intel®

Server OS Testing Services

Enterprise Platforms and Services Division

Intel® Server Board SE7500CW2

Server Test Submission (STS) Report

For the Microsoft® Windows® Logo Program (WLP)

Rev 1.3

8/24/2003

This report describes the Intel® SE7500CW2 Server Platform Windows Logo Program test run conducted by Intel Enterprise Platforms and Services Division (EPSD).

Purpose of this WLP Submission:

System Update submission to combine the previous Windows Server 2003 and Windows 2000 logo submissions into a single Microsoft Designed for Windows Logo submission for the Intel® Server Board SE7500CW2.

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 and/or Firmware update. (For example, update submission test run with new BIOS to support additional processor speeds.)	☐
	OS update. (For example, update submission test run to add Microsoft Designed for Windows Server 2003 logo to product.)	☑

Revision History and Disclaimers

Revision History		
Revision	**Date**	**Comments**
1.0	9/7/2002	STS Report for WLP Windows 2000 Server First-Time Submission for Intel® Server Board SE7500CW2
1.0	9/7/2002	STS Report for WLP Windows 2000 Advanced Server First-Time Submission for Intel® Server Board SE7500CW2 with add-in SCSI adapter. Microsoft removed requirement for add-in SCSI adapters on server systems without onboard SCSI for the Windows 2000 Advanced Server DFW logo in February 2003.
1.1	3/25/2003	STS Report for the Update Hardware and Driver Test Submission for Intel® Server Board SE7500CW2.
1.3	8/24/2003	STS Report for WLP System Update submission to add Windows Server 2003

Contents

Introduction

This report provides an overview of the testing conducted on the Intel® Server Board SE7500CW2 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
HCT	All HCT's used during testing
Errata and Contingencies	All Microsoft* errata or contingencies used during testing

Terms and Definitions

Term	Definitions
WHDC	Windows* Hardware and Driver Central. Provides technical information, development and testing kits, newsletters and support information. http://www.microsoft.com/whdc/default.mspx
WHQL	Windows* Hardware Qualification Lab. For more information visit the WHDC home page at: http://www.microsoft.com/whdc/default.mspx
HCT	Hardware Compatibility Tests. For latest Server HCTs visit: http://www.microsoft.com/whdc/hwtest/system/default.mspx
WLP	Windows Logo Program. For further information see: http://www.microsoft.com/whdc/winlogo/default.mspx
HCL	Windows Hardware Compatibility List. You can view the HCL at: http://www.microsoft.com/whdc/hcl/search.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/

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	711989	
Previously logo'd Submission ID / Master ID	672143, 625430	
Submission Type		
	Check Submission Type	**Comments**
First-Time Hardware and Driver Test Submission	☐	
System Update	☑	
Update Type (Update Hardware and Drivers Test Submission ONLY)		
	Check Update Type	**Comments**
Hardware (Firmware) Update	☐	
System Update	☑	
Previously Logo'd Operating System	Windows* 2000	
Update Type Detail (Update Hardware and Drivers Test Submission ONLY)		
	Check Update Type	**Comments**
New CPU Speeds	☐	
Motherboard Updates	☐	
BIOS Updates	☐	
OS Update	☑	Windows Server 2003 OS Update
Product Category		
Hardware Category	PC System or Server	
Operating System Selected	Windows Server 2003 & Windows 2000	

Product Detail		
General Product Information		
Equipment Type	Server	
Primary Target Market	Business/Corporate	
Compliance	All applicable requirements	
Testing Matrix (optional)		
	Check Tested	**Comments**
PAE_Tested	☑	Supports 4GB or more of memory
Characterization (optional)		
	Check appropriate options	**Comments**
Web Server	☑	
SQL Database Server	☑	
File Server	☑	

Server Board Configuration Information

Processor	
Quantity	2
Front Side Bus Speed	400 MHz
Family/Model	Intel® Xeon™ processors with 512KB L2 Cache and Hyper-Threading Technology
Speed	1.8GHz, 2.0GHz, 2.2GHz, 2.4GHz, 2.6GHz, 2.8GHz, 3.0GHz
System Memory	
Amount Installed	8 GB
Memory Type	Registered ECC DDR200/266 SDRAM
Power Management	
ACPI Sleep States (S1, S2, S3, 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	AA-A0020-601
Board Manufacturer	Intel Corporation
Board Model	Intel® SE7500CW2 Server Board
Northbridge* Chipset Manufacturer	Intel Corporation
Northbridge Chipset Model	Intel® E7500 chipset
Southbridge* Chipset Manufacturer	Intel Corporation
Southbridge Chipset Model	Intel® E7500 chipset
BIOS	
BIOS Manufacturer	Phoenix* BIOS
BIOS Version	4.0 Release 6.0.4 – Production Release 1.28
BIOS Date	5/22/2003
BIOS URL (For Updates)	http://support.intel.com/support/motherboards/server/se7500cw2/

Bus Types			
	Check all that Apply		**Check all that Apply**
PS/2	☑	AGP*	☐
1394	☐	PCCard* (16-bit)	☐
CF (Compact Flash)	☐	CardBus* (32-bit)	☐
PCI	☑	USB	☑
Mini-PCI	☐	USB 2.0	☐
AMR	☐	InfiniBand*	☐
ACR	☐	Bluetooth*	☐
COM (Serial)	☑		

Integrated Components			
	Check all that Apply		**Check all that Apply**
Audio	☐	Display	☑
IDE	☑	Networking	☑
SCSI	☐	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 SE7500CW2 are available for download at:

http://developer.intel.com/support/motherboards/server/SE7500CW2/

Technology	OS	Version
LAN Dual Intel® PRO 100+ Server Ethernet Controller (Intel® 82550PM Controller)	**Windows* 2000**	6.4.14.0
	Windows Server 2003	6.6.8.1
ATA Promise* PDC20267 dual channel ATA/100 RAID Controller	**Windows 2000**	2.30.0140.12
	Windows Server 2003	2.30.140.19
Display ATI* Rage* XL SVGA PCI Video Controller (with 8MB of Video Memory)	**Windows 2000**	5.00.2195.5012
	Windows Server 2003	5.10.2600.6014

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 SE7500CW2	
Additional Product Names	Intel SE7500CW2 Platform	
Supported Platforms		
	Check Tested	**Comments**
Windows* 2000 Server	☑	
Windows 2000 Advanced Server	☑	
Windows Server 2003 Web Server	☑	
Windows Server 2003 Standard Server	☑	
Windows Server 2003 Enterprise Server	☑	

Hardware Compatibility Tests Used (HCT)

Microsoft* Windows Hardware and 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* 2000	HCT 9.502 Test Procedures for Systems, Servers and Cluster Servers (Windows 2000) http://download.microsoft.com/download/whistler/Docs/Docs/W982KMeXP/EN-US/HCT9502_Systems.exe	HCT 9.502 Test Kit (Windows 2000) (35.4 MB) 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/Install/20.0/W982KMeXP/EN-US/logoidx.exe
	391 NDIS Intermediate Drivers Instructions http://download.microsoft.com/download/whistler/Install/20.1/W982KMeXP/EN-US/NDISIntermedDriver.exe	Beta NDIS Test Update (ndt391.exe) (2MB) http://download.microsoft.com/download/whistler/Install/12.2/W982KMeXP/EN-US/ndt391.exe
	386 NDIS Intermediate Drivers Instructions http://download.microsoft.com/download/whistler/Install/20.1/W982KMeXP/EN-US/NDISIntermedDriver.exe	NDIS Test Update for Windows 98 SE, Windows Me, and Windows 2000 (ndt386.exe) (2.02MB) http://download.microsoft.com/download/whistler/Install/12.2/W982KMeXP/EN-US/ndt386.exe
Windows Server 2003	HCT 11.2 Test Procedures and Readme files for Windows XP SP1 and Windows Server 2003 (4.95MB) http://www.microsoft.com/whdc/hwtest/search/details.aspx?ID=725	HCT 11.2 (Windows XP SP1 and Windows Server 2003) Test Kit (4.95MB) http://www.microsoft.com/whdc/hwtest/search/details.aspx?ID=724
	Logo'd Components Index Full Install	Logo'd Components Index Full Install (~9.8 MB) http://download.microsoft.com/download/whistler/Install/20.0/W982KMeXP/EN-US/logoidx.exe

Errata and Contingencies

Microsoft* System HCT Errata list is available at:
http://www.microsoft.com/whdc/hwtest/search/results.aspx?type=errata&key=system&kit=-1

Operating System	Identification Number	Title
Windows* 2000	298	PCI Power Management Register Interface Test: False Failure
Windows 2000	349	ACPI Stress Test Sleep State and Hibernation Failures for Servers
Windows 2000	403	PCI 2.2 compliance test and PCI 2.1 Cards test extended capabilities error
Windows 2000	418	ACPI Pre-OS tests are not required for system submissions
Windows 2000	683	Parallel port and LPT PnP Enumeration tests not required for systems and servers without parallel ports
Windows 2000	702	Audio tests are not required for servers that do not implement audio devices
Windows 2000	719	DVD test cannot be run on systems without a DVD drive
Windows 2000	722	PCI 2.2 Compliance test and PCI 2.1 (Cards) test might fail test systems with ATA/ATAPI controllers

Intel® Server Board SE7500CW2 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://download.microsoft.com/download/whistler/install/1.0/w98nt42kmexp/en-us/readme.exe

Testing Exceptions for Intel® Server Board SE7500CW2 Windows Server 2003 System Update Submission

Data in this section reflects product data and test exceptions listed in section 2 of the Intel® Server Board SE7500CW2 Readme file at time of WLP Update submission ID.

Operating system (Windows* XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows Server 2003	Contingency	610
Failing test name	PCI Compliance	

Applicable error message (Type **N/A** if the error message or failing text is excessive or if there is no text)	**Contingency Title:** All Intel ICH Chipsets – Contingency 610
	Log File: PCI_TEST_1.LOG
	Issue:
	The Intel ICH Chipsets are failing the PCI Compliance test. The Intel ICH implementation places the IOApic logically behind the P-P bridge, but it appears to the OS that it is a peer of the bridge.
	PCI Compliance Test Failure:
	   Intel(R) E7000 Series Hub Interface B PCI-to-PCI Bridge - 2543
	      PCI\VEN_8086&DEV_2543&SUBSYS_00000000&REV_03\3&61aaa01&0&10
	      +TEST+SEV2 : FAIL: 4.63.18 - The Secondary Bus Reset bit in the Bridge Control Register must be read/write.
	
	Solution: This is an acceptable failure for all Intel ICH chipsets for the Windows XP and Windows Server 2003 logo's.	

Additional information (for example, test system in a multiple system configuration)		

Additional Information for Windows Server 2003 System Update Submission

Data in this section reflects product data and additional information entered in section 3 of the Intel® Server Board SE7500CW2 Readme file at time of WLP submission ID.

- This submission covers both the base configuration and the RAID configuration of the Intel® SE7500CW2 Server for the Windows Server 2003 operating system.

Testing Exceptions for Intel® Server Board SE7500CW2 Windows 2000 Update Submission

Data in this section reflects product data and test exceptions listed in section 2 of the Intel® Server Board SE7500CW2 Readme file at time of WLP Update submission ID 672143.

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows 2000	Errata	349
Failing test name	ACPI Stress	

Applicable error message (Type **N/A** if the error message or failing text is excessive or if there is no text)	**Errata Title:** <u>ACPI Stress Test Sleep State and Hibernation Failures for Servers</u>
	Log File: acpitest3.log
	Problem:
	In accordance with the Windows Logo Program for Hardware requirements, servers are not required to support sleep states or hibernation (see the Hardware Design Guide, version 2.0, chapter 2, section 8 for details). However, if the test server supports sleep states or hibernation, the server is required to pass the ACPI Stress test. If the test server does not support power management, the following error will appear in Acpitest.log:
	    728.564 : +VAR+ 1 : Parameter block 1
	    728.564 : +VAR+SEV1 1 : Sleep not supported in this system
	    728.564 : +VAR+ 2 : Parameter block 2
	    728.564 : +VAR+SEV1 2 : Hibernation not supported in this system
	Solution:
	This is an acceptable failure for the SE7500CW2 based server since the SE7500CW2 server board meets all ACPI requirements for basic and advanced servers. Note servers are not required to support ACPI sleep states. Refer to Errata 349 for details of above acceptable failure.	

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 2000	Errata	403
Failing test name	PCI 2.1(Cards) Test	
Applicable error message (Type **N/A** if the error message or failing text is excessive or if there is no text)	**Errata Title:** <u>PCI 2.2 compliance test and PCI 2.1 Cards test extended capabilities error</u> **Log File:** pcitest2.log **Problem:** Systems that include integrated core chipsets in the southbridge (for example IDE, USB) may fail the PCI 2.2 Compliance test and the PCI 2.1 Cards test with the following extended capabilities failures: ERROR: Extended capabilities not supported on this device **Solution:** The issue described above is an acceptable failure. Refer to Errata 403 for details of above acceptable failure.	
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 2000	Errata	702
Failing test name	DSound, Full Duplex, Mixer Driver, Wave Driver	
Applicable error message (Type **N/A** if the error message or failing text is excessive or if there is no text)	Servers that do not ship with an audio device are not required to run the following audio tests: • Direct Sound Driver • Full Duplex • Mixer Driver • Wave Driver Refer to errata 702 titled: Audio tests are not required for servers that do not implement audio 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 2000	Errata	722
Failing test name	PCI 2.1 (Cards) Test	

Applicable error message (Type **N/A** if the error message or failing text is excessive or if there is no text)	**Errata Title:** PCI 2.2 Compliance test and PCI 2.1 (Cards) test might fail test systems with ATA/ATAPI controllers
	Log File: PCITest2.log
	Problem:
	PCI2.1 (Cards) test fails with the following error:
	Getting the resource Length.
	   BAR is 0xFFBFFC00, Length of BAR is 0x00000400
	     ERROR: Base register 24 should be zero (read-only)!
	  No Extended capabilities required for this device
	Solution:
	Reference errata 722 in submission readme file.	

Additional information (for example, test system in a multiple system configuration)		

Additional Information for Windows 2000 Update Submission

Data in this section reflects product data and additional information entered in section 3 of the Intel® Server Board SE7500CW2 Readme file at time of WLP submission ID 672143.

- Due to Windows* 2000 Advanced Server* operating system limitations server systems that support 4GB or more of memory are tested with maximum memory installed for all HCTs except for the ACPI HCTs. Memory is removed in order to bring the total system memory below 4GB to enable Windows 2000 Advanced Server to go into hibernation. Refer to errata ID: 92 and the AWE Test procedures for more information.

Testing Exceptions for Intel® Server Board SE7500CW2 First Time Submission

Data in this section reflects product data and test exceptions listed in section 2 of the Intel® Server Board SE7500CW2 Readme file at time of WLP First-Time submission ID 625430.

Operating system (Windows* XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows 2000	Errata	298
Failing test name	PCI Power Management Register Interface	

Applicable error message
(Type **N/A** if the error message or failing text is excessive or if there is no text)
	Errata Title: <u>PCI Power Management Register Interface Test: False Failure</u>
	Log File: pcicap.log
	Problem: Following acceptable error occurs in the PCICAP log file:
	    <<< PCI Test Assertion : 4.4.2 >>>
	    PowerState field in PMCSR register is read/write.
	    PowerState field in PMCSR register is not writable.
	    -- FAILURE [pmcsr.c:]
	    <<< FAILED 4.4.2 >>>
	Solution: This is an acceptable failure per Errata 298. Refer to errata 298 for additional details of above acceptable failure.	

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 2000	Errata	349
Failing test name	ACPI Stress	

Applicable error message
(Type **N/A** if the error message or failing text is excessive or if there is no text)
	Errata Title: <u>ACPI Stress Test Sleep State and Hibernation Failures for Servers</u>
	Log File: acpitest.log
	Problem:
	In accordance with the Windows Logo Program for Hardware requirements, servers are not required to support sleep states or hibernation (see the Hardware Design Guide, version 2.0, chapter 2, section 8 for details). However, if the test server supports sleep states or hibernation, the server is required to pass the ACPI Stress test. If the test server does not support power management, the following error will appear in Acpitest.log:
	    728.564 : +VAR+ 1 : Parameter block 1
	    728.564 : +VAR+SEV1 1 : Sleep not supported in this system
	    728.564 : +VAR+ 2 : Parameter block 2
	    728.564 : +VAR+SEV1 2 : Hibernation not supported in this system
	Solution:
	This is an acceptable failure for the SE7500CW2 based server since the SE7500CW2 server board meets all ACPI requirements for basic and advanced servers. Note servers are not required to support ACPI sleep states. Refer to Errata 349 for details of above acceptable failure.	

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 2000	Errata	403
Failing test name	PCI 2.1 (Cards)	
Applicable error message (Type **N/A** if the error message or failing text is excessive or if there is no text)	**Errata Title:** PCI 2.2 compliance test and PCI 2.1 Cards test extended capabilities error **Log File:** PCITest.log Systems that include integrated core chipsets in the southbridge (for example IDE, USB) may fail the PCI 2.2 Compliance test and the PCI 2.1 Cards test with the following extended capabilities failures: "ERROR: Extended capabilities not supported on this device" **Solution:** The issue described above is an acceptable failure. For more information please refer to Errata ID 403.	
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 2000	Errata	702
Failing test name	DSound, Full Duplex, Mixer Driver, Wave Driver	
Applicable error message (Type **N/A** if the error message or failing text is excessive or if there is no text)	Servers that do not ship with an audio device are not required to run the following audio tests: • Direct Sound Driver • Full Duplex • Mixer Driver • Wave Driver Refer to errata 702 titled: Audio tests are not required for servers that do not implement audio 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 2000	Errata	719
Failing test name	DVD Test	
Applicable error message (Type **N/A** if the error message or failing text is excessive or if there is no text)	DVD test not required for systems that ship without a DVD drive. Refer to errata titled: DVD test cannot be run on systems without a DVD drive	
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 2000	Errata	722
Failing test name	PCI 2.1 (Cards) Test	

Applicable error message
(Type **N/A** if the error message or failing text is excessive or if there is no text)
	Errata Title: PCI 2.2 Compliance test and PCI 2.1 (Cards) test might fail test systems with ATA/ATAPI controllers
	Log File: PCITest.log
	Problem:
	PCI2.1 (Cards) test fails with the following error:
	Getting the resource Length.
	  BAR is 0xFFBFFC00, Length of BAR is 0x00000400
	    ERROR: Base register 24 should be zero (read-only)!
	  No Extended capabilities required for this device
	Solution:
	Reference errata 722 in submission readme file.	

Additional information (for example, test system in a multiple system configuration)		

Additional Information

Data in this section reflects product data and additional information entered in section 3 of the Intel® Server Board SE7500CW2 Readme file at time of WLP submission ID 625430.

- Due to Windows* 2000 Advanced Server operating system limitations, server systems that support 4GB or more of memory are tested with maximum memory installed for all HCTs except for the ACPI HCTs. Memory is removed in order to bring the total system memory below 4GB to enable Windows 2000 Advanced Server to go into hibernation. Refer to errata ID: 92.

Appendix A – Submission History

Microsoft "Designed for Windows" logo submission history for the Intel® Server Board SE7500CW2:

Submission ID	Type	Date	OS Qualified	Processor Speeds	Board Revision	BIOS Version
711989	System Update Submission	8/24/2003	Windows* Server 2003 - Enterprise Ed. - Standard Ed. - Web Ed. Windows 2000 - Advanced Server - Windows 2000 (log files from SID 672143)	1.8GHz, 2.0GHz, 2.2GHz, 2.4GHz, 2.6GHz, 2.8GHz, 3.0GHz Intel® Xeon™ Processor	AA-A0020-601	Production Release 1.28 BIOS SID# 672143: Production Release 1.25 BIOS
672143	Update Submission	03/25/2003	Windows 2000 - Advanced Server - Windows 2000	1.8GHz, 2.0GHz, 2.2GHz, 2.4GHz, 2.6GHz, 2.8GHz Intel® Xeon™ Processor	AA-A0020-601	Production Release 1.25 BIOS
625429	First-Time Submission	09/07/02	Windows 2000 - Advanced Server	1.8GHz, 2.0GHz, 2.2GHz, 2.4GHz Intel® Xeon™ Processor	AA-A0020-504	Production Release 1.14 BIOS
625430	First-Time Submission	09/07/02	Windows 2000 - Server	1.8GHz, 2.0GHz, 2.2GHz, 2.4GHz Intel® Xeon™ Processor	AA-A0020-504	Production Release 1.14 BIOS