



Server WHQL Testing Services
Enterprise Platforms and Services Division
Intel® Server Board S3420GPV

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

Rev 1.0

Dec. 30th, 2009

This report describes the Intel® Server Board S3420GPV 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 S3420GPV in None RAID configuration.

Windows Server 2008 R2 x64bit Submission Logo ID: 1382724 (S3420GPV MB)

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 2008 logo to product.)	<input type="checkbox"/>

Revision History and Disclaimers

Revision History		
Revision	Date	Comments
1.0	12/30/2009	Internal draft of the STS Report for Windows Server 2008 R2 x64bit Submission for Intel® Server Board S3420GPV configured in None RAID mode

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Introduction

This report provides an overview of the testing conducted on the Intel® Server Board S3420GPV 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	1382724	
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 R2 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	<input checked="" type="checkbox"/>	
SQL Database Server	<input checked="" type="checkbox"/>	
File Server	<input checked="" type="checkbox"/>	

Server Board Submission Information

Server Board Configuration Information

Processor	
Quantity	1 (physical processors installed)
Front Side Bus Speed	QPI: 5.86 GT/s (Giga transfers per sec)
Family/Model	Intel® Core™ i3 Desktop Processor
Speed	2.93 and 3.06GHz
System Memory	
Amount Installed	16 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 <u>NOT</u> eligible for logo under the Microsoft* Motherboard logo program)
Board AA #/Fab	PBA: E80883-101
Board Manufacturer	Intel Corporation
Board Model	Intel® Server Board S3420GPV
Northbridge* Chipset Manufacturer	N/A
Northbridge Chipset Model	N/A
Southbridge* Chipset Manufacturer	Intel Corporation
Southbridge Chipset Model	Intel® 3420 PCH
BIOS	
BIOS Manufacturer	AMI*
BIOS Version	S3420GP.86B.01.00.0035
BIOS Date	12/17/2009
BIOS URL (For Updates)	http://www.intel.com/Products/Server/Motherboards/S3420GP/S3420GP-overview.htm

Bus Types			
	Check all that Apply		Check all that Apply
PS/2	<input 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 type="checkbox"/>	Networking	<input checked="" type="checkbox"/>
SCSI	<input 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 S3420GPV are available for download at:

<http://www.intel.com/Products/Server/Motherboards/S3420GP/S3420GP-overview.htm>

Technology	OS	Version
Intel® S3420 PCH Chipset	Windows Server 2008 R2	Embedded
LAN Intel 82574L and Intel 82578DM Server Network Connection Supports 10/100/1000	Windows Server 2008 R2	14.4
Display Silicon motion SM712 video controller	Windows Server 2008 R2	Embedded

Product Data for HCL: Completion of WLP

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

Server Board Submission Information

Product Data		
Product Name	Intel® Server Board S3420GPV	
Additional Product Names		
Supported Platforms		
	Check Tested	Comments
Windows Server 2003 family	<input type="checkbox"/>	
Windows Server 2003 x64 family	<input type="checkbox"/>	
Windows Server 2008 family	<input type="checkbox"/>	
Windows Server 2008 R2 x64 family	<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.mspx>.

Please check this website regularly for test kit updates.

Operating Systems	Notes	Hardware Compatibility Tests (HCT)
Windows Server 2008 R2 x64bit	DTM 1.4 Test Procedures for Systems, Servers and Cluster Servers	DTM 1.4 Test Kit
	Logo'd Components Index Full Install	Logo'd Components Index Full Install

Errata and Contingencies

Microsoft* System DTM Errata list is available at:

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

Operating System	Identification Number	Title
Windows Server 2008 R2 x64bit		<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.mspx>

Testing Exceptions for S3420GPV Windows Server 2008 R2 x64Bit

Data in this section reflects product data and test exceptions listed in section 2 of the S3420GPV Readme file at time of WLP First-Time submission ID Number 1382724 (S3420GPV MB).

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008 R2 x64b	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)	Assertion CF68482E-9EEF-45B4-A8B8-1379AB6CF94A Bit range 9:4 (Negotiated Link Width) in the Link Status register (offset 12h) in the PCI Express Capability table is 0h. It must be in the set of values {0x1, 0x2, 0x4, 0x8, 0xc, 0x10, 0x20}.	
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 R2 x64b	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 cannot be used to determine device presence when the SI bit is clear.	
Additional information (for example, test system in a multiple system configuration)		

Errata and Contingencies

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2008 R2 x64b	Errata	1998
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 9322F624-9817-4A1E-8C97-7C4A74052129 Network and storage controllers must be PCI Express devices.	
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 R2 x64b	Errata	1543
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 0E36472A-0EDB-4685-A67D-7AF1FFBFA81B Data Link Layer Link Active Reporting Capable bit is set but Data Link Layer Link Active is not.	
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 R2 x64b	Errata	1554
Failing test name	Signed Driver Check (Server 2008) (Manual)	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	If a driver is found to be signed by Microsoft that is tested with the chklogo test, the message, ERROR: No Logo Level Attribute on file., is an invalid failure if followed by, This file has a 0 level Logo and followed by, Cannot match the device ID of the driver the device was test within an invidual assertion.	
Additional information (for example, test system in a multiple system configuration)		

Additional Information

No additional information entered in section 3 of the S3420GPV Submission Readme file at time of WLP submission ID 1382724 (S3420GPV MB).

Appendix A – Submission History

Microsoft “Designed for Windows*” logo submission history for the Intel® Server Board S3420GPV

Submission ID	Type	Date	OS Qualified	Processor Speeds	Board Revision	BIOS Version
1382724 (S3420GPV MB)	First-Time	12/30/09	Windows Server 2008 R2 - 64 Bit	2.93 and 3.06GHz	101	S3420GP.86B.01.00.0035