

intel® Technical Advisory

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5200 NE Elam Young Parkway
Hillsboro, OR 97124

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Intel® E7320 MCH Transposed Interrupt Messages across Hub Interface Erratum: Impact to Intel® Server Board SE7320SP2

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Products Affected

Product Code	MM #
SE7320SP2	856637
BSPE7320	856627

Description

An erratum affecting PCI Express* slot capabilities has been found in the Intel® E7320 server chipset during testing and is root caused. Please reference *Intel® E7320 MCH Specification Update Erratum #23: "Transposed Interrupt Messages across Hub Interface Erratum"* for a complete description of the MCH errata. The Intel® Server Board SE7320SP2 is affected by this erratum.

Intel Server Board SE7320SP2 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® E7320 MCH Specification Update Erratum #23: "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 SE7320SP2. 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 SE7320SP2 BIOS Production Release Version P04. Intel recommends that customers update all Intel® Server Board SE7320SP2 to this BIOS version. BIOS Version P04 will be available from iBL and <http://support.intel.com> on or before August 27, 2004.

Customers may choose to ship Intel Server Board SE7320SP2 product with BIOS Production Release Version P03, 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 SE7320SP2 in early Q4 2004 to add support for broad PCI Express* adapter add-in cards.

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