intel® Technical Advisory

TA-0304-2

5200 NE Elam Young Parkway
Hillsboro, OR 97124

August 17, 2000

Intel® SBT2 Server Board: UP 933Mhz and UP/DP 1000Mhz processors may exceed the maximum Tplate temperature

*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 **SBT2** 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

All Intel® SBT2 Server boards (**BBTBB, MM#830479**; **SBT2, MM# 830469**) integrated with the Intel® SC5000 server chassis (**KHDHSRPU, MM#830611**) and containing the additional 5-drive hot-swap drive bay (10 hard drive total).

Description

The Intel SBT2 Server board integrated with the Intel SC5000 server chassis currently supports Intel Pentium® III Xeon™ processors up to 1000Mhz**. Under specific high-power configurations, the processors may exceed the maximum allowed Tplate temperature of 55°C by 1 to 2 degrees.

This issue may occur in system configurations containing 10 hard drives integrated into the two SC5000 drive bays and either UP (single processor) 933Mhz or UP/DP (single/dual) 1000Mhz processors. If, with this configuration, the system is running a software application that causes high processor utilization and power consumption, and the system's ambient temperature is 35°C or above, the processors may reach temperatures 1 or 2 degrees above the maximum allowable Tplate temperature of 55°C.

**Future support will be evaluated as higher frequency processors become available

Root Cause

The issue is caused by the large amounts of heat that can be released by the processor(s) and hard drives while running very high-powered applications. Although the airflow over the processors is adequate for most configurations, UP 933Mhz and UP/DP 1000Mhz processors under high-power configurations (as specified above) may require a cooler environment.

Corrective Action / Resolution

This issue should not appear in most configurations. Even in configurations with 10 hard drives and 933Mhz or 1000Mhz processors, the processor's Tplate temperature rises above 55°C only when running high-power applications. To ensure that the processor temperatures do not exceed their allowable Tplate maximum, it is required for SBT2 / SC5000 system configurations containing UP 933Mhz or UP/DP 1000Mhz processors and 10 hot-swap hard drives, that the ambient temperature of the system never exceed 30°C.

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

Server Products Division
Enterprise Products Group
Intel Corporation