



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

Intel Technical Advisory

TA-1021-5

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January 5, 2014

PCI Express* 3.0 Add-in Adapter Support Issue

Products Affected

Intel® Server Board S1400FP Product Family
Intel® Server Board S1400SP Product Family
Intel® Server Board S1600JP Product Family
Intel® Server Board S2400EP Product Family
Intel® Server Board S2400GP Product Family
Intel® Server Board S2400LP Product Family
Intel® Server Board S2400SC Product Family
Intel® Server Board S2400BB Product Family
Intel® Server Board S2600CO Product Family
Intel® Server Board S2600CP Product Family
Intel® Server Board S2600GL Product Family
Intel® Server Board S2600GZ Product Family
Intel® Server Board S2600IP Product Family
Intel® Server Board S2600JF Product Family
Intel® Server Board S2600WP Product Family
Intel® Workstation Board W2600CR Product Family
Intel® Server Board S4600LH2 and S4600LT2 Product Family
Intel® Server System H2000JF Product Family
Intel® Server System H2000LP Product Family
Intel® Server System H2000WP Product Family
Intel® Server System P4000CP Product Family
Intel® Server System P4000GP Product Family
Intel® Server System P4000IP Product Family
Intel® Server System P4000SC Product Family
Intel® Server System R1000EP Product Family
Intel® Server System R1000GZ/GL Product Family
Intel® Server System R2000GZ/GL Product Family
Intel® Server System R2000IP Product Family
Intel® Server System R2000SC Product Family
Intel® Server System R2000LH2 and R2000LT2 Product Family

Description

Intel has observed that PCI Express* (PCIe) 3.0 adapters operating at PCIe* 3.0 speed may generate errors in the System Event Log (SEL) when installed in one of the server platforms listed above. This issue may occur when adapters are used in the standard PCIe* connector slots or when connected to the Storage IO connectors on these products. These combinations of adapters and platforms do not generate errors in SEL when running at PCIe* 2.0 speeds.

Root Cause

This issue appears to be specific to the signaling characteristics between the server board PCIe* 3.0 slot or Storage IO Module connector and the specific adapters being used. Intel® Server Platforms are designed to meet the PCIe* 3.0 specification and to pass the PCI SIG compliant tests, however it is possible for this issue to occur even when the add-in card meets the PCIe* 3.0 specification and passes the PCI SIG compliant tests.

Corrective Action / Resolution

Intel is implementing a new BIOS option called "Processor PCIe Link Speed" that allows users to select the appropriate PCIe* link speed of PCIe slots in platforms employing the Intel® Xeon® E5-26xx V2, E5-24xx V2 or E5-16xx V2 families. By default, the installed PCIe* 3.0 adapters will run at their maximum native speed, but may be limited to PCIe* 2.0 speeds if desired. Refer to the relevant platform *Technical Product Specification (TPS)* for more details on this new BIOS option.

The BIOS option "Processor PCIe Link Speed" will not be visible if the platform employs the Intel® Xeon® Processor E5-26xx V1, E5-24xx V1, E5-16xx V1, or E5-46xx V1 families, and the BIOS will limit the PCIe slots speed to PCIe* 2.0 speeds unless the add-in adapters have been tested for robust operation at PCIe 3.0 speeds. Refer to the web page of *PCIe* Gen 3 adapter support for Intel® Server Boards S4600/S2600/S2400/S1600/S1400* <http://www.intel.com/support/motherboards/server/sb/CS-034157.htm> for the most up-to-date list of tested PCIe* 3.0 adapters that will run at their maximum native speed.

Intel recommends upgrading your system BIOS to version R02.02.0002 or a subsequent version. The System Upgrade Package (SUP) including the latest BIOS is available on the Intel web site at <http://downloadcenter.intel.com/>.

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

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