



QLC FCode for 2Gb FC HBAs

This software license applies only to QLogic customers.
QLogic Corporation.
All rights reserved.

Table of Contents

1. [Package Contents](#)
2. [Supported Features](#)
3. [HBA Configuration \(FCode Options\)](#)
4. [Utilities \(Flashing the FCode\)](#)
5. [Additional Notes](#)
 - 5.1 [OS Support](#)
 - 5.2 [Building a Bootable Disk](#)
6. [Contacting Support](#)

1. Package Contents

NOTE: 2300/2310-based HBAs must use the `isp2300.prom` file. 2312-based HBAs must use the `isp2312.prom` file. If you do not load the correct file, the adapter will not function properly.

The following table describes the contents provided in the FCode binary file.

Filename	Description
isp2300.prom	FCode binary file for use with 2300/2310 based HBAs
isp2312.prom	FCode binary file for use with 2312 based HBAs
readme.txt	Text version of this FCode readme file
release.txt	FCode release notes

2. Supported Features

The QLC FCode for 2Gb FC HBAs driver supports the following features:

- Fabric boot support
- Local loop boot support
- 1 or 2 Gb data rate support
- Support boot with QLC(ssd) driver

3. HBA Configuration Parameters

Selecting FCode from OBP

```
{1} ok show-disks
```

```
a) /pci@1d,700000/pci@2/QLGC,qlc@6,1/fp@0,0/disk
```

```
b) /pci@1c,600000/SUNW,qlc@1/fp@0,0/disk
```

```
q) NO SELECTION
```

Enter Selection, q to quit: x (enter your selection)

```
(i)ok select /pci@1c,600000/SUNW,qlc@1 (selecting SUN HBA)
```

or

```
(ii)ok select /pci@1d,700000/pci@2/QLGC,qlc@6,1 (selecting QLogic HBA)
```

Show FCode version

```
ok version
```

Show FCode information

```
ok .properties
```

List targets attached

```
ok show-children
```

Test Adapter (Recommend using Loopback plug)

```
ok test /pci@1c,600000/SUNW,qlc@1
```

or

```
ok test /pci@1d,700000/pci@2/QLGC,qlc@6,
```

4. Utilities (Flashing the FCode)

For QLogic HBA, use the latest SANSurfer FC HBA Manager or SANSurfer command line interface (CLI) from Qlogic's website:

```
cli\HBA Utilities\Update Flash
```

```
SANSurfer\Utilities\Update FCode
```

For SUN HBA, use:

```
luxadm qlgc_s_download -f [fcode-file ]
```

5. Additional Notes

This section provides the following additional notes:

- [5.1 OS Support](#)
- [5.2 Building a Bootable Disk](#)

5.1 OS Support

This FCode has been tested with Sun Solaris 9 and 10.

5.2 Building a Bootable Disk

This procedure assumes the system is already booted from an existing system disk and that you have already performed a full system backup. The device name shown in this example is for a device on the third PCI bus slot, target ID 130, LUN 0, slice 0. The device path is different on each system depending on which CI bus slot, target Id, LUN, etc.

You must have already completed the steps listed above before attempting to create a bootable disk.

This procedure uses the Solaris `ufsdump` command to create temporary `saveset` files for each partition on your current boot disk. This requires enough disk space to create the `saveset` files or a Solaris machine with a high capacity tape drive attached.

1. Determine the amount of disk space used/available on your current boot disk using the `/usr/bin/df -k -l` as shown in the following example:

```
/usr/bin/df -k -l
Filesystem      kbytes    used    avail  capacity  Mounted on
/dev/dsk/c0t0d0s0 2577118 1650245  875331    66%      /
/proc           0         0        0         0%      /proc
fd              0         0        0         0%      /dev/fd
mnttab          0         0        0         0%      /etc/mnttab
swap           1310480    0    1310480    0%      /var/run
swap           1311344    864    1310480    1%      /tmp
/dev/dsk/c0t0d0s7 5135326    114    5083859    1%      /home
```

This `df` example shows that the current boot disk is `/dev/dsk/c0t0d0sx`. There are two partitions of interest, slice 0 or `/` and slice 7 or `/home`. Slice 0 is using 1.6Gb and has 875Mb free. Slice 7 uses 114Kb and has 5Gb free. Therefore, you can use slice 7 or `/home` to store the temporary `saveset` files. If at least 1.7Gb free was not available on this disk, you must create a partition on the new bootable disk large enough to hold the largest temporary `saveset` plus the largest used space on a partition. In this example, that would be a partition at least 3.2Gb (1.6Gb+1.6Gb).

2. Use the `format` command to create, label, and format partitions on the new bootable disk. These partitions must be large enough to contain the contents of the temporary `savesets`. If you are not familiar with the `format` command, carefully read about the command in the Solaris documentation and man pages.

WARNING! Misusing the `format` command could destroy the data on the current disk drives.

Example:

```
format
partition
print

Part    Tag      Flag      Cylinders      Size      Blocks
0       root     wm        0 - 8738       4.00Gb    (8739/0/0) 8389440
1       swap     wu        8739 - 9188    210.94Mb  (450/0/0)  432000
2       backup   wu        0 - 9201       4.21Gb    (9202/0/0) 8833920
3       unassigned wm        0              0         (0/0/0)    0
4       unassigned wm        0              0         (0/0/0)    0
5       unassigned wm        0              0         (0/0/0)    0
6       unassigned wm        0              0         (0/0/0)    0
7       unassigned wm        0              0         (0/0/0)    0

label
quit
quit
```

3. Use the `newfs` command to create the file system. For example:

```
newfs -v /dev/rdisk/c3t130d0s0 (QLogic HBA)
or
newfs -v /dev/rdisk/c12t2100000C506CCD92d0s0 (SUN HBA)
or
newfs -v /dev/rdisk/c4t50001FE1500A5C7Dd255s0 (LUN 254)
```
4. Mount the boot partition to the `/mnt` mount point. For example:

```
mount /dev/dsk/cxtxd0s0 /mnt
```
5. Change directory to the root partition mount point. For example:

```
cd /mnt
```
6. Use the `ufsdump` utility to copy the root partition to the new boot disk. For example:

```
ufsdump 0f - / ufsrestore rf -
```
7. Run the following command:

```
rm restoresymtable
```
8. Install the boot block on the new boot disk. For example:

```
installboot /usr/platform/`uname -i`/lib/fs/ufs/bootblk /dev/rdisk/cxtxd0s0
```
9. Edit the new `vfstab` to properly mount the new partition(s) during boot. In this case, you would change each reference of `c0t0d0s0` to `c3t129d1s0`. Booting to LUN >0 requires adding the target and LUN in `/kernel/drv/sd.conf`. For example:

```
vi /mnt/etc/vfstab
```
10. Shut down the system. For example:

```
/sbin/init 0
```
11. Boot from the newly created boot disk. For example:

```
ok boot /pci@1f,0/pci@1/SUNW,qlc@4/disk@w210000c506ccd92 (SUN HBA)
or
ok boot /pci@1f,0/pci@1/QLGC,qlc@4/disk@w210000c506ccd92 (QLogic HBA)
or
ok boot /pci@1f,0/pci@1/SUNW,qlc@4/disk@w210000c506ccd92,ff (LUN 255)
```
12. View the current dump device setting. For example:

```
# dumpadm
Dump content: kernel pages
Dump device: /dev/dsk/c0t0d0s1 (swap)
Savecore directory: /var/crash/saturn
Savecore enabled: yes
```
13. Change the dump device to the swap area of the new boot drive. For example:

```
# dumpadm -d /dev/dsk/cxtxd0s1
```

NOTE: The following step sets the newly created boot disk to be the default boot disk.
14. Perform the following steps at the system OBP (`ok`) prompt:
 - a. Create an alias entry for the new boot device (optional). For example:

```
ok nvalias fibredisk /pci@1f,0/pci@1/SUNW,qlc@4/disk@w210000c506ccd92
or
ok nvalias fibredisk /pci@1f,0/pci@1/QLGC,qlc@4/disk@w210000c506ccd92
```
 - b. Set the default boot device to be the new boot device (optional). For example:

```
ok setenv boot-device fibredisk
```
 - c. As an option, you could build boot disk from CD or DVD using the following command:

```
ok boot cdrom
```

NOTES:

- Tested with Solaris 10 Update 3 build 8.
- Refer to the Solaris manual for more information.

6. 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>

[Go to Top](#)



© Copyright 2007. All rights reserved worldwide. QLogic, the QLogic logo, and the Powered by QLogic logo are registered trademarks of QLogic Corporation. All other brand and product names are trademarks or registered trademarks of their respective owners.