Intel® Server Board S5000VCL

Intel® Server System SR1530CL /SR1530HCL /SR1530HCLS

Tested Hardware and Operating System List

Revision 2.1

July 2008

Enterprise Platforms and Services Division

Revision History

Date	Revision Number	Modifications
September 2006	1.0	Initial Release
February 2007	1.1	Removed hard drive section – tested hard drives can now be found in the Tested Hard Drive Report.
July 2007	1.2	Add new spare accessory and Operation system support and Certification
Sep 2007	1.3	Add new RAID controller certification on PCI SW RAID SCSI and PCI HW RAID SATA
Jan 2008	1.4	Update document title. Add new adapters. (In shaded area)
May 2008	2.0	Update document contents. Add new system configurations, supported Operating systems and adapters. (In shaded area)
July 2008	2.1	Add new system configurations, supported operating systems and adapters. (In shaded area)

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Table of Contents

1.   Introduction

This document is intended to provide users of the Intel® Server Board S5000VCL and Intel® Server System SR1530CL/SR1530HCL(S) with a guide to the different operating systems, adapter cards, and peripherals tested by Intel on this platform.

This document will continue to be updated as new adapters, peripherals, and operating systems are tested, or until the Intel® Server Board S5000VCL and Intel® Server System SR1530CL/SR1530HCL(S) is no longer in production. Each new release of the document will present updated information as well as continue to provide the information from previous releases.

Intel will only provide support for those adapters and peripherals under the specified system configuration (System BIOS and Firmware revisions) and operating systems versions with which they were tested.

1.1   Test Overview

Testing performed on the Intel® Server Board S5000VCL and Intel® Server System SR1530CL/SR1530HCL(S) is classified under two separate categories: Basic Installation Testing, and Adapter / Peripheral Compatibility and Stress Testing.

1.1.1   Basic Installation Testing

Basic installation testing is performed with each supported operating system. Basic installation testing validates that the server board can install the operating system and that the base hardware feature set is functional. A small set of peripherals is used for installation purposes only. No add-in adapter cards are tested.

> The latest version of an operating system signifies the latest supported version at the time of the actual test run. Each new release of this document may have a newly supported release of a given operating system. Previous releases of a supported operating system may not be tested beyond the basic installation test process.

1.1.1.1   Support Commitment for Basic Installation Testing

Intel commits to provide the following level of customer support for operating systems that receive only basic installation testing:

- Intel will provide and test operating system drivers for each of the server board's integrated controllers, provided that the controller vendor has a driver available upon request. Vendors will not be required by Intel to develop drivers for operating systems that they do not already support. This may limit the functionality of certain server board integrated controllers.
- Intel will support customer issues that involve installation and/or functionality of operating system with the server board's integrated controllers only if a driver has been made available.

- Intel will NOT provide support for issues related to use of any add-in adapters or peripherals installed in the server system when an operating system that received basic installation testing only is in use.
- Support is defined as assistance in root causing issues, and determining a customer acceptable resolution to the issue associated with the operating system. The resolution may include, but is not limited to, on-board controller driver changes, engaging the vendor for resolution, BIOS changes, firmware changes, or determining a customer acceptable workaround for the issue.

1.1.2 Adapter / Peripheral Compatibility and Stress Testing

Adapter / Peripheral Compatibility and Stress testing is performed only on the most current release of a supported operating system at the time of a given validation run. The Adapter / Peripheral Compatibility and Stress testing process consists of three areas: Base Platform, Adapter Compatibility, and Stress.

Base Platform: Each base platform will successfully install a given operating system and successfully run a disk stress test.

Adapter Compatibility: Adapter compatibility validation (CV) testing uses test suites to gain an accurate view of how the server performs with a wide variety of adapters under the primary supported operating systems. These tests are designed to show hardware compatibility between the cards and the server platform and include functional testing only. No heavy stressing of the systems or the cards is performed for CV testing.

Stress Testing: This test sequence uses configurations that include add-in adapters in all available slots, (depending on chassis used) for a minimum 72-hour test run without injecting errors. Each configuration passes an installation test, a Network/Disk Stress test, and tape backup test. Any fatal errors that occur will require a complete test restart.

1.1.2.1 Support Commitment for Adapter / Peripheral Compatibility and Stress Testing

Intel commits to provide the following level of customer support for operating systems that receive Adapter / Peripheral Compatibility and Stress testing:

- Intel will provide support for customer issues with these operating systems involving installation and/or functionality of the server board with or without the adapters and peripherals listed in this document as having been tested under the particular operating system.
- Support is defined as assistance in root causing issues, and determining a customer acceptable resolution to the issue associated with the operating system. The resolution may include, but is not limited to, on-board controller driver changes, engaging the vendor for resolution, BIOS changes, firmware changes, or determining a customer acceptable workaround for the issue.
- Intel will provide and test operating system drivers for each onboard video, network, and storage controller.
- Intel will enable vendors to provide driver support for add-in adapters using these operating systems.

- Intel will go through some of the steps to achieve certification to ensure its customers do not run across any problems, but the actual certification is the responsibility of the individual customer.

    📬   For operating systems, adapter cards, and peripherals not listed in this document, there is no support commitment. Intel will consider support requests on a case-by-case basis.

1.2 Pass/Fail Test Criteria

For each operating system, adapter, and peripheral configuration, a test passes if specific criteria are met. Specific configurations may have had particular characteristics that were addressed on a case-by-case basis. In general, a configuration passes testing if the following conditions are met:

- The operating system installed without error.
- Manufacturer's installation instructions or Intel's best-known methods were used for the operating system installation.
- No extraordinary workarounds were required during the operating system installation.
- The server system behaved as expected during and after the operating system installation.
- Application software installed and executed normally.
- Hardware compatibility tests ran to completion without error.
- Test software suites executed successfully
- Test and data files were created in the correct directories without error.
- Files copied from client to server and back compare to the original with zero errors reported.
- Clients remain connected to the server system.
- Industry standard test suites run to completion with zero errors reported.

All Intel® Server Board S5000VCL testing was performed using the Intel® Server System SR1530CL (Fixed SATA), SR1530HCL (Hot-swap SATA) and SR1530HCLS (Hot-swap SAS).

2. Intel® Server Board S5000VCL Base System Configurations

The following table lists the base system configurations tested. Base system configurations will change as new revisions of the Intel® Server Board S5000VCL are released and/or new system BIOS and BMC firmware are cut onto the board in the factory. Each base system configuration is assigned an identifier number that is referenced in the tables throughout this document. New base system configurations are added with each new release of this document.

✏ Intel will only provide support for adapters and peripherals under the specified base system configuration and operating systems versions with which they were tested.

Base System Configuration Identifier #	Board Code	PBA Number	BIOS Revision	BMC Firmware Revision	Notes
1	S5000VCL (SATA)	D41874-502	R0058	BMC50	
2	S5000VCLSASBB	D24481-601	R0058	BMC50	
3	S5000VCL (SATA)	D41874-602	R0068	BMC56	
4	S5000VCLSASBB	D24481-602	R0068	BMC56	
5	S5000VCL (SATA)	D41874-603	R0074	BMC58	
6	S5000VCLSASBB	D24481-604	R0074	BMC58	
7	S5000VCLSASBB	D24481-604	R0078	BMC59	
8	S5000VCLR (SATA)	D41874-700	R0085	BMC62	
9	S5000VCLR (SATA)	D41874-700	R0087	BMC62	
10	S5000VCLR (SATA)	D41874-700	R0088	BMC63	
11	S5000VCLR(SATA)	D41874-700	R0089	BMC63	
12	S5000VCLSASBB	D24481-700	R0089	BMC63	

3. Supported Operating Systems

The following table provides a list of supported operating systems for the Intel® Server Board S5000VCL. Each of the listed operating systems was tested for compatibility with the Intel® Server Board S5000VCL base system configuration listed in Section 2 of this document. Operating systems are supported only with the specified base system configuration(s) with which they were tested.

The following table also indicates whether each operating system received Basic Installation Testing, or Adapter / Peripheral Compatibility and Stress Testing. For information on the support commitments for Basic Installation Testing vs. Adapter / Peripheral Compatibility and Stress Testing, please reference Section 1 of this document.

Any variations to the standard operating system installation process are documented in the Installation Guidelines section of this document. If there are no installation guidelines noted in the following table, then the operating system installed as expected using the manufacturer's installation instructions or Intel's best-known methods.

> ✎ Operating systems supported by Intel® System Management software or LANDesk* Client Manager software may be different than the operating systems supported by the Intel® Server Board S5000VCL. Please reference the Readme and User Guide documents that are included as part of each Intel® System Management and LANDesk* Client Manager distribution for operating systems that are supported by that release.

Operating System	Base System Configuration Tested & Type of Testing	Notes
Microsoft Windows Enterprise Server 2003*, 32-bit, SP1, Release 2	Configuration 1, 7, 8 – Compatibility and Stress	Intel's testing was completed with Microsoft Windows Enterprise Server 2003* 32-bit SP1 release 2. The Intel® Server Board S5000VCL supports the operating system portion of Microsoft Windows Server Enterprise 2003* 32-bit SP1 only. The application portion is not tested or supported.
Microsoft Windows Enterprise Server 2003*, 64-bit, SP1, Release 2	Configuration 1, 7, 8 – Compatibility and Stress	Intel's testing was completed with Microsoft Windows Enterprise Server 2003* 64-bit SP1 release 2. The Intel® Server Board S5000VCL supports the operating system portion of Microsoft Windows Enterprise Server 2003* 64-bit SP1 only. The application portion is not tested or supported.
Microsoft Windows Enterprise Server 2003*, 32-bit, SP2, Release 2	Configuration 8, 9 – Compatibility and Stress	Intel's testing was completed with Microsoft Windows Enterprise Server 2003* 32-bit SP2. The Intel® Server Board S5000VCL supports the operating system portion of Microsoft Windows Server Enterprise 2003* 32-bit SP2 only. The application portion is not tested or supported.

Operating System	Base System Configuration Tested & Type of Testing	Notes
Microsoft Windows Enterprise Server 2003*, 64-bit, SP2, Release 2	Configuration 8, 9 – Compatibility and Stress	Intel's testing was completed with Microsoft Windows Enterprise Server 2003* 64-bit SP2 release 2. The Intel® Server Board S5000VCL supports the operating system portion of Microsoft Windows Enterprise Server 2003* 64-bit SP1 only. The application portion is not tested or supported.
Microsoft* Windows* Server 2003 / Microsoft Windows Small Business Server 2003	Configuration 2, 3 – Compatibility & Stress Configuration 7, 8 – Basic Installation Only	Intel's testing was completed with Microsoft Windows Server 2003. The Intel Server Board S5000VCL supports the operating system portion of Microsoft Windows Small Business Server 2003 only. The application portion is not tested or supported.
Red Hat* Enterprise Linux 4.0, Update 2, 32-bit	Configuration 1 – Compatibility and Stress Configuration 7, 8 – Basic Installation Only	Intel's testing was completed with Red Hat* Enterprise Linux 4.0 AS U2. The Intel® Server Board S5000VCL supports the operating system portion of Red Hat* Enterprise Linux 4.0 U2 32-bit only. The application portion is not tested or supported.
Red Hat* Enterprise Linux 4.0, Update 6, 64-bit	Configuration 1 – Compatibility and Stress Configuration 7, 8 – Basic Installation Only	Intel's testing was completed with Red Hat* Enterprise Linux 4.0 AS U6. The Intel® Server Board S5000VCL supports the operating system portion of Red Hat* Enterprise Linux 4.0 U2 64-bit only. The application portion is not tested or supported.
Red Hat* Enterprise Linux 5.0, 32-bit	Configuration 8, 9 – Compatibility and Stress	Intel's testing was completed with Red Hat* Enterprise Linux5.0 AS U2. The Intel® Server Board S5000VCL supports the operating system portion of Red Hat* Enterprise Linux 5.0 32-bit only. The application portion is not tested or supported.
Red Hat* Enterprise Linux 5.0, 64-bit	Configuration 8, 9 – Compatibility and Stress	Intel's testing was completed with Red Hat* Enterprise Linux 5.0. The Intel® Server Board S5000VCL supports the operating system portion of Red Hat* Enterprise Linux 5.0 64-bit only. The application portion is not tested or supported.
SuSE* Enterprise Linux Server 9, SP2, 32-bit	Configuration 1 – Compatibility and Stress Configuration 7, 8 – Basic Installation Only	Intel's testing was completed with SuSE* Enterprise Linux Server 9 service pack 2. The Intel® Server Board S5000VCL supports the operating system portion of SuSE* Enterprise Linux Server 9 U2 32-bit only. The application portion is not tested or supported.

Operating System	Base System Configuration Tested & Type of Testing	Notes
SuSE* Enterprise Linux 9, SP2, 64-bit	Configuration 1 – Compatibility and Stress Configuration 7, 8 – Basic Installation Only	Intel's testing was completed with SuSE* Enterprise Linux Server 9 service pack 2. The Intel® Server Board S5000VCL supports the operating system portion of SuSE* Enterprise Linux Server 9 U2 64-bit only. The application portion is not tested or supported.
SuSE* Enterprise Linux Server 10, SP1, 32-bit	Configuration 7, 8 – Compatibility and Stress	Intel's testing was completed with SuSE* Enterprise Linux Server 10 service pack 1. The Intel® Server Board S5000VCL supports the operating system portion of SuSE* Enterprise Linux Server 10 U1 32-bit only. The application portion is not tested or supported.
SuSE* Enterprise Linux 10, SP1, 64-bit	Configuration 7, 8 – Compatibility and Stress	Intel's testing was completed with SuSE* Enterprise Linux Server 10 service pack 1. The Intel® Server Board S5000VCL supports the operating system portion of SuSE* Enterprise Linux Server 10 U1 64-bit only. The application portion is not tested or supported.
Microsoft Windows 2000*, SP4	Configuration 1 – Basic Installation Only	
Red Hat* Enterprise Linux 3.0, Update 6, 32-bit	Configuration 1 – Basic Installation Only	
Red Hat* Enterprise Linux 3.0, Update 6, 64-bit	Configuration 1 – Basic Installation Only	
NetWare* 6.5, SP5	Configuration 1 – Basic Installation Only	

3.1   Operating System Certifications

Listed below are the operating systems that Intel will certify with the Intel® Server Board S5000VCL. However, the customer is responsible for their own certification from the individual operating system vendors. In many cases, the customer may leverage their operating system certifications from Intel's testing. See the "Comments" section next to each operating system in the table below for additional information. Intel's certifications, pre-certification, and operating system testing may help reduce some of the risk in achieving customer certifications with the operating system vendors.

Operating System	Certification Listing	Comments
Microsoft Windows Enterprise Server 2003*, 32-bit, SP1,	Intel Server Board S5000VCLSATA SID: 1221884 Intel Server Board S5000VCLSAS SID: 1232334	OEM must request certification by Microsoft for their specific product. http://www.microsoft.com/hwdq/hcl/search.asp http://developer.intel.com/design/servers/whql.htm
Microsoft Windows Server 2003*, 64-bit, SP1	Intel Server Board S5000VCLSATA SID: 1221884 Intel Server Board S5000VCLSAS SID: 1232334	OEM must request certification by Microsoft for their specific product. http://www.microsoft.com/hwdq/hcl/search.asp http://developer.intel.com/design/servers/whql.htm
Red Hat* Enterprise Linux 4.0, Update 4, 32-bit	Intel Server Board S5000VCLSATA SID: pending review Intel Server Board S5000VCLSAS SID: 222614	Red Hat checks Intel's results, certifies (if appropriate), and posts the certificate on their web site. Customer can leverage the Intel certification, if customer product meets the operating system vendor standard. http://hardware.redhat.com/hcl/?pagename=hcl&view=certified&vendor=399&class=8#list
Red Hat* Enterprise Linux 4.0, Update 4, EM64T	Intel Server Board S5000VCLSATA SID: pending review Intel Server Board S5000VCLSAS	Red Hat checks Intel's results, certifies (if appropriate), and posts the certificate on their web site. Customer can leverage the Intel certification, if customer product meets the operating system vendor standard. http://hardware.redhat.com/hcl/?pagename=hcl&view=certified&vendor=399&class=8#list
SuSE* Enterprise Linux Server 9, SP2, 32-bit	Intel Server Board S5000VCLSATA BID: 87739 Intel Server Board S5000VCLSAS BID: 87736	Novell checks Intel's test results, certifies (if appropriate), and posts the certificate on their web site. Customer can leverage the Intel certification, if customer product meets the operating system vendor standard. http://developer.novell.com/yes/67676.htm
SuSE* Enterprise Linux 9, SP2, EM64T	Intel Server Board S5000VCLSATA BID: 87740 Intel Server Board S5000VCLSAS BID: 87737	Novell checks Intel's test results, certifies (if appropriate), and posts the certificate on their web site. Customer can leverage the Intel certification, if customer product meets the operating system vendor standard. http://developer.novell.com/yes/67676.htm

4.   Adapters and Peripherals

Add-in adapter card and peripheral compatibility and stress testing will only be performed with the latest version of an operating system at the time the validation testing occurred. The following table shows the operating system and base system configurations used to validate each device. The adapters are divided into categories based on their functionality. All integrated on-board devices are tested by default and are therefore not included in the following tables.

Note that not all adapter cards were tested under all operating systems. The following notation is used in the tested adapters and peripherals table below to indicate the support level that Intel provides for a particular adapter under a particular operating system:

Number (i.e. 1)	This adapter or peripheral has been tested and is supported under the specific configuration identified in the Base System Configurations Table in Section 2 of this document.
Number in brackets (i.e. [1])	This adapter or peripheral has been tested, but is NOT supported under the specific configuration identified in the Base System Configurations Table in Section 2 of this document.
NT	This adapter or peripheral has not been tested under this operating system and is not supported under this operating system.
ND	This adapter or peripheral has not been tested under this operating system due to limitations in IHV driver availability, and is not suported under this operating system.
SA (Similar Adapter)	This adapter is supported, but not tested. This adapter model has not been tested with this server board, but Intel will support it based on successful testing of a similar adapter from the same adapter family. Intel has high confidence that this adapter will function correctly with the server board. This adapter uses the same firmware and drivers, and has a nearly identical system interface to another adapter of the same family that has been successfully tested with this server board. In addition, Intel has secured IHV commitment to support the similar adapters equally. Customers should always test adapters as part of the final system configuration prior to deployment. All installation guidelines for the tested adapter also apply to the similar adapter.

Any variations to the standard adapter installation process or to expected adapter functionality are documented in the Installation Guidelines section of this document. If there are installation guidelines affecting a particular adapter and operating system combination, these are referenced in the following table. If there are no installation guidelines noted in the following table, then the adapter installed and functioned as expected using manufacturer's installation instructions or Intel's best-known methods.

> Testing of adapters cards normally is performed with unused add-in adapters and onboard controller expansion ROMs disabled in BIOS Setup. Intel recommends that customers disable the option ROM for add-in controllers and/or the on-board controllers when not booting from the controller or needing to use its built in utilities.

4.1   PCI NIC

Manufacturer	Model Name	Model Number	Interface	Comments	Microsoft Windows Server 2003*	Microsoft Windows Server 2003 EM64T*	Red Hat* Enterprise Linux AS4.0 U2	Red Hat* Enterprise Linux AS4.0 U2 EMT64	Red Hat* Enterprise Linux 5	Red Hat* Enterprise Linux 5 EMT64	SuSE* Linux SLES 9 SP2	SuSE* Linux SLES 9 SP2 EMT64	SuSE* Linux SLES 10 SP1	SuSE* Linux SLES 10 SP1 EMT64	Red Hat* Enterprise Linux 5 U1	Red Hat* Enterprise Linux 5 U1 EMT64	Microsoft Windows Server 2008*	Microsoft Windows Server 2008 EM64T*
Intel®	PWLA8494 GT	PRO/1000 GT Quad Port Sever Adapter	PCI-X* 133		1,8,12	1,8, 12	1	1	8	8	1	1	8	8	12	12	12	12
Intel	PWLA8494 MT	PRO/1000MT Quad Port Gigabit Server Adapter, 4-port 10/100/1000BaseT	PCI-X 133		1	1	1	1			1	1						
Intel	PWLA8490 XT	PRO/1000XT Gigabit Server Adapter, 10/100/1000BaseT	PCI-X 133		1	1	1	1			1	1						
Intel	PILA8470D 3	PRO/100+ S Server, 10/100baseT + Security	PCI 32/33		1, 11	1, 11	1	1			1	1		11	11	11	11	11
Intel	PILA8472C 3	PRO/100+ Dual Port PCI-64/66 Gainesville, 10/100baseT, Dual port	PCI 32/33		12	12							12	12	12	12	12	12

Manufacturer	Model Name	Model Number	Interface	Comments	Microsoft Windows Server 2003*	Microsoft Windows Server 2003 EM64T*	Red Hat* Enterprise Linux AS4.0 U2	Red Hat* Enterprise Linux AS4.0 U2 EMT64	Red Hat* Enterprise Linux 5	Red Hat* Enterprise Linux 5 EMT64	SuSE* Linux SLES 9 SP2	SuSE* Linux SLES 9 SP2 EMT64	SuSE* Linux SLES 10 SP1	SuSE* Linux SLES 10 SP1 EMT64	Red Hat* Enterprise Linux 5 U1	Red Hat* Enterprise Linux 5 U1 EMT64	Microsoft Windows Server 2008*	Microsoft Windows Server 2008 EM64T*
Intel	PWLA8490 MT	PRO/1000MT Gigabit Server Adapter, 10/100/1000BaseT, Copper, No bridge	PCI-X 133		1,9,11	1,9,11	1	1	8	8	1	1	8,11	8,11	11	11	11	11
Intel	PWLA8492 MT	PRO/1000MT Dual Port Gigabit Server Adapter, 10/100/1000BaseTDual Port, Copper, No bridge	PCI-X 133		1,8,11	1,8,11	1		8	8			8,11	8,11	11	11	11	11
Intel	EXPI9402PT	PRO/1000 PT Dual Port Server Adapter	PCI Express		11	11							11	11	11	11	11	11
Syskonnect*	SK-9E21	SK-9E21	PCI Express*		1,8,11	1,9,11	1	1	8	8	1	1	8,11	8,11	11	11	11	11
Syskonnect	SK-9E22	SK-9E22	PCI Express		1,9,11	1,9,11	1		9	8			9,11	9,11	11	11	11	11

Manufacturer	Model Name	Model Number	Interface	Comments	Microsoft Windows Server 2003*	Microsoft Windows Server 2003 EM64T*	Red Hat* Enterprise Linux AS4.0 U2	Red Hat* Enterprise Linux AS4.0 U2 EMT64	Red Hat* Enterprise Linux 5	Red Hat* Enterprise Linux 5 EMT64	SuSE* Linux SLES 9 SP2	SuSE* Linux SLES 9 SP2 EMT64	SuSE* Linux SLES 10 SP1	SuSE* Linux SLES 10 SP1 EMT64	Red Hat* Enterprise Linux 5 U1	Red Hat* Enterprise Linux 5 U1 EMT64	Microsoft Windows Server 2008*	Microsoft Windows Server 2008 EM64T*
4.2　PCI SW RAID SATA																		
AMCC/3ware*	9500S-8	9500S-8	PCI-X 66		1,9	1,9	1	1	8	8	1	1	8	8				
Promise*	FastTrack TX4300	FastTrack TX4300	PCI 64/66		1	1	1	1			1	1						
4.3　PCI SW RAID SCSI																		
LSI*	LSI22320-R	LSI22320-R	PCI-X 133		1,2,8,9,12	1,2,8,9,12	1,2	1,2	8,9	8,9			12	12	12	12	12	12
Adaptec	ASC-29320ALP-R	ASC-29320ALP-R	PCI-X133		1	1	1	1			1	1	8	8				
4.4　PCI SW RAID SAS																		
LSI Logic*	3442x	3442x (IT)	PCI-X 133		1,8,11	1,8,11	1	1	8,	8,	1	1	8,11	8,11	11	11		
Adaptec	ASC-48300	ASC-48300 (HostRAID)	PCI-X 133		1,9	1,9	1	1	9	8	1	1	9	9				

Manufacturer	Model Name	Model Number	Interface	Comments	Microsoft Windows Server 2003*	Microsoft Windows Server 2003 EM64T*	Red Hat* Enterprise Linux AS4.0 U2	Red Hat* Enterprise Linux AS4.0 U2 EMT64	Red Hat* Enterprise Linux 5	Red Hat* Enterprise Linux 5 EMT64	SuSE* Linux SLES 9 SP2	SuSE* Linux SLES 9 SP2 EMT64	SuSE* Linux SLES 10 SP1	SuSE* Linux SLES 10 SP1 EMT64	Red Hat* Enterprise Linux 5 U1	Red Hat* Enterprise Linux 5 U1 EMT64	Microsoft Windows Server 2008*	Microsoft Windows Server 2008 EM64T*
4.5	**PCI Fiber Channel**																	
Emulex*	LP10000DC	LP10000DC-M2	PCI-X 133		1,8	8	1	1	8	8	1	1	8	8				
4.6	**PCI HW RAID SAS**																	
Intel®	SRCSASJV	SRCSASJV	PCI Express	PCI-LP/RP-Long	8, 10	8, 10			8, 10	8, 10			8, 10	8, 10				12
Intel®	SRCSASRB	SRCSASRB	PCI Express	PCI-LP/RP-Long	8, 10	8, 10			8, 10	8, 10			8, 10	8, 10				11
Intel®	SRCSASBB8I	SRCSASBB8I	PCI Express	PCI-LP/RP	8, 10	8, 10			8, 10	8, 10			8, 10	8, 10				
Intel®	SRCSASLS4I	SRCSASLS4I	PCI Express	PCI-LP/RP	8, 10	8, 10			8, 10	8, 10			8, 10	8, 10				
Intel®	SASMF8I	SASMF8I	PCI Express	PCI-LP/RP	8, 10	8, 10			8, 10	8, 10			8, 10	8, 10				
Intel®	SRCSATAWB	SRCSATAWB	PCI Express	PCI-LP/RP-Long	8, 10	8, 10			8, 10	8, 10			8, 10	8, 10				
Intel®	SRCSAS144E	SRCSAS144E	PCI Express	PCI-Med	8, 10, 11	8, 10,11			8, 10	8, 10			8, 10, 11	8, 10, 11	11	11	11	11
Adaptec	Adaptec RAID 2045	Adaptec RAID 2045	PCI Express	PCI-LP/MD2	6	6	6	6			6	6						

Manufacturer	Model Name	Model Number	Interface	Comments	Microsoft Windows Server 2003*	Microsoft Windows Server 2003 EM64T*	Red Hat* Enterprise Linux AS4.0 U2	Red Hat* Enterprise Linux AS4.0 U2 EMT64	Red Hat* Enterprise Linux 5	Red Hat* Enterprise Linux 5 EMT64	SuSE* Linux SLES 9 SP2	SuSE* Linux SLES 9 SP2 EMT64	SuSE* Linux SLES 10 SP1	SuSE* Linux SLES 10 SP1 EMT64	Red Hat* Enterprise Linux 5 U1	Red Hat* Enterprise Linux 5 U1 EMT64	Microsoft Windows Server 2008*	Microsoft Windows Server 2008 EM64T*
Adaptec	Adaptec RAID 2405	Adaptec RAID 2405	PCI Express	PCI-LP/MD2	6	6	6	6			6	6						
Adaptec	Adaptec RAID 2445	Adaptec RAID 2445	PCI Express	PCI-LP/MD2	6	6	6	6			6	6						
Adaptec	Adaptec RAID 31205	Adaptec RAID 31205	PCI Express	PCI-Med	6	6	6	6			6	6						
Adaptec	Adaptec RAID 31605	Adaptec RAID 31605	PCI Express	PCI-Med	6	6	6	6			6	6						
Adaptec	Adaptec RAID 3405	Adaptec RAID 3405	PCI Express	PCI-LP/RP	6	6	6	6			6	6						
Adaptec	Adaptec RAID 3805	Adaptec RAID 3805	PCI Express	PCI-LP/RP	6	6	6	6			6	6						
Adaptec	Adaptec RAID 5085	Adaptec RAID 5085	PCI Express	PCI-LP/RP	6	6	6	6			6	6						
Adaptec	Adaptec RAID 51245	Adaptec RAID 51245	PCI Express	PCI-Med	6	6	6	6			6	6						
Adaptec	Adaptec RAID 51645	Adaptec RAID 51645	PCI Express	PCI-Med	6	6	6	6			6	6						
Adaptec	Adaptec RAID 52245	Adaptec RAID 52245	PCI Express	PCI-Med	6	6	6	6			6	6						
Adaptec	Adaptec RAID 5405	Adaptec RAID 5405	PCI Express	PCI-LP/RP	6	6	6	6			6	6						

Manufacturer	Model Name	Model Number	Interface	Comments	Microsoft Windows Server 2003*	Microsoft Windows Server 2003 EM64T*	Red Hat* Enterprise Linux AS4.0 U2	Red Hat* Enterprise Linux AS4.0 U2 EMT64	Red Hat* Enterprise Linux 5	Red Hat* Enterprise Linux 5 EMT64	SuSE* Linux SLES 9 SP2	SuSE* Linux SLES 9 SP2 EMT64	SuSE* Linux SLES 10 SP1	SuSE* Linux SLES 10 SP1 EMT64	Red Hat* Enterprise Linux 5 U1	Red Hat* Enterprise Linux 5 U1 EMT64	Microsoft Windows Server 2008*	Microsoft Windows Server 2008 EM64T*
Adaptec	Adaptec RAID 5445	Adaptec RAID 5445	PCI Express	PCI-LP/RP	6	6	6	6			6	6						
Adaptec	Adaptec RAID 5805	Adaptec RAID 5805	PCI Express	PCI-LP/RP	6	6	6	6			6	6						
AMCC/3ware*	9690SA-4I4E	9690SA	PCI Express	PCI-LP	6	6	6	6			6	6						
AMCC/3ware	9690SA-8E	9690SA	PCI Express	PCI-LP	6	6	6	6			6	6						
AMCC/3ware	9690SA-8I	9690SA	PCI Express	PCI-LP	6	6	6	6			6	6						
LSI	SRCSAS18E	SRCSAS18E	PCI Express	PCI-Med	8, 11	8, 11			8	8			8, 11	8, 11	11	11	11	
LSI	SAS3442E	SAS3442E	PCI Express	PCI-Med	11	11							11	11	11	11	11	11

4.7   PCI HW RAID SATA

Manufacturer	Model Name	Model Number	Interface	Comments	Microsoft Windows Server 2003*	Microsoft Windows Server 2003 EM64T*	Red Hat* Enterprise Linux AS4.0 U2	Red Hat* Enterprise Linux AS4.0 U2 EMT64	Red Hat* Enterprise Linux 5	Red Hat* Enterprise Linux 5 EMT64	SuSE* Linux SLES 9 SP2	SuSE* Linux SLES 9 SP2 EMT64	SuSE* Linux SLES 10 SP1	SuSE* Linux SLES 10 SP1 EMT64	Red Hat* Enterprise Linux 5 U1	Red Hat* Enterprise Linux 5 U1 EMT64	Microsoft Windows Server 2008*	Microsoft Windows Server 2008 EM64T*
Intel®	SRCS16	SRCS16	PCI 64/66		1,2,8	1,2,8	1, 2	1,2	8	8	1,2	1,2	9					
Intel®	SRCS28X	SRCS28X	PCI-X 133		1,2,8	1,8	1, 2	1,2	8	8	1	1	8	8				11
Adaptec	AAR-21610SA	AAR-21610SA	PCI 64/66		1	1	1	1			1	1						

Manufacturer	Model Name	Model Number	Interface	Comments	Microsoft Windows Server 2003*	Microsoft Windows Server 2003 EM64T*	Red Hat* Enterprise Linux AS4.0 U2	Red Hat* Enterprise Linux AS4.0 U2 EMT64	Red Hat* Enterprise Linux 5	Red Hat* Enterprise Linux 5 EMT64	SuSE* Linux SLES 9 SP2	SuSE* Linux SLES 9 SP2 EMT64	SuSE* Linux SLES 10 SP1	SuSE* Linux SLES 10 SP1 EMT64	Red Hat* Enterprise Linux 5 U1	Red Hat* Enterprise Linux 5 U1 EMT64	Microsoft Windows Server 2008*	Microsoft Windows Server 2008 EM64T*
Adaptec	AAR-2410SA	AAR-21610SA	PCI 64/66		1,8	1,8	1	1	8	8	1	1	8	8				
AMCC/3ware*	9550SXU-12	9550SXU-12	PCI-X133	PCI-Med	5, 6	5, 6	5, 6	5, 6			5, 6	5, 6						
AMCC/3ware	9550SXU-12MI	9550SXU-12MI	PCI-X133	PCI-Med	5, 6	5, 6	5, 6	5, 6			5, 6	5, 6						
AMCC/3ware	9550SXU-16ML	9550SXU-16ML	PCI-X133	PCI-Med	5, 6	5, 6	5, 6	5, 6			5, 6	5, 6						
AMCC/3ware*	9550SXU-4LP	9550SXU-4LP	PCI-X133	PCI-LP	5, 6	5, 6	5, 6	5, 6			5, 6	5, 6						
AMCC/3ware	9550SXU-8LP	9550SXU-8LP	PCI-X133	PCI-LP	5, 6	5, 6	5, 6	5, 6			5, 6	5, 6						
AMCC/3ware	9650SE-12ML	9650SE-12ML	PCI Express	PCI-Med	5, 6	5, 6	5, 6	5, 6			5, 6	5, 6						
AMCC/3ware	9650SE-16ML	9650SE-16ML	PCI Express	PCI-Med	5, 6	5, 6	5, 6	5, 6			5, 6	5, 6						
AMCC/3ware	9650SE-	9650SE-24M8	PCI	PCI-Med	5,	5, 6	5, 6	5, 6			5, 6	5, 6						

Manufacturer	Model Name	Model Number	Interface	Comments	Microsoft Windows Server 2003*	Microsoft Windows Server 2003 EM64T*	Red Hat* Enterprise Linux AS4.0 U2	Red Hat* Enterprise Linux AS4.0 U2 EMT64	Red Hat* Enterprise Linux 5	Red Hat* Enterprise Linux 5 EMT64	SuSE* Linux SLES 9 SP2	SuSE* Linux SLES 9 SP2 EMT64	SuSE* Linux SLES 10 SP1	SuSE* Linux SLES 10 SP1 EMT64	Red Hat* Enterprise Linux 5 U1	Red Hat* Enterprise Linux 5 U1 EMT64	Microsoft Windows Server 2008*	Microsoft Windows Server 2008 EM64T*
	24M8		Express		6													
AMCC/3ware	9650SE-2LP	9650SE-2LP	PCI Express	PCI-LP	5, 6	5, 6	5, 6	5, 6			5, 6	5, 6						
AMCC/3ware	9650SE-4LPML	9650SE-4LPML	PCI Express	PCI-LP	5, 6	5, 6	5, 6	5, 6			5, 6	5, 6						
AMCC/3ware	9650SE-8LPML	9650SE-8LPML	PCI Express	PCI-LP	5,6,8	5,6,8	5, 6	5, 6	8	8	5, 6	5, 6						11
ICP Vortex*	ICP9047MA	ICP9047MA	PCI-X133	PCI-Med; 3.3V only	5, 6	5, 6	5, 6	5, 6			5, 6	5, 6						
ICP Vortex	ICP9087MA	ICP9087MA	PCI-X133	PCI-Med; 3.3V only	5, 6	5, 6	5, 6	5, 6			5, 6	5, 6						
LSI Logic*	MegaRAID* SATA 300-8x	MegaRAID SATA 300-8x	PCI-X 133		1, 8	1, 8	1	1	8	8	1	1	8	8				11
LSI Logic	MegaRAID SATA 150-6	MegaRAID SATA 150-6	PCI 64/66		1, 8	1, 8	1	1	8	8	1	1	8	8				

Manufacturer	Model Name	Model Number	Interface	Comments	Microsoft Windows Server 2003*	Microsoft Windows Server 2003 EM64T*	Red Hat* Enterprise Linux AS4.0 U2	Red Hat* Enterprise Linux AS4.0 U2 EMT64	Red Hat* Enterprise Linux 5	Red Hat* Enterprise Linux 5 EMT64	SuSE* Linux SLES 9 SP2	SuSE* Linux SLES 9 SP2 EMT64	SuSE* Linux SLES 10 SP1	SuSE* Linux SLES 10 SP1 EMT64	Red Hat* Enterprise Linux 5 U1	Red Hat* Enterprise Linux 5 U1 EMT64	Microsoft Windows Server 2008*	Microsoft Windows Server 2008 EM64T*
4.8 PCI HW RAID SCSI																		
Intel®	SRCU41L	SRCU41L	PCI 64/66		1,9	1,9	1	1	9	9	1	1						11
Adaptec	ASR-2130S	ASR-2130S	PCI-X133	PCI-Short; 3.3V only	5, 6	5, 6	5, 6	5, 6			5, 6	5, 6						
Adaptec	ASR-2230S	ASR-2230S	PCI-X133	PCI-Short; 3.3V only	5, 6	5, 6	5, 6	5, 6			5, 6	5, 6						
ICP Vortex*	ICP9014RO	ICP9014RO	PCI-X133	PCI-LP; 3.3V only	5, 6	5, 6	5, 6	5, 6			5, 6	5, 6						
ICP Vortex	ICP9024RO	ICP9024RO	PCI-X133	PCI-LP; 3.3V only	5, 6	5, 6	5, 6	5, 6			5, 6	5, 6						
4.9 PCI Storage SCSI																		
Adaptec	ASC-29320LPE	ASC-29320LPE	PCI Express	PCI-LP	5, 6	5, 6	5, 6	5, 6			5, 6	5, 6						
4.10 DVD Drives																		
HLDS	GWA-4082N	GWA-4082N	ATA33		7, 8, 11	7, 8, 11	7	7	8	8	7		8, 11	8, 11	11	11	11	11

Manufacturer	Model Name	Model Number	Interface	Comments	Microsoft Windows Server 2003*	Microsoft Windows Server 2003 EM64T*	Red Hat* Enterprise Linux AS4.0 U2	Red Hat* Enterprise Linux AS4.0 U2 EMT64	Red Hat* Enterprise Linux 5	Red Hat* Enterprise Linux 5 EMT64	SuSE* Linux SLES 9 SP2	SuSE* Linux SLES 9 SP2 EMT64	SuSE* Linux SLES 10 SP1	SuSE* Linux SLES 10 SP1 EMT64	Red Hat* Enterprise Linux 5 U1	Red Hat* Enterprise Linux 5 U1 EMT64	Microsoft Windows Server 2008*	Microsoft Windows Server 2008 EM64T*
LG*	GCC-4521Bl	GCC-4521Bl	ATA33		1	1	1	1			1	1						
LG	GCC-4522Bl	GCC-4522Bl	ATA33		1	1	1	1			1	1						
Toshiba*	SD-M1912	SD-M1912	ATA33		1	1	1	1			1	1						
Plextor*	PX-716SA	PX-716SA	SATA		1	1	1	1			1	1						
TEAC	DV-28E-V93	DV-28E-V93	ATA33		11	11							11	11	11	11	11	11

4.11 Input

Manufacturer	Model Name	Model Number	Interface	Comments	Microsoft Windows Server 2003*	Microsoft Windows Server 2003 EM64T*	Red Hat* Enterprise Linux AS4.0 U2	Red Hat* Enterprise Linux AS4.0 U2 EMT64	Red Hat* Enterprise Linux 5	Red Hat* Enterprise Linux 5 EMT64	SuSE* Linux SLES 9 SP2	SuSE* Linux SLES 9 SP2 EMT64	SuSE* Linux SLES 10 SP1	SuSE* Linux SLES 10 SP1 EMT64	Red Hat* Enterprise Linux 5 U1	Red Hat* Enterprise Linux 5 U1 EMT64	Microsoft Windows Server 2008*	Microsoft Windows Server 2008 EM64T*
Logitech*	967415-0403	967415-0403	PS2/USB	PS/2 & USB keyboard	5, 6	5, 6	5, 6	5, 6			5, 6	5, 6						
Logitech	Mx518	Mx518	USB	USB, optical mouse	5,6,9,11	5,6,9,11	5, 6	5, 6	9	9	5, 6	5, 6	8, 11	8, 11	11	11	11	11
Microsoft*	Intellimouse 3.0	Intellimouse 3.0	PS2/USB	PS/2 & USB optical mouse	5,6,9,11	5,6,9,11	5, 6	5, 6	9	9	5, 6	5, 6	8, 11	8, 11	11	11	11	11
Aopen	KB-858	KB-858	PS2/USB	PS/2 & USB keyboard	8, 11	8, 11			8	8			8, 11	8, 11	11	11	11	11