intel® Technical Advisory

TA-698-2

5200 NE Elam Young Parkway
Hillsboro, OR 97124

June 8, 2004

Intel® Server System SPSH4 and SRSH4 SCSI SAFTE Controller Firmware Update

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Products Affected
SSHCBPE, SSHCBRBK, SSHDVBRBK

Description
Intel Server System SPSH4 and SRSH4 SCSI SAFTE controller cards with hot swap controller (HSC) firmware version 0.10 (Intel part number A42862-110) may cause certain 15K and 10K RPM hard disk drives to be marked offline during system AC power on or AC power cycling (power button pressed). This condition has been reported only when 15K or 10K RPM hard disk drives are in use, and has only been seen to occur during AC power on or AC power cycling. This issue does not affect other hard disk drive speeds, and will not cause hard disk drives to be marked offline during run time operation or soft (warm) reboots. This issue is expected to occur approximately only once out of every twenty AC power cycles.

Root Cause
The hard disk drive power on delay of HSC version 0.10 boot block code is 50 milliseconds. This may not be an adequate amount of time for some 15K and 10K RPM hard disk drives to discharge bulk capacitance before power is applied to the drive, which may result in hard drive power not initializing correctly. In a RAID configuration, this may result in the hard disk drives being marked offline.

Corrective Action / Resolution
The failure mode is a recoverable failure. If a hard disk drive is marked offline due to this issue, it will stay in this state until AC power to the system is cycled (power button pressed). On the next reboot following the power cycle, the hard drive offline error may be cleared by using the RAID configuration utility to manually mark the hard disk drive online. No data loss will occur due to this issue.

Intel has updated the SCSI SAFTE controller HSC firmware to version 0.11 to increase the power on delay in the boot block code. HSC version 0.11 extends the power on delay of the SCSI SAFTE controller from 50 milliseconds to 1 second. The increase power on delay of the SCSI SAFTE controller increases the robustness of the SCSI backplane to insure that 15K and 10K RPM hard disk drives have sufficient time to discharge before the backplane applies 12V power to the drives.

The SCSI SAFTE controller boot block code cannot be updated outside of the Intel manufacturing process. Intel is implementing an ECO to incorporate HSC version 0.11 into the affected product codes. Please reference PCN 103809-01 for further details on this change.

Customers with affected product codes containing a SCSI SAFTE controller with HSC version 0.10 (Intel part number A42862-110) who are using 15K RPM or 10K hard disk drives listed on the Intel Server System SPSH4 and SRSH4 Tested Hardware and OS List, and encounter the hard disk drives being marked off line during system AC power on or AC power cycling, may obtain a replacement SAFTE card programmed with HSC version 0.11 (Intel part number

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A42862-111) through Intel's normal warranty process. To obtain a replacement SAFTE controller card, contact Intel using your normal warranty process. Please indicate that you are calling regarding TA 698-X and have the part number and the serial numbers for the systems needing the replacement part.

Please contact your Intel Sales Representative if you require more specific information about this issue.

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