

Server WHQL Testing Services

Enterprise Platforms and Services Division

Intel® Server Board S5520UR
Intel® Server System SR1600UR
Intel® Server System SR1625UR
Intel® Server System SR2600URLX
Intel® Server System SR2625URLX

Server Test Submission (STS) Report

For the Microsoft® Windows® Logo Program (WLP)

Rev 1.0

April 9, 2009

This report describes the Intel® Server Board S5520UR 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 S5520UR combined with a passive mid-plane.

Submission Logo ID: 1324155

Submission Type:	Reason for test run	Check one
First Time Submission	Initial Microsoft Designed for Windows logo submission. New product submission.	
System Update	Hardware update. (For example, update submission test run with new processor speeds.)	
BIOS Update	BIOS and/or Firmware update. (For example, update submission test run with new BIOS to support additional processor speeds.)	
OS Update	OS update. (For example, update submission test run to add Microsoft Designed for Windows Server 2008 logo to product.)	

Revision History and Disclaimers

Revision History		
Revision	Revision Date Comments	
1.0	4/9/2009	Internal draft of the STS Report for Windows Server 2008 Submission for Intel® Server Board S5520UR configured with a passive midplane and SATA SW RAID.

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Introduction

This report provides an overview of the testing conducted on the Intel® Server Board S5520UR 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 Submission information, ID # and final server board configuration upon completion 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.mspx
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.mspx
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.mspx
WLP	Windows Logo Program. For further information see: http://www.microsoft.com/whdc/winlogo/default.mspx
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	1324155		
Submission Type			
	Check Submission Type	Comments	
First-Time Hardware and Driver Test Submission	Ø		
System Update Test Submission			
Product Category			
Hardware Category	PC System or Server		
Operating System family	Windows Server 2008 family		
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	\checkmark		
SQL Database Server	\checkmark		
File Server	V		

Server Board Configuration Information

Processor		
Quantity	2 (physical processors installed)	
Front Side Bus Speed	6.40 GT/s	
Family/Model	Intel [®] Xeon Quad-core Processor 5500 series	
Speed	1.86, 2.00, 2.13, 2.26, 2.40, 2.53, 2.66, 2.80, and 2.93 GHz	
System Memory		
Amount Installed	96 GB	
Memory Type	DDR3	
Power Management		
ACPI Sleep States (S1, S2, S3, S4)	S1	
Server Board Product		
System uses logo'd motherboard	NO (Server boards are NOT eligible for logo under the Microsoft* Motherboard logo program)	
Board AA #/Fab	PBA: E22554-601	
Board Manufacturer	Intel Corporation	
Board Model	Intel [®] Server Board S5520UR	
Northbridge* Chipset Manufacturer	Intel Corporation	
Northbridge Chipset Model	Intel [®] 5520 IOH	
Southbridge* Chipset Manufacturer	Intel Corporation	
Southbridge Chipset Model	Intel® ICHIOR I/O Controller	
BIOS		
BIOS Manufacturer	AMI*	
BIOS Version	S5500.86B.01.00.0033.03062009	
BIOS Date	3/6/2009	
BIOS URL (For Updates)	http://support.intel.com/support/motherboards/server/s5520ur	

Bus Types			
	Check all that Apply		Check all that Apply
PS/2		AGP*	
1394		PCCard* (16-bit)	
CF (Compact Flash)		CardBus* (32-bit)	
PCI	\checkmark	USB	
Mini-PCI		USB 2.0	\checkmark
AMR		InfiniBand*	
ACR		Bluetooth*	
COM (Serial)	V	PCI Express	\checkmark
Integrated Components		·	
	Check all that Apply		Check all that Apply
Audio		Display	
IDE	V	Networking	
SCSI	V	RAID	
Modem		Bluetooth*	

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 S5520UR are available for download at: http://support.intel.com/support/motherboards/server/s5520ur

Technology	os	Version	
Intel® S5000/ESB2-E Chipset			
The chipset contains two main components: the	Windows Server 2008	9.1.0.1012	
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 – 64Bit	9.1.0.1012	
Embedded ICHxxx/ESB2 Controller	W. 1 0 000	12.09.1022.2009	
SW RAID mode	Windows Server 2008	12.08.1023.2008	
	Windows Server 2008 – 64Bit	12.08.1023.2008	
LAN 2 X Intel 82575EB Server Network Connection Supports 10/100/1000	Windows Server 2008	10.6.0015.0 (Pkg 14.0)	
and I/O Accelerated Technology	Windows Server 2008 – 64Bit	10.6.0015.0 (Pkg 14.0)	
(Intel 82563GB Controller)			
Display	Windows Server 2008	WDM20080228.1996-R4	
Server Engine iBMC video controller	Windows Server 2008 – 64Bit	WDM20080228.1996-R4	
	Williadws Server 2006 - 64Bit		

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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 S5520UR		
	Intel® Server Syste	em SR1600UR	
Additional Product Names	Intel® Server Syste	em SR1625UR	
	Intel® Server System SR2600URBRP		
	Intel® Server System SR2625URBRP		
Supported Platforms			
	Check Tested	Comments	
Windows Server 2003 family			
Windows Server 2003 x64 family			
Windows Server 2008 family	$\overline{\checkmark}$		
Windows Server 2008 x64 family	V		

Hardware Compatibility Tests Used

Microsoft* Windows Hardware Driver Central Server Testing Home Page: http://www.microsoft.com/whdc/hwtest/system/default.mspx.

Please check this website regularly for test kit updates.

Operating Systems	Notes	Hardware Compatibility Tests (HCT)
Windows Server 2003	DTM 1.2 Test Procedures for Systems, Servers and Cluster Servers (Windows 2000)	DTM 1.2 Test Kit (Windows 2000) (35.4 MB)
	http://download.microsoft.com/download/whistler/ Docs/Docs/W982KMeXP/EN- US/HCT9502_Systems.exe	http://download.microsoft.com/download/whistler/Tools/Tools/W98NT42KMeXP/EN-US/HCT9502UPD.EXE
	Logo'd Components Index Full Install	Logo'd Components Index Full Install (~9.8 MB)
		http://download.microsoft.com/download/whistler/Instal I/20.0/W982KMeXP/EN-US/logoidx.exe
	391 NDIS Intermediate Drivers Instructions	Beta NDIS Test Update (ndt391.exe) (2MB)
	http://download.microsoft.com/download/whistler/ Install/20.1/W982KMeXP/EN- US/NDISIntermedDriver.exe	http://download.microsoft.com/download/whistler/Instal I/12.2/W982KMeXP/EN-US/ndt391.exe
	386 NDIS Intermediate Drivers Instructions	NDIS Test Update for Windows 98 SE, Windows Me, and Windows 2000 (ndt386.exe) (2.02MB)
	http://download.microsoft.com/download/whistler/ Install/20.1/W982KMeXP/EN- US/NDISIntermedDriver.exe	http://download.microsoft.com/download/whistler/Instal l/12.2/W982KMeXP/EN-US/ndt386.exe
Windows Server 2008	DTM 1.2 Test Procedures and Readme files for Windows Server 2003 and Windows Server 2008 (4.95MB)	DTM 1.2 Test Kit (4.95MB) http://www.microsoft.com/whdc/hwtest/search/details.a spx?ID=724
	http://www.microsoft.com/whdc/hwtest/search/de tails.aspx?ID=725	
	Logo'd Components Index Full Install	Logo'd Components Index Full Install (~9.8 MB)
		http://download.microsoft.com/download/whistler/Instal I/20.0/W982KMeXP/EN-US/logoidx.exe

Errata and Contingencies

Microsoft* System DTM Errata list is available at: https://winqual.microsoft.com/EC/

Operating System	Identification Number	Title
Windows Server 2008		See Testing Exceptions section below

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.mspx

Testing Exceptions for S5520UR-SATA-SWR Windows Server 2008

Data in this section reflects product data and test exceptions listed in section 2 of the S5520UR-SATA-SWR Readme file at time of WLP First-Time submission ID Number **1324155**.

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	997
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)	Error Reporting Capable bits 4:0 of the Device Control Register in the PCI Express capability aren't tested correctly. 1) Assertion 47C39833-84AD-44EA-9723-0695202ADDEA: FAILED. Bit 0 (Correctable Error Reporting Enable) in the Device Control register (offset 8h) in the PCI Express Capability table must be read-writable. 2) Assertion 5CBA2A63-A48E-4443-85FA-A7DCD8EA47BC: FAILED. Bit 1 (Non-Fatal Error Reporting Enable) in the Device Control register (offset 8h) in the PCI Express Capability table must be read-writable. 3) Assertion 0AB06F7C-59CB-4F9A-8363-B51B1ACAB54F: FAILED. Bit 2 (Fatal Error Reporting Enable) in the Device Control register (offset 8h) in the PCI Express Capability table must be read-writable. 4) Assertion E3834E4A-A7BD-410C-9A61-FA91770D2A71: FAILED. Bit 3 (Unsupported Request Reporting Enable) in the Device Control register (offset 8h) in the PCI Express Capability table must be read-writable.	
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	1051
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 9:4 (Negotiated Link Width)in the Link Status register (offset 12h) in the PCI Express Capability table is 1h. It cannot be in the set of values {0x1, 0x2} for PCI Express display controllers. Assertion 7229E848-31C2-482A-88F2-73ADA2C32B79.
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	1098
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 FAE18121-9177-4FB2-A081-0D04C285EFF2 Bit range 15:0 (Extended Capability ID)in the Enhanced Capability Header register (offset 0h) in the Unrecognized Enhanced Capability ID 13 table is Dh. It must be in the range [0x0 - 0xB] as all other Capability IDs are reserved.	
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	1150
Failing test name	PCI Harware 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)	Assertion 3CDD17AF-215E-4921-894F-C99434A3B3CA Bit range 31:21 (Reserved_3)in the Uncorrectable Error Mask register (offset 8h) in the Advanced Error Reporting Capability table must be read-only and always return 0 . Assertion FF8BC1A1-79B5-480A-9439-BF81AEDF4183 Bit 13 (Flow Control Protocol 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 . It was found to return 0 . Assertion 461CA4DE-9266-4420-9B5F-F33622A5D02B Bit range 31:21 (Reserved_3)in the Uncorrectable Error Severity register (offset Ch) in the Advanced Error Reporting Capability table must be read-only and always return 0 .	
Additional information (for example, test system in a multiple system configuration)		

Testing Exceptions for S5520UR-SATA-SWR Windows Server 2008 64 Bit

Data in this section reflects product data and test exceptions listed in section 2 of the S5520UR-SATA-SWR Readme file at time of WLP First-Time submission ID Number **1324155**.

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	997
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)	Express capability aren't tested co 44EA-9723-0695202ADDEA: FAIL Enable) in the Device Control regis Capability table must be read-writa 85FA-A7DCD8EA47BC: FAILED. the Device Control register (offset must be read-writable. 3) Assertio B51B1ACAB54F: FAILED. Bit 2 (F Control register (offset 8h) in the P writable. 4) Assertion E3834E4A-FAILED. Bit 3 (Unsupported Requirements)	able. 2) Assertion 5CBA2A63-A48E-4443- Bit 1 (Non-Fatal Error Reporting Enable) in 8h) in the PCI Express Capability table
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	1051
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 9:4 (Negotiated Link Width)in the Link Status register (offset 12h) in the PCI Express Capability table is 1h. It cannot be in the set of values {0x1, 0x2} for PCI Express display controllers. Assertion 7229E848-31C2-482A-88F2-73ADA2C32B79.
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	1098
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 FAE18121-9177-4FB2-A081-0D04C285EFF2 Bit range 15:0 (Extended Capability ID)in the Enhanced Capability Header register (offset 0h) in the Unrecognized Enhanced Capability ID 13 table is Dh. It must be in the range [0x0 - 0xB] as all other Capability IDs are reserved.	
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	1150
Failing test name	PCI Harware 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)	Assertion 3CDD17AF-215E-4921-894F-C99434A3B3CA Bit range 31:21 (Reserved_3)in the Uncorrectable Error Mask register (offset 8h) in the Advanced Error Reporting Capability table must be read-only and always return 0 . Assertion FF8BC1A1-79B5-480A-9439-BF81AEDF4183 Bit 13 (Flow Control Protocol 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 . It was found to return 0. Assertion 461CA4DE-9266-4420-9B5F-F33622A5D02B Bit range 31:21 (Reserved_3)in the Uncorrectable Error Severity register (offset Ch) in the Advanced Error Reporting Capability table must be read-only and always return 0.	
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	1284, 1285, 1286

Failing test name	ng test name Virtualization – Virtual machine Detect Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	The Virtualization - Virtual Machine Detect Test is incorrectly available to run in the Server category for non virtualization featured servers.	
Additional information (for example, test system in a multiple system configuration)		

Additional Information

No additional information entered in section 3 of the S5520UR-SATA-SWR Submission Readme file at time of WLP submission ID 1324155.

Appendix A – Submission History

Microsoft "Designed for Windows*" logo submission history for the $Intel^{\circledR}$ Server Board S5520UR-SATA-SWR

Submission ID	Туре	Date	OS Qualified	Processor Speeds	Board Revision	BIOS Version
1323046	First-Time	3/27/09	Windows Server 2003 - 32 & 64 Bit	1.86, 2.00, 2.13, 2.26, 2.40, 2.53, 2.66, 2.80, and 2.93	601	\$5500.86B.01.00.33 3/6/2009
1324155	First-Time	4/9/09	Windows Server 2008 - 32 & 64 Bit	GHz " "	601	\$5500.86B.01.00.33 3/6/2009