

intel® Technical Advisory

TA-0314-1

5200 NE Elam Young Parkway
Hillsboro, OR 97124

September 27, 2000

SKA4 False Errors Reported by BYO Diagnostics for Intrusion Switch and Power Distribution Board.

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Products Affected

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

Description

Running PC Diags or BYO Diags v 1.01 or earlier may result in test results logging several errors that are false errors. The false errors will be recorded in the *RESULTS.LOG* file similar to the following:

Intrusion Switch Error

*** ERROR BMC.CHECKDISCRETESENSORS V4.07

Failed checking Chs Intrusion ID Sensor #50h

Expected: 1h, Actual: 0h

Standard Error Code = 0BE0C00B

(Error logged at 01-01-01 01:01:01)

BMC.CHECKDISCRETESENSORS FAILED

Power Distribution Board Unit

*** ERROR BMC.CHECKDISCRETESENSORS V4.07

Failed checking PwrDstBd Unit Sensor #40h

Expected: 0h, Actual: 10h

Standard Error Code = 0BE0C00B

(Error logged at 01-01-01 01:01:01)

BMC.CHECKDISCRETESENSORS FAILED

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SMP Processor

SMP_Processor0_target_to_current_ipi

SMP_Processor0_current_to_target_ipi

Root Cause

Intrusion Switch Error

The intrusion switch sensor as monitored by the BMC (Baseboard Management Controller) can have either two or three possible return values depending on the version of BMC installed. BMC 22 and later can have three possible values returned as shown in Table 1: Intrusion Switch Sensor Values, while BMC 21 or earlier only returns two values (1 or 2) and will not exhibit the diagnostic error. The problem occurs because the diagnostics do not correctly interpret a return value of 0 as a valid status.

Table 1: Intrusion Switch Sensor Values

Value	Meaning
0	The intrusion switch is not activated and has never been activated.
1	The intrusion switch is not activated but has been activated at least once.
2	The intrusion switch is activated.

Power Distribution Board Unit

The Power Distribution Board Unit switch sensor as monitored by the BMC can have three possible return values as shown in Table 2: Power Distribution Board Sensor Values. The problem occurs because the diagnostics do not correctly interpret a return value of 10 as a valid status.

Table 2: Power Distribution Board Sensor Values

Value	Meaning
00	The power sensor reports no error.
10	The power sensor reports that AC power was lost at least once and the system has not gone through a complete shutdown and reboot since AC has been resolved. This value will only be set based on the conditions defined by the BIOS setup for <i>Power Policy</i> and the condition of the system when AC power was lost. See Table 3: Conditions for Setting Power Sensor.
40	The power sensor reports that a power supply failure exists.

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Table 3: Conditions for Setting Power Sensor

		System on when AC Lost.	System off when AC Lost
BIOS Policy	Never Power On	Not Set	Not Set
	Restore Last State	Set	Not Set
	Always Power On	Set	Set

SMP Processor

This error is a result of a conflict between interrupt handling in the diagnostics and console redirection being turned on. When diagnostics are executed interrupt handling and vectors are taken over by the diagnostics. This causes the console redirection to backlog a significant number of interrupts as system control information is being redirected to a COM port.

Corrective Action / Resolution

All of the referenced errors in this Technical Advisory are false errors. Intel is revising the diagnostic programs to correct these false reports. When further information becomes available regarding this issue a revision to this Technical Advisory will be published.

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

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