intel® Technical Advisory

TA-703-1

5200 NE Elam Young Parkway
Hillsboro, OR 97124

July 28, 2004

Intel® E7525 MCH Interrupt Message Re-Ordering across Hub Interface Erratum: Impact to Intel® Server Board SE7525GP2

Products Affected

Product Code	MM #
BGPE7525	856625
SE7525GP2	856659

Description

An erratum affecting PCI Express* slot capabilities has been found in the Intel® E7525 server chipset during testing and is root caused. Please reference *Intel® E7525 MCH Specification Update* Erratum #24: "Interrupt Message Re-Ordering across Hub Interface Erratum" for a complete description of the MCH errata. The Intel® Server Board SE7525GP2 is affected by this erratum.

Intel Server Board SE7525GP2 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® E7525 MCH Specification Update* Erratum #24: "Interrupt Message Re-Ordering across Hub Interface Erratum" for a complete description of the MCH errata.

Corrective Action / Resolution

Intel Server Board SE7525GP2 PCI Express add-in adapter card support is limited to single function devices. PCI Express add-in adapter cards tested and supported with the Intel Server Board SE7525GP2 will be listed in the *Intel Server Board SE7525GP2 Tested Hardware and Operating System List* (THOL) document.

A BIOS workaround is required for PIC mode operation. The BIOS workaround will be incorporated into Intel Server Board SE7525GP2 BIOS Production Release Version P04. Intel recommends that customers update all Intel® Server Board SE7525GP2 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 SE7525GP2 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) Only PCI Express single function add-in adapters are installed. This restricted configuration will limit any possible exposure to this issue to pre operating system boot.

This Technical Advisory describes an issue which may or may not affect the customer's product

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An MCH component stepping change will be implemented on the Intel Server Board SE7525GP2 in early Q4 2004 to add support for broad PCI Express* adapter add-in cards.

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

Enterprise Platforms & Services Division
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