



## Server OS Testing Services

### Enterprise Platforms and Services Division

# Intel<sup>®</sup> Server Platform SR6850HW4

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## Server Test Submission (STS) Report

### For the Microsoft<sup>®</sup> Windows<sup>®</sup> Logo Program (WLP)

Rev 1.1

**May 11, 2005**

This report describes the Intel<sup>®</sup> Server Platform SR6850HW4 Windows\* Logo Program test run conducted by Intel Enterprise Platforms and Services Division (EPSD).

#### **Purpose of this WLP Submission:**

System Update submission for the Intel<sup>®</sup> Server Platform SR6850HW4.

| Submission Type:  | Reason for test run                                                             | Check one                           |
|-------------------|---------------------------------------------------------------------------------|-------------------------------------|
| Update Submission | Initial Microsoft Designed for Windows logo submission. New product submission. | <input checked="" type="checkbox"/> |

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## Revision History and Disclaimers

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| Revision History |           |                                                                                                                                                            |
|------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Revision         | Date      | Comments                                                                                                                                                   |
| 1.0              | 5/6/2005  | STS Report for WLP Windows 2003 Enterprise Edition First-Time Submission for Intel® Server Platform SR6850HW4 with 3.66GHz 1MB Cache [Cranford] Processors |
| 1.1              | 5/11/2005 | STS Report for WLP Windows 2003 Enterprise Edition First-Time Submission for Intel® Server Platform SR6850HW4 with 3.33GHz 8MB Cache [Potomac] Processors  |

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# Introduction

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This report provides an overview of the testing conducted on the Intel® Server Platform SR6850HW4 server board 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: <a href="http://www.microsoft.com/whdc/hcl/search.mspx">http://www.microsoft.com/whdc/hcl/search.mspx</a>                                                                      |
| HCT  | Hardware Compatibility Tests. For latest Server HCTs visit: <a href="http://www.microsoft.com/whdc/hwtest/system/default.mspx">http://www.microsoft.com/whdc/hwtest/system/default.mspx</a>                                                  |
| 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. <a href="http://www.microsoft.com/whdc/default.mspx">http://www.microsoft.com/whdc/default.mspx</a> |
| WHOS | Windows Hardware Online Service – Secure online web site used to submit products for logo qualification and review submission history. <a href="https://winqual.microsoft.com/">https://winqual.microsoft.com/</a>                           |
| WHQL | Windows* Hardware Qualification Lab. For more information visit the WHDC home page at: <a href="http://www.microsoft.com/whdc/default.mspx">http://www.microsoft.com/whdc/default.mspx</a>                                                   |
| WLP  | Windows Logo Program. For further information see: <a href="http://www.microsoft.com/whdc/winlogo/default.mspx">http://www.microsoft.com/whdc/winlogo/default.mspx</a>                                                                       |
| WTS  | Workstation Test Submission Report published by EPSD                                                                                                                                                                                         |

# Server Board Submission Information

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## Intel Server Board Submission Report: Completion of WLP

Data in this section reflects system submission information at the time of WLP submission.

### Submission Information

| Submission ID                                                         |                                                                           |                                             |
|-----------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------|
| Submission ID / Master ID                                             | 975817                                                                    |                                             |
| Previously logo'd Submission ID / Master ID                           | 974159                                                                    |                                             |
| Submission Type                                                       |                                                                           |                                             |
|                                                                       | Check Submission Type                                                     | Comments                                    |
| First-Time Hardware and Driver Test Submission                        | <input type="checkbox"/>                                                  | Windows Server 2003 Enterprise Edition SP1  |
| System Update                                                         | <input checked="" type="checkbox"/>                                       | Windows Server 2003 Enterprise Edition, SP1 |
| Update Type (Update Hardware and Drivers Test Submission ONLY)        |                                                                           |                                             |
|                                                                       | Check Update Type                                                         | Comments                                    |
| Hardware (Firmware) Update                                            | <input type="checkbox"/>                                                  |                                             |
| System Update                                                         | <input checked="" type="checkbox"/>                                       |                                             |
| Previously Logo'd Operating System                                    | Windows 2003 Enterprise Edition SP1 and Windows 2000 Advanced Server      |                                             |
| Update Type Detail (Update Hardware and Drivers Test Submission ONLY) |                                                                           |                                             |
|                                                                       | Check Update Type                                                         | Comments                                    |
| New CPU Speeds                                                        | <input checked="" type="checkbox"/>                                       | Potomac 3.33GHz 8MB Cache                   |
| Motherboard Updates                                                   | <input type="checkbox"/>                                                  |                                             |
| BIOS/Firmware Updates                                                 | <input type="checkbox"/>                                                  |                                             |
| OS Updates                                                            | <input type="checkbox"/>                                                  |                                             |
| Product Category                                                      |                                                                           |                                             |
| Hardware Category                                                     | PC System or Server                                                       |                                             |
| Operating System Selected                                             | Windows Server 2003 Enterprise Edition SP1 & Windows 2000 Advanced Server |                                             |

| 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                  | <input checked="" type="checkbox"/> | Supports 4GB or more of memory |
| 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                           | 4                                                                                                                         |
| Front Side Bus Speed               | 667MHz                                                                                                                    |
| Family/Model                       | Intel® Xeon™ MP Hyper-Threading L2/L3                                                                                     |
| Speed                              | 3.0GHz & 3.33GHz                                                                                                          |
| System Memory                      |                                                                                                                           |
| Amount Installed                   | 32 GB                                                                                                                     |
| Memory Type                        | ECC DDR2 400 SDRAM                                                                                                        |
| 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                     | I/O Board C51891-600A, , SCSI Board C61492-201AB, Front Panel C61338-200, Intel Management Module C46194-401              |
| Board Manufacturer                 | Intel Corporation                                                                                                         |
| Board Model                        | Intel® Server Platform SR6850HW4                                                                                          |
| Northbridge* Chipset Manufacturer  | Intel                                                                                                                     |
| Northbridge Chipset Model          | E8500                                                                                                                     |
| Southbridge* Chipset Manufacturer  | Intel                                                                                                                     |
| Southbridge Chipset Model          | ICH5                                                                                                                      |
| BIOS                               |                                                                                                                           |
| BIOS Manufacturer                  | Intel                                                                                                                     |
| BIOS Version                       | SHW40.86B.P01.01.0001                                                                                                     |
| BIOS Date                          | 3/18/2005                                                                                                                 |
| BIOS URL (For Updates)             | <a href="http://support.intel.com/support/motherboards/server/">http://support.intel.com/support/motherboards/server/</a> |
| Firmware                           |                                                                                                                           |
| BMC Version                        | 30                                                                                                                        |
| HSC Version                        | 05                                                                                                                        |
| FRU/SDR Version                    | 20                                                                                                                        |
| Firmware URL (For Updates)         | <a href="http://support.intel.com/support/motherboards/server/">http://support.intel.com/support/motherboards/server/</a> |

| 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-X                          | <input checked="" type="checkbox"/> | USB               | <input checked="" 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-E             | <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 checked="" type="checkbox"/> | RAID              | <input checked="" type="checkbox"/> |
| Modem                          | <input type="checkbox"/>            | Bluetooth*        | <input type="checkbox"/>            |
| Fibre Channel Expansion Module | <input checked="" type="checkbox"/> | SATA              | <input checked="" 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 Platform SR6850HW4 server board are available for download at:

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

| Technology                                                                                  | OS                  | Version      |
|---------------------------------------------------------------------------------------------|---------------------|--------------|
| <b>LAN</b><br>Broadcom* BCM5704 NetXtreme* Gigabit Ethernet controller                      | Windows Server 2003 | 7.100        |
| <b>SCSI RAID</b><br>Intel RAID Controller SROMBU42E                                         | Windows Server 2003 | 6.45.2.32    |
| <b>SCSI</b><br>LSI Logic* 53C1030 SCSI controller                                           | Windows Server 2003 |              |
| <b>Display</b><br>ATI* RADEON 7000 Series PCI Video Controller (with 16 MB of Video Memory) | Windows Server 2003 | 6.14.10.6497 |
| <b>Intel Fibre Channel Expansion Module</b><br>Qlogic* ISP2322 FC PCI-X controller          | Windows Server 2003 | 9.0.1.17     |



**Product Data for HCL: Completion of WLP**

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

| <b>Product Data</b>                     |                                     |                 |
|-----------------------------------------|-------------------------------------|-----------------|
| Product Name                            | Intel® Server Platform SR6850HW4    |                 |
| <b>Supported Platforms</b>              |                                     |                 |
|                                         | <b>Check Tested</b>                 | <b>Comments</b> |
| 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

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Microsoft\* Windows Hardware Driver Central Server Testing Home Page:

<http://www.microsoft.com/whdc/hwtest/system/default.aspx>.

Please check this website regularly for test kit updates.

| Operating Systems       | Notes                                                                                                                                                                                                     | Hardware Compatibility Tests (HCT)                                                                                                                                              |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Windows Server 2003 SP1 | HCT 12.1 Test Procedures and Readme files for Windows XP SP2 and Windows Server 2003 SP1<br><a href="http://www.microsoft.com/whdc/whql/WHQLdwn.aspx">http://www.microsoft.com/whdc/whql/WHQLdwn.aspx</a> | HCT 12.1 (Windows XP SP2 and Windows Server 2003 SP1) Test Kit<br><a href="http://www.microsoft.com/whdc/whql/WHQLdwn.aspx">http://www.microsoft.com/whdc/whql/WHQLdwn.aspx</a> |
|                         |                                                                                                                                                                                                           |                                                                                                                                                                                 |

## Errata and Contingencies

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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 Server 2003 | 772                   | LAN Device Wake Up test is not required on network devices in mobile systems, multifunction, broadband, LAN emulation, wireless LAN, server LAN, or bus-powered USB network devices |

### Intel® Server Platform SR6850HW4 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 Platform SR6850HW4 Windows\* Server 2003

Data in this section reflects product data and test exceptions listed in section 2 of the Intel® Server Platform SR6850HW4 Readme file at time of WLP submission ID 972415

| <b>Operating system</b><br>(Windows XP, Windows 2000, etc.)                                                                   | <b>Failure type</b><br>(Contingency, Errata, Incident)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>ID number</b> |
|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Windows 2003 Enterprise Server 32bit                                                                                          | Errata                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 772              |
| <b>Failing test name</b>                                                                                                      | LAN Device Wake Up test                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |
| <b>Applicable error message</b><br>(Type <b>N/A</b> if the error message or failing text is excessive or if there is no text) | LAN Device Wake Up test is not required on network devices in mobile systems, multifunction, broadband, LAN emulation, wireless LAN, server LAN, or bus-powered USB network devices                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                  |
| <b>Additional information</b><br>(for example, test system in a multiple system configuration)                                | <p>The <b>LAN Device Wake</b> test is not required for the following types of network devices:</p> <ul style="list-style-type: none"> <li>▪ Multifunction devices</li> <li>▪ Broadband and WAN devices:                             <ul style="list-style-type: none"> <li>• Cable modems</li> <li>• DSL</li> <li>• ISDN</li> </ul> </li> <li>▪ LAN emulation devices</li> <li>▪ Wireless LAN devices</li> <li>▪ Server LAN devices:                             <ul style="list-style-type: none"> <li>• Multiport NICs</li> <li>• FDDI</li> <li>• ATM</li> </ul> </li> <li>▪ Gigabit and higher Ethernet devices</li> <li>▪ Bus-powered USB network devices</li> <li>▪ Network devices in mobile systems</li> </ul> <p>Note: 10/100 single port LAN devices are required to support WOL.</p> |                  |

**Additional Information**

Due to Windows\* 2003 Enterprise 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\* 2003 Enterprise to go into hibernation. Refer to errata ID: 92 and the AWE Test procedures for more information.

## Appendix A – Submission History

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Microsoft “Designed for Windows” logo submission history for the Intel® Server Platform SR6850HW4:

| Submission ID | Type                  | Date     | OS Qualified                                               | Processor Speeds                                                      | Board Revision                                             | BIOS Version          |
|---------------|-----------------------|----------|------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------|-----------------------|
| 974159        | First-Time Submission | 5/6/2005 | Windows Server 2003<br>- Enterprise<br>- Standard<br>- Web | 3.16GHz & 3.66GHz<br>Intel® Xeon™ MP<br>Hyper-Threading<br>Technology | C61338-200,<br>C51891-600A,<br>C46194-401,<br>C61492-201AB | SHW40.86B.P01.01.0001 |