



AlphaServer DS20L

V6.6 Console Firmware Release Notes



AlphaServer DS20L

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- 1 SCOPE..... 4**
 - 1.1 AUDIENCE..... 4
 - 1.2 GOLDEN RULES ON UPDATING FIRMWARE 4
 - 1.3 INTERNET ACCESS TO FIRMWARE..... 4
- 2 READ ME FIRST..... 5**
 - 2.1 CONSOLE CHANGES THIS RELEASE 5
 - 2.2 OPERATING SYSTEM/CONSOLE FIRMWARE REVISION MATRIX 5
 - 2.3 KNOWN ANOMALIES 5
 - 2.3.1 *Reconfiguring fibre channel switches..... 5*
 - 2.3.2 *Messages from KGPSA devices..... 6*
 - 2.3.3 *When the Console KGPSA Driver starts. 6*
- 3 FIRMWARE UPDATE PROCEDURE 6**
 - 3.1 UPDATE FIRMWARE FROM THE SRM CONSOLE 6
 - 3.2 LOADABLE FIRMWARE UTILITY [LFU] COMMANDS 8
 - 3.2.1 *Update Command..... 9*
 - 3.2.2 *List Command..... 9*



1 Scope

The document lists significant changes in this firmware release and describes methods to update console firmware and console-supported I/O options firmware. This document does not describe console firmware internals or console architecture.

1.1 Audience

The audience for this document is intended for individuals responsible for operating system installations and upgrades, for console firmware updates and for (console-supported) I/O options firmware updates.

1.2 Golden Rules on Updating Firmware

Update console firmware before installing or updating an operating system. After an operating system shutdown, always re-initialize the system before running the update utility.

1.3 Internet Access to Firmware

Internet access to console firmware.

www.compaq.com/support/ (click on *Alpha Systems* under the “*Downloadable Drivers & Utilities*” menu).



2 Read Me First

2.1 Console Changes This Release

The release notes and firmware are on the V6.6 Alpha Systems Firmware Update CD. This release contains the following:

- Bug fixes and enhancements for KGPSA:
 - Serious kgpsa faults will now cause the system to crash rather than hang.
 - There is a small period of time after the system is initialized in which some fibre channel disks will not be displayed with a show device command. If the system boots during this period, the message “waiting for poll to complete” followed by the device name will be displayed while waiting for the device.
 - In rare instances it may take more than a minute for the link to initialize. A two minute timer has been added to prevent systems from hanging while waiting for link initialization.
 - The kgpsa will report when it is not connected to a switch or arbitrated loop with the message “open fibre” followed by the device name.
 - Several kgpsa error messages have been expanded to include the device name. Some error messages have been removed as they were reporting normal behavior.
- New firmware for FCA2384

2.2 Operating System/Console Firmware Revision Matrix

The following matrix shows the minimum operating system version required with this console firmware release.

Table 2-1 AlphaServer DS20L Operating System and Firmware Revision Matrix

Firmware V6.6		December 2003	
Operating System			
Tru64 Unix		V5.1A	
Console Firmware			
SRM Version		V6.6	

2.3 Known Anomalies

2.3.1 Reconfiguring fibre channel switches

If a fibre cable is moved from one fibre channel port to another, the console will need to be initialized before devices can be accessed via the new switch.



2.3.2 Messages from KGPSA devices

Messages similar to “retry ct pga0.0.0.2.6” may occur on systems that have KGPSA devices and are informational and do not represent an error. They result from rejected accesses to a busy fibre channel switch which are allowed and thus retried.

2.3.3 When the Console KGPSA Driver starts.

When the console KGPSA driver starts, you may see the error message “pga0.0.0.2.4 - Nvram read failed”. See the WWIDMGR USERS MANUAL for information about formatting the NVRAM.

3 Firmware Update Procedure

This chapter explains how to invoke the Loadable Firmware utility [LFU] to update AlphaServer firmware from the SRM console. Firmware update information is also described in the User’s Guide.

AlphaServer systems recently shipped may have a higher firmware revision than the firmware revision listed in this release. *Do not load firmware that is older than what is presently installed.* A higher firmware revision usually indicates support for the currently shipping operating system. The revision number of the console firmware and the Alpha Firmware CD are mutually exclusive.

A system reset or re-initialization should be done after the operating system is shut down and before the update utility is run.

NOTE TO LINUX USERS: If you have the environment variable “sysvar” set to 5 then you must set it to 12 and re-initialize before the update utility is run. After updating the firmware, reset sysvar to 5 and re-initialize before booting your operating system.

3.1 Update Firmware from the SRM Console

The following procedure shows how to update console firmware from a network device. Here, the file v62_shupdate.sys has already been copied to the MOP server.

Re-initialize the system	>>>init	
Boot from the network	>>> Boot eia0 -fi v62_shupdate - proto mop	Boot using MOP protocol
Type update	UPD> update srm	Update console firmware
Exit the LFU	UPD>exit	Exiting will initialize the system



```
Example updating firmware from the network:
>>> boot eia0 -fi v62_shupdate -proto mop
Trying MOP boot.
.....
Network load complete.
Host name: BESSIE
Host address: aa-00-04-06-74

bootstrap code read in base = 200000, image_start = 0, image_bytes = 156200
initializing HWRPB at 2000
initializing page table at 3ff48000
initializing machine state
setting affinity to the primary CPU
jumping to bootstrap code

**** Loadable Firmware Update Utility ****
-----
Function  Description
-----
Display  Displays the system's configuration table.
Exit     Done exit LFU (reset).
List     Lists the device, revision, firmware name,update rev
Update   Replaces current firmware with loadable data image.
Verify   Compares loadable and hardware images.
? or Help  Scrolls this function table.
-----

UPD> update srm

answer Yes to all questions then exit

UPD> exit

End of Example

The firmware is now loaded into ROM. Typing exit will reset the AlphaServer system which invokes the
new firmware.
```

The following procedure shows how to update console firmware from a CD.



Insert Firmware CD into drive	>>> show device	Find the CD-ROM device ID e.g. dqb0
Re-initialize the system	>>>init	
Boot the Alpha Firmware CD	>>> Boot dqb0	Boot code determines the AlphaServer type
Press the Enter key after Bootfile:	Bootfile:	Press enter to use default firmware
Type update	UPD> update	Update console and i/o option firmware
Exit the LFU	UPD>exit	Exiting will initialize the system

Example updating firmware from CD:

```
>>> boot dqb0 (Firmware CD is inserted in CD Drive)
```

block 0 of dqb0.0.1.16.0 is a valid boot block reading 989 blocks from dqb0.0.1.16.0
bootstrap code read in base = 156000, image_start = 0, image_bytes = 7ba00
initializing HWRPB at 2000
initializing page table at 148000
initializing machine state
setting affinity to the primary CPU
jumping to bootstrap code

[Release notes are displayed]

Bootfile: [press Enter-key]

```
eb.....ea.e9.e8.e7.e6.
```

**** Loadable Firmware Update Utility ****

```
-----
```

Function	Description
Display	Displays the system's configuration table.
Exit	Done exit LFU (reset).
List	Lists the device, revision, firmware name,update rev
Update	Replaces current firmware with loadable data image.
Verify	Compares loadable and hardware images.
? or Help	Scrolls this function table.

```
-----
```

UPD> **update srm**

answer **Yes** to all questions then exit

UPD> **exit**

End of Example

The firmware is now loaded into ROM. Typing exit will reset the AlphaServer system which invokes the new firmware.

3.2 Loadable Firmware Utility [LFU] Commands

The Loadable Firmware Utility is the mechanism to update console and I/O option firmware. This section describes the most commonly used LFU commands. Type HELP at the LFU prompt (UPD>) to list all LFU commands.



3.2.1 Update Command

Use the update command to update console and/or I/O option firmware.

UPD> **update** [update will update both console(s) and I/O option firmware]

UPD> **update** <option-name> e.g. >>> update ccmab02

3.2.2 List Command

Use the list command to show a list of memory-loaded images and currently supported flash ROMs. In the following example three devices are installed in a system that can be firmware-updated.

```
UPD> list
Device  Current Revision  Filename  Update Revision
srm     5.9                srm_fw   6.2
UPD>
```



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