



NVIDIA Switch-IB Firmware v11.2008.2102 Release Notes

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Release Notes Update History

Revision	Date	Description
1.0	November 30, 2020	Initial release of this Release Notes version, This version introduces Changes and New Features

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 www.mellanox.com → Support & Education → 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® Mellanox Switch-IB™ firmware. This firmware complements the Switch-IB™ 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_1880110032	Switch-IB™ 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
Switch-IB 2™	15.2008.2102
SwitchX®-2	9.4.2000
ConnectX®-5 (Ex)	16.28.2006
ConnectX-4	12.28.1002
Connect-IB®	10.16.6000
ConnectX-3 (Pro)	2.42.5000
MFT	4.15.1

Supported Cables and Modules

Firmware Upgrade

Firmware upgrade may be performed directly from any previous version to this version. To upgrade firmware, please refer to the Mellanox Firmware Tools (MFT) package at: http://www.mellanox.com/page/management_tools

PRM Revision Compatibility

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

Changes and New Features

Category	Description
	11.2008.2102
General	Stability improvements.

Bug Fixes in this Firmware Version

This firmware version does not include Bug Fixes. For a list of old Bug Fixes, please see [Bug Fixes History](#).

Known Issues

The following sections describe known issues in firmware releases and possible workarounds.

Internal Ref.	Issue
955641	Description: VL_HIGH_LIMIT is not affecting the VL arbiter as expected.
	Workaround: Arbitration table should be set using only the low priority VL arbitration table
	Keywords: VL Arbitration
1249608	Description: Configuring weight "0" for VL, results in unexpected behavior.
	Workaround: Arbitration table should be configured with weights other than "0".
	Keywords: VL Arbitration
982005	Description: When connecting 6 & 7 meters, link may raise DDR instead of QDR against GD4000/IS5000 switches.
	Workaround: N/A
	Keywords: Link
-	Description: Congestion Control 1.3 supports congestion log only.
	Workaround: N/A
	Keywords: QoS
-	Description: Port LEDs do not flash on system boot.
	Workaround: N/A
	Keywords: LEDs
-	Description: Link width reduction is not supported in this release.
	Workaround: N/A
	Keywords: Power Management
-	Description: If QDR is not enabled for the switch's InfiniBand Port Speed while connected to ConnectX-3/Pro or Connect-IB® FDR adapters or to

Internal Ref.	Issue
	<p>SwitchX® /SwitchX®-2 FDR switches, links will rise at SDR or DDR (even if FDR is enabled).</p> <p>Workaround: Enable QDR (in addition to FDR) when connecting to peer ports running at FDR</p> <p>Keywords: Interoperability</p>
-	<p>Description: Force FDR10 is not supported on EDR products.</p> <p>Workaround: To raise link with an FDR10 device, make sure all speeds, including EDR, are configured on Switch-IB.</p> <p>Keywords: Interoperability</p>
-	<p>Description: Fallback Routing is not supported for DF+ topology. Fallback Routing Notifications and Adaptive Routing notifications are not supported for topologies others then trees.</p> <p>Workaround: N/A</p> <p>Keywords: Network</p>
697149	<p>Description: Link rises at DDR speed instead of FDR10 when using 100m QDR/FDR10 optical cables.</p> <p>Workaround: N/A</p> <p>Keywords: Link</p>
-	<p>Description: FDR link may rise with symbol errors on optic EDR cable longer than 30M.</p> <p>Workaround: N/A</p> <p>Keywords: Link</p>
-	<p>Description: Fan LEDs may behave unexpectedly in the first 5 seconds of system boot.</p> <p>Workaround: N/A</p> <p>Keywords: LEDs</p>
-	<p>Description: Module info page in Diagnostics Data VS-MAD is not supported</p> <p>Workaround: N/A</p> <p>Keywords: Diagnostics Data VS-MAD</p>

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
	11.2008.1904
General	Stability Improvements.
	11.2008.1604
General	Stability Improvements.
	11.2008.1300
General	Stability Improvements.
	11.2008.0236
General	Stability Improvements.
Power Supply	Delta 550W Power Supply is now backward compatible with Delta 460W PSU.
	11.2007.0300
Performance	Added support for link-negotiated credit size.
	11.2000.3276
Power Supply	Added support for Delta 550m Power Supply.
	11.2000.2626
General	Added support for Error Injection with PTER register.

Category	Description
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.
11.2000.2046	
Link up time	Link up time stability
11.2000.1600	
Bug Fixes	See Bug Fixes History .
11.2000.1000	
Chassis Management	Changed the PSU voltage read from “Vout” to “Vin”.
General	System stability improvements.
11.19100.0618	
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.
11.1701.0010	
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.
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).
11.1610.0206	
General	Bug fixes
11.1610.0196	
General	Added support for congestion control log 1.3 as described in IBTA IB specification release 1.3, Annex A10.

Category	Description
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

Warning

For older releases history, please refer to the relevant firmware versions.

Internal Ref.	Issue
1786686	Description: Wrong behavior of ARGroupTableCopy MAD.
	Keywords: Adaptive Routing
	Discovered in Release: 11.2000.1142
	Fixed in Release: 11.2000.1600
1730194	Description: In rare cases, when connecting between Switch-IB/Switch-IB 2 and Quantum switch systems, traffic lose might occur.
	Keywords: Traffic, Switch-IB/Switch-IB 2, Quantum
	Discovered in Release: 11.2000.1000
	Fixed in Release: 11.2000.1142
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: 11.1500.0034
	Fixed in Release: 11.1630.0206
1092005	Description: Enable SDR speed regardless of cable supported speeds
	Keywords: Link
	Discovered in Release: 11.1400.0102
	Fixed in Release: 11.1500.0106

Internal Ref.	Issue
-	<p>Description: VL arbitration does not distribute traffic as expected in case of multiple VLs.</p> <p>Keywords: General</p> <p>Discovered in Release: 11.1200.0102</p> <p>Fixed in Release: 11.1300.0100</p>
-	<p>Description: In rare cases, FDR links may rise with errors. (Improved BER performance.)</p> <p>Keywords: Link</p> <p>Discovered in Release: 11.1.1002</p> <p>Fixed in Release: 11.1200.0102</p>
-	<p>Description: Insertion of QDR cables into a Switch-IB™ based switch overwrites non-volatile fields (rx_output_amp/emp).</p> <p>Keywords: System Management</p> <p>Discovered in Release: 11.1100.0072</p> <p>Fixed in Release: 11.1200.0102</p>
-	<p>Description: Bubbles appear as symbol errors when link raises FDR 1x.</p> <p>Keywords: Link</p> <p>Discovered in Release: 11.1.1002</p> <p>Fixed in Release: 11.1200.0102</p>
-	<p>Description: PSU fans set to work with 60% max speed by default.</p> <p>Keywords: Chassis Management</p> <p>Discovered in Release: 11.0350.0394</p> <p>Fixed in Release: 11.1100.0072</p>
-	<p>Description: The command “show interfaces ib * transceiver” shows no cable is connected while link is up.</p> <p>Keywords: Chassis Management</p> <p>Discovered in Release: 11.0350.0394</p> <p>Fixed in Release: 11.1100.0072</p>

Internal Ref.	Issue
690231	Description: Fixed MSGI data reading.
	Keywords: General
	Discovered in Release: 11.1.1002
	Fixed in Release: 11.0350.0394
-	Description: In rare cases, link may degrade speed from EDR or FDR to a lower speed. In other cases physical errors may increment.
	Keywords: Link
	Discovered in Release: 11.0350.0372
	Fixed in Release: 11.0350.0394

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