

# AIS-E1

## Intel QM67 Advanced System Controller

### P5 Verification Test Report

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

Issue date	Approval	Test Engineer
2012/08/13	Tom Lin	Leo Liu

**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	

**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 will be updated when re-test completed in product next change version.

## Specification Verification

### Main Specification

Item	Specification	Result			Note
		Pass	Fail	N/A	
CPU	Socket G2 (rPGA988B) 2nd Generation for Intel® Core™ i7 / i5 / Celeron® QC / DC processors up to 45W Max	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System Memory	2 x 204-pin Dual Channel DDR3 1066/1333/1600 MHz SO-DIMM up to 16GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Non test DDR3-1600
Chipset	Intel® Sandy-Bridge + QM67	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ethernet	LAN1: Intel® PHY WG82579LN 10/100/1000Mb LANs, RJ-45 X1 LAN2: Realtek ALC 8111E 10/100/1000Mb LANs, RJ-45 X1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bios	AMI BIOS 64Mbit SPI ROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I/O Chip	ITE IT8728F	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Storage	Up to 4 x 2.5" HDD/SSD, 1 x Slim ODD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Optical ROM	Up to 1 x Slimm ODD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LED	Two indicators for Power and HDD in front panel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio	HD Audio Realtek ALC 892 Codec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Expansion	1 <sup>st</sup> slot_1 x PCI-E [x4], 1 x Mini-PCIe socket, 1 x CFast 2 x Antenna Hole	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Watchdog Timer	1~255 step by software programming	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
H/W Status Monitor	Monitoring system temperature, voltage, and cooling fan status	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power Supply	12V dc Power Adapter, 84W (Optional 120W power adaptor)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Weight	13.84lb (6.30kg)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Chassis Color	Dark blue	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dimension (W x H x D)	315mm(W) x 70mm(H) x 300mm(D)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial Port	1 x RS-232/422/485 supports 5/12V, Optional 5 x RS-232	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Universal Serial Bus	6 x USB 2.0 (2 on front panel, 4 with USB 2.0 connectors)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio	3 x Audio Jack ( Mic-in, Line-in, Line-out)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ethernet	2 x RJ45 w/ LED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Display	1 x D-sub, 1 x DVI-D, 1 x HDMI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power Switch	1 x ATX Power Switch	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### O.S. Support

Item	Specification	Result	Note
Microsoft Windows	Windows XP Professional English SP3 32 Bit	<input checked="" type="checkbox"/>	
	Windows XP Professional English SP1 64 Bit	<input checked="" type="checkbox"/>	

	Windows 7 English 32 Bit	<input checked="" type="checkbox"/>	
	Windows 7 English 64 Bit	<input checked="" type="checkbox"/>	
Linux	Linux Kernel 2.6.x or above	<input checked="" type="checkbox"/>	

**Environmental Specifications**

Item	Specification
Operating temperature	32~113°F (0~45°C)
Storage temperature	-4~140°F (-20~60°C)
Storage humidity	10~80%, non-condensing
Vibration	0.5G, 5~500Hz
Shock	15G with 11 m/sec
Drop	N/A
EMC	CE /FCC class A

**Note:** Please refer Environment Test Report for detail information

## Platform Information

Item	Device Information	Test Item
System Model/Version	AIS-E1 A1.0	1,2,3,4,5,6,7,8,9
CPU Board	EMB-QM67 A1.0	1,2,3,4,5,6,7,8,9
Carrier Board	N/A	1,2,3,4,5,6,7,8,9
BIOS / Version	AIS-E1 R0.2(05/02/2012)	1,2,3,4,5,6,7,8,9
CPU Type	Intel Core i7-2710QE 2.10GHz	1,2,3,4,5,6,7,8,9
Memory Type	INNODISK DDR3-1333 4GB(ELPIDA E5108AJBG-6E-E)*2	1,2,3,4,5,6,7,8,9
SATA HDD	WD 2.5" SATA2 160GB(WD1600BUDT)	1,2,3,4,5,6,7,8,9
SATA DVD-ROM	SONY Slimm ODD 8X(AD-7585H)	1,2,3,4,5,6,7,8,9
USB DVD-ROM	N/A	1,2,3,4,5,6,7,8,9
LCD Monitor	CHIMEI 22"(22SH-L)	1,2,3,4,5,6,7,8,9
LVDS	N/A	1,2,3,4,5,6,7,8,9
Compact Flash	N/A	1,2,3,4,5,6,7,8,9
Daughter Board	N/A	1,2,3,4,5,6,7,8,9
Expansion Board	PER-R27X A0.2	1,2,3,4,5,6,7,8,9
Operating System	<input checked="" type="checkbox"/> Ubuntu 10.10 Kernel 2.6.35-22	7-1
	<input checked="" type="checkbox"/> Windows 7 Ultimate 32/64Bit	7-2
	<input checked="" type="checkbox"/> Windows XP Professional English SP3 32 Bit	7-3
	<input checked="" type="checkbox"/> Windows XP Professional English SP1 64 Bit	7-3
Power Supply	ATX Power Supply: N/A	1,2,3,4,5,6,7,8,9
	AT Power Supply: N/A	1,2,3,4,5,6,7,8,9
	DC Adapter : FSP 12V/7A 84W(FSP084-DMAA1)	1,2,3,4,5,6,7,8,9
Battery Model	N/A	1,2,3,4,5,6,7,8,9
<b>Chipset Information with Windows 7 Ultimate English SP1 32 Bit Driver Version</b>		
Chipset Software	Intel Chipset Device Software 9.2.0.1025(02/28/2011)	
North Bridge	N/A	
South Bridge	QM67	
Super IO Chipset	ITE IT8728F	
VGA Chipset	Intel HD Graphics Family 8.15.10.2342(3/25/2011)	
Audio Chipset	Realtek High Definition Audio 6.0.1.6363(5/3/2011)	
Ethernet Chipset	Intel 82579LM Gigabit Network Connection 11.10.84.0(2/8/2011)	
	Realtek PCIe GBE Family Controller 7.43.321.2011(3/21/2011)	

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# 1. OSD Control Function Test

## 1.1. OSD Control Test

OSD Control Function	Function			Note
	Pass	Fail	N/A	
Auto	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
MENU	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
UP	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
DOWN	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
POWER	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
EXIT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

## 1.2. OSD - On Screen Display Test

OSD - On Screen Display	Function			Note
	Pass	Fail	N/A	
Input Source	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	OSD Control by system
PIP Enable	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Auto Tune	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Backlight	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Brightness	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Contrast	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Color	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Position	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Language	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Recall	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Save Exit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cancel Exit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

## 1.3. OSD Light Test

OSD Control Function	Function			Note
	Pass	Fail	N/A	
Power off	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Power on	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Stand by	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Into S1 / S3 and see light function

## 1.4. 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"/>	
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"/>	
DVD-ROM drive 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"/>	

1.5. 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 SP1 32 Bit Driver Version										
CPU	Intel Core i7-2710QE 2.10GHz									
Memory	INNODISK DDR3-1333 4GB(ELPIDA E5108AJBG-6E-E)*2									
HDD	WD 2.5" SATA2 160GB(WD1600BUDT)									
VGA	CHIMEI 22"(22SH-L)									
DVI	CHIMEI 22"(22SH-L)									
TV	N/A									
Color Quality	<input checked="" type="checkbox"/> 16bit <input type="checkbox"/> 24bit <input checked="" type="checkbox"/> 32bit									
Resolution	VGA			DVI			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 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"/>	
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"/>	
1184X666	<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"/>	
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X768	<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"/>	
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 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"/>	
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 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"/>	
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"/>	
1600X1050	<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 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"/>	
1792X1344	<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"/>	
1856X1392	<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"/>	
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 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"/>	
1920X1440	<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"/>	
2048X1536	<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"/>	
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 with Full Screen under POST screen and Text Mode.

### 2.1.2. Dual Output Function Test

Selection	Output	Result			Note
		Pass	Fail	N/A	
Dual Display Clone	VGA + DVI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dual Display Twin		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dual Display Clone	VGA + HDMI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dual Display Twin		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dual Display Clone	DVI + HDMI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dual Display Twin		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 is normal and it shows "Ghost Image" / "Flicker" or not

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

### 2.1.4. Video Resolution Test

LVDS Model	Result			Note
	Pass	Fail	N/A	
1_AUO G065VN01 V.0 / 6.5" / 640x480 / 18bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2_AUO G065VN01 V.0 / 6.5" / 640x480 / 24bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3_Data Image 7" / 800*480 / 18bit (16:9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4_AU G084SN05 V.3 / 8.4" / 800*600 / 18bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
5_AU B104SN02 V.0 / 10.4" / 800*600 / 18bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6_AUO G084SN05 v7 / 8.4" / 800*600 / 24bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7_AU G150XG01 V.0 / 15" / 1024*768 / 18bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
8_AU M150XN07 V.2 / 15" / 1024x768 / 24bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
9_Toshiba /12.1"/1280 x 768 x 18bit (16:9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
10_AU M170EG01 V.D/ 17" / 1280*1024 / 48bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
11_AU M170XW01 V.1 / 17" / 1280x768 / 24bit (16:9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
12_AUO T260XW02 / 26" / 1366x768 / 24bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
13_AU M201UN02 V.5 / 20.1" / 1600x1200x48bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
14_AUO T370HW01 / 37" / 1920x1080 / 48bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
15_AUO M190PW01 V0 / 19"/1440X900/48 bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	
CD_In	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Line In	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MICROPHONE	<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"/>	
S/P DIF function Test	Input	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	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 82579LM Gigabit Network						MAC Address	88-88-88-88-87-88		
On Board LAN2	Realtek PCIe GBE Family						MAC Address	00-E0-4C-68-00-10		
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"/>		
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"/>		

### 2.3.2. Throughput Test

DUT Platform Information:

<input type="checkbox"/>	<b>Fedora 13</b>
<input type="checkbox"/>	<b>Cent 5.5</b>
<input checked="" type="checkbox"/>	<b>Ubuntu 10.10</b> Kernel 2.6.27
<input type="checkbox"/>	<b>Red Hat</b>

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

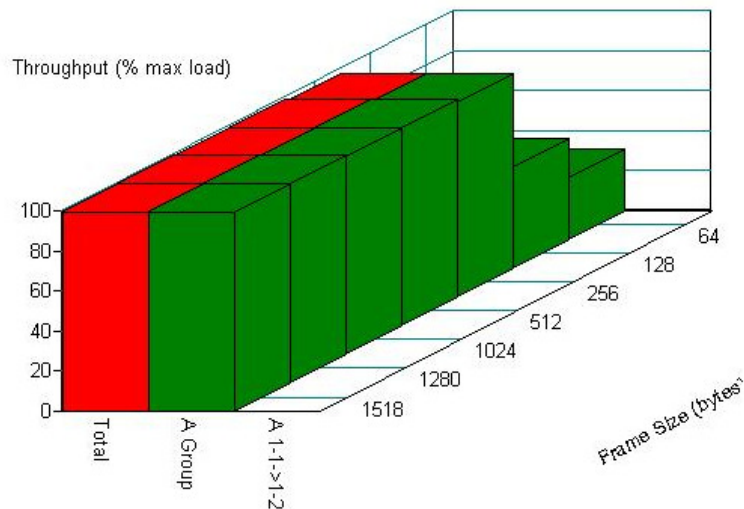
Graphics Media	Ubuntu Default setting
LAN	LAN1 → Intel 82579LM: 1.3.10a
	LAN2 → Realtek 8111E: 8.023.00
Audio Driver	Ubuntu Default setting

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:

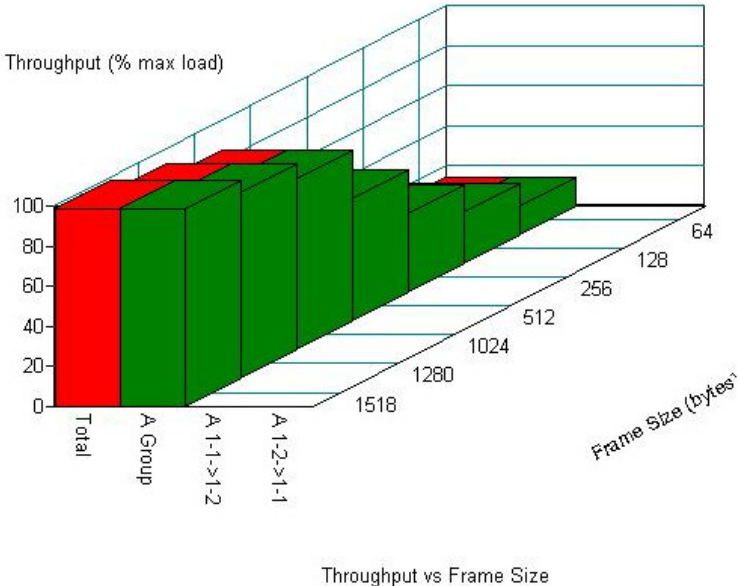
- Half Direction (LAN1: Intel 82579LM 10/100/1G Ethernet → LAN2: Realtek 8111E 10/100/1G Ethernet)



Throughput vs Frame Size

<u>Name/FrameSize</u>	<u>64</u>	<u>128</u>	<u>256</u>	<u>512</u>	<u>1024</u>	<u>1280</u>	<u>1518</u>
<b>Total</b>	30.390625	49.7265625	96.90625	98.453125	98.453125	99.2265625	99.2265625
<b>A Group</b>	30.390625	49.7265625	96.90625	98.453125	98.453125	99.2265625	99.2265625
<b>A 1-1-&gt;1-2</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2. Binary Direction (LAN1: Intel 82579LM 10/100/1G Ethernet → LAN2: Realtek 8111E 10/100/1G Ethernet)



<u>Name/Framesize</u>	<u>64</u>	<u>128</u>	<u>256</u>	<u>512</u>	<u>1024</u>	<u>1280</u>	<u>1518</u>
<b>Total</b>	14.1484375	24.9765625	38.8984375	60.5546875	84.53125	92.265625	98.453125
<b>A Group</b>	14.1484375	24.9765625	38.8984375	60.5546875	84.53125	92.265625	98.453125
<b>A 1-1-&gt;1-2</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>A 1-2-&gt;1-1</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2.4. Optional Function Test

[ ] No Support

Function Test	Result			Note
	Pass	Fail	N/A	
3G Module ( )	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
GPS ( )	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Wireless LAN ( )	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bluetooth ( )	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

### 3. Integration Test

Hardware Information with Windows 7 Ultimate English SP1 32 Bit Driver Version	
CPU	Intel Core i7-2710QE 2.10GHz
Memory	INNODISK DDR3-1333 4GB(ELPIDA E5108AJBG-6E-E)*2
HDD	WD 2.5" SATA2 160GB(WD1600BUDT)
Chipset Information with Windows 7 Ultimate English SP1 32 Bit Driver Version	
Chipset Software	Intel Chipset Device Software 9.2.0.1025(02/28/2011)
North Bridge	N/A
South Bridge	QM67
Super IO Chipset	ITE IT8728F
VGA Chipset	Intel HD Graphics Family 8.15.10.2342(3/25/2011)
Audio Chipset	Realtek High Definition Audio 6.0.1.6363(5/3/2011)
Ethernet Chipset	Intel 82579LM Gigabit Network Connection 11.10.84.0(2/8/2011) Realtek PCIe GBE Family Controller 7.43.321.2011(3/21/2011)

#### 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"/>	
SONY USB2.0 DVD-R/W DRX-830UL		<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"/>	
Serial Modem Ring In	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test by Modem
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use loopback and WINSSD.exe to test RS-422 in Windows
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The communication between the RS-485 port of two boards is linked by one 100m 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

Test Item	Result			Note
	Pass	Fail	N/A	
BurnIn Test V7.0 Pro	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows 7 Ultimate English SP1 32 Bit

Note: COM PORT Speed Set to 115200.

## 4. Application Test

### 4.1. PCI Slot Function (PCI Adapter Card) Test

Adapter VGA Card	Set Simultaneous Display and Reboot			Note
	Pass	Fail	N/A	
CHAINTECH NVIDIA GeForce4 MX440-8X	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Adapter Sound Card	Play Sound			Note
	Pass	Fail	N/A	
Creative Sound BLASTER Live5.1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Adapter SCSI Card	Copy files to SCSI HDD			Note
	Pass	Fail	N/A	
ADAPTEC Ultra160 SCSI ASC-29160	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Adapter Image Capture Card	Connect to CCD			Note
	Pass	Fail	N/A	
I-VIEW CP-1400AS (with Age STD-477FAI CCD)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Adapter LAN Card	Connect to Internet			Note
	Pass	Fail	N/A	
Intel GD82559 10/100 Mbps Fast Ethernet Adapter	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
INTEL PWLA8391GTBLK Pro/1000 Giga LAN Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Adapter RAID Card	RAID 0 , 1 , 10 Function Test			Note
	Pass	Fail	N/A	
ADAPTEC 1420SA RoHS 4-Port SATA II RAID	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

### 4.2. PCI-Express Function Test

PCI-Express x1	Function Test			Note
	Pass	Fail	N/A	
SUNIX SATA1414 eSATA & SATAII x1Express card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sysconnect SK-9E21D 10 /100/1000 Base-T Adapter PCI-Express x1 LAN Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
PCI-Express x4	Function Test			Note
	Pass	Fail	N/A	
Adaptec AAR-1430SA SATAII HostRAID Controllers PCI-Express x4 RAID Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
PCI-Express x16	Function Test			Note
	Pass	Fail	N/A	
ASUS EAX1600PRO/TD/256M/A (ATI Chipset) PCI-Express x16 VGA Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
WINFAST PX6200 TC TDH PCI-Express x16 VGA Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Express card	Function Test			Note
	Pass	Fail	N/A	
SUNIX SATA II Express card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SunBox 34mm Giga LAN Express Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Mini PCI Express Card	Function Test			Note
	Pass	Fail	N/A	
Ralink RT2571WF WLAN Mini Card (USB Interface)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sil3132 Mini PCI-E Function Test Card (USB Interface)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	



### 4.3. Mini PCI Card Compatibility Test

Device Item	Function Test			Note
	Pass	Fail	N/A	
Mini PCI.10/100 Base-Tx LAN (W/Intel.82551QM .A1.0) (Model:PER-C10L)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
GM-101 WLAN 11b/g 54Mbps Mini PCI Card (Model: VNT6655AM)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
ADLINK mPCI-8750 ATI Rage XL Mini PCI VGA Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

### 4.4. CardBus (PCMCIA) Compatibility Function Test

Device Item	Bit	Function Test			Note
		Pass	Fail	N/A	
Intel PRO/Wireless 2011B LAN PC Card (WPC2011BWW)	Slot 1 (Up)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[PC-200200]
	Slot 2 (Down)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Kingston datapack DP-PCM2 / 2GB (PC Card TypeII HDD)	Slot 1 (Up)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[PC-200201]
	Slot 2 (Down)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
PCi GW-NS54SG Cardbus Adapter Wireless LAN Type-II	Slot 1 (Up)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[PC-200502]
	Slot 2 (Down)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
PCi GW-NS54SG Cardbus Adapter Wireless LAN Type-II	Slot 2 (Down)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[PC-200502]

### 4.5. ISA Slot Function Test

Test Item	Result	Note
SCSI Card Adaptec AHA-1520B SCSI Card	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	[SS-002]
LAN Card NE2000 Compatible LAN Card (RTL8019AS)	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	[NW-014]
VGA Card CIRRUS LOGIC 5429 FCC ID:ICUVGA-GWV27A	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	[VC-008]

### 4.6. Adapter Compatibility- Industry Control Card PC/104, PC/104+, PCI-104

#### 4.6.1. Device List: PC/104 Module

Test Item	Result			Note
	Pass	Fail	N/A	
AAEON PCM-3660	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

#### 4.6.2. Device List: PC/104+ Module

Test Item	Result			Note
	Pass	Fail	N/A	
AAEON PCM-3430	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

#### 4.6.3. Device List: PCI-104 Module

Test Item	Result			Note
	Pass	Fail	N/A	
AAEON PCM-3730	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

#### 4.6.4. Device List: PCI/104 Express Module

Test Item	Result			Note
	Pass	Fail	N/A	
AAEON PER-123	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

#### 4.7. SSD Modules Compatibility Test

SSD HDD Compatibility Test:

Cable Type:  IDE  SATA2  MLC  SLC

Test Item	Result			Note
	Pass	Fail	N/A	
Transcend SSD 16G - TS16GSSD25S	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

#### 4.8. Peripheral Compatibility- Storage Device Test

##### 4.8.1. Disk on Chip (DOC) Test

Test Item		Result			Note
		Pass	Fail	N/A	
DOC 2000 Model	16MB	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	M-System / MD2200-D16
DOC 2000 Onboard Address	CC00	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	D000	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	D400	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	D800	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	DC00	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Disable	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

##### 4.8.2. Disk on module (DOM) Test

Test Item	Result			Note
	Pass	Fail	N/A	
Transcend / TS512MDOM40V / 512MB / IDE 40 Pin	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Transcend / TS512MDOM44V / 512MB / IDE 44 Pin	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

#### 4.9. Riser Card Function Test

Test Item		Result			Note
		Pass	Fail	N/A	
LAN		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
PCI Slot		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
PCI-e Slot(4X) PER-R27X(A 0.2)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	With intel(R)Gigabit ET2 Quad Svr Adptr(X 4)
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	With intel(R)PRO/1000 PF DUAL PORT (X 4)

		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adaptec AAR-1430SA SATAII HostRAID Controllers PCI-Express x4 RAID Card
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	With intel(R)Gigabit CT DDESKTOP ADAPTER(X 1)

## 5. Power Consumption Test

	Hardware Information with Windows 7 Ultimate English SP1 32 Bit Driver Version
<b>CPU</b>	Intel Core i7-2710QE 2.10GHz
<b>Memory</b>	INNODISK DDR3-1333 4GB(ELPIDA E5108AJBG-6E-E)*2
<b>HDD</b>	WD 2.5" SATA2 160GB(WD1600BUDT)

### 5.1. PC Health Status

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

Voltage Monitoring Test	Result			In Bios(V)	Note
	Pass	Fail	N/A		
+VCC_Core	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.092	
+V1.5_SYS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.500	
+V3.3S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.360	
VBAT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.360	
+V5S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.052	
+V12S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.904	
+VCC_GFXCORE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.456	
CPU Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	71 °C	
PCH Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	57°C	
System Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	47°C	
Fan 1 Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5720 RPM	
Fan 2 Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6192 RPM	

## 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	-1 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RTC Clock in Power Off Mode		24 hrs	+/-2 sec	-1 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 6.2. Booting Timer Test

Installation	Actual		Note
System Booting Time	4.2	Sec	Press the Power Button till "Beep" Sound appears

### 6.3. Watchdog Timer Test

Use Function as below: IT8712b.exe

[ ] No Support.

Time-Out Interval	Margin for error	Actual	Result			Note
			Pass	Fail	N/A	
10 sec	+/-2 sec	10.2 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
60 sec	+/-2 sec	60.2 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
255 sec	+/-2 sec	256.7 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 Ubuntu 10.10 – Kernel 2.6.35-22

[ ] No Support

Driver Information:

Chipset Software	System default
Graphics Media	System default
Audio Driver	System default
LAN Driver	Intel 82579LM Gigabit: 1.3.10a Realtek 8111E: 8.023.00

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Ubuntu 10.10 Kernel 2.6.35-22	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Type uname -a

Test Result:

Test Item	Result			Note
	Pass	Fail	N/A	
<b>Display Function Test</b>				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DVI -- 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"/>	
VGA + DVI	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
VGA + LVDS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
DVI + LVDS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Network Function Test</b>				
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"/>	
<b>Audio Function Test</b>				
Play Audio Function Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Play Audio Test
<b>Base Function Test</b>				
Mouse Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Keyboard Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Console Redirection	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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"/>	
<b>X Windows Application</b>				
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
<b>Command Test On Text Mode: Attention Delay Phenomenon</b>				
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
Restart the Computer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Init 6 or shutdown -r now
Halt	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Power Off Mode
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

No Support

x32 Driver Information:

Chipset Software	Intel(R) Chipset Device Software 9.2.0.1025(2011/2/28)
Graphics Media	Intel(R) HD Graphics Family 8.15.10.2342(2011/03/25)
Audio Driver	Realtek High Definition Audio 6.0.1.6363(2011/5/3)
LAN Driver	Intel(R) 82579LM Gigabit Network Connection 11.10.84.0(2011/02/08)
	Realtek PCIe GBE Family Controller 7.43.321.2011 (2011/3/21)

No Support

x64 Driver Information:

Chipset Software	Intel® Chipset Device Software:9.1.1.1023(11/02/2009)
Graphics Media	Intel®GMA 3600 Series 8.15.8.1995(11/6/2009)
Audio Driver	Realtek High Definition Audio 6.0.1.6363(2011/5/3)
LAN Driver	Intel(R)82577LM Gigabit Network Connection 11.2.19.0(2009/09/23)
	Intel(R)82574L Gigabit Network Connection 11.0.103.0(2009/07/14)

### 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"/>	

### Test Results:

Test Item	Result			Note
	Pass	Fail	N/A	
<b>Single Display</b>				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DVI-- 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"/>	
<b>Boot - Windows 7 Ultimate Advanced Options Menu</b>				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Basic Function Test</b>				
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"/>	
LPT1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>LAN Function Test</b>				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Audio Function Test</b>				
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"/>	
S/PDIF Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Start Menu</b>				
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	<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 XP Professional English Version 32/64Bit

[ ] No Support

[X] x32 Driver Information:

Chipset Software	Intel(R) Chipset Device Software 9.2.0.1025(2011/2/28)
Graphics Media	Intel(R) HD Graphics Family 6.14.10.5313(2010/11/11)
Audio Driver	Realtek High Definition Audio 5.10.0.6363(2011/5/3)
LAN Driver	Intel(R) 82579LM Gigabit Network Connection 11.10.84.0(2011/02/08) Realtek RTL 8111E 5.728.114.2011(2011/1/14)

[ ] No Support

[X] x64 Driver Information:

Chipset Software	Intel(R) Chipset Device Software 9.2.0.1025(2011/2/28)
Graphics Media	Intel(R) HD Graphics Family 6.14.10.5313(2010/11/11)
Audio Driver	Realtek High Definition Audio 5.10.0.6363(2011/5/3)
LAN Driver	Intel(R) 82579LM Gigabit Network Connection 11.10.84.0(2011/02/08) Realtek RTL 8111E 5.728.114.2011(2011/1/14)

#### Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows XP Professional ACPI Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

#### Test Results:

Test Item	Result			Note
	Pass	Fail	N/A	
<b>Single Display</b>				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DVI-- 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"/>	
<b>Boot - Windows XP Professional Advanced Options Menu</b>				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Basic Function Test</b>				
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"/>	
LPT1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>LAN Function Test</b>				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Audio Function Test</b>				
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"/>	
S/PDIF Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Start Menu</b>				
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	<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
<b>CPU</b>	Intel® Core™ i7-2710QE Processor(6M Cache, 2.10 GHz)
<b>Memory</b>	INNODISK DDR3-1333 4GB X 2
<b>HDD</b>	WD1600BUDT-63DPZY0/ 2.5" SATA HDD / 160GB

### 8.1. Boot Sequence Test

Test Item	Result			Note
	Pass	Fail	N/A	
Floppy	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Hard Disk	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Removable (All Device Priority)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
CDROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB HDD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Floppy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB CD-ROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN [ Boot From LAN First ]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Check "Halt on" item – All error but K/B	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

### 8.2. Power Management Test

#### 8.2.1. APM Power Management Test

Test Item	Setting Test	Result			Note
		Pass	Fail	N/A	
Suspend Mode	Function Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Power Button	Delay 4 Sec	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Soft-Off By PWRBTN
Power Button	Instant-Off	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Soft-Off By PWRBTN

#### 8.2.2. ACPI Power Management Test

Test Item	Result			Note
	Pass	Fail	N/A	
Enable ACPI Auto Configuration	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
ACPI - S1 (POS)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Resume from PS/2 keyboard or mouse.
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Resume from USB keyboard or mouse.
ACPI - S3 (STR)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Suspend Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 8.3. Power On after Power Failure Test

Test Item	Result			Note
	Pass	Fail	N/A	
Off	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
On	Under Dos	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Under Windows(Normal Shutdown)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Under Windows(Abnormal Shutdown)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Last State	Under Dos	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Under Windows(Normal Shutdown)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Under Windows(Abnormal Shutdown)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### 8.4. 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

#### 8.5. TPM Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
No Change	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Clear	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Enable & Active	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Disable & Disactive	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Detect TPM device under Windows.

#### 8.6. IAMT Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
Remote Control: Turn power off	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Remote Control: Cycle power off and on	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Remote Control: Reset	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Remote Control after G3 state	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

#### 8.7. Supervisor / User Password Test

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

#### 8.8. CAN port Function Test

Basic Function Test					Note
Test Item	Interrupt: Polling or IRQ	Result			
		Pass	Fail	NA	
CAN1 transmits CAN2	CAN1:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	CAN2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
CAN2 transmits CAN1	CAN2:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	CAN1:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Note: Sets the interrupt for each port. Be sure that this setting matches the IRQ

## 9. Performance Test

Hardware Information with Windows 7 Ultimate English SP1 32 Bit Driver Version	
CPU	Intel® Core™ i7-2710QE Processor(6M Cache, 2.10 GHz)
Memory	INNODISK DDR3-1333 4GB X 2
HDD	WD1600BUDT-63DPZY0/ 2.5" SATA HDD / 160GB

### 9.1. Performance Test

Test Result: (Display set 1024\*768 test)

Testing Software	Scope		Note
	AAEON	Ref.	
<b>PCMark2005</b>			
PCMark	7680	-	PCMarks
CPU	10021	-	
Memory	8891	-	
Graphics	5087	-	
HDD	4437	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	
<b>PCMark Vantage</b>			
PCMark	6868	-	PCMarks
Memory	4002	-	
TV and Movies	5148	-	
Gaming	4849	-	
Music	5462	-	
Communications	8757	-	
Productivity	5180	-	
HDD	2625	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	
<b>PCMark2002</b>			
CPU	-	-	
Memory	46590	-	
HDD	2048	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	
<b>PCMark 7</b>			
Score	2514		
<b>Performance Test 7.0</b>			
PassMark Rating	1237.8		
CPU Mark	5686.7		
2D Graphics Mark	272.6		
Memory Mark	1053.4		
Disk Mark	472.3		

Testing Software	Scope		Note
	AAEON	Ref.	
<b>3Dmark2003 v360</b>			
3Dmark Score	10769		
CPU Score	1683		

<b>3Dmark505</b>		
3Dmark Score	8437	
CPU Score	18930	
<b>3Dmark2006v110</b>		
3Dmark Score	5401	-
CPU Score	5254	-
SM 2.0	1748	
HDR/SM 3.0	2166	

Testing Software	Scope		Note
	AAEON	Ref.	
<b>Final Reality V1.01—BenchMark Test</b>			
2D image	52.24	-	Reality marks
3D	5.50	-	
Bus transfer	24.77	-	
Overall	22.41	-	
Benchmark (A)	-		

9.2. Memory Test

Test Item	Result			Note
	Pass	Fail	N/A	
MEM v4.20 Overnight Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4GB X 2(DDR3-1333)