


Testing Report and Approval Sheet Performed at STEC

Advantech Part Number	96HD300G-SS-SG15K1	
Manufacturer	Seagate	
Model Number	ST3300657SS	
Capacity	300GB	
Rotate speed	15000 RPM	
Cache	16MB	
Dimension (W x H x D) in mm	146.52x101.6x25.4	
RoHS Status (Yes/No)	Yes	

Where to use and Apply:

Configuration #1	Testing Instructions:	
	Testing Item	Testing Result
PCE-5124	Function Test	PASS
Q35 GMCH+ICH9DO	Compatibility Test	PASS
A102-1	Reliability Test ((-5°C~65°C)	PASS
Configuration #2	Testing Instructions:	
	Testing Item	Testing Result
AIMB-762	Function Test	PASS
945G+ICH7R	Compatibility Test	PASS
A101-4	Reliability Test	PASS
Configuration #3	Testing Instructions:	
	Testing Item	Testing Result
PCE-5125Q	Function Test	PASS
Intel® Q57	Compatibility Test	PASS
A101-2	Reliability Test	PASS
Configuration #4	Testing Instructions:	
	Testing Item	Testing Result
AIMB-780W	Function Test	PASS
Intel3450	Compatibility Test	PASS
A101-2	Reliability Test	PASS
Configuration #5	Testing Instructions:	
	Testing Item	Testing Result
PCE-7210	Function Test	PASS
E7520+6300ESB	Compatibility Test	PASS
A102-1	Reliability Test	PASS
Configuration #6	Testing Instructions:	
	Testing Item	Testing Result
PCE-7214	Function Test	PASS
Intel E5100 + ICH9R	Compatibility Test	PASS
A102-1	Reliability Test	PASS

Engineering Note and Remark:

Requestor:	Testing Engineer:	Finished Date:
Christine.weng	Tenthy.Zhang	2011-4-25

Item	Product Information
Brand Name	Seagate
Vendor M/N	ST3300657SS
Advantech Part Number	96HD300G-SS-SG15K1
Capacity	300GB
Rotate speed	15000 RPM
Cache capacity	16MB
Firmware	0006
Product Photo	



Function test

Test Platform	Test Platform1	Test Platform2	Test Platform3	Test Platform4
MB/SBC	PCE-5124	AIMB-762	PCE-5125Q	AIMB-780W
PCB version	A102-1	A101-4	A101-2	A101-2
BIOS version	V1.23	V1.17	125X0042	V1.10
Core Chipset	Q35 GMCH+ICH9DO	945G+ICH7R	Intel® Q57	Intel3450
VGA Chipset	Q35 integrated	945G integrated	CPU integrated	CPU integrated
CPU	Intel Core2 Duo E8500(3.16GHZ)	P4 651(3.40 GHz)	Intel Core I3-540(3.06GHZ)	Intel® Pentium® G6950(2.80GHZ)
DRAM	Transcend DDR2 800 2GB	Transcend DDR2 667 2GB	Apacer DDR3 1333 2G	Apacer DDR3 1333 2G
Backplane	PCE-5B12-07_A101-1	NA	PCE-5B13-08_A102-1	NA
Connect SAS Card	LSI SAS 8708EM2	LSI SAS 8704EM2	LSI SAS 9260-8i	Promise TX4650
Test Platform	Test Platform5		Test Platform6	
MB/SBC	PCE-7210		PCE-7214	
PCB version	A102-1		A102-1	
BIOS version	210X2125		V1.10	
Core Chipset	E7520+6300ESB		Intel E5100 + ICH9R	
VGA Chipset	ATi Radeon® 7000M		XGI Volari Z11	
CPU	Intel® Xeon™ CPU 3.2GHZ		Intel® Xeon® Processor E5410 (2.33GHZ)	
DRAM	Transcend DDR2 400 512MBX4		Transcend REG DDR2 667 1GX4	
Backplane	PCE-7B13-07_A101-1		PCE-7B06-04_A104-1	
Connect SAS Card	Promise TX8660		LSI SAS 8704EM2	
Item	Pass Criteria			Result
Model shows on POST	POST should show the correct model name			PASS
Model shows in BIOS	BIOS should show the correct model name			PASS
Formatting	There is no any error during formatting the HDD			PASS
OS installed	Windows OS can be installed and boot into OS properly			PASS
Model shows in device manager	Device manager should show the correct model name and capacity			PASS
Read/Write	Run NFCtest 3 rounds from one partition to another under windows			PASS

Compatibility test

Test Platform1	
MB/SBC	PCE-5124
PCB version	A102-1
BIOS version	V1.23
Core Chipset	Q35 GMCH+ICH9DO
VGA Chipset	Q35 integrated
CPU	Intel Core2 Duo E8500(3.16GHZ)
RAM	Transcend DDR2 800 2GB
Backplane	PCE-5B12-07_A101-1
Criteria	Can build RAID and Windows can be installed and boot into OS properly;Run NFCtest PASS and run power on/off 20 times succesfully.

With Raid card and OS Compatibility test

Raid Card	Raid Level	HDD information	On Slot	OS	Result
LSI SAS 8708EM2(PCIEX8)	RAID 0	Seagate ST3300657SS	PPCIE2 (PCIEX16)	WinXP(SP3) 32bit (English)	PASS
LSI SAS 9240-4i(PCIEX8)	RAID 5	Seagate ST3300657SS+ Seagate ST31000424SS*2	PPCIE2 (PCIEX16)	Win7 Ultimate 32bit(English)	PASS
LSI SAS 8708EM2(PCIEX8)	RAID 1	Seagate ST3300657SS+ Seagate ST31000424SS	P1PCIE1 (PCIEX4)	WinXP(SP3) 64bit (English)	PASS

Test Platform2

MB/SBC	AIMB-762
PCB version	A101-4
BIOS version	V1.17
Core Chipset	945G+ICH7R
VGA Chipset	945G integrated
CPU	P4 651(3.40 GHz)
RAM	Transcend DDR2 667 2GB
Backplane	NA
Criteria	Can build RAID and Windows can be installed and boot into OS properly;Run NFCtest PASS and run power on/off 10 times succesfully.

With Raid card and OS Compatibility test

Raid Card	Raid Level	HDD information	On Slot	OS	Result
LSI SAS 8704EM2(PCIEX8)	RAID 0	Seagate ST3300657SS	PCIE1_16X (PCIEX16)	WinXP(SP3) 32bit (English)	PASS
LSI SAS 9260-8i(PCIEX8)	RAID 5	Seagate ST3300657SS+ Seagate ST31000424SS*2	PCIE1_16X (PCIEX16)	WinXP(SP3) 64bit (English)	PASS
Promise TX2650(PCIEX1)	RAID 0	Seagate ST3300657SS+ Seagate ST31000424SS	PCIE1_4X (PCIEX4)	Win7 Ultimate 32bit(English)	PASS
Promise TX4660(PCIEX4)	RAID 1	Seagate ST3300657SS+ Seagate ST31000424SS	PCIE1_4X (PCIEX4)	Win2008(SP2) 32bit (English)	PASS

Test Platform3

MB/SBC	PCE-5125Q
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PCB version	A101-2
BIOS version	125X0042
Core Chipset	Intel® Q57
VGA Chipset	CPU integrated
CPU	Intel Core I3-540(3.06GHZ)
RAM	Apacer DDR3 1333 2G
Backplane	PCE-5B13-08_A102-1
Criteria	Can build RAID and Windows can be installed and boot into OS properly;Run NFCtest PASS and run power on/off 20 times succesfully.

With Raid card and OS Compatibility test

Raid Card	Raid Level	HDD information	On Slot	OS	Result
LSI SAS 9260-8i(PCIEX8)	RAID 0	Seagate ST3300657SS	PPCIE2 (PCIEX16)	WinXP(SP3) 32bit (English)	PASS
LSI SAS 8704EM2(PCIEX8)	RAID 5	Seagate ST3300657SS+ Seagate ST31000424SS*2	PPCIE2 (PCIEX16)	Win7 Ultimate 32bit(English)	PASS
Promise TX4660(PCIEX4)	RAID 1	Seagate ST3300657SS+ Seagate ST31000424SS	P1PCIE1 (PCIEX4)	WinXP(SP3) 64bit (English)	PASS
Promise TX4650(PCIEX1)	RAID 0	Seagate ST3300657SS+ Seagate ST31000424SS	P1PCIE2 (PCIEX4)	Win2008(SP2) 64bit (English)	PASS

Test Platfrom4

MB/SBC	AIMB-780W
PCB version	A101-2
BIOS version	V1.10
Core Chipset	Intel3450
VGA Chipset	CPU integrated
CPU	Intel® Pentium® G6950(2.80GHZ)
RAM	Apacer DDR3 1333 2G
Criteria	Can build RAID and Windows can be installed and boot into OS properly;Run NFCtest PASS and run power on/off 20 times succesfully.

With Raid card and OS Compatibility test

Raid Card	Raid Level	HDD information	On Slot	OS	Result
Promise TX4650(PCIEX1)	RAID 0	Seagate ST3300657SS	PCIEX4_1	WinXP(SP3) 32bit (English)	PASS
Promise TX2650(PCIEX1)	RAID0	Seagate ST3300657SS+ Seagate ST31000424SS	PCIEX4_1	Win7 Ultimate 32bit (English)	PASS
LSI SAS 8708EM2(PCIEX8)	RAID 1	Seagate ST3300657SS+ Seagate ST31000424SS	PCIEX16_1	Win7 Ultimate 64bit (English)	PASS
LSI SAS 9240-4i(PCIEX8)	RAID 5	Seagate ST3300657SS+ Seagate ST31000424SS*2	PCIEX16_1	Win2008(SP2) 64bit (English)	PASS

Test Platfrom5

MB/SBC	PCE-7210
PCB version	A102-1
BIOS version	210X2125
Core Chipset	E7520+6300ESB
VGA Chipset	ATi Radeon® 7000M
CPU	Intel® Xeon™ CPU 3.2GHZ

RAM	Transcend DDR2 400 512MBX4				
Backplane	PCE-7B13-07_A101-1				
Criteria	Can build RAID and Windows can be installed and boot into OS properly;Run NFCtest PASS and run power on/off 20 times succesfully.				
With Raid card and OS Compatibility test					
Raid Card	Raid Level	HDD information	On Slot	OS	Result
Promise TX8660(PCIEX4)	RAID 0	Seagate ST3300657SS	P1PCIEX1 (PCIEX4)	WinXP(SP3) 32bit (English)	PASS
Promise TX4650(PCIEX1)	RAID 0	Seagate ST3300657SS+ Seagate ST31000424SS	P1PCIEX3 (PCIEX4)	Win7 Ultimate 32bit (English)	PASS
LSI SAS 9260-8i(PCIEX8)	RAID 1	Seagate ST3300657SS+ Seagate ST31000424SS	PPCIEX1 (PCIEX8)	WinXP(SP3) 64bit (English)	PASS
LSI SAS 8708EM2(PCIEX8)	RAID 5	Seagate ST3300657SS+ Seagate ST31000424SS*2	PPCIEX2 (PCIEX8)	Win2008(SP2) 32bit (English)	PASS

Test Platform6					
MB/SBC	PCE-7214				
PCB version	A102-1				
BIOS version	V1.10				
Core Chipset	Intel E5100 + ICH9R				
VGA Chipset	XGI Volari Z11				
CPU	Intel® Xeon® Processor E5410 (2.33GHZ)				
RAM	Transcend REG DDR2 667 1GX4				
Backplane	PCE-7B06-04_A104-1				
Criteria	Can build RAID and Windows can be installed and boot into OS properly;Run NFCtest PASS and run power on/off 20 times succesfully.				
With Raid card and OS Compatibility test					
Raid Card	Raid Level	HDD information	On Slot	OS	Result
LSI SAS 8704EM2(PCIEX8)	RAID 0	Seagate ST3300657SS	PPCIEX1 (PCIEX8)	WinXP(SP3) 32bit (English)	PASS
LSI SAS 9240-4i(PCIEX8)	RAID 5	Seagate ST3300657SS+ Seagate ST31000424SS*2	PPCIEX1 (PCIEX8)	WinXP(SP3) 64bit (English)	PASS
Promise TX4660(PCIEX4)	RAID 1	Seagate ST3300657SS+ Seagate ST31000424SS	PPCIEX1 (PCIEX8)	Win7 Ultimate 32bit (English)	PASS

Performance test

Test Platform-1		
MB/SBC	PCE-5124	
PCB version	A102-1	
BIOS version	V1.23	
Core Chipset	Q35 GMCH+ICH9DO	
VGA Chipset	Q35 integrated	
CPU	Intel Core2 Duo E8500(3.16GHZ)	
DRAM	Transcend DDR2 800 2GB	
Backplane	PCE-5B12-07_A101-1	
Connect SAS Card and Raid Level	LSI SAS 8708EM2,RAID 0	
O.S	Windows XP English with SP3	
Test Software	Item	Result
HD Tach version 3.0.4.0	Burst Speed (MB/s)	197.5
	Average Read (MB/s)	143.3
	CPU Utilization	4%
	Random Access Time (ms)	5.5
HD Tune version 2.52	Minimum Transfer Rate (MB/s)	90.1
	Maximum Transfer Rate (MB/s)	162.3
	Average Transfer Rate (MB/s)	96.6
	Access Time (ms)	5.4
	CPU Usage	3.10%
	Burst Speed (MB/s)	98

Test Platform-2		
MB/SBC	AIMB-762	
PCB version	A101-4	
BIOS version	V1.17	
Core Chipset	945G+ICH7R	
VGA Chipset	945G integrated	
CPU	P4 651(3.40 GHz)	
DRAM	Transcend DDR2 667 2GB	
Backplane	NA	
Connect SAS Card and Raid Level	LSI SAS 9260-8i, RAID 0	
O.S	Windows XP English with SP3	
Test Software	Item	Result
HD Tach version 3.0.4.0	Burst Speed (MB/s)	196.1
	Average Read (MB/s)	172.5
	CPU Utilization	8%
	Random Access Time (ms)	5.6
HD Tune version 2.52	Minimum Transfer Rate (MB/s)	129.6
	Maximum Transfer Rate (MB/s)	162.3
	Average Transfer Rate (MB/s)	154.7
	Access Time (ms)	5.4
	CPU Usage	12.10%
	Burst Speed (MB/s)	97.8

Test Platform-3		
MB/SBC	PCE-5125Q	
PCB version	A101-2	
BIOS version	125X0042	
Core Chipset	Intel® Q57	
VGA Chipset	CPU integrated	
CPU	Intel Core I3-540(3.06GHZ)	
DRAM	Apacer DDR3 1333 2G	
Backplane	PCE-5B13-08_A102-1	
Connect SAS Card and Raid Level	LSI SAS 9260-8i, RAID 0	
O.S	Windows XP English with SP3	
Test Software	Item	Result
HD Tach version 3.0.4.0	Burst Speed (MB/s)	372.7
	Average Read (MB/s)	148.3
	CPU Utilization	3%
	Random Access Time (ms)	5.5
HD Tune version 2.52	Minimum Transfer Rate (MB/s)	92.5
	Maximum Transfer Rate (MB/s)	201.4
	Average Transfer Rate (MB/s)	100.7
	Access Time (ms)	5.4
	CPU Usage	1.70%
	Burst Speed (MB/s)	120.1

Test Platform-4		
MB/SBC	AIMB-780W	
PCB version	A101-2	
BIOS version	V1.10	
Core Chipset	Intel3450	
VGA Chipset	CPU integrated	
CPU	Intel® Pentium® G6950(2.80GHZ)	
DRAM	Apacer DDR3 1333 2G	
Connect SAS Card and Raid Level	Promise TX4650, Raid 0	
O.S	Windows XP English with SP3	
Test Software	Item	Result
HD Tach version 3.0.4.0	Burst Speed (MB/s)	133.3
	Average Read (MB/s)	80.5
	CPU Utilization	5%
	Random Access Time (ms)	5.7
HD Tune version 2.52	Minimum Transfer Rate (MB/s)	52
	Maximum Transfer Rate (MB/s)	106.9
	Average Transfer Rate (MB/s)	60.5
	Access Time (ms)	5.4
	CPU Usage	3.60%
	Burst Speed (MB/s)	74.6

Test Platform-5	
MB/SBC	PCE-7210
PCB version	A102-1
BIOS version	210X2125
Core Chipset	E7520+6300ESB

VGA Chipset	ATi Radeon® 7000M	
CPU	Intel® Xeon™ CPU 3.2GHZ	
DRAM	Transcend DDR2 400 512MBX4	
Backplane	PCE-7B13-07_A101-1	
Connect SAS Card and Raid Level	Promise TX8660, Raid 0	
O.S	Windows XP English with SP3	
Test Software	Item	Result
HD Tach version 3.0.4.0	Burst Speed (MB/s)	133.4
	Average Read (MB/s)	127.1
	CPU Utilization	3%
	Random Access Time (ms)	5.6
HD Tune version 2.52	Minimum Transfer Rate (MB/s)	111
	Maximum Transfer Rate (MB/s)	116.7
	Average Transfer Rate (MB/s)	115.8
	Access Time (ms)	5.5
	CPU Usage	3.90%
	Burst Speed (MB/s)	76.3

Test Platform-6		
MB/SBC	PCE-7214	
PCB version	A102-1	
BIOS version	V1.10	
Core Chipset	Intel E5100 + ICH9R	
VGA Chipset	XGI Volari Z11	
CPU	Intel® Xeon® Processor E5410 (2.33GHZ)	
DRAM	Transcend REG DDR2 667 1GX4	
Backplane	PCE-7B06-04_A104-1	
Connect SAS Card and Raid Level	LSI SAS 8704EM2,RAID 0	
O.S	Windows XP English with SP3	
Test Software	Item	Result
HD Tach version 3.0.4.0	Burst Speed (MB/s)	195
	Average Read (MB/s)	171.7
	CPU Utilization	2%
	Random Access Time (ms)	5.7
HD Tune version 2.52	Minimum Transfer Rate (MB/s)	129.6
	Maximum Transfer Rate (MB/s)	157.2
	Average Transfer Rate (MB/s)	151.7
	Access Time (ms)	5.4
	CPU Usage	1.80%
	Burst Speed (MB/s)	96.20

Reliability Test
1. Room Temperature

Test Platform-1		
MB/SBC	AIMB-762	
PCB version	A101-4	
BIOS version	V1.17	
Core Chipset	945G+ICH7R	
VGA Chipset	945G integrated	
CPU	P4 651(3.40 GHz)	
DRAM	Transcend DDR2 667 2GB	
Backplane	NA	
Connect SAS Card and Raid Level	LSI SAS 8704EM2,RAID 0	
O.S	Windows XP English with SP3	
Test software	Pass Criteria	Result
Power on/off	Power on off 100 times, successful boot rate 100%	PASS
Burn_inV6.0	Set DISK loading 100%,all disks file size 15%; The result of all disks should be Passed when running Burn_in V6.0 for 12 hours.	PASS

Test Platform-2		
MB/SBC	AIMB-780W	
PCB version	A101-2	
BIOS version	V1.10	
Core Chipset	Intel3450	
VGA Chipset	CPU integrated	
CPU	Intel® Pentium® G6950(2.80GHZ)	
DRAM	Apacer DDR3 1333 2G	
Connect SAS Card and Raid Level	Promise TX4650,RAID 0	
O.S	Windows XP English with SP3	
Test software	Pass Criteria	Result
Power on/off	Power on off 100 times, successful boot rate 100%	PASS
Burn_inV6.0	Set DISK loading 100%,all disks file size 15%; The result of all disks should be Passed when running Burn_in V6.0 for 12 hours.	PASS

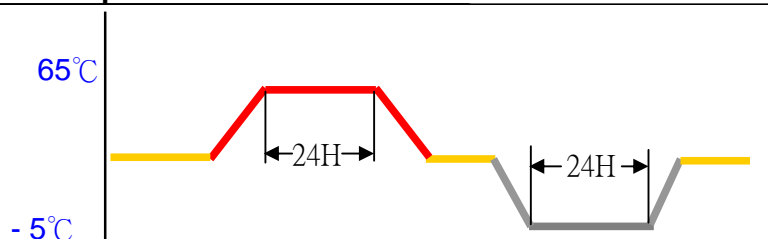
Test Platform-3		
MB/SBC	PCE-7210	
PCB version	A102-1	
BIOS version	210X2125	
Core Chipset	E7520+6300ESB	
VGA Chipset	ATi Radeon® 7000M	
CPU	Intel® Xeon™ CPU 3.2GHZ	
DRAM	Transcend DDR2 400 512MBX4	
Backplane	PCE-7B13-07_A101-1	
Connect SAS Card and Raid Level	Promise TX8660,Raid 0	

O.S	Windows XP English with SP3	
Test software	Pass Criteria	Result
Power on/off	Power on off 100 times, successful boot rate 100%	PASS
Burn_inV6.0	Set DISK loading 100%,all disks file size 15%; The result of all disks should be Passed when running Burn_in V6.0 for 12 hours.	PASS

Test Platform-4		
MB/SBC	PCE-7214	
PCB version	A102-1	
BIOS version	V1.10	
Core Chipset	Intel E5100 + ICH9R	
VGA Chipset	XGI Volari Z11	
CPU	Intel® Xeon® Processor E5410 (2.33GHZ)	
DRAM	Transcend REG DDR2 667 1GX4	
Backplane	PCE-7B06-04_A104-1	
Connect SAS Card and Raid Level	LSI SAS 8704EM2,RAID 0	
O.S	Windows XP English with SP3	
Test software	Pass Criteria	Result
Power on/off	Power on off 100 times, successful boot rate 100%	PASS
Burn_inV6.0	Set DISK loading 100%,all disks file size 15%; The result of all disks should be Passed when running Burn_in V6.0 for 12 hours.	PASS

Test Platform-5		
MB/SBC	PCE-5125Q	
PCB version	A101-2	
BIOS version	125X0042	
Core Chipset	Intel® Q57	
VGA Chipset	CPU integrated	
CPU	Intel Core I3-540(3.06GHZ)	
DRAM	Apacer DDR3 1333 2G	
Backplane	PCE-5B13-08_A102-1	
Connect SAS Card and Raid Level	LSI SAS 9260-8I,RAID 0	
O.S	Windows XP English with SP3	
Test software	Pass Criteria	Result
Power on/off	Power on off 100 times, successful boot rate 100%	PASS
Burn_inV6.0	Set DISK loading 100%,all disks file size 15%; The result of all disks should be Passed when running Burn_in V6.0 for 12 hours.	PASS

2. High/Low temperature



Test Platform-2		
MB/SBC	PCE-5124	
PCB version	A102-1	
BIOS version	V1.23	
Core Chipset	Q35 GMCH+ICH9DO	
VGA Chipset	Q35 integrated	
CPU	Intel Core2 Duo E8500(3.16GHZ)	
DRAM	Transcend DDR2 800 2GB	
Backplane	PCE-5B12-07_A101-1	
Connect SAS Card and Raid Level	LSI SAS 8708EM2,RAID 0	
O.S	Windows XP English with SP3	
High temperature		
Test software	Pass Criteria	Result
Power on/off	Power on off 100 times, successful boot rate 100%	PASS
Burn_inV6.0	Set DISK loading 100%,all disks file size 15%; The result of all disks should be Passed when running Burn_in V6.0 for 24 hours.	PASS
Low temperature		
Test software	Pass Criteria	Result
Power on/off	Power on off 100 times, successful boot rate 100%	PASS
Burn_inV6.0	Set DISK loading 100%,all disks file size 15%; The result of all disks should be Passed when running Burn_in V6.0 for 24 hours.	PASS