



Server WHQL Testing Services
Enterprise Platforms and Services Division

Intel[®] Server Board S5000PALR
Intel[®] Server System SR1550ALSASR
Intel[®] Server System SR2500ALLXR

Server Test Submission (STS) Report
For the Microsoft[®] Windows[®] Logo Program (WLP)

Rev 2.0

May 13, 2008

This report describes the Intel[®] S5000PALR Server Platform Windows* Logo Program test run conducted by Intel Enterprise Platforms and Services Division (EPSD).

Purpose of this WLP Submission:

System First Time submission for the Microsoft* Designed for Windows Logo submission for the Intel[®] Server Board S5000PALR configured with the optional RAID Activation Key (AXXRAK18E). **Submission Logo ID: 1290702**

Submission Type:	Reason for test run	Check one
First Time Submission	Initial Microsoft Designed for Windows logo submission. New product submission.	<input checked="" type="checkbox"/>
System Update	Hardware update. (For example, update submission test run with new processor speeds.)	<input type="checkbox"/>
BIOS Update	BIOS and/or Firmware update. (For example, update submission test run with new BIOS to support additional processor speeds.)	<input type="checkbox"/>
OS Update	OS update. (For example, update submission test run to add Microsoft Designed for Windows Server 2003 logo to product.)	<input type="checkbox"/>

Revision History and Disclaimers

Revision History		
Revision	Date	Comments
1.0	11/6/2007	Internal draft of the STS Report for Windows Server 2003 Submission for Intel® Server Board S5000PALR configured in SAS HW RAID mode
2.0	5/13/2008	Internal draft of the STS Report for Windows Server 2008 Submission for Intel® Server Board S5000PALR configured in SATA HW RAID mode (32-bit and 64-bit)

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Introduction

This report provides an overview of the testing conducted on the Intel® Server Board S5000PALR by Intel EPSD and provides details about this testing run.

Overview of Contents

Section	Content
Introduction	Brief descriptions of the sections in the report. Table listing terms and definitions.
Server Product Submission Information	Submission information, ID # and final server board configuration upon completion of WLP including HW, Driver version, BIOS version, and Board AA number
DTM	All DTM tests used during testing
Errata and Contingencies	All Microsoft* errata or contingencies used during testing

Terms and Definitions

Term	Definitions
EPSD	Enterprise Platforms and Services Division
HCL	Windows Hardware Compatibility List. Changed to Windows Server Catalogue. You can view the catalogue at: http://www.microsoft.com/windows/catalog/server/
DTM	Driver Test manager. For latest Server DTM tests visit: http://www.microsoft.com/whdc/hwtest/system/default.aspx
STS	Server Test Submission Report published by EPSD
WHDC	Windows* Hardware and Driver Central. Provides technical information, development and testing kits, newsletters and support information. http://www.microsoft.com/whdc/default.aspx
WHOS	Windows Hardware Online Service – Secure online web site used to submit products for logo qualification and review submission history. https://winqual.microsoft.com/
WHQL	Windows* Hardware Qualification Lab. For more information visit the WHDC home page at: http://www.microsoft.com/whdc/whql/default.aspx
WLP	Windows Logo Program. For further information see: http://www.microsoft.com/whdc/winlogo/default.aspx
WTS	Workstation Test Submission Report published by EPSD

Server Board Submission Information

Intel Server Board Submission Report: Completion of WLP

Data in this section reflects system submission information at the time of WLP Update submission.

Submission Information

Submission ID		
Submission ID / Master ID	1290702	
Submission Type		
	Check Submission Type	Comments
First-Time Hardware and Driver Test Submission	<input checked="" type="checkbox"/>	
System Update Test Submission	<input type="checkbox"/>	
Product Category		
Hardware Category	PC System or Server	
Operating System family	Windows Server 2008 and Windows Server 2008 x64 families	
Product Detail		
General Product Information		
Equipment Type	Server	
Primary Target Market	Business/Corporate	
Compliance	All applicable requirements	
Characterization (optional)		
	Check appropriate options	Comments
Web Server	<input checked="" type="checkbox"/>	
SQL Database Server	<input checked="" type="checkbox"/>	
File Server	<input checked="" type="checkbox"/>	

Server Board Configuration Information

Processor	
Quantity	2 (physical processors installed)
Front Side Bus Speed	1333 MHz
Family/Model	Intel® Xeon® Quad-core and Dual-Core processors
Speed	2.67, 2.80, 3.0, 3.20, and 3.73 GHz
System Memory	
Amount Installed	32 GB
Memory Type	FB DDR2-533 (4 GB FBDIMMs, ECC)
Power Management	
ACPI Sleep States (S1, S2, S3, S4)	S1, S4
Server Board Product	
System uses logo'd motherboard	NO (Server boards are <u>NOT</u> eligible for logo under the Microsoft* Motherboard logo program)
Board AA #/Fab	PBA: D13607-901
Board Manufacturer	Intel Corporation
Board Model	Intel® Server Board S5000PALR
Northbridge* Chipset Manufacturer	Intel Corporation
Northbridge Chipset Model	Intel® 5000P Memory Controller Hub
Southbridge* Chipset Manufacturer	Intel Corporation
Southbridge Chipset Model	Intel® ESB2-E I/O Controller
BIOS	
BIOS Manufacturer	AMI*
BIOS Version	S5000.86B.10.00.0088
BIOS Date	3/14/2007
BIOS URL (For Updates)	http://support.intel.com/support/motherboards/server/S5000PAL/

Bus Types			
	Check all that Apply		Check all that Apply
PS/2	<input checked="" type="checkbox"/>	AGP*	<input type="checkbox"/>
1394	<input type="checkbox"/>	PCCard* (16-bit)	<input type="checkbox"/>
CF (Compact Flash)	<input type="checkbox"/>	CardBus* (32-bit)	<input type="checkbox"/>
PCI	<input checked="" type="checkbox"/>	USB	<input type="checkbox"/>
Mini-PCI	<input type="checkbox"/>	USB 2.0	<input checked="" type="checkbox"/>
AMR	<input type="checkbox"/>	InfiniBand*	<input type="checkbox"/>
ACR	<input type="checkbox"/>	Bluetooth*	<input type="checkbox"/>
COM (Serial)	<input checked="" type="checkbox"/>	PCI Express	<input checked="" type="checkbox"/>
Integrated Components			
	Check all that Apply		Check all that Apply
Audio	<input type="checkbox"/>	Display	<input checked="" type="checkbox"/>
IDE	<input checked="" type="checkbox"/>	Networking	<input checked="" type="checkbox"/>
SCSI	<input checked="" type="checkbox"/>	RAID	<input checked="" type="checkbox"/>
Modem	<input type="checkbox"/>	Bluetooth*	<input type="checkbox"/>

Onboard Integrated Devices and Drivers

Data in this section reflects system configuration at the time of WLP submission. The latest drivers for the Intel® Server Board S5000PALR are available for download at:

<http://support.intel.com/support/motherboards/server/S5000PAL/>

Technology	OS	Version
Intel® S5000/ESB2-E Chipset The chipset contains two main components: the Memory Controller Hub (MCH) for the host bridge and the I/O controller hub for the I/O sub-system. The chipset uses the Enterprise South Bridge (ESB2-E) for the I/O controller hub.	Windows Server 2008 Windows Server 2008 – x64	OS Embedded OS Embedded
Embedded SATA (ESB2-E) Controller Legacy mode	Windows Server 2008 Windows Server 2008 – x64	OS Embedded OS Embedded
Embedded 1064E SAS Controller HW RAID mode (w/ RAID Activation Key)	Windows Server 2008 Windows Server 2008 – x64	2.13.0000.32 2.13.0000.64
LAN 2 X Intel PRO/1000-EB Server Network Connection Supports 10/100/1000 and I/O Accelerated Technology (Intel 82563GB Controller)	Windows Server 2008 Windows Server 2008 – x64	9.12.16.0 (Pkg 12.4) 9.12.16.0 (Pkg 12.4)

I/O Accelerated Technology	Windows Server 2008 Windows Server 2008 – x64	1.2.79.9 (Pkg 12.4) 1.2.79.9 (Pkg 12.4)
Display ATI* ES1000 SVGA PCI video controller with 16 MB of video memory	Windows Server 2008 Windows Server 2008 – x64	8.240.50.3000 8.240.50.3000
Intel® ESG-SHV backplane (Null driver)	Windows Server 2008 Windows Server 2008 – x64	6.0.6001.18000 6.0.6001.18000

Product Data for HCL: Completion of WLP

Data in this section reflects product data for HCL at time of WLP submission.

Product Data		
Product Name	Intel® Server Board S5000PALR	
Additional Product Names	Intel® Server System SR1550ALSASR	
	Intel® Server System SR25000ALLXR	
Supported Platforms		
	Check Tested	Comments
Windows Server 2008, Standard Edition	<input checked="" type="checkbox"/>	
Windows Server 2008, Standard Edition x64	<input checked="" type="checkbox"/>	
Windows Server 2008, Enterprise Edition	<input checked="" type="checkbox"/>	
Windows Server 2008, Enterprise Edition x64	<input checked="" type="checkbox"/>	
Windows Server 2008, DataCenter	<input checked="" type="checkbox"/>	
Windows Server 2008, DataCenter x64	<input checked="" type="checkbox"/>	

Hardware Compatibility Tests Used

Microsoft* Windows Hardware Driver Central Server Testing Home Page:

<http://www.microsoft.com/whdc/hwtest/system/default.aspx>.

Please check this website regularly for test kit updates.

Operating Systems	Notes	Hardware Compatibility Tests (HCT)
Windows Server 2008	DTM 1.2 Test Procedures and Readme files for Windows XP SP2, Windows vista, Windows Server 2003, and Windows Server 2008 (4.95MB) http://www.microsoft.com/whdc/winlogo/wlk/default.aspx	DTM 1.2 (Windows XP, Windows Vista, Windows Server 2003, and Windows Server 2008) Test Kit (4.95MB) http://www.microsoft.com/whdc/winlogo/wlk/default.aspx
	Windows Server Marketplace	http://www.windowsservercatalog.com/default.aspx

Errata and Contingencies

Microsoft* System DTM Errata list is available at:

<https://winqual.microsoft.com/EC/>

Operating System	Identification Number	Title
Windows Server 2008		<i>See Testing Exceptions section below</i>

Submission Readme File

Effective May 1, 2002, the new Microsoft standardized Readme form will be required for all hardware submissions that include any of the following testing exceptions:

- Test failures
- Tests not run
- Missing test logs
- Inconclusive test results

All testing exceptions must be identified with a valid Errata ID, Incident ID, or Contingency ID provided by WHQL. The new Microsoft standardized Readme file is available for download at:

<http://www.microsoft.com/whdc/winlogo/WLK/default.msp>

Testing Exceptions for S5000PALR-SAS-HW RAID Windows Server 2008

Data in this section reflects product data and test exceptions listed in section 2 of the Intel® Server System SR2500ALLXR Readme file at time of WLP First-Time submission ID Number **1290702**.

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008	Errata	1029
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	Assertion 4BA8F23A-6BB1-48EE-88D8-ED1A3ECD34B9 SVID register of the Subsystem ID and Subsystem Vendor ID Capability table must be read-only . Assertion 6B0F606E-DBB3-4B8C-8879-32B302412EB8 SSID register of the Subsystem ID and Subsystem Vendor ID Capability table must be read-only . Assertion B576282C-5C66-4253-A275-257F5D49EFEF SVID register of the Subsystem ID and Subsystem Vendor ID Capability table cannot have a value of 0h. These are valid failures but are not a requirement till January 2009. A filter is being created for the above assertions for this particular device. Added failure: Assertion 7A5587BC-5646-4DC4-9A5D-22F85AB2204E PCI Express ports and bridges must implement Subsystem ID and Subsystem Vendor ID Capability.	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008	Errata	1078
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	The Bit 5 (Surprise Down Error Severity) in the Uncorrectable Error Severity register (offset Ch) in the Advanced Error Reporting Capability table must be read-only and always return 1 if the Bit 5 (Surprise Down Error Mask) in the Uncorrectable Error Mask Register in the Advanced Error Reporting Capability table is not implemented	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008	Errata	887

Failing test name	PCI Hardware Compliance Test for Systems Running Windows Vista (PCIHCT)
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	Bit 10 (Interrupt Disable) in the Command register (offset 4h) in the Header table must be read-writable if the device supports an interrupt.
Additional information (for example, test system in a multiple system configuration)	

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008	Errata	1113
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	Bit 5 (Retrain Link) in the Link Control register (offset 10h) in the PCI Express Capability table must always return 0 on reads even though it is read-write.	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008	Errata	316
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	Bit range 15:8 (Bus Number) in the PCI-X Bridge Status register (offset 4h) in the PCI-X Capability table must be read-only. RESOLUTION: The following assertion failure is allowed EBA19FF0-AB40-4D74-AC05-4ABE22D356BD	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008	Errata	317
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	Header Type 1 Registers failure due to a PCI Compliance test issue RESOLUTION: The following assertion failure is allowed 60BDF3F8-01D2-4B58-8A14-04DA4C1B694A	

Additional information (for example, test system in a multiple system configuration)	
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Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008	Errata	1115
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	PCI Compliance - Bit 3 (Read Completion Boundary) in the Link Control register (offset 10h) in the PCI Express Capability table must be read-only and always return 0 for switch ports. RESOLUTION: The following PCI Compliance assertion failure is allowed 9A275B03 -1072-43D6-B034-3DD306D24324	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008	Errata	331
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	PCI Compliance - Bit range 31:2 (Message Address)in the Message Address register (offset 4h) in the MSI Capability table must be read-writable. RESOLUTION: The following PCI Compliance test assertion failure is allowed DDC8A893-6F85-4D69-BC79-874BA52E0A02.	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008	Errata	1080
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	PCI Compliance test causes the system to hang after testing Power Management capability of the graphics devices. This occurs after the device are put into various D-states and then recovered to D0 state. Cause: The AMD/ATI graphics devices require that the VBIOS be re-posted after transition to various D-states and recovery to D0 state which the PCIHCT doesn't do.	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008	Errata	566
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	Assertion 7A5587BC-5646-4DC4-9A5D-22F85AB2204E: FAILED. PCI Express ports and bridges must implement Subsystem ID and Subsystem Vendor ID Capability. This requirement not in effect until 2009	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008	Errata	1114
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	According to the PCI Express Base Specification, Rev 2.0 Section 7.8.8, this bit field is undefined when the link is not up. If there is not PCIe device behind the bridge, then the link can NOT be up and therefore the field is undefined. Bit 13 in the same register (Link Status) can be used to determine if the link is active (up). The PCIHCT uses the Presence Detect State bit of the Slot Status register to determine whether a child device is present. However, the Presence Detect State bit only returns valid data if the Slot Implemented bit is set (bit 8 of PCIe capabilities register). If the PCIe root port or downstream port will never have a device behind it, the Slot Implemented bit is cleared to 0. Per the spec, PDS will always be 1 when the Slot Implemented bit is clear. Therefore PDS can not be used to determine device presence when the SI bit is clear.	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008	Errata	474
Failing test name	PCI Hardware Compliance Test	

Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	According to the PCI Express Base Specification, Rev 2.0 Section 7.8.8, this bit field is undefined when the link is not up. If there is not PCIe device behind the bridge, then the link can NOT be up and therefore the field is undefined. Bit 13 in the same register (Link Status) can be used to determine if the link is active (up). The PCIHCT uses the Presence Detect State bit of the Slot Status register to determine whether a child device is present. However, the Presence Detect State bit only returns valid data if the Slot Implemented bit is set (bit 8 of PCIe capabilities register). If the PCIe root port or downstream port will never have a device behind it, the Slot Implemented bit is cleared to 0. Per the spec, PDS will always be 1 when the Slot Implemented bit is clear. Therefore PDS can not be used to determine device presence when the SI bit is clear.
Additional information (for example, test system in a multiple system configuration)	

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008	Errata	1166
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	PCI Compliance - Bit 20 (Data Link Layer Link Active Reporting Capable) in the Link Capabilities register (offset Ch) in the PCI Express Capability table must be read-only. RESOLUTION: The following PCI Compliance test assertion failure is allowed ABC66DC4-D88C-496E-845D-63B7F9A05176.	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008	Errata	1110
Failing test name	BitLocker Drive Encryption BIOS Interface Logo Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	For platforms without Trusted Platform Modules (TPM), the WLK 1.1 kit has an issue which randomly causes the BitLocker Drive Encryption BIOS Interface Logo Test to fail.	
Additional information (for example, test system in a multiple system configuration)		

Testing Exceptions for S5000PALR-SAS-HWRAID Windows Server 2008 x64

Data in this section reflects product data and test exceptions listed in section 2 of the Intel® Server System SR2500ALLXR Readme file at time of WLP First-Time submission ID Number **1290702**.

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008 x64	Errata	1029
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	Assertion 4BA8F23A-6BB1-48EE-88D8-ED1A3ECD34B9 SSVID register of the Subsystem ID and Subsystem Vendor ID Capability table must be read-only . Assertion 6B0F606E-DBB3-4B8C-8879-32B302412EB8 SSID register of the Subsystem ID and Subsystem Vendor ID Capability table must be read-only . Assertion B576282C-5C66-4253-A275-257F5D49EFEF SSVID register of the Subsystem ID and Subsystem Vendor ID Capability table cannot have a value of 0h. These are valid failures but are not a requirement till January 2009. A filter is being created for the above assertions for this particular device. Added failure: Assertion 7A5587BC-5646-4DC4-9A5D-22F85AB2204E PCI Express ports and bridges must implement Subsystem ID and Subsystem Vendor ID Capability.	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008 x64	Errata	1078
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	The Bit 5 (Surprise Down Error Severity) in the Uncorrectable Error Severity register (offset Ch) in the Advanced Error Reporting Capability table must be read-only and always return 1 if the Bit 5 (Surprise Down Error Mask) in the Uncorrectable Error Mask Register in the Advanced Error Reporting Capability table is not implemented	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008 x64	Errata	887

Failing test name	PCI Hardware Compliance Test for Systems Running Windows Vista (PCIHCT)
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	Bit 10 (Interrupt Disable) in the Command register (offset 4h) in the Header table must be read-writable if the device supports an interrupt.
Additional information (for example, test system in a multiple system configuration)	

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008 x64	Errata	1113
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	Bit 5 (Retrain Link) in the Link Control register (offset 10h) in the PCI Express Capability table must always return 0 on reads even though it is read-write.	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008 x64	Errata	316
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	Bit range 15:8 (Bus Number) in the PCI-X Bridge Status register (offset 4h) in the PCI-X Capability table must be read-only. RESOLUTION: The following assertion failure is allowed EBA19FF0-AB40-4D74-AC05-4ABE22D356BD	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008 x64	Errata	317
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	Header Type 1 Registers failure due to a PCI Compliance test issue RESOLUTION: The following assertion failure is allowed 60BDF3F8-01D2-4B58-8A14-04DA4C1B694A	

Additional information (for example, test system in a multiple system configuration)	
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Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008 x64	Errata	1115
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	PCI Compliance - Bit 3 (Read Completion Boundary) in the Link Control register (offset 10h) in the PCI Express Capability table must be read-only and always return 0 for switch ports. RESOLUTION: The following PCI Compliance assertion failure is allowed 9A275B03 -1072-43D6-B034-3DD306D24324	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008 x64	Errata	331
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	PCI Compliance - Bit range 31:2 (Message Address)in the Message Address register (offset 4h) in the MSI Capability table must be read-writable. RESOLUTION: The following PCI Compliance test assertion failure is allowed DDC8A893-6F85-4D69-BC79-874BA52E0A02.	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008 x64	Errata	324
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	PCI Compliance - Bit 20 (Data Link Layer Link Active Reporting Capable) in the Link Capabilities register (offset Ch) in the PCI Express Capability table must be read-only. RESOLUTION: The following PCI Compliance test assertion failure is allowed ABC66DC4-D88C-496E-845D-63B7F9A05176.	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008 x64	Errata	1080
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	PCI Compliance test causes the system to hang after testing Power Management capability of the graphics devices. This occurs after the device are put into various D-states and then recovered to D0 state. Cause: The AMD/ATI graphics devices require that the VBIOS be re-posted after transition to various D-states and recovery to D0 state which the PCIHCT doesn't do.	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008 x64	Errata	566
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	Assertion 7A5587BC-5646-4DC4-9A5D-22F85AB2204E: FAILED. PCI Express ports and bridges must implement Subsystem ID and Subsystem Vendor ID Capability. This requirement not in effect until 2009	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008 x64	Errata	1114
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	According to the PCI Express Base Specification, Rev 2.0 Section 7.8.8, this bit field is undefined when the link is not up. If there is not PCIe device behind the bridge, then the link can NOT be up and therefore the field is undefined. Bit 13 in the same register (Link Status) can be used to determine if the link is active (up). The PCIHCT uses the Presence Detect State bit of the Slot Status register to determine whether a child device is present. However, the Presence Detect State bit only returns valid data if the Slot Implemented bit is set (bit 8 of PCIe capabilities register). If the PCIe root port or downstream port will never have a device behind it, the Slot Implemented bit is cleared to 0. Per the spec, PDS will always be 1 when the Slot Implemented bit is clear. Therefore PDS can not be used to determine device presence when the SI bit is clear.	

Additional information (for example, test system in a multiple system configuration)		
Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008 x64	Errata	474
Failing test name	PCI Hardware Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	According to the PCI Express Base Specification, Rev 2.0 Section 7.8.8, this bit field is undefined when the link is not up. If there is not PCIe device behind the bridge, then the link can NOT be up and therefore the field is undefined. Bit 13 in the same register (Link Status) can be used to determine if the link is active (up). The PCIHCT uses the Presence Detect State bit of the Slot Status register to determine whether a child device is present. However, the Presence Detect State bit only returns valid data if the Slot Implemented bit is set (bit 8 of PCIe capabilities register). If the PCIe root port or downstream port will never have a device behind it, the Slot Implemented bit is cleared to 0. Per the spec, PDS will always be 1 when the Slot Implemented bit is clear. Therefore PDS can not be used to determine device presence when the SI bit is clear.	
Additional information (for example, test system in a multiple system configuration)		

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008 x64	Errata	1110
Failing test name	BitLocker Drive Encryption BIOS Interface Logo Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	For platforms without Trusted Platform Modules (TPM), the WLK 1.1 kit has an issue which randomly causes the BitLocker Drive Encryption BIOS Interface Logo Test to fail.	
Additional information (for example, test system in a multiple system configuration)		

Additional Information

No additional information entered in section 3 of the Intel® Server System SR2500ALLXR Readme file at time of WLP submission ID 1290702.

Appendix A – Submission History

Microsoft “Designed for Windows*” logo submission history for the Intel® Server S5000PALR:
(SAS-HWRAID mode)

Submission ID	Type	Date	OS Qualified	Processor Speeds	Board Revision	BIOS Version
1280344	First-Time	11/5/07	Windows 2003 EE SP2 - 32 & 64 Bit	2.67, 2.80, 3.0, 3.20, and 3.73 GHz	100	S5000.86B.10.00.84 10/17/2007
1290702	First-Time	5/13/2008	Windows Server 2008 x86 and x64 families	2.67, 2.80, 3.0, 3.20, and 3.73 GHz	100	S5000.86B.10.00.88 3/14/2008