

## FC Adapter STOR Miniport Driver for Windows

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## 1. Version

These release notes describe the changes, fixes, known issues, and release details that apply to FC HBA STOR miniport driver, version 9.1.8.17.

This driver package includes firmware versions 5.01.02 (4Gb adapters) and 5.01.02 (8Gb adapters), as well as API version 1.28.0.73 (QLSDM).

The STORport driver for Windows Server 2003 SP1 platforms requires the KB932755/KB939315 (or later) update, which you must apply before installing or upgrading to this version of the miniport driver. For boot installations, install Windows Server 2003 SP2 first, then install the KB update.

## 2. Changes

The following changes have been made to the FC adapter STOR miniport driver between versions 9.1.8.16 and 9.1.8.17.

### Hardware Support

None

## OS Support

None

## Software/Driver

Driver restores 4G FC PCIe Device Control and Link Control registers based on saved value

## Industry Standards Compliance

N/A

## 3. Bug Fixes

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The following fixes have been made to the FC adapter STOR miniport driver between versions 9.1.8.16 and 9.1.8.17.

None

## 4. Known Issues

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None

## 5. History

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### 9.1.8.16 QL - 04/08/09

- Firmware versions: 4.06.04 (4Gb/8Gb)
- API version 1.28.0.72 (QLSDM)
- Added support for the following devices (supported platforms) (2.3n):
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_01761077 (x86, ia64, x64)
- Removed support for the following devices (2.3h):
  - PCI\VEN\_1077&DEV\_8432&SUBSYS\_010E1077 (x86, x64)
  - PCI\VEN\_1077&DEV\_2432&SUBSYS\_004A1137 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2300&SUBSYS\_00091077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2300&SUBSYS\_01061077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2312&SUBSYS\_01000E11 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2312&SUBSYS\_01001077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2312&SUBSYS\_01010E11 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2312&SUBSYS\_01011077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2312&SUBSYS\_01020E11 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2312&SUBSYS\_01021077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2312&SUBSYS\_01021749 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2312&SUBSYS\_01030E11 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2312&SUBSYS\_01040E11 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2312&SUBSYS\_01050E11 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2312&SUBSYS\_01060E11 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2312&SUBSYS\_01070E11 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2312&SUBSYS\_01080E11 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2312&SUBSYS\_010A1077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2312&SUBSYS\_01491077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2312&SUBSYS\_018A1028 (x86, x64)
  - PCI\VEN\_1077&DEV\_2312&SUBSYS\_027D1014 (x86, IA64, x64)

- PCI\VEN\_1077&DEV\_2312&SUBSYS\_02FB1014 (x86, IA64, x64)
- PCI\VEN\_1077&DEV\_2312&SUBSYS\_10511734 (x86, IA64, x64)
- PCI\VEN\_1077&DEV\_2312&SUBSYS\_34A08086 (x86, IA64, x64)
- PCI\VEN\_1077&DEV\_2312&SUBSYS\_34BA8086 (x86, IA64, x64)
- PCI\VEN\_1077&DEV\_2322&SUBSYS\_01151077 (x86, IA64, x64)
- PCI\VEN\_1077&DEV\_2322&SUBSYS\_01161077 (x86, IA64, x64)
- PCI\VEN\_1077&DEV\_2322&SUBSYS\_01171077 (x86, IA64, x64)
- PCI\VEN\_1077&DEV\_2322&SUBSYS\_01181077 (x86, IA64, x64)
- PCI\VEN\_1077&DEV\_2322&SUBSYS\_01701028 (x86, x64)
- PCI\VEN\_1077&DEV\_2322&SUBSYS\_34BC8086 (x86, x64)
- PCI\VEN\_1077&DEV\_2322&SUBSYS\_82BF1033 (x86, ia64, x64)
- PCI\VEN\_1077&DEV\_6312&SUBSYS\_01191077 (x86, x64)
- PCI\VEN\_1077&DEV\_6312&SUBSYS\_011C1077 (x86, x64)
- PCI\VEN\_1077&DEV\_6322&SUBSYS\_012F1077 (x86, x64)
- PCI\VEN\_1077&DEV\_6322&SUBSYS\_01321077 (x86, x64)
- PCI\VEN\_1077&DEV\_2312&SUBSYS\_01311077 (IA64)
- PCI\VEN\_1077&DEV\_2312&SUBSYS\_12BA103C (IA64)
- PCI\VEN\_1077&DEV\_2312&SUBSYS\_12C2103C (IA64)
- PCI\VEN\_1077&DEV\_2312&SUBSYS\_12C7103C (IA64)
- PCI\VEN\_1077&DEV\_2312&SUBSYS\_12C9103C (IA64)
- PCI\VEN\_1077&DEV\_2312&SUBSYS\_1329103C (IA64)
- Removed support for 2Gb FC adapters.
- Added 32 vectors support for 8Gb FC adapters.
- Added QoS support.
- Added VSAN support.
- Added no I/O space support for OEM specific 4Gb/8Gb FC adapters.
- Added support for NPIV statistics.
- Added support for reading NPIV configuration from persistent storage.
- Added support for using Flash tables.
- Added support for 512K block size.
- Maintained the CTO disabled setting.
- Changed the 4G PCIe adapters' Maximum Read Request Size to use the default value of 128.

#### **9.1.7.18 QL - 05/22/08**

- Firmware versions: 3.03.25 (2Gb), 4.04.00 (4Gb/8Gb).
- API version 1.28.0.63 (QLSDM).

#### **9.1.7.17 QL - 05/21/08**

- Added support for the following devices (supported platforms) (2.3m):
  - PCI\VEN\_1077&DEV\_8432&SUBSYS\_010E1077 (x86, x64)
  - PCI\VEN\_1077&DEV\_2432&SUBSYS\_014B1077 (x86, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_01701077 (x86, ia64, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_01711077 (x86, ia64, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_01721077 (x86, ia64, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_01731077 (x86, ia64, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_01741077 (x86, ia64, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_01751077 (x86, ia64, x64)
  - PCI\VEN\_1077&DEV\_2432&SUBSYS\_004A1137 (x86, ia64, x64)

- Removed support for the following devices (supported platforms):
  - PCI\VEN\_1077&DEV\_2432&SUBSYS\_011C1077 (x86, x64)**NOTE:** Microsoft requires x86 and x64 support for all HBAs.
- Firmware versions: 3.03.25 (2Gb), 4.03.02 (4Gb).
- API version 1.28.0.63 (QLSDM).
- Added support for 64-bit QLSDM DLLs.
- Enabled FDMI by default.
- Added support for Atmel flash AT26DF081A.
- Removed support for obsolete qd parameter.
- Changed the driver to not log events caused by I/O completion errors.

#### 9.1.7.16 QL - 02/19/08

- Added support for the Windows Server 2008 operating system.
- Applied a fix to handle logout in the loop environment.

#### 9.1.7.15 QL - 10/30/07

- Added support for the following devices (supported platforms):
  - PCI\VEN\_1077&DEV\_2432&SUBSYS\_01081077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_015C1077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_015D1077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_015E1077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_015F1077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_01601077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_01611077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_01621077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_01631077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_01641077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_3261103C (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_3262103C (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_3263103C (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2532&SUBSYS\_3264103C (x86, IA64, x64)**NOTE:** Microsoft requires x86 and x64 support for all HBAs.
- Firmware versions: 3.03.25 (2Gb), 4.02.00 (4Gb).
- API version: 1.28.0.50 (QLSDM).
- Unique assignment of management server N-port handle values to be for each virtual port.
- NPIV (N\_Port ID Virtualization).
- Target link speed (iIDMA).
- PcieLinkCap/Stat to HbaDeviceChipProperty.
- Flash layout regions for 4Gb and returned flash layout table from flash if it is valid.
- Three Alternate Boot Devices and OOF (out-of-order frame receive).
- Removed QL2XHA12: IHVs are required to use HBA API provided by Microsoft.
- Preserved BIOS defaults when updating multi-boot image whose BIOS locations can be anywhere in the image.
- Fixed checksum calculation in QLSDM when two-bios image is flashed.
- Fixed ER50975: Initiator discovery problem caused a large burst of RSCN activity when the NetApp does its failover.

- A failed GPNID command occurring during ports discovery must not cause the termination of the discovery process.
- Handled the case where the GNNFT command was failing due to incorrectly calculated the maximum data response length.
- Setting the alternate WWN and enabling it in the NVRAM did not propagate through to the HBA. Reading the NVRAM and reinitializing the HBA will handle this case.

#### **9.1.4.16 QL 3.03.21 4.00.26 - 02/02/07**

- Adhered to Subsystem Id document v2.2m+.
- Firmware versions: 3.03.21 (2Gb), 4.00.26 (4Gb).
- API versions: 1.28.0.37 (QLSDM), 2.0.0.14 (QL2XHAI2).
- Fixed ER50975: Initiator discovery problem caused a large burst of RSCN activity when the NetApp does its failover. A failed GPNID command occurring during ports discovery must not cause the termination of the discovery process.

#### **9.1.4.15 QL 3.03.21 4.00.26 - 11/17/06**

- Firmware versions: 3.03.21 (2Gb), 4.00.26 (4Gb).
- API versions: 1.28.0.37 (QLSDM), 2.0.0.14 (QL2XHAI2).
- Adhered to Subsystem Id document v2.2m+.
- NOTE: Microsoft requires both x86 and x64 support all HBAs.
- Added support for the following devices (supported platforms):
  - PCI\VEN\_1077&DEV\_2322&SUBSYS\_01151077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2322&SUBSYS\_01161077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2422&SUBSYS\_1336103C (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2432&SUBSYS\_015B1077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_5432&SUBSYS\_01551077 (x86, x64)
  - PCI\VEN\_1077&DEV\_5432&SUBSYS\_01561077 (x86, x64)
  - PCI\VEN\_1077&DEV\_2422&SUBSYS\_014A1077 (IA64)
  - PCI\VEN\_1077&DEV\_2432&SUBSYS\_014B1077 (IA64)
- Removed support for the following devices:
  - PCI\VEN\_1077&DEV\_6312&SUBSYS\_01301077 (x86, x64)
  - PCI\VEN\_1077&DEV\_2422&SUBSYS\_01471077 (IA64)
  - PCI\VEN\_1077&DEV\_2432&SUBSYS\_01451077 (IA64)
- Conformed QLSDM and the driver to the revised API for "Get/Set Target Link Speed".
- Increased loop back test buffer size to 2048 bytes in QLSDM.
- Closed ER49768: Loopback test always failed when the NVRAM frame size is set to 512 or 1024 (Windows). Pass in transfer size instead of hard coded value in QLSDM.
- Handled the case where the device becomes not ready in the StartIO routine.
- Closed ER48374: SANsurfer 5.0.0 Build 4 - Driver 9.1.3.10b2 - Windows IA64 SP1 - HP. The HBA model numbers do not show up on Information Tab.
- Closed ER48117 (AR 48907, SR70415 [REF:609618455]): Long Erase (0x019) issues with DLT S4 and QLE2462. Error occurs (most likely a bus reset) when running a long erase that takes longer than 110 minutes on the Quantum DLT-S4 (firmware:0808) drive, which exceeds the built in 4Gb firmware timeout limit.

#### **9.1.3.16 QL 3.03.21 4.00.23 - 10/05/06**

- This version replaces the invalid release 9.1.3.15.
- Firmware versions: 3.03.21 (2Gb), 4.00.23 (4Gb).

- API versions: 1.28.0.35 (QLSDM), 2.0.0.14 (QL2XHAI2).
- Removed I/O Reduction support for the 4G HBA.

#### **9.1.3.15 QL 3.03.21 4.00.23 - 09/19/06**

- Firmware versions: 3.03.21 (2Gb), 4.00.23 (4Gb).
- API versions: 1.28.0.35 (QLSDM), 2.0.0.14 (QL2XHAI2).
- Added OEM specific support for assigning a Virtual World Wide Port Name via registry key.
- Added "Get/Set" target link speed support.
- Changed the INF to enable the I/O Reduction for the 4Gb HBA for the IA64 platform based on Microsoft document.
- Added multiple BIOS support in QLSDM.
- Initialized debug file name variable during DLL load (QL2XHAI2).
- Closed EMC OPT23605: x64 Server hangs during boot at the 'Applying Computer Settings.'
- Cleaned up code related to get Object text for OS Device Name (QL2XHAI2).
- Closed ER47338: Attached target devices not visible to OS after server reboot (QLE220).
- Closed ER47436: Driver not Login into Target Devices (QLE220).
- Closed ER47530: Topology diagram is not displaying properly when LIP issued on QLA2462 port.

#### **9.1.2.19 QL 3.03.19 4.00.23 - 06/30/06**

- Firmware versions: 3.03.19 (2Gb), 4.00.23 (4Gb).
- Closed ER46891: Bus Resets Under Heavy I/O Load.
- API Versions: 1.28.0.33 (QLSDM), 2.0.0.12 (QL2XHAI2).
- Closed ER47166: SANsurfer FC HBA Manager B83 showed only one port see the storage even though no zoning.
- Closed OPT 235681: port failure after disconnecting and reconnecting ISL port used by Mirrorview.
- Closed ER47235: SANsurfer FC HBA Manager does not display the topology view correctly when the HBAs are set to loop only until the system is rebooted.

#### **9.1.2.18 QL 3.03.19 4.00.22 - 06/16/06**

- Firmware versions: 3.03.19 (2Gb), 4.00.22 (4Gb).
- API Versions: 1.28.0.33 (QLSDM), 2.0.0.12 (QL2XHAI2).
- Added VPD update support for 2432 4-port adapter in 1.28.0.33 (QLSDM).
- Recognized Asynchronous Event 8048h as a valid AEN.
- Modified timer task to handle the case when HBA is in a stopped state.
- 24xx only: Added support for NVRAM Nodename option bit.
- 4Gb only: Added support for reading data from SFP (Small Form Factor Pluggable) optical transceivers via QLSDM.
- Adhered to Subsystem Id document v2.2g.
- Added support for the following devices (supported platforms):
  - PCI\VEN\_1077&DEV\_2422&SUBSYS\_014D1077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2432&SUBSYS\_014C1077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2432&SUBSYS\_01521077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2432&SUBSYS\_01531077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2432&SUBSYS\_01541077 (x86, IA64, x64)

- PCI\VEN\_1077&DEV\_5432&SUBSYS\_014E1077 (x86, x64)
- Adhered to firmware dump procedure per 2400 Series Firmware Interface Specification version C.
- Closed ER47113: RX2600 fails to boot Windows after 1MB bin flash - SANsurfer 2.0.30b84\_windows.
- Fixed: LUNs disappeared after DS4000 controller firmware download in direct attach.
- Closed ER46586: "Bind By Port ID + Present Targets that are persistently bound only" is not working (in loop environment).
- Changed to perform the full firmware dump when firmware error occurs.
- Closed ER46141: JBOD disks turn offline in SANsurfer FC HBA Manager and SANsurfer FC HBA CLI when settings are Present targets that are persistently bound + Bind by Port id (in loop environment).
- Corrected firmware region size in option ROM layout, i.e. firmware size in flash.
- Closed ER45035: GPN\_ID has wrong payload length after unplug/re-plug.
- When using the QLSDM to retrieve the transceiver data, you may get SDMGT\_CANNOT\_GET\_SFP\_DATA error on system platforms using certain models of Supermicro Motherboard such as P3TDL3 and P3TDLE. The QLSDM retrieves the transceiver data using underlying 4Gb firmware (v4.00.21) that reports an error code of 4005 for this operation.
- Verified support for Atmel flash chip AT26DF081A.

#### **9.1.2.16 QL 3.03.19 4.00.18 - 03/16/06**

- Firmware versions: 3.03.19 (2Gb), 4.00.18 (4Gb).
- Adhered to Subsystem Id document v2.2f.
- Added support for the following devices (supported platforms):
  - PCI\VEN\_1077&DEV\_6312&SUBSYS\_01191077 (x86, x64)
  - PCI\VEN\_1077&DEV\_6312&SUBSYS\_011C1077 (x86, x64)
  - PCI\VEN\_1077&DEV\_6312&SUBSYS\_01301077 (x86, x64)
  - PCI\VEN\_1077&DEV\_6322&SUBSYS\_012F1077 (x86, x64)
- Set additional firmware option bit 10 for 2Gb HBA so the firmware waits for the task management command, (such as reset LUN to complete.)
- Closed OPT226506: HBA does not re-login to target after target sends LOGO to HBA.
- Closed ER44735: The link status behave differently between QLE-2460 and QLA2342.
- Closed ER45228: Incorrect HwVersion string is reported by QLogic IHV HBA\_GetAdapterAttributes call.
- Closed ER45230: Event Id 11 entries logged by ql2300 at offset x10 and offset x34 do not match the Error Codes published on the web. Since the Miniport uses the Microsoft's Storport.sys driver to actually log the error event, and it has been confirmed that the storport.sys driver logs the event incorrectly. A bug has been reported to Microsoft on this: SRX041110604850 (STORport - Incorrect event data is logged when storport's storportlogerror). Meanwhile, the Miniport driver is changed to log the event code at offset x10 by default. This workaround is controlled by the registry parameter "mevtrworkaround". Please see readme file for detail on this parameter.
- Closed ER45232: Use memory map mechanism in the driver.

#### **9.1.2.15 QL 3.03.19 4.00.17 - 02/13/06**

- Firmware versions: 3.03.19 (2Gb), 4.00.17 (4Gb).

- Adhered to Subsystem Id document v2.2e
- Added support for the following devices (supported platforms):
  - PCI\VEN\_1077&DEV\_5432&SUBSYS\_013E1077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_5432&SUBSYS\_013F1077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2422&SUBSYS\_014A1077 (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2432&SUBSYS\_014B1077 (x86, IA64, x64)
- Added support to use combined 2Gb IPX firmware.
- Added support for SST25VF080B flash part.
- Added option for not to dump code section for 24xx firmware dump.
- Closed ER44270: Serial number for the 4Gb HBA should be obtained from the VPD.
- Closed ER38787: Windows 2000/qla2340/veritas tape backup long cable pull failed error message ERROR\_DEVICE\_NOT\_CONNECTED.

#### **9.1.1.15 QL 3.03.18 4.00.12 - 10/12/05**

- Firmware versions: 3.03.18 (2Gb), 4.00.12 (4Gb).
- Closed PTR 90818: QLogic 4Gb driver returns selection timeout immediately after cable pull in an OEM special dual loop configuration.
- Closed PTR 90652: QLogic Driver returns a selection timeout when rebooting a controller in an OEM special dual loop configuration.

#### **9.1.0.18 QL 3.03.18 4.00.12 - 10/11/05**

- Firmware versions: 3.03.18 (2Gb), 4.00.12 (4Gb).
- Adhered to Subsystem Id document v2.2d.
- Added support for the following devices (supported platforms):
  - PCI\VEN\_1077&DEV\_2422&SUBSYS\_12D7103C (x86, IA64, x64)
  - PCI\VEN\_1077&DEV\_2312&SUBSYS\_01491077 (x86, IA64, x64)

#### **9.1.0.17 QL 3.03.18 4.00.12 - 09/21/05**

- Firmware versions: 3.03.18 (2Gb), 4.00.12 (4Gb).

#### **9.1.0.16 QL 3.03.16 4.00.12 - 08/29/05**

- Firmware versions: 3.03.16 (2Gb), 4.00.12 (4Gb).
- Embedded 24xx firmware in the driver.
- Closed ER43175: New driver could not detect any device to install as BOOT from SAN on one specific setup.

#### **9.1.0.15 QL 3.03.16 - 08/10/05**

- Firmware versions: 3.03.16 (2Gb), (Use onboard 4Gb firmware.)
- Added 24xx support.
- Closed ER42601: Need to change bit used to control LED mode.

#### **9.0.2.17 QL 3.03.13 - 04/07/05**

- Firmware versions: 3.03.16 (2Gb).

## **6. Additional Information**

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None

## 7. Firmware (Embedded in Driver)

The following tables show the changes and bug fixes to the firmware that is embedded in the drivers for the 4Gb Fibre Channel adapters, 8Gb Fibre Channel adapters, and Converged Network Adapters from versions 4.06.00 to 5.01.02.

### Changes

Change	Description
<b>5.01.01 to 5.01.02</b>	
None	
<b>5.01.00 to 5.01.01</b>	
None	
<b>5.00.00 to 5.01.00</b>	
[ER64026]	8100 Only. Implement FIP VLAN Discovery.
[ER64406]	8100 Only. Implement SFP Read/Write Mailbox Commands (031h and 030h). For details, see the <i>8100 Series Fibre Channel Firmware Interface Specification Rev C</i> .
[ER64342]	8100 Only. When detected, report MPI configuration error and reason code in Get Firmware State Mailbox Command (069h). For details, see the <i>8100 Series Fibre Channel Firmware Interface Specification Rev C</i> .
[ER64673]	8100 Only. Implement Get XGMAC Statistics Mailbox Command (07Ah). For details, see the <i>8100 Series Fibre Channel Firmware Interface Specification Rev C</i> .
[ER64732]	8100 Only. Return SFP status information. See Asynchronous Event 8012h and Mailbox Commands 05Dh, 048h, 060h, and 069h. For details, see the <i>8100 Series Fibre Channel Firmware Interface Specification Rev C</i> .
[ER64672]	8100 Only. Update Get DCBX Parameters Mailbox Command (051h) to match latest spec. For details, see the <i>8100 Series Fibre Channel Firmware Interface Specification Rev C</i> .
[ER64391]	8100 Only. Added new error completion codes to Restart MPI Mailbox Command (03Dh). For details, see the <i>8100 Series Fibre Channel Firmware Interface Specification Rev C</i> .
[ER62531]	2532 and 8100 Only. Add DSD chaining support to command CRC type IOCBs.
[ER64497]	8100 Only. Modify Report ID Acquisition IOCB to return sub code for status 0x01, Unable to acquire ID, for FDISC. The sub code is returned at offset 10h.
[ER62265] [ER63194] [ER62894] [ER61070] [ER63873]	Customer-specific changes.
[ER64455] [ER63872]	8100 Only. Updated Immediate Notify to reflect format described in Firmware Spec. For details, see the <i>8100 Series Fibre Channel Firmware Interface Specification Rev C</i> .

### Changes (*continued*)

Change	Description
<b>4.06.00 to 5.00.00</b>	
[ER62857]	MID only. The firmware now returns a Port Unavailable (28h) Completion Status if the VP Index fails validation during a SCSI Task Management request.
[ER63650]	SB2 only. The firmware now allows Get Link Status Mailbox Command (06bh) to complete even though Process Login has not completed.
[ER62858]	MID only. The firmware now allows Get VP Database Mailbox Command (49h) regardless of VP Status.

### Bug Fixes

Error	Description
<b>5.01.01 to 5.01.02</b>	
[ER65155]	8100 only. Corrected ELS and BLS timeout units conversion when processing Mailbox Commands Get Timeout Parameters (0022h) and Set Timeout Parameters (0032h).
[ER65415]	8100 only. Rediscover FCF's if FIP FLOGI times out.
<b>5.01.00 to 5.01.01</b>	
[ER65165]	Corrected an issue after External Loopback was performed that prevented FIP from completing.
<b>5.00.00 to 5.01.00</b>	
[ER64377]	8100 Only. Correct an issue with Flash Access Mailbox Command (003Eh).
[ER64585]	8100 Only. Fixed incorrect Destination MAC address in FIP FLOGI request after an FCF Fabric name change.
[ER64454]	8100 Only. Fix FIP Failure to find FCF after a number of cable pulls/insertions into different FCF ports.
[ER64520]	8100 Only. Corrected false Loopback errors reported during internal and external tests.
[ER64315]	SB2 Only. Corrected a condition where the System Defined 1 field of an IOCB being returned to the system driver may be over written.
[ER64176]	Corrected a condition where an Immediate Notify could be sent to the system driver when a VP is not configured for Target Mode operation.
[ER64265]	8100 Only. Corrected a potential firmware hang condition after processing an ELS timeout or recovering from an internal error.
[ER64435]	8100 Only. Corrected potential FCoE traffic stall after Port Reset completes.
[ER64507]	8100 Only. Get FCF List Mailbox Command (050h) may fail to find valid FCF Index.
[ER64567]	Corrected potential RISC pause when PUREX is enabled.

### Bug Fixes (*continued*)

Error	Description
[ER63856]	8100 Only. Corrected handling of FLOGI Timeout and Reject processing by using Retry Count and Timeout as specified in Initialize Firmware Control Block.
[ER64902]	8100 Only. Corrected Firmware hang condition after receiving an ABTS.
[ER64705]	2400/2532 Only. Corrected a condition where a FCP RSP could be transmitted across a LIP and before the discovery timer expires in private loop topology.
[ER64251]	Corrected cleanup of pending Transmit Data requests across fault injection.
[ER64590]	8100 Only. Allow primary port to be discovered via FDISC after it received a Clear Virtual Link or Fabric LOGO and another Virtual Port becomes the master.
<b>4.06.00 to 5.00.00</b>	
[ER61682]	Fixed an issue that delayed starting new Transmit requests if a Transmit error is pending.
[ER62172] [ER62000]	Corrected the auto-negotiation algorithm that could prevent the link from establishing when connected to a switch.
[ER63563]	Corrected an issue where a Mailbox or Mailbox IOCB request would not complete if a Fabric LOGO occurred.
[ER63564]	DISK CRC only. Corrected a RISC Pause condition reported during cable pull testing.
[ER63488]	Corrected IDLE character to ArbFF when connected at 8Gb rate.
[ER62798]	MID only. Corrected various issues relating to VF support.
[ER62826]	Corrected issues found with VF and Fabric LOGO processing. Also corrected the valid VP Count range to 1-254.
[ER63913]	2532 MID multiple queue only. Corrected a link credit issue that resulted in decreased performance.
[ER63790]	Fixed an incorrect Response In Pointer reported in the RISC to Host Status Register when running in ZIO mode.
[ER63400] [ER62952]	Completed various FCE tracing fixes.
[ER63104]	Customer-specific fix.
[ER61666]	Fixed an issue to prevent initiating an LR upon a Transmit timeout while the firmware services other requests.
[ER62715]	Corrected CTIO handling when link is down and CTIO received with an Exchange Address of FFFFFFFFh.
[ER62886]	MID only. Corrected Source and Destination Address on an SCR retry.

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## 10. Contacting Support

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Please feel free to contact your QLogic approved reseller or QLogic Technical Support at any phase of integration for assistance. QLogic Technical Support can be reached by the following methods:

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