

Report NO: 14I010011

NVR-6300S

Networking Video Recorder System

System Level Product P5 Test Report

Summary	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Pass with Deviation (Comment: _____)			
	Test Results Category			
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	0
Defect Unsolved	0	0	0	0

Issue date

2014/08/20

Approval

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Test Engineer

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Version Released Records

Date	Version	Change History	Note
2010/04/21	P3-1001	1. Re-composing test Items	
2010/06/01	P2P3-1001	1. New Test Report	
2010/06/21	P2P3-1002	1. Add BIOS -> SPI ROM Setting (South Bridge – GPIO)	
2010/12/02	P2P3-1003	1. New Test Report	
2011/02/23	P2P3-1101	1. Re-composing test Items	
2011/03/04	P2P3-1102	1. Add Specification Validation	
2012/05/29	P2P3-1201	1. Add Summary Table of DTS	
2013/12/6	P2P3-1301	<ol style="list-style-type: none"> 1. Rename document : [System Level Product P2-P3 Verification Test Plan & Report Template] 2. Chapter3:Add RS422 1.2KM/115200bps transmission test 3. Chapter3:BurninTest test add USB2.0/3.0. 4. Chapter5: Modify power consumption test item. 5. Chapter7: add Windows XP Professional English Version 32/64Bit and Windows 8 Pro English Version 32/64Bit test. 6. Chapter8: Change BIOS format from Award to AMI and add Hi-Safe, Hi-Manager test item. 7. Chapter9: Add SATA performance test and USB3.0 performance. 8. Remove Chapter10: Other Tests. 	

Note :

For all test items in this report, 3 results have been defined and described as following:

Pass: Functionality work perfectly

Fail: Functionality failed and must be resolved in the next version

N/A: Functionality Not Applicable or Not Available

This test report would be updated when re-test completed in product next change version.

Specification Verification

Main Specification

Item	Specification	Result			Note
		Pass	Fail	N/A	
Form Factor	Network Video Recorder-4U Rackmount	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Processor	Intel® Haswell 22nm LGA 1150 socket Processor, Max. 65W TDPs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Chipset	Intel® Q87 (Lynx Point)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System Memory	4 x DIMM, Max. 32GB, DDR3 1600MHz ECC support dual Channel Memory Architecture	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BIOS	AMI BIOS, 128Mb SPI flash ROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
H/W Monitor	Monitors CPU/system temperature Monitors Vcore/5V/3.3V/V_DIMM/12V/5Vsb voltages Monitors CPU/system fan speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ethernet	Intel® 10/100/1000Base-TX Ethernet x 2 LAN 1 : Intel® PHY I217LM Giga LAN (support AMT 9.0) LAN 2 : Intel® I211AT Giga LAN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio	HD Audio Realtek ALC892-GR support with phone Jack	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
KB & MS	1 x PS/2 keyboard (purple) 1 x PS/2 mouse (green)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Display Port	1 x VGA, 1 x Display Port, 1 x HDMI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I/O Chip	IT8728F	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial Port	2 x COM (Box header 2.0mm x 2) COM 1~2: RS232	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Storage	14 x SATA III (6.0Gb/s) ports, SATA1~6 Supports RAID 0/1/5/10, SATA7~14: RAID support: TBD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Expansion Slot	1 x PCIe [x16] (PCIe Gen 3.0) slot 1 x PCIe [x 4] (PCIe Gen 2.0) Slot (signal [x2])	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCIE to SATA Controller	ASMedia ASM1061 / 5Px2 Pin Header 2.54mm.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB	4 x USB3.0(2pcs:Type A port + 2pcs: 10Px2 Box Header 2.0mm). 8 x USB2.0(2pcs: Type A, 3pcs: 5Px2 Pin Header 2.54mm)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TPM	Infineon SLB9635 TT 1.2 (Optional)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
WDT	System reset : 1~255 step by software programming	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power Requirement	1 x ATX Standard 24-pin connector, 1 x 8-pin +12V connector	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1 x CPU fan, 1 x System fan with 4-pin wafer Support SMART FAN control				
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O.S. Support

Item	Specification	Result			Note
		Pass	Fail	N/A	
Microsoft Windows	Windows 7, 32bit / 64bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Windows 8, 32bit / 64bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Linux	Linux Kernel 2.6.x or above	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Environmental Specifications

Item	Specification
Operating temperature	32~140°F (0~40°C)
Storage temperature	-4~158°F (-20~70°C)
Storage humidity	5%~90% RH, non-condensing
EMC	CE /FCC class A

Note: Please refer Environment Test Report for detail information

Platform Information

Item	Device Information	Test Item
System Model/Version	NVR-6300S A0.2	1,2,3,4,5,6,7,8,9,10,11,12
M/B Board	NVR-6300S A0.2	1,2,3,4,5,6,7,8,9,10,11,12
Carrier Board	N/A	N/A
BIOS / Version	NVR-6300S R1.0 (NVR87AM10) (06/26/2014)	1,2,3,4,5,6,7,8,9,10,11,12
CPU Type	Intel® Core™ i7-4770S Processor(8M Cache, 3.1GHz, up to 3.90 GHz)65W (ES)	1,2,3,4,5,6,7,8,9,10,11,12
Memory Type	Transcend DDR3 1600 8GB SEC K4B4G0846B-HYK0 InnoDisk DDR3 1600 8GB Hynix H5TQ4G83MFR-PBC	1,2,3,4,5,6,7,8,9,10,11,12
SATA HDD	Toshiba MK3261GSYN 2.5" 320GB/5200rpm WD WD500AKX SATAIII 3.5" 500GB/7200rpm Seagate ST500DM002 SATAIII 3.5" 500GB/7200rpm	1,2,3,4,5,6,7,8,9,10,11,12
SATA DVD-ROM	Slim DVD R/W	1,2,3,4,5,6,7,8,9,10,11,12
USB DVD-ROM	lomega DVDRW8X-U	1,2,3,4,5,6,7,8,9,10,11,12
LCD Monitor	LG Flatron E2260 / 22" monitor 1920*1080 Asus PA238Q 23" monitor 1920*1080	1,2,3,4,5,6,7,8,9,10,11,12
LVDS	N/A	N/A
Compact Flash	N/A	N/A
Daughter Board	N/A	N/A
Expansion Board	N/A	N/A
Operating System	<input checked="" type="checkbox"/> English Fedora 19 – Kernel 3.9.5-301.fc19.i686.PAE	7-1
	<input type="checkbox"/> Windows XP Professional English SP3 32/64 Bit	N/A
	<input checked="" type="checkbox"/> Windows 7 Ultimate 32/64Bit	7-2
	<input checked="" type="checkbox"/> Windows 8 Pro English Version 32/64Bit	7-3
Power Supply	ATX Power Supply : Zippy HG2-5600V 600W	1,2,3,4,5,6,7,8,9,10,11,12
	AT Power Supply:N/A	N/A
	DC Adapter :N/A	N/A
Battery Model	N/A	N/A
Chipset Information with Windows 7 Ultimate English SP1 32 Bit Driver Version		
Chipset Software	Intel Chipset Device Software / 10.0.14 (3/26/2014)	
PCH Bridge	Intel Q87	
Super IO Chipset	ITE IT8728F	
VGA Chipset	Intel HD Graphics 4600 / 10.18.10.3574 (4/24/2014)	
Audio Chipset	Intel Display Audio 6.16.0.3137 (2/21/2014)	
	Realtek High Definition Audio 6.0.1.7083 (11/5/2013)	
LAN1 Chipset	Intel Ethernet Connection I217-LM / 12.11.96.1 (3/14/2014)	
LAN2 Chipset	Intel I211 Gigabit Network Connection / 12.11.97.0 (3/11/2014)	

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1. OSD Control Function Test

1.1. Modular System Industrial Workstation Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
AC power outlet / inlet	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power On / Off	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Reset Button	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power LED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
H.D.D LED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CD-ROM drive included	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD driver included	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Floppy drive included	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Lockable front-panel door	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Finger mouse	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
59 Data-entry&20/24 Function keys	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

1.2. Mechanism construction check

Test Item	Result			Note
	Pass	Fail	N/A	
Case construction check	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCMCIA construction check	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
CF Card construction check	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Please check both (Type I and Type II)
Component check	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2. Basic Function Test

2.1. Video Function Test

2.1.1. Single Output Function Test

Hardware Information with Windows 7 Ultimate English Version 32 Bit Driver Version										
CPU	Intel® Core™ i7-4770S Processor(8M Cache, 3.1GHz, up to 3.90 GHz)65W (ES)									
Memory	Transcend DDR3 1600 8GB SEC K4B4G0846B-HYK0 InnoDisk DDR3 1600 8GB Hynix H5TQ4G83MFR-PBC									
SATA HDD	Toshiba MK3261GSYN 2.5" 320GB/5200rpm WD WD500AKX SATAIII 3.5" 500GB/7200rpm Seagate ST500DM002 SATAIII 3.5" 500GB/7200rpm									
VGA	LG Flatron E2260 / 22" monitor 1920*1080									
HDMI	Samsung 28" UD590 4K*2K 30Hz									
Display Port	Samsung 28" UD590 4K*2K 60Hz									
Color Quality	<input checked="" type="checkbox"/> 16bit <input type="checkbox"/> 24bit <input checked="" type="checkbox"/> 32bit									
Resolution	VGA			Display Port			HDMI			Note
	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
640X480	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
800X600	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1024X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1152X864	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X600	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X720	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X800	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X960	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X1024	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1360X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1366X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1400X1050	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1440X900	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1600X900	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1600X1200	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1680X1050	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1776X1000	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1792X1344	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1856X1392	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1920X1080	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1920X1200	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with ViewSonic VP2770-LED
1920X1440	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with ViewSonic VP2770-LED
2048X1152	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with ViewSonic VP2770-LED
2560X1440	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with ViewSonic VP2770-LED
3840X2160	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Samsung 28" UD590 4K*2K
EDID check	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Rotation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rotation (0 / 90 /180 /270)

Note: Pay attention to Full Screen under POST screen and Text Mode.

2.1.2. Multi-Display Test

Selection	Output	Result			Note
		Pass	Fail	N/A	
Dual Display Clone	VGA+HDMI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dual Display Clone	VGA+DP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dual Display Clone	HDMI+DP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Triple Display Clone	VGA+DP+HDMI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2.1.3. Video Resolution Test

Test points:

1. Power on without inserting any VGA connector until system reaches Windows desktop
2. Plug VGA connector into test machine while system reaches Windows; then check VGA driver and display
3. Check VGA output Brightness to if it is normal, no "Ghost Image" / "Flicker"

	Result			Note
	Pass	Fail	N/A	
In Windows Desktop	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	







2.2. Audio Function Test

[] No Support

Function Test	Result			Note
	Pass	Fail	N/A	
L (Left) Channel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
R (Right) Channel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Line In	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Line in recorder	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MICROPHONE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Microphone recorder	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDMI Audio	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DP Audio	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6-channel mode for 5.1 speaker output	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
8-channel mode for 7.1 speaker output	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

2.3. LAN Function Test

[] No Support

Connect two computers via different speed LAN HUB by using "Ping" instruction (1000 times)										
1000MBps LAN HUB			D-Link DGS-1008D							
100MBps LAN HUB			Accton Desktop-3005							
10MBps LAN HUB			SVEC FD916H							
On Board LAN1		Intel I217-LM Gigabit LAN					MAC Address		88-88-88-88-87-88	
On Board LAN2		Intel I211 Gigabit LAN					MAC Address		12-34-56-78-90-12	
LAN Speed	Link / Speed LED	Active LED	LAN 1			LAN 2			Note	
			Pass	Fail	N/A	Pass	Fail	N/A		
1000MBps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
100MBps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
10MBps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Wake On LAN			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	S3/S4/S5/DOS off	
Boot ROM to Novell 4.11 [RPL]			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
LAN Boot (PXE)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Internet Browser (DHCP Server)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
POE LAN_IP Camera			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test under Win7_32 Etrouision EV8782Q-BD 3MP Bullet Camera	

2.3.2. Throughput Test

DUT Platform Information:

<input type="checkbox"/>	Fedora 15
<input checked="" type="checkbox"/>	Cent 5.6 2.6.18-238.el5 PAE (OS install to 2.5" HDD)
<input type="checkbox"/>	Ubuntu 10.1
<input type="checkbox"/>	Red Hat

Note : Connection-Level Performance (Interaction Constants Duration Time Set to 60 Sec.)

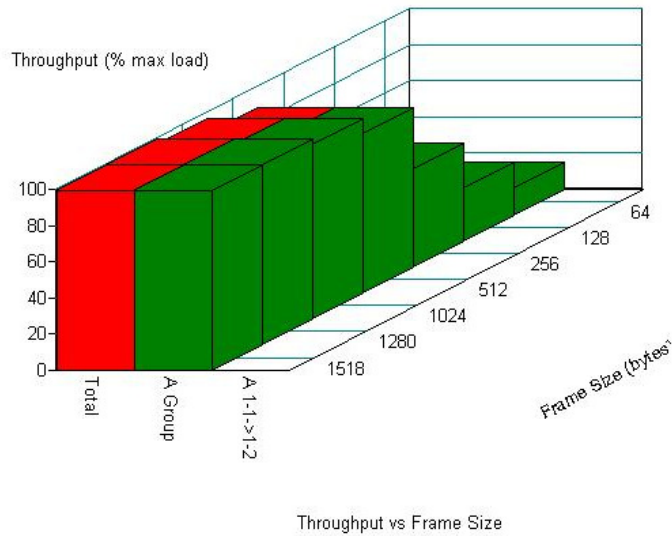
Graphics Media	Cent OS5.6 default setting
LAN	LAN1 → Intel I211 Gigabit LAN <Intel Pro/1000 Network Driver igb-5.0.6.tar.gz
	LAN2 → Intel I217-LM Gigabit LAN <Intel Pro/1000 Network Driver e1000e-2.3.2.tar.gz
Audio Driver	Cent OS5.6 default setting

SMB Platform Information:

Chassis	SPIRENT Smartbits 600B
Chassis Version	2.80.003 (Cur) 2.50.000
Chassis Serial #	06014047
Library	6.00-29
API	5.50.42.01
File	0550042
Module	2 * LAN-3324A SmartMetrics XD 4-Port 10/100/1000Base-T Gigabit Ethernet
Test Software	SmartFlow5.50.42.1

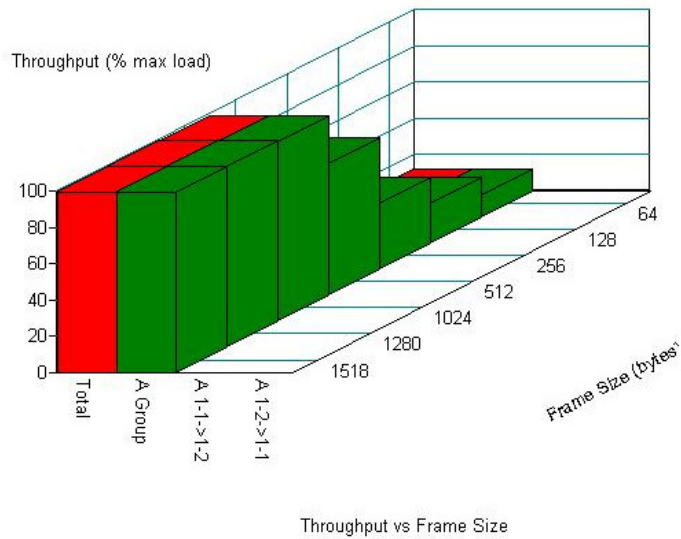
Test Result:

1. Half Direction (LAN1: Intel I211 Gigabit LAN → LAN2: Intel I217-LM Gigabit LAN)



<u>Name/Frame size</u>	<u>64</u>	<u>128</u>	<u>256</u>	<u>512</u>	<u>1024</u>	<u>1280</u>	<u>1518</u>
Total	14.921875	28.84375	53.59375	87.625	96.1328125	99.2265625	99.2265625
A Group	14.921875	28.84375	53.59375	87.625	96.1328125	99.2265625	99.2265625
A 1-1->1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2. Binary Direction (LAN1: Intel I211 Gigabit LAN → LAN2: Intel I217-LM Gigabit LAN)



<u>Name/Frame size</u>	<u>64</u>	<u>128</u>	<u>256</u>	<u>512</u>	<u>1024</u>	<u>1280</u>	<u>1518</u>
Total	11.828125	21.109375	35.8046875	72.15625	98.453125	99.2265625	99.2265625
A Group	11.828125	21.109375	35.8046875	72.15625	98.453125	99.2265625	99.2265625
A 1-1->1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A 1-2->1-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2.4. Jumper and Connector Function Test

Function Test		Result			Note
		Pass	Fail	N/A	
JP1	AUTO POWER BUTTOM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CMOS	Clear CMOS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB2		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB3		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB4		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM2		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3. Integration Test

Hardware Information with Windows 7 Ultimate English SP1 32 Bit Driver Version	
CPU	Intel® Core™ i7-4770S Processor(8M Cache, 3.1GHz, up to 3.90 GHz)65W (ES)
Memory	Transcend DDR3 1600 8GB SEC K4B4G0846B-HYK0 InnoDisk DDR3 1600 8GB Hynix H5TQ4G83MFR-PBC
HDD	Toshiba MK3261GSYN 2.5" 320GB/5200rpm WD WD500AKX SATAIII 3.5" 500GB/7200rpm Seagate ST500DM002 SATAIII 3.5" 500GB/7200rpm
Chipset Information with Windows 7 Ultimate English SP1 32 Bit Driver Version	
Chipset Software	Intel Chipset Device Software / 10.0.14 (3/26/2014)
PCH Bridge	Intel Q87
Super IO Chipset	ITE IT8728F
VGA Chipset	Intel HD Graphics 4600 / 10.18.10.3574 (4/24/2014)
Audio Chipset	Intel Display Audio 6.16.0.3137 (2/21/2014) Realtek High Definition Audio 6.0.1.7083 (11/5/2013)
LAN1 Chipset	Intel Ethernet Connection I217-LM / 12.11.96.1 (3/14/2014)
LAN2 Chipset	Intel I211 Gigabit Network Connection / 12.11.97.0 (3/11/2014)

3.1. USB Port Integration Test

Item	USB Port	Boot			Function(Win 7)			Note
		Pass	Fail	N/A	Pass	Fail	N/A	
USB HDD		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB FDD Mitsumi D353GUE		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Iomega DVDRW8X-U		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Buffalo BRXL-PC6U2 USB2.0		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Hub Test (Connect USB Device) HUB Port1: USB Keyboard / HUB Port2: USB Mouse / HUB Port3: USB HDD								
USB 2.0 HUB PowerSync / USB 2.0 4 Port HU-155					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3.2. Digital I/O Port Test

DIO Address (___)	Result			Note
	Pass	Fail	N/A	
DIO VCC +5V	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

3.3. COM Port Integration Test

Test Item	Result			Note
	Pass	Fail	N/A	
Serial Modem Dial Out	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COM1/2
Serial Modem Ring In	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test by Modem <S3/S4/S5/DOS off>
Serial Modem +12V	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test by Multimeter
Serial Modem +5V	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test by Multimeter

3.4. RS-422 / RS-485 Test

Test Item	Result			Note
	Pass	Fail	N/A	
RS-422 for COM2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Use loopback and WINSSD.exe to test RS-422 in Windows
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The communication between the RS-422 port of two boards is linked by one 1.2km cable on Windows Terminal
RS-485 for COM2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Use ICP CON I-7044D D/IO Module in Windows(Support Auto flow control)
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The communication between the RS-485 port of two boards is linked by one 1200m cable on Windows Terminal

3.5. LPT Port Test

Test Item	Result			Note
	Pass	Fail	N/A	
XEROX Phaser 3124 Laser Printer	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

3.6. Burn In Test

Under Room Temperature: 26 °C

OS: Windows 7 Ultimate English SP1

Test Item	Result			Note	
	Pass	Fail	N/A		
Burn In Test V7.1(1006) Duty: 100 Time: over 12 hours	CPU	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RAM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	COM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Video	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Disk	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Sound	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Network	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Parallel	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	USB	2.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Note: COM PORT Speed Set to 115200.

3.7. Memtest Test

Test Item	Result			Note
	Pass	Fail	N/A	
MemTest V5.01 over night test.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Transcend DDR3 1333 8GB SEC K4B4G0846B-HYK0 *4

4. Application Test

4.1. PCI-Express Function Test

PCI-Express x1 devices		Function Test			Note
		Pass	Fail	N/A	
SUNIX SATA1414 eSATA & SATAII x1Express card	4x slot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	GEN1
	16x slot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	GEN1
Intel GIGABIT CT DESKTOP ADAPTER	4x slot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	68-05-CA-02-61-C3
	16x slot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Uptech UTB230 / USB3.0	4x slot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	16x slot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DigiFusion PERTO2A RS232 & Parallel card.	4x slot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	16x slot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCI-Express x4 devices		Function Test			Note
		Pass	Fail	N/A	
Intel GIGABIT ET2 Quad Port Svr Adptr (E1G44ET2BLK)	4x slot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	16x slot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Intel Pro/1000 PF Dual Port	4x slot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	16x slot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCI-Express x16 devices		Function Test			Note
		Pass	Fail	N/A	
MSI RX1650-TD512E (ATI Chipset) PCI-Express x16 VGA Card		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
GIGABYTE GVR5670C-1GI (ATI Chipset) (ATI Chipset)PCI-Express x16 VGA Card		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ASUS GTX680-2GD5 GEN3 (ATI Chipset)PCI-Express x16 Graphics Card		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ASUS GT620-1GD3-L-V2 PCI-e2.0 (NVIDIA Chipset) PCI-Express x16 VGA Card		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bear Card	4X GEN2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	8X GEN2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	16X GEN2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

4.2. SSD Modules Compatibility Test

SSD HDD Compatibility Test:

Cable Type: IDE SATA2 MLC SLC

Test Item	Result			Note
	Pass	Fail	N/A	
Intel® SSD 520 Series (120GB, 2.5in SATA 6Gb/s, MLC)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Native SATA: Read<max>: 557MB/s Write<max>:514MB/s Extend SATA: Read<max>: 404MB/s Write<max>:384MB/s

5. Power Consumption Test

	Hardware Information with Windows 7 Ultimate English SP1 32 Bit Driver Version
CPU	Intel® Core™ i7-4770S Processor(8M Cache, 3.1GHz, up to 3.90 GHz)65W (ES)
Memory	Transcend DDR3 1600 8GB SEC K4B4G0846B-HYK0 InnoDisk DDR3 1600 8GB Hynix H5TQ4G83MFR-PBC
HDD	Toshiba MK3261GSYN 2.5" 320GB/5200rpm WD WD500AKX SATAIII 3.5" 500GB/7200rpm Seagate ST500DM002 SATAIII 3.5" 500GB/7200rpm

5.1. Power Consumption

Please refer to the "NVR-6300S Power Electronics Test Report" for power consumption test value.

5.2. PC Health Status

Test Point: The value between Actual Voltage and Voltage Monitor must be +/- 5%

Voltage Monitoring Test	Result			BIOS	Actual	Note
	Pass	Fail	N/A			
CPU Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	52°C	56°C	
System Temp 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	34°C	34°C	
CPU FAN Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1128 RPM	1121 RPM	
System Fan1 Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5314 RPM	5314 RPM	
System Fan2 Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5273 RPM	5273 RPM	
Vcore	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.740V	1.75V	
V_SM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.536V	1.53V	
(+) 12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.945V	11.89V	
(+) 5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.999V	5.04V	
(+) 5VSBV	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.992V	5.09V	
VBAT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.120V	3.05V	

6. Time Accuracy Test

6.1. System Clock & RTC Clock Test

Under Room Temperature: 26 °C

Function	Item	Time Interval	Margin for error	Actual	Result			Note
					Pass	Fail	N/A	
RTC Clock in Power On Mode		24 hrs	+/-2 sec	-2 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RTC Clock in Power Off Mode		24 hrs	+/-2 sec	+0 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

6.2. Booting Timer Test

Installation	Actual		Note
System Booting Time	5	Sec	Press the Power Button till "Beep" Sound appears

6.3. Watchdog Timer Test

Use Function as below:

[] No Support. Hi-safe 20140120

Time-Out Interval	Margin for error	Actual	Result			Note
			Pass	Fail	N/A	
10 sec	+/- 10%	10 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
60 sec	+/- 10%	62 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
255 sec	+/- 10%	265 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Note : Under Room Temperature: 26°C / DOS Mode

7. O.S. Compatibility Test

7.1. English Fedora 19 – Kernel 3.9.5-301.fc19.i686.PAE

[] No Support

Driver Information:

Chipset Software	Fedora19 default
Graphics Media	Fedora19 default
Audio Driver	Fedora19 default
LAN Driver	Fedora19 default

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Fedora 19 – Kernel 3.9.5-301.fc19.i686.PAE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Type uname -a

Test Result:

Test Item	Result			Note
	Pass	Fail	N/A	
Display Function Test				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1080
DP -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1080
HDMI -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1080
VGA + HDMI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VGA + DP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DP+ HDMI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Network Function Test				
Connect to Internet – LAN 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Connect to Internet – LAN 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio Function Test				
Play Audio Function Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Play Audio Test
Base Function Test				
Mouse Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PS/2
Keyboard Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PS/2
Console Redirection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COM1/ COM 2
DVD-ROM Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 3.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
X Windows Application				
Start Button Office	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Office function
X-Window	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Startx – Desktop in Linux
Command Test On Text Mode: Attention Delay Phenomenon				
uname -a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show information
Shutdown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Init 0 or shutdown -h now or power off
Restart the Computer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Init 6 or shutdown -r now or reboot
Halt	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	System halted. (halt -p)
ls / clear; cd /dev /ls -l	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Command instruction

7.2. Windows 7 Ultimate English Version 32/64Bit

[X] x32 Driver Information:

Chipset Software	Intel Chipset Device Software / 10.0.14 (3/26/2014)
Graphics Media	Intel HD Graphics 4600 / 10.18.10.3574 (4/24/2014)
Audio Driver	Intel Display Audio 6.16.0.3137 (2/21/2014) Realtek High Definition Audio 6.0.1.7083 (11/5/2013)
LAN1 Driver	Intel Ethernet Connection I217-LM / 12.11.96.1 (3/14/2014)
LAN2 Driver	Intel I211 Gigabit Network Connection / 12.11.97.0 (3/11/2014)

[X] x64 Driver Information:

Chipset Software	Intel Chipset Device Software / 10.0.14 (3/26/2014)
Graphics Media	Intel HD Graphics 4600 10.18.10.3574 (4/24/2014)
Audio Driver	Intel Display Audio 6.16.0.3137 (2/21/2014) Realtek High Definition Audio 6.0.1.7083 (11/5/2013)
LAN1 Driver	Intel Ethernet Connection I217-LM 12.11.96.1 (3/14/2014)
LAN2 Driver	Intel I211 Gigabit Network Connection 12.11.97.0 (3/11/2014)

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows 7 Ultimate ACPI Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	32bit AHCI mode 64bit AHCI mode

Test Results:

Test Item	Result			Note
	Pass	Fail	N/A	
Single Display				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1080
DP -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2560*1440
HDMI -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1080
Boot - Windows 7 Ultimate Advanced Options Menu				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Basic Function Test				
PS/2 Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COM1/2
USB 3.0/2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	USB2.0*8/ USB3.0*4
TPM Function	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN Function Test				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio Function Test				
Line Out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Line In Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Microphone Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DP Line out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDMI Line out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Start Menu				
Log off User	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shut down (S5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Standby(S3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Restart	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hibernate (S4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

7.3. Windows 8.1 Pro English Version 32/64Bit

[X] x32 Driver Information:

Chipset Software	Intel Chipset Device Software / 10.0.14 (3/26/2014)
Graphics Media	Intel HD Graphics 4600 / 10.18.10.3574 (4/24/2014)
Audio Driver	Intel Display Audio / 6.16.0.3137 (2/21/2014)
	Realtek High Definition Audio / 6.0.1.7083 (11/5/2013)
LAN1 Driver	Intel Ethernet Connection I217-LM / 12.11.96.1 (3/14/2014)
LAN2 Driver	Intel I211 Gigabit Network Connection / 12.11.97.0 (3/11/2014)

[X] x64 Driver Information:

Chipset Software	Intel Chipset Device Software / 10.0.14 (3/26/2014)
Graphics Media	Intel HD Graphics 4600 / 10.18.10.3574 (4/24/2014)
Audio Driver	Intel Display Audio / 6.16.0.3137 (2/21/2014)
	Realtek High Definition Audio / 6.0.1.7083 (11/5/2013)
LAN1 Driver	Intel Ethernet Connection I217-LM / 12.11.96.1 (3/14/2014)
LAN2 Driver	Intel I211 Gigabit Network Connection / 12.11.97.0 (3/11/2014)

Install OS to SATA HDD Card:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows 8.1 Pro ACPI Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	32bit RAID1+0 64bit RAID5

Test Results:

Test Item	Result			Note
	Pass	Fail	N/A	
Single Display				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DP-- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDMI -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot - Windows 7 Ultimate Advanced Options Menu				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Basic Function Test				
PS/2 Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 2.0 / USB 3.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN Function Test				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio Function Test				
Line Out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Line In Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Microphone Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDMI Line Out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DP Line Out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Start Menu				
Log off User	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shut down (S5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Standby(S3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Restart	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hibernate (S4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8. BIOS Function Test

	Hardware Information with Windows 7 Ultimate English SP1 32 Bit Driver Version
CPU	Intel® Core™ i7-4770S Processor(8M Cache, 3.1GHz, up to 3.90 GHz)65W (ES)
Memory	Transcend DDR3 1600 8GB SEC K4B4G0846B-HYK0 InnoDisk DDR3 1600 8GB Hynix H5TQ4G83MFR-PBC
HDD	Toshiba MK3261GSYN 2.5" 320GB/5200rpm WD WD500AKX SATAIII 3.5" 500GB/7200rpm Seagate ST500DM002 SATAIII 3.5" 500GB/7200rpm

8.1. Advanced Test

Test Item	Result			Note		
	Pass	Fail	N/A			
ACPI settings	Suspend Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
	Sleeps state (S3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
S5 RTC Wake up	Wake system with Dynamic time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Wake system with fixed time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with 1min	
Trusted Computing	TPM SUPPORT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Clear TPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
CPU configuration	Hyper-threading	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
	Virtualization Technology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
	Turbo Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
	Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
SATA configuration	SATA controller	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
	AHCI mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	IDE mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	RAID mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
AMT Configuration	Intel AMT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/disable	
	Un-configure ME	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
PCH-FW Configuration	9.0.30.1482					
USB configuration	Legacy USB Support	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Super IO configuration	Serial port 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
	Serial port 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
Smart FAN Function	Smart FAN 1	Full Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6045rpm
		Manual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0~255 255 : 6045rpm; 127 : 2083rpm; 0 : 1138rpm
		Automatic mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Smart FAN 2	Full Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5373rpm
		Manual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0~255 255 : 4470rpm;127 : 2481rpm; 0 : 1136rpm
		Automatic mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Refer System temperature
	Smart FAN 3	Full Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5400rpm
		Manual	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0~255 255: 4470rpm;127: 2481rpm; 0:1136rpm
		Automatic mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.2. Chipset Test

Test Item			Result			Note
			Pass	Fail	N/A	
System Agent (SA) Configuration	Primary Display	Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		IGFX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		PEG	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Boot display	VBIOS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		CRT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		HDMI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		DP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Memory Configuration		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCIe 16x GEN speed		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with bear card	
PCH-IO Configuration	Power Mode	ATX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		AT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Restore AC Power Loss	Power on	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Power Off	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Last State	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	PCIe x2 port Speed		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with PCIe SATA1414 Test with bear card
Resume on Ring		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable /disable	

8.3. Boot Test

Test Item	Result			Note
	Pass	Fail	N/A	
Quiet Boot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Launch Intel I217LM PXE OpROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
Launch Intel WGI211AT PXE OpROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
Boot From Hard Disk	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot From CDROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot From USB HDD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot From USB Floppy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot from USB CD-ROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot from LAN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.4. CMOS Backup / Clear CMOS Test

Test Item	Result			Note
	Pass	Fail	N/A	
CMOS Backup	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Clear CMOS Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.5. AAEON Tag Check Utility

Test Item	Result			Note
	Pass	Fail	N/A	
Check AAEON BIOS OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AONCHECK.EXE

8.6. Supervisor / User Password Test

Test Item	Result			Note
	Pass	Fail	N/A	
Administrator Password	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
User Password	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.7. Hi-safe Test

Test Item	Result			Note	
	Pass	Fail	N/A		
Version(20140423)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
System Information	CPU Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Model Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Display Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RAM Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Support single DIMM
H/W Monitor	Info	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Fan Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Voltage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
WatchDog	10sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 10 sec
	1min	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 62 sec
	255sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 265 sec
	Auto Reload	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SMBus	SMBus IO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SMBus Address 0xF040
	Read Byte	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Slave Address A0h,A2h,A4h
	Read Word	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Result / Read	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Smart FAN	Chipset	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Fan Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CPU, SYS, SYS2
	Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Speed control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Off Speed TMP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Full Speed TMP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.8. Hi-Manager Test

Test Item	Result			Note	
	Pass	Fail	N/A		
Version(20130925)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Power control	Power on	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Power off	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Reset	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Power on from G3 state	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Group Management	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Event log	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Alarm Clock	Set Alarm Time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Recurring Alarm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Remote Recovery	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
KVM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with i7-4770T	
Schedule	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

8.9. IAMT Test

Test Item	Result			Note
	Pass	Fail	N/A	
Link: http://192.168.0.253:16992/	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power on	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power off	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Reset	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power on from G3 state	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
KVM function	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

9. Performance Test

Hardware Information with Windows 7 Ultimate English Version 32 Bit Driver Version	
CPU	Intel® Core™ i7-4770S Processor(8M Cache, 3.1GHz, up to 3.90 GHz)65W (ES)
Memory	Transcend DDR3 1600 8GB SEC K4B4G0846B-HYK0 InnoDisk DDR3 1600 8GB Hynix H5TQ4G83MFR-PBC
SATA HDD	Toshiba MK3261GSYN 2.5" 320GB/5200rpm WD WD500AKX SATAIII 3.5" 500GB/7200rpm Seagate ST500DM002 SATAIII 3.5" 500GB/7200rpm

9-1. Performance Test

Test Result: (Display set 1920*1080 test)

Testing Software	Scope	Note
PCMark2005		Windows 7
PCMark	13618	PCMarks
CPU	14178	
Memory	11471	
Graphics	9819	
HDD	8592	
Benchmark (B)	-	
Average Efficiency	-	
PCMark 7		
PCMarks	3736	PCMarks
Benchmark (B)	-	
Average Efficiency	-	
PCMark Vantage		
PCMarks	9440	PCMarks
Memories	5541	
TV and Movies	6008	
Gaming	6785	
Music	7861	
Communications	12196	
Productivity	7628	
HDD	3707	
Benchmark (B)	-	
Average Efficiency	-	

Testing Software	Scope	Note
CPUmark99		Windows 7
CPU mark99	676	

Testing Software	Scope	Note
3Dmark2006 v120		Windows 7
3Dmark Score	6548	
SM2.0 Score	2264	
HDR/SM3.0 Score	2458	
CPU Score	6894	

Benchmark (B)	-	
Average Efficiency	-	

3Dmark Vantage		Windows 7
3DMark Score	P5917	
GPU Score	4734	
CPU Score	23603	
3Dmark11 Professional Edition		Windows 7
Extreme 1920*1080		
3Dmark 11Score	X379	
Graphics Score	334	
Physics Score	7201	
Combined Score	439	
Performance 1280*720		
3Dmark 11Score	P1425	
Graphics Score	1233	
Physics Score	7170	
Combined Score	1385	
Entry 1024*600		
3Dmark 11Score	E2287	
Graphics Score	2013	
Physics Score	6893	
Combined Score	1654	

Testing Software	Scope	Note
Final Reality V1.01—BenchMark Test		Windows 7
2D image	59.5	Reality marks
3D	7.55	
Bus transfer	56.76	
Overall	30.52	
Benchmark (A)	-	

Testing Software	Scope	Note
Performance Test 7.0		
PassMark Rating	2077.8	
CPU Mark	8334.5	
2D Graphics Mark	446.8	
3D Graphics Mark	754.1	
Memory Mark	1414.1	
Disk Mark	1128.9	

Testing Software	Scope	Note
Windows experience index		Windows 7
Processor	7.6	
Memory	7.8	
Graphics	6.7	

Gaming graphics	6.7	
Primary hard disk	5.9	

SATA Performance				
SATA HDD	Toshiba MK3261GSYN 2.5" 320GB/5200rpm			
CPU	Intel® Core™ i7-4770S Processor(8M Cache, 3.1GHz, up to 3.90 GHz)65W (ES)			
Memory	Transcend DDR3 1600 8GB SEC K4B4G0846B-HYK0 InnoDisk DDR3 1600 8GB Hynix H5TQ4G83MFR-PBC			
OS	Windows 7 Ultimate SP1 English Version 32 Bit			
Item	Comment / (unit)	Software	Score	Note
Single HDD (SATA port 1~6) SATAIII <Native>	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	16.5ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	2%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	73.3MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	221.2MB/s	SATAII 150~300MB SATAIII up 300M/B

SATA Performance				
SATA HDD	WD WD3200AAKX 3.5" 320GB			
CPU	Intel® Core™ i7-4770S Processor(8M Cache, 3.1GHz, up to 3.90 GHz)65W (ES)			
Memory	Transcend DDR3 1600 8GB SEC K4B4G0846B-HYK0 InnoDisk DDR3 1600 8GB Hynix H5TQ4G83MFR-PBC			
OS	Windows 7 Ultimate SP1 English Version 32 Bit			
Item	Comment / (unit)	Software	Score	Note
Single HDD (SATA port 1~6) SATAIII <Native>	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	15.3ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	1%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	91.2MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	346.7MB/s	SATAII 150~300MB SATAIII up 300M/B
Single HDD (SATA port CN1~8) SATAIII<ASM1061>	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	15.1ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	2%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	91.3MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	277.4MB/s	SATAII 150~300MB SATAIII up 300M/B

SATA Performance				
SATA HDD	Seagate ST500DM002 SATAIII 3.5" 500GB/7200rpm			
CPU	Intel® Core™ i7-4770S Processor(8M Cache, 3.1GHz, up to 3.90 GHz)65W (ES)			
Memory	Transcend DDR3 1600 8GB SEC K4B4G0846B-HYK0 InnoDisk DDR3 1600 8GB Hynix H5TQ4G83MFR-PBC			
OS	Windows 7 Ultimate SP1 English Version 32 Bit			
Item	Comment / (unit)	Software	Score	Note
Single HDD (SATA port 1~6)	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	15.8ms	

SATAIII <Native>	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	2%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	116.1MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	284.4 B/s	SATAII 150~300MB SATAIII up 300M/B
Single HDD (SATA port CN1~8) SATAIII<ASM1061>	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	15.9ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	3%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	120.8MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	238.1MB/s	SATAII 150~300MB SATAIII up 300M/B

USB2.0 Performance

USB Flash	Kingston DT Ultimate G2 32GB			
Item	Comment / (unit)	Software	Transfer Rate (MB/s)	Note
USB2.0	Maximum Read	ATTO Disk Benchmark	45MB/s	
	Maximum Write	ATTO Disk Benchmark	28MB/s	

USB3.0 Performance

USB Flash	Kingston DT Ultimate G2 32GB			
Item	Comment / (unit)	Software	Transfer Rate (MB/s)	Note
USB3.0	Maximum Read	ATTO Disk Benchmark	125MB/s	
	Maximum Write	ATTO Disk Benchmark	73MB/s	

10. Hardware Test

10.1. CPU Compatibility Test

CPU Information	Result			Note
	Pass	Fail	N/A	
Intel® Core™ i7-4770S Processor(8M Cache, 3.1GHz, up to 3.90 GHz)65W(ES)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MemTest, Boot, Install OS

10.2. Memory Compatibility Test

Memory Information	MEM V5.01			Note
	Pass	Fail	N/A	
Transcend DDR3 1600 8GB SEC K4B4G0846B-HYK0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*2 / *4
InnoDisk DDR3 1600 8GB Hynix H5TQ4G83MFR-PBC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*2

10.3. SATA Compatibility Test

10.3.1 SATA-IDE Mode Test

SATA IDE Mode		Result			Note
		Pass	Fail	N/A	
HDD	Seagate ST500DM002 SATAIII 3.5" 500GB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	Toshiba MK3261GSYN 2.5" 320GB/5200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows7
HDD	WD WD3200AAKX 3.5" 320GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fedora19
SATA DOM	Innodisk SATADOM-SV 3ME series16GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SATA DOM	Innodisk SATADOM D150SV 4GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DVD	Slim DVD RW	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

10.3.2 Onboard SATA-AHCI Mode Test

SATA AHCI Test		Result			Note
		Pass	Fail	N/A	
Toshiba MK3261GSYN 2.5" 320GB/5200rpm		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Seagate ST500DM002 SATAIII 3.5" 500GB/7200rpm		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
WD WD500AKX SATAIII 3.5" 500GB/7200rpm		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Intel SSDSC2CW120A3 / 120GB		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transcend SSD TS16GSSD25S-S / 16GB		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Slim DVD RW		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

10.3.3 Onboard SATA-RAID Mode Test

SATA RAID Test		Result			Note
		Pass	Fail	N/A	
RAID-0 (HDDx2) Striping/Span Test	WD WD3200AAKX 3.5" 320GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Win7_32
	WD WD3200AAKX 3.5" 320GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RAID-1 (HDDx2) Mirror Test	WD WD3200AAKX 3.5" 320GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Win7_64
	WD WD3200AAKX 3.5" 320GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RAID-5 (HDDx3) Striping/Span Test Rotation Parity	WD WD3200AAKX 3.5" 320GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Win8_64
	WD WD3200AAKX 3.5" 320GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	WD WD3200AAKX 3.5" 320GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RAID-10 (HDDx4) Striping/Span Test Mirroring	WD WD3200AAKX 3.5" 320GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Win8_32
	WD WD3200AAKX 3.5" 320GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	WD WD3200AAKX 3.5" 320GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	WD WD3200AAKX 3.5" 320GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

10.4. Keyboard/Mouse Compatibility Test

Keyboard/mouse Information		Result			Note
		Pass	Fail	N/A	
PS/2 Keyboard	ASUS PK1100	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PS/2 Mouse	Logitech M-S43	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Keyboard	Microsoft 1366	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Mouse	Microsoft 1113	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

10.5. USB Compatibility Test

USB device Information		Result			Note
		Pass	Fail	N/A	
DVD ROM	lomega DVDRW8X-U	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Blu-Ray	Buffalo BRXL-PC6U2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install Win
USB Flash	SanDisk USB2.0 8GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Flash	TDK Media Trans-It Drive USB2.0 Device 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	