



NVIDIA Switch-IB 2 Firmware Release Notes v15.2010.3118

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Release Notes Update History

Revision	Date	Description
1.0	July 25, 2022	Initial release of this Release Notes version.

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.

Firmware Download

Please visit [nvidia.com/en-us/networking/](https://www.nvidia.com/en-us/networking/) → Support → Support → Firmware Download

Document Revision History

A list of the changes made to this document are provided in [Changes and New Features History](#).

Firmware Compatible Products

These are the release notes for the NVIDIA® Switch-IB® 2 firmware. This firmware complements the Switch-IB 2 silicon architecture with a set of advanced features, allowing easy and remote management of the switch.

Supported Systems

This firmware supports the devices and protocols listed in the table below.

Device Part Number	PSID	Description
MSB7890	MT_2640110032	Switch-IB 2 based EDR InfiniBand switch; 36 QSFP28 ports; externally managed

Firmware Interoperability

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

HCA/Switch	Firmware Version
NVIDIA® Switch-IB®	11.2008.3328
SWITCHX®-2	9.4.2000
ConnectX®-6	20.33.1048
ConnectX-5 (Ex)	16.33.1048
ConnectX-4	12.28.2006
Connect-IB®	10.16.6000
ConnectX-3 (Pro)	2.42.5000

HCA/Switch	Firmware Version
MFT	4.18.1-14

Supported Cables and Modules

Switch-to-Switch Connectivity Matrix

Switch	Switch	Cable			
		EDR DAC	EDR AOC	FDR DAC	FDR AOC
Switch-IB/Switch-IB 2	NVIDIA Quantum	EDR	EDR	N/A	N/A
SWITCHX-2	Switch-IB/Switch-IB 2	N/A	N/A	FDR	FDR

NIC-to-Switch Connectivity Matrix

Adapter	Switch		Cable							
			Y cable DAC	Y cable AOC	HDR DAC	HDR AOC	EDR DAC	EDR AOC	FDR DAC	FDR AOC
ConnectX-4/ ConnectX-5	Switch-IB/ Switch-IB 2	EDR Switch	N/A	N/A	EDR	N/A	EDR	EDR	N/A	N/A
ConnectX-3/ ConnectX-3 Pro			Switch-IB/ Switch-IB 2	N/A	N/A	N/A	N/A	FDR	N/A	FDR

Firmware Upgrade

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

PRM Revision Compatibility

This firmware version complies with the NVIDIA Switches Programmer's Reference Manual (PRM), Rev 1.45 or later.

Changes and New Features

Category	Description
General	Stability improvements.

Bug Fixes in This Firmware Version

This firmware version does not include any bug fixes. For a list of bug fixes from previous versions, please see [Bug Fixes History](#).

Changes and New Features History

Warning

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.

Category	Description
15.2010.3004	
General	Stability improvements.
15.2010.2300	
General	Stability improvements.
15.2010.2246	
General	See Bug fixes .
15.2010.2110	
General	Stability improvements.
15.2010.2036	
General	Stability improvements.
15.2010.1404	
General	Stability improvements.
15.2010.1310	
General	Stability improvements.
15.2010.1202	

Category	Description
General	Stability improvements.
15.2010.1128	
General	Stability improvements.
15.2008.3328	
General	Stability improvements.
15.2008.3000	
Bug Fixes	See Bug fixes .
15.2008.2402	
Bug Fixes	See Bug fixes .
15.2008.2102	
General	Stability Improvements.

15.2008.1904	
Adaptive Routing	Added support for a new Adaptive Router counter (PortARTrials) as part of the PortRNCounters group. PortARTrials is used to indicate the number of times the AR decision mechanism is used per port.
15.2008.1604	
Bug Fixes	See Bug fixes .
15.2008.1300	
General	Stability Improvements.
15.2008.0236	
General	Stability Improvements.
Cables	Added support for the Hirakawa cable.
Power Supply	Delta 550W Power Supply is now backward compatible with Delta 460W PSU.
15.2007.0300	
Performance	Added support for link-negotiated credit size.

15.2008.1904	
15.2000.3276	
Power Supply	Added support for Delta 550W Power Supply.
15.2000.2626	
General	Added support for Error Injection with PTER register.
Speed Link	SDR link speed on InfiniBand systems is now available for all cables, including cables that do not advertise InfiniBand speed in their memory map.
15.2000.2046	
PSU's Temperature Thresholds	Now PSU's temperature thresholds (high and low) can be queried via the MTMP register.
15.2000.1600	
Bug Fixes	See Bug fixes .
15.2000.1142	
Bug Fixes	See Bug fixes .
15.2000.1000	
Chassis Management	Changed the PSU voltage read from "Vout" to "Vin".
General	System stability improvements.
15.19100.0618	
General	Added support for PortStateTable standard SMP MAD.
Chassis Management	Added support for PSU utilization and consumption of output power.
Chassis Management	Added support for PSU temperature and 12V Vout monitoring.
15.1701.0010	
General	Added support for congestion control log 1.3 as described in IBTA IB specification release 1.3, Annex A10.
General	Added additional information (PDDR pages as described in the <i>Switches PRM</i> , section 8.15.50 PDDR - Port Diagnostics Database Register) to diagnostics data VS-MAD as described in Mellanox Vendor Specific MAD Specification 1.3 section 3.33 - DiagnosticData.

15.2008.1904	
Chassis Management	Added ability to read part numbers and serial numbers for fans (by using MFNR register) and the power supply (by using MSPS register).
15.1610.0210	
SHARP	Added support for SHARP reproducibility configuration.
15.1610.0206	
General	See Bug fixes .
15.1610.0200	
Chassis Management	Added ability to read part numbers and serial numbers for fans (by using MFNR register) and the power supply (by using MSPS register).
15.1610.0196	
General	Added support for congestion control log 1.3 as described in IBTA IB specification release 1.3, Annex A10.
General	Added additional information (PDDR pages as described in the <i>Switches PRM</i> , section 8.15.50 PDDR - Port Diagnostics Database Register) to diagnostics data VS-MAD as described in Mellanox Vendor Specific MAD Specification 1.4 section 3.33 – DiagnosticData.
SHARP	Added support for group join optimization using root GID as described in Mellanox Vendor Specific MAD Specification 1.4 section 4.10 – Aggregation Group Join.

Bug Fixes History

Internal Ref.	Issue
3040232	Description: PLFT mapping for SMA port (port 0) was configured in a way that caused PLFT of FDB 0 to be used instead of PLFT of FDB 1.
	Keywords: PLFT, SMA
	Discovered in Version: 15.2010.2110
	Fixed in Version: 15.2010.2246
2330881	Description: Switch-IB 2 may hang once PSU is extracted and inserted in a quick operation.
	Keywords: PSU
	Discovered in Version: 15.2008.2102
	Fixed in Release: 15.2008.2402
2249227	Description: The SN and PN fields values in Switch-IB 2 with 550W PSU show as zero in some devices.
	Keywords: 550W PSU
	Discovered in Release: 15.2008.1300
	Fixed in Release: 15.2008.1600
1786686	Description: Wrong behavior of ARGroupTableCopy MAD.
	Keywords: Adaptive Routing
	Discovered in Release: 15.2000.1142
	Fixed in Release: 15.2000.1600
1730194	Description: In rare cases, when connecting between Switch-IB/Switch-IB 2 and Quantum switch systems, traffic loss might occur.
	Keywords: Traffic, Switch-IB/Switch-IB 2, Quantum
	Discovered in Release: 15.2000.1000
	Fixed in Release: 15.2000.1142

Internal Ref.	Issue
1337469	Description: In rare cases, when a receiver's electrical eye is narrow, link might raise with BER higher (worse) than 10-12.
	Keywords: Link
	Discovered in Release: 15.1500.0034
	Fixed in Release: 15.1630.0206
1092005	Description: Enable SDR speed regardless of cable supported speeds
	Keywords: Link
	Discovered in Release: 15.1400.0102
	Fixed in Release: 15.1500.0106
1089528	Description: SHARP not functional in case of groups larger than 14 members
	Keywords: SHARP
	Discovered in Release: 15.1430.0160
	Fixed in Release: 15.1500.0106
964972	Description: In info block 29 (Thermal algorithm values): DELTA TEMP REPORTING > '4' will be considered '1'. DELTA TEMP REPORTING = 1,2,3 returns no issues.
	Keywords: Thermal Management
	Discovered in Release: 15.1310.0138
	Fixed in Release: 15.1310.0150
-	Description: VL arbitration does not distribute traffic as expected in case of multiple VLs
	Keywords: General
	Discovered in Release: 15.1200.0102
	Fixed in Release: 15.1300.0100

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