

EFI Utility User's Guide

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1 SEL Message Display Utility (selview)

The SEL Message Display Utility interprets system event logs (SEL), explains them in natural English, distinguishes errors, and displays Event ID. The features are as follows:

- Corresponds with the BMC, and collects SEL data.
- Reads SEL format files that include 16-byte length SEL events that has been saved in advance.
- Describes data inherent in the system at the top of the output file, so that sources of the data are clarified.
- Includes a separate analysis data dictionary data file that can easily be replaced easily or updated.

The command format for the selview command is:

```
selview /f [inputfile] /o [outputfile]
```

A transform section and dictionary are controlled as a unified binary.

The input file and output file can include a file path. The file path is specified as shown below. A relative path is available to current drive.

```
[drive:] [directory] [file]
```

Table 1. selview Command Parameters

Parameter	Description
/f or /F inputfile	Designates SEL raw data reserved as input file for the object to be transformed. If this parameter is omitted, the system SEL is obtained.
/o or /O outputfile	Designates a file to input results of the transformation. If this parameter is omitted, the results are output to the console. Examples: <ul style="list-style-type: none">• selview /o output.txt: Saves SEL lists to the file, output.txt, in the current directory.• selview /o work\output.txt: Saves SEL lists to the file, output.txt, in the work subdirectory that is beneath the current directory.• selview/o fs0:\output.txt: Saves SEL lists to the file, output.txt, in the root directory of fs0.• selview /o fso:\work\output.txt: Saves SEL to the file, output.txt, in the subfolder called work that is located in fs0.• selview /o fso:output.txt: Results in a command error because the relative path is only supported in the current drive.
/h or /H or /?	Displays how to use commands and revisions.

Table 1. selview Command Parameters

Parameter	Description
/f or /F inputfile	Designates SEL raw data reserved as input file for the object to be transformed. If this parameter is omitted, the system SEL is obtained.
/p or /P	Pauses by the page when displaying the screen.

Table 2. selview Output Fields

Item	Description
Platform Information	<p>Display FRU information of parts as Vendor Name, Product Part number, and board serial number. See "FRU Information Displayed by selview" on page 17 for details.</p> <p>If -f inputfile is not included in the command line, this field is unnecessary .SELDICT VERSION: A version of the dictionary used in the analysis .</p>
Tool Information	<p>Utility revision: The revision of the tool is displayed.</p> <p>Support firmware: The latest revision of the supported firmware is displayed.</p>
Time Stamp	<p>The time stamp field displays dates and time in the format YY/MM/DD hh:mm:ss </p> <p>where:</p> <ul style="list-style-type: none">• YY: the last two digits of the year• MM: the numbered month, from 01-12• DD: the numbered day of the month, from 01 - 31• hh: the 24 hour time display from 00 - 23• mm: the minute of the hour• ss: the second of the minute <p>The BMC time is recorded by the second (32 bits) from 00:00:00 January 1, 1970. Daylight Savings Time adjustments are made by server management software. The time data 0x00000000 through 0x20000000 are displayed as "Pre-init Timestamp" instead of time data to show the state that BMC time is not set up.</p>
SEL Data	Transforms SEL 16-byte data in HEX-ASCII code .

Table 2. selview Output Fields

Item	Description
Error Marker	<p>The output file includes an asterisk "*" or a plus "+" to help the user identify faults and warnings. The error marker field may contain one of the following:</p> <p>"*": Indicates the event is error or warning.</p> <p>"*UT": The associated event may be logged with a high temperature margin, but the system is still functional.</p> <p>"*LT": The associated event may be logged with a low temperature margin, but the system is still functional.</p> <p>"*UV": The associated event may be logged with an upper voltage margin testing, but the system is still functional.</p> <p>"*LV": The associated event may be logged with a lower voltage margin, but the system is still functional.</p> <p>"+ ": This is an information message, indicating a possible configuration mismatch. DIMMs, PCI cards and the system configuration options should be checked if these error markers are displayed frequently.</p>
Event ID	<p>The event ID describes a corresponding line number in the SEL Definitions. This field consists of up to seven ASCII codes, such as 1234A01</p>
Messages	<p>An English description of the event. If the SEL record is not included in the dictionary, then "Unknown SEL" is displayed.</p>

See ["SEL Definitions" on page 53](#) for tables of SEL events.

2 Save and Restore System Configuration Utility (syscfg)

The Save and Restore System Configuration Utility (syscfg) is a command line utility used with the Extended Firmware Interface (EFI) shell. With this command, the user can store or restore the system firmware, BMC firmware, EFI boot manager, and FRU settings. The syscfg provides the following functions:

- System Firmware Settings: Saves or restores all information held in the system.
- IPMI Configurations: [Partial save] Saves or restores the BMC settings. Since the BMC password is not saved for security purposes, the Null password is set for saved data. If a password setting is necessary, the backup file for the password should be edited.
- CMOS Settings: [Partial save] Saves the information saved in CMOS NVRAM.
- EFI Boot Manager Options: [Partial save] Saves or restores the EFI Boot Manager Options.
- FRU Settings : [Partial save] Saves or restores the FRU data (image). Hard-coded information, such as board serial number cannot be over-written.
- UUID: Restores only UUID of FRU information.
- Serial Number: Restores only the product serial number information on FRUs This restore can be performed only when the character string length and type code of the serial number matches the character string length and type code for the FRU that is pre-registered in FRU. The restore can not be performed if the product serial number field does not exist in the target FRU product information area.
- Check Sum is revised when FRU Product Area is revised.

The syscfg utility does not provide the following:

- An option for setting BMC-specific settings is not provided. If parameter changes are needed for BMC settings, the data file should be edited.
- A CMOS clear function is not provided because this can be executed by front panel operations.
- A FRU clear function is not provided because the equivalent function is available by restoring clear data.

The syscfg utility can be used in conjunction with replacing a system board. For this procedure, the command-line switches for the UUID and product serial numbers can be used to copy this information from the removed board into the firmware on the new board. The other FRU information, such as the "Product Version", "Product Part/Model Number" are replaced by the new board information. See ["BMC Data Format" on page 21](#) for details about information that can be copied from the old board to the new board.

The command format for the syscfg command is:

```
syscfg /argument(s) [switches]
```

or

```
syscfg -argument(s) [switches]
```

Table 3. syscfg Arguments and Switches

Argument and Switches	Description
/s or /S [File Name] [Switches]	<p>Save. This option writes the current IPMI configuration, CMOS settings, EFI Boot Manager settings, and FRU settings in the specified file. If a file name is not specified, the default file name, <code>syscfg.xxx</code>, is used.</p> <p>This option can be used with the following options to save part of settings for each configuration element: <code>/f</code>, <code>/c</code>, <code>/e</code>, or <code>/u</code>. If none of these switches is specified, <code>/s</code> targets all items.</p> <p>Examples:</p> <ul style="list-style-type: none">• <code>syscfg /s data</code>: Saves backup files with the filenames <code>data.bmc</code>, <code>data.cms</code>, <code>data.efs</code>, <code>data.fru</code>, <code>data.uid</code>, and <code>data.snb</code> into the current directory. See Table 4 on page 9 for an explanation of the file names.• <code>syscfg /s work\data /d</code>: Saves the backup file with the filename <code>data.uid</code> in the <code>work</code> subdirectory that is beneath the current directory. This backup file contains UUID information.• <code>syscfg /s fs0\data /n</code>: Saves the backup file with the filename <code>data.snb</code> in the <code>fs0</code>: root directory. This backup file contains serial number information.• <code>syscfg /s fs0:\work\data</code>: Saves backup files with the filenames <code>data.bmc</code>, <code>data.cms</code>, <code>data.efs</code>, <code>data.fru</code>, <code>data.uid</code>, and <code>data.snb</code> in the <code>fs0</code>: directory named <code>work</code>.• <code>syscfg /s fs0:data</code>: results in an error message because the relative path is only supported in the current drive.

Table 3. syscfg Arguments and Switches

Argument and Switches	Description
/r or /R [File Name] [Switches]	<p>Restore. This option restores IPMI configuration, CMOS settings, EFI Boot Manager settings, and FRU settings from the specified file.</p> <p>The configuration element to be restored must be specified by one or more of the following options /f, /c, /e, or /u. If no option is specified, an error message is displayed and the utility terminates with an error code.</p> <p>Examples:</p> <ul style="list-style-type: none"> • <code>syscfg /r data /f</code>: Restores IPMI data from a file named <code>data</code> that is in the current directory. • <code>syscfg /r work\data /c</code>: Restores CMOS settings from a file named <code>data.cms</code> that is located in the <code>work</code> subdirectory beneath the directory. • <code>syscfg /r fs0\data /e</code>: Restores the EFI boot manager settings from the backup file with the filename <code>data.efs</code> that is located in the <code>fs0: root</code> directory. • <code>syscfg /r fs0\work\data /d</code>: Restores the UUID settings from the backup file with the filename <code>data.uid</code> that is located in the <code>fs0:\root\work</code> directory. • <code>syscfg /r data /n</code>: Restores the serial number settings from the backup file with the filename <code>data.efs</code> that is located in the current directory.
/f or /F [File Name] [Switches]	<p>Specify IPMI configuration data. This option is used only with /s or /r to save or restore the BMC firmware settings.</p> <p>When the /r option is used to restore the firmware settings, the IPMI settings must be included in the input file. Otherwise, the utility displays an error message and terminates with an error code.</p> <p>This option cannot be used with /c, /e, /u, /d, or /n.</p>
/c [File Name] [Switches]	<p>Specify CMOS settings. This option is used only with with /s or /r to save or restore the settings of CMOS backup information.</p> <p>When the /r option is used to restore the CMOS backup information, the CMOS Backup information must be included in the input file. Otherwise, the utility displays an error message and terminates with an error code.</p> <p>This option cannot be used with /f, /e, /u, /d, or /n.</p>
/e or /E [File Name] [Switches]	<p>Specify EFI boot manager settings. This option is used only with /s or /r to save or restore the EFI boot manager settings.</p> <p>When the /r option is used to restore the EFI boot manager settings, the EFI boot manager settings must be included in the input file. Otherwise, the utility displays an error message and terminates with an error code.</p> <p>This option cannot be used with /f, /c, /u, /d, or /n.</p>

Table 3. syscfg Arguments and Switches

Argument and Switches	Description
/u or /U [File Name] [Switches]	<p>Specify FRU settings. This option is used only with /s or /r to save or restore the FRU information.</p> <p>When the /r option is used to restore FRU information, FRU information must be included in the input file. Otherwise, the utility displays an error message and terminates with an error code. The restored FRU information includes "Product Serial Number" and "UUID".</p> <p>This option cannot be used with /f, /c, /e, /d, or /n.</p>
/d or /D [File Name] [Switches]	<p>UUID restore. This option is used only with /s or /r to save or restore the UUID.</p> <p>This option cannot be used with /f, /c, /e, /n, or /u.</p>
/n or /N [File Name] [Switches]	<p>Serial number. This option is used only with /s or /r to save or restore the serial number.</p> <p>When the /r option is used to restore the serial number, the restore is executed only when the character string length and type code of the serial number matches the character string length and type code of the FRU. If these items do not match, the program terminated with error messages.</p> <p>This option cannot be used with /f, /c, /e, /d, or /u.</p>
/0 (Zero)	<p>Set BMC settings to factory defaults. This option returns the BMC's non-volatile configurations to the factory defaults</p> <p>The option cannot be used with any other options.</p>
/h or /H or /?	<p>Help. This option displays the command line help.</p>

Table 4. syscfg Files

File Name	Description
syscfg.exe	Execution program.
[File Name].bmc	BMC setting data. The file is in text format. Example: If the file name is specified as <code>data</code> , the resulting file name is <code>data.bmc</code> .
[File Name].cms	CMOS information data. This file is in binary format. Example: If the file name is specified as <code>data</code> , the resulting file name is <code>data.cms</code> .
[File Name].efs	EFI setting data. This file is in binary format. Example: If the file name is specified as <code>data</code> , the resulting file name is <code>data.efs</code> .
[File Name].fru	FRU information data. This file is in binary format. Example: If the file name is specified as <code>data</code> , the resulting file name is <code>data.fru</code> .
[File Name].uid	Specific data with UUID only. The file is in text format. Example: If the file name is specified as <code>data</code> , the resulting file name is <code>data.uid</code> .
[File Name].snb	Specific data with Serial Number only. The file is in text format. Example: If the file name is specified as <code>data</code> , the resulting file name is <code>data.snb</code> .

On the next page is the sample what the user might see if he/she uses the /h switch to obtain help.

syscfg xx.x All Right Reserved, Copyright(C),2006, Hitachi,Ltd.

SYSCFG /S [Drive:\
[Path\
[File Name] [{ /C | /E | /F | /D | /N | /U }]

SYSCFG /R [Drive:\
[Path\
[File Name] { /C | /E | /F | /D | /N | /U }

SYSCFG /O

SYSCFG { /? | /H }

Save and restore functions.

/S Specify the file name to save configuration(s).

With using this switch and all configuration data switches are omitted,
all configuration data will be saved.

Otherwise, one specified configuration would be saved.

/R Specify the file name of saved configuration to restore.

With using this switch, one configuration switch must be specified.

[Drive:\
[Path\
[File Name]

Specify configuration data file. If file name was omitted,
then syscfg will be assumed.

The REAL NAME of file(s) will be added extension corresponding to
each configuration (i.e., filename.bmc, filename.efs, etc,).

Configuration data select switches

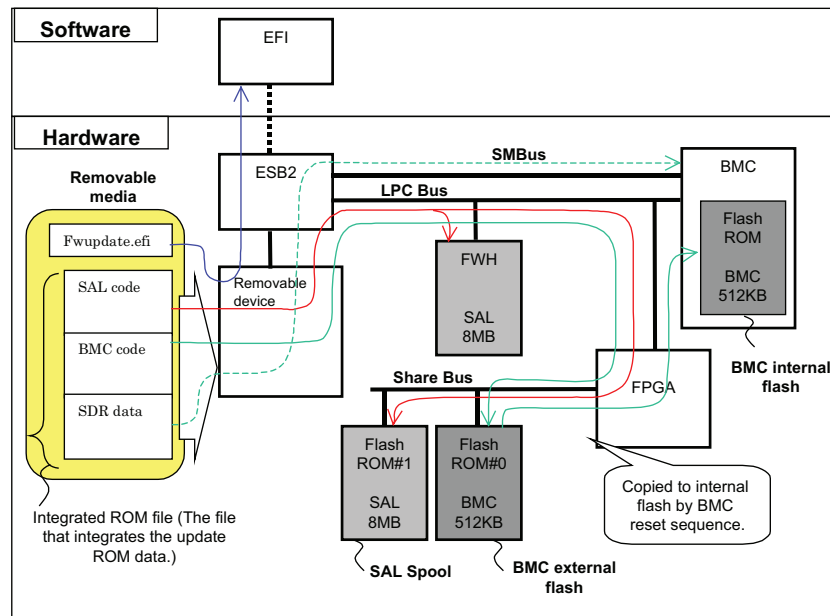
Switch	Selected data	File extention
/C	CMOS NVRAM	.cms
/D	UUID information	.uid
/E	EFI boot manager's configuration	.efs
/F	BMC firmware's configuration	.bmc
/N	Manufacturing serial number	.snb
/U	FRU inventories	.fru

3 Firmware Update Tool (fwupdate)

The firmware update utility (fwupdate) provides a way to update the SAL, BMC, and sensor data records (SDRs). Fwupdate is performed as an EFI shell command. Fwupdate provides the following functions.

- SAL/BMC update: This function updates SAL (FHW/SAL Spool) and BMC (external flash) to SAL/BMC in the integrated ROM file specified by file name. When the "target machine type" and "model" existing in the integrated ROM file is unmatched to the system, the update is not performed. This update process takes about 15 minutes to complete. SAL Spool is used as a back up of SAL. When SAL in FWH is damaged, the SAL is recovered from SAL Spool by using the SAL firmware recovery function.
- Take over the NVM area: NVM area in FWH stores the EFI parameters such as EFI boot option. By copying the contents of NVM area to take over, resetting of EFI parameters can be omitted. When version of NVM area managed by SAL is unmatched between FWH SAL and integrated ROM SAL, the takeover is not performed.
- SDR write function: Writes SDR data in the integrated ROM file. This update process takes about 3 minutes to complete.

A manual reset of the system is required after using the fwupdate utility.



AF001399

Figure 1. Block Diagram for Firmware Update Process

Fwupdate is executed by entering a command from the EFI shell:

```
fwupdate [Filename] [Option] [Enter]
```

The filename can include a file path. A relative path is available to current drive.

```
[drive:][directory][file]
```

The following table describes the fwupdate command parameters.

Table 5. fwupdate Command Parameters

Parameter	Description
File name	Integrated ROM file name (Format is as follow.); fw_aa-bb_cc-dd.rom; aa-bb: SAL version; cc-dd: BMC version; File name must be entered except when /V or /H option is specified
/f or /F	Does not confirm the write operation.; Normally, Down grade confirms the continuation of execution.
/v or /V	Displays the version of SAL (FWH)/BMC (internal flash).
/h or /H or /?	Displays the description of option command.
/l or /L	Updates only SAL in FWH and SAL Spool.
/b or /B	Updates only BMC in external flash.
/n or /N	Does not take over NVM area. (Invalid when /B or /S is specified.)

The following page shows what the screen looks like when the firmware update utility is executed.

```

fs0:>fwupdate fw_01-02_01-03.rom[Enter]

Firmware Update Utility Ver 1.0
Copyright (C) 1996-2000 Intel Corporation. All rights reserved.
*****
Copyright (c) Hitachi, Ltd, 2000-2005. All rights reserved.
*****
Build Date: Tue Feb 27 16:22:51 2005

*Fwupdate is providing update services*

File: fs0:\fw_01-02_01-03.rom Size: 9,371,904 Bytes
Reading file fs0:\fw_01-02_01-03.rom 100% Done!
Sumcheck SAL Data Done!
Sumcheck BMC Data Done!

***** Firmware Version Display *****
          Now <-- New
BMC      01-02    01-03
SAL      01-01    01-02

Fwupdate is ready to update FLASH devices.

***** SAL update process start *****
*** SAL Spool update process start ***
Chip Erasing FLASH Devices Please wait several minutes!
Chip Erasing FLASH Devices process Done!
Programming FLASH Devices 100% Done! ?????
Verifying FLASH 100% Done!?????????

*** SAL FWH Bank0 update process start ***
Erasing FLASH Devices 100% Done!
Programming FLASH Devices 100% Done!
Verifying FLASH 100% Done!

*** SAL FWH Bank1 update process start ***
Erasing FLASH Devices 100% Done!
Programming FLASH Devices 100% Done!
Verifying FLASH 100% Done!

***** BMC update process start *****
Erasing FLASH Devices 100% Done!
Programming FLASH Devices 100% Done!
Verifying FLASH 100% Done!

***** SDR update process start *****
Clear SDR Repository Done!
Add SDR 100% Done!

***** Firmware Version Display *****
          Now
BMC      01-03
SAL      01-02

Firmware update process was completed.
Restart this system at once.

```


Appendix A: FRU Data Mapping

Table 6. Classification and Usage of FRU Information

Item		Read / Write	Usage	Offset
Header		Read only	Indicates offset to each area based on the IPMI specification.	00h-07h (8-byte)
Internal Use Area		Read only	Work area for BMC.	08h-4Fh 72-byte
	Module Revision		Chassis code to identify the OEM destination and module type.	
	UUID	Read/write for /s, /u, and /d		
Chassis	Chassis Manufacturer Name	Read only	Name of manufacturer.	50h-6Fh (32-byte)
Info. Area	Chassis Type		17h (Rack Mount Chassis).	
	Chassis Part Number		Part number for component.	
	Chassis Serial Number		N/A	
Board Info. Area	Manufacturing Date/Time Area	Read only	Manufactured date of the board.	70h-Afh (64-byte)
	Board Manufacturer Name		Name of manufacturer.	
	Board Product Name		Name and revision of the server board.	
	Board Serial Number		Serial number of the server board.	
	Board Part Number		N/A	

Table 6. Classification and Usage of FRU Information

Item		Read / Write	Usage	Offset
Product Info. Area	Product Manufacturer Name	Read/write for /s and /u	Can be changed by OEM customer.	B0h-FFh 80-byte)
	Product Name			
	Product Part/ Model Number			
	Product Version			
	Product Serial Number	Read/write for /s, /u, and /n		
	Asset Tag	Read.write for /s and /u		
	FRU File ID			

Appendix B: FRU Information Displayed by selview

The tool "selview" displays FRU information of parts for tracking and manage the parts.

Table 7. FRU Information Displayed by selview

Component	Information	FRU Group	FRU Data	FRU Offset
Main Board	Vendor Name	Product Info	Product Manufacturer Name	Variable, see note 1
	Product Part Number	Product Info	Product Part/ Model Number	Variable, see note 1
	Board Product Name	Board Info	Board Product Name	7Eh
	Board S/N	Board Info	Board Serial Number	8Fh
	Board UUID	Internal Use Area	GUID	2Eh
Memory Box 0, 1, 2, 3	Vendor Name	Product Info	Product Manufacturer Name	Variable, see note 1
	Product Part Number	Product Info	Product Part/ Model Number	Variable, see note 1
	Board Product Name	Board Info	Board Product Name	7Eh
	Board S/N	Board Info	Board Serial Number	8Fh
HDD-PK	Vendor Name	Product Info	Product Manufacturer Name	Variable, see note 1
	Product Part Number	Board Info	Product Part/ Model Number	Variable, see note 1
	Board Product Name	Product Info	Board Product Name	7Eh
	Board S/N	Board Info	Board Serial Number	8Fh

Table 7. FRU Information Displayed by selview

Component	Information	FRU Group	FRU Data	FRU Offset
Power Unit 0, 1	Vendor Name	Product Info	Product Manufacturer Name	Variable, see note 2
	Product Name	Product Info	Product Name	Variable, see note 2
	Product Part Number	Product Info	Product Part/ Model Number	Variable, see note 2
	Product S/N	Product Info	Product Serial Number	Variable, see note 2

Notes:

1. This offset can be configurable by OEM customers. The selview tool will count the offset from the top of "FRU Product Area", by the method following IPMI specifications.
2. There is a case that the offset is changed by Power Unit vendors. The selview tool will count the offset from the top of "FRU Product Area", by the method following IPMI specifications.

Table 8. FRU Display Format

FRU Item	Description
Product Info: Product Manufacturer Name Product Info: Product Part/Model# Board Info: Board Product Name Board Info: Board S/N	ASCII string format. If the field does not exist, display "----".
Product Info: Product Name Product Info: Product Part# Product Info: Product S/N	ASCII string format. If the field does not exist, display "----". (Items written at the left are for Power Units.)
Board UUID	ASCII string format. The tool converts binary data of "Internal Use Area--GUID" to ASCII.

If the tool cannot detect the FRU ROM of the components, it will display "(Not Mounted)".

Example FRU information displayed by selview.

```
EFI> selview

SEL Message Display Utility Ver 1.0
Supported latest firmware XX-XX
*****
Copyright (c) Hitachi, Ltd, 2000-2005. All rights reserved.
Build Date: Tue Feb 27 16:22:51 2005
*****

----- MAIN BOARD -----
Vendor Name: HITACHI
Product Part#: 4S4U0123456789AB
Board Product Name: HBW01-AXXX
Board S/N: XXXXXXXXXXXXXXXXX
Board UUID:XXXXXXXX_XXXXXXXX_XXXXXXXX_XXXXXXXX
----- MMR#0 -----
Vendor Name: HITACHI
Product Part#: MMR 0123456789AB
Board Product Name: HBW02-AXXX
Board S/N: XXXXXXXXXXXXXXXXX
----- MMR#1 -----
Vendor Name: HITACHI
Product Part#: MMR 0123456789AB
Board Product Name: HBW02-AXXX
Board S/N: XXXXXXXXXXXXXXXXX
----- MMR#2 -----
(Not mounted)
----- MMR#3 -----
(Not mounted)
----- HDD-PK -----
Vendor Name: HITACHI
Product Part#: HDD 0123456789AB
Board Product Name: HBW03-AXXX
Board S/N: XXXXXXXXXXXXXXXXX
----- Power Unit#0 -----
Vendor Name: DELTA ENERGY SYSTEMS
Product Name: AWF 2DC 1400W
Product Part#: XXXXXXXXXXX-XXX
Part S/N: XXXXXXXXXXXXXXXXX
----- Power Unit#1 -----
(Not mounted)
-----
SELDICT VERSION: 1.0

|
(SEL list is displayed)
|
```


Appendix C: BMC Data Format

This appendix describes the data format of the BMC settings that stored by sysfg. The BMC configuration settings are stored in text format to [File Name].bmc. Users can modify the BMC configuration by either editing the file contents of [File Name].bmc or by restoring the default file syscfg.

The saved configuration file consists of the section line, followed by keyword lines. The section line is defined within brackets of "[]". The keyword line consists of the keyword, an equal sign "=", and the defined value. To change the BMC settings, the defined value can be modified.

At restore operation, partial keyword line definition is available. All keyword lines are ignored if removal of the section line.

Value descriptions are either numerical or text. Text values must be contained within double quotation marks "".

The saved value of "not supported" shows that feature is not supported by the BMC, or it is not defined. If the vaule is defined as "not supported" after a restore, the keyword item is ignored.

Definitions of Sections and Keywords

LAN Configuration Parameters 7 IPv4 Header Parameters

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 7 IPv4 Header Parameters]	N/A	N/A

Header

- Modification of the value: Not available
- Omission (not listed) in configuration data file: Not available (Always requested in the file)

Section Name	Keyword	Keyword Options / Information
Header	Syscfg=	Use pre-saved value
	Dataformat=	Use pre-saved value

Channel Access

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[Channel Access_n where "n" is the channel number in the IPMI specification: 1: LAN 2: Serial	PEF Alerting Enable_Disable=	"enable": Enable PEF Alerting "disable": Disable PEF Alerting on this channel (the Alert Immediate command can still be used to generate alerts)
	Per-message Authentication=	"enable": Enable Per-message Authentication "disable": Disable Per-message Authentication. [Authentication required to activate any session on this channel, but authentication not used on subsequent packets for the session.]
	User Level Authentication=	"enable": Enable User Level Authentication. All User Level commands are to be authenticated per the Authentication Type that was negotiated when the session was activated. "disable": Disable User Level Authentication. Allow User Level commands to be executed without being authenticated.

Section Name	Keywords	Keyword Options / Information
[Channel Access_n where "n" is the channel number in the IPMI specification: 1: LAN 2: Serial (continued)]	Access Mode for IPMI messaging= NOTES: <ul style="list-style-type: none"> If the Channel Number is 1 (LAN), only the value of 2 is available. If the Channel Number is 2 (Serial), only the value of 3 is available. 	0: Disabled. Channel disabled for IPMI messaging 1: Pre-boot only. Channel only available when system is in a powered down state or in BIOS prior to start of boot. 2: Always available. Channel always available for communication regardless of system mode. The BIOS typically dedicates the serial connection to the BMC. 3: Shared. Same as always available, but BIOS typically leaves the serial port available for software use.
	Channel Privilege Level Limit=	1: CALLBACK level 2: USER level 3: OPERATOR level 4: ADMINISTRATOR level 5: OEM Proprietary level

LAN Configuration Parameters 2 Authentication Type Enables

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 2 Authentication Type Enables]	Callback Level Authentication type OEM proprietary=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	Callback Level Authentication type straight password=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 2 Authentication Type Enables] (continued)	Callback Level Authentication type MD5=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	Callback Level Authentication type MD2=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	Callback Level Authentication type none=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	User Level Authentication type OEM proprietary=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	User Level Authentication type straight password=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	User Level Authentication type MD5=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 2 Authentication Type Enables] (continued)	User Level Authentication type MD2=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	User Level Authentication type none=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	Operator Level Authentication type OEM proprietary=	"supported": authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	Operator Level Authentication type straight password=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	Operator Level Authentication type MD5=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	Operator Level Authentication type MD2=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	Operator Level Authentication type none=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 2 Authentication Type Enables] (continued)	Administrator Level Authentication type OEM proprietary=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	Administrator Level Authentication type straight password=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	Administrator Level Authentication type MD5=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	Administrator Level Authentication type MD2=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	Administrator Level Authentication type none=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	OEM Level Authentication type OEM proprietary=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 2 Authentication Type Enables] (continued)	OEM Level Authentication type straight password=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	OEM Level Authentication type MD5=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	OEM Level Authentication type MD2=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.
	OEM Level Authentication type none=	"supported": Authentication type enabled for use at given privilege level "not_available": Authentication type not available for use at given privilege level.

LAN Configuration Parameters 3 IP Address

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 3 IP Address]	IP Address=	IP address in decimal numbers between to 255. Enclose IP address in quote marks ". Example: "192.168.0.254"

LAN Configuration Parameters 4 Parameter IP Address Source

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 4 Parameter IP Address Source]	IP Address Source=	0: unspecified 1: Static address (manually configured) 2: Address obtained by BMC running DHCP 3: Address loaded by BIOS or system software 4: Address obtained by BMC running other address assignment protocol

LAN Configuration Parameters 5 MAC Address

- Modification of the value: The value is not restored (Read Only). The value is not restored to target platform, and the BMC uses pre-defined MAC address, which is set at the factory.
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 5 MAC Address]	MAC Address=	Twelve hexadecimal numbers. This is not case sensitive. Example: "0123456789AB"

LAN Configuration Parameters 6 Subnet Mask

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 6 Subnet Mask]	Subnet Mask=	IP address in decimal numbers between to 255. Enclose IP address in quote marks ".". Example: "192.168.0.254"

LAN Configuration Parameters 7 IPv4 Header Parameters

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 7 IPv4 Header Parameters]	Parameters Time-to-live=	Value for time-to-live parameter in IP Header for RMCP packets and PET Traps transmitted from this channel.
	Parameters Flags=	0 - 7. Sets value of bit 1 in the Flags field in the IP Header for packets transmitted by this channel.
	Parameters Precedence=	0 - 7.
	Parameters Type of Service=	0 - 15.

LAN Configuration Parameters 10 BMC-generated ARP Control

- Modification of the value: Available (use pre-saved value.)
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 10 BMC-generated ARP control]	ARP responses=	"enable": Enable BMC-generated ARP responses "disable": Disable BMC-generated ARP responses
	Gratuitous ARPs=	"enable": Enable BMC-generated Gratuitous ARPs "disable": Disable BMC-generated Gratuitous ARPs

LAN Configuration Parameters 11 Gratuitous ARP Interval

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 11 Gratuitous ARP interval]	Gratuitous ARP interval=	0 - 255. Gratuitous ARP interval in 500 millisecond increments. 0-based. Interval accuracy is +/- 10%. If this configuration parameter is not implemented, gratuitous ARPs shall be issued at a rate of once every 2 seconds.

LAN Configuration Parameters 12 Default Gateway Address

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 12 Default Gateway Address]	IP Address=	IP address in decimal numbers between to 255. Enclose IP address in quote marks ". ". Example: "192.168.0.254"

LAN Configuration Parameters 13 Default Gateway MAC Address

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 13 Default Gateway MAC Address]	MAC Address=	Twelve hexadecimal numbers. This is not case sensitive. Example: "0123456789AB"

LAN Configuration Parameters 14 Backup Gateway Address

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 14 Backup Gateway Address]	IP Address=	IP address in decimal numbers between to 255. Enclose IP address in quote marks ". ". Example: "192.168.0.254"

LAN Configuration Parameters 15 Backup Gateway MAC Address

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 15 Backup Gateway MAC Address]	MAC Address=	Twelve hexadecimal numbers. This is not case sensitive. Example: "0123456789AB"

LAN Configuration Parameters 16 Community String

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 16 Community String]	Community String=	18 ASCII characters. Example: "AMITest"

LAN Configuration Parameters 17 Number of Destinations (Read Only)

- Modification of the value: Not available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 17 Number of Destinations (Read Only)]	Number of Destinations=	1 - 4. Number LAN Destinations. A count of 0h indicates LAN Alerting is not supported.

LAN Configuration Parameters 18 Destination Type

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 18 Destination Type]	Alert Acknowledge_n= where "n" is the "Destination Number" in IPMI specifications. (The value from 1 to 4).	0: Unacknowledged. Alert is assumed successful if transmission occurs without error. This value is also used with Callback numbers. 1: Acknowledged. Alert is assumed successful only if acknowledged is returned. Some alert types, such as Dial Page, do not support an acknowledge.
	Destination Type_n= where "n" is the Destination Type in the IPMP specification.	0: PET Trap destination 6: OEM 1 7: OEM 2
	Timeout_Retry Interval_n=	0 - 255. This value sets the timeout waiting for an acknowledge, or the time between automatic retries depending on whether the alert is acknowledge or not. The recommended factory default is 3 seconds. This value is ignored if the alert type does not support acknowledge, or if the Alert Acknowledge bit is 0.
	Retries_n=	0 - 7. The number of times to retry alert to given destination. 0: No retries (alert is only sent once). If the alert is acknowledged (Alert Acknowledge bit = 1b) the alert will only be retried if a timeout occurs waiting for the acknowledge. Otherwise, this value selects the number of times an unacknowledged alert will be sent out. The timeout interval or time between retries is set by the Alert Acknowledge Timeout / Retry Interval value (byte 3 of this parameter).

LAN Configuration Parameters 19 Destination Addresses

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[LAN Configuration Parameters 19 Destination Addresses]	Address Format_1=	0 = IPv4 IP Address followed by DIX Ethernet/802.3 MAC Address
	Gateway selector_1=	"default" = use default gateway "backup" = use backup gateway
	Alerting IP Address_1=	Specify the value from 0 to 255 of decimal number. Enclose IP address in quote marks ". ". Example: "192.168.0.254"
	Alerting MAC Address_1=	Twelve hexadecimal numbers. This is not case sensitive. Example: "0123456789AB"

User Name

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[User Name]	User Name String in ASCII_n= where "n" is the User ID from 2 - 10.	16 ASCII characters. Example: "root"

User Password

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

This keyword is not supported at parameter saving operation (Restore only keyword).

Section Name	Keywords	Keyword Options / Information
[User Password]	Set User Password_n= where "n" is the User ID from 2 - 10.	Up to 20 ASCII characters. Example: "Intel" If the length of string is zero (""), NULL password is set to BMC. This keyword is used for initialize the password. If the case not need to modify pre- defined password, do not use this keyword.
	Test User Password_n= where "n" is the User ID from 2 - 10.	Up to 20 ASCII characters. Example: "Intel"
	Enable User_*=	"enable": enable user "disable": disable user

Notes:

- For "password definition", use only the keyword "Set User Password_n".
- To both activate a user and set a password, use both keywords, "Set User Password_n" and "Enable User_n".
- If all of the keywords are used under the [User Password] section, then three IPMI commands are issued with the sequence of Set Password, Test Password, Enable User.

User Access

- Modification of the value: Available (Partially available)
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[User Access_n] where "n" is the Channel Number in the IPMI specification, from 2 - 10.	Maximum number of User IDs=	The maximum number of users. This keyword is read-only.
	User Restricted to Callback_n= where "n" is the User ID in the IPMI Specification, from 2 - 10. This keyword is not required.	0: User Privilege Limit is determined by the User Privilege Limit parameter, below, for both callback and non-callback connections. 1: User Privilege Limit is determined by the User Privilege Limit parameter for callback connections, but is restricted to Callback level for non-callback connections. Thus, a user can only initiate a Callback when they 'call in' to the BMC, but once the callback connection has been made, the user could potentially establish a session as an operator.
	link authentication_n= where "n" is the User ID in the IPMI Specification, from 2 - 10.	"disable": Disable user for link authentication "enable": Enable user for link authentication
	IPMI Messaging_n= where "n" is the User ID in the IPMI Specification, from 2 - 10.	"disable": Disable user for IPMI Messaging "enable": Enable user for IPMI Messaging
	User Privilege Limit_n= where "n" is the User ID in the IPMI Specification, from 2 to 10.	0: Reserved 1: Callback 2: User 3: Operator 4: Administrator 5: OEM Proprietary 15: NO ACCESS

SOL Configuration Parameters 1 SOL Enable

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[SOL Configuration Parameters 1 SOL Enable]	SOL Enable=	"enable": Enable SOL payload "disable": Disable SOL payload

SOL Configuration Parameters 2 SOL Authentication

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[SOL Configuration Parameters 2 SOL Authentication]	Force SOL Payload Encryption=	"force": Force encryption. If the Cipher Suite for the session supports encryption this setting will force the use of encryption for all SOL payload data. "remote": Encryption controlled by remote console. Whether SOL Packets are encrypted or not is selectable by the remote console at the time the payload is activated (using the Activate Payload command) and can be changed during operation via the Suspend/Resume Payload Encryption command.

Section Name	Keywords	Keyword Options / Information
[SOL Configuration Parameters 2 SOL Authentication] (continued)	Force SOL Payload Authentication=	<p>"force": Force Authentication. If the Cipher Suite for the session supports authentication this setting will force the use of authentication on all SOL Payload data.</p> <p>"remote": Authentication controlled by remote software. For the standard Cipher Suites, if encryption is used authentication must also be used. Therefore, while encryption is being used software will not be able to select using unauthenticated payloads.</p>
	SOL Privilege Level=	<p>0h: reserved 1h: reserved 2h: USER level 3h: OPERATOR level 4h: ADMINISTRATOR level 5h: OEM Proprietary level</p>

SOL Configuration Parameters 3 Character Accumulate Interval & Send Threshold

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[SOL Configuration Parameters 3 Character Accumulate Interval & Send Threshold]	Character Accumulate Interval=	<p>0 - 255. Character Accumulate Interval in 5 ms increments. 1-based. This sets the typical amount of time that the BMC will wait before transmitting a partial SOL character data packet. (Where a partial packet is defined as a packet that has fewer characters to transmit than the number of characters specified by the Character Send Threshold. A packet will not be sent.</p>

Section Name	Keywords	Keyword Options / Information
[SOL Configuration Parameters 3 Character Accumulate Interval & Send Threshold] (continued)	Character Send Threshold=	0 - 255. Character Send Threshold. 1-based. The BMC will automatically send an SOL character data packet containing this number of characters as soon as this number of characters (or greater) has been accepted from the baseboard serial controller into the BMC. This provides a mechanism to tune the buffer to reduce latency to when the first characters are received after an idle interval. In the degenerate case, setting this value to a '1' would cause the BMC to send a packet as soon as the first character was received.

SOL Configuration Parameters 4 SOL Retry

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[SOL Configuration Parameters 4 SOL Retry]	Retry count=	0 - 7. Retry count. 1-based. 0: No retries after packet is transmitted. Packet will be dropped if no ACK/NACK received by time retries expire.
	Retry Interval=	0 - 255. Retry Interval. 1-based. Retry Interval in 10 ms increments. Sets the time that the BMC will wait before the first retry and the time between retries when sending SOL packets to the remote console.

SOL Configuration Parameters 5 SOL Non-volatile Bit Rate (Read Only)

- Modification of the value: Not available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[SOL Configuration Parameters 5 SOL non-volatile bit rate (Read Only)]	Bit Rate=	7: 19.2 kbps 8: 38.4 kbps 9: 57.6 kbps 10: 115.2 kbps

SOL Configuration Parameters 6 SOL Volatile Bit Rate

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[SOL Configuration Parameters 6 SOL volatile bit rate]	Bit Rate=	7: 19.2 kbps 8: 38.4 kbps 9: 57.6 kbps 10: 115.2 kbps

PEF Configuration Parameters 1 PEF Control

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[PEF Configuration Parameters 1 PEF Control]	PEF Alerting Startup Delay disable=	"enable": Enable PEF Alert Startup delay "disable": Disable PEF startup delay.
	PEF Startup Delay disable=	"enable": Enable PEF startup delay on manual (pushbutton) system power-ups (from S4/S5) and system resets (including system resets initiated by PEF). "disable": Disable PEF startup delay.
	Enable event messages for PEF actions=	"enable": Enable event messages for PEF actions. If this bit is set, each action triggered by a filter will generate an event message for the action. These allow the occurrence of PEF triggered actions to be logged (if event logging is enabled). The events are logged as System Event Sensor 12h, offset 04h. These event messages are also subject to PEF. "disable": Disable event messages for PEF actions.
	PEF=	"enable": Enable PEF. "disable": Disable PEF.

PEF Configuration Parameters 2 PEF Action Global Control

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[PEF Configuration Parameters 2 PEF Action global Control]	diagnostic interrupt=	"enable": Enable diagnostic interrupt "disable": Disable diagnostic interrupt
	OEM action=	"enable": Enable OEM action "disable": Disable OEM action
	power cycle action=	"enable": Enable power cycle action (No effect if power is already off) "disable": Disable power cycle action (No effect if power is already off)
	reset action=	"enable": Enable reset action "disable": Disable reset action
	power down action=	"enable": Enable power down action "disable": Disable power down action
	Alert action=	"enable": Enable Alert action "disable": Disable Alert action

PEF Configuration Parameters 3 PEF Startup Delay

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[PEF Configuration Parameters 3 PEF Startup Delay]	PEF Startup Delay=	0 - 255. Number of seconds for the delay, +/- 10%. 1-based. 00h = no delay.

PEF Configuration Parameters 4 PEF Alert Startup Delay

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[PEF Configuration Parameters 4 PEF Alert Startup Delay]	PEF Alert Delay=	0 - 255. Number of seconds for the delay, +/- 10%. 1-based. 00h = no delay.

PEF Configuration Parameters 5 Number of Event Filters (READ ONLY)

- Modification of the value: Not available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[PEF Configuration Parameters 5 Number of Event Filters (READ ONLY)]	number of event filter entries=	Number of event filter entries. 0 = alerting not supported.

PEF Configuration Parameters 6 Event Filter Table

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[PEF Configuration Parameters 6 Event Filter Table]	filter data_n= where "n" is the filter number, from 1 to 16.	Specify 40 digits of Hexadecimal numbers. Example: "80010110FFFF04FF01FFFF52FF5200FF0000FF00"

PEF Configuration Parameters 8 Number of Alert Policy Entries (READ ONLY)

- Modification of the value: Not available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[PEF Configuration Parameters 8 Number of Alert Policy Entries (READ ONLY)]	number of alert policy entries=	number of alert policy entries. 0 = alerting not supported.

PEF Configuration Parameters 9 Alert Policy Table

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[PEF Configuration Parameters 9 Alert Policy Table]	entry data_n= where "n" is the entry number, from 1 to 16.	Specify 6 hexadecimal digits. Example: "181181"

PEF Configuration Parameters 10 System GUID

- Modification of the value: Not available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[PEF Configuration Parameters 10 System GUID]	BMC uses following value=	1: BMC uses following value in PET Trap. 0: BMC ignores following value and uses value returned from Get System GUID command instead.

PEF Configuration Parameters 13 Alert String

- Modification of the value: Available
- Omission (not listed) in configuration data file: Available

Section Name	Keywords	Keyword Options / Information
[PEF Configuration Parameters 13 Alert String]	Alert String_n_x= where "n" is the alert string selector in the IPMI specification, from 1 to 3. where "x" is the block selector in the IPMI specification, from 1 to 3.	String data. Null terminated 8-bit ASCII string. 16-bytes maximum per block.

The following pages show an example of a file output.

```
[Header]
Syscfg="01-00"
Dataformat="01-00"

[Channel Access_1]
PEF Alerting Enable_Disable="enable"
Per-message Authentication="enable"
User Level Authentication="enable"
Access Mode for IPMI messaging=2
Channel Privilege Level Limit=4

[Channel Access_2]
PEF Alerting Enable_Disable="enable"
Per-message Authentication="enable"
User Level Authentication="enable"
Access Mode for IPMI messaging=3
Channel Privilege Level Limit=4

[LAN Configuration Parameters 2 Authentication Type Enables]
Callback Level Authentication type OEM proprietary="not_available"
Callback Level Authentication type straight password="supported"
Callback Level Authentication type MD5="supported"
Callback Level Authentication type MD2="supported"
Callback Level Authentication type none="supported"
User Level Authentication type OEM proprietary="not_available"
User Level Authentication type straight password="supported"
User Level Authentication type MD5="supported"
User Level Authentication type MD2="supported"
User Level Authentication type none="supported"
Operator Level Authentication type OEM proprietary="not_available"
Operator Level Authentication type straight password="supported"
```

```

Operator Level Authentication type MD5="supported"
Operator Level Authentication type MD2="supported"
Operator Level Authentication type none="supported"
Administrator Level Authentication type OEM proprietary="not_available"
Administrator Level Authentication type straight password="supported"
Administrator Level Authentication type MD5="supported"
Administrator Level Authentication type MD2="supported"
Administrator Level Authentication type none="supported"
OEM Level Authentication type OEM proprietary="not_available"
OEM Level Authentication type straight password="not_available"
OEM Level Authentication type MD5="not_available"
OEM Level Authentication type MD2="not_available"
OEM Level Authentication type none="not_available"

[LAN Configuration Parameters 3 IP Address]
IP Address="xxx.xxx.xxx.xxx"

[LAN Configuration Parameters 4 Parameter IP Address Source]
IP Address Source=1

[LAN Configuration Parameters 5 MAC Address]
MAC Address="XXXXXXXXXXXX"

[LAN Configuration Parameters 6 Subnet Mask]
Subnet Mask="255.255.255.0"

[LAN Configuration Parameters 7 IPv4 Header Parameters]
Parameters Time-to-live=0
Parameters Flags=0
Parameters Precedence=0
Parameters Type of Service=0

[LAN Configuration Parameters 10 BMC-generated ARP control]
ARP responses="disable"
Gratuitous ARPs="enable"

[LAN Configuration Parameters 11 Gratuitous ARP interval]
Gratuitous ARP interval=4

[LAN Configuration Parameters 12 Default Gateway Address]
IP Address="0.0.0.0"

[LAN Configuration Parameters 13 Default Gateway MAC Address]
MAC Address="000000000000"

[LAN Configuration Parameters 14 Backup Gateway Address]
IP Address="0.0.0.0"

[LAN Configuration Parameters 15 Backup Gateway MAC Address]
MAC Address="000000000000"

[LAN Configuration Parameters 16 Community String]
Community String="AMITest"

[LAN Configuration Parameters 17 Number of Destinations (Read Only)]
Number of Destinations=4

```

```

[LAN Configuration Parameters 18 Destination Type]
Alert Acknowledge_1=0
Alert Acknowledge_2=0
Alert Acknowledge_3=0
Alert Acknowledge_4=0
Destination Type_1=0
Destination Type_2=0
Destination Type_3=0
Destination Type_4=0
Timeout_Retry Interval_1=0
Timeout_Retry Interval_2=0
Timeout_Retry Interval_3=0
Timeout_Retry Interval_4=0
Retries_1=0
Retries_2=0
Retries_3=0
Retries_4=0

[LAN Configuration Parameters 19 Destination Addresses]
Address Format_1=0
Address Format_2=0
Address Format_3=0
Address Format_4=0
Gateway selector_1="default"
Gateway selector_2="default"
Gateway selector_3="default"
Gateway selector_4="default"
Alerting IP Address_1="0.0.0.0"
Alerting IP Address_2="0.0.0.0"
Alerting IP Address_3="0.0.0.0"
Alerting IP Address_4="0.0.0.0"
Alerting MAC Address_1="000000000000"
Alerting MAC Address_2="000000000000"
Alerting MAC Address_3="000000000000"
Alerting MAC Address_4="000000000000"

[User Name]
User Name String in ASCII_2="AAAAAAA"
User Name String in ASCII_3="not_support"
User Name String in ASCII_4="not_support"
User Name String in ASCII_5="not_support"
User Name String in ASCII_6="not_support"
User Name String in ASCII_7="not_support"
User Name String in ASCII_8="not_support"
User Name String in ASCII_9="not_support"
User Name String in ASCII_10="not_support"

[User Password]
Set User Password_2="AAAAAAA"
Enable User_2="enable"
Test User Password_2="AAAAAAA"

```

```
[User Access_1]
Maximum number of User IDs=10
User Restricted to Callback_2=1
User Restricted to Callback_3=1
User Restricted to Callback_4=1
User Restricted to Callback_5=1
User Restricted to Callback_6=1
User Restricted to Callback_7=1
User Restricted to Callback_8=1

User Restricted to Callback_9=1
User Restricted to Callback_10=1
link authentication_2="enable"
link authentication_3="disable"
link authentication_4="disable"
link authentication_5="disable"
link authentication_6="disable"
link authentication_7="disable"
link authentication_8="disable"
link authentication_9="disable"
link authentication_10="disable"
IPMI Messaging_2="enable"
IPMI Messaging_3="disable"
IPMI Messaging_4="disable"
IPMI Messaging_5="disable"
IPMI Messaging_6="disable"
IPMI Messaging_7="disable"
IPMI Messaging_8="disable"
IPMI Messaging_9="disable"
IPMI Messaging_10="disable"
User Privilege Limit_2=4
User Privilege Limit_3=15
User Privilege Limit_4=15
User Privilege Limit_5=15
User Privilege Limit_6=15
User Privilege Limit_7=15
User Privilege Limit_8=15
User Privilege Limit_9=15
User Privilege Limit_10=15

[SOL Configuration Parameters 1 SOL Enable]
SOL Enable="disable"

[SOL Configuration Parameters 2 SOL Authentication]
Force SOL Payload Encryption="remote"
Force SOL Payload Authentication="remote"
SOL Privilege Level=0

[SOL Configuration Parameters 3 Character Accumulate Interval & Send
Threshold]
Character Accumulate Interval=0
Character Send Threshold=0
```

```

[SOL Configuration Parameters 4 SOL Retry]
Retry count=2
Retry Interval=20

[SOL Configuration Parameters 5 SOL non-volatile bit rate (Read Only)]
Bit Rate=7

[SOL Configuration Parameters 6 SOL volatile bit rate]
Bit Rate=0
[PEF Configuration Parameters 1 PEF Control]
PEF Alerting Startup Delay disable="disable"
PEF Startup Delay disable="disable"
Enable event messages for PEF actions="disable"
PEF="enable"

[PEF Configuration Parameters 2 PEF Action global Control]
diagnostic interrupt="disable"
OEM action="disable"
power cycle action="disable"
reset action="disable"
power down action="disable"
Alert action="enable"

[PEF Configuration Parameters 3 PEF Startup Delay]
PEF Startup Delay=0

[PEF Configuration Parameters 4 PEF Alert Startup Delay]
PEF Alert Delay=0

[PEF Configuration Parameters 5 Number of Event Filters (READ ONLY)]
number of event filter entries=16

[PEF Configuration Parameters 6 Event Filter Table]
filter data_1="80010110FFFF04FF01FFFF52FF5200FF0000FF00"
filter data_2="80010110FFFF02FF01FFFF00FF0000FF0000FF00"
filter data_3="80010110FFFF02FF03FFFF00FF0000FF0000FF00"
filter data_4="80010108FFFF01FF01008100FF0000FF0000FF00"
filter data_5="80010110FFFF01FF01020400FF0000FF0000FF00"
filter data_6="80010110FFFF05FF6FFFFFF0FF0000FF0000FF00"
filter data_7="80010108FFFF07FF6F040000FF0000FF0000FF00"
filter data_8="80010110FFFF07FF6FFBFF00FF0000FF0000FF00"
filter data_9="80010108FFFF08FF6F000400FF0000FF0000FF00"
filter data_10="80010110FFFF08FF6FFBFF00FF0000FF0000FF00"
filter data_11="80010110FFFF10FF6F100004FF0400FF0000FF00"
filter data_12="80010110FFFF23FF6FFFFFF0FF0000FF0000FF00"
filter data_13="0000000000000000000000000000000000000000"
filter data_14="00000000000000000000000000000000000000"
filter data_15="00000000000000000000000000000000000000"
filter data_16="00000000000000000000000000000000000000"

[PEF Configuration Parameters 8 Number of Alert Policy Entries (READ ONLY)]
number of alert policy entries=16

```



```
[PEF Configuration Parameters 9 Alert Policy Table]
entry data_1="181181"
entry data_2="000000"
entry data_3="000000"
entry data_4="000000"
entry data_5="000000"
entry data_6="000000"
entry data_7="000000"
entry data_8="000000"
entry data_9="000000"
entry data_10="000000"
entry data_11="000000"
entry data_12="000000"
entry data_13="000000"
entry data_14="000000"
entry data_15="000000"
entry data_16="000000"

[PEF Configuration Parameters 10 System GUID]
BMC uses following value=0
System GUID="00000000000000000000000000000000"

[PEF Configuration Parameters 11 Number of Alert Strings (READ ONLY)]
nombre of alert policy entries=3

[PEF Configuration Parameters 12 Alert String Keys]
Event Filter Number_1=0
Event Filter Number_2=0
Event Filter Number_3=0
Alert String Set_1=0
Alert String Set_2=0
Alert String Set_3=0

[PEF Configuration Parameters 13 Alert String]
Alert String_1_1="System FRED"
Alert String_1_2=
Alert String_1_3="not_support"
Alert String_2_1=
Alert String_2_2=
Alert String_2_3="not_support"
Alert String_3_1=
Alert String_3_2=
Alert String_3_3="not_support"
```


Appendix D: SEL Definitions

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0001	MB Temp0, 30	Assert	Temperature: Upper critical going high	20 00	01	01	59 - XX - XX		Warning message. MB temperature0 upper critical. If fan0-5 tach lower critical SEL is generated, give priority to it. Check chassis ventilation.
0002	MB Temp0, 30	Assert	Temperature: Upper non-recoverable going high	20 00	01	01	5B - XX - XX		Error message. MB temperature0 upper non-recoverable. If fan0-5 tach lower critical SEL is generated, give priority to it. Check chassis ventilation. Replace MB.
0003	MB Temp0, 30	Deassert	Temperature: Upper critical going high	20 00	01	81	59 - XX - XX		Informational message. MB temperature0 upper critical deassert. No action necessary.
0004	MB Temp0	Deassert	Temperature: Upper non-recoverable going high	20 00	01	81	5B - XX - XX		Informational message. MB temperature0 upper non-recoverable deassert. No action necessary.
0005	MB Temp1, 31	Assert	Temperature: Upper critical going high	20 00	01	01	59 - XX - XX		Warning message. MB temperature1 upper critical If fan0-5 tach lower critical SEL is generated, give priority to it. Check chassis ventilation.
0006	MB Temp1, 31	Assert	Temperature: Upper non-recoverable going high	20 00	01	01	5B - XX - XX		Error message. MB temperature1 upper non-recoverable. If fan0-5 tach lower critical SEL is generated, give priority to it. Check chassis ventilation. Replace MB.
0007	MB Temp1, 31	Deassert	Temperature: Upper critical going high	20 00	01	81	59 - XX - XX		Informational message. MB temperature1 upper critical deassert. No action necessary.
0008	MB Temp1, 31	Deassert	Temperature: Upper non-recoverable going high	20 00	01	81	5B - XX - XX		Informational message. MB temperature1 upper non-recoverable deassert. No action necessary.
0009	Environment Temp, 32	Assert	Temperature: Lower critical going low	20 00	01	01	52 - XX - XX		Warning message. Environment temperature lower critical. Check room temperature.
0010	Environment Temp, 32	Assert	Temperature: Upper critical going high	20 00	01	01	59 - XX - XX		Warning message. Environment temperature upper critical. Check room temperature.
0011	Environment Temp, 32	Assert	Temperature: Upper non-recoverable going high	20 00	01	01	5B - XX - XX		Error message. Environment temperature upper non-recoverable. Check room temperature.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0012	Environment Temp, 32	Deassert	Temperature: Lower critical going low	20 00	01	81	52 - XX - XX		Informational message. Environment temperature lower critical deassert. No action necessary.
0013	Environment Temp, 32	Deassert	Temperature: Upper critical going high	20 00	01	81	59 - XX - XX		Informational message. Environment temperature upper critical deassert. No action necessary.
0014	Environment Temp, 32	Deassert	Temperature: Upper non-recoverable going high	20 00	01	81	5B - XX - XX		Informational message. Environment temperature upper non-recoverable deassert. No action necessary.
0015	CPU0 Temp, 43	Assert	Temperature: Upper critical going high	20 00	01	01	59 - XX - XX		Warning message. CPU0 temperature upper critical. If fan0-5 tach lower critical SEL is generated, give priority to it. Check chassis ventilation.
0016	CPU0 Temp, 43	Assert	Temperature: Upper non-recoverable going high	20 00	01	01	5B - XX - XX		Error message. CPU0 temperature upper non-recoverable. If fan0-5 tach lower critical SEL is generated, give priority to it. Check chassis ventilation. Replace CPU0.
0017	CPU0 Temp, 43	Deassert	Temperature: Upper critical going high	20 00	01	81	59 - XX - XX		Informational message. CPU0 temperature upper critical deassert. No action necessary.
0018	CPU0 Temp, 43	Deassert	Temperature: Upper non-recoverable going high	20 00	01	81	5B - XX - XX		Informational message. CPU0 temperature upper non-recoverable deassert. No action necessary.
0019	CPU1 Temp, 53	Assert	Temperature: Upper critical going high	20 00	01	01	59 - XX - XX		Warning message. CPU1 temperature upper critical. If fan0-5 tach lower critical SEL is generated, give priority to it. Check chassis ventilation.
0020	CPU1 Temp, 53	Assert	Temperature: Upper non-recoverable going high	20 00	01	01	5B - XX - XX		Error message. CPU1 temperature upper non-recoverable. If fan0-5 tach lower critical SEL is generated, give priority to it. Check chassis ventilation. Replace CPU1.
0021	CPU1 Temp, 53	Deassert	Temperature: Upper critical going high	20 00	01	81	59 - XX - XX		Informational message. CPU1 temperature upper critical deassert. No action necessary.
0022	CPU1 Temp, 53	Deassert	Temperature: Upper non-recoverable going high	20 00	01	81	5B - XX - XX		Informational message. CPU1 temperature upper non-recoverable deassert. No action necessary.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0023	CPU2 Temp, 63	Assert	Temperature: Upper critical going high	20 00	01	01	59 - XX - XX		Warning message. CPU2 temperature upper critical. If fan0-5 tach lower critical SEL is generated, give priority to it. Check chassis ventilation.
0024	CPU2 Temp, 63	Assert	Temperature: Upper non-recoverable going high	20 00	01	01	5B - XX - XX		Error message. CPU2 temperature upper non-recoverable. If fan0-5 tach lower critical SEL is generated, give priority to it. Check chassis ventilation. Replace CPU2.
0025	CPU2 Temp, 63	Deassert	Temperature: Upper critical going high	20 00	01	81	59 - XX - XX		Informational message. CPU2 temperature upper critical deassert. No action necessary.
0026	CPU2 Temp, 63	Deassert	Temperature: Upper non-recoverable going high	20 00	01	81	5B - XX - XX		Informational message. CPU2 temperature upper non-recoverable deassert. No action necessary.
0027	CPU3 Temp, 73	Assert	Temperature: Upper critical going high	20 00	01	01	59 - XX - XX		Warning message. CPU3 temperature upper critical. If fan0-5 tach lower critical SEL is generated, give priority to it. Check chassis ventilation.
0028	CPU3 Temp, 73	Assert	Temperature: Upper non-recoverable going high	20 00	01	01	5B - XX - XX		Error message. CPU3 temperature upper non-recoverable. If fan0-5 tach lower critical SEL is generated, give priority to it. Check chassis ventilation. Replace CPU3.
0029	CPU3 Temp, 73	Deassert	Temperature: Upper critical going high	20 00	01	81	59 - XX - XX		Informational message. CPU3 temperature upper critical deassert. No action necessary.
0030	CPU3 Temp, 73	Deassert	Temperature: Upper non-recoverable going high	20 00	01	81	5B - XX - XX		Informational message. CPU3 temperature upper non-recoverable deassert. No action necessary.
0031	MB M12V, 23	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MB main 12V lower critical. If PS0-1 power failure SEL is generated, give priority to it. Replace PS0, PS1. Replace MB.
0032	MB M12V, 23	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MB main 12V lower non-recoverable. If PS0-1 power failure SEL is generated, give priority to it. Replace PS0, PS1. Replace MB.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0033	MB M12V, 23	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MB main 12V upper critical. If PS0-1 power failure SEL is generated, give priority to it. Replace PS0, PS1. Replace MB
0034	MB M12V, 23	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MB main 12V upper non-recoverable. If PS0-1 power failure SEL is generated, give priority to it. Replace PS0, PS1. Replace MB.
0035	MB M12V, 23	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MB main 12V lower critical deassert. No action necessary.
0036	MB M12V, 23	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MB main 12V lower non-recoverable deassert. No action necessary.
0037	MB M12V, 23	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MB main 12V upper critical deassert. No action necessary.
0038	MB M12V, 23	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MB main 12V upper non-recoverable deassert. No action necessary.
0039	MB M5.0V, 24	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MB main 5.0V lower critical. Replace MB.
0040	MB M5.0V, 24	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MB main 5.0V lower non-recoverable. Replace MB.
0041	MB M5.0V, 24	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MB main 5.0V upper critical. Replace MB.
0042	MB M5.0V, 24	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MB main 5.0V upper non-recoverable. Replace MB.
0043	MB M5.0V, 24	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MB main 5.0V lower critical deassert. No action necessary.
0044	MB M5.0V, 24	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MB main 5.0V lower non-recoverable deassert. No action necessary.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0045	MB M5.0V, 24	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MB main 5.0V upper critical deassert. No action necessary.
0046	MB M5.0V, 24	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MB main 5.0V upper non-recoverable deassert. No action necessary.
0047	MB M3.3V, 25	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MB main 3.3V lower critical. Replace MB.
0048	MB M3.3V, 25	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MB main 3.3V lower non-recoverable. Replace MB.
0049	MB M3.3V, 25	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MB main 3.3V upper critical. Replace MB.
0050	MB M3.3V, 25	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MB main 3.3V upper non-recoverable. Replace MB.
0051	MB M3.3V, 25	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MB main 3.3V lower critical deassert. No action necessary.
0052	MB M3.3V, 25	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MB main 3.3V lower non-recoverable deassert. No action necessary.
0053	MB M3.3V, 25	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MB main 3.3V upper critical deassert. No action necessary.
0054	MB M3.3V, 25	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MB main 3.3V upper non-recoverable deassert. No action necessary.
0055	MB M2.5V, 26	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Error message. MB main 2.5V lower critical. Replace MB.
0056	MB M2.5V, 26	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MB main 2.5V lower non-recoverable. Replace MB.
0057	MB M2.5V, 26	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MB main 2.5V upper critical. Replace MB.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0058	MB M2.5V, 26	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MB main 2.5V upper non-recoverable. Replace MB.
0059	MB M2.5V, 26	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MB main 2.5V lower critical deassert. No action necessary.
0060	MB M2.5V, 26	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MB main 2.5V lower non-recoverable deassert. No action necessary.
0061	MB M2.5V, 26	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MB main 2.5V upper critical deassert. No action necessary.
0062	MB M2.5V, 26	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MB main 2.5V upper non-recoverable deassert. No action necessary.
0063	MB M1.8V, 27	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MB main 1.8V lower critical. Replace MB.
0064	MB M1.8V, 27	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MB main 1.8V lower non-recoverable. Replace MB.
0065	MB M1.8V, 27	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MB main 1.8V upper critical. Replace MB.
0066	MB M1.8V, 27	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MB main 1.8V upper non-recoverable. Replace MB.
0067	MB M1.8V, 27	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MB main 1.8V lower critical deassert. No action necessary.
0068	MB M1.8V, 27	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MB main 1.8V lower non-recoverable deassert. No action necessary.
0069	MB M1.8V, 27	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MB main 1.8V upper critical deassert. No action necessary.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0070	MB M1.8V, 27	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MB main 1.8V upper non-recoverable deassert. No action necessary.
0071	MB M1.5V, 28	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MB main 1.5V lower critical. Replace MB.
0072	MB M1.5V, 28	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MB main 1.5V lower non-recoverable. Replace MB.
0073	MB M1.5V, 28	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MB main 1.5V upper critical. Replace MB.
0074	MB M1.5V, 28	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		MB main 1.5V upper non-recoverable. Replace MB.
0075	MB M1.5V, 28	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MB main 1.5V lower critical deassert. No action necessary.
0076	MB M1.5V, 28	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MB main 1.5V lower non-recoverable deassert. No action necessary.
0077	MB M1.5V, 28	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MB main 1.5V upper critical deassert. No action necessary.
0078	MB M1.5V, 28	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MB main 1.5V upper non-recoverable deassert. No action necessary.
0079	MB M1.2V0, 29	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MB main 1.2V0 lower critical. Replace CPU0, CPU1. Replace MB.
0080	MB M1.2V0, 29	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MB main 1.2V0 lower non-recoverable. Replace CPU0, CPU1. Replace MB.
0081	MB M1.2V0, 29	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MB main 1.2V0 upper critical. Replace CPU0, CPU1. Replace MB.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0082	MB M1.2V0, 29	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MB main 1.2V0 upper non-recoverable. Replace CPU0, CPU1. Replace MB.
0083	MB M1.2V0, 29	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MB main 1.2V0 lower critical deassert. No action necessary.
0084	MB M1.2V0, 29	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MB main 1.2V0 lower non-recoverable deassert. No action necessary.
0085	MB M1.2V0, 29	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MB main 1.2V0 upper critical deassert. No action necessary.
0086	MB M1.2V0, 29	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MB main 1.2V0 upper non-recoverable deassert. No action necessary.
0087	MB M1.2V1, 2A	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MB main 1.2V1 lower critical. Replace CPU2, CPU3. Replace MB.
0088	MB M1.2V1, 2A	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MB main 1.2V1 lower non-recoverable. Replace CPU2, CPU3. Replace MB.
0089	MB M1.2V1, 2A	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MB main 1.2V1 upper critical. Replace CPU2, CPU3. Replace MB.
0090	MB M1.2V1, 2A	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MB main 1.2V1 upper non-recoverable. Replace CPU2, CPU3. Replace MB.
0091	MB M1.2V1, 2A	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MB main 1.2V1 lower critical deassert. No action necessary.
0092	MB M1.2V1, 2A	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MB main 1.2V1 lower non-recoverable deassert. No action necessary.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0093	MB M1.2V1, 2A	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MB main 1.2V1 upper critical deassert. No action necessary.
0094	MB M1.2V1, 2A	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MB main 1.2V1 upper non-recoverable deassert. No action necessary.
0095	MB M1.2V2, 2B	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MB main 1.2V2 lower critical. Replace MB.
0096	MB M1.2V2, 2B	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MB main 1.2V2 lower non-recoverable. Replace MB.
0097	MB M1.2V2, 2B	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MB main 1.2V2 upper critical. Replace MB.
0098	MB M1.2V2, 2B	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MB main 1.2V2 upper non-recoverable. Replace MB.
0099	MB M1.2V2, 2B	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MB main 1.2V2 lower critical deassert. No action necessary.
0100	MB M1.2V2, 2B	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MB main 1.2V2 lower non-recoverable deassert. No action necessary.
0101	MB M1.2V2, 2B	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MB main 1.2V2 upper critical deassert. No action necessary.
0102	MB M1.2V2, 2B	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MB main 1.2V2 upper non-recoverable deassert. No action necessary.
0103	MB M-12V, 2C	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MB main -12V lower critical. If Slot1-6 fault status asserted SEL is generated, give priority to it. Replace MB.
0104	MB M-12V, 2C	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MB main -12V lower non-recoverable. If Slot1-6 fault status asserted SEL is generated, give priority to it. Replace MB.
0105	MB M-12V, 2C	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MB main -12V upper critical. If Slot1-6 fault status asserted SEL is generated, give priority to it. Replace MB.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0106	MB M-12V, 2C	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MB main -12V upper non-recoverable. If Slot1-6 fault status asserted SEL is generated, give priority to it. Replace MB.
0107	MB M-12V, 2C	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MB main -12V lower critical deassert. No action necessary.
0108	MB M-12V, 2C	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MB main -12V lower non-recoverable deassert. No action necessary.
0109	MB M-12V, 2C	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MB main -12V upper critical deassert. No action necessary.
0110	MB M-12V, 2C	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MB main -12V upper non-recoverable deassert. No action necessary.
0111	HDDPL M12V0, 2D	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. HDDPL main 12V0 lower critical. Replace MB, HDDPL.
0112	HDDPL M12V0, 2D	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. HDDPL main 12V0 lower non-recoverable. Replace MB, HDDPL.
0113	HDDPL M12V0, 2D	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. HDDPL main 12V0 upper critical. Replace MB, HDDPL.
0114	HDDPL M12V0, 2D	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. HDDPL main 12V0 upper non-recoverable. Replace MB, HDDPL.
0115	HDDPL M12V0, 2D	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. HDDPL main 12V0 lower critical deassert. No action necessary.
0116	HDDPL M12V0, 2D	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. HDDPL main 12V0 lower non-recoverable deassert. No action necessary.
0117	HDDPL M12V0, 2D	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. HDDPL main 12V0 upper critical deassert. No action necessary.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0118	HDDPL M12V0, 2D	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. HDDPL main 12V0 upper non-recoverable deassert. No action necessary.
0119	HDDPL M12V1, 2E	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. HDDPL main 12V1 lower critical. Replace MB, HDDPL.
0120	HDDPL M12V1, 2E	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. HDDPL main 12V1 lower non-recoverable. Replace MB, HDDPL.
0121	HDDPL M12V1, 2E	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. HDDPL main 12V1 upper critical. Replace MB, HDDPL.
0122	HDDPL M12V1, 2E	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. HDDPL main 12V1 upper non-recoverable. Replace MB, HDDPL.
0123	HDDPL M12V1, 2E	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. HDDPL main 12V1 lower critical deassert. No action necessary.
0124	HDDPL M12V1, 2E	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. HDDPL main 12V1 lower non-recoverable deassert. No action necessary.
0125	HDDPL M12V1, 2E	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. HDDPL main 12V1 upper critical deassert. No action necessary.
0126	HDDPL M12V1, 2E	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. HDDPL main 12V1 upper non-recoverable deassert. No action necessary.
0126 A	HDDPL S3.3V, 2F	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. HDDPL Sub 3.3V lower critical. Replace MB, HDDPL.
0126 B	HDDPL S3.3V, 2F	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. HDDPL Sub 3.3V lower non-recoverable. Replace MB, HDDPL.
0126 C	HDDPL S3.3V, 2F	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. HDDPL Sub 3.3V upper critical. Replace MB, HDDPL.
0126 D	HDDPL S3.3V, 2F	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. HDDPL Sub 3.3V upper non-recoverable. Replace MB, HDDPL.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0126 E	HDDPL S3.3V, 2F	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. HDDPL Sub 3.3V lower critical deassert. No action necessary.
0126 F	HDDPL S3.3V, 2F	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. HDDPL Sub 3.3V lower non-recoverable deassert. No action necessary.
0126 G	HDDPL S3.3V, 2F	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. HDDPL Sub 3.3V upper critical deassert. No action necessary.
0126 H	HDDPL S3.3V, 2F	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. HDDPL Sub 3.3V upper non-recoverable deassert. No action necessary.
0127	MMR0 M3.3V, 83	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MMR0 main 3.3V lower critical. Replace MMR0. Replace MB.
0128	MMR0 M3.3V, 83	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MMR0 main 3.3V lower non-recoverable. Replace MMR0. Replace MB.
0129	MMR0 M3.3V, 83	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MMR0 main 3.3V upper critical. Replace MMR0. Replace MB.
0130	MMR0 M3.3V, 83	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MMR0 main 3.3V upper non-recoverable. Replace MMR0. Replace MB.
0131	MMR0 M3.3V, 83	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MMR0 main 3.3V lower critical deassert. No action necessary.
0132	MMR0 M3.3V, 83	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MMR0 main 3.3V lower non-recoverable deassert. No action necessary.
0133	MMR0 M3.3V, 83	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MMR0 main 3.3V upper critical deassert. No action necessary.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0134	MMR0 M3.3V, 83	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MMR0 main 3.3V upper non-recoverable deassert. No action necessary.
0135	MMR0 M1.8V, 84	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MMR0 main 1.8V lower critical. Replace MMR0. Replace MB.
0136	MMR0 M1.8V, 84	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MMR0 main 1.8V lower non-recoverable. Replace MMR0. Replace MB.
0137	MMR0 M1.8V, 84	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MMR0 main 1.8V upper critical. Replace MMR0. Replace MB.
0138	MMR0 M1.8V, 84	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MMR0 main 1.8V upper non-recoverable. Replace MMR0. Replace MB.
0139	MMR0 M1.8V, 84	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MMR0 main 1.8V lower critical deassert. No action necessary.
0140	MMR0 M1.8V, 84	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MMR0 main 1.8V lower non-recoverable deassert. No action necessary.
0141	MMR0 M1.8V, 84	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MMR0 main 1.8V upper critical deassert. No action necessary.
0142	MMR0 M1.8V, 84	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MMR0 main 1.8V upper non-recoverable deassert. No action necessary.
0143	MMR0 M1.5V, 85	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MMR0 main 1.5V lower critical. Replace MMR0. Replace MB.
0144	MMR0 M1.5V, 85	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MMR0 main 1.5V lower non-recoverable. Replace MMR0. Replace MB.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0145	MMR0 M1.5V, 85	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MMR0 main 1.5V upper critical. Replace MMR0. Replace MB.
0146	MMR0 M1.5V, 85	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MMR0 main 1.5V upper non-recoverable. Replace MMR0. Replace MB.
0147	MMR0 M1.5V, 85	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MMR0 main 1.5V lower critical deassert. No action necessary.
0148	MMR0 M1.5V, 85	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MMR0 main 1.5V lower non-recoverable deassert. No action necessary.
0149	MMR0 M1.5V, 85	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MMR0 main 1.5V upper critical deassert. No action necessary.
0150	MMR0 M1.5V, 85	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MMR0 main 1.5V upper non-recoverable deassert. No action necessary.
0151	MMR1 M3.3V, 93	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MMR1 main 3.3V lower critical. Replace MMR1. Replace MB.
0152	MMR1 M3.3V, 93	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MMR1 main 3.3V lower non-recoverable. Replace MMR1. Replace MB.
0153	MMR1 M3.3V, 93	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MMR1 main 3.3V upper critical. Replace MMR1. Replace MB.
0154	MMR1 M3.3V, 93	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MMR1 main 3.3V upper non-recoverable. Replace MMR1. Replace MB.
0155	MMR1 M3.3V, 93	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MMR1 main 3.3V lower critical deassert. No action necessary.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0156	MMR1 M3.3V, 93	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MMR1 main 3.3V lower non-recoverable deassert. No action necessary.
0157	MMR1 M3.3V, 93	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MMR1 main 3.3V upper critical deassert. No action necessary.
0158	MMR1 M3.3V, 93	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MMR1 main 3.3V upper non-recoverable deassert. No action necessary.
0159	MMR1 M1.8V, 94	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MMR1 main 1.8V lower critical. Replace MMR1. Replace MB.
0160	MMR1 M1.8V, 94	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MMR1 main 1.8V lower non-recoverable. Replace MMR1. Replace MB.
0161	MMR1 M1.8V, 94	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MMR1 main 1.8V upper critical. Replace MMR1. Replace MB.
0162	MMR1 M1.8V, 94	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MMR1 main 1.8V upper non-recoverable. Replace MMR1. Replace MB.
0163	MMR1 M1.8V, 94	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MMR1 main 1.8V lower critical deassert. No action necessary.
0164	MMR1 M1.8V, 94	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MMR1 main 1.8V lower non-recoverable deassert. No action necessary.
0165	MMR1 M1.8V, 94	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MMR1 main 1.8V upper critical deassert. No action necessary.
0166	MMR1 M1.8V, 94	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MMR1 main 1.8V upper non-recoverable deassert. No action necessary.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0167	MMR1 M1.5V, 95	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MMR1 main 1.5V lower critical. Replace MMR1. Replace MB.
0168	MMR1 M1.5V, 95	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MMR1 main 1.5V lower non-recoverable. Replace MMR1. Replace MB.
0169	MMR1 M1.5V, 95	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MMR1 main 1.5V upper critical. Replace MMR1. Replace MB.
0170	MMR1 M1.5V, 95	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MMR1 main 1.5V upper non-recoverable. Replace MMR1. Replace MB.
0171	MMR1 M1.5V, 95	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MMR1 main 1.5V lower critical deassert. No action necessary.
0172	MMR1 M1.5V, 95	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MMR1 main 1.5V lower non-recoverable deassert. No action necessary.
0173	MMR1 M1.5V, 95	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MMR1 main 1.5V upper critical deassert. No action necessary.
0174	MMR1 M1.5V, 95	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MMR1 main 1.5V upper non-recoverable deassert. No action necessary.
0175	MMR2 M3.3V, A3	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MMR2 main 3.3V lower critical. Replace MMR2 Replace MB.
0176	MMR2 M3.3V, A3	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MMR2 main 3.3V lower non-recoverable. Replace MMR2. Replace MB.
0177	MMR2 M3.3V, A3	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MMR2 main 3.3V upper critical. Replace MMR2. Replace MB.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0178	MMR2 M3.3V, A3	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MMR2 main 3.3V upper non-recoverable. Replace MMR2. Replace MB.
0179	MMR2 M3.3V, A3	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MMR2 main 3.3V lower critical deassert. No action necessary.
0180	MMR2 M3.3V, A3	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MMR2 main 3.3V lower non-recoverable deassert. No action necessary.
0181	MMR2 M3.3V, A3	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MMR2 main 3.3V upper critical deassert. No action necessary.
0182	MMR2 M3.3V, A3	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MMR2 main 3.3V upper non-recoverable deassert. No action necessary.
0183	MMR2 M1.8V, A4	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MMR2 main 1.8V lower critical. Replace MMR2. Replace MB.
0184	MMR2 M1.8V, A4	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MMR2 main 1.8V lower non-recoverable. Replace MMR2. Replace MB.
0185	MMR2 M1.8V, A4	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MMR2 main 1.8V upper critical. Replace MMR2. Replace MB.
0186	MMR2 M1.8V, A4	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MMR2 main 1.8V upper non-recoverable. Replace MMR2. Replace MB.
0187	MMR2 M1.8V, A4	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MMR2 main 1.8V lower critical deassert. No action necessary.
0188	MMR2 M1.8V, A4	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MMR2 main 1.8V lower non-recoverable deassert. No action necessary.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0189	MMR2 M1.8V, A4	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MMR2 main 1.8V upper critical deassert. No action necessary.
0190	MMR2 M1.8V, A4	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MMR2 main 1.8V upper non-recoverable deassert. No action necessary.
0191	MMR2 M1.5V, A5	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MMR2 main 1.5V lower critical. Replace MMR2. Replace MB.
0192	MMR2 M1.5V, A5	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MMR2 main 1.5V lower non-recoverable. Replace MMR2. Replace MB.
0193	MMR2 M1.5V, A5	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MMR2 main 1.5V upper critical. Replace MMR2. Replace MB.
0194	MMR2 M1.5V, A5	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MMR2 main 1.5V upper non-recoverable. Replace MMR2. Replace MB.
0195	MMR2 M1.5V, A5	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MMR2 main 1.5V lower critical deassert. No action necessary.
0196	MMR2 M1.5V, A5	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MMR2 main 1.5V lower non-recoverable deassert. No action necessary.
0197	MMR2 M1.5V, A5	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MMR2 main 1.5V upper critical deassert. No action necessary.
0198	MMR2 M1.5V, A5	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MMR2 main 1.5V upper non-recoverable deassert. No action necessary.
0199	MMR3 M3.3V, B3	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MMR3 main 3.3V lower critical. Replace MMR3. Replace MB.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0200	MMR3 M3.3V, B3	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MMR3 main 3.3V lower non-recoverable. Replace MMR3. Replace MB.
0201	MMR3 M3.3V, B3	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MMR3 main 3.3V upper critical. Replace MMR3. Replace MB.
0202	MMR3 M3.3V, B3	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MMR3 main 3.3V upper non-recoverable. Replace MMR3. Replace MB.
0203	MMR3 M3.3V, B3	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MMR3 main 3.3V lower critical deassert. No action necessary.
0204	MMR3 M3.3V, B3	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MMR3 main 3.3V lower non-recoverable deassert. No action necessary.
0205	MMR3 M3.3V, B3	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MMR3 main 3.3V upper critical deassert. No action necessary.
0206	MMR3 M3.3V, B3	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MMR3 main 3.3V upper non-recoverable deassert. No action necessary.
0207	MMR3 M1.8V, B4	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MMR3 main 1.8V lower critical. Replace MMR3. Replace MB.
0208	MMR3 M1.8V, B4	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MMR3 main 1.8V lower non-recoverable. Replace MMR3. Replace MB.
0209	MMR3 M1.8V, B4	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MMR3 main 1.8V upper critical. Replace MMR3. Replace MB.
0210	MMR3 M1.8V, B4	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MMR3 main 1.8V upper non-recoverable. Replace MMR3. Replace MB.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0211	MMR3 M1.8V, B4	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MMR3 main 1.8V lower critical deassert. No action necessary.
0212	MMR3 M1.8V, B4	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MMR3 main 1.8V lower non-recoverable deassert. No action necessary.
0213	MMR3 M1.8V, B4	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MMR3 main 1.8V upper critical deassert. No action necessary.
0214	MMR3 M1.8V, B4	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MMR3 main 1.8V upper non-recoverable deassert. No action necessary.
0215	MMR3 M1.5V, B5	Assert	Voltage: Lower critical going low	20 00	02	01	52 - XX - XX		Warning message. MMR3 main 1.5V lower critical. Replace MMR3. Replace MB.
0216	MMR3 M1.5V, B5	Assert	Voltage: Lower non-recoverable going low	20 00	02	01	54 - XX - XX		Error message. MMR3 main 1.5V lower non-recoverable. Replace MMR3. Replace MB.
0217	MMR3 M1.5V, B5	Assert	Voltage: Upper critical going high	20 00	02	01	59 - XX - XX		Warning message. MMR3 main 1.5V upper critical. Replace MMR3. Replace MB.
0218	MMR3 M1.5V, B5	Assert	Voltage: Upper non-recoverable going high	20 00	02	01	5B - XX - XX		Error message. MMR3 main 1.5V upper non-recoverable. Replace MMR3. Replace MB.
0219	MMR3 M1.5V, B5	Deassert	Voltage: Lower critical going low	20 00	02	81	52 - XX - XX		Informational message. MMR3 main 1.5V lower critical deassert. No action necessary.
0220	MMR3 M1.5V, B5	Deassert	Voltage: Lower non-recoverable going low	20 00	02	81	54 - XX - XX		Informational message. MMR3 main 1.5V lower non-recoverable deassert. No action necessary.
0221	MMR3 M1.5V, B5	Deassert	Voltage: Upper critical going high	20 00	02	81	59 - XX - XX		Informational message. MMR3 main 1.5V upper critical deassert. No action necessary.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0222	MMR3 M1.5V, B5	Deassert	Voltage: Upper non-recoverable going high	20 00	02	81	5B - XX - XX		Informational message. MMR3 main 1.5V upper non-recoverable deassert. No action necessary.
0223	Fan0 Tach, E0	Assert	Fan: Lower critical going low	20 00	04	01	52 - XX - XX		Error message. Fan0 tach lower critical. Replace Fan0. Replace MB.
0224	Fan0 Tach, E0	Deassert	Fan: Lower critical going low	20 00	04	81	52 - XX - XX		Informational message. Fan0 tach lower critical deassert. No action necessary.
0225	Fan1 Tach, E1	Assert	Fan: Lower critical going low	20 00	04	01	52 - XX - XX		Error message. Fan1 tach lower critical. Replace Fan1. Replace MB.
0226	Fan1 Tach, E1	Deassert	Fan: Lower critical going low	20 00	04	81	52 - XX - XX		Informational message. Fan1 tach lower critical deassert. No action necessary.
0227	Fan2 Tach, E2	Assert	Fan: Lower critical going low	20 00	04	01	52 - XX - XX		Error message. Fan2 tach lower critical. Replace Fan2. Replace MB.
0228	Fan2 Tach, E2	Deassert	Fan: Lower critical going low	20 00	04	81	52 - XX - XX		Informational message. Fan2 tach lower critical deassert. No action necessary.
0229	Fan3 Tach, E3	Assert	Fan: Lower critical going low	20 00	04	01	52 - XX - XX		Error message. Fan3 tach lower critical. Replace Fan3. Replace MB.
0230	Fan3 Tach, E3	Deassert	Fan: Lower critical going low	20 00	04	81	52 - XX - XX		Informational message. Fan3 tach lower critical deassert. No action necessary.
0231	Fan4 Tach, E4	Assert	Fan: Lower critical going low	20 00	04	01	52 - XX - XX		Error message. Fan4 tach lower critical. Replace Fan4 Replace MB.
0232	Fan4 Tach, E4	Deassert	Fan: Lower critical going low	20 00	04	81	52 - XX - XX		Informational message. Fan4 tach lower critical deassert. No action necessary.
0233	Fan5 Tach, E5	Assert	Fan: Lower critical going low	20 00	04	01	52 - XX - XX		Error message. Fan5 tach lower critical. Replace Fan5. Replace MB.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0234	Fan5 Tach, E5	Deassert	Fan: Lower critical going low	20 00	04	81	52 - XX - XX		Informational message.Fan5 tach lower critical deassert. No action necessary.
0235	CPU0, 40	Assert	Processor: Thermal Trip	20 00	07	6F	01 - FF - FF	40	Error message. CPU0 thermal trip. If fan0-5 tach lower critical SEL is generated, give priority to it. Check chassis ventilation. Replace CPU0.
0236	CPU0, 40	Assert	Processor: Processor Disabled	20 00	07	6F	08 - FF - FF		Error message. CPU0 disabled. Replace CPU0.
0237	CPU0, 40	Assert	Processor: Configuration Error	20 00	07	6F	A5 - 0C - 00	41	Error message. CPU0 configuration error (Absent). All CPU slots are empty. Replace CPU0.
0238	CPU0, 40	Assert	Processor: Configuration Error	20 00	07	6F	A5 - 0C - 02	42	Error message. CPU0 configuration error (disabled). All CPUs are disabled. Replace CPU0.
0239	CPU0, 40	Assert	Processor: Configuration Error	20 00	07	6F	A5 - 0C - 03	43	Error message. CPU0 configuration error (Illegal Type). CPU0 is WB unsupported type. Replace CPU0 with WB supported type.
0239 A	CPU0, 40	Assert	Processor: Configuration Error	20 00	07	6F	A5 - 0C - 04	7C	Error message. CPU0 configuration error (installation rule). CPU0 slot is empty. Install supported processor.
0240	CPU0 Init Error, 41	Assert	Processor: Transition to non-recoverable from less severe	20 00	07	07	A3 - 03 - 40	44	Error message. CPU0 I2C access error (PIROM). Replace CPU0. Replace MB.
0241	CPU0 Init Error, 41	Assert	Processor: Transition to non-recoverable from less severe	20 00	07	07	A3 - 03 - 41	45	Error message. CPU0 I2C access error (temperature monitor). Replace CPU0. Replace MB.
0242	CPU1, 50	Assert	Processor: Thermal Trip	20 00	07	6F	01 - FF - FF	46	Error message. CPU1 thermal trip. If fan0-5 tach lower critical SEL is generated, give priority to it. Check chassis ventilation. Replace CPU1.
0243	CPU1, 50	Assert	Processor: Processor Disabled	20 00	07	6F	08 - FF - FF		Error message. CPU1 disabled. Replace CPU1.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0244	CPU1, 50	Assert	Processor: Configuration Error	20 00	07	6F	A5 - 0C - 11	47	Error message. CPU1 configuration error (disabled). All CPUs are disabled. (Include CPU1). Replace CPU1.
0245	CPU1, 50	Assert	Processor: Configuration Error	20 00	07	6F	A5 - 0C - 12	48	Error message. CPU1 configuration error (Illegal Type). CPU1 is WB unsupported type. Replace CPU1 with WB supported type.
0246	CPU1, 50	Assert	Processor: Configuration Error	20 00	07	6F	A5 - 0C - 13	49	Error message. CPU1 configuration error (Different Type). CPU1 is different type from CPU0. Replace CPU1 with same type as CPU0.
0246 A	CPU1, 50	Assert	Processor: Configuration Error	20 00	07	6F	A5 - 0C - 14	7D	Error message. CPU1 configuration error (installation rule). CPU1 socket is empty. Install supported processor in CPU1 socket.
0247	CPU1 Init Error, 51	Assert	Processor: Transition to non-recoverable from less severe	20 00	07	07	A3 - 03 - 50	4A	Error message. CPU1 I2C access error (PIROM). Replace CPU1. Replace MB.
0248	CPU1 Init Error, 51	Assert	Processor: Transition to non-recoverable from less severe	20 00	07	07	A3 - 03 - 51	4B	Error message. CPU1 I2C access error (temperature monitor). Replace CPU1. Replace MB.
0249	CPU2, 60	Assert	Processor: Thermal Trip	20 00	07	6F	01 - FF - FF	4C	Error message. CPU2 thermal trip. If fan0-5 tach lower critical SEL is generated, give priority to it. Check chassis ventilation. Replace CPU2.
0250	CPU2, 60	Assert	Processor: Processor Disabled	20 00	07	6F	08 - FF - FF		Error message. CPU2 disabled. Replace CPU2.
0251	CPU2, 60	Assert	Processor: Configuration Error	20 00	07	6F	A5 - 0C - 21	4D	Error message. CPU2 configuration error (disabled). All CPUs are disabled. (Include CPU2). Replace CPU2.
0252	CPU2, 60	Assert	Processor: Configuration Error	20 00	07	6F	A5 - 0C - 22	4E	Error message. CPU2 configuration error (Illegal Type). CPU2 is WB unsupported type. Replace CPU2 with WB supported type.
0253	CPU2, 60	Assert	Processor: Configuration Error	20 00	07	6F	A5 - 0C - 23	4F	Error message. CPU2 configuration error (Different Type). Replace CPU2 with same type as CPU0-1.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0253 A	CPU2, 60	Assert	Processor: Configuration Error	20 00	07	6F	A5 - 0C - 24	7E	Error message. CPU2 configuration error (installation rule). CPU2 socket is empty. Install supported processor in CPU2 socket.
0254	CPU2 Init Error, 61	Assert	Processor: Transition to non-recoverable from less severe	20 00	07	07	A3 - 03 - 60	50	Error message. CPU2 I2C access error (PIROM). Replace CPU2. Replace MB.
0255	CPU2 Init Error, 61	Assert	Processor: Transition to non-recoverable from less severe	20 00	07	07	A3 - 03 - 61	51	Error message. CPU2 I2C access error (temperature monitor). Replace CPU2. Replace MB.
0256	CPU3, 70	Assert	Processor: Thermal Trip	20 00	07	6F	01 - FF - FF	52	Error message. CPU3 thermal trip. If fan0-5 tach lower critical SEL is generated, give priority to it. Check chassis ventilation. Replace CPU3.
0257	CPU3, 70	Assert	Processor: Processor Disabled	20 00	07	6F	08 - FF - FF		Error message. CPU3 disabled. Replace CPU3.
0258	CPU3, 70	Assert	Processor: Configuration Error	20 00	07	6F	A5 - 0C - 31	53	Error message. CPU3 configuration error (disabled). All CPUs are disabled. (Include CPU3). Replace CPU3.
0259	CPU3, 70	Assert	Processor: Configuration Error	20 00	07	6F	A5 - 0C - 32	54	Error message. CPU3 configuration error (Illegal Type). CPU3 is WB unsupported type. Replace CPU3 with WB supported type.
0260	CPU3, 70	Assert	Processor: Configuration Error	20 00	07	6F	A5 - 0C - 33	55	Error message. CPU3 configuration error (Different Type). CPU3 is different type from CPU0-2. Replace CPU3 with same type as CPU0-2.
0261	CPU3 Init Error, 71	Assert	Processor: Transition to non-recoverable from less severe	20 00	07	07	A3 - 03 - 70	56	Error message. CPU3 I2C access error (PIROM). Replace CPU3. Replace MB.
0262	CPU3 Init Error, 71	Assert	Processor: Transition to non-recoverable from less severe	20 00	07	07	A3 - 03 - 71	57	Error message. CPU3 I2C access error (temperature monitor). Replace CPU3. Replace MB.
0263	MB Power Fail, 22	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	A1 - 01 - 00	58	Error message. MB power failure (main 5.0V). Replace MB.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0264	MB Power Fail, 22	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	A1 - 01 - 01	59	Error message. MB power failure (main 3.3V). Replace MB.
0265	MB Power Fail, 22	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	A1 - 01 - 02	5A	Error message. MB power failure (main 2.5V). Replace MB.
0266	MB Power Fail, 22	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	A1 - 01 - 03	5B	Error message. MB power failure (main 1.8V). Replace MB.
0267	MB Power Fail, 22	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	A1 - 01 - 04	5C	Error message. MB power failure (main 1.5V). Replace MB.
0268	MB Power Fail, 22	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	A1 - 01 - 05	5D	Error message. MB power failure (main 1.2V0). Replace MB.
0269	MB Power Fail, 22	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	A1 - 01 - 06	5E	Error message. MB power failure (main 1.2V1). Replace MB.
0270	MB Power Fail, 22	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	A1 - 01 - 07	5F	Error message. MB power failure (main 1.2V2). Replace MB.
0271	MB Power Fail, 22	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	A1 - 01 - 08	60	Error message. MB power failure (Voltage Type Unknown). Replace MB.
0272	MVR0 Power Fail, 42	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	01 - FF - FF	61	Error message. MVR0 power failure. Check MVR0 connection, CPU0 and MVR0 Installation. Replace MVR0. Replace MB.
0273	MVR1 Power Fail, 52	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	01 - FF - FF	62	Error message. MVR1 power failure. Check MVR1 connection, CPU1 and MVR1 Installation. Replace MVR1. Replace MB.
0274	MVR2 Power Fail, 62	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	01 - FF - FF	63	Error message. MVR2 power failure. Check MVR2 connection, CPU2 and MVR2 Installation. Replace MVR2. Replace MB.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0275	MVR3 Power Fail, 72	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	01 - FF - FF	64	Error message. MVR3 power failure. Check MVR3 connection, CPU3 and MVR3 Installation. Replace MVR3. Replace MB.
0276	MMR0 Power Fail, 82	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	01 - FF - FF	74	Error message. MMR0 power failure. Replace MMR0. Replace MB.
0277	MMR1 Power Fail, 92	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	01 - FF - FF	75	Error message. MMR1 power failure. Replace MMR1. Replace MB.
0278	MMR2 Power Fail, A2	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	01 - FF - FF	76	Error message. MMR2 power failure. Replace MMR2. Replace MB.
0279	MMR3 Power Fail, B2	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	01 - FF - FF	78	Error message. MMR3 power failure. Replace MMR3. Replace MB.
0280	PS0, C0	Assert	Power supply: Power Supply Error	20 00	08	6F	A6 - 0D - 00	65	Error message. PS0 configuration error (Absent). BMC did not find PS presence. Replace PS0.
0281	PS0, C0	Assert	Power supply: Configuration Error	20 00	08	6F	A6 - 0D - 01	66	Error message. PS0 configuration error (Illegal Type). Replace PS0.
0282	PS0, C1	Assert	Power supply: Configuration Error	20 00	08	6F	A6 - 0D - 02	67	Error message. PS0 configuration error (Insufficient Resources). Replace PS0.
0283	PS1, C1	Assert	Power supply: Configuration Error	20 00	08	6F	A6 - 0D - 12	68	Error message. PS1 configuration error (Insufficient Resources). PS1 slot is empty. Replace PS1.
0284	PS1, C1	Assert	Power supply: Configuration Error	20 00	08	6F	A6 - 0D - 13	69	Error message. PS1 configuration error (Different Type). PS1 is different type from PS0. Replace PS1 with same type as PS0.
0285	PS0 Hot Plug, C2	Assert	Power supply: Device Removed	20 00	08	08	00 - FF - FF		Informational message. PS0 removed. No action necessary.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0286	PS0 Hot Plug, C2	Assert	Power supply: Device Inserted	20 00	08	08	01 - FF - FF		Informational message. PS0 Inserted. No action necessary.
0287	PS1 Hot Plug, C3	Assert	Power supply: Device Removed	20 00	08	08	00 - FF - FF		Informational message. PS1 removed. No action necessary.
0288	PS1 Hot Plug, C3	Assert	Power supply: Device Inserted	20 00	08	08	01 - FF - FF		Informational message. PS1 Inserted. No action necessary.
0289	PS0 Power Fail, C4	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	A1 - 01 - 20		Error message. PS0 Power Failure (Redundancy Lost). Check PSCBL0 connection. Replace PS0.
0290	PS0 Power Fail, C4	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	A1 - 01 - 21	6A	Error message. PS0 Power Failure (Insufficient Resources). Check PSCBL0 connection. Replace PS0.
0291	PS0 Power Fail, C4	Deassert	Power supply: Power Supply Failure Detected	20 00	08	EF	A1 - 01 - 22		Informational message. PS0 Power Failure deassert. No action necessary.
0292	PS1 Power Fail, C5	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	A1 - 01 - 30		Error message. PS1 Power Failure (Redundancy Lost). Check PSCBL1 connection. Replace PS1.
0293	PS1 Power Fail, C5	Assert	Power supply: Power Supply Failure Detected	20 00	08	6F	A1 - 01 - 31	6B	Error message. PS1 Power Failure (Insufficient Resources). Check PSCBL1 connection. Replace PS1.
0294	PS1 Power Fail, C5	Deassert	Power supply: Power Supply Failure Detected	20 00	08	EF	A1 - 01 - 32		Informational message. PS1 Power Failure deassert. No action necessary.
0295	Cold Start, 00	Assert	Power supply: AC Lost	20 00	09	6F	04 - FF - FF		Informational message. Cold Start (AC Lost). No action necessary.
0297	Fan Redundancy, E8	Assert	Cooling device: Redundancy Lost	20 00	0A	0B	01 - FF - FF		Informational message. Fan Redundancy Lost. No action necessary.
0298	Fan Redundancy, E8	Assert	Cooling device: Insufficient Resources	20 00	0A	0B	05 - FF - FF		Informational message. Fan Insufficient Resources. No action necessary.
0299	Fan Redundancy, E8	Deassert	Cooling device: Redundancy Lost	20 00	0A	8B	01 - FF - FF		Informational message. Fan Redundancy Lost deassert. No action necessary.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0300	Fan Redundancy, E8	Deassert	Cooling device: Insufficient Resources	20 00	0A	8B	05 - FF - FF		Informational message. Fan Insufficient Resources deassert. No action necessary.
0301	Boot Timeout, 06	Assert	System firmware progress: System Firmware Hang	20 00	0F	6F	A1 - XX - XX		Error message. Boot Timeout (System Firmware Hang). Event Data 2-3: POST Code Check POST code (maintenance action depends on POST code).
0302	OEM Event, 01	Assert	System event: Transition to non-recoverable from less severe	20 00	12	07	A3 - 0A - 00	90	Error message. Multiple Machine Check interrupt. Replace MB.
0303	OEM Event, 01	Assert	System event: Transition to non-recoverable from less severe	20 00	12	07	A3 - 0B - 00		Error message. Machine Check Timeout. Replace MB.
0304	OEM Event, 01	Assert	System event: Informational	20 00	12	07	A8 - 00 - 00		Informational message. BMC Restart (IPMI command). No action necessary.
0305	OEM Event, 01	Assert	System event: Informational	20 00	12	07	A8 - 00 - 01		Informational message. BMC Restart (BMC Firmware Update). No action necessary.
0306	OEM Event, 01	Assert	System event: Informational	20 00	12	07	A8 - 00 - 02		Informational message. BMC Restart (BMC Memory Re-initialize). No action necessary.
0307	OEM Event, 01	Assert	System event: Informational	20 00	12	07	A8 - 00 - 10		Informational message. BMC Firmware Update. No action necessary.
0308	OEM Event, 01	Assert	System event: Informational	20 00	12	07	A8 - 00 - 20		Informational message. SDINT Button Pressed. No action necessary.
0309	OEM Event, 01	Assert	System event: Informational	20 00	12	07	A8 - 00 - 30		Informational message. CMOS Clear Mode Enter. No action necessary.
0310	OEM Event, 01	Assert	System event: Informational	20 00	12	07	A8 - 00 - 31		Informational message. CMOS Clear Mode Exit. No action necessary.
0311	OEM Event, 01	Assert	System event: Informational	20 00	12	07	A8 - 00 - 40		Informational message. FWH Emergency Recovery Mode Enter. No action necessary.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0312	OEM Event, 01	Assert	System event: Informational	20 00	12	07	A8 - 00 - 41		Informational message. FWH Emergency Recovery Mode Exit. No action necessary.
0312 A	OEM Event, 01	Assert	System event: Informational	20 00	12	07	A8 - 00 - 50		Informational message. ACPI Power Button Event Emulation (Initiate Soft-shutdown). No action necessary.
0313	Hard Reset, 03	Assert	System event: OEM System Boot Event	20 00	12	6F	01 - FF - FF		Informational message. Hard Reset (OEM System Boot Event). No action necessary.
0314	Soft Reset Critical Interrupt, 04	Assert	Critical interrupt: Front Panel NMI / Diagnostic interrupt	20 00	13	6F	00 - FF - FF		Informational message. Dump interrupt (Diagnostic interrupt). No action necessary.
0315	Soft Reset Critical Interrupt, 04	Assert	Critical interrupt: Fatal NMI	20 00	13	6F	09 - FF - FF		Informational message. Machine Check interrupt (Fatal NMI). No action necessary.
0316	Reset Button, 05	Assert	Button / Switch: Reset Button Pressed	20 00	14	6F	02 - FF - FF		Informational message. Reset Button Pressed. No action necessary.
0317	BMC Error, 20	Assert	Board / Module: Transition to non-critical from OK	20 00	15	07	A1 - 02 - 00		Warning message. BMC Error (BMC ROM checksum error). Update BMC firmware. Replace MB.
0318	BMC Error, 20	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 02 - 20		Error message. BMC error (BMC SRAM Parity error). Replace MB.
0319	BMC Error, 20	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 02 - 30		Error message. BMC error (BMC Watchdog Timer Expired). Replace MB.
0319 A	BMC Error, 20	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 0F - 00		Error message. Environment temperature sensor disabled (Unsettled Value). Replace HDDPL, HDDCBL0.
0319 B	BMC Error, 20	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 0F - 01		Error message. Environment temperature sensor disabled (error Margin). Replace HDDPL, HDDCBL0.
0320	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 03 - 00		Error message. MB I2C access error (Fan Boost Control). Replace MB.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0321	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 03 - 20	6D	Error message. MB I2C access error (sensor0). Replace MB.
0322	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 03 - 21	6E	Error message. MB I2C access error (sensor1). Replace MB.
0323	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 03 - 22	6F	Error message. MB I2C access error (voltage margin0). Replace MB.
0324	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 03 - 23	70	Error message. MB I2C access error (voltage margin1). Replace MB.
0325	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 03 - 24	71	Error message. MB I2C access error (clock generator). Replace MB.
0325 A	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 03 - 30	71	Error message. HDDPL I2C access error (SEEPROM). Replace MB, HDDPL.
0325 B	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 03 - 31	71	Error message. HDDPL I2C access error (sensor). Replace MB, HDDPL.
0326	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 04 - 00	91	Error message. MB config access error (NDC30). Replace MB.
0327	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 04 - 10	92	Error message. MB config access error (NDC31). Replace MB.
0328	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 04 - 20	93	Error message. MB config access error (ESB2). Replace MB.
0329	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 04 - 30	94	Error message. MB config access error (PXH). Replace MB.
0330	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 05 - 00	72	Error message. MB PLL lock error (NDC30). Replace MB.
0331	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 05 - 10	73	Error message. MB PLL lock error (NDC31). Replace MB.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0332	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 06 - 01	95	Error message. MB HSCP link error (NDC30 / Port1). Replace MB.
0333	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 06 - 11	96	Error message. MB HSCP link error (NDC31 / Port1). Replace MB.
0334	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 07 - 00	97	Error message. MB bit deskew latency error (NDC30 / Port0). Replace MB.
0335	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 07 - 01	98	Error message. MB bit deskew latency error (NDC30 / Port1). Replace MB.
0336	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 07 - 02	99	Error message. MB bit deskew latency error (NDC30 / Port2). Replace MB.
0337	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 07 - 10	9A	Error message. MB bit deskew latency error (NDC31 / Port0). Replace MB.
0338	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 07 - 11	9B	Error message. MB bit deskew latency error (NDC31 / Port1). Replace MB.
0339	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe	20 00	15	07	A3 - 07 - 12	9C	Error message. MB bit deskew latency error (NDC31 / Port2). Replace MB.
0340	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 08 - 00	9D	Error message. MB PCI-Express link error. Replace MB.
0341	MB Init Error, 21	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 09 - 00	9E	Error message. MB illegal machine check interrupt. Replace MB.
0342	MMR0 Init Error, 81	Assert	Board / Module: Transition to non-recoverable from less severe error	20 00	15	07	A3 - 03 - 80		Error message. MMR0 I2C access error (voltage monitor). Replace MMR0. Replace MB.
0343	MMR0 Hot Plug, 86	Assert	Board / Module: Device Removed	20 00	15	08	A0 - 0E - 00		Informational message. MMR0 removed (correct operation). No action necessary.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0344	MMR0 Hot Plug, 86	Assert	Board / Module: Device Removed	20 00	15	08	A0 - 0E - 01	78	Informational message. MMR0 removed (wrong operation). No action necessary.
0345	MMR0 Hot Plug, 86	Assert	Board / Module: Device Inserted	20 00	15	08	A1 - 0E - 02		Informational message. MMR0 inserted. No action necessary.
0346	MMR1 Init Error, 91	Assert	Board / Module: Transition to non-recoverable from less severe	20 00	15	07	A3 - 03 - 90		Replace MMR1. MMR1 I2C access error (voltage monitor). Replace MB.
0347	MMR1 Hot Plug, 96	Assert	Board / Module: Device Removed	20 00	15	08	A0 - 0E - 10		Informational message. MMR1 removed (correct operation). No action necessary.
0348	MMR1 Hot Plug, 96	Assert	Board / Module: Device Removed	20 00	15	08	A0 - 0E - 11	79	Informational message. MMR1 removed (wrong operation). No action necessary.
0349	MMR1 Hot Plug, 96	Assert	Board / Module: Device Inserted	20 00	15	08	A0 - 0E - 12		Informational message. MMR1 Inserted. No action necessary.
0350	MMR2 Init Error, A1	Assert	Board / Module: Transition to non-recoverable from less severe	20 00	15	07	A3 - 03 - A0		Error message. MMR2 I2C access error (voltage monitor). Replace MMR2. Replace MB.
0351	MMR2 Hot Plug, A6	Assert	Board / Module: Device Removed	20 00	15	08	A0 - 0E - 20		Informational message. MMR2 removed (correct operation). No action necessary.
0352	MMR2 Hot Plug, A6	Assert	Board / Module: Device Removed	20 00	15	08	A0 - 0E - 21	7A	Informational message. MMR2 removed (wrong operation). No action necessary.
0353	MMR2 Hot Plug, A6	Assert	Board / Module: Device Inserted	20 00	15	08	A0 - 0E - 22		Informational message. MMR2 Inserted. No action necessary.
0354	MMR3 Init Error, B1	Assert	Board / Module: Transition to non-recoverable from less severe	20 00	15	07	A3 - 03 - B0		Error message. MMR3 I2C access error (voltage monitor). Replace MMR3. Replace MB.
0355	MMR3 Hot Plug, B6	Assert	Board / Module: Device Removed	20 00	15	08	A0 - 0E - 30		Informational message. MMR3 removed (correct operation). No action necessary.
0356	MMR3 Hot Plug, B6	Assert	Board / Module: Device Removed	20 00	15	08	A0 - 0E - 31	7B	Informational message. MMR3 removed (wrong operation). No action necessary.
0357	MMR3 Hot Plug, B6	Assert	Board / Module: Device Inserted	20 00	15	08	A0 - 0E - 32		Informational message. MMR3 Inserted. No action necessary.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0358	Slot1, D1	Assert	Slot / Connector: Fault Status Asserted	20 00	21	6F	00 - FF - FF		Error message. Slot1 fault. Replace Slot1. Replace MB.
0359	Slot1, D1	Deassert	Slot / Connector: Fault Status Asserted	20 00	21	EF	00 - FF - FF		Informational message. Slot1 fault deassert. No action necessary.
0360	Slot2, D2	Assert	Slot / Connector: Fault Status Asserted	20 00	21	6F	00 - FF - FF		Error message. Slot2 fault. Replace Slot2. Replace MB.
0361	Slot2, D2	Deassert	Slot / Connector: Fault Status Asserted	20 00	21	EF	00 - FF - FF		Informational message. Slot2 fault deassert. No action necessary.
0362	Slot3, D3	Assert	Slot / Connector: Fault Status Asserted	20 00	21	6F	00 - FF - FF		Error message. Slot3 fault. Replace Slot3. Replace MB.
0363	Slot3, D3	Deassert	Slot / Connector: Fault Status Asserted	20 00	21	EF	00 - FF - FF		Informational message. Slot3 fault deassert. No action necessary.
0364	Slot4, D4	Assert	Slot / Connector: Fault Status Asserted	20 00	21	6F	00 - FF - FF		Error message. Slot4 fault. Replace Slot4. Replace MB.
0365	Slot4, D4	Deassert	Slot / Connector: Fault Status Asserted	20 00	21	EF	00 - FF - FF		Informational message. Slot4 fault deassert. No action necessary.
0366	Slot5, D5	Assert	Slot / Connector: Fault Status Asserted	20 00	21	6F	00 - FF - FF		Error message. Slot5 fault. Replace Slot5. Replace MB.
0367	Slot5, D5	Deassert	Slot / Connector: Fault Status Asserted	20 00	21	EF	00 - FF - FF		Informational message. Slot5 fault deassert. No action necessary.
0368	Slot6, D6	Assert	Slot / Connector: Fault Status Asserted	20 00	21	6F	00 - FF - FF		Error message. Slot6 fault. Replace Slot6. Replace MB.
0369	Slot6, D6	Deassert	Slot / Connector: Fault Status Asserted	20 00	21	EF	00 - FF - FF		Informational message. Slot6 fault deassert. No action necessary.

Table 9. BMC SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Seg Code	Message Type, Description, Recovery Information
0370	Power Up/Down, 02	Assert	System ACPI power state: S0 / G0 working	20 00	22	6F	00 - FF - FF		Informational message. Power up (S0 / G0 "working"). No action necessary.
0371	Power Up/Down, 02	Assert	System ACPI power state: S5 / G2 soft-off	20 00	22	6F	05 - FF - FF		Informational message. Power down (S5 / G2 soft-off). No action necessary.
0372	Watchdog Timer, 0D	Assert	Watchdog 2: Timer Expired	20 00	23	6F	XX - XX - XX		Informational message. Watchdog timereExpired. No action necessary.
0373	BAT, 33	Assert	Battery: Battery Failed	20 00	29	6F	01 - FF - FF		Warning message. Battery failed. Replace the battery.
0374	BAT, 33	Deassert	Battery: Battery Failed	20 00	29	EF	01 - FF - FF		Informational message. Battery failed deassert. No action necessary.

Table 10. SAL SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Description	Message Type / Recovery Information
1001	Processor, 03	Assert	Processor: To Non-Critical from OK	01 00	07	07	A1 - CPU Socket ID - XX	Processor correctable error limit reached. CPU Socket ID: <ul style="list-style-type: none"> • x0 : CPU0 • x1 : CPU1 • x2 : CPU2 • x3 : CPU3 	Warning message. This SEL is logged when the error checker lights at the location other than the external bus. Replace CPUx.
1002	Processor, 03	Assert	Processor: Critical	01 00	07	07	A2 - CPU Socket ID - XX	Processor recoverable error. CPU Socket ID: <ul style="list-style-type: none"> • x0 : CPU0 • x1 : CPU1 • x2 : CPU2 • x3 : CPU3 	Error message. This SEL is logged when the error checker lights at the location other than external bus. Replace CPUx.

Table 10. SAL SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Description	Message Type / Recovery Information
1003	Processor, 03	Assert	Processor: non-recoverable	01 00	07	07	A3 - CPU Socket ID - XX	Processor fatal error. CPU Socket ID: <ul style="list-style-type: none"> • x0 : CPU0 • x1 : CPU1 • x2 : CPU2 • x3 : CPU3 	Error message. This SEL is logged when the error checker lights at the location other than external bus. Replace CPUx
1004	Processor, 03	Assert	Processor: Informational	01 00	07	07	A8 - CPU Socket ID - XX	Processor correctable error. CPU Socket ID <ul style="list-style-type: none"> • x0 : CPU0 • x1 : CPU1 • x2 : CPU2 • x3 : CPU3 	Information; This SEL is logged when the error checker lights at the location other than external bus
1005	Processor, 04	Assert	Processor: FRB1/BIST Failure	01 00	07	6F	A2 - CPU Socket ID - XX	Processor Early/Late Self-test failure. CPU Socket ID: <ul style="list-style-type: none"> • x0 : CPU0 • x1 : CPU1 • x2 : CPU2 • x3 : CPU3 	Error message. Replace CPUx
1006	Processor, 04	Assert	Processor: FRB2/Hang in POST failure	01 00	07	6F	A3 - CPU Socket ID - XX	Processor Hang in POST. CPU Socket ID: <ul style="list-style-type: none"> • x0 : CPU0 • x1 : CPU1 • x2 : CPU2 • x3 : CPU3 	Error message. Replace CPUx
1006A 1	Processor, 04	Assert	Processor: Processor Automatically Throttled	01 00	07	6F	AA - CPU Socket ID - XX	Processor Automatically Throttled. CPU Socket ID: <ul style="list-style-type: none"> • x0 : CPU0 • x1 : CPU1 • x2 : CPU2 • x3 : CPU3 	Informational message. No action necessary.
1006A 2	Processor, 04	Deassert	Processor: Processor Automatically Throttled	01 00	07	6F	AA - CPU Socket ID - XX	Processor Automatically Throttled Recovered. CPU Socket ID: <ul style="list-style-type: none"> • x0 : CPU0 • x1 : CPU1 • x2 : CPU2 • x3 : CPU3 	Informational message. No action necessary.

Table 10. SAL SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Description	Message Type / Recovery Information
1007	Processor, 04	Assert	Processor: FRB3/ Processor Startup/ Initialization failure (CPU didn't start)	01 00	07	6F	A4 - CPU Socket ID - XX	Processor not hand-off to SAL. CPU Socket ID: <ul style="list-style-type: none"> • x0 : CPU0 • X1 : CPU1 • x2 : CPU2 • x3 : CPU3 	Error message. Replace CPUx
1009	Memory, 02	Assert	Memory: Correctable ECC	01 00	0C	6F	B1 - XX - MMR ID	Memory correctable ECC error: <ul style="list-style-type: none"> • bit[7:4] MMR ID (0-3) • bit[3:0] DIMM ID <ul style="list-style-type: none"> — 0 : JD0A0 — 1 : JD0A1 — 2 : JD0B0 — 3 : JD0B1 — 4 : JD2A0 — 5 : D2A1 — 6 : JD2B0 — 7 : JD2B1 	Information; Indicates one DIMM at CPE. (The system logs one SEL.)
1010A 0	Memory, 02	Assert	Memory: Uncorrectable ECC	01 00	0C	6F	B2 - 0X - MMR ID	Memory uncorrectable ECC error: <ul style="list-style-type: none"> • bit[7:4] MMR ID (0-3) • bit[3:0] DIMM ID <ul style="list-style-type: none"> — 0 : JD0A0 — 1 : JD0A1 — 2 : JD0B0 — 3 : JD0B1 — 4 : JD2A0 — 5 : JD2A1 — 6 : JD2B0 — 7 : JD2B1 	Error message. Four DIMMs should be replaced (Single Mode). The system logs four messages in the SEL. Replace MMRx-DIMMx

Table 10. SAL SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Description	Message Type / Recovery Information
1010A 1	Memory, 02	Assert	Memory: Uncorrectable ECC	01 00	0C	6F	B2 - 1X - MMR ID	<p>Memory uncorrectable ECC error:</p> <ul style="list-style-type: none"> • bit[7:4] MMR ID (0-3) • bit[3:0] DIMM ID <ul style="list-style-type: none"> — 0 : JD0A0 — 1 : JD0A1 — 2 : JD0B0 — 3 : JD0B1 — 4 : JD2A0 — 5 : JD2A1 — 6 : JD2B0 — 7 : JD2B1 	<p>Error message. Four DIMMs should be replaced (Double Mode). The system logs four messages in the SEL. DIMMs to be replaced exist in multiple MMRs.</p> <p>Replace MMRx-DIMMx</p>
1010A 2	Memory, 02	Assert	Memory: Uncorrectable ECC	01 00	0C	6F	B2 - 2X - MMR ID	<p>Memory uncorrectable ECC error:</p> <ul style="list-style-type: none"> • bit[7:4] MMR ID (0-3) • bit[3:0] DIMM ID <ul style="list-style-type: none"> — 0 : JD0A0 — 1 : JD0A1 — 2 : JD0B0 — 3 : JD0B1 — 4 : JD2A0 — 5 : JD2A1 — 6 : JD2B0 — 7 : JD2B1 	<p>Error message. Eight DIMMs should be replaced (Mirror Mode). The system logs eight messages in the SEL. DIMMs to be replaced exist in multiple MMRs.</p> <p>Replace MMRx-DIMMx</p>
1010A 3	Memory, 02	Assert	Memory: Uncorrectable ECC	01 00	0C	6F	B2 - 3X - MMR ID	<p>Memory uncorrectable ECC error:</p> <ul style="list-style-type: none"> • bit[7:4] MMR ID (0-3) • bit[3:0] DIMM ID <ul style="list-style-type: none"> — 0 : JD0A0 — 1 : JD0A1 — 2 : JD0B0 — 3 : JD0B1 — 4 : JD2A0 — 5 : JD2A1 — 6 : JD2B0 — 7 : JD2B1 	<p>Error message. Outputs by uncorrectable error at initialization. The system logs the same number of messages in the SEL with the number of replacement. DIMMs to be replaced exist in multiple MMRs.</p> <p>Replace MMRx-DIMMx</p>

Table 10. SAL SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Description	Message Type / Recovery Information
1011	Memory, 02	Assert	Memory: Memory Scrub Failed (Stack bit)	01 00	0C	6F	B3 - XX - MMR ID	Memory chip replace didn't start: <ul style="list-style-type: none"> • bit[7:4] MMR ID (0-3) • bit[3:0] DIMM ID <ul style="list-style-type: none"> — 0 : JD0A0 — 1 : JD0A1 — 2 : JD0B0 — 3 : JD0B1 — 4 : JD2A0 — 5 : JD2A1 — 6 : JD2B0 — 7 : JD2B1 	Informational message. No action necessary. Outputs at the memory replacement when the memory was already replaced in the past and there is no redundant DRAM.
1012	Memory, 02	Assert	Memory: Memory Device Disabled	01 00	0C	6F	B4 - XX - XF where Event Data3 is X[MMR ID]	MMR disabled: <ul style="list-style-type: none"> • bit[7:4] MMR ID (0-3) 	Error message. Replace MMRx.
1013	Memory, 02	Assert	Memory: Memory Device Disabled	01 00	0C	6F	B4 - XX - MMR ID, unless XF	DIMM disabled: <ul style="list-style-type: none"> • bit[7:4] MMR ID (0-3) • bit[3:0] DIMM ID <ul style="list-style-type: none"> — 0 : JD0A0 — 1 : JD0A1 — 2 : JD0B0 — 3 : JD0B1 — 4 : JD2A0 — 5 : JD2A1 — 6 : JD2B0 — 7 : JD2B1 	Error message. DIMM degradation will be performed in the unit of four. (The system logs four messages in the SEL.). Replace MMRx-DIMMx.
1014	Memory, 02	Assert	Memory: Correctable ECC limit reached	01 00	0C	6F	B5 - XX - MMR ID	Memory correctable ECC error limit reached: <ul style="list-style-type: none"> • bit[7:4] MMR ID (0-3) • bit[3:0] DIMM ID <ul style="list-style-type: none"> — 0 : JD0A0 — 1 : JD0A1 — 2 : JD0B0 — 3 : JD0B1 — 4 : JD2A0 — 5 : JD2A1 — 6 : JD2B0 — 7 : JD2B1 	Warning message. DIMM degradation will be performed in the unit of four. (The system logs four messages in the SEL.). Replace MMRx-DIMMx.

Table 10. SAL SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Description	Message Type / Recovery Information
1015A 0	Memory, 02	Assert	Memory: Presence Detected	01 00	0C	6F	B6 - X0 - XF, where Event Data3 is X[MMR ID]	MMR added: <ul style="list-style-type: none"> bit[7:4] MMR ID (0-3) 	Informational message. No action necessary.
1015A 1	Memory, 02	Assert	Memory: Presence Detected	01 00	0C	6F	B6 - X1 - XF, where Event Data3 is X[MMR ID]	MMR added: <ul style="list-style-type: none"> bit[7:4] MMR ID (0-3) 	Informational message. No action necessary.
1015A 2	Memory, 02	Assert	Memory: Presence Detected	01 00	0C	6F	B6 - X2 - XF, where Event Data3 is X[MMR ID]	MMR added: <ul style="list-style-type: none"> bit[7:4] MMR ID (0-3) 	Informational message. No action necessary.
1016	Memory, 02	Assert	Memory: Configuration Error	01 00	0C	6F	B7 - XX - MMR ID	Memory configuration failure: <ul style="list-style-type: none"> bit[7:4] MMR ID (0-3) bit[3:0] DIMM ID <ul style="list-style-type: none"> — 0 : JD0A0 — 1 : JD0A1 — 2 : JD0B0 — 3 : JD0B1 — 4 : JD2A0 — 5 : JD2A1 — 6 : JD2B0 — 7 : JD2B1 	Error message. Indicates in the unit of four. Replace MMRx-DIMMx.
1017	Memory, 02	Assert	Memory: Spare	01 00	0C	6F	B8 - XX - MMR ID	Memory chip replace started: <ul style="list-style-type: none"> bit[7:4] MMR ID (0-3) bit[3:0] DIMM ID <ul style="list-style-type: none"> — 0 : JD0A0 — 1 : JD0A1 — 2 : JD0B0 — 3 : JD0B1 — 4 : JD2A0 — 5 : JD2A1 — 6 : JD2B0 — 7 : JD2B1 	Informational message. Replace MMRx-DIMMx.
1018A 0	Memory, 02	Deassert	Memory: Presence Detected	01 00	0C	EF	B6 - X0 - Xf where Event Data3 is X[MMR ID]	MMR removed successfully: <ul style="list-style-type: none"> bit[7:4] MMR ID (0-3) 	Informational message. No action necessary.

Table 10. SAL SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Description	Message Type / Recovery Information
1018A1	Memory, 02	Deassert	Memory: Presence Detected	01 00	0C	EF	B6 - X1 - XF, where Event Data3 is X[MMR ID]	MMR removal started: <ul style="list-style-type: none"> bit[7:4] MMR ID (0-3) 	Informational message. No action necessary.
1019A0	Memory, 02	Deassert	Memory: Spare	01 00	0C	EF	B8 - 3X - MMR ID	Memory chip replacement finished: <ul style="list-style-type: none"> bit[7:4] MMR ID (0-3) bit[3:0] DIMM ID <ul style="list-style-type: none"> 0 : JD0A0 1 : JD0A1 2 : JD0B0 3 : JD0B1 4 : JD2A0 5 : JD2A1 6 : JD2B0 7 : JD2B1 	Informational message. No action necessary.
1019A1	Memory, 02	Deassert	Memory: Spare	01 00	0C	EF	B8 - 3X - MMR ID	Memory chip replacement finished: <ul style="list-style-type: none"> bit[7:4] MMR ID (0-3) bit[3:0] DIMM ID <ul style="list-style-type: none"> 0 : JD0A0 1 : JD0A1 2 : JD0B0 3 : JD0B1 4 : JD2A0 5 : JD2A1 6 : JD2B0 7 : JD2B1 	Informational message. No action necessary.
1020	System Firmware Progress, 12	Assert	System firmware: System Firmware Error (POST Error)	01 00	0F	6F	A0 - POST error code - POST error code	POST Critical Error. POST Error Code	Error message. Check POST code. The maintenance action depends on the POST code.
1020A0	System Firmware Progress, 12	Assert	System firmware: System Firmware Error (POST Error)	01 00	0F	6F	C0 - 02 - 00	No usable system memory	Error message. Check if MMRs installed correctly. Check DIMM configuration on each MMR. Check earlier logged messages in the SEL with memory sensor type.
1021	BIOS, 10	Assert	Critical interrupt: Front Panel NMI/Diagnostic interrupt	01 00	13	6F	A0 - XX - XX	Front Panel NMI / Diagnostic interrupt	Informational message. No action necessary.

Table 10. SAL SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Description	Message Type / Recovery Information
1021A0	BIOS, 10	Assert	Critical interrupt: Bus Uncorrectable Error	01 00	13	6F	A8 - XX - XX	MCA raised	Informational message. No action necessary.
1022	Board, 00	Assert	Board: To Non-Critical from OK	01 00	15	07	A1 - MMR ID - 0X	FSB correctable error limit reached. CPU Socket ID: <ul style="list-style-type: none"> • 00 : CPU0 • 01 : CPU1 • 10 : CPU2 • 11 : CPU3 	Warning message. Replace CPUx (pointed out by Event Data 2). Replace the other CPU on the same FSB. Replace MB.
1024	Board, 00	Assert	Board: To Non-Critical from OK	01 00	15	07	A1 - 00 - 51	PCI-Express* correctable error limit reached (ESI I/f, NDC detected)	Warning message. Error has been detected at ESI I/F in NDC. Replace MB.
1025	Board, 00	Assert	Board: To Non-Critical from OK	01 00	15	07	A1 - 01 - 51	PCI-Express correctable error limit reached (ESI I/f, ESB2 detected)	Warning message. Error has been detected at ESI I/F in ESB2. Replace MB.
1026	Board, 00	Assert	Board: To Non-Critical from OK	01 00	15	07	A1 - 02 - 51	PCI-Express correctable error limit reached (NDC-ESB2 PCI-E I/f, NDC detected)	Warning message. Error has been detected at NDC-ESB2 PCI-E I/F in NDC. Replace MB.
1027	Board, 00	Assert	Board: To Non-Critical from OK	01 00	15	07	A1 - 03 - 51	PCI-Express correctable error limit reached (NDC-ESB2 PCI-E I/f, ESB2 detected)	Warning message. Error has been detected at NDC-ESB2 PCI-E I/F in ESB2. Replace MB.
1027A0	Board, 00	Assert	Board: To Non-Critical from OK	01 00	15	07	A1 - 04 - 51	PCI-Express correctable error limit reached (ESB2-PXH I/f, ESB2 detected)	Warning message. Replace MB.
1027A1	Board, 00	Assert	Board: To Non-Critical from OK	01 00	15	07	A1 - 05 - 51	PCI-Express correctable error limit reached (ESB2-PXH I/f, PXH detected)	Warning message. Replace MB.
1028	Board, 00	Assert	Board: To Non-Critical from OK	01 00	15	07	A1 - XX - 1X	Node Link correctable error limit reached	Warning message. Replace MB.

Table 10. SAL SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Description	Message Type / Recovery Information
1029	Board, 00	Assert	Board: To Non-Critical from OK	01 00	15	07	A1 - XX - 2X; A1 - MMR ID - 2X	NDC-MC Interface correctable error limit reached. MMR ID: <ul style="list-style-type: none"> • 00 : MMR0 • 01 : MMR1 • 02 : MMR0 • 03 : MMR1 • 10 : MMR2 • 11 : MMR3 • 12 : MMR2 • 13 : MMR3 	Warning message. Replace MMRx. Replace MB.
1030	Board, 00	Assert	Board: To Non-Critical from OK	01 00	15	07	A1 - XX - 3X	HSCP correctable error limit reached	Warning message. Replace MB.
1031	Board, 00	Assert	Board: Critical	01 00	15	07	A2 - CPU Socket ID - 0X	FSB fatal error. CPU Socket ID: <ul style="list-style-type: none"> • x0 : CPU0 • x1 : CPU1 • x2 : CPU2 • x3 : CPU3 	Error message. Replace CPUx (pointed out by Event Data 2). Replace the other CPU on the same FSB. Replace MB.
1032	Board, 00	Assert	Board: Critical	01 00	15	07	A2 - 00 - 4X	PCI recoverable error (ESB2 detected)	Error message. Replace MB.
1033	Board, 00	Assert	Board: Critical	01 00	15	07	A2 - 00 - 51	PCI-Express recoverable error (ESI I/f, NDC detected)	Error message. Error has been detected at ESI I/F in NDC. Replace MB.
1034	Board, 00	Assert	Board: Critical	01 00	15	07	A2 - 01 - 51	PCI-Express recoverable error (ESI I/f, ESB2 detected)	Error message. Error has been detected at ESI I/F in ESB2. Replace MB.
1035	Board, 00	Assert	Board: Critical	01 00	15	07	A2 - 02 - 51	PCI-Express recoverable error (NDC-ESB2 PCI-E I/f, NDC detected)	Error message. Error has been detected at NDC-ESB2 PCI-E I/F in NDC. Replace MB.
1036	Board, 00	Assert	Board: Critical	01 00	15	07	A2 - 03 - 51	PCI-Express recoverable error (NDC-ESB2 PCI-E I/f, NDC detected)	Error message. Error has been detected at NDC-ESB2 PCI-E I/F in ESB2. Replace MB.
1036A0	Board, 00	Assert	Board: Critical	01 00	15	07	A2 - 04 - 51	PCI-Express recoverable error (ESB2-PXH I/f, ESB2 detected)	Error message. Replace MB.

Table 10. SAL SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Description	Message Type / Recovery Information
1036A 1	Board, 00	Assert	Board: Critical	01 00	15	07	A2 - 05 - 51	PCI-Express recoverable error (ESB2-PXH I/f, PXH detected)	Error message. #1: replace MB
1037	Board, 00	Assert	Board: Critical	01 00	15	07	A2 - XX - 1X	Node Link recoverable error	Error message. Replace MB.
1037A 1	Board, 00	Assert	Board: Critical	01 00	15	07	A2 - 00 - 86	Unexpected Clock Frequency	Warning message. Reboot system (This works in case that clock frequency has been altered by OEM -defined IPMI command). Replace MB.
1038	Board, 00	Assert	Board: non-recoverable	01 00	15	07	A3 - CPU Socket ID - 0X	FSB fatal error. CPU Socket ID: <ul style="list-style-type: none"> • x0 : CPU0 • x1 : CPU1 • x2 : CPU2 • x3 : CPU3 	Error message. Replace CPUx (pointed out by Event Data 2) Replace the other CPU on the same FSB. Replace MB.
1039	Board, 00	Assert	Board: non-recoverable	01 00	15	07	A3 - 00 - 4X	PCI fatal error (ESB2 detected)	Error message. Replace MB.
1040	Board, 00	Assert	Board: non-recoverable	01 00	15	07	A3 - 00 - 51	PCI-Express fatal error (ESI I/f, NDC detected)	Error message. Error has been detected at ESI I/F in NDC. Replace MB.
1041	Board, 00	Assert	Board: non-recoverable	01 00	15	07	A3 - 01 - 51	PCI-Express fatal error (ESI I/f, ESB2 detected)	Error message. Error has been detected at ESI I/F in ESB2. Replace MB.
1042	Board, 00	Assert	Board: non-recoverable	01 00	15	07	A3 - 02 - 51	PCI-Express fatal error (NDC-ESB2 PCI-E I/f, NDC detected)	Error message Error has been detected at NDC-ESB2 PCI-E I/F in NDC. Replace MB.
1043	Board, 00	Assert	Board: non-recoverable	01 00	15	07	A3 - 03 - 51	PCI-Express fatal error (NDC-ESB2 PCI-E I/f, ESB2 detected)	Error message Error has been detected at NDC-ESB2 PCI-E I/F in ESB2. Replace MB.
1043A 0	Board, 00	Assert	Board: non-recoverable	01 00	15	07	A3 - 04 - 51	PCI-Express fatal error (ESB2-PXH I/f, ESB2 detected)	Error message Replace MB.

Table 10. SAL SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Description	Message Type / Recovery Information
1043A 1	Board, 00	Assert	Board: non-recoverable	01 00	15	07	A3 - 05 - 51	PCI-Express fatal error (ESB2-PXH I/f, PXH detected)	Error message Replace MB.
1044	Board, 00	Assert	Board: non-recoverable	01 00	15	07	A3 - XX - 1X	Node Link fatal error	Error message Replace MB.
1045	Board, 00	Assert	Board: non-recoverable	01 00	15	07	A3 - XX - 21	NDC-MC Interface fatal error. MMR ID: <ul style="list-style-type: none"> • 00 : MMR0 • 01 : MMR1 • 02 : MMR0 • 03 : MMR1 • 10 : MMR2 • 11 : MMR3 • 12 : MMR2 • 13 : MMR3 	Error message Replace MMRx. Replace MB.
1046	Board, 00	Assert	Board: Informational	01 00	15	07	A8 - CPU Socket ID - 0X;	FSB correctable error. CPU Socket ID: <ul style="list-style-type: none"> • x0 : CPU0 • x1 : CPU1 • x2 : CPU2 • x3 : CPU3 	Informational message. No action necessary.
1048	Board, 00	Assert	Board: Informational	01 00	15	07	A8 - 00 - 51	PCI-Express correctable error (ESI I/f, NDC detected)	Informational message. No action necessary. Error has been detected at ESI I/F in NDC.
1049	Board, 00	Assert	Board: Informational	01 00	15	07	A8 - 01 - 51	PCI-Express correctable error (ESI I/f, ESB2 detected)	Informational message. No action necessary. Error has been detected at ESI I/F in ESB2.
1050	Board, 00	Assert	Board: Informational	01 00	15	07	A8 - 02 - 51	PCI-Express correctable error (NDC-ESB2 PCI-E I/f, NDC detected)	Informational message. No action necessary. Error has been detected at NDC-ESB2 PCI-E I/F in NDC.
1051	Board, 00	Assert	Board: Informational	01 00	15	07	A8 - 03 - 51	PCI-Express correctable error (NDC-ESB2 PCI-E I/f, ESB2 detected)	Informational message. No action necessary. Error has been detected at NDC-ESB2 PCI-E I/F in ESB2.

Table 10. SAL SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Description	Message Type / Recovery Information
1051A0	Board, 00	Assert	Board: Informational	01 00	15	07	A8 - 04 - 51	PCI-Express correctable error (ESB2-PXH I/f, ESB2 detected)	Informational message. No action necessary.
1051A1	Board, 00	Assert	Board: Informational	01 00	15	07	A8 - 05 - 51	PCI-Express correctable error (ESB2-PXH I/f, PXH detected)	Informational message. No action necessary.
1052	Board, 00	Assert	Board: Informational	01 00	15	07	A8 - XX - 1X	Node Link correctable error	Informational message. No action necessary.
1053	Board, 00	Assert	Board: Informational	01 00	15	07	A8 - MMR ID - 2X	NDC-MC Interface correctable error. MMR ID: <ul style="list-style-type: none"> • 00 : MMR0 • 01 : MMR1 • 02 : MMR0 • 03 : MMR1 • 10 : MMR2 • 11 : MMR3 • 12 : MMR2 • 13 : MMR3 	Informational message. No action necessary.
1054	Board, 00	Assert	Board: Informational	01 00	15	07	A8 - XX - 3X	HSCP correctable error	Informational message. No action necessary.
1055	Chipset, 01	Assert	Chipset: To Non-Critical from OK	01 00	19	07	A1 - X0 - X6	Chipset correctable error limit reached	Warning message. Other than Event Data3 = 46. Replace MB.
1056	Chipset, 01	Assert	Chipset: To Non-Critical from OK	01 00	19	07	A1 - X0 - 65	LCM counter sync error limit reached	Warning message. Replace MB.
1057	Chipset, 01	Assert	Chipset: To Non-Critical from OK	01 00	19	07	A1 - X0 - 7X	L3 Cache Tag (SRAM) correctable error limit reached	Warning message. Replace MB.

Table 10. SAL SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Description	Message Type / Recovery Information
1058	Chipset, 01	Assert	Chipset: To Non-Critical from OK	01 00	19	07	A1 - MMR ID - 46	Memory controller correctable error limit reached. MMR ID: <ul style="list-style-type: none"> • 00 : MMR0 • 01 : MMR1 • 02 : MMR0 • 03 : MMR1 • 10 : MMR2 • 11 : MMR3 • 12 : MMR2 • 13 : MMR3 	Warning message. Replace MMRx.
1059	Chipset, 01	Assert	Chipset: Critical	01 00	19	07	A2 - X0 - X6	Chipset recoverable error	Error message. Replace MB.
1059A0	Chipset, 01	Assert	Chipset: Critical	01 00	19	07	A2 - X0 - 7X	L3 Cache Tag (SRAM) uncorrectable error	Error message. Replace MB.
1059A1	Chipset, 01	Assert	Chipset: Critical	01 00	19	07	A2 - MMR ID - 46	Memory controller recoverable error. : MMR ID: <ul style="list-style-type: none"> • 00 : MMR0 • 01 : MMR1 • 02 : MMR0 • 03 : MMR1 • 10 : MMR2 • 11 : MMR3 • 12 : MMR2 • 13 : MMR3 	Error message. Replace MMRx.
1060	Chipset, 01	Assert	Chipset: Critical	01 00	19	07	A2 - X0 - X3	Bad chipset data received	Error message. Review SEL.
1060A0	Chipset, 01	Assert	Chipset: Critical	01 00	19	07	A2 - XX - XF	Recoverable error (Unknown)	Error message Unable to identify the cause. Replace MB.
1061	Chipset, 01	Assert	Chipset: Non-Recoverable	01 00	19	07	A3 - X0 - X6	Chipset fatal error	Error message Other than Event Data3 = 46. Replace MB.
1062	Chipset, 01	Assert	Chipset: Non-Recoverable	01 00	19	07	A3 - XX - X6	Chipset timeout	Error message. Replace MB.

Table 10. SAL SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Description	Message Type / Recovery Information
1063	Chipset, 01	Assert	Chipset: non-recoverable	01 00	19	07	A3 - X0 - 7X	L3 Cache Tag (SRAM) fatal error on POST	Error message Other than Event Data3 = 70. Replace MB.
1064	Chipset, 01	Assert	Chipset: non-recoverable	01 00	19	07	A3 - MMR ID - 46	Memory controller fatal error. MMR ID: <ul style="list-style-type: none"> • 00 : MMR0 • 01 : MMR1 • 02 : MMR0 • 03 : MMR1 • 10 : MMR2 • 11 : MMR3 • 12 : MMR2 • 13 : MMR3 	Error message. Replace MMRx.
1065	Chipset, 01	Assert	Chipset: non-recoverable	01 00	19	07	A3 - 00 - 41	Memory controller illegal data detected	Error message Two MMRs (or four of MC chipset) are candidates of failure unit, but no detection ability to indicate which MMR is failed. Replace MMR0. Replace MMR1. Replace MB.
1065A0	Chipset, 01	Assert	Chipset: non-recoverable	01 00	19	07	A3 - 10 - 41	Memory controller illegal data detected	Error message Two MMRs (or four of MC chipset) are candidates of failure unit, but no detection ability to indicate which MMR is failed. Replace MMR2. Replace MMR3. Replace MB.
1066A0	Chipset, 01	Assert	Chipset: non-recoverable	01 00	19	07	A3 - XX - XF	Fatal error (Unknown)	Error message Unable to identify the cause. Replace MB.
1067	Chipset, 01	Assert	Chipset: Informational	01 00	19	07	A8 - X0 - X6	Chipset correctable error	Informational message. No action necessary. Other than Event Data3 = 46
1068	Chipset, 01	Assert	Chipset: Informational	01 00	19	07	A8 - X0 - 65	LCM counter sync error	Informational message. No action necessary.
1069	Chipset, 01	Assert	Chipset: Informational	01 00	19	07	A8 - X0 - 7F	L3 Cache Tag (SRAM) correctable error	Informational message. No action necessary.

Table 10. SAL SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Description	Message Type / Recovery Information
1070	Chipset, 01	Assert	Chipset: Informational	01 00	19	07	A8 - MMR ID - 46	Memory controller correctable error. MMR ID: <ul style="list-style-type: none"> • 00 : MMR0 • 01 : MMR1 • 02 : MMR0 • 03 : MMR1 • 10 : MMR2 • 11 : MMR3 • 12 : MMR2 • 13 : MMR3 	Informational message. No action necessary.
1071	OS Boot	Assert	OS boot: Boot completed - boot device not specified	01 00	1F	6F	06 - XX - XX	OS boot complete	
1072	Slot	Assert	to Non-Critical from OK	01 00	21	07	A1 - 0X - 0X	Slotx correctable error limit reached. Slot ID(x): <ul style="list-style-type: none"> • 01 : Slot1 • 02 : Slot2 • 03 : Slot3 • 04 : Slot4 • 05 : Slot5 • 06 : Slot6 	Replace Slotx. Replace MB.
1073	Slot	Assert	Slot:: To Non-Critical from OK	01 00	21	07	A1 - 0X - 81	ESB2 correctable error limit reached	Rreplace MB.
1077	Slot, 05	Assert	Slot:: To Non-Critical from OK	01 00	21	07	A1 - 0X - 85	PXH correctable error limit reached	Warning message. Replace MB.
1078	Slot, 05	Assert	Slot:: Critical	01 00	21	07	A2 - 0X - Slot ID	Slotx recoverable error. Slot ID(x): <ul style="list-style-type: none"> • 01 : Slot1 • 02 : Slot2 • 03 : Slot3 • 04 : Slot4 • 05 : Slot5 • 06 : Slot6 	Error message. Replace Slotx. Replace MB.
1079	Slot, 05	Assert	Slot:: Critical	01 00	21	07	A2 - 0X - 81	ESB2 recoverable error	Error message. Replace MB
1080	Slot, 05	Assert	Slot:: Critical	01 00	21	07	A2 - 0X - 81	SAS controller recoverable error	Error message. Replace MB.

Table 10. SAL SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Description	Message Type / Recovery Information
1081	Slot, 05	Assert	Slot:: Critical	01 00	21	07	A2 - 0X - 83	Management LAN Controller recoverable error	Error message. Replace MB.
1082	Slot, 05	Assert	Slot:: Critical	01 00	21	07	A2 - 0X - 84	VGA Controller recoverable error	Error message. Replace MB.
1083	Slot, 05	Assert	Slot:: Critical	01 00	21	07	A2 - 0X - 85	PXH recoverable error	Error message. Replace MB.
1084	Slot, 05	Assert	Slot:: non-recoverable	01 00	21	07	A3 - 0X - Slot ID	Slotx fatal error. Slot ID(x): <ul style="list-style-type: none"> • 01 : Slot1 • 02 : Slot2 • 03 : Slot3 • 04 : Slot4 • 05 : Slot5 • 06 : Slot6 	Error message. Replace Slotx. Replace MB.
1085	Slot, 05	Assert	Slot:: non-recoverable	01 00	21	07	A3 - 0X - 81	ESB2 fatal error	Error message. Replace MB.
1086	Slot, 05	Assert	Slot:: non-recoverable	01 00	21	07	A3 - 0X - 82	SAS controller fatal error	Error message. Replace MB.
1087	Slot, 05	Assert	Slot:: non-recoverable	01 00	21	07	A3 - 0X - 83	Management LAN Controller fatal error	Error message. Replace MB.
1088	Slot, 05	Assert	Slot:: non-recoverable	01 00	21	07	A3 - 0X - 84	VGA Controller fatal error	Error message. Replace MB.
1089	Slot, 05	Assert	Slot:: non-recoverable	01 00	21	07	A3 - 0X - 85	PXH fatal error	Rreplace MB.
1090	Slot, 05	Assert	Slot:: Informational	01 00	21	07	A8 - 0X - 0X	Slotx correctable error. Slot ID(x): <ul style="list-style-type: none"> • 01 : Slot1 • 02 : Slot2 • 03 : Slot3 • 04 : Slot4 • 05 : Slot5 • 06 : Slot6 	
1091	Slot, 05	Assert	Slot:: Informational	01 00	21	07	A8 - 0X - 81	ESB2 correctable error	
1095	Slot, 05	Assert	Slot:: Informational	01 00	21	07	A8 - 0X - 85	PXH correctable error	Informational message. No action necessary.

Table 10. SAL SEL Definitions

#	Sensor Name and Number	Event		Generator ID	Sensor Type	Event Trigger	Event Data1 - Event Data2 - Event Data3	Description	Message Type / Recovery Information
1096	Version Change, 11	Assert	Version: Firmware or software change detected	01 00	2B	6F	01 - XX - XX	Firmware Recovery Start	Informational message. No action necessary.
1097	Version Change, 11	Assert	Version: Invalid or unsupported firmware version	01 00	2B	6F	E5 - 00 - XX	Firmware Version Unmatch (No valid backup image)	Error message. Replace MB.
1097A0	Version Change, 11	Assert	Version: Invalid or unsupported firmware version	01 00	2B	6F	E5 - 01 - FWH ID	Firmware Version Unmatch (FWH #xx write failure). FWH ID (0-3)	Error message. Replace MB.
1098	Version Change, 11	Assert	Version: Software or F/W Change was successful	01 00	2B	6F	07 - XX - XX	Firmware Update Succeeded	Informational message. No action necessary.

