



Server WHQL Testing Services

Enterprise Platforms and Services Division

Intel® Server SE7221BK1LX

Server Test Submission (STS) Report

For the Microsoft® Windows® Logo Program (WLP)

Rev 1.0

February 14, 2005

This report describes the Intel® SE7221BK1LX Server Platform 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 SE7221BK1LX.

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	2/14/2005	Internal draft of the STS Report for Windows Server 2003 & Windows 2000 WLP Submission for Intel® Server Board SE7221BK1LX.

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Introduction

This report provides an overview of the testing conducted on the Intel® Server Board SE7221BK1LX without RAID enabled 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
EPSD	Enterprise Platforms and Services Division
HCL	Windows Hardware Compatibility List. You can view the HCL at: http://www.microsoft.com/whdc/hcl/search.mspx
HCT	Hardware Compatibility Tests. For latest Server HCTs 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/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	942542	
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 2003 and Windows 2000 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	1 (physical processors installed)
Front Side Bus Speed	800 MHz
Family/Model	Intel Pentium 4; Prescott LGA-775
Speed	3.2GHz, 3.4GHz, 3.6GHz
System Memory	
Amount Installed	4 GB
Memory Type	DDR II 400/533MHz
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	C78048-401
Board Manufacturer	Intel Corporation
Board Model	Intel® Server Board SE7221BK1LX
Northbridge* Chipset Manufacturer	Intel Corporation
Northbridge Chipset Model	Intel E7221 chipset
Southbridge* Chipset Manufacturer	Intel Corporation
Southbridge Chipset Model	Intel E7221 chipset
BIOS	
BIOS Manufacturer	AMI*
BIOS Version	SE7221BK1E.86B.P.02.00.0018.110520043934
BIOS Date	11/05/2004
BIOS URL (For Updates)	http://support.intel.com/support/motherboards/server/SE7221BK1/

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 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 SE7221BK1LX are available for download at:

<http://support.intel.com/support/motherboards/server/SE7221BK1/>

Technology	OS	Version
LAN 2 X Intel PRO/1000 MT Server Network Connections That Support 10/100/1000	Windows Server 2003	v. 8.4.21.0
Display Intel Integrated 7221 Graphics Adaptor	Windows Server 2003	6.00.01.0004
Serial RAID ATA (Off the ICH6) The Intel ICH6 SATA system contains two independent SATA signal ports that can be configured as either a RAID 1 or 0	Windows Server 2003	4.2.1118.2004

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 SE7221BK1LX	
Additional Product Names		
Supported Platforms		
	Check Tested	Comments
Windows 2000 Server	<input checked="" type="checkbox"/>	
Windows 2000 Advanced Server	<input checked="" type="checkbox"/>	
Windows Server 2003, Web Edition	<input checked="" type="checkbox"/>	
Windows Server 2003, Standard Edition	<input checked="" type="checkbox"/>	
Windows Server 2003, Enterprise Edition	<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* 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	372	ACPI System test fails systems that support ACPI table version 1.0 or greater
Windows Server 2003	610	Intel ICHx Contingency
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
Windows Server 2003	772	LAN Device Wake test is not required on network devices in mobile systems, multifunction, broadband, LAN emulation, wireless LAN, server LAN, or bus-powered USB network devices
Windows 2000	826	PCI 2.1 Compliance test, PCI 2.1 Cards test, PCI 2.2 Compliance test, and CardBus Bridge Register test fail on devices that are PCI 2.3-compliant
Windows Server 2003	860	Enable/Disable – Device I/O test fails on USB 2.0 host controllers
Windows Server 2003	901	The ACPI Verifier test fails the E820 table when the system memory controller is a child of the PCI Bus
Windows Server 2003	1012	Enable/Disable - Device I/O test false-fails because of LPT port errors
Windows 2000	1182	ACPI Sleep test conflicts with Windows 2000 Service Pack 4

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 SE7221BK1LX Windows 2000 Submission

Logs are no longer accepted for Windows 2000. When submitted with a current OS like Windows 2003 Enterprise Server and requested, Windows 2000 will receive a “Supported” status.

Testing Exceptions for Intel® Server SE7221BK1LX Windows Server 2003

Data in this section reflects product data and test exceptions listed in section 2 of the Intel® Server SE7221BK1LX Readme file at time of WLP First-Time submission ID Number 942542.

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows 2003 EE	Errata	670
Failing test name		
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	PCI Pre-OS Tests: PCI Configuration Header Dump test; Pcidump.log PCI Power Management Register Interface test; Pcicap.log Subsystem ID and Subsystem Vendor ID test; Pcivid.log PCI Test Adapter Diagnostic test; Pmdiag.log PME# Signal Routing test; Pcipme1.log PME# Signal Routing - Simultaneous test; Pcipme2.log PCI 3.3 Volt Auxiliary Power Load test; Pcivaux.log System Wake Up test; Pciwake.log PCI Voltage Requirement test; Pcivolt.log PCI Voltage Requirement - 3.3 Vaux test; Pcivoltz.log S3 Compliance test; S3test.log	
Additional information (for example, test system in a multiple system configuration)	PCI Pre-OS tests that use FoxFire cards are no longer required	

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows 2003 EE	Errata	860
Failing test name		
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	Enable/Disable – Device I/O ID=PCI\VEN_8086&DEV_2658&SUBSYS_34448086&REV_03\3&11583659&0&E8 Friendly Name=(null) Status=25175040 Prob=22 Status=DN_HAS_PROBLEM, DN_DISABLEABLE, DN_NT_ENUMERATOR, DN_NT_DRIVER, Prob=CM_PROB_DISABLED TEST 2 :FAIL	
Additional information (for example, test system in a multiple system configuration)	Enable/Disable – Device I/O test fails on USB 2.0 host controllers	

Operating system (Windows XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows 2003 EE	Errata	901
Failing test name	ACPI Verifier	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	The memory range specified is in conflict with the system's E820 table. The E820 table says that this memory range is in the AcpiAddressRangeMemory range which is conflicting with the requested memory range which is between 0x0 - 0x9d800	
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 2003 EE	Errata	1273
Failing test name	HCT 11.2 PCI Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	7D8.7DC : +TEST+SEV2 : Error: Unable to locate driver! Possibly not installed..	
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 2003 EE	Errata	1306
Failing test name	HCT 12 PCI Compliance Test	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	3E8.3F4 : DEVICE INFO : Intel(R) PRO/1000 MT Network Connection 3E8.3F4 : DEVICE INFO : PCI\VEN_8086&DEV_1076&SUBSYS_34448086&REV_05\4&23c0b1c&0&18F0 3E8.3F4 : +TEST+SEV2 : FAIL: - A PCI-X device that generates interrupts must have an MSI or MSI-X 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 2003 EE	Errata	941
Failing test name	PCI Configuration Header Dump	
Applicable error message (Type N/A if the error message or failing text is excessive or if there is no text)	+TEST+SEV1 : Unknown new capability ID or PCI Device, 0x0d +TEST+SEV1 : Unknown new capability ID or PCI Device, 0x0d	
Additional information (for example, test system in a multiple system configuration)		

Tip If necessary, you can use the copy and paste features in Microsoft Word® to add additional tables to this document.

Section 3: Additional Information

Use this section to include any additional information that is required for your submission type or requested by WHQL.

For example, list delta information between this submission and the parent submission.

The PCI Compliance errors reported in this readme.doc were run with both the HCT 11.2 test kit and the HCT 12 test kit. The HCT 11.2 PCI Compliance test failed with errata 1273 which requires a run with the PCI Compliance test in the HCT 12 test kit. That test failed also but was covered by errata 1306.

I wanted to make sure the failures in both test kits were captured.

The HCT 12 whqlhct.cab is located in a directory called "PCI Compliance" with the submission logs.

Appendix A – Submission History

Microsoft “Designed for Windows*” logo submission history for the Intel® Server SE7221BK1LX.

Submission ID	Type	Date	OS Qualified	Processor Speeds	Board Revision	BIOS Version
942542	First-time	2/14/2005	Windows 2003 EE and Windows 2003 with a “Supported” status only	3.2GHz, 3.4GHz, 3.6GHz	C78048-401	P02 11/5/2004