

# intel® Technical Advisory

TA-0587-1

5200 NE Elam Young Parkway  
Hillsboro, OR 97124

Aug 9, 2002

## SPSH4/SRSH4 Hot-Plug PCI Slots Configured at 66MHz by Default

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 Name	Product Code
Intel® server platform SPSH4	SSHCBPBE, SSHCBPBK, SSHCBBRK
Intel® server platform SRSH4	SSHDVRBK

### Description

The Intel server platforms SPSH4 and SRSH4 with baseboard PBA revision -6xx ship from the factory with the PCI Hot-plug (PHP) slots (PCI slots 5-8) configured at 66MHz via jumper blocks 1G and 5H11. These jumpers ground the PCIXCAP signal in each of the PCI segments which causes the chipset to set the specified bus to PCI 66MHz.

Configuration options for jumper blocks 1G and 5H11 are as follows:

Jumper Block Designation	Jumper Setting	Functional Result
1G	Both pins shorted (factory default)	PCI slots 7 & 8 set to 66MHz
1G	Jumper off or only 1 pin shorted	PCI slots 7 & 8 set to 100MHz
5H11	Both pins shorted (factory default)	PCI slots 5 & 6 set to 66MHz
5H11	Jumper off or only 1 pin shorted	PCI slots 5 & 6 set to 100MHz

For maximum data integrity on PCI slots 5 – 8, Intel recommends the default jumper setting of 66MHz. Various system anomalies have been observed in the Intel validation labs under certain configurations in high-stress system I/O tests when the PHP capable slots are set to 100MHz PCI-X. These anomalies have only been observed when both PHP slots on a single PCI segment (slots 5&6 or 7&8) are populated with 100MHz PCI-X adapters; such anomalies have not been observed when only a single slot on a PCI segment is populated. Since Intel cannot validate all possible configuration combinations, customers are advised to leave the system configured at the default 66MHz PCI frequency to ensure optimal data integrity at all times.

Intel has determined that the operational anomalies are limited to server systems with PBA revision -6xx or earlier and when the PHP capable slots are configured for 100MHz operation. These anomalies have not been observed at the 66MHz factory default configuration. Additionally, there are two non-PHP 100MHz PCI-X slots on the system (slots 3&4); these slots are not affected by the anomalies and remain configured for 100MHz PCI-X operation.

Intel will not make available any patch, software upgrade, hardware or other means to change the PHP behavior of the affected products.

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

Enterprise Platforms & Services Division  
Intel Corporation