Eye Opening Tool

Rev 0.2.0

Eye Opening Tool Release Notes

Document Number:

1 Overview

These are release notes for the Eye Opening tool Package Rev 0.2.0. Eye Opening is a tool package for:

• Evaluating and testing InfiniBand cables

• Configuring port SerDeses and physical port state (for a single port)

• Finding the optimal configuration for SerDeses of an InfiniBand Tx-Rx pair connected by a cable

This document includes the following sections:

1.1 Platforms and Operating Systems

Table 1 - Supported Platforms and Operating Systems

Architecture	Operating System	Kernel
X86	Red Hat Enterprise Linux 4.0	2.6.9-5.ELsmp,
	Red Hat Enterprise Linux 4.0-U2	2.6.9-22
	Red Hat Enterprise Linux 3.0	Update 4
	SuSE SLES 9.0	2.6.5-7.111.5-smp
	SuSE 9.3 Pro	2.6.11.4-20a-smp
	SuSE 9.3 Pro	2.6.11.11 / 2.6.12 (Kernel.org)
	SuSE 10.0 Pro	2.6.13-15
	SuSE 10.0 Pro	(Kernel.org)
	Fedora Core 3	2.6.9-1.667smp
	Fedora Core 4	Updated default kernel
AMD64 (Opteron)	Red Hat Enterprise Linux AS 4.0	2.6.9-5.ELsmp
	Red Hat Enterprise Linux 4.0-U2	2.6.9-22
	Red Hat Enterprise Linux AS 3.0	Update 4
	SuSE 9.3 Pro	2.6.11.4-20a-smp
	SuSE 9.3 Pro	2.6.11.11 / 2.6.12 (Kernel.org)
	SuSE 10.0 Pro	2.6.13-15
	SuSE 10.0 Pro	(Kernel.org)
	SuSE SLES 9.0	2.6.5-7.111.19-smp
	Rocks 0.3.3	2.4.21-20.Elsmp
	Fedora Core 3	2.6.9-1.667smp
	Fedora Core 4	Updated default kernel
Intel EM64T	Red Hat Enterprise Linux AS 4.0	2.6.9-5.EL
	Red Hat Enterprise Linux 4.0-U2	2.6.9-22
	Red Hat Enterprise Linux AS 3.0	Update 4
	SuSE 9.3 Pro	2.6.11.4-20a-smp
	SuSE 9.3 Pro	2.6.11.11 / 2.6.12 (Kernel.org)
	SuSE 10.0 Pro	2.6.13-15
	SuSE 10.0 Pro	(Kernel.org)
	SuSE SLES 9.0 RC5	2.6.5-7.111.19-smp
	Fedora Core 3	2.6.9-1.667smp
	Fedora Core 4	Updated default kernel

1.2 Software Prerequisites

• MST (Mellanox Software Tools) version 4.2.0 or later must be installed.

• Tcl version 8.4 or later must be installed.

2 Changes and New Features

- Reorganized the package and reduced its size (library cleanup).

- The GUI tool (eye_gui) now supports the HCA devices InfiniHost III Ex (MT25208) and InfiniHost III Lx (MT25204) in addition to the InfiniScale III (MT47396).

- Renamed tools:

    - eye_gui (previously is3_eye_gui)

    - eye_opening_is (previously is3_eye_opening)

    - eye_opening_ex (previously ih_eye_opening)

- Added the eye_opening_lx tool which supports the single IB port InfiniHost III Lx device.

- Added a configuration mode, *set_conf*, for configuring port SerDeses and physical port state (for a single port).

- Added the '-con' flag to Eye Opening tools run from the command line (this does not apply to the GUI tool). This flag instructs the tool to skip checking for a connected cable.

- The Eye Opening GUI (in *full configuration scan* and *def_conf* modes) no longer checks for a connected cable. Instead, it runs assuming a cable is connected.

For details and operation of the tools, please refer to the *Eye Opening User's Manual, Document no. 2190UG (rev 0.40 or later).*

3 Known Issues

The tool was verified on the MTS2400 switch system and the MHEA28-XT HCA Adapter Card. The verification uncovered the issues listed in Table 2.

Table 2 - Known Issues

Description	Details
eye_opening_is results may vary on different ports	The tool may produce different results using the same cable for different ports. This item applies whether eye_opening_is is run from the command line or from the GUI.
No support for IB DDR auto-negotiation	Firmware burnt using a DDR-specific .INI file supplied by Mellanox configures the IB ports to auto-negotiate for DDR operation. The Eye Opening tool package will not operate correctly unless an SDR-only or a DDR-only firmware is burnt. Workaround: If IB DDR SerDes configuration is desired, the DDR .INI file must be modified to configure the IB ports to DDR only. Using this modified .INI file a new firmware needs to be burnt using the *mlxburn* tool (which is part of the MFT package[1]). After this, it is possible to apply the Eye Opening tools.
If IB port SerDeses of a switch system need to be run at a different speed than the one used for Eye Opening configuration, it is recommended to reset the system	Example: If Eye Opening was run for configuring the IB port SerDeses of a switch system at DDR, and after this session the SerDeses need to run at SDR for an application/test, you should reset the switch system.
When running Eye Opening do not run another application that uses the I2C bus	Doing so may block the Eye Opening session

1. This package is accessible via http://www.mellanox.com under 'Firmware Downloads'.

4 Fixed Bugs

Table 3 - Fixed Bugs

Issue	Details
Closing eye_gui does not end the run	The Eye Opening scanning process is now terminated when the GUI is closed.