

intel® Technical Advisory

TA-0300-1

5200 NE Elam Young Parkway
Hillsboro, OR 97124

July 28, 2000

SKA4 PCI Configuration Space not Updated Properly

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. Intel products are not intended for use in medical, life saving, or life sustaining applications. Intel may make changes to specifications and product descriptions at any time, without notice. The **Products Affected** 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.

Products Affected

Product Type	Product Code
SKA4 Server Baseboard	BKO2HE
SRKA4 Server Platform	SKODVHI, SKODVBK, SKODVBS, ISP4400
SPKA4 Server Platform	SKOC2HI, SKOC2BS, SKOC2BSxx

Description

SKA4 based server systems may hang or otherwise function improperly after adding certain PCI add-in cards with an Intel i960* RD/RP/RN/RM I/O microprocessor. This behavior has been observed with the AMI MR493* RAID card, but other cards may exhibit the behavior also. The SKA4 based server system may not be able to install Microsoft Windows 2000* after installing a card implementing the referenced i960 microprocessor with PCI HOT Plug (PHP) enabled. The result is a hang when Microsoft Windows 2000* is unable to find the hard drive through the installed card.

Root Cause

The root cause of the problem has been identified as a system BIOS PCI resource allocation issue. The hang condition occurs on certain PCI cards (i.e. - AMI 493*) containing the i960* RD/RM/RN I/O microprocessor with the integrated PCI-PCI bridge enabled and no devices located on the subordinate bus (internal to the card). This problem is caused by a BIOS routine that was implemented for the i960* RP/RD/RM/RN that creates a 1Mb aperture on the primary side of the integrated PCI-PCI bridge. This BIOS routine addresses an errata on the i960* RP in which the PCI-PCI bridge cannot properly close the memory aperture. The implementation of this routine on the i960* RD/RM/RN creates the condition that may cause Microsoft Windows 2000* to hang during installation on a SKA4 server-based system with Hot Plug PCI enabled.

Corrective Action / Resolution

This issue is currently under engineering investigation. A change in the SKA4 System BIOS is targeted in the near future.

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

intel[®] Technical Advisory

TA-0300-1

5200 NE Elam Young Parkway
Hillsboro, OR 97124

July 28, 2000

Server Products Division
Enterprise Platform Group
Intel Corporation