

intel® Technical Advisory

TA-708-1

5200 NE Elam Young Parkway
Hillsboro, OR 97124

August 18, 2004

Intel® E7520 MCH Transposed Interrupt Messages across Hub Interface Erratum: Impact to Intel® Server Board SE7520AF2

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Products Affected

Product Code	MM #
SE7520AF2	859101
BAF2HPBB	857127
BAF2BB	856967
BAF2NSBB	864841

Description

An erratum affecting PCI Express* slot capabilities has been found in the Intel® E7520 server chipset during testing and is root caused. Please reference *Intel® E7520 MCH Specification Update Erratum #29: "Transposed Interrupt Messages across Hub Interface Erratum"* for a complete description of the MCH errata. The Intel® Server Board SE7520AF2 is affected by this erratum.

Intel Server Board SE7520AF2 based systems running with a single processor thread and operating in legacy PIC mode or virtual wire Mode A may hang under high I/O-driver interrupt stress. For systems operating in full APIC mode where the number of virtual interrupt line (intA, intB, etc.) used by all PCI-Express* adapters in a system exceeds the number of logical processors (threads), the system may hang.

Root Cause

Please reference *Intel® E7520 MCH Specification Update Erratum #29: "Transposed interrupt messages across Hub Interface Erratum"* for a complete description of the MCH errata.

Corrective Action / Resolution

PCI Express adapter add-in cards are not recommended for use with Intel Server Board SE7520AF2. All PCI Express devices down on the server board are supported. A BIOS workaround is required for PIC mode operation. The BIOS workaround will be incorporated into Intel Server Board SE7520AF2 BIOS Production Release Version P02. Intel recommends that customers update all Intel® Server Board SE7520AF2 to this BIOS version. BIOS Version P02 will be available from iBL and <http://support.intel.com> on or before September 1, 2004.

Customers may choose to ship Intel Server Board SE7520AF2 product with BIOS Production Release Version P01, which does not include the PIC mode BIOS workaround, if the system configuration adheres to the following limitations: 1) Uni-processor systems must have processor hyperthreading Enabled in BIOS Setup, 2) The operating system must be configured to operate in symmetric mode rather than PIC mode, and 3) No PCI Express adapter add-in cards are installed. This restricted configuration will limit any possible exposure to this issue to pre operating system boot.

An MCH component stepping change will be implemented on the Intel Server Board SE7520AF2 in early Q4 2004 to add support for broad PCI Express* adapter add-in cards.

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Enterprise Platforms & Services Division
Intel Corporation