

intel[®] Action Alert

AA-0748-1

5200 NE Elam Young Parkway
Hillsboro, OR 97124

February 2, 2005

Intel[®] Server Board SE7520JR2 DDR2 MCH VR Circuit Component Failure

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Products Affected

Product Code	MM#	Description
SE7520JR2ATAD2	861066	SE7520JR2 DDR2 SATA Boxed Board
SE7520JR2SCSID2	861067	SE7520JR2 DDR2 SCSI Boxed Board
BJRDDR2BB	861065	SE7520JR2 DDR2 SCSI OEM 10 Pack
SR2400SYSD2	865605	SR2400JR2 Integrated SKU
SR2400SYSD2NA	866080	SR2400JR2 Integrated SKU (North America)
SJR2USKU07	864821	OEM SKU

Description

During a recent integration build of a SE7520JR2 DDR2 based platform, Intel's manufacturing team discovered that a small number of systems experienced catastrophic thermal component failures on the baseboard. The failed components on the boards included the MCH, a FET, and DIMM. An investigation of the failures resulted in identical failures to an additional number of boards.

All of the failures were observed to occur while the baseboards were undergoing power cycling tests in the factory. All of the failures occurred at system power up. No failure was seen to occur during run time.

Root Cause

Failure analysis for this issue revealed that on some boards, an anomaly was found with the 1.8 Volt regulator circuit within the DDR2 memory sub-system, where a VR controller showed improper operation producing excessive voltage on the 1.8 Volt rail. This over-voltage condition results in the destruction of the MCH, a FET, and DIMM.

Note: Intel has verified that the DDR2 VR circuit design is unique to the Intel Server Board SE7520JR2 DDR2. No other products are affected by this issue.

Corrective Action / Resolution

Intel placed an immediate ship hold on all SE7520JR2 DDR2 products upon discovery of this issue.

Intel, in conjunction with the VR controller vendor, has determined a reliable method for identifying boards that are susceptible to this issue. Details of the board identification are provided on the following page.

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Intel is implementing two corrective actions for this issue, a short term and long term plan.

1) Short Term Corrective Action Plan

Intel has screened and reworked all SE7520JR2 DDR2 products in its finished goods inventory. All reworked product was assigned a new board Serial Number. Reworked boards will have a serial number starting at **BZJR505xxxxx**. All new board builds will be assembled with a VR controller which is known not to contribute to the circuit anomaly. All new board builds will have serial numbers starting at **BZJR506xxxxx**.

Integrated SE7520JR2 DDR2 system SKUs that have been screened and reworked will have a Manufacturing Pack Date of "**1 FEB 05**" or later. The manufacturing pack date can be found on the white product label located on the outside of the shipping box.

2) Long Term Corrective Action Plan

Intel has identified a design enhancement to the board that would remove the sensitivity of any variation of the 1.8 VR controller. Intel plans to implement the identified enhancement with a board change at a date to be determined.

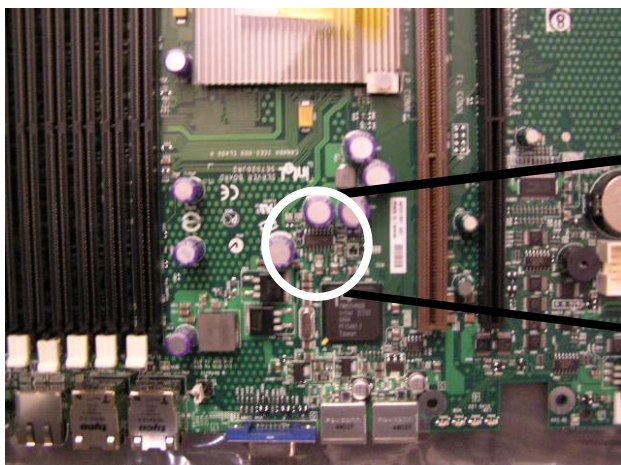
Recommended Customer Action

Customers should screen all existing SE7520JR2 DDR2 product (boards and systems) **that have serial number date codes prior to those noted above** for the following board identifier. Boards found with the identifier should be returned to Intel for immediate replacement.

NOTE: At this time there is no reliable means to identify a susceptible board beyond the visual screen identified below.

To identify a SE7520JR2 DDR2 board susceptible to this issue, locate the L6910 VR controller chip at board location U6C1 as shown below. **Boards that have a VR controller chip with a white dot "•" silk-screened after the L6910 part number ARE SUSCEPTIBLE to this issue and should NOT be used.**

Boards that have a L6910 VR controller chip with no dot are not susceptible to this issue and can be used.



dot "•"



The L6910 VR Chip is best seen with back edge closest to the person performing the screen. When board is placed as described, chip orientation as shown above is correct.

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

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