



Release Notes

BridgeX® Firmware fw-BridgeX

Rev 8.2.000

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BridgeX Firmware fw-BridgeX Release Notes

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1 Overview

These are the release notes for the BridgeX® gateway firmware, fw-BridgeX Rev 8.2.000. This firmware supports the following protocols:

- Ethernet over InfiniBand (EoIB)
- Fibre Channel over Ethernet (FCoE)
- Fibre Channel over InfiniBand (FCoIB)
- Ethernet to Ethernet (PHY)

Note: After burning new firmware to an gateway system, reboot the machine so that the new firmware can take effect. If you do not reboot, you will get an error in the RUN_FW command.

The document consists of the following sections:

- “Revision Compatibility” (page 3)
- “Changes & Major New Features From 8.1.000” (page 3)
- “Bug Fixes” (page 4)
- “Known Issues” (page 5)

2 Revision Compatibility

- Firmware fw-BridgeX Rev 8.2.000 complies with *BridgeX Programmer's Reference Manual (PRM), Rev 0.60 or later*.
- Firmware fw-BridgeX Rev 8.2.000 complies with *Mellanox BridgeX Management (BXM)* software version 1.3.4-0.

3 Changes & Major New Features From 8.1.000

- Support for BridgeX Step A2 device (OPN: MT68102A2-FCC[R]-VEF)
- Added batch programming. Up to 7 entries of one command can be added to the context table (see PRM Section 3.9.1)
- Added the capability to move the Fiber Channel link to offline state (see PRM Section 3.9.3)
- Support for FC link reset – at alpha level
- Added anti-spoofing by slid, and an anti-spoofing capability field (see PRM Section 3.9.2)
- system_guid and wwnn can now be also set (see PRM Section 3.9.2)
- Added EQ overflow handling
- Implemented the internal port properties attribute (see PRM Section 3.9.4)
- Implemented speed autonegotiation as per the InfiniBand Architecture Specification, Release 1.2.1
- Support for combined IB speed autonegotiation (both according to Mellanox proprietary protocol and the InfiniBand Architecture Specification, Release 1.2.1)
- Added the firmware configuration (.ini) file parameters *fec_requested* and *fec_ability* per port

- Added the fields *eth_proto_cap* and *fc_proto_cap* to the BXM external port attribute (see PRM Section 3.9.3)
- Support for the 4th port during Fibre Channel autonegotiation
- Added events in cases of Ethernet port state changes
- Added the command External Port Module Query (see PRM Section 3.9.6)
- Support for manual link up (see PRM Section 3.9.3)
- Support for KR

4 Bug Fixes

Table 1 - Bug Fixes

Index	Issue	Description	Found in FW Version	Fixed in FW Version
1.	Spurious pulse on thermal warning GPIOs after reset deassertion	300ms after reset is deasserted, a spurious pulse on the GPIO pins THERM and TEMP_WARN may be observed	8.1.000	8.2.000
2.	IB auto-negotiation is not supported on BX4020 Gateway Platforms		8.1.000	8.2.000
3.	Port link status indicator LED remains on after port disable	Fixed	8.1.000	8.2.000
4.	Wrong num_int_ports reported by query_dev_cap	See PRM Section 7.2.1.6 for details	8.1.000	8.2.000
5.	Fixes for various counters	<ul style="list-style-type: none"> • Proper reset of counters upon INIT_PORT/CLOSE_PORT • Eth counters: RFC_3635, unknown_opcodes counter, CLI, other_counters counter • IB counters: symbol_error counter 	8.1.000	8.2.000
6.	RX adaptation	Always worked on Lane 0. Fixed.	8.1.000	8.2.000
7.	CR-space timeouts fixes		8.1.000	8.2.000
8.	KR fixes	<ul style="list-style-type: none"> • No more than one KR port in a slice was supported • Problem bringing up a KR port after reset 	8.1.000	8.2.000
9.	lampree failures fixes		8.1.000	8.2.000
10.	External port properties attr updates/modifications	Updated/modified fields in the external port properties attribute (see PRM Section 3.9.3) and modified RO/RW	8.1.000	8.2.000
11.	Go bit does not clear	Fixed	8.1.000	8.2.000
12.	Context table attribute GET	Wrong fcid value of FC control type (see PRM Section 3.9.1)	8.1.000	8.2.000
13.	Wrong fc_control_frames return value	Wrong protocol options in the gateway group properties attribute (see PRM Section 3.9.2)	8.1.000	8.2.000

5 Known Issues

The following table describes known issues in this firmware release and possible workarounds.

Table 2 - Known Issues

Index	Issue	Description	Current Implemented Workaround in FW	Possible Workaround	Scheduled Release (fix)
1.	Firmware does not verify actual capability of Fiber Channel module speed capability	Auto-negotiation of Fiber Channel ports should not include speeds that are not supported by the module	N/A	N/A	Next release
2.	Fibre Channel link reset is in alpha state		N/A	N/A	Next release
3.	DCBX command is not implemented		N/A	N/A	Next release
4.	Firmware does not verify the actual capability of the Fiber Channel module's speed capability		N/A	N/A	Next release
5.	Fibre Channel / Ethernet protocol indicator LEDs of external ports do not work		N/A	N/A	Next release