

intel® Technical Advisory

TA-0727-3

5200 NE Elam Young Parkway
Hillsboro, OR 97124

May 24, 2005

Intel® Entry Server Platform SR1325TP1-E Serial ATA Drive Performance Loss at High Ambient Temperatures

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Products Affected

Product Code	MM #	Description
SR1325TP1	855943	Includes 1U chassis, server board, 2-port Serial ATA with RAID 0 or 1
SR1325TP1NA	857848	Includes 1U chassis, server board, 2-port Serial ATA with RAID 0 or 1. Includes North America power cord

Description

Chassis cooling fans are operating at maximum speed when ambient the temperature reaches or exceed 35 degrees Celsius (C). Serial ATA (SATA) drives may experience some performance loss due to rotational vibration caused by high speed cooling fans. The actual amount of performance loss varies with each SATA drive vendor and model.

Root Cause

Excessive rotational vibration interference in some SATA drives is caused by insufficient damping of chassis vibrations by the hard disk drive carrier caused by some unscreened fans when the fans are operating at their maximum speed. Modern SATA hard drives use Self-Monitoring, Analysis and Reporting Technology (SMART) which will reduce drive performance as a data protection measure when excessive hard disk drive vibration occurs.

Corrective Action / Resolution

Intel is adding a rubber damping pad to the hard drive carrier which reduces chassis vibrations and therefore the amount of performance degradation loss. The rubber damping material has been tested with the SATA hard disk drives which are listed in the current tested hardware and operating system list which is posted on support.intel.com. Also, Intel now uses improved fans to reduce chassis vibration caused by operation at maximum fan speeds. Date code of the improved fans is H4B100 or later.

Date Code decode is thus: 1st letter: Plant Y for Yung-Ton, Taiwan N for Tainan, Taiwan H for Nai-Hai, China K for Kunshan, China 2nd letter: Year 4 for 2004 3rd letter: Month 1-9 for Jan-Sept. A for Oct B for Nov C for Dec and the last 3 letters/digits are the production lot sequence number.

The following PCN's were published to notify customers of these changes.

PCN 104488-00 (dated 11/04/2005) announced the implementation of Poron rubber damping material effective December 6, 2004.

PCN 104611-00 (dated 11/29/2004) announced the implementation of improved fans in product manufactured after November 1, 2004.

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If you received an Intel® Entry Server Chassis SR1325TP1-E prior to December 6, 2004, you may order from Intel Customer Support a Poron rubber upgrade kit, part number C93050-001, which includes the rubber damping pad to be added to the hard drive carrier. If you suspect you have excessive chassis vibration caused by a fan (fan date code before H4B100), you may replace the fan under the normal warranty process.

Please contact Intel using your normal warranty process. Indicate you are calling regarding TA# 727-3 and have the following information available when you call; the part number requested and the serial number(s) for the chassis(s) requiring the upgrade kit.

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

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