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Server WHQL Testing Services

Enterprise Platforms and Services Division

Intel® Server Board SCB2 ATA

Server Test Submission (STS) Report

For the Microsoft® Windows® Logo Program (WLP)

Rev 1.1

January 22, 2003

This report describes the Intel® Server Board SCB2 ATA Windows Update Hardware Compatibility Test (HCT) run conducted by Intel Enterprise Platforms and Services Division (EPSD).

Purpose of this WLP Submission:

WLP Update Hardware and Drivers Test submission for the Intel® Server Board SCB2 ATA.

Run Type:	Check one	Comments
First run new product	☐	
Board HW update	☑	
BIOS/Firmware update	☑	
OS update	☐	

Revision History and Disclaimers

Revision History		
Revision	**Date**	**Comments**
1.0	4/29/2002	STS Report for the First-Time Hardware and Driver Test Submission for SCB2 ATA
1.1	1/22/2003	STS Report for the Update Hardware and Driver Test Submission for SCB2 ATA

Contents

Introduction

This report provides an overview of the testing conducted on the Intel® Server Board SCB2 ATA 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
WHQL	Windows* Hardware Qualification Lab. For more information visit the WHQL home page at: http://www.microsoft.com/hwdq/hwtest/default.asp
HCT	Hardware Compatibility Tests. For latest Server HCTs visit: http://www.microsoft.com/hwdq/hwtest/devices/systems.asp?area=syssrv-srvr
WLP	Windows Logo Program. For further information see: http://www.microsoft.com/winlogo/
HCL	Windows Hardware Compatibility List. You can view the HCL at: http://www.microsoft.com/hwdq/hcl/search.asp
WLPQS	Windows Logo Program Qualification 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	656243	
Previously logo'd Submission ID / Master ID	567688	
Submission Type		
	Check Submission Type	**Comments**
First-Time Hardware and Driver Test Submission	☐	
Update Hardware and Driver Test Submission	☑	Hardware and BIOS/Firmware Updates
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	☑	
Product Category		
Hardware Category	PC System or Server	
Operating System Selected	Windows* 2000	

Product Detail		
General Product Information		
Equipment Type	Server	
Primary Target Market	Business/Corporate	
Compliance	Server Design Guide (SDG) 2.0	
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	133 MHz
Family/Model	Intel® Pentium® III Processor with 512-KB L2 Cache Support
Speed	1GHz, 1.133 GHz, 1.266 GHz, 1.4 GHz
System Memory	
Amount Installed	6 GB
Memory Type	PC133 ECC SDRAM memory
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 A46043-611
Board Manufacturer	Intel Corporation
Board Model	SCB2 ATA
Northbridge* Chipset Manufacturer	ServerWorks*
Northbridge Chipset Model	ServerSet* III HE-SL
Southbridge* Chipset Manufacturer	ServerWorks
Southbridge Chipset Model	CSB5 A2.0
BIOS	
BIOS Manufacturer	AMI*
BIOS Version	SCB2 Production Release BIOS Version 2.09, Build 65 (SCB20.86B.0065.P19)
BIOS Date	8/22/02
BIOS URL (For Updates)	http://support.intel.com/support/motherboards/server/SCB2/
Firmware	
BMC Version	63
HSC Version	v0.5 for the Intel® SR2200 Server Chassis
FRU/SDR Version	5.0.P
Firmware URL (For Updates)	http://support.intel.com/support/motherboards/server/SCB2/

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 SCB2 ATA are available for download at:

http://developer.intel.com/support/motherboards/server/SCB2/

Technology	OS	Version
LAN Intel® PRO 100+ Server Ethernet Controller (Intel® 82550PM Controller)	**Windows* 2000**	6.01.03.0000
	Windows .NET*	N/A
ATA Promise* PDC20267 dual channel ATA/100 RAID Controller	**Windows 2000**	2.30.140.2
	Windows .NET	N/A
Display ATI* Rage* XL VGA PCI Video Controller (with 8MB of Video Memory)	**Windows 2000**	5.00.2195.5012
	Windows .NET	N/A

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 SCB2 ATA	
Additional Product Names	SCB2 ATA Intel SCB2 ATA Platform Intel SCB2 ATA Server	
Supported Platforms		
	Check Tested	**Comments**
Windows 2000 Professional	☐	
Windows 2000 Server	☑	
Windows 2000 Advanced Server	☑	
Windows 2000 Datacenter	☐	
Windows .NET Web Server	☐	
Windows .NET Standard Server	☐	
Windows .NET Enterprise Server	☐	
Windows .NET Datacenter	☐	

Hardware Compatibility Tests Used (HCT)

Microsoft* WHQL Server Testing Home Page:
http://www.microsoft.com/hwdq/hwtest/devices/systems.asp?area=syssrv-srvr.

Please check this website regularly for test kit updates.

Operating Systems	Notes	HCT
Windows* 2000	Readme for Microsoft Windows Logo HCT 9.502 http://www.microsoft.com/hwtest/search/details.asp?ID=337	HCT 9.502 Test Kit (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
	Contents of the HCT 9.5 Test Kit http://www.microsoft.com/hwtest/search/details.asp?ID=231	HCT 9.5 Test Kit (140 MB) http://download.microsoft.com/download/whistler/Tools/Tools/W98NT42KMeXP/EN-US/hct19991122.exe
	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 (35.4MB) http://download.microsoft.com/download/whistler/Tools/Tools/W98NT42KMeXP/EN-US/HCT9502UPD.EXE
	3.91 & 3.86 NDIS Intermediate Drivers Instructions http://download.microsoft.com/download/whistler/Install/20.1/W982KMeXP/EN-US/NDISIntermedDriver.exe	NDIS Test Update 3.91 (ndt391.exe) (2MB) http://download.microsoft.com/download/whistler/Install/12.2/W982KMeXP/EN-US/ndt391.exe
		NDIS Test Update 3.86 (ndt386.exe) (2.02MB) http://download.microsoft.com/download/whistler/Install/12.2/W982KMeXP/EN-US/ndt386.exe
Windows* Server 2003	HCT 11.1 Test Procedures and Readme files for Windows XP SP1 and Windows Server 2003 (4.95MB) http://www.microsoft.com/hwdq/hwtest/search/details.asp?ID=686	HCT 11.1 (Windows XP SP1 and Windows Server 2003) Test Kit (4.95MB) http://www.microsoft.com/hwdq/hwtest/search/details.asp?ID=685
	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/hwdq/hwtest/search/results.asp?sType=Err&Key=system&kit=3&Sort=Title&ipage=1

Operating System	Identification Number	Title
Windows* 2000	95	CD-ROM (Audio Cert) issues
Windows 2000	209	PnP Enable/Disable Test Issues
Windows 2000	298	PCI Power Management Register Interface Test: False Failure
Windows 2000	418	ACPI Pre-OS tests are not required for system submissions
Windows 2000	670	PCI Pre-OS tests are no longer required, depending on the number of PCI slots in the test system
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 SCB2 ATA 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 SCB2 ATA Update Submission

Data in this section reflects product data and test exceptions listed in section 2 of the Intel® Server Board SCB2 ATA Readme file at time of WLP Update submission.

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
	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)!	

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

Additional Information for Udpate Submission

Data in this section reflects product data and additional information entered in section 3 of the Intel® Server Board SCB2 ATA Readme file at time of WLP submission.

• 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 SCB2 ATA First Time Submission

Data in this section reflects product data and test exceptions listed in section 2 of the Intel® Server Board SCB2 ATA Readme file at time of WLP First-Time submission.

Operating system (Windows* XP, Windows 2000, etc.)	Failure type (Contingency, Errata, Incident)	ID number
Windows 2000	Errata	95
Failing test name	CD-ROM (Audio Cert)	
Applicable error message (Type **N/A** if the error message or failing text is excessive or if there is no text)	Errata Title: <u>CD-ROM (Audio Cert) issues</u> Log File: MCICDFL.LOG Problem: Following errors occurs in the log file: ERROR: 'status Alias1 current track' expected RetVal '12', got '110' Solution: Refer to Errata 95 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	209
Failing test name	PnP Disable/Enable Test fails	

Applicable error message (Type **N/A** if the error message or failing text is excessive or if there is no text)	Problem:
	PNP Disable/Enable test fails with the following error:
	    QueryRemove Adapter FAILED 0x17 CR_REMOVE_VETOED
	    VetoType = PNP_VetoWindowsApp
	    VetoName = C:\WINNT\System32\svchost.exe
	Solution:
	This is an acceptable failure. Include errata item ID # 209 in your readme.txt when you make your submission.	

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	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: PCI Power Management Register Interface Test: False Failure Log File: pcicap.log Problem: Following errors occurs in the PCICAP log file: 　　　<<< FAILED 4.4.2 >>> 　　　PowerState field in PMCSR register is not writable. Solution: Refer to Errata 298 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	670
Failing test name	Preview PCI Pre-OS Tests (PME# Signal Routing, 3.3 Vauv Auxiliary Power Load, Simultaneous PME# Signal Assert)	
Applicable error message (Type **N/A** if the error message or failing text is excessive or if there is no text)	Preview PCI Pre-OS Test failures are acceptable. Preview PCI Pre-OS tests are not required to pass with HCT 9.502 on systems with any number of PCI slots. The SCB2 SCSI system has 2 available PCI slots. The following Preview PCI Pre-OS Tests failures are acceptable per errata 670: • 　PME# Signal Routing[Preview] acceptable failure • 　3.3Vaux Auxiliary Power Load[Preview] acceptable failure • 　Simultaneous PME# Signal Assert[Preview] acceptable failure Refer to errata 670 titled: PCI Pre-OS tests are no longer required, depending on the number of PCI slots in the test system	
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	683
Failing test name	Parallel Test	
Applicable error message (Type **N/A** if the error message or failing text is excessive or if there is no text)	Parallel test not required for systems that ship without a parallel port. Refer to errata titled: Parallel port and LPT PnP Enumeration tests not required for systems and servers without parallel ports	
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
	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)!	

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

Additional Information for First-Time Submission

Data in this section reflects product data and additional information entered in section 3 of the Intel® Server Board SCB2 ATA Readme file at time of WLP submission.

- To pass the Serial Port(COM2) HCT either use a RJ45 loopback connector that meets HCT requirements or use the SCB2 RJ45 to DB9 adapter and an appropriate DB9 loopback connector attached to the SCB2 RJ45 serial connector then run the HCTs. Refer to the Intel SCB2 Attention sheet # A77758-001 and the SCB2 Product Guide regarding configuration of the RJ45 serial connector and the RJ45 to DB9 adapter for more information.

- 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.

Appendix A – Submission History

Submission history for the Intel® Server Board SCB2 ATAATA:

WLPQS Submission History					
Submission ID	**Type**	**Date**	**Processor Speeds**	**Board Revision**	**BIOS Version**
656243	Update Submission	1/22/2003	1GHz, 1.133 GHz, 1.266 GHz, 1.4 GHz Intel® Pentium® III Processor with 512-KB L2 Cache Support	PBA A46043-611	SCB2 Production Release BIOS Version 2.09, Build 65 (SCB20.86B.0065.P19)
567688	First-Time Submission	1/29/2002	1GHz, 1.133 GHz, 1.266 GHz, 1.4 GHz Intel® Pentium® III Processor with 512-KB L2 Cache Support	PBA-AXXXXX-606	SCB2 Production Release 1.01