Direct ready); Secure boot; No Crypto
900-9X767-003N-DT1	MCX75210AAS-HEAT	MT_0000000850	NVIDIA ConnectX-7 HHHL Adapter Card; NDR200 IB; Single-port OSFP; PCIe 5.0 2x8 in a row (Socket Direct); Crypto Disabled; Secure Boot Enabled;
900-9X7AO-00C3-STZ	MCX713104AC-ADAT	MT_0000000852	NVIDIA ConnectX-7 HHHL Adapter Card; 25/50GbE; Quad-Port SFP56; PCIe 4.0 x16; Crypto Enabled; Secure Boot Enabled
900-9X766-003N-ST0	MCX75310AAS-HEAT	MT_0000000844	NVIDIA ConnectX-7 HHHL Adapter Card; 200GbE / NDR200 IB (default mode); Single-port OSFP; PCIe 5.0 x16; Crypto Disabled; Secure Boot Enabled;
900-9X7AH-0079-DTZ	MCX755106AC-HEAT	MT_0000001045	NVIDIA ConnectX-7 HHHL adapter Card; 200GbE (default mode) / NDR200 IB; Dual-port QSFP112; PCIe 5.0 x16 with x16 PCIe extension option; Crypto Enabled; Secure Boot Enabled;
930-9O000-0000-060	MCX755206AS-NEAT-N	MT_0000000892	NVIDIA ConnectX-7 VPI adapter card; 400Gb/s IB and 200GbE; dual-port QSFP; PCIe 5.0 x16; dual slot; secure boot; no crypto; tall bracket for Nvidia DGX storage
900-9X7AH-0039-STZ	MCX715105AS-WEAT	MT_0000001244	NVIDIA ConnectX-7 HHHL Adapter Card; 400GbE (default mode) / NDR IB; Single-port QSFP112; Port Split Capable; PCIe 5.0 x16 with x16 PCIe extension option; Crypto Disabled; Secure Boot Enabled
900-9X760-0078-MB1	MCX753436MS-HEBB	MT_0000001221	NVIDIA ConnectX-7 OCP3.0 SFF Adapter Card;200GbE (default mode) / NDR200 IB; Dual-port QSFP112; Multi-Host and Port Split capable; PCIe 5.0 x16; Crypto Disabled; Secure Boot Enabled; Thumbscrew (Pull Tab) Bracket

3.2 Driver Software, Tools and Switch Firmware

The following are the drivers' software, tools, switch/HCA firmware versions tested that you can upgrade from or downgrade to when using this firmware version:

	Supported Version
ConnectX-7 Firmware	28.44.1036 / 28.43.2026 / 28.43.1014
DOCA-HOST	2.10.0 / 2.9.1 **Note:** For the list of the supported Operating Systems, please refer to the driver's Release Notes.
WinOF-2	25.1.50020 / 24.10.50010 / 24.7.50000 **Note:** For the list of the supported Operating Systems, please refer to the driver's Release Notes.
MFT	4.31.0-149 / 4.30.1-139 / 4.30.0-139 **Note:** For the list of the supported Operating Systems, please refer to the driver's Release Notes.

	Supported Version
mstflint	4.31.0-149 / 4.30.1-139 / 4.30.0-139 **Note:** For the list of the supported Operating Systems, please refer to the driver's Release Notes.
FlexBoot	3.7.500
UEFI	14.37.14
MLNX-OS	3.12.2002 onwards
Cumulus	5.11.0.0026 onwards
NVIDIA Quantum-2 Firmware	31.2014.2084 onwards

4 Changes and New Features

Security Hardening Enhancements: This release contains important reliability improvements and security hardening enhancements. NVIDIA recommends upgrading your devices' firmware to this release to improve the devices' firmware security and reliability.

To generate PLDM packages for firmware updates, users must install and use the MFT version that corresponds with the respective firmware release.

Feature/Change	Description
28.44.1036	
Multi-host LAG	When using a multi-host deployment, each host is assigned unique ports and PFs and manages its own LAG.
PCIe Switch fwreset	Added support for a new synchronized flow, including a tool and driver, to perform a fwreset on setups with a PCIe switch configuration.
PTP	Unified PTP is now supported across different VFs on the same PF.
MADs	Added support for new MADs: `PortRecoveryPolicyConfig` and `PortRecoveryPolicyCounters`. During the PHY recovery process, the firmware core will indicate the `port_logical_state` as Active.
Block SMP Traffic	Added a new NV config (SM_DISABLE, default 0) which, when enabled, blocks SMP traffic that does not originate from the SM.
Dynamic Long Cables	Added the ability to set cable length as a parameter in the PFCC access register. The cable length is used in the calculation of RX lossless buffer parameters, including size, Xoff, and Xon thresholds.
Bug Fixes	See *Bug Fixes in this Firmware Version* section.

4.1 Customer Affecting Changes

4.1.1 Changes in This Release

This section provides a list of changes that took place in the current version and break compatibility/interface, discontinue support for features and/or OS versions, etc.

Introduced in Version	Description
N/A	N/A

4.1.2 Changes Planned for Future Releases

This section provides a list of changes that will take place in a future version of the product and will break compatibility/interface, discontinue support for features and/or OS versions, etc.

Planned for Version	Description
N/A	N/A

4.1.3 Changes in Earlier Releases

This section provides a list of changes that took place throughout the past two major releases that broke compatibility/interface, discontinued support for features and/or OS versions, etc.

For an archive of all changes, please refer to the Release Notes History section.

Introduced in Version	Description	Customer Impact and Recommendation
28.43.2026	**DPA Outbox Blocking-Mode** Due to a silicon issue, as of firmware version 28.43.2026, the DPA outbox is configured to operate in non-blocking mode, causing DPA outbox requests to complete immediately without waiting for actual completion. As a result, the DPA stack must poll a "busy" bit before initiating another DPA outbox operation.	Update the firmware version to 28.43.2026 or higher or update the BF-Bundle (containing this firmware) and DOCA-Host to 2.9.x or higher. This is mandatory for customers programming the DPA (e.g., DPA with DOCA PCC, or using NVIDIA turn-key apps which utilize the DPA (virtio-net/blk/fs, NVMe).
	DPA Thread Context Due to internal-stack API changes, as of firmware v28.43.2026, DPA thread context is changed in the DPA. This affects the overlying DPA stack. As of firmware version 28.43.2026, internal-stack API changes have altered the DPA thread context, impacting the overlying DPA stack.	

4.1.4 Discontinued Features

List of features which are supported in previous generations of hardware devices.

N/A

4.2 Declared Unsupported Features

This section provides a list of features that are not supported by the software.

N/A

5 Bug Fixes in this Firmware Version

Internal Ref.	Issue
4087432	**Description:** Increased the RX lossless buffer size to delay the transmission of Pause/PFC frames during NIC congestion.
	Keywords: RX lossless buffer size
	Discovered in Version: 28.43.2026
	Fixed in Release: 28.44.1036
4176327	**Description:** Fixed cable info semaphore deadlock.
	Keywords: Cables
	Discovered in Version: 28.43.1014
	Fixed in Release: 28.44.1036
4179944	**Description:** Fixed the error handling for the TLV full list, which caused the TLV mechanism to hang.
	Keywords: TLV
	Discovered in Version: 28.43.1014
	Fixed in Release: 28.44.1036
4199196	**Description:** Fixed the SPDM GET_CERTIFICATE operation to support all certificate chain offsets and chunk sizes.
	Keywords: SPDM
	Discovered in Version: 28.43.2026
	Fixed in Release: 28.44.1036
4183928	**Description:** Fixed an issue in VDPA where destroying a virtq would cause a health buffer syndrome with ext_synd=0x8f33 if the virtq was created without an mkey or with unmanned and mapped mkeys during live migration.
	Keywords: VDPA, live migration
	Discovered in Version: 28.43.2026
	Fixed in Release: 28.44.1036
4184904 / 4183908	**Description:** Fixed an issue where the VDPA feature bits GUEST_TSO4 and GUEST_TSO6 were unexpectedly set by default, leading to traffic interruptions.
	Keywords: VDPA, feature cap, GUEST_TSO4, GUEST_TSO6
	Discovered in Version: 28.43.2026
	Fixed in Release: 28.44.1036
4184904	**Description:** Fixed an issue where the VDPA feature bits GUEST_TSO4 and GUEST_TSO6 were unexpectedly set by default, leading to traffic interruptions.
	Keywords: VDPA, feature cap, GUEST_TSO4, GUEST_TSO6
	Discovered in Version: 28.43.2026
	Fixed in Release: 28.44.1036
4184910	**Description:** Fixed an issue where enabling PCC NP and setting the link type to one port as IB and the other as Ethernet could cause an assert to appear in dmesg with ext_synd 0x8309.

Internal Ref.	Issue
	Keywords: PCC NP, port type
	Discovered in Version: 28.43.2026
	Fixed in Release: 28.44.1036
4133372	**Description:** Added support for SyncE at 1G link speed.
	Keywords: SyncE
	Discovered in Version: 28.43.2026
	Fixed in Release: 28.44.1036
3661179	**Description:** Added a new mechanism for allocations and deallocations flows to enhance parallelism.
	Keywords: Allocations, deallocations flows
	Discovered in Version: 28.39.1002
	Fixed in Release: 28.44.1036

6 Known Issues

VF Network Function Limitations in SR-IOV Legacy Mode

Dual Port Device	Single Port Device
127 VF per PF (254 functions)	127

VF Network Function Limitations in Switchdev Mode

Dual Port Device	Single Port Device
127 VF per PF (254 functions)	127

VF+SF Network Function Limitations in Switchdev Mode

Dual Port Device	Single Port Device
• 127 VF per PF (254 functions) • 512 PF+VF+SF per PF (1024 functions)	• 127 VF (127 functions) • 512 PF+VF+SF per PF (512 functions)

Internal Ref.	Issue
3875417	**Description:** For systems that support a large number of VFs (200 or more) and can open over a million QPs, the FLR may take about 1 second per function resulting in a driver timeout.
	Workaround: N/A
	Keywords: VFs, QPs, FLR
	Detected in version: 28.44.1036
4193036	**Description:** The initial allocation of DPA_THREAD on group affinity allocates memory for all EUs, including stack, core dump, and other resources.
	Workaround: N/A
	Keywords: DPA
	Detected in version: 28.44.1036
4030457	**Description:** This release does not support InfiniBand (IB) over Windows OS when using ConnectX-7 MCX75310AAS-NEAT and MCX75310AAC-NEAT OPNs.
	Workaround: N/A
	Keywords: InfiniBand, Windows
	Detected in version: 28.42.1000
2169950	**Description:** When decapsulation on a packet occurs, the FCS indication is not calculated correctly.
	Workaround: N/A
	Keywords: FCS
	Discovered in Version: 28.42.1000

Internal Ref.	Issue
-	**Description:** Downgrading the following adapter cards (MCX713104AS-ADAT & MCX713104AC-ADAT) to a lower version than 20.39.2048 is not supported.
	Workaround: N/A
	Keywords: Downgrade
	Discovered in Version: 28.40.1000
3728450	**Description:** SW_RESET with a pending image is currently not supported.
	Workaround: N/A
	Keywords: SW_RESET
	Discovered in Version: 28.40.1000
3735988	**Description:** In IB system, RTT_response_sl feature does not work with Sniffer tools (e.g., Wireshark/Tcpdump/).
	Workaround: N/A
	Keywords: Health buffer, sniffer, RTT
	Discovered in Version: 28.40.1000
3614362	**Description:** When connected to a Spectrum-1 switch system using NRZ 25G optic module supporting DME in NO FEC, an EFF BER of -13 may be seen once in 200 toggles.
	Workaround: To raise the link, re-toggle the port.
	Keywords: Spectrum-1, NRZ, BER, port toggling
	Discovered in Version: 28.39.1002
3629216	**Description:** mlxfwreset level 3 command is not supported for MCX750500B-0D00 / MCX750500B-0D0K / MCX755206AS-NEAT-N P/N.
	Workaround: 1. Enable mlxfwreset level 4. `mlxfwreset -d <dev> r -l 4 -y` 2. Reboot the server.
	Keywords: mlxfwreset level 3
	Discovered in Version: 28.39.1002
-	**Description:** The I^2C clock fall time is lower than the 12ns minimum defined in the I2C-bus specification. For further information, refer to the I^2C-bus Specification, Version 7.0, October 2021, https://www.i2c-bus.org/.
	Workaround: N/A
	Keywords: I^2C clock
	Discovered in Version: 28.39.1002
3179534	**Description:** 25G/lane speeds are not supported on 200GbE optic cables.
	Workaround: N/A
	Keywords: Cables, 200GbE
	Discovered in Version: 28.39.1002

Internal Ref.	Issue
3435259	**Description:** The host enables the device to populate only 1 bus. When opening extra 2 Physical ports, moving from dual-port to quad-port, the user can open 2 less Virtual Functions.
	Workaround: N/A
	Keywords: VF, dual-port, quad-port
	Discovered in Version: 28.39.1002
3525865	**Description:** Unexpected system behavior might be observed if the driver is loaded while reset is in progress.
	Workaround: N/A
	Keywords: Sync 1 reset, firmware reset
	Discovered in Version: 28.39.1002
3363753	**Description:** The link is down when connected to the MMS1V00-WM (DR4) optical module.
	Workaround: N/A
	Keywords: 400G, link down
	Discovered in Version: 28.38.1002
3439438	**Description:** When connecting to a High Speed Traffic Generator in 400G speed, the linkup time may takes up to 3 minutes.
	Workaround: N/A
	Keywords: 400G, linkup time
	Discovered in Version: 28.38.1002
-	**Description:** When upgrading from firmware v28.35.2000 to a newer one, the default port speeds of adapter cards MCX755106AS-HEAT/ MCX755106AC-HEAT will change from InfiniBand to Ethernet.
	Workaround: To change it back to InfiniBand, please follow the instructions in the ConnectX-7 hardware User Manual.
	Keywords: Firmware upgrade, port type, MCX755106AS-HEAT/ MCX755106AC-HEAT
	Discovered in Version: 28.37.1014
3376224	**Description:** FEC override is not supported when working with NRZ speeds on PAM4 Optical modules.
	Workaround: N/A
	Keywords: FEC override, NRZ, PAM4
	Discovered in Version: 28.37.1014
3262845	**Description:** In the ConnectX-7 adapter card with P/N MCX750500B-0D0K, the "Fatal Error Reporting Enable" bit controls both the fatal and the non-fatal ERR MSG forwarding. The "Non-Fatal Error Reporting Enable" bit does not affect the ERR MSG forwarding.
	Workaround: N/A
	Keywords: Fatal Error Reporting Enable" bit, PCIe, MCX750500B-0D0K
	Discovered in Version: 28.36.1010
3329109	**Description:** MFS1S50-H003E cable supports only HDR rate when used as a split cable.
	Workaround: N/A

Internal Ref.	Issue
	Keywords: HDR, split cable, MFS1S50-H003E
	Discovered in Version: 28.36.1010
2844036	**Description:** When using the "Dual Write" feature with QP buffer bigger than the maximum outstanding WQEs (128), the data being sent on the standby QP can be corrupted.
	Workaround: Limit the QP buffer size when using "Dual Write" up to 128 WQEs.
	Keywords: Dual-write, QP
	Discovered in Version: 28.36.1010
3178339	**Description:** PCIe PML1 is disabled.
	Workaround: N/A
	Keywords: PCIe PML1
	Discovered in Version: 28.35.1012
3033910	**Description:** BAR misses caused by a memory write/read actions are not reported in the AER and the device status.
	Workaround: N/A
	Keywords: BAR miss, AER
	Discovered in Version: 28.34.4000
3140645	**Description:** 3rd party servers may hang after warm reboot due to the PCIe switch.
	Workaround: N/A
	Keywords: PCIe, 3rd party servers
	Discovered in Version: 28.34.4000
-	**Description:** Changing dynamic PCIe link width is not supported.
	Workaround: N/A
	Keywords: PCIe
	Discovered in Version: 28.34.1002
3141072	**Description:** The "max_shaper_rate" configuration query via QEEC mlxreg returns a value translated to hardware granularity.
	Workaround: N/A
	Keywords: RX Rate-Limiter, Multi-host
	Discovered in Version: 28.34.1002
2870970	**Description:** GTP encapsulation (flex parser profile 3) is limited to the NIC domain. Encapsulating in the FDB domain will render a 0-size length in GTP header.
	Workaround: N/A
	Keywords: GTP encapsulation
	Discovered in Version: 28.34.1002
3081264	**Description:** 10G/40G speeds are not supported on MFS1S00-XXXX modules (200G optics) in ConnectX-7 adapter cards.
	Workaround: N/A
	Keywords: Optical cables

Internal Ref.	Issue
	Discovered in Version: 28.33.4030
3070590	**Description:** PLL modules are not supported in ConnectX-7 ethernet adapter cards.
	Workaround: N/A
	Keywords: PLL
	Discovered in Version: 28.33.4030
3070409	**Description:** When connecting a ConnectX-7 adapter card to a ConnectX-6 Dx or an NVIDIA Spectrum-3 switch, NRZ speeds are not raised when using 200GbE optical cable.
	Workaround: Configure PHY_FEC_OVERRIDE on the ConnectX-7 side for the requested speed.
	Keywords: Optical cables, NRZ, ConnectX-6 Dx, NVIDIA Spectrum-3, 200GbE optical cable
	Discovered in Version: 28.33.4030
2993531	**Description:** PML1 is disabled by default. Enabling it might result in server hanging.
	Workaround: N/A
	Keywords: PML1
	Discovered in Version: 28.33.2028
-	**Description:** Upgrading to firmware 28.33.2028 from any previous Engineering Sample (earlier than version 28.98.2406) must be done before installing WinOF-2 v2.90 driver and requires going through the following steps: 1. Upgrade to 28.98.2406 version while the driver is disabled. 2. Upgrade to firmware version 28.33.2028 (the driver can be enable at this stage).
	Workaround: N/A
	Keywords: Firmware upgrade
	Discovered in Version: 28.33.2028
-	**Description:** Downgrading from firmware 28.33.2028 to any previous Engineering Sample firmware is not supported.
	Workaround: N/A
	Keywords: Firmware downgrade
	Discovered in Version: 28.33.2028

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7 PreBoot Drivers (FlexBoot/UEFI)

7.1 FlexBoot Changes and New Features

For further information, please refer to the FlexBoot Release Notes.

7.2 UEFI Changes and Major New Features

For further information, please refer to the UEFI Release Notes.

8 Validated and Supported Cables and Switches

8.1 Validated and Supported Cables and Modules

8.1.1 Cables Lifecycle Legend

Lifecycle Phase	Definition
EOL	End of Life
LTB	Last Time Buy
HVM	GA level
MP	GA level
P-Rel	GA level
Preliminary	Engineering Sample
Prototype	Engineering Sample

8.1.2 InfiniBand/Ethernet Support

Upon firmware upgrade, after reset, the default port configuration could be changed.

To set the right configuration, run:

```
mlxconfig -d <mst device> s LINK_TYPE_P1=1/2 LINK_TYPE_P2=1/2
```

where:

- LINK_TYPE_P1 - sets the configuring protocol for port 1
- LINK_TYPE_P2 - sets the configuring protocol for port 2
- (1/2) - values used for the different protocols:
- 1 – for InfiniBand
- 2 - for Ethernet

8.1.3 NDR / 400GbE Cables

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
NA	400GE	980-9I693-F4NS00	MMA1Z00-NS400-T	SINGLE PORT TRANSCEIVER, 400GBPS,400GbE, QSFP112, MPO12 APC, 850NM MMF, UP TO 50M, FLAT TOP	P-Rel

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
NA	400GE	980-9I51S-F4NS00	MMA4Z00-NS400-T	SINGLE PORT TRANSCEIVER, 400GBPS,400GbE, OSFP, MPO12 APC, 850NM MMF, UP TO 50M, FLAT TOP	P-Rel
NDR	N/A	980-9I600-00N003	MCA4J80-N003-FLT	Active copper cable, IB twin port NDR, up to 800Gb/s, OSFP, 3m, flat top	MP
NDR	N/A	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	N/A	980-9I948-00N004	MCA7J60-N004	NVIDIA active copper splitter cable, IB twin port NDR 800Gb/s to 2x400Gb/s, OSFP to 2xOSFP, 4m	P-Rel
NDR	N/A	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	NA	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	NA	980-9IA0L-00N00A	MCP4Y10-N00A-FLT	NVIDIA Passive Copper cable, IB twin port NDR, up to 800Gb/s, OSFP, 0.5m, flat top	MP
NDR	N/A	980-9I50D-00N004	MCA7J70-N004	NVIDIA active copper splitter cable, IB twin port NDR 800Gb/s to 4x200Gb/s, OSFP to 4xOSFP, 4m	P-Rel
NDR	N/A	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	N/A	980-9I76G-00N004	MCA7J75-N004	NVIDIA Active copper splitter cable, IB twin port NDR 800Gb/s to 4x200Gb/s, OSFP to 4xQSFP112, 4m	Prototype
NDR	N/A	980-9I76H-00N005	MCA7J75-N005	NVIDIA Active copper splitter cable, IB twin port NDR 800Gb/s to 4x200Gb/s, OSFP to 4xQSFP112, 5m	Prototype
N/A	400GE	980-9I35O-00W001	MCP1660-W001E30	NVIDIA Direct Attach Copper cable, 400GbE, 400Gb/s, QSFP-DD, 1m, 30AWG	EOL [P-Rel]

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	400GE	980-9I35P-00W002	MCP1660-W002E26	NVIDIA Direct Attach Copper cable, 400GbE, 400Gb/s, QSFP-DD, 2m, 26AWG	EOL [P-Rel]
N/A	400GE	980-9I35Q-00W003	MCP1660-W003E26	NVIDIA Direct Attach Copper cable, 400GbE, 400Gb/s, QSFP-DD, 3m, 26AWG	EOL [P-Rel]
N/A	400GE	980-9I35R-00W00A	MCP1660-W00AE30	NVIDIA Direct Attach Copper cable, 400GbE, 400Gb/s, QSFP-DD, 0.5m, 30AWG	EOL [P-Rel]
N/A	400GE	980-9I35S-00W01A	MCP1660-W01AE30	NVIDIA Direct Attach Copper cable, 400GbE, 400Gb/s, QSFP-DD, 1.5m, 30AWG	EOL [P-Rel]
N/A	400GE	980-9I35T-00W02A	MCP1660-W02AE26	NVIDIA Direct Attach Copper cable, 400GbE, 400Gb/s, QSFP-DD, 2.5m, 26AWG	EOL [P-Rel]
NDR	N/A	980-9IA0F-00N001	MCP4Y10-N001	NVIDIA passive Copper cable, IB twin port NDR, up to 800Gb/s, OSFP, 1m	MP
NDR	N/A	980-9IA0G-00N001	MCP4Y10-N001-FLT	NVIDIA Passive Copper cable, IB twin port NDR, up to 800Gb/s, OSFP, 1m, flat top	MP
NDR	N/A	980-9IA0J-00N002	MCP4Y10-N002-FLT	NVIDIA passive Copper cable, IB twin port NDR, up to 800Gb/s, OSFP, 2m, flat top	MP
NDR	N/A	980-9IA0R-00N01A	MCP4Y10-N01A-FLT	NVIDIA passive Copper cable, IB twin port NDR, up to 800Gb/s, OSFP, 1.5m, flat top	MP
N/A	400GE	980-9I48Y-00W001	MCP7F60-W001R30	NVIDIA DAC splitter cable, 400GbE, 400Gb/s to 4x100Gb/s, QSFP-DD to 4xQSFP56, 1m, 30AWG	EOL [P-Rel]
N/A	400GE	980-9I48Z-00W002	MCP7F60-W002R26	NVIDIA DAC splitter cable, 400GbE, 400Gb/s to 4x100Gb/s, QSFP-DD to 4xQSFP56, 2m, 26AWG	EOL [P-Rel]
N/A	400GE	980-9I822-00W02A	MCP7F60-W02AR26	NVIDIA DAC splitter cable, 400GbE, 400Gb/s to 4x100Gb/s, QSFP-DD to 4xQSFP56, 2.5m, 26AWG	EOL [P-Rel]

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	400GE	980-9IA3S-00W001	MCP7H60-W001R30	NVIDIA DAC splitter cable, 400GbE, 400Gb/s to 2x200Gb/s, QSFP-DD to 2xQSFP56, 1m, 30AWG	EOL [P-Rel]
N/A	400GE	980-9IA3T-00W002	MCP7H60-W002R26	NVIDIA DAC splitter cable, 400GbE, 400Gb/s to 2x200Gb/s, QSFP-DD to 2xQSFP56, 2m, 26AWG	EOL [P-Rel]
N/A	400GE	980-9IA3U-00W003	MCP7H60-W003R26	NVIDIA DAC splitter cable, 400GbE, 400Gb/s to 2x200Gb/s, QSFP-DD to 2xQSFP56, 3m, 26AWG	EOL [P-Rel]
N/A	400GE	980-9IA3V-00W01A	MCP7H60-W01AR30	NVIDIA DAC splitter cable, 400GbE, 400Gb/s to 2x200Gb/s, QSFP-DD to 2xQSFP56, 1.5m, 30AWG	EOL [P-Rel]
N/A	400GE	980-9IA3W-00W02A	MCP7H60-W02AR26	NVIDIA DAC splitter cable, 400GbE, 400Gb/s to 2x200Gb/s, QSFP-DD to 2xQSFP56, 2.5m, 26AWG	EOL [P-Rel]
NDR	N/A	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	N/A	980-9I433-00N001	MCP7Y00-N001-FLT	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 2x400Gb/s, OSFP to 2xOSFP,1m, flat top	P-Rel
NDR	N/A	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	N/A	980-9I925-00N002	MCP7Y00-N002-FLT	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 2x400Gb/s, OSFP to 2xOSFP, 2m, flat top	P-Rel
NDR	N/A	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	N/A	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
NDR	N/A	980-9I927-00N01A	MCP7Y00-N01A-FLT	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 2x400Gb/s, OSFP to 2xOSFP,1.5m, flat top	P-Rel

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
NDR	N/A	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	N/A	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	N/A	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	N/A	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	N/A	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	N/A	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	N/A	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	N/A	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	N/A	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	N/A	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	N/A	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	N/A	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

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
NDR	N/A	980-9I75F-00N001	MCP7Y50-N001-FLT	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 4x200Gb/s, OSFP to 4xOSFP, 1m, flat top	P-Rel
NDR	N/A	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	N/A	980-9I46H-00N002	MCP7Y50-N002-FLT	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 4x200Gb/s, OSFP to 4xOSFP, 2m, flat top	P-Rel
NDR	N/A	980-9I46T-00N003	MCP7Y50-N003	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 4x200Gb/s, OSFP to 4xOSFP, 3m	P-Rel
NDR	N/A	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	N/A	980-9I46J-00N01A	MCP7Y50-N01A-FLT	NVIDIA passive copper splitter cable, IB twin port NDR 800Gb/s to 4x200Gb/s, OSFP to 4xOSFP, 1.5m, flat top	P-Rel
NDR	N/A	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
NDR	N/A	980-9I73U-000003	MFP7E10-N003	NVIDIA passive fiber cable, MMF , MPO12 APC to MPO12 APC, 3m	MP
NDR	N/A	980-9I73V-000005	MFP7E10-N005	NVIDIA passive fiber cable, MMF, MPO12 APC to MPO12 APC, 5m	MP
NDR	N/A	980-9I57W-000007	MFP7E10-N007	NVIDIA passive fiber cable, MMF, MPO12 APC to MPO12 APC, 7m	MP
NDR	N/A	980-9I57X-00N010	MFP7E10-N010	NVIDIA passive fiber cable, MMF, MPO12 APC to MPO12 APC, 10m	MP
NDR	N/A	980-9I57Y-000015	MFP7E10-N015	NVIDIA passive fiber cable, MMF , MPO12 APC to MPO12 APC, 15m	MP
NDR	N/A	980-9I57Z-000020	MFP7E10-N020	NVIDIA passive fiber cable, MMF, MPO12 APC to MPO12 APC, 20m	MP

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
NDR	N/A	980-9I573-00N025	MFP7E10-N025	NVIDIA passive fiber cable, MMF, MPO12 APC to MPO12 APC, 25m	MP
NDR	N/A	980-9I570-00N030	MFP7E10-N030	NVIDIA passive fiber cable, MMF, MPO12 APC to MPO12 APC, 30m	MP
NDR	N/A	980-9I570-00N035	MFP7E10-N035	NVIDIA passive fiber cable, MMF, MPO12 APC to MPO12 APC, 35m	MP
NDR	N/A	980-9I570-00N040	MFP7E10-N040	NVIDIA passive fiber cable, MMF, MPO12 APC to MPO12 APC, 40m	MP
NDR	N/A	980-9I57Y-00N050	MFP7E10-N050	NVIDIA passive fiber cable, MMF, MPO12 APC to MPO12 APC, 50m	MP
NDR	N/A	980-9I571-00N003	MFP7E20-N003	NVIDIA passive fiber cable, MMF, MPO12 APC to 2xMPO12 APC, 3m	MP
NDR	N/A	980-9I572-00N005	MFP7E20-N005	NVIDIA passive fiber cable, MMF, MPO12 APC to 2xMPO12 APC, 5m	MP
NDR	N/A	980-9I573-00N007	MFP7E20-N007	NVIDIA passive fiber cable, MMF, MPO12 APC to 2xMPO12 APC, 7m	MP
NDR	N/A	980-9I554-00N010	MFP7E20-N010	NVIDIA passive fiber cable, MMF, MPO12 APC to 2xMPO12 APC, 10m	MP
NDR	N/A	980-9I555-00N015	MFP7E20-N015	NVIDIA passive fiber cable, MMF, MPO12 APC to 2xMPO12 APC, 15m	MP
NDR	N/A	980-9I556-00N020	MFP7E20-N020	NVIDIA passive fiber cable, MMF, MPO12 APC to 2xMPO12 APC, 20m	MP
NDR	N/A	980-9I557-00N030	MFP7E20-N030	NVIDIA passive fiber cable, MMF, MPO12 APC to 2xMPO12 APC, 30m	MP
NDR	N/A	980-9I55Z-00N050	MFP7E20-N050	NVIDIA passive fiber cable, MMF, MPO12 APC to 2xMPO12 APC, 50m	MP
NDR	N/A	980-9I559-00N002	MFP7E30-N002	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 2m	MP
NDR	N/A	980-9I55A-00N003	MFP7E30-N003	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 3m	MP
NDR	N/A	980-9I55B-00N005	MFP7E30-N005	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 5m	MP

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
NDR	N/A	980-9I58C-00N007	MFP7E30-N007	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 7m	MP
NDR	N/A	980-9I58D-00N010	MFP7E30-N010	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 10m	MP
NDR	N/A	980-9I58E-00N015	MFP7E30-N015	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 15m	MP
NDR	N/A	980-9I58F-00N020	MFP7E30-N020	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 20m	MP
NDR	N/A	980-9I58G-00N030	MFP7E30-N030	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 30m	MP
NDR	N/A	980-9I580-00N030	MFP7E30-N040	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 40m	MP
NDR	N/A	980-9I58H-00N050	MFP7E30-N050	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 50m	MP
NDR	N/A	980-9I581-00N050	MFP7E30-N060	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 60m	MP
NDR	N/A	980-9I582-00N050	MFP7E30-N070	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 70m	MP
NDR	N/A	980-9I58I-00N100	MFP7E30-N100	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 100m	MP
NDR	N/A	980-9I58J-00N150	MFP7E30-N150	NVIDIA passive fiber cable, SMF, MPO12 APC to MPO12 APC, 150m	MP
NDR	N/A	980-9I58K-00N003	MFP7E40-N003	NVIDIA passive fiber cable, SMF, MPO12 APC to 2xMPO12 APC, 3m	MP
NDR	N/A	980-9I58L-00N005	MFP7E40-N005	NVIDIA passive fiber cable, SMF, MPO12 APC to 2xMPO12 APC, 5m	MP
NDR	N/A	980-9I58M-00N007	MFP7E40-N007	NVIDIA passive fiber cable, SMF, MPO12 APC to 2xMPO12 APC, 7m	MP
NDR	N/A	980-9I58N-00N010	MFP7E40-N010	NVIDIA passive fiber cable, SMF, MPO12 APC to 2xMPO12 APC, 10m	MP
NDR	N/A	980-9I56O-00N015	MFP7E40-N015	NVIDIA passive fiber cable, SMF, MPO12 APC to 2xMPO12 APC, 15m	MP

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
NDR	N/A	980-9I56P-00N020	MFP7E40-N020	NVIDIA passive fiber cable, SMF, MPO12 APC to 2xMPO12 APC, 20m	MP
NDR	N/A	980-9I56Q-00N030	MFP7E40-N030	NVIDIA passive fiber cable, SMF, MPO12 APC to 2xMPO12 APC, 30m	MP
NDR	N/A	980-9I56R-000050	MFP7E40-N050	NVIDIA passive fiber cable, SMF, MPO12 APC to 2xMPO12 APC, 50m	MP
NDR	N/A	980-9I693-00NS00	MMA1Z00-NS400	NVIDIA single port transceiver, 400Gbps,NDR, QSFP112, MPO12 APC, 850nm MMF, up to 50m, flat top	P-Rel
NDR	N/A	980-9I51A-00NS00	MMA4Z00-NS-FLT*	NVIDIA twin port transceiver, 800Gbps,2xNDR, OSFP, 2xMPO12 APC, 850nm MMF, up to 50m, flat top	MP
NDR	N/A	980-9I51S-00NS00	MMA4Z00-NS400	NVIDIA single port transceiver, 400Gbps,NDR, OSFP, MPO12 APC, 850nm MMF, up to 50m, flat top	MP
NDR	N/A	980-9I51C-00NS00	MMA4Z00-NV4-FLT	NVIDIA twin port transceiver, 800Gbps,4xNVlink4, OSFP, 2xMPO12 APC, 850nm, flat top	Prototype
N/A	400GE	980-9I16Y-00W000	MMS1V00-WM	NVIDIA transceiver, 400GbE, QSFP-DD, MPO, 1310nm, DR4	MP
NDR	N/A	980-9I30F-00NS00	MMS4X00-NL400	NVIDIA single port transceiver, 400Gbps,NDR, OSFP, MPO12 APC, 1310nm SMF, up to 30m, flat top	EOL [Prototype]
NDR	N/A	980-9I30G-00NM00	MMS4X00-NM	NVIDIA twin port transceiver, 800Gbps,2xNDR, OSFP, 2xMPO, 1310nm SMF, up to 500m, finned	MP
NDR	N/A	980-9I301-00NM00	MMS4X00-NM-FLT	NVIDIA twin port transceiver, 800Gbps,2xNDR, OSFP, 2xMPO12 APC, 1310nm SMF, up to 500m, flat top	Prototype
NDR	N/A	980-9I30H-00NM00	MMS4X00-NS	NVIDIA twin port transceiver, 800Gbps,2xNDR, OSFP, 2xMPO12 APC, 1310nm SMF, up to 100m, finned	MP

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
NDR	N/A	980-9I30I-00NM00	MMS4X00-NS-FLT	NVIDIA twin port transceiver, 800Gbps,2xNDR, OSFP, 2xMPO12 APC, 1310nm SMF, up to 100m, flat top	MP
NDR	N/A	980-9I31N-00NM00	MMS4X00-NS400	NVIDIA single port transceiver, 400Gbps,NDR, OSFP, MPO12 APC, 1310nm SMF, up to 100m, flat top	MP
NDR	NA	980-9I30L-00N000	MMS4X50-NM	NVIDIA twin port transceiver, 800Gbps, 2xFR4, 2xNDR, OSFP, 2xLC-LC, 1310nm SMF, up to 2km, finned	P-Rel
NDR	NA	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	NA	980-9IA0L-00N00A	MCP4Y10-N00A-FLT	NVIDIA Passive Copper cable, IB twin port NDR, up to 800Gb/s, OSFP, 0.5m, flat top	MP
NDR	NA	980-9I068-00NM00	MMS1X00-NS400	NVIDIA single port transceiver, 400Gbps, NDR, QSFP112, MPO, 1310nm SMF, up to 500m, flat top	Early BOM

⚠ * MMA4Z00-NS-FLT transceiver is used with the following ConnectX-7 adapter cards ONLY: MCX750500B-0D0K / MCX750500C-0D0K / MCX750500B-0D00 / MCX750500C-0D00.

8.1.4 HDR / 200GbE Cables

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
HDR	NA	980-9I45A-09H035	MFS1S00-H035V	Mellanox active optical cable, up to 200Gb/s IB HDR, QSFP56, 35m	MP
HDR	NA	980-9I45G-09H090	MFS1S00-H090V	Mellanox active optical cable, up to 200Gb/s IB HDR, QSFP56, 90m	LTB [MP]
HDR	NA	980-9I45O-00H200	MFS1S00-H200E	Mellanox active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 200m	EOL [EVT]
HDR	200GE	980-9I548-00H001	MCP1650-H001E30	Nvidia Passive Copper cable, up to 200Gbps, QSFP56 to QSFP56, 1m	HVM

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
HDR	200GE	980-9I549-00H002	MCP1650-H002E26	Nvidia Passive Copper cable, up to 200Gbps, QSFP56 to QSFP56, 2m	HVM
HDR	200GE	980-9I54A-00H00A	MCP1650-H00AE30	Nvidia Passive Copper cable, up to 200Gbps, QSFP56 to QSFP56, 0.5m	HVM
HDR	200GE	980-9I54B-00H01A	MCP1650-H01AE30	Nvidia Passive Copper cable, up to 200Gbps, QSFP56 to QSFP56, 1.5 m	HVM
N/A	200GE	980-9I54C-00V001	MCP1650-V001E30	NVIDIA Passive Copper cable, 200GbE, 200Gb/s, QSFP56, LSZH, 1m, black pulltab, 30AWG	LTB [HVM]
N/A	200GE	980-9I54D-00V002	MCP1650-V002E26	NVIDIA Passive Copper cable, 200GbE, 200Gb/s, QSFP56, LSZH, 2m, black pulltab, 26AWG	LTB [HVM]
N/A	200GE	980-9I54G-00V003	MCP1650-V003E26	NVIDIA Passive Copper cable, 200GbE, 200Gb/s, QSFP56, LSZH, 3m, black pulltab, 26AWG	EOL [HVM]
N/A	200GE	980-9I54H-00V00A	MCP1650-V00AE30	NVIDIA Passive Copper cable, 200GbE, 200Gb/s, QSFP56, LSZH, 0.5m, black pulltab, 30AWG	LTB [HVM]
N/A	200GE	980-9I54I-00V01A	MCP1650-V01AE30	NVIDIA Passive Copper cable, 200GbE, 200Gb/s, QSFP56, LSZH, 1.5m, black pulltab, 30AWG	LTB [HVM]
N/A	200GE	980-9I54L-00V02A	MCP1650-V02AE26	NVIDIA Passive Copper cable, 200GbE, 200Gb/s, QSFP56, LSZH, 2.5m, black pulltab, 26AWG	LTB [HVM]
HDR	200GE	980-9I39E-00H001	MCP7H50-H001R30	Nvidia Passive copper splitter cable, 200Gbps to 2x100Gbps, QSFP56 to 2xQSFP56, 1m	HVM
HDR	200GE	980-9I99F-00H002	MCP7H50-H002R26	Nvidia Passive copper splitter cable, 200Gbps to 2x100Gbps, QSFP56 to 2xQSFP56, 2m	HVM
HDR	200GE	980-9I98G-00H01A	MCP7H50-H01AR30	Nvidia Passive copper splitter cable, 200Gbps to 2x100Gbps, QSFP56 to 2xQSFP56, 1.5m	HVM
N/A	200GE	980-9I98H-00V001	MCP7H50-V001R30	NVIDIA passive copper hybrid cable, 200GbE 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56, colored, 1m, 30AWG	LTB [HVM]

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	200GE	980-9I98I-00V002	MCP7H50-V002R26	NVIDIA passive copper hybrid cable, 200GbE 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56, colored, 2m, 26AWG	LTB [HVM]
N/A	200GE	980-9I98J-00V003	MCP7H50-V003R26	NVIDIA passive copper hybrid cable, 200GbE 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56, colored, 3m, 26AWG	EOL [HVM]
N/A	200GE	980-9I98K-00V01A	MCP7H50-V01AR30	NVIDIA passive copper hybrid cable, 200GbE 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56, colored, 1.5m, 30AWG	EOL [HVM]
N/A	200GE	980-9I98M-00V02A	MCP7H50-V02AR26	NVIDIA passive copper hybrid cable, 200GbE 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56, colored, 2.5m, 26AWG	LTB [HVM]
N/A	200GE	980-9I98O-00V002	MCP7H60-C002	NVIDIA DAC splitter cable, 200GbE, 200Gb/s to 2x100Gb/s, QSFP-DD to 2xQSFP28, colored pulltabs, 2m	EOL [P-Rel]
N/A	200GE	980-9IA3P-00V003	MCP7H60-C003	NVIDIA DAC splitter cable, 200GbE, 200Gb/s to 2x100Gb/s, QSFP-DD to 2xQSFP28, colored pulltabs, 3m	EOL [P-Rel]
N/A	200GE	980-9IA3X-00V001	MCP7H70-V001R30	NVIDIA passive copper hybrid cable, 200GbE 200Gb/s to 4x50Gb/s, QSFP56 to 4xSFP56, colored, 1m, 30AWG	EOL [P-Rel]
N/A	200GE	980-9IA3Y-00V002	MCP7H70-V002R26	NVIDIA passive copper hybrid cable, 200GbE 200Gb/s to 4x50Gb/s, QSFP56 to 4xSFP56, colored, 2m, 26AWG	EOL [P-Rel]
N/A	200GE	980-9I43Z-00V003	MCP7H70-V003R26	NVIDIA passive copper hybrid cable, 200GbE 200Gb/s to 4x50Gb/s, QSFP56 to 4x4SFP56, colored, 3m, 26AWG	EOL [P-Rel]
N/A	200GE	980-9I430-00V01A	MCP7H70-V01AR30	NVIDIA passive copper hybrid cable, 200GbE 200Gb/s to 4x50Gb/s, QSFP56 to 4xSFP56, colored, 1.5m, 30AWG	EOL [P-Rel]

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	200GE	980-9I431-00V02A	MCP7H70-V02AR26	NVIDIA passive copper hybrid cable, 200GbE 200Gb/s to4x50Gb/s, QSFP56 to 4xSFP56, colored, 2.5m, 26AWG	EOL [P-Rel]
HDR	200GE	980-9I46K-00H001	MCP7Y60-H001	NVIDIA passive copper splitter cable, 400(2x200)Gbps to 2x200Gbps, OSFP to 2xQSFP56, 1m, fin to flat	MP
HDR	200GE	980-9I46L-00H002	MCP7Y60-H002	NVIDIA passive copper splitter cable, 400(2x200)Gbps to 2x200Gbps, OSFP to 2xQSFP56, 2m, fin to flat	MP
HDR	200GE	980-9I93M-00H01A	MCP7Y60-H01A	NVIDIA passive copper splitter cable, 400(2x200)Gbps to 2x200Gbps, OSFP to 2xQSFP56, 1.5m, fin to flat	MP
HDR	200GE	980-9I93N-00H001	MCP7Y70-H001	NVIDIA passive copper splitter cable, 400(2x200)Gbps to 4x100Gbps, OSFP to 4xQSFP56, 1m, fin to flat	MP
HDR	200GE	980-9I93O-00H002	MCP7Y70-H002	NVIDIA passive copper splitter cable, 400(2x200)Gbps to 4x100Gbps, OSFP to 4xQSFP56, 2m, fin to flat	MP
HDR	200GE	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	N/A	980-9I41X-00H003	MFA7U10-H003	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 3m	P-Rel
HDR	N/A	980-9I11Z-00H005	MFA7U10-H005	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 5m	P-Rel
HDR	N/A	980-9I111-00H010	MFA7U10-H010	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 10m	P-Rel
HDR	N/A	980-9I113-00H015	MFA7U10-H015	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 15m	P-Rel

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
HDR	N/A	980-9I115-00H020	MFA7U10-H020	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 20m	P-Rel
HDR	N/A	980-9I117-00H030	MFA7U10-H030	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 30m	P-Rel
HDR	N/A	980-9I124-00H003	MFS1S00-H003E	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 3m	EOL [HVM]
HDR	200GE	980-9I457-00H003	MFS1S00-H003V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 3m	MP
HDR	N/A	980-9I45A-00H005	MFS1S00-H005E	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 5m	EOL [HVM]
HDR	200GE	980-9I45D-00H005	MFS1S00-H005V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 5m	MP
HDR	N/A	980-9I45G-00H010	MFS1S00-H010E	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 10m	EOL [HVM]
HDR	200GE	980-9I45J-00H010	MFS1S00-H010V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 10m	MP
HDR	N/A	980-9I45M-00H015	MFS1S00-H015E	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 15m	EOL [HVM]
HDR	200GE	980-9I45O-00H015	MFS1S00-H015V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 15m	MP
HDR	N/A	980-9I45R-00H020	MFS1S00-H020E	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 20m	EOL [HVM]
HDR	200GE	980-9I45T-00H020	MFS1S00-H020V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 20m	MP
HDR	N/A	980-9I45Y-00H030	MFS1S00-H030E	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 30m	EOL [HVM]
HDR	200GE	980-9I440-00H030	MFS1S00-H030V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 30m	MP

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
HDR	N/A	980-9I455-00H050	MFS1S00-H050E	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 50m	EOL [HVM]
HDR	200GE	980-9I447-00H050	MFS1S00-H050V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 50m	MP
HDR	N/A	980-9I44G-00H100	MFS1S00-H100E	NVIDIA active fiber cable, IB HDR, up to 200Gb/s, QSFP56, LSZH, black pulltab, 100m	EOL [HVM]
HDR	200GE	980-9I44H-00H100	MFS1S00-H100V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 100m	MP
HDR	200GE	980-9I44K-00H130	MFS1S00-H130V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 130m	MP
HDR	200GE	980-9I44N-00H150	MFS1S00-H150V	Nvidia active optical cable, up to 200Gbps , QSFP56 to QSFP56, 150m	MP
N/A	200GE	980-9I44P-00V003	MFS1S00-V003E	NVIDIA active fiber cable, 200GbE, 200Gb/s, QSFP56, LSZH, black pulltab, 3m	LTB [HVM]
N/A	200GE	980-9I45Q-00V005	MFS1S00-V005E	NVIDIA active fiber cable, 200GbE, 200Gb/s, QSFP56, LSZH, black pulltab, 5m	LTB [HVM]
N/A	200GE	980-9I45R-00V010	MFS1S00-V010E	NVIDIA active fiber cable, 200GbE, 200Gb/s, QSFP56, LSZH, black pulltab, 10m	LTB [HVM]
N/A	200GE	980-9I44S-00V015	MFS1S00-V015E	NVIDIA active fiber cable, 200GbE, 200Gb/s, QSFP56, LSZH, black pulltab, 15m	LTB [HVM]
N/A	200GE	980-9I44T-00V020	MFS1S00-V020E	NVIDIA active fiber cable, 200GbE, 200Gb/s, QSFP56, LSZH, black pulltab, 20m	LTB [HVM]
N/A	200GE	980-9I44U-00V030	MFS1S00-V030E	NVIDIA active fiber cable, 200GbE, 200Gb/s, QSFP56, LSZH, black pulltab, 30m	LTB [HVM]
N/A	200GE	980-9I44V-00V050	MFS1S00-V050E	NVIDIA active fiber cable, 200GbE, 200Gb/s, QSFP56, LSZH, black pulltab, 50m	LTB [HVM]
N/A	200GE	980-9I44W-00V100	MFS1S00-V100E	NVIDIA active fiber cable, 200GbE, 200Gb/s, QSFP56, LSZH, black pulltab, 100m	EOL [HVM] [HIBERN/ATE]
HDR	N/A	980-9I452-00H003	MFS1S50-H003E	NVIDIA active fiber splitter cable, IB HDR, 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56 , LSZH, 3m	EOL [HVM]

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
HDR	200GE	980-9I445-00H003	MFS1S50-H003V	Nvidia active optical splitter cable, 200Gbps to 2x100Gbps , QSFP56 to 2x QSFP56, 3m	HVM
HDR	N/A	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	200GE	980-9I969-00H005	MFS1S50-H005V	Nvidia active optical splitter cable, 200Gbps to 2x100Gbps , QSFP56 to 2x QSFP56, 5m	HVM
HDR	N/A	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	200GE	980-9I96D-00H010	MFS1S50-H010V	Nvidia active optical splitter cable, 200Gbps to 2x100Gbps , QSFP56 to 2x QSFP56, 10m	HVM
HDR	N/A	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	200GE	980-9I96H-00H015	MFS1S50-H015V	Nvidia active optical splitter cable, 200Gbps to 2x100Gbps , QSFP56 to 2x QSFP56, 15m	HVM
HDR	N/A	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	200GE	980-9I96L-00H020	MFS1S50-H020V	Nvidia active optical splitter cable, 200Gbps to 2x100Gbps , QSFP56 to 2x QSFP56, 20m	HVM
HDR	N/A	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	200GE	980-9I96P-00H030	MFS1S50-H030V	Nvidia active optical splitter cable, 200Gbps to 2x100Gbps , QSFP56 to 2x QSFP56, 30m	HVM
N/A	200GE	980-9I95Q-00V003	MFS1S50-V003E	NVIDIA active fiber splitter cable, 200GbE, 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56, LSZH, black pulltab, 3m	EOL [HVM]

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	200GE	980-9I96R-00V005	MFS1S50-V005E	NVIDIA active fiber splitter cable, 200GbE, 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56, LSZH, black pulltab, 5m	EOL [HVM]
N/A	200GE	980-9I96S-00V010	MFS1S50-V010E	NVIDIA active fiber splitter cable, 200GbE, 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56, LSZH, black pulltab, 10m	EOL [HVM]
N/A	200GE	980-9I96T-00V015	MFS1S50-V015E	NVIDIA active fiber splitter cable, 200GbE, 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56, LSZH, black pulltab, 15m	EOL [HVM]
N/A	200GE	980-9I95U-00V020	MFS1S50-V020E	NVIDIA active fiber splitter cable, 200GbE, 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56, LSZH, black pulltab, 20m	EOL [HVM]
N/A	200GE	980-9I95V-00V030	MFS1S50-V030E	NVIDIA active fiber splitter cable, 200GbE, 200Gb/s to 2x100Gb/s, QSFP56 to 2xQSFP56, LSZH, black pulltab, 30m	EOL [HVM]
HDR	N/A	980-9I17S-00HS00	MMA1T00-HS	NVIDIA transceiver, HDR, QSFP56, MPO, 850nm, SR4, up to 100m	HVM
N/A	200GE	980-9I20T-00V000	MMA1T00-VS	NVIDIA transceiver, 200GbE, up to 200Gb/s, QSFP56, MPO, 850nm, SR4, up to 100m	HVM
HDR	N/A	980-9I055-00H000	MMS1W50-HM	NVIDIA transceiver, IB HDR, up to 200Gb/s, QSFP56, LC-LC, 1310nm, FR4	MP
HDR	N/A	980-9I41X-00H003	MFA7U10-H003	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 3m	P-Rel
HDR	N/A	980-9I11Z-00H005	MFA7U10-H005	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 5m	P-Rel
HDR	N/A	980-9I111-00H010	MFA7U10-H010	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 10m	P-Rel
HDR	N/A	980-9I113-00H015	MFA7U10-H015	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 15m	P-Rel

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
HDR	N/A	980-9I115-00H020	MFA7U10-H020	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 20m	P-Rel
HDR	N/A	980-9I117-00H030	MFA7U10-H030	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 30m	P-Rel
HDR	N/A	980-9I11V-00H050	MFA7U10-H050	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 50m	Prototype
HDR	NA	980-9I45E-09H070	MFS1S00-H070V	NVIDIA active optical cable, up to 200Gb/s IB HDR, QSFP56, LSZH, 70m	MP
HDR	NA	980-9I41Y-00H003	MFA7U10-H003-FLT	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 3m, flat top	P-Rel
HDR	NA	980-9I110-00H005	MFA7U10-H005-FLT	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 5m, flat top	P-Rel
HDR	NA	980-9I112-00H010	MFA7U10-H010-FLT	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 10m, flat top	P-Rel
HDR	NA	980-9I114-00H015	MFA7U10-H015-FLT	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 15m, flat top	P-Rel
HDR	NA	980-9I116-00H020	MFA7U10-H020-FLT	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 20m, flat top	P-Rel
HDR	NA	980-9I118-00H030	MFA7U10-H030-FLT	NVIDIA AOC splitter, IB twin port HDR, 400Gb/s to 2x200Gb/s, OSFP to 2xQSFP56, 30m, flat top	P-Rel

8.1.5 HDR100 Cables

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
HDR100	NA	980-9I41Z-00H003	MFA7U40-H003	NVIDIA AOC splitter, 200(2x100)Gbps to 2x100Gbps, OSFP to 2xQSFP56, 3m, fin to flat	P-Rel

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
HDR100	NA	980-9I111-00H005	MFA7U40-H005	NVIDIA AOC splitter, 200(2x100)Gbps to 2x100Gbps, OSFP to 2xQSFP56, 5m, fin to flat	P-Rel
HDR100	NA	980-9I113-00H010	MFA7U40-H010	NVIDIA AOC splitter, 200(2x100)Gbps to 2x100Gbps, OSFP to 2xQSFP56, 10m, fin to flat	P-Rel
HDR100	NA	980-9I115-00H015	MFA7U40-H015	NVIDIA AOC splitter, 200(2x100)Gbps to 2x100Gbps, OSFP to 2xQSFP56, 15m, fin to flat	P-Rel
HDR100	NA	980-9I117-00H020	MFA7U40-H020	NVIDIA AOC splitter, 200(2x100)Gbps to 2x100Gbps, OSFP to 2xQSFP56, 20m, fin to flat	P-Rel
HDR100	NA	980-9I119-00H030	MFA7U40-H030	NVIDIA AOC splitter, 200(2x100)Gbps to 2x100Gbps, OSFP to 2xQSFP56, 30m, fin to flat	P-Rel

8.1.6 EDR / 100GbE Cables

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	100GE	980-9I90Z-00C000	FTLC9152RGPL	100Gb/s Transceiver, QSFP28, LC-LC, 850nm SWDM4 up to 100m Over Multi-Mode Fiber	EOL [MP]
N/A	100GE	980-9I62O-00C001	MCP1600-C001	NVIDIA Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP, PVC, 1m 30AWG	EOL [HVM]
N/A	100GE	980-9I620-00C001	MCP1600-C001E30N	NVIDIA Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP28, 1m, Black, 30AWG, CA-N	HVM
N/A	100GE	980-9I62S-00C001	MCP1600-C001LZ	NVIDIA Passive Copper Cable, ETH 100GbE, 100Gb/s, QSFP, 1m, LSZH, 30AWG	EOL [MP]
N/A	100GE	980-9I621-00C002	MCP1600-C002	NVIDIA Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP, PVC, 2m 30AWG	EOL [HVM]
N/A	100GE	980-9I622-00C002	MCP1600-C002E26N	NVIDIA® Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP28, 2m, Black, 26AWG, CA-N	Preliminary

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	100GE	980-9I62V-00C002	MCP1600-C002E30N	NVIDIA Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP28, 2m, Black, 30AWG, CA-N	HVM
N/A	100GE	980-9I62X-00C003	MCP1600-C003	NVIDIA Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP, PVC, 3m 28AWG	EOL [HVM]
N/A	100GE	980-9I62Z-00C003	MCP1600-C003E26N	NVIDIA Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP28, 3m, Black, 26AWG, CA-N	EOL [HVM]
N/A	100GE	980-9I620-00C003	MCP1600-C003E30L	NVIDIA Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP28, 3m, Black, 30AWG, CA-L	HVM
N/A	100GE	980-9I622-00C003	MCP1600-C003LZ	NVIDIA Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP, 3m, LSZH, 26AWG	EOL [MP]
N/A	100GE	980-9I625-00C005	MCP1600-C005E26L	NVIDIA Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP28, 5m, Black, 26AWG, CA-L	HVM
N/A	100GE	980-9I626-00C00A	MCP1600-C00A	NVIDIA Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP, PVC, 0.5m 30AWG	EOL [HVM]
N/A	100GE	980-9I627-00C00A	MCP1600-C00AE30N	NVIDIA Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP28, 0.5m, Black, 30AWG, CA-N	EOL [HVM]
N/A	100GE	980-9I629-00C00B	MCP1600-C00BE30N	NVIDIA Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP28, 0.75m, Black, 30AWG, CA-N	EOL [HVM]
N/A	100GE	980-9I62B-00C01A	MCP1600-C01A	NVIDIA Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP, PVC, 1.5m 30AWG	EOL [HVM]
N/A	100GE	980-9I62C-00C01A	MCP1600-C01AE30N	NVIDIA Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP28, 1.5m, Black, 30AWG, CA-N	HVM
N/A	100GE	980-9I62G-00C02A	MCP1600-C02A	NVIDIA Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP, PVC, 2.5m 30AWG	EOL [HVM]

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	100GE	980-9I62H-00C02A	MCP1600-C02AE26N	NVIDIA Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP28, 2.5m, Black, 26AWG, CA-N	EOL [HVM]
N/A	100GE	980-9I62I-00C02A	MCP1600-C02AE30L	NVIDIA Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP28,2.5m, Black, 30AWG, CA-L	HVM
N/A	100GE	980-9I62M-00C03A	MCP1600-C03A	NVIDIA Passive Copper cable, ETH 100GbE, 100Gb/s, QSFP, PVC, 3.5m 26AWG	EOL [P-Rel]
EDR	100GE	980-9I62P-00C001	MCP1600-E001	NVIDIA Passive Copper cable, IB EDR, up to 100Gb/s, QSFP, LSZH, 1m 30AWG	EOL [HVM]
EDR	N/A	980-9I62Q-00E001	MCP1600-E001E30	NVIDIA Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 1m, Black, 30AWG	HVM
EDR	100GE	980-9I62S-00C002	MCP1600-E002	NVIDIA Passive Copper cable, IB EDR, up to 100Gb/s, QSFP, LSZH, 2m 28AWG	EOL [HVM]
EDR	N/A	980-9I62T-00E002	MCP1600-E002E26	NVIDIA® Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 2m, Black, 26AWG	Preliminary
EDR	N/A	980-9I62U-00E002	MCP1600-E002E30	NVIDIA Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 2m, Black, 30AWG	HVM
EDR	100GE	980-9I62V-00C003	MCP1600-E003	NVIDIA Passive Copper cable, IB EDR, up to 100Gb/s, QSFP, LSZH, 3m 26AWG	EOL [HVM]
EDR	N/A	980-9I62W-00E003	MCP1600-E003E26	NVIDIA Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 3m, Black, 26AWG	HVM
EDR	N/A	980-9I62Y-00E004	MCP1600-E004E26	NVIDIA Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 4m, Black, 26AWG	EOL [HVM]
EDR	N/A	980-9I62Z-00E005	MCP1600-E005E26	NVIDIA Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 5m, Black, 26AWG	HVM

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
EDR	N/A	980-9I620-00E00A	MCP1600-E00A	NVIDIA Passive Copper cable, IB EDR, up to 100Gb/s, QSFP, LSZH, 0.5m 30AWG	EOL [HVM]
EDR	N/A	980-9I621-00E00A	MCP1600-E00AE30	NVIDIA Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 0.5m, Black, 30AWG	EOL [HVM]
EDR	N/A	980-9I622-00E00B	MCP1600-E00BE30	NVIDIA Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 0.75m, Black, 30AWG	EOL [HVM] [HIBERN/ATE]
EDR	100GE	980-9I623-00C01A	MCP1600-E01A	NVIDIA Passive Copper cable, IB EDR, up to 100Gb/s, QSFP, LSZH, 1.5m 30AWG	EOL [HVM]
EDR	N/A	980-9I624-00E01A	MCP1600-E01AE30	NVIDIA Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 1.5m, Black, 30AWG	HVM
EDR	N/A	980-9I625-00E01C	MCP1600-E01BE30	NVIDIA Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 1.25m, Black, 30AWG	EOL [HVM] [HIBERN/ATE]
EDR	100GE	980-9I626-00C02A	MCP1600-E02A	NVIDIA Passive Copper cable, IB EDR, up to 100Gb/s, QSFP, LSZH, 2.5m 26AWG	EOL [HVM]
EDR	N/A	980-9I627-00E02A	MCP1600-E02AE26	NVIDIA Passive Copper cable, IB EDR, up to 100Gb/s, QSFP28, 2.5m, Black, 26AWG	HVM
N/A	100GE	980-9I645-00C001	MCP7F00-A001R	NVIDIA passive copper hybrid cable, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, colored pulltabs, 1m, 30AWG	EOL [HVM]
N/A	100GE	980-9I486-00C001	MCP7F00-A001R30N	NVIDIA passive copper hybrid cable, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 1m, Colored, 30AWG, CA-N	LTB [HVM]
N/A	100GE	980-9I48A-00C002	MCP7F00-A002R	NVIDIA passive copper hybrid cable, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, colored pulltabs, 2m, 30AWG	EOL [HVM]

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	100GE	980-9I48B-00C002	MCP7F00-A002R30N	NVIDIA passive copper hybrid cable, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 2m, Colored, 30AWG, CA-N	LTB [HVM]
N/A	100GE	980-9I48G-00C003	MCP7F00-A003R26N	NVIDIA passive copper hybrid cable, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 3m, Colored, 26AWG, CA-N	EOL [HVM]
N/A	100GE	980-9I48H-00C003	MCP7F00-A003R30L	NVIDIA passive copper hybrid cable, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 3m, Colored, 30AWG, CA-L	LTB [HVM]
N/A	100GE	980-9I48J-00C005	MCP7F00-A005R26L	NVIDIA passive copper hybrid cable, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 5m, Colored, 26AWG, CA-L	LTB [HVM]
N/A	100GE	980-9I48M-00C01A	MCP7F00-A01AR	NVIDIA passive copper hybrid cable, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, colored pulltabs,1.5m, 30AWG	EOL [HVM]
N/A	100GE	980-9I48N-00C01A	MCP7F00-A01AR30N	NVIDIA passive copper hybrid cable, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 1.5m, Colored, 30AWG, CA-N	LTB [HVM]
N/A	100GE	980-9I48S-00C02A	MCP7F00-A02AR26N	NVIDIA passive copper hybrid cable, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 2.5m, Colored, 26AWG, CA-N	EOL [HVM]
N/A	100GE	980-9I48T-00C02A	MCP7F00-A02AR30L	NVIDIA passive copper hybrid cable, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 2.5m, Colored, 30AWG, CA-L	LTB [HVM]
N/A	100GE	980-9I48U-00C02A	MCP7F00-A02ARLZ	NVIDIA passive copper hybrid cable, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 2.5m, LSZH, Colored, 28AWG	EOL [P-Rel]
N/A	100GE	980-9I48X-00C03A	MCP7F00-A03AR26L	NVIDIA passive copper hybrid cable, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 3.5m, Colored, 26AWG, CA-L	EOL [HVM]

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	100GE	980-9I61C-00C005	MCP7H00-G00000	NVIDIA® passive copper hybrid cable, ETH 100Gb/s to 2x50Gb/s, QSFP28 to 2xQSFP28, 5m, Colored, 26AWG, CA-L	Preliminary
N/A	100GE	980-9I61D-00C001	MCP7H00-G001	NVIDIA passive copper hybrid cable, ETH 100Gb/s to 2x50Gb/s, QSFP28 to 2xQSFP28, 1m, 30AWG	EOL [HVM]
N/A	100GE	980-9I99F-00C001	MCP7H00-G001R	NVIDIA passive copper hybrid cable, ETH 100Gb/s to 2x50Gb/s, QSFP28 to 2xQSFP28, colored pulltabs, 1m, 30AWG	EOL [HVM]
N/A	100GE	980-9I99G-00C001	MCP7H00-G001R30N	NVIDIA passive copper hybrid cable, ETH 100Gb/s to 2x50Gb/s, QSFP28 to 2xQSFP28, 1m, Colored, 30AWG, CA-N	LTB [HVM]
N/A	100GE	980-9I99J-00C002	MCP7H00-G002R	NVIDIA passive copper hybrid cable, ETH 100Gb/s to 2x50Gb/s, QSFP28 to 2xQSFP28, colored pulltabs, 2m, 30AWG	EOL [HVM]
N/A	100GE	980-9I99K-00C002	MCP7H00-G002R26N	NVIDIA® passive copper hybrid cable, ETH 100Gb/s to 2x50Gb/s, QSFP28 to 2xQSFP28, 2m, Colored, 26AWG, CA-N	Preliminary
N/A	100GE	980-9I99L-00C002	MCP7H00-G002R30N	NVIDIA passive copper hybrid cable, ETH 100Gb/s to 2x50Gb/s, QSFP28 to 2xQSFP28, 2m, Colored, 30AWG, CA-N	LTB [HVM]
N/A	100GE	980-9I99O-00C003	MCP7H00-G003R	NVIDIA passive copper hybrid cable, ETH 100Gb/s to 2x50Gb/s, QSFP28 to 2xQSFP28, colored pulltabs, 3m, 28AWG	EOL [HVM]
N/A	100GE	980-9I99Q-00C003	MCP7H00-G003R26N	NVIDIA passive copper hybrid cable, ETH 100Gb/s to 2x50Gb/s, QSFP28 to 2xQSFP28, 3m, Colored, 26AWG, CA-N	EOL [HVM]
N/A	100GE	980-9I39R-00C003	MCP7H00-G003R30L	NVIDIA passive copper hybrid cable, ETH 100Gb/s to 2x50Gb/s, QSFP28 to 2xQSFP28, 3m, Colored, 30AWG, CA-L	LTB [HVM]

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	100GE	980-9I99S-00C004	MCP7H00-G004R26L	NVIDIA passive copper hybrid cable, ETH 100Gb/s to 2x50Gb/s, QSFP28 to 2xQSFP28, 4m, Colored, 26AWG, CA-L	EOL [HVM]
N/A	100GE	980-9I99W-00C01A	MCP7H00-G01AR	NVIDIA passive copper hybrid cable, ETH 100Gb/s to 2x50Gb/s, QSFP28 to 2xQSFP28, colored pulltabs, 1.5m, 30AWG	EOL [HVM]
N/A	100GE	980-9I99X-00C01A	MCP7H00-G01AR30N	NVIDIA passive copper hybrid cable, ETH 100Gb/s to 2x50Gb/s, QSFP28 to 2xQSFP28, 1.5m, Colored, 30AWG, CA-N	LTB [HVM]
N/A	100GE	980-9I992-00C02A	MCP7H00-G02AR	NVIDIA passive copper hybrid cable, ETH 100Gb/s to 2x50Gb/s, QSFP28 to 2xQSFP28, colored pulltabs, 2.5m, 30AWG	EOL [HVM]
N/A	100GE	980-9I994-00C02A	MCP7H00-G02AR26N	NVIDIA passive copper hybrid cable, ETH 100Gb/s to 2x50Gb/s, QSFP28 to 2xQSFP28, 2.5m, Colored, 26AWG, CA-N	EOL [HVM]
N/A	100GE	980-9I395-00C02A	MCP7H00-G02AR30L	NVIDIA passive copper hybrid cable, ETH 100Gb/s to 2x50Gb/s, QSFP28 to 2xQSFP28, 2.5m, Colored, 30AWG, CA-L	LTB [HVM]
N/A	100GE	980-9I13S-00C003	MFA1A00-C003	NVIDIA active fiber cable, ETH 100GbE, 100Gb/s, QSFP, LSZH, 3m	HVM
N/A	100GE	980-9I13X-00C005	MFA1A00-C005	NVIDIA active fiber cable, ETH 100GbE, 100Gb/s, QSFP, LSZH, 5m	HVM
N/A	100GE	980-9I134-00C010	MFA1A00-C010	NVIDIA active fiber cable, ETH 100GbE, 100Gb/s, QSFP, LSZH, 10m	HVM
N/A	100GE	980-9I13A-00C015	MFA1A00-C015	NVIDIA active fiber cable, ETH 100GbE, 100Gb/s, QSFP, LSZH, 15m	HVM
N/A	100GE	980-9I13F-00C020	MFA1A00-C020	NVIDIA active fiber cable, ETH 100GbE, 100Gb/s, QSFP, LSZH, 20m	HVM
N/A	100GE	980-9I13N-00C030	MFA1A00-C030	NVIDIA active fiber cable, ETH 100GbE, 100Gb/s, QSFP, LSZH, 30m	HVM

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	100GE	980-9I130-00C050	MFA1A00-C050	NVIDIA active fiber cable, ETH 100GbE, 100Gb/s, QSFP, LSZH, 50m	HVM
N/A	100GE	980-9I13B-00C100	MFA1A00-C100	NVIDIA active fiber cable, ETH 100GbE, 100Gb/s, QSFP, LSZH, 100m	LTB [HVM]
EDR	N/A	980-9I13D-00E001	MFA1A00-E001	NVIDIA active fiber cable, IB EDR, up to 100Gb/s, QSFP, LSZH, 1m	HVM
EDR	N/A	980-9I13F-00E003	MFA1A00-E003	NVIDIA active fiber cable, IB EDR, up to 100Gb/s, QSFP, LSZH, 3m	HVM
EDR	N/A	980-9I13J-00E005	MFA1A00-E005	NVIDIA active fiber cable, IB EDR, up to 100Gb/s, QSFP, LSZH, 5m	HVM
EDR	N/A	980-9I13M-00E007	MFA1A00-E007	NVIDIA active fiber cable, IB EDR, up to 100Gb/s, QSFP, LSZH, 7m	LTB [HVM]
EDR	N/A	980-9I13O-00E010	MFA1A00-E010	NVIDIA active fiber cable, IB EDR, up to 100Gb/s, QSFP, LSZH, 10m	HVM
EDR	N/A	980-9I13R-00E010	MFA1A00-E010_FF	NVIDIA active fiber cable, IB EDR, up to 100Gb/s, QSFP, LSZH, 10m	EOL [HVM] [HIBERN/ATE]
EDR	N/A	980-9I13S-00E015	MFA1A00-E015	NVIDIA active fiber cable, IB EDR, up to 100Gb/s, QSFP, LSZH, 15m	HVM
EDR	N/A	980-9I13V-00E020	MFA1A00-E020	NVIDIA active fiber cable, IB EDR, up to 100Gb/s, QSFP, LSZH, 20m	HVM
EDR	N/A	980-9I13Y-00E030	MFA1A00-E030	NVIDIA active fiber cable, IB EDR, up to 100Gb/s, QSFP, LSZH, 30m	HVM
EDR	N/A	980-9I133-00E050	MFA1A00-E050	NVIDIA active fiber cable, IB EDR, up to 100Gb/s, QSFP, LSZH, 50m	HVM
EDR	N/A	980-9I135-00E100	MFA1A00-E100	NVIDIA active fiber cable, IB EDR, up to 100Gb/s, QSFP, LSZH, 100m	LTB [HVM]
N/A	100GE	980-9I37H-00C003	MFA7A20-C003	NVIDIA active fiber hybrid solution, ETH 100GbE to 2x50GbE, QSFP28 to 2xQSFP28, 3m	EOL [HVM]
N/A	100GE	980-9I37I-00C005	MFA7A20-C005	NVIDIA active fiber hybrid solution, ETH 100GbE to 2x50GbE, QSFP28 to 2xQSFP28, 5m	EOL [HVM]

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	100GE	980-9I40J-00C010	MFA7A20-C010	NVIDIA active fiber hybrid solution, ETH 100GbE to 2x50GbE, QSFP28 to 2xQSFP28, 10m	EOL [HVM]
N/A	100GE	980-9I40K-00C020	MFA7A20-C020	NVIDIA active fiber hybrid solution, ETH 100GbE to 2x50GbE, QSFP28 to 2xQSFP28, 20m	EOL [HVM]
N/A	100GE	980-9I40L-00C002	MFA7A20-C02A	NVIDIA® active fiber hybrid solution, ETH 100GbE to 2x50GbE, QSFP28 to 2xQSFP28, 2.5m	Preliminary
N/A	100GE	980-9I40M-00C003	MFA7A20-C03A	NVIDIA® active fiber hybrid solution, ETH 100GbE to 2x50GbE, QSFP28 to 2xQSFP28, 3.5m	Preliminary
N/A	100GE	980-9I40N-00C003	MFA7A50-C003	NVIDIA active fiber hybrid solution, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 3m	EOL [HVM]
N/A	100GE	980-9I40O-00C005	MFA7A50-C005	NVIDIA active fiber hybrid solution, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 5m	EOL [HVM]
N/A	100GE	980-9I49P-00C010	MFA7A50-C010	NVIDIA active fiber hybrid solution, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 10m	EOL [HVM]
N/A	100GE	980-9I49Q-00C015	MFA7A50-C015	NVIDIA active fiber hybrid solution, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 15m	EOL [HVM]
N/A	100GE	980-9I49R-00C020	MFA7A50-C020	NVIDIA active fiber hybrid solution, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 20m	EOL [HVM]
N/A	100GE	980-9I49S-00C030	MFA7A50-C030	NVIDIA active fiber hybrid solution, ETH 100GbE to 4x25GbE, QSFP28 to 4xSFP28, 30m	EOL [HVM]
N/A	100GE	980-9I149-00CS00	MMA1B00-C100D	NVIDIA transceiver, 100GbE, QSFP28, MPO, 850nm, SR4, up to 100m, DDMI	HVM
N/A	100GE	980-9I17D-00CS00	MMA1B00-C100T	NVIDIA® transceiver, 100GbE, QSFP28, MPO, 850nm, up to 100m, OTU4	Preliminary

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
EDR	N/A	980-9I17L-00E000	MMA1B00-E100	NVIDIA transceiver, IB EDR, up to 100Gb/s, QSFP28, MPO, 850nm, SR4, up to 100m	HVM
N/A	100GE	980-9I17P-00CR00	MMA1L10-CR	NVIDIA optical transceiver, 100GbE, 100Gb/s, QSFP28, LC-LC, 1310nm, LR4 up to 10km	HVM
N/A	100GE	980-9I17Q-00CM00	MMA1L30-CM	NVIDIA optical module, 100GbE, 100Gb/s, QSFP28, LC-LC, 1310nm, CWDM4, up to 2km	MP
N/A	100GE	980-9I16X-00C000	MMS1C10-CM	NVIDIA active optical module, 100Gb/s, QSFP, MPO, 1310nm, PSM4, up to 500m	EOL [MP]
N/A	100GE	980-9I042-00C000	MMS1V70-CM	NVIDIA transceiver, 100GbE, QSFP28, LC-LC, 1310nm, DR1	P-Rel
N/A	100GE	980-9I53X-00C000	SPQ-CE-ER-CDFL-M	40km 100G QSFP28 ER Optical Transceiver	P-Rel
N/A	100GE	980-9I63F-00CM00	X65406	NVIDIA® optical module, 100GbE, 100Gb/s, QSFP28, LC-LC, 1310nm, CWDM4, up to 2km	Preliminary

⚠ EDR links raise with RS-FEC.

8.1.7 FDR / 56GbE Cables

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
FDR	56GE	980-9I679-00L004	MC2207126-004	NVIDIA passive copper cable, VPI, up to 56Gb/s, QSFP, 4m	EOL [HVM]
FDR	56GE	980-9I67A-00L003	MC2207128-003	NVIDIA passive copper cable, VPI, up to 56Gb/s, QSFP, 3m	EOL [HVM]
FDR	56GE	980-9I67C-00L02A	MC2207128-0A2	NVIDIA passive copper cable, VPI, up to 56Gb/s, QSFP, 2.5m	EOL [MP]
FDR	56GE	980-9I67D-00L001	MC2207130-001	NVIDIA passive copper cable, VPI, up to 56Gb/s, QSFP, 1m	EOL [HVM]

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
FDR	56GE	980-9I67E-00L002	MC2207130-002	NVIDIA passive copper cable, VPI, up to 56Gb/s, QSFP, 2m	EOL [HVM]
FDR	56GE	980-9I67F-00L00A	MC2207130-00A	NVIDIA passive copper cable, VPI, up to 56Gb/s, QSFP, 0.5m	EOL [HVM]
FDR	56GE	980-9I67G-00L01A	MC2207130-0A1	NVIDIA passive copper cable, VPI, up to 56Gb/s, QSFP, 1.5m	EOL [HVM]
FDR	56GE	980-9I15U-00L003	MC220731V-003	NVIDIA active fiber cable, VPI, up to 56Gb/s, QSFP, 3m	EOL [HVM]
FDR	56GE	980-9I15V-00L005	MC220731V-005	NVIDIA active fiber cable, VPI, up to 56Gb/s, QSFP, 5m	EOL [HVM]
FDR	56GE	980-9I15W-00L010	MC220731V-010	NVIDIA active fiber cable, VPI, up to 56Gb/s, QSFP, 10m	EOL [HVM]
FDR	56GE	980-9I15X-00L015	MC220731V-015	NVIDIA active fiber cable, VPI, up to 56Gb/s, QSFP, 15m	EOL [HVM]
FDR	56GE	980-9I15Y-00L020	MC220731V-020	NVIDIA active fiber cable, VPI, up to 56Gb/s, QSFP, 20m	EOL [HVM]
FDR	56GE	980-9I15Z-00L025	MC220731V-025	NVIDIA active fiber cable, VPI, up to 56Gb/s, QSFP, 25m	EOL [HVM]
FDR	56GE	980-9I150-00L030	MC220731V-030	NVIDIA active fiber cable, VPI, up to 56Gb/s, QSFP, 30m	EOL [HVM]
FDR	56GE	980-9I151-00L040	MC220731V-040	NVIDIA active fiber cable, VPI, up to 56Gb/s, QSFP, 40m	EOL [HVM] [HIBERN/ATE]
FDR	56GE	980-9I152-00L050	MC220731V-050	NVIDIA active fiber cable, VPI, up to 56Gb/s, QSFP, 50m	EOL [HVM]
FDR	56GE	980-9I153-00L075	MC220731V-075	NVIDIA active fiber cable, VPI, up to 56Gb/s, QSFP, 75m	EOL [HVM]
FDR	56GE	980-9I154-00L100	MC220731V-100	NVIDIA active fiber cable, VPI, up to 56Gb/s, QSFP, 100m	EOL [HVM]
FDR	56GE	980-9I675-00L001	MCP170L-F001	NVIDIA passive copper cable, VPI, up to 56Gb/s, QSFP, LSZH, 1m	EOL [P-Rel]
FDR	56GE	980-9I678-00L00A	MCP170L-F00A	NVIDIA passive copper cable, VPI, up to 56Gb/s, QSFP, LSZH, 0.5m	EOL [P-Rel]

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
FDR	56GE	980-9I679-00L01A	MCP170L-F01A	NVIDIA passive copper cable, VPI, up to 56Gb/s, QSFP, LSZH, 1.5m	EOL [P-Rel] [HIBERN/ATE]

8.1.8 50GbE Cables

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	50GE	980-9I79O-00G000	MAM1Q00A-QSA56	NVIDIA cable module, ETH 50GbE, 200Gb/s to 50Gb/s, QSFP56 to SFP56	EOL [POR]
N/A	50GE	980-9I873-00G001	MCP2M50-G001E30	NVIDIA Passive Copper cable, 50GbE, 50Gb/s, SFP56, LSZH, 1m, black pulltab, 30AWG	EOL [P-Rel]
N/A	50GE	980-9I874-00G002	MCP2M50-G002E26	NVIDIA Passive Copper cable, 50GbE, 50Gb/s, SFP56, LSZH, 2m, black pulltab, 26AWG	EOL [P-Rel]
N/A	50GE	980-9I875-00G003	MCP2M50-G003E26	NVIDIA Passive Copper cable, 50GbE, 50Gb/s, SFP56, LSZH, 3m, black pulltab, 26AWG	EOL [P-Rel]
N/A	50GE	980-9I876-00G00A	MCP2M50-G00AE30	NVIDIA Passive Copper cable, 50GbE, 50Gb/s, SFP56, LSZH, 0.5m, black pulltab, 30AWG	EOL [P-Rel]
N/A	50GE	980-9I877-00G01A	MCP2M50-G01AE30	NVIDIA Passive Copper cable, 50GbE, 50Gb/s, SFP56, LSZH, 1.5m, black pulltab, 30AWG	EOL [P-Rel]
N/A	50GE	980-9I878-00G02A	MCP2M50-G02AE26	NVIDIA Passive Copper cable, 50GbE, 50Gb/s, SFP56, LSZH, 2.5m, black pulltab, 26AWG	EOL [P-Rel]

8.1.9 40GbE Cables

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
NA	40GE	980-9I72H-00B010	MCA7J70-C003	NVIDIA passive fiber hybrid cable, MPO to 8xLC, 10m	Preliminary

8.1.10 25GbE Cables

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	25GE	980-9I78I-00A000	MAM1Q00A-QSA28	NVIDIA cable module, ETH 25GbE, 100Gb/s to 25Gb/s, QSFP28 to SFP28	HVM
N/A	25GE	980-9I63J-00A001	MCP2M00-A001	NVIDIA Passive Copper cable, ETH, up to 25Gb/s, SFP28, 1m, 30AWG	EOL [HVM]
N/A	25GE	980-9I63L-00A001	MCP2M00-A001E30N	NVIDIA Passive Copper cable, ETH, up to 25Gb/s, SFP28, 1m, Black, 30AWG, CA-N	LTB [HVM]
N/A	25GE	980-9I63M-00A002	MCP2M00-A002	NVIDIA Passive Copper cable, ETH, up to 25Gb/s, SFP28, 2m, 30AWG	EOL [HVM]
N/A	25GE	980-9I63N-00A002	MCP2M00-A002E26N	NVIDIA® Passive Copper cable, ETH, up to 25Gb/s, SFP28, 2m, Black, 26AWG, CA-N	Preliminary
N/A	25GE	980-9I63O-00A002	MCP2M00-A002E30N	NVIDIA Passive Copper cable, ETH, up to 25Gb/s, SFP28, 2m, Black, 30AWG, CA-N	LTB [HVM]
N/A	25GE	980-9I63R-00A003	MCP2M00-A003E26N	NVIDIA Passive Copper cable, ETH, up to 25Gb/s, SFP28, 3m, Black, 26AWG, CA-N	EOL [HVM]
N/A	25GE	980-9I63S-00A003	MCP2M00-A003E30L	NVIDIA Passive Copper cable, ETH, up to 25Gb/s, SFP28, 3m, Black, 30AWG, CA-L	LTB [HVM]
N/A	25GE	980-9I63T-00A004	MCP2M00-A004E26L	NVIDIA Passive Copper cable, ETH, up to 25Gb/s, SFP28, 4m, Black, 26AWG, CA-L	EOL [HVM]
N/A	25GE	980-9I63V-00A005	MCP2M00-A005E26L	NVIDIA Passive Copper cable, ETH, up to 25Gb/s, SFP28, 5m, Black, 26AWG, CA-L	LTB [HVM]
N/A	25GE	980-9I63W-00A00A	MCP2M00-A00A	NVIDIA Passive Copper cable, ETH, up to 25Gb/s, SFP28, 0.5m, 30AWG	EOL [HVM]
N/A	25GE	980-9I63X-00A00A	MCP2M00-A00AE30N	NVIDIA Passive Copper cable, ETH, up to 25Gb/s, SFP28, 0.5m, Black, 30AWG, CA-N	EOL [HVM]

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	25GE	980-9I63Z-00A01A	MCP2M00-A01AE30N	NVIDIA Passive Copper cable, ETH, up to 25Gb/s, SFP28, 1.5m, Black, 30AWG, CA-N	LTB [HVM]
N/A	25GE	980-9I631-00A02A	MCP2M00-A02AE26N	NVIDIA Passive Copper cable, ETH, up to 25Gb/s, SFP28, 2.5m, Black, 26AWG, CA-N	EOL [HVM]
N/A	25GE	980-9I632-00A02A	MCP2M00-A02AE30L	NVIDIA Passive Copper cable, ETH, up to 25Gb/s, SFP28, 2.5m, Black, 30AWG, CA-L	LTB [HVM]
N/A	25GE	980-9IA1T-00A003	MFA2P10-A003	NVIDIA active optical cable 25GbE, SFP28, 3m	EOL [HVM]
N/A	25GE	980-9I53W-00A005	MFA2P10-A005	NVIDIA active optical cable 25GbE, SFP28, 5m	EOL [HVM]
N/A	25GE	980-9I53Z-00A007	MFA2P10-A007	NVIDIA active optical cable 25GbE, SFP28, 7m	EOL [HVM]
N/A	25GE	980-9I532-00A010	MFA2P10-A010	NVIDIA active optical cable 25GbE, SFP28, 10m	EOL [HVM]
N/A	25GE	980-9I535-00A015	MFA2P10-A015	NVIDIA active optical cable 25GbE, SFP28, 15m	EOL [HVM]
N/A	25GE	980-9I536-00A020	MFA2P10-A020	NVIDIA active optical cable 25GbE, SFP28, 20m	EOL [HVM]
N/A	25GE	980-9I539-00A030	MFA2P10-A030	NVIDIA active optical cable 25GbE, SFP28, 30m	EOL [HVM]
N/A	25GE	980-9I53A-00A050	MFA2P10-A050	NVIDIA active optical cable 25GbE, SFP28, 50m	EOL [HVM]
N/A	25GE	980-9I094-00AR00	MMA2L20-AR	NVIDIA optical transceiver, 25GbE, 25Gb/s, SFP28, LC-LC, 1310nm, LR up to 10km	MP
N/A	25GE	980-9I595-00AM00	MMA2P00-AS	NVIDIA transceiver, 25GbE, SFP28, LC-LC, 850nm, SR	HVM
N/A	25GE	980-9I34B-00AS00	MMA2P00-AS-SP	NVIDIA transceiver, 25GbE, SFP28, LC-LC, 850nm, SR, up to 100m, single package	EOL [HVM]
N/A	25GE	980-9I34D-00AS00	MMA2P00-AS_FF	NVIDIA transceiver, 25GbE, SFP28, LC-LC, 850nm, SR, up to 100m	EOL [HVM]

8.1.11 10GbE Cables

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	10GE	980-9I71G-00J000	MAM1Q00A-QSA	NVIDIA cable module, ETH 10GbE, 40Gb/s to 10Gb/s, QSFP to SFP+	HVM
N/A	10GE	980-9I65P-00J005	MC2309124-005	NVIDIA passive copper hybrid cable, ETH 10GbE, 10Gb/s, QSFP to SFP+, 5m	EOL [P-Rel]
N/A	10GE	980-9I65Q-00J007	MC2309124-007	NVIDIA passive copper hybrid cable, ETH 10GbE, 10Gb/s, QSFP to SFP+, 7m	EOL [P-Rel]
N/A	10GE	980-9I65R-00J001	MC2309130-001	NVIDIA passive copper hybrid cable, ETH 10GbE, 10Gb/s, QSFP to SFP+, 1m	EOL [HVM]
N/A	10GE	980-9I65S-00J002	MC2309130-002	NVIDIA passive copper hybrid cable, ETH 10GbE, 10Gb/s, QSFP to SFP+, 2m	EOL [HVM]
N/A	10GE	980-9I65T-00J003	MC2309130-003	NVIDIA passive copper hybrid cable, ETH 10GbE, 10Gb/s, QSFP to SFP+, 3m	EOL [HVM]
N/A	10GE	980-9I65U-00J00A	MC2309130-00A	NVIDIA passive copper hybrid cable, ETH 10GbE, 10Gb/s, QSFP to SFP+, 0.5m	EOL [HVM] [HIBERN/ATE]
N/A	10GE	980-9I682-00J004	MC3309124-004	NVIDIA passive copper cable, ETH 10GbE, 10Gb/s, SFP+, 4m	EOL [HVM]
N/A	10GE	980-9I683-00J005	MC3309124-005	NVIDIA passive copper cable, ETH 10GbE, 10Gb/s, SFP+, 5m	EOL [HVM]
N/A	10GE	980-9I684-00J006	MC3309124-006	NVIDIA passive copper cable, ETH 10GbE, 10Gb/s, SFP+, 6m	EOL [HVM]
N/A	10GE	980-9I685-00J007	MC3309124-007	NVIDIA passive copper cable, ETH 10GbE, 10Gb/s, SFP+, 7m	EOL [HVM]
N/A	10GE	980-9I686-00J001	MC3309130-001	NVIDIA passive copper cable, ETH 10GbE, 10Gb/s, SFP+, 1m	EOL [HVM]
N/A	10GE	980-9I688-00J002	MC3309130-002	NVIDIA passive copper cable, ETH 10GbE, 10Gb/s, SFP+, 2m	EOL [HVM]
N/A	10GE	980-9I68B-00J003	MC3309130-003	NVIDIA passive copper cable, ETH 10GbE, 10Gb/s, SFP+, 3m	EOL [HVM]

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	10GE	980-9I68F-00J00A	MC3309130-00A	NVIDIA passive copper cable, ETH 10GbE, 10Gb/s, SFP+, 0.5m	EOL [HVM]
N/A	10GE	980-9I68G-00J01A	MC3309130-0A1	NVIDIA passive copper cable, ETH 10GbE, 10Gb/s, SFP+, 1.5m	EOL [HVM]
N/A	10GE	980-9I68H-00J02A	MC3309130-0A2	NVIDIA passive copper cable, ETH 10GbE, 10Gb/s, SFP+, 2.5m	EOL [HVM]
N/A	10GE	980-9I68B-00J002	MCP2100-X002B	NVIDIA passive copper cable, ETH 10GbE, 10Gb/s, SFP+, 2m, Blue Pulltab, Connector Label	EOL [HVM] [HIBERN/ATE]
N/A	10GE	980-9I68C-00J003	MCP2100-X003B	NVIDIA passive copper cable, ETH 10GbE, 10Gb/s, SFP+, 3m, Blue Pulltab, Connector Label	EOL [HVM]
N/A	10GE	980-9I68E-00J001	MCP2104-X001B	NVIDIA passive copper cable, ETH 10GbE, 10Gb/s, SFP+, 1m, Black Pulltab, Connector Label	EOL [HVM] [HIBERN/ATE]
N/A	10GE	980-9I68F-00J002	MCP2104-X002B	NVIDIA passive copper cable, ETH 10GbE, 10Gb/s, SFP+, 2m, Black Pulltab, Connector Label	EOL [HVM]
N/A	10GE	980-9I68G-00J003	MCP2104-X003B	NVIDIA passive copper cable, ETH 10GbE, 10Gb/s, SFP+, 3m, Black Pulltab, Connector Label	EOL [HVM]
N/A	10GE	980-9I68H-00J01A	MCP2104-X01AB	NVIDIA passive copper cable, ETH 10GbE, 10Gb/s, SFP+, 1.5m, Black Pulltab, Connector Label	EOL [HVM]
N/A	10GE	980-9I68I-00J02A	MCP2104-X02AB	NVIDIA passive copper cable, ETH 10GbE, 10Gb/s, SFP+, 2.5m, Black Pulltab, Connector Label	EOL [HVM]
N/A	10GE	MFM1T02A-LR-F	MFM1T02A-LR-F	NVIDIA optical module, ETH 10GbE, 10Gb/s, SFP+, LC-LC, 1310nm, LR up to 10km	HVM
N/A	10GE	MFM1T02A-SR-F	MFM1T02A-SR-F	NVIDIA optical module, ETH 10GbE, 10Gb/s, SFP+, LC-LC, 850nm, SR up to 300m	HVM
N/A	10GE	930-9O000-0000-343	MFM1T02A-LR	NVIDIA SFP+ optical module for 10GBASE-LR	HVM
N/A	10GE	930-9O000-0000-409	MFM1T02A-SR	NVIDIA SFP+ optical module for 10GBASE-SR	HVM

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	10GE	MFM1T02A-SR-P	MFM1T02A-SR-P	NVIDIA optical module, ETH 10GbE, 10Gb/s, SFP+, LC-LC, 850nm, SR up to 300m	HVM

8.1.12 1GbE Cables

IB Data Rate	Eth Data Rate	NVIDIA P/N	Legacy OPN	Description	LifeCycle Phase
N/A	1GE	980-9I270-00IM00	MC3208011-SX	NVIDIA Optical module, ETH 1GbE, 1Gb/s, SFP, LC-LC, SX 850nm, up to 500m	EOL [P-Rel]
N/A	1GE	980-9I251-00IS00	MC3208411-T	NVIDIA module, ETH 1GbE, 1Gb/s, SFP, Base-T, up to 100m	HVM

8.1.13 Supported 3rd Party Cables and Modules

Speed	Cable OPN	Description
400GbE	T-RS4CNH-NFM	Innolight 400G (Sumi laser)
400GbE	T-RS4CNH-NFL	Innolight 400G (BRCM laser)
400GbE	EOLO-134HG-5H-B	Eoptolink 400G OSFP DR4
400GbE	CTF4XFR4CS1-01	QSFP_CMIS ,400G-FR4 ,Optical Module (separated), 1310 nm EML, FW: 0.9.0
400GbE	AQQLBCQ4EDLA1729	QSFP112 400G FR4 Transceiver
400GbE	T-GQ4CNT-N00	Innolight 400G QSFP 112 FR4 Transceiver, Duplex LC Interface, 4 CWDM Lanes, up to 2km, Pull Tab
400GbE	C-DQF8FNMxxx-N00	QSFP-DD to 2 x QSFP56 active optical cable with full real-time digital diagnostic monitoring (Rev 1A)
400GbE	FCBN950QE1C05	400G-2x200G split 5M AOC cables (400G QSFP-DD breaking out to 2x 200G QSFP56) (Rev A0)
400GbE	DME8811-EC07	400G-2x200G split 7M AOC cables (400G QSFP-DD breaking out to 2x 200G QSFP56) (Rev 12)
400GbE	RTXM500-910	400G-2x200G split 10M AOC cables (400G QSFP-DD breaking out to 2x 200G QSFP56) (Rev 10)
400GbE	FCBN950QE1C20	Fiber Optic Cable Assemblies 8X 50 Gbps, 20M, Ethernet, Quadwire cable, QSFP-DD breakout to 2x QSFP56, MMF, Round Cable, Plenum Rated, 10W/5.5W, 0/70C operation, ROHS
400GbE	QDD-4ZQ100-CU1M	QSFP-DD 4x 100GBASE-CR2 Passive Breakout Copper Cable, 1 meter

Speed	Cable OPN	Description
400GbE	QDD-2Q200-CU3M	QSFP-DD 2x 200GBASE-CR4 Passive Breakout Copper Cable, 3 meters
400GbE	AAQD2QP2400C003	400G-2x200G ATI AOC breakout cable
200GbE	RTXM500-301-F1	200G QSFP56 SR4 100m Optical Transceiver
200GbE	T-FX4FNS-N00	200Gb/s QSFP56 SR4 Optical Transceiver
200GbE	RTXM500-905	400G-2x200G split 5M AOC cables (400G QSFP-DD breaking out to 2x 200G QSFP56) (Rev C0)
100GbE	1AT-3Q4M01XX-12A	O-NET QSFP28 100G Active cable/module
100GbE	AQPMANQ4EDMA0784	QSFP28 100G SMF 500m Transceiver
100GbE	CAB-Q-Q-100G-3M	Passive 3 meter, QSFP+ to QSFP+ QSFP100 TWINAX 103.125Gbps-CR4
100GbE	CAB-Q-Q-100GbE-3M	Passive 3 meter , QSFP+ to QSFP+ QSFP100 TWINAX 103.125Gbps-CR4
100GbE	FCBN425QE1C30-C1	100GbE Quadwire® QSFP28 Active Optical Cable 30M
100GbE	FTLC1151RDPL	TRANSCIEVER 100GBE QSFP LR4
100GbE	FTLC9152RGPL	100G 100M QSFP28 SWDM4 OPT TRANS
100GbE	FTLC9555REPM3-E6	100m Parallel MMF 100GQSFP28Optical Transceiver
100GbE	NDAAFJ-C102	SF-NDAAFJ100G-005M
100GbE	QSFP-100G-AOC30M	30m (98ft) Cisco QSFP-100G-AOC30M Compatible 100G QSFP28 Active Optical Cable
100GbE	QSFP28-LR4-AJ	CISCO-PRE 100GbE LR4 QSFP28 Transceiver Module
100GbE	QSFP-40/100-SRBD	CISCO-PRE 100G AOM BiDi
100GbE	SQF1002L4LNC101P	Cisco-SUMITOMO 100GbE AOM
40GbE	2231254-2	Cisco 3m 40GbE copper
40GbE	AFBR-7QER15Z-CS1	Cisco 40GbE 15m AOC
40GbE	BN-QS-SP-CBL-5M	PASSIVE COPPER SPLITTER CABLE ETH 40GBE TO 4X10GBE 5M
40GbE	NDCCGJ-C402	15m (49ft) Avago AFBR-7QER15Z Compatible 40G QSFP+ Active Optical Cable
40GbE	QSFP-40G-SR-BD	Cisco 40GBASE-SR-BiDi, duplex MMF

8.2 Tested Switches

8.2.1 NDR / 400GbE Switches

Speed	NVIDIA SKU	Legacy OPN	Description
NDR	920-9B210-00FN-xxx	QM9790	NVIDIA Quantum-2 based NDR InfiniBand EVB Switch, 64 NDR ports, 32 OSFP ports, non-blocking switching capacity of 51.2Tbps, 2 Power Supplies (AC), Standard depth, Unmanaged, P2C airflow, Rail Kit, RoHS6
NDR	920-9B210-00FN-xxx	QM9700	NVIDIA Quantum 2 based NDR InfiniBand Switch, 64 NDR ports, 32 OSFP ports, 2 Power Supplies (AC), Standard depth, Managed, P2C airflow, Rail Kit
400GbE	920-9N42F-00RI-xxx	SN5600	NVIDIA Spectrum-4 based 800GbE 2U Open Ethernet switch with ONIE and NOS Authentication, 64 OSFP ports and 1 SFP28 port, 2 power supplies (AC), x86 CPU, Secure-boot, standard depth, C2P airflow, Tool-less Rail Kit
400GbE	920-9N301-00xB-xxx	SN4700	NVIDIA Spectrum-3 based 400GbE, 1U Open Ethernet switch, 32xQSFP-DD ports, x86 CPU, standard depth
400GbE	920-9N312-00xB-xxx	SN4410	NVIDIA Spectrum-3 based 400GbE 1U Open Ethernet switch, 24 QSFPDD28 and 8 QSFP-DD ports, 2 Power Supplies (AC), x86 CPU, standard depth
400GbE	N/A	Wedge 400	Meta: Wedge 400-48X 400GbE Data Center Switch
400GbE	N/A	Cisco Nexus 3432D-S	Cisco Nexus 3432D-S, 32 fixed 400-Gigabit Ethernet QSFP-DD ports with backward compatibility for QSFP56, QSFP28, and QSFP+

8.2.2 HDR / 200GbE Switches

Speed	NVIDIA SKU	Legacy OPN	Description
HDR	920-9B110-00FH-xxx	MQM8700	NVIDIA Quantum HDR InfiniBand Switch, 40 QSFP56 ports, 2 Power Supplies (AC), x86 dual core, standard depth, P2C airflow, Rail Kit
HDR	920-9B110-00FH-xxx	MQM8790	NVIDIA Quantum HDR InfiniBand Switch, 40 QSFP56 ports, 2 Power Supplies (AC), unmanaged, standard depth, P2C airflow, Rail Kit
200GbE	920-9N302-00xA-xxx	MSN4600V	NVIDIA Spectrum-3 based 200GbE 2U Open Ethernet switch, 64 QSFP56 ports, 2 Power Supplies (AC), x86 CPU, standard depth

Speed	NVIDIA SKU	Legacy OPN	Description
200GbE	920-9N210-C1x7-xxx	MSN3700	NVIDIA Spectrum-2 based 200GbE Open Ethernet switch, 32 QSFP56 ports, x86 CPU, standard depth

8.2.3 100GbE Switches

Speed	NVIDIA SKU	Legacy OPN	Description
100GbE	920-9N302-00xA-xxx / 920-9N302-00x7-xxx	SN4600-XXXX	64-port Non-blocking 100GbE Open Ethernet Switch System
100GbE	920-9N201-00x7-xxx	SN3700C-XXXX	32-port Non-blocking 100GbE Open Ethernet Switch System
100GbE	920-9N213-00x7-xxx	SN3420-XXXX	48 SFP + 12 QSFP ports Non-blocking 100GbE Open Ethernet Switch System
100GbE	920-9N101-00x7-xxx	SN2700-XXXX	32-port Non-blocking 100GbE Open Ethernet Switch System
100GbE	N/A	QFX5200-32C-32	32-port 100GbE Ethernet Switch System
100GbE	N/A	7060CX-32S	32-port 100GbE Ethernet Switch System
100GbE	N/A	3232C	32-port 100GbE Ethernet Switch System
100GbE	N/A	N9K-C9236C	36-port 100GbE Ethernet Switch System
100GbE	N/A	93180YC-EX	48-port 25GbE + 6-port 100GbE Ethernet Switch System
100GbE	N/A	S6820-56HF	H3C S6850-56HF L3 Ethernet Switch with 48 SFP28 Ports and 8 QSFP28 Ports
100GbE	N/A	BMS T7032-IX7	32 QSFP28 ports support for 10/25/40/50/100GbE

9 Release Notes History

9.1 Changes and New Feature History

⚠ This section includes history of changes and new feature of 3 major releases back. For older releases history, please refer to the relevant firmware versions.

Feature/Change	Description
28.43.1014	
PCIe Telemetry	Added support for PCIe Telemetry (NSM Type 2).
Programmable Congestion Control (PCC)	Migrated PCC NP solution from ACE hardware platform to DPA hardware platform. The new capability is applicable to the following 2 modes: • PCC_INT_EN=True and PCC_INT_NP_RTT_DATA_MODE=INGRESS_BYTE • PCC_INT_EN=True and PCC_INT_NP_RTT_DATA_MODE=NO_DATA The first mode is used to support ZTRCC RX bytes in RTT response.
RDMA Telemetry	Added the option to indicate an error CQE event on every selected function per eSwitch manager. This indication is defined as a new WQE including the relevant information about the error (such as: syndrome, function_id, timestamp, QPs num etc.). The feature is configured using a new general object: RDMA-Telemetry object, and depends on the following new caps: `HCA_CAP.rdma_telemetry_notification_types` and `HCA_CAP.rdma_telemetry`.
UID Permissions	Extended kernel lockdown permission set. The following sub-operations can now be called by tools (permission TOOLS_RESORCES) using new HCA capability bitmask field: tool_partial_cap. The 5 sub-operations are: • QUERY_HCA_CAP with other function • QUERY_VUID with direct data • QUERY_ROCE_ADDRESS with other vport • SET_HCA_CAP with other function • POSTPONE_CONNECTED_QP_TIMEOUT with other vport The new added caps are: • tool_partial_cap.postpone_conn_qp_timeout_other_vport, • tool_partial_cap.set_hca_cap_other_func • tool_partial_cap.query_roce_addr_other_vport • tool_partial_cap.query_vuid_direct_data • tool_partial_cap.query_hca_cap_other_func
Cross E-Switch Scheduling	Added support for QoS scheduling across multiple E-Switches grouped in a LAG. VPort members of a Physical Function can be added to a rate group from another Physical Function and rate limits of the group will apply to those VPort members as well.
Jump from NIC_TX to FDB_TX	Added `'table_type_valid'` and `'table_type'` fields to the steering action (STC) "Jump To Flow" table parameters to enable the user to jump from NIC_TX to FDB_TX and bypass the ACL table.

Feature/Change	Description
28.43.1014	
Jump to TIR or queue from FDB on Tx	Enabled hop reduction by bypassing NIC domain in various use cases. Such action reduces the number of hops (improves PPS) to deal with mass number of flows and devices. To enable this new capability, a new STC action type "JUMP_TO_FDB_RX" was added to allow jumping into the RX side of a table.
Flex Parser: ARC-IN and ARC-OUT	Increased the maximum number of supported "ARC-IN" from 1 to 8 and "ARC-OUT" from 3 to 8 for the dynamic flex parser.
PSP Crypto Offload	**[Alpha]** Added support for PSP Crypto offload transport mode.
ZTR_RTTCC Histogram	Added histogram support for rate and Round-Trip Time (RTT) in PCC ZTR_RTTCC.
Bug Fixes	See *Bug Fixes in this Firmware Version* section.

Feature/Change	Description
28.42.1000	
Memory Slow Release	Added a new command interface "Memory slow release" to enable/ disable holding memory pages for a defined period of time. Once the timer expires, the firmware will return the pages to the driver.
PXE Filters	Added support for configuring PXE boot filters' setting from the HII menu to filter only PXE packets (DHCP, TFTP.ARP,ICMP) during boot on UEFI environment.
Precision Timing (PTM)	Added support for Precision Timing (PTM). This new capability ensures seamless operations, synchronized data access, faster response times, and optimal AI performance, enhancing cloud offerings' reliability and scalability.
PTP	Improved the PTP accuracy for ports with link speed of 25G or above.
Kernel Lockdown	Added support for MVTS register via a miscellaneous driver using the access_register PRM command.
AN/LT Visibility	Added an LT logger that provides visibility of the LT status, process and parameters sent and received during the flow.
Steering SF Traffic to a Specific PF MSI-X	MSI-X on SF can be received now through the PF's MSI-X vector.
Bug Fixes	See *Bug Fixes in this Firmware Version* section.

Feature/Change	Description
28.41.1000	
ODP Event	Added support for the following prefetch fields on ODP event: pre_demand_fault_pages, post_demand_fault_pages.
TRNG FIPS Compliance	Implemented Deterministic Random Bit Generator (DRBG) algorithm on top of firmware TRNG (the source for raw data input) in accordance with NIST SP800-90A.

Feature/Change	Description
28.41.1000	
400GbE, Single-Port, OSFP to OSPF-RHS cable	Added support for 400GbE speed (8X50G) in Single-Port OSFP adapter cards including link training and auto-negotiation when connecting OSFP to OSPF-RHS cables.
PSP	Added support for PSP in Hardware Steering.
NVConfig	Added a new NVConfig option to copy AR bit from the BTH header to the DHCP header.
Steering	Added the option provide field's offset and length in Steering add_action option.
Steering Match	Added support for steering match on packet l4_type through FTG/FTE.
Packet's Flow Label Fields	Added support for setting, adding or copying the flow_label fields from the packet.
BAR Pages	Added support for 64KB pages. **Note:** Configuring BAR_PAGE_ALIGNMENT to ALIGN_64KB(2) while one of the following is configured will cause the device to ignore the BAR_PAGE_ALIGNMENT configuration: • PF_NUM_PF_MSIX>256 on any of the Physical Functions • VIRTIO_EMULATION_HOTPLUG_TRANS/ VIRTIO_NET_EMULATION_PF_PCI_LAYOUT/ VIRTIO_NET_EMULATION_VF_PCI_LAYOUT/ VIRTIO_BLK_EMULATION_PF_PCI_LAYOUT/ VIRTIO_BLK_EMULATION_PF_PCI_LAYOUT=VIRTIO_TRANSITIONAL(1)
Flex Parser Merge Mechanism	Extended Flex Parser merge mechanism to support hardware capabilities.
Flex Parser	Enabled the option to disable the native parser when the parse graph node is configured with the same conditions.
Flex Parser	Added support for father/son headers parsing.
LRO	Added support for tunnel_offload in LRO.
Bug Fixes	See *Bug Fixes in this Firmware Version* section.

Feature/Change	Description
28.40.1000	
Socket Direct Single netdev Mapped to Two PCIe Devices	Enabled Single Netdev mapping to two PCIe devices (Socket Direct). Now multiple devices (PFs) of the same port can be combined under a single netdev instance. Traffic is passed through different devices belonging to different NUMA sockets, thus saving cross-NUMA traffic and allowing apps running on the same netdev from different NUMAs to still feel a sense of proximity to the device and achieve improved performance. The netdev is destroyed once any of the PFs is removed. A proper configuration would utilize the correct close NUMA when working on a certain app/CPU. Currently, this capability is limited to PFs only, and up to two devices (sockets). To enable the feature, one must configure the same Socket Direct group (non zero) for both PFs through mlxconfig SD_GROUP.
Port Rate Limiting	Added a new access register (PBWS) to set the port maximum bandwidth to a value between 95% to 100%.

Feature/Change	Description
28.40.1000	
ACL	Added support for egress ACL to the uplink by adding a new bit to the Set Flow Table Entry: allow_fdb_uplink_hairpin.
Live Migration	Added support for live migration with MPV and IPSEC. This capability enables creating cross-vhca objects, however, they can only be created between affiliated GVMIs. If `HCA_CAP.migratable` bit is set, `HCA_CAP.cross_vhca_object_to_object_supported` and `HCA_CAP.allowed_object_for_other_vhca_access` refer to affiliated VHCAs only.
Alternative Bill of Materials (BOM)	NVIDIA is adding an alternative Bill of Materials (BOM) for the specified affected items (MCX713104AS-ADAT & MCX713104AC-ADAT) to enhance production yields. The new alternate BOM requires updating to a minimum firmware version of 28.39.2048.
Bug Fixes	See *Bug Fixes in this Firmware Version* section.

9.2 Bug Fixes History

> ⚠ This section includes history of 3 major releases back. For older releases history, please refer to the relevant firmware versions.

Internal Ref.	Issue
4040226	**Description:** Added a recovery step in case of CQ doorbell getting lost during VF migration.
	Keywords: VF migration
	Discovered in Version: 28.42.1000
	Fixed in Release: 28.43.1014
3988375	**Description:** PLDM includes port temperature sensor PDR only if an active cable is connected.
	Keywords: Temperature sensor PDR
	Discovered in Version: 28.42.1000
	Fixed in Release: 28.43.1014
3837332	**Description:** Changed PCIe Geen4/5 new static configuration for VGA gain and CTLE.
	Keywords: PCIe, VGA, CTLE
	Discovered in Version: 28.42.1000
	Fixed in Release: 28.43.1014
4120411	**Description:** Fixed an issue that occasionally caused PTP accuracy degradation for port speed configured to 1G or 10G.

Internal Ref.	Issue
	Keywords: PTP
	Discovered in Version: 28.42.1000
	Fixed in Release: 28.43.1014
4134558	**Description:** Fixed an issue that resulted in MSIx reduction flow triggered with a wrong limitation (the total number of MSIx is reduced from 8k to 4k by mistake) when the dynamic MSIx feature is enabled and virtio emulation is disabled.
	Keywords: Dynamic MSIx
	Discovered in Version: 28.42.1000
	Fixed in Release: 28.43.1014
4007123	**Description:** Fixed lossless packet drops at 400GB 4 lanes when using an optic fiber cable.
	Keywords: 400GB, 4 lanes, optic fiber cable
	Discovered in Version: 28.42.1000
	Fixed in Release: 28.43.1014
4014351	**Description:** Fixed the query for FACTORY default NV configuration values. The firmware always returned the "next" value to be applied.
	Keywords: Access register MNVDA, QUERY / SET configurations
	Discovered in Version: 28.42.1000
	Fixed in Release: 28.43.1014
4048886	**Description:** Fixed an issue related to override TP4 settings.
	Keywords: TP4 settings
	Discovered in Version: 28.42.1000
	Fixed in Release: 28.43.1014
4001690	**Description:** Changed the CTLE and VGA gain for Gen4/5 starting point.
	Keywords: CTLE, VGA gain
	Discovered in Version: 28.42.1000
	Fixed in Release: 28.43.1014
4066248	**Description:** Increased SPDM's RDT value.
	Keywords: SPDM
	Discovered in Version: 28.42.1000
	Fixed in Release: 28.43.1014
4092754	**Description:** Fixed a rare certificate signature verification error.
	Keywords: Certificate signature verification
	Discovered in Version: 28.42.1000
	Fixed in Release: 28.43.1014
4003534	**Description:** Fixed an issue that caused issues during the cables' linkup process after reinserting a module in multi ASIC platforms.
	Keywords: Cables

Internal Ref.	Issue
	Discovered in Version: 28.42.1000
	Fixed in Release: 28.43.1014
4041723	**Description:** Fixed the user_cc_en default value (mlxreg).
	Keywords: mlxreg
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	Fixed in Release: 28.43.1014
4041723	**Description:** Fixed the user_cc_en default value (mlxreg).
	Keywords: mlxreg
	Discovered in Version: 28.42.1000
	Fixed in Release: 28.43.1014

Internal Ref.	Issue
3868155	**Description:** Enabled the usage of different TX presets for Link Training (LT), LT timer, and inhibit timer non-SPEC values.
	Keywords: Link Training (LT)
	Discovered in Version: 28.41.1000
	Fixed in Release: 28.42.1000

Internal Ref.	Issue
3949320	**Description:** Fixed the partition default value in firmware when MFT builds the bin file. Additionally, in "root certificate" partition, modified the discovery flow in case both of the "root certificate" partition are invalid by erasing them before they are used.
	Keywords: Partition
	Discovered in Version: 28.41.1000
	Fixed in Release: 28.42.1000
3985535	**Description:** Fixed an issue that caused RDE PortMetrics property Transceivers.SupplyVoltage to be reflected in incorrect units of 100uV instead of V.
	Keywords: RDE
	Discovered in Version: 28.41.1000
	Fixed in Release: 28.42.1000
3938744	**Description:** Prevented HCA_CAP from allowing rogue drivers to create more EQs than the number allowed in the HCA_CAP.max_num_eqs.
	Keywords: HCA_CAP
	Discovered in Version: 28.41.1000
	Fixed in Release: 28.42.1000
3859451	**Description:** PLDM connector PDR is now not reported if a cable is not connected to prevent incomplete data display.
	Keywords: PLDM connector PDR
	Discovered in Version: 28.41.1000
	Fixed in Release: 28.42.1000
3754309	**Description:** Added the PPHCR register (responsible of showing histograms) to the GMP mads flow used to query registers via the mlxlink tool.
	Keywords: FEC histograms
	Discovered in Version: 28.41.1000
	Fixed in Release: 28.42.1000
3882607	**Description:** Fixed a downgrade issue that resulted in failure when downgrading to v28.37.1014.
	Keywords: Firmware downgrade
	Discovered in Version: 28.41.1000
	Fixed in Release: 28.42.1000
3855011	**Description:** Blocked access to invalid CR-SPACE registers when the adapter cards are secured.
	Keywords: CR-SPACE registers
	Discovered in Version: 28.41.1000
	Fixed in Release: 28.42.1000
3908476	**Description:** Fixed an issue that resulted in device assert when using DCBX CEE.
	Keywords: DCBX CEE
	Discovered in Version: 28.41.1000
	Fixed in Release: 28.42.1000

Internal Ref.	Issue
3652616	**Description:** Fixed an issue that prevented CNP or RTT counters from wrapping around properly.
	Keywords: CNP, RTT, counter
	Discovered in Version: 28.41.1000
	Fixed in Release: 28.42.1000
3730919	**Description:** Fixed an issue where the CR_SPACE was open to any read operation, even though some reads could lock the gateway. Bad reads from CR_SPACE will now result in a bad_access error being returned.
	Keywords: CR_SPACE, Gateway
	Discovered in Version: 28.41.1000
	Fixed in Release: 28.42.1000
3976276	**Description:** Fixed an issue that prevented the SFF module from accessing the EEPROM data when removing the CMIS module and inserting the SFF module instead of it.
	Keywords: EEPROM, SFF, CMIS
	Discovered in Version: 28.41.1000
	Fixed in Release: 28.42.1000

Internal Ref.	Issue
3675068	**Description:** Added the TX_SCHEDULER_FWS_REACTIVITY nvconfig flag to solved an mlnx_qos ETS settings issue.
	Keywords: nvconfig, ETS
	Discovered in Version: 28.39.1002
	Fixed in Release: 28.41.1000
3787123	**Description:** Improved ZTR_RTTCC algorithm fairness when running with 4K MTU.
	Keywords: PCC
	Discovered in Version: 28.39.1002
	Fixed in Release: 28.41.1000
3729783	**Description:** Fixed an issue where Congestion Control could malfunction due to an invalid database.
	Keywords: Congestion Control
	Discovered in Version: 28.39.1002
	Fixed in Release: 28.41.1000
3814806	**Description:** Fixed an issue that prevented PLDM command `Get Schema URI` from functioning properly when there were no base RDE resource IDs.
	Keywords: PLDM
	Discovered in Version: 28.39.1002
	Fixed in Release: 28.41.1000

Internal Ref.	Issue
3814821	**Description:** Fixed an issue that prevented RDE Port resource from showing 400Gb speed in CapableLinkSpeedGbps and in MaxSpeedGbps in some InfiniBand cards.
	Keywords: 400Gb, InfiniBand, RDE
	Discovered in Version: 28.39.1002
	Fixed in Release: 28.41.1000
3807206	**Description:** Changed BER monitor default values to alarm on symbol and effective BER.
	Keywords: BER
	Discovered in Version: 28.39.1002
	Fixed in Release: 28.41.1000
3682915	**Description:** Fixed a performance issue by enabling CC to allow queues to receive fair bandwidth.
	Keywords: Performance, CC, bandwidth
	Discovered in Version: 28.39.1002
	Fixed in Release: 28.41.1000
3706132 / 3768905	**Description:** Fixed an issue that resulted in VF FLR being stuck when his PF triggered the FLR as well.
	Keywords: VF FLR, PF
	Discovered in Version: 28.39.1002
	Fixed in Release: 28.41.1000

Internal Ref.	Issue
3712016	**Description:** Fixed an issue that prevented Congestion Control from behaving properly when GRH is used in traffic of an IB cluster.
	Keywords: IB Congestion Control, CNP, SL
	Discovered in Version: 28.39.1002
	Fixed in Release: 28.40.1000
3174038	**Description:** SPDM requests received while CPLD burn flow is in progress may be answered with incorrect responses.
	Keywords: SPDM
	Discovered in Version: 28.34.1002
	Fixed in Release: 28.40.1000
3110297	**Description:** When ConnectX-7 adapter card is configured to use the Auto-Negotiation mode, 400G_8x linkup cannot be raised.
	Keywords: 400G_8x, linkup
	Discovered in Version: 28.34.4000
	Fixed in Release: 28.40.1000

Internal Ref.	Issue
3339818	**Description:** When performing a stress toggling on a ConnectX-7 adapter card that is connected to the MMA1Z00-NS400 cable and the speed is set to 100G_1x with interleaved FEC, a long linkup time of up to 5 min may occur.
	Keywords: Toggling, MMA1Z00-NS400
	Discovered in Version: 28.36.1010
	Fixed in Release: 28.40.1000
3339919	**Description:** • When raising a link using 200G optical cables while connecting a ConnectX-7 to a ConnectX-7, raising a link with width less than the maximum provided by the cable with speed 25G lane is not supported. • When raising a link using 400G optical cables while connecting a ConnectX-7 to a ConnectX-7, raising a link with width less than the maximum provided by the cable with speed 50G or 25G lane is not supported.
	Keywords: Link up speed
	Discovered in Version: 28.36.1010
	Fixed in Release: 28.40.1000
3312483	**Description:** WoL packets may not working properly if sent to Unicast destination MAC.
	Keywords: WoL packets, Unicast destination MAC
	Discovered in Version: 28.36.1010
	Fixed in Release: 28.40.1000
3275394	**Description:** When performing PCIe link secondary-bus-reset, disable/enable or mlxfwreset on AMD based Genoa systems, the device takes longer then expected to link up, due to a PCIe receiver termination misconfiguration.
	Keywords: PCIe
	Discovered in Version: 28.37.1014
	Fixed in Release: 28.40.1000
3457472	**Description:** Disabling the Relaxed Ordered (RO) capability (relaxed_ordering_read_pci_enabled=0) using the vhca_resource_manager is currently not functional.
	Keywords: Relaxed Ordered
	Discovered in Version: 28.37.1014
	Fixed in Release: 28.40.1000
3606136	**Description:** In rare cases, linkup time of NDR and NDR200 with MMA4Z00-NS400 may take longer than 60 seconds.
	Keywords: Cables, NDR, NDR200, linkup time
	Discovered in Version: 28.39.1002
	Fixed in Release: 28.40.1000
3683068	**Description:** Added back the Digital Feedforward Equalizer (DFFE) hardware component to improve the signal integrity link.
	Keywords: Digital Feedforward Equalizer (DFFE)
	Discovered in Version: 28.38.1002

Internal Ref.	Issue
	Fixed in Release: 28.40.1000
3708035	**Description:** Fixed an issue with Selective-Repeat configuration which occasionally caused retransmission to wait for timeout instead of out-of-sequence NACK.
	Keywords: RoCE, SR
	Discovered in Version: 28.38.1002
	Fixed in Release: 28.40.1000
3695219	**Description:** Enabled the lowest minimum rate for SW DCQCN to enable congestion control to hold a larger amount of QPs without pauses or drops.
	Keywords: Congestion control, PCC, DCQCN
	Discovered in Version: 28.38.1002
	Fixed in Release: 28.40.1000
3637429	**Description:** Fixed an issue that caused the secondary ASIC run module init to fail due to missing condition.
	Keywords: Secondary device, EEPROM
	Discovered in Version: 28.38.1002
	Fixed in Release: 28.40.1000
3693945	**Description:** Fixed an issue that kept the adapter cards' quad ports UP when using breakout cables / QSFP-split-4. Now when a 4 alignment loss is noticed, the link in 25G/lane Ethernet is dropped.
	Keywords: Quad ports, link up, breakout cables / QSFP-split-4
	Discovered in Version: 28.38.1002
	Fixed in Release: 28.40.1000
3607329	**Description:** Modified PCIe switch downstream port EQLZ.PH1 timing to 3ms.
	Keywords: PCIe switch downstream port
	Discovered in Version: 28.38.1002
	Fixed in Release: 28.40.1000
3617606	**Description:** Fixed a rare race condition in NODNIC teardown that caused commands to hang on regular PF.
	Keywords: NODNIC teardown
	Discovered in Version: 28.36.1010
	Fixed in Release: 28.40.1000

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OFED Drivers	25.01	• License • 3rd Party Notice
MFT FreeBSD	4.31.0-147	• 3rd Party Notice • License
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