



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

Intel Technical Advisory

TA-1021-4

5200 NE Elam Young Parkway
Hillsboro, OR 97124

April 28, 2013

PCIe Gen 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 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[®] Server Board S2400BB Product Family
Intel[®] Server Boards S4600LH2 and S4600LT2 Product Family
Intel[®] Workstation Board W2600CR 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 R2000SC 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 R1000BB Product Family
Intel[®] Server System R2000BB Product Family
Intel[®] Server System R2000IP Product Family
Intel[®] Server Systems R2000LH2 and R2000LT2 Product Family

Description

Intel has discovered that PCIe Gen3 adapters operating at Gen3 speed may generate errors in the System Event Log (SEL) when installed in one of the server boards listed above. This issue may affect any adapter operating at PCIe Gen3 speed when used in the standard PCIe connector slots or when connected to the Storage IO connectors on these

products. Further investigation shows these adapters do not generate error messages in the SEL when running in PCIe Gen2 mode. Intel has verified that the PCIe Gen3 capable add-in adapters listed below in the Corrective Action/Resolution section are not subject to this issue when running at Gen3 speed.

Root Cause

This issue appears to be specific to the signaling characteristics between the server board PCIe Gen3 slot or Storage IO Module connector and the specific adapters being used. Intel is investigating the root cause and working to correct this issue as quickly as possible.

Corrective Action / Resolution

As an interim step until root cause and corrective action are determined, Intel is releasing a BIOS update to avoid the potential issue by limiting the PCIe slot speed to Gen2 unless the add-in adapters are PCIe Gen3 tested on the Intel® Server Boards listed above. Installing a PCIe Gen3 capable adapter in the system without updating the BIOS is not supported and may result in the errors described in this document. Upgrade your system BIOS to version R01.06.0002 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/>.

For the most up-to-date list of tested PCIe Gen3 capable adapters, visit the Intel web site at <http://www.intel.com/support/motherboards/server/sb/CS-034157.htm>.

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

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

A "Mission Critical Application" is any application in which failure of the Intel Product could result, directly or indirectly, in personal injury or death. SHOULD YOU PURCHASE OR USE INTEL'S PRODUCTS FOR ANY SUCH MISSION CRITICAL APPLICATION, YOU SHALL INDEMNIFY AND HOLD INTEL AND ITS SUBSIDIARIES, SUBCONTRACTORS AND AFFILIATES, AND THE DIRECTORS, OFFICERS, AND EMPLOYEES OF EACH, HARMLESS AGAINST ALL CLAIMS COSTS, DAMAGES, AND EXPENSES AND REASONABLE ATTORNEYS' FEES ARISING OUT OF, DIRECTLY OR INDIRECTLY, ANY CLAIM OF PRODUCT LIABILITY, PERSONAL INJURY, OR DEATH ARISING IN ANY WAY OUT OF SUCH MISSION CRITICAL APPLICATION, WHETHER OR NOT INTEL OR ITS SUBCONTRACTOR WAS NEGLIGENT IN THE DESIGN, MANUFACTURE, OR WARNING OF THE INTEL PRODUCT OR ANY OF ITS PARTS.

Intel may make changes to specifications and product descriptions at any time, without notice. Designers must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined". Intel reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The information here is subject to change without notice. Do not finalize a design with this information.

The products described in this document may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

Contact your local Intel sales office or your distributor to obtain the latest specifications and before placing your product order.

Copies of documents which have an order number and are referenced in this document, or other Intel literature, may be obtained by calling 1-800-548-4725, or go to: <http://www.intel.com/design/literature.htm>

Enterprise Platforms & Services Division
Intel Corporation