



BIOS for QLA2xx FC HBAs

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1. OS Support

This BIOS supports the DOS, Windows 2000, Windows 2003, Novell NetWare, Solaris x86, and Linux on x86 based systems.

2. Supported Features

- Up to 256 LUNs
- Point-to-point and loop configuration
- Boot capability in FC-AL and fabric topologies

3. BIOS Package Contents

The following table describes the files provided for QLA200/QLA210.

File	Description
ql63xxrm.bin	Binary image of the BIOS for QLA200/210
Flasutil.exe	Utility program to flash the BIOS
63xxReleaseNotes.txt	BIOS release notes
63xxReadme.txt	Text version of this readme file

4. Using FlasUtil

The QLogic flash programming utility is a DOS utility. Please boot to DOS or Floppy to run the utility. Do not run this utility from drive connected to the HBA.

Make sure `Flasutil.exe` and the source files `ql63xxrm.bin` are in the same directory.

4.1. Flashing the BIOS

1. Insert the QLA2xx controller in the system.
2. Boot to DOS.
3. Run FlasUtil program by typing `flasutil` at the command prompt.

If the program detects a QLA2xx controller, the following is displayed:

QLA2xx Adapter found at I/O address: xxxx

NOTE: If the QLA2xx controller is not detected, run `FlasUtil` again with the `/I` (Ignore Subsystem ID) option.

4. Select `F` to write Flash. `FlasUtil` writes Flash to adapter using `ql63xxrm.bin` found in the same directory.
5. Reboot the system.

4.2. FlasUtil Command Line Options

QLogic FLASH Programming Utility is a DOS utility with the following command line options.

BIOS Flash Options

Option	Description
/F <i>xxxx</i>	Write BIOS Flash, Adapter Address = <i>xxxx</i> . If no address specified then write flash to all adapters. If the flash already contains a valid BIOS, the existing NVRAM defaults are preserved.
/O <i><filename.ext></i>	Use <i><filename.ext></i> instead of QL63xxRM.BIN.
/I	Ignore Subsystem ID.
/M	Do not prompt for I/O address.
/Q	Quiet Mode, no messages are displayed.
/C <i>xxxx</i>	Verify Flash of Adapter at Address <i>xxxx</i> . If no address specified then verify flash of all adapters.
/W <i>xxxx</i>	Copy BIOS Flash to file: QL1xROM.SAV, adapter address = <i>xxxx</i> .
/V <i>xxxx</i>	Display current version number of BIOS on adapters at address <i>xxxx</i> . Entering this option without an address displays the BIOS version of all adapters.
/S <i>xxxx</i>	Display serial number of adapter at address <i>xxxx</i> . Entering this option without an address displays serial number of all adapters.
/Y <i>xxxx</i>	Display Port Name of adapter at address <i>xxxx</i> . If no address specified then display Port Name of all adapters.

Usage Example

To write flash in all QLogic HBAs in a system without being prompted for I/O address:

```
flasutil /f - This updates the BIOS while preserving previous NVRAM defaults.
```

5. QLA2XX Configuration Parameters

NOTE: The Fast!Util BIOS utility does not run on Sun SPARC systems. Refer to the FCode Guide for the QLA2xx Board Family for information regarding adapter configuration settings.

This section provides detailed configuration information for advanced users who want to customize the configuration of the QLA2xx HBA and the connected devices. You can configure the HBA using Fast!UTIL. Access Fast!UTIL by pressing **<ALT>+<Q>** or **<CTRL>+<Q>** during the QLA2xx HBA BIOS initialization (it may take a few seconds for the Fast!UTIL menu to appear). If you have more than one QLA2xx HBA, Fast!UTIL asks you to select the HBA you want to configure. After changing the settings, Fast!UTIL reboots your system to load the new parameters.

CAUTION! If the configuration settings are incorrect, your QLA2xx HBA may not function properly.

The following selections are available from the Fast!UTIL **Options** menu:

- **Configuration Settings**
- **Scan Fibre Channel Devices**
- **Fibre Disk Utility**
- **Loopback Data Test**
- **Select Host Adapter**
- **Exit Fast!UTIL**

5.1. Configuration Settings

This section presents the configuration settings:

- [5.1.1. Host Adapter Settings](#)
- [5.1.2. Selectable Boot Settings](#)
- [5.1.3. Restore Default Settings](#)

5.1.1. Host Adapter Settings

Setting	Values	Default	Description
Host Adapter BIOS	Enabled/Disabled	Disabled	When this setting is disabled, the ROM BIOS on the QLA2xx HBA is disabled, freeing space in upper memory. This setting must be enabled if you are booting from an FC disk drive attached to the QLA2xx HBA. See 5.1.2. Selectable Boot Setting for details on specifying the boot device.
Spin Up Delay	Enabled/Disabled	Disabled	When this bit is set, the BIOS waits up to two minutes to find the first drive.
Extended Error Logging	Enabled/Disabled	Disabled	This setting provides additional error and debug information to the operating system.

5.1.2. Selectable Boot Settings

The Selectable Boot Settings option is accessed from the **Configuration Settings** menu. If you enable the Host Adapter BIOS in the Adapter Settings, this option allows you to select the boot device as shown in the following table.

Selectable Boot Settings

Enable Selectable Boot	WWPN/LUN Boot List	Device Boot
No	x	BIOS configures the first disk drive it finds as boot device.
Yes	None specified	BIOS configures the first disk drive it finds that is also a LUN 0 as boot device.
Yes	Specified	BIOS scans through the specified Boot WWPN/LUN list until it finds a disk drive. This is configured as boot device.

This option allows you to specify up to four WWPN/LUN as boot devices. To enable the Selectable Boot option and insert devices into the boot device locations, follow these steps:

1. From the **Configuration Settings** menu, select **Host Adapter Settings**.
2. Enable the **HBA BIOS**, then press **ESC** to return to the **Configuration Settings** menu.
3. From the **Configuration Settings** menu, select **Selectable Boot Settings**.
4. Press **ENTER** to enable or disable (toggle) the **Selectable Boot** option. Use the down arrow key to move to the **Primary** location of the **Selectable Boot List** menu.
5. Press **ENTER** to see a list of accessible devices (in the **Select Fibre Channel Device** menu).
6. Select a drive using the arrow keys to scroll down to the device you want to put into your **Selectable Boot** menu list, then press **ENTER** to select the requested device and load it into the **Selectable Boot** menu list.
7. Repeat this step to specify up to three alternate boot devices.

NOTES:

- QLogic recommends that when the HBA BIOS is enabled and the **Selectable Boot** option is enabled, you always select a device and put it in the Primary boot device location of the **Selectable Boot** menu list.
- For new systems with Phoenix and AMI Multiboot BIOS the **Selectable boot settings** for the HBA does not work, unless the System BIOS **Hard Drive Boot** option is in the correct order.

5.1.3 Restore Default Settings

The **Restore Defaults** option from the **Configuration Settings** menu restores the QLA2xx HBA default settings.

5.2. Scan Fibre Channel Devices

This option scans the FC loop and lists all the connected devices by loop ID. Information about each device is listed, for example, vendor name, product name, and revision. This information is useful when configuring your QLA2xx HBA and attached devices.

5.3. Fibre Disk Utility

This option scans the Fibre Channel loop and lists all the connected devices by loop ID. You can select a Fibre Channel hard disk and do one of the following:

- Perform a low-level format.
- Verify the disk media.
- Verify the disk data.
- Select a disk device.

CAUTION! Performing a low-level format destroys all data on the disk.

5.4. Loopback Data Test

This option allows you to perform a Loopback test. Make sure that the FC loop is up or a Loopback plug is attached to the adapter before starting the test.

5.5. Select Host Adapter

If you have multiple QLA2xx HBAs in your system, use this setting to select and then configure or view the settings of a specific QLA2xx HBA.

6. Additional Notes

- BIOS scan (BIOS enabled) does not list devices attached to Fabric Switch. If you want to boot to a single device attach to Fabric, please refer to the note in [5.1.2 Selectable Boot Setting](#).
- Use /I option if FlasUtil does not detect your controller.
- FlasUtil supports up to 16 QLA2xx controllers at a time.
- QLA2xx LED Setting shown in the following table:

	Amber LED	Green LED
Power On:	On Steady	On Steady
Loss-of-Sync:	1/2 sec flash	Off
Signal Acquired:	On Steady	Off
On-line:	Off	On Steady
Firmware Error:	1/2 sec flash	1/2 sec flash

NOTE: "1/2 sec" is only approximate. When the I/O is running on the adapter, the LEDs are NOT designed to blink like a Network adapter.

7. Contacting Support

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:

Web: <http://support.qlogic.com>

North America Contact Information

Email: support@qlogic.com

Phone: (952) 932-4040

Support contact information for other regions of the world is available at the QLogic website:

<http://support.qlogic.com>

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