96RACK-5-SS-CR-B2
Test Report

Test Requestor	Lydia.Liu	**Job Title**		**Release Date**	2012-08-15
Testing Engineer	Jeans.Zhou	**Job Title**	AKDC DQA Engineer	**Revision**	V1.0
Approved by	Sophie.Song	**Job Title**	AKDC DQA assistant manager	**Release Status**	Formal Release

Revision History:

Revision Date	Revision	Description	Creator
2012/08/15	1.0	First version released	Jeans.Zhou

Content

Test Result Definition:

Item	Description
Pass	Compatibility test properly without any problem.
Fail	Compatibility test can't work properly and can't meet the product spec, please describe issue to the "Remark" item detailedly.
No test	No test (no test tool or device or driver not ready); please write reason to the "Remark" item.
N/A	Spec not support.
Limitation	Compatibility issue Limitation, it needs formal approval mail or other formal reply from PM or Applicant or Manufacturer.

Test Item List Summary

Test item and result

Test item	Result	Remark
Mechanical Function	Pass	
Electrical Function	Pass	
Performance Test	Pass	

1. Product Information:

Advantech Part Number	**96RACK-5-SS-CR-B2**
Manufacturer	ICY DOCK
Module Part NO.	MB994IPO-3SB
Form Factor	5.25''half-height expansion bay
Host Interface	7Pin SATA Connectorx5
HDD interface	SATA
Available SATA Device	2.5" SATA&SAS SSD/HDD(up to 15mm)&slim ODD
Host Transfer Rate	Up to 6Gb/s
Material	Aluminum & SECC
LED Display Color	Green(Power on)/Amber LED Flashing
Dimension (W x H x D)	146x41.3x170(mm)
RoHS Status (Yes/No)	Yes

Photo:

2. Test Platform

MB/SBC	PCE-5125Q		
PCB version	A102-1	CPU	Intel Core i3 530 2.93GHZ
BIOS version	125x0042	DRAM	Apacer DDR3 2GB 1333 DIMM
Core Chipset	IntelQ57	Backplane	PCE-5B12-07_A101-1
VGA Chipset	Q57 integrated	Other	

3. Test Software

Utilities	Version / Description
Power On/Off (For Reliability test)	
Passmark BurnIn Test Pro (For Reliability test)	V7.0 build 1013
HD Tach (For Performance test)	V3.0.4.0
HD Tune (For Performance test)	V2.52
CD Speed(For Performance test)	V4.7.7.16

4. Test Item

4.1 Mechanical Function test

4.1.1 Appearance Inspection

Pass Criteria: Inspect sample's Appearance whether it is ok.

Result: **Pass**

4.1.2 Mechanical Assemble

Pass Criteria: When assembling with HDD, it hasn't Mechanical interference.

Result: **Pass**

4.2   Electrical Function test

4.2.1 OS installation

Pass Criteria: Windows OS can be installed and boot into OS properly, and run Burn-in 12 hours pass.

MB/SBC: PCE-5125Q

OS	Version	Result
Windows XP	Windows XP professional with 32bit SP3(English)	**Pass**

4.2.2 Read/Write

Pass Criteria: Run NFC test 3 rounds from one partition to another under windows.

Result: **Pass**

4.2.3 Raid card compatibility test

Pass Criteria: Can build RAID and work normally in OS, and run power on/off 10 times successfully.

MB/SBC: PCE-5125Q

Backplane: PCE-5B12-07_A101-1

Item	RAID card				
	HighPoint RR1520	**HighPoint RR2640**	**LSI 9650SE-2LP-SGL**	**LSI 9240-4i**	**LSI 9260-8i**
Advantech PN	96RC-ST-2C-P-HP	96RC-SAS-4C-PE-HP	96RC-SATA-2P-PE-LS	96RC-SAS-4P-PE-LS	96RC-SAS-8P-PE-LS1
Bus	PCI 32bit	PCIE X4	PCIE X1	PCIE X8	PCIE X8
BIOS	V2.4.090630	V1.3	BE9X4.08.00.004	4.30.00	3.24.00
Driver	2.4.6.1110	1.5.10.1012	3.0.5.56	5.1.112.64	5.1.112.32
HDD	ST9500323CSx2	SQF-S25M4-256G-S7C +SQF-S25M4-256G-S7E	WD1600BEVT+ WD2500BEVT	CT128M4SSD2+ CT064M4SSD2	MK32764GSX+ MK5076GSX
RAID Level	RAID1	RAID0	RAID0	RAID0	RAID1
Raid size	500.10GB	511.9GB	298.00GB	117.345GB	297.091
In Slot	P1PCI2	PPCIE4	P1PCIE2	PPCIE2	PPCIE2
OS	XP 32bit	XP 64bit	XP 32bit	Win7 64bit	Win7 32bit
Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remark					

4.3 Performance Test

4.3.1 HDD/SSD Performance Test

Pass Criteria: Run software "HD Tach version 3.0.4.0 and HD Tune version 2.52" to test the HDD performance which transferring from the Mobile Rack connector, and recording the Data to compare with the performance Data of original Edisk, which cannot reduce.

MB/SBC: PCE-5125Q

Backplane: PCE-5B12-07_A101-1

HDD		HD Tach version 3.0.4.0				Result
		Burst Speed (MB/s)	Average Read (MB/s)	CPU Utilization	Random Access Time (ms)	
SATA1	CT064M4SSD2	257.6	230.7	3%	0.1	Pass
	CT064M4SSD2 with Mobile Rack	258.6	230.1	3%	0.1	
SATA2	WD1600BEVT	246.4	69.5	2%	16.3	Pass
	WD1600BEVT with Mobile Rack	250.0	69.5	2%	16.1	

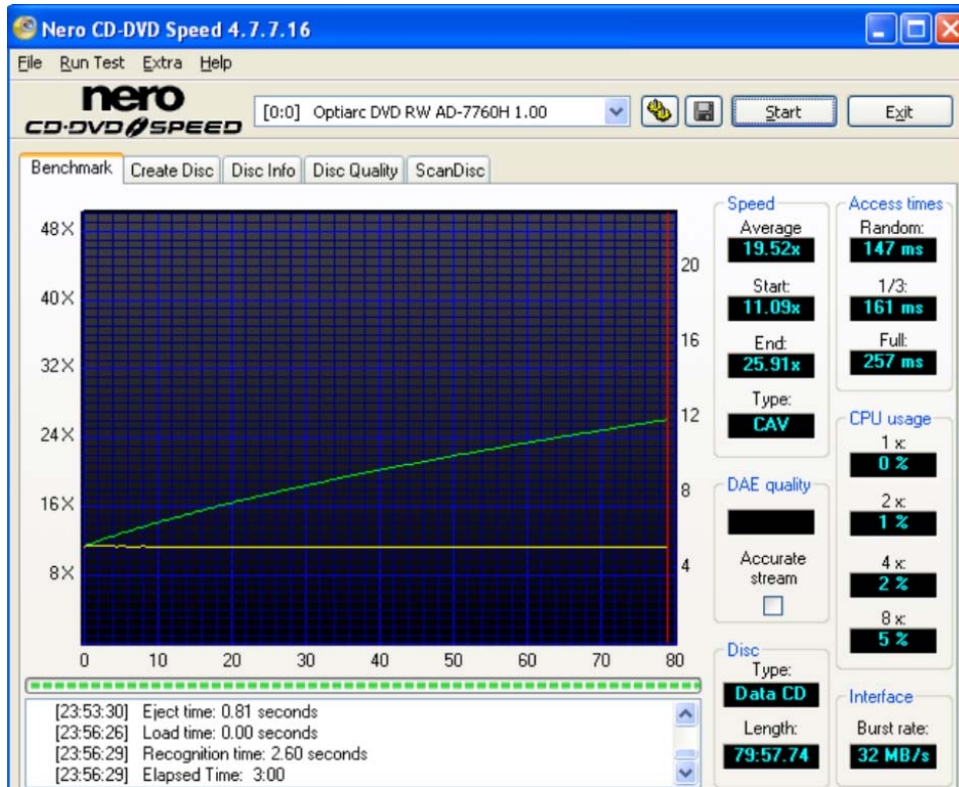| MB/SBC		HD Tune version 2.52						Result
		Minimum Transfer Rate (MB/s)	Maximum Transfer Rate (MB/s)	Average Transfer Rate (MB/s)	Access Time (ms)	CPU Usage	Burst Speed (MB/s)	
SATA1	CT064M4SSD2	180.8	192.8	189.2	0.2	5.0%	103.4	Pass
	CT064M4SSD2 with Mobile Rack	180.8	192.3	187.4	0.2	5.3%	103.1	
SATA2	WD1600BEVT	54.9	77.5	66.3	15.9	1.9%	137.2	Pass
	WD1600BEVT with Mobile Rack	54.9	77.5	66.3	15.8	1.8%	137.1	

4.3.2 ODD Performance Test

Pass Criteria: Run software "Nero CD Speed", test the ODD performance which transferring from the Mobile Rack

connector, and recording the Data to compare with the performance Data of original ODD, which cannot reduce.

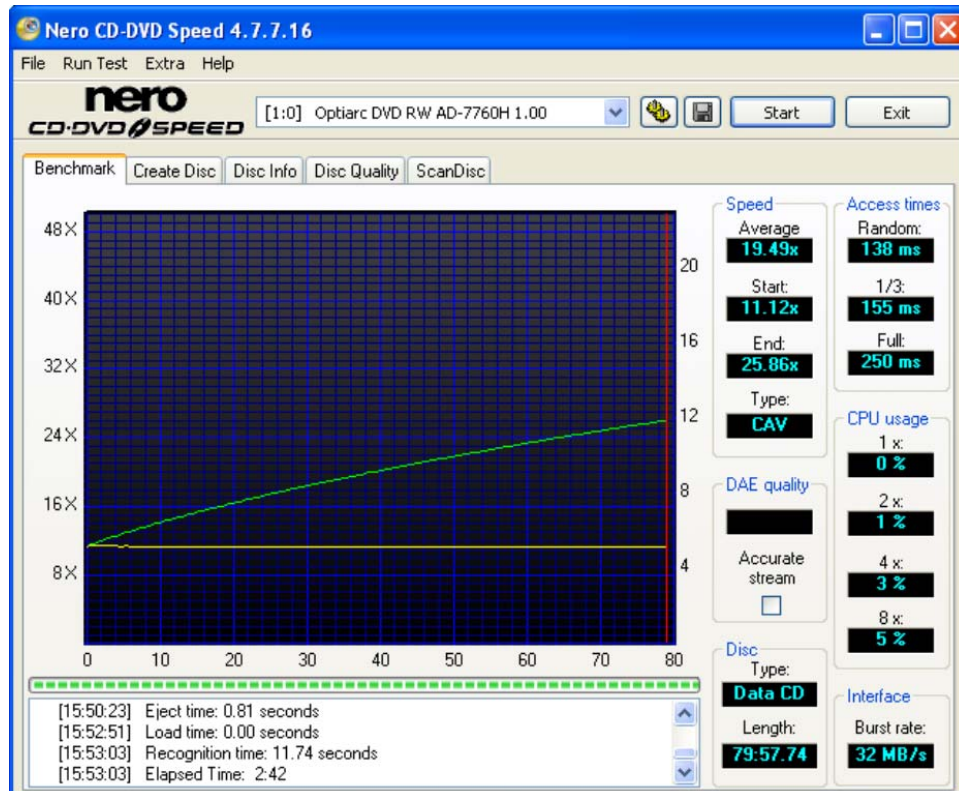**MB/SBC:** PCE-5125Q (PCE-5B12-07_A101-1)

Test Software	Nero CD Speed(Version:4.7.7.16)	
Item	CD	DVD
CD information	ILTECH CD-R 52X 700MB/80min Verbatim CD-R 52X 700MB/80min	Sony 16X DVD+R 120min/4.7GB RiTEK 8X DVD+R 120Min/4.7GB
Current speed	24x	8x
OS	Windows XP professional edition 32bit with SP3	
Drive	Optiarc DVD RW AD-7760H	
Firmware Version	0106	
Disc	CD-R	DVD+R
MID	97m22s67f	RITEK R03 002
Capacity	79.57.74	4.38GB

CD test result: Pass
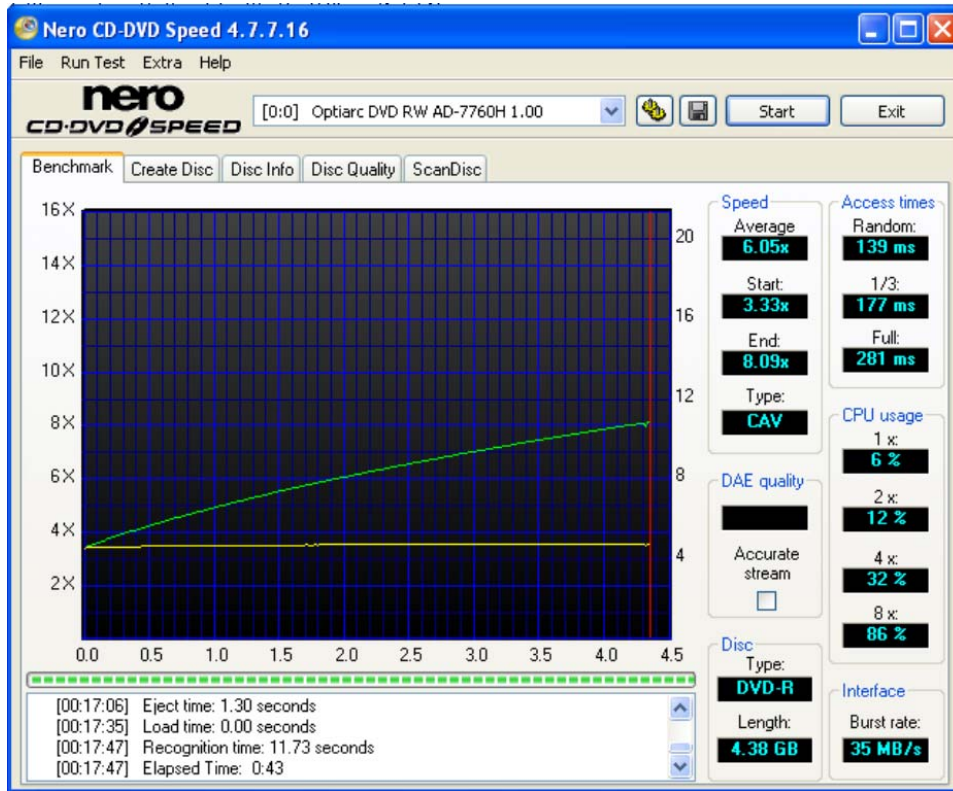
AD-7760H test result:

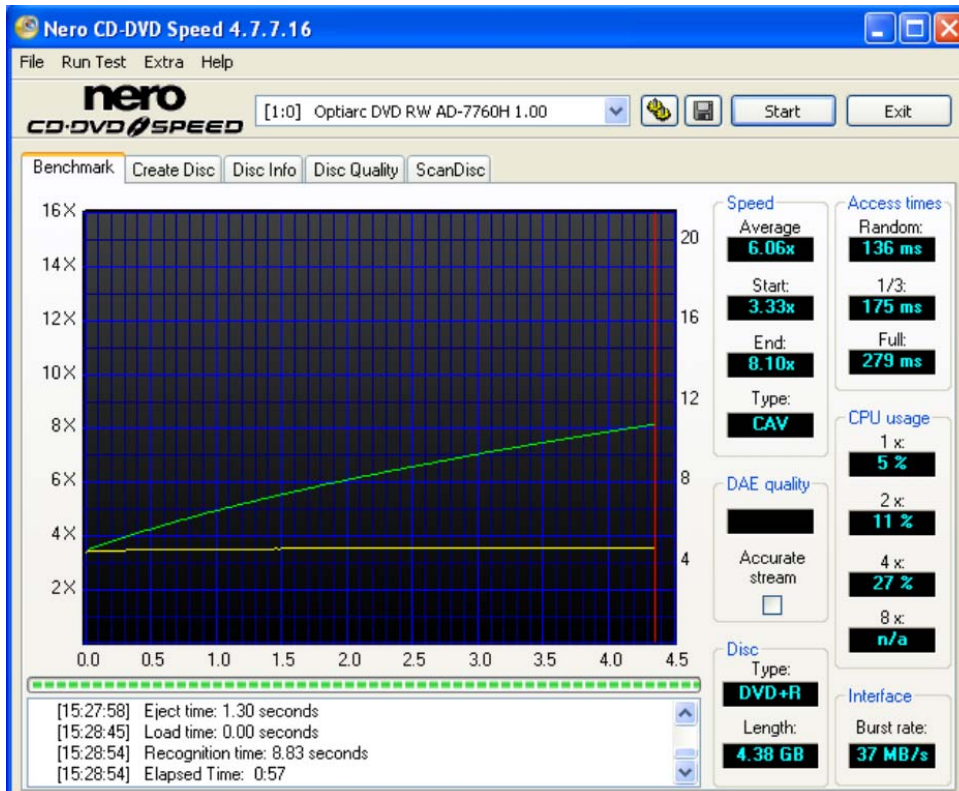AD-7760H with Mobile Rack test result:

DVD test result: Pass

AD-7760H test result:

AD-7760H with Mobile Rack test result:

4.4 Reliability test

MB/SBC: PCE-5125Q (PCE-5B12-07_A101-1)

OS: Windows XP professional with 32bit SP3 (English)

Test Environment: Room temp

Item	Pass Criteria	Result
Power on/off	Power on/off 100 times, successful boot rate 100%	**Pass**

5. Appendix