

Report NO: 14P010021

# BOXER-6614

## Fanless Embedded Controller

**with Intel® SOC Quad Core 1.83Ghz Processor N2930**  
**Intel® SOC Dual Core 1.58Ghz Processor N2807**

### 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
2014/12/10	Vincent Chen	Max Chang

## 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"> <li>1. Rename document : [System Level Product P2-P3 Verification Test Plan &amp; Report Template]</li> <li>2. Chapter3:Add RS422 1.2KM/115200bps transmission test</li> <li>3. Chapter3:BurninTest test add USB2.0/3.0.</li> <li>4. Chapter5: Modify power consumption test item.</li> <li>5. Chapter7: add Windows XP Professional English Version 32/64Bit and Windows 8 Pro English Version 32/64Bit test.</li> <li>6. Chapter8: Change BIOS format from Award to AMI and add Hi-Safe, Hi-Manager test item.</li> <li>7. Chapter9: Add SATA performance test and USB3.0 performance.</li> <li>8. Remove Chapter10: Other Tests.</li> </ol>	

**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	
Product Name	BOXER-6614	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Construction	Metal. Fe	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CPU Board	GENE-BT05	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Processor	On board Intel® Quad Core 1.83GHz SoC N2930(FCBGA1170) Or optional Dual Core 1.58GHz SoC N2807(FCBGA1170)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System Memory	204-pin DDR3(L) SODIMM x 1, Support DDR3(L) 1066/1333, Max 8GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Display Interface	DB-15 x 1 FOR VGA, HDMI x1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Storage	SATA 3.0Gb/s 2.5" HDD/SSD bay x 1 _A2/A2M CFast™ Slot x 1 (w/Cover protection)_A1/A2/A1M/A2M	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Network	Gigabit Ethernet, RJ-45 x 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Front I/O panel	USB typell x 2 for USB 2.0 Audio jack x 1 for Line-out CFast™ slot x 1 Power switch x 1 Power LED x 1, HDD LED x 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Rear I/O panel	DB-9 x 2 for RS-232 DB-9x 2 for RS-232/422/485 with 5/12V RJ-45 x 2 for 10/100/1000 base-T USB typell x 2 for USB 3.0 x1, USB 2.0 x1 DB-15 x1 for VGA HDMI x 1 3-pin terminal block x1 for DC9-30V in (A1M/A2M) Or DC Jack Locable for DC 12V in (A1/A2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Expansion	Full-size Mini Card(PCIe[x1]+USB) x 1 Half-size Mini Card(PCIe[x1]+USB) x 1 SIM Slot x1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Indicator	Front: Power LED x 1, Hard Disk Drive active LED x 1 Gigabit Lan: Link status x 2 Activte status x 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mounting	Desktop mount/Wall mount/Din Rail	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power Supply	ATX Power function (1) DC Input 12 V w/lock (AEC-6614-A1/A2) (2) DC Input 9-30V w/3-pin terminal block (AEC-6614-A1M/A2M)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## O.S. Support

Item	Specification	Result	Note
Microsoft Windows	Windows 7 32bit/64bit	☒	
	Windows 8/8.1 32bit/64bit	☒	
Linux	Fedora	☒	

## Environmental Specifications

Item	Specification
Operating temperature	-5°F ~ 131°F (-15°C ~ 55°C) - CFast -5°F ~ 140°F (-15°C ~ 60°C) – HDD According to IEC68-2-1,2,3,14,30
Storage temperature	-4° ~ 158° F (-20 ~ 70° C)
Storage humidity	5 ~ 90% @ 40C, non-condensing
Vibration	5g RMS / 5 ~ 500Hz / operation –CFast™ Card 1g RMS / 5~ 500Hz / operation – HDD
Shock	50G peak acceleration (11 ms duration) –CFast™ Card 20G peak acceleration (11 ms duration) – HDD
Drop	92cm (1 Corner, 3 Edge, 6 Surface)
EMC	CE / FCC class B (*Nice to have)

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

## Platform Information

Item	Device Information	Test Item
System Model / Version	BOXER-6614 A1.0	1,2,3,4,5,6,7,8,9
CPU Board	GENE-BT05 A1.0	1,2,3,4,5,6,7,8,9
Carrier Board	N/A	N/A
BIOS / Version	BOXER-6614 R1.0(B614AM10)12/05/2014)	1,2,3,4,5,6,7,8,9
EC / Version	N/A	N/A
CPU Type	Intel® Celeron® Processor N2930 (2M Cache, up to 2.16 GHz) Intel® Celeron® Processor N2807 (1M Cache, up to 2.16 GHz)	1,2,3,4,5,6,7,8,9
Memory Type	Innodisk DDR3L 1600 8GB (SEC 431 BYKO K4B4G0846D)	1,2,3,4,5,6,7,8,9
SATA HDD	TOSHIBA MK1060GSC 2.5" 100GB/4200rpm	1,2,3,4,5,6,7,8,9
SATA DVD-ROM	N/A	N/A
USB DVD-ROM	Pioneer DVR-XD11T	1,2,3,4,5,6,7,8,9
LCD Monitor	Dell U2713HM 1920*1200 ASUS PA238Q 23" 1920*1080 View Sonic VP2770-LED 1920*1200	1,2,3,4,5,6,7,8,9
Operating System	<input checked="" type="checkbox"/> Linux English Ubuntu14.04 Kernel 3.13.0 -24 -generic	7-1
	<input checked="" type="checkbox"/> Windows 7 Ultimate SP1 English Version 32/64 Bit	7-2
	<input checked="" type="checkbox"/> Windows 8.1 Enterprise English Version 32/64Bit	7-3
Power Supply	DC Adapter : FSP084-DMAA1 12V/7A	1,2,3,4,5,6,7,8,9
<b>Chipset Information with Windows 8.1 Enterprise English 64Bit Driver Version</b>		
Chipset Software	Intel Chipset Device Software 10.0 (04/24/2014)	
SOC Bridge	Intel® Bay Trail	
Super IO Chipset	Fintek F81866	
VGA Chipset	Intel HD Graphics 10.18.10.3740 (07/04/2014)	
Audio Chipset	Realtek High Definition Audio 6.0.1.7083 (11/05/2013)	
	Intel Display Audio 6.16.0.3145 (04/17/2014)	
Ethernet Chipset	Intel I211 Gigabit Network Connection 12.11.97.0 (03/11/2014)	

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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	
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"/>	
CD-ROM drive included	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	
CFast Card construction check	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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 8.1 Enterprise English 64Bit Driver Version										
CPU	Intel® Celeron® Processor N2930 (2M Cache, up to 2.16 GHz)									
Memory	Innodisk DDR3L 1600 8GB (SEC 431 BYKO K4B4G0846D)									
SATA HDD	TOSHIBA MK1060GSC 2.5" 100GB/4200rpm									
VGA	View Sonic VP2770-LED 1920*1200									
HDMI	ASUS PA238Q 23" 1920*1080									
LVDS	N/A									
Color Quality	<input checked="" type="checkbox"/> 16bit <input type="checkbox"/> 24bit <input checked="" type="checkbox"/> 32bit									
Resolution	VGA			HDMI			LVDS			Note
	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
800X600	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1152X864	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X600	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X720	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X800	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X1024	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1360X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1366X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1400X1050	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1600X900	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1600X1200	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1920X1200	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Dell 2410
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"/>	
2048X1152	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Dell 2713HM
EDID check	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	

### 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"/>	

### 2.1.4. 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"/>	
6_AUO G121XN01 V.07 / 12.1" / 800*600 / 18bit (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_AUO G121XN01 V.0 / 12" 1024*768 / 18bit (4:3)	<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 G185XW01 / 18" / 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"/>	
16_AUO M215HW03 V1 21" 1920/1080/48bit	<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"/>	
Line In	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Line in recorder	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
MICROPHONE	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Microphone recorder	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
HDMI 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			HP J4095A 24 Ports							
10MBps LAN HUB			SVEC FD916H							
OnBoard LAN1		Intel I211 Gigabit LAN					MAC Address		00-07-32-2D-8F-E8	
OnBoard LAN2		Intel I211 Gigabit LAN					MAC Address		00-07-32-2D-8F-E7	
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	
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"/>	Fedora Core 14 – Kernel
<input type="checkbox"/>	Cent OS5.6
<input checked="" type="checkbox"/>	Ubuntu 12.04
<input type="checkbox"/>	Red Hat

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

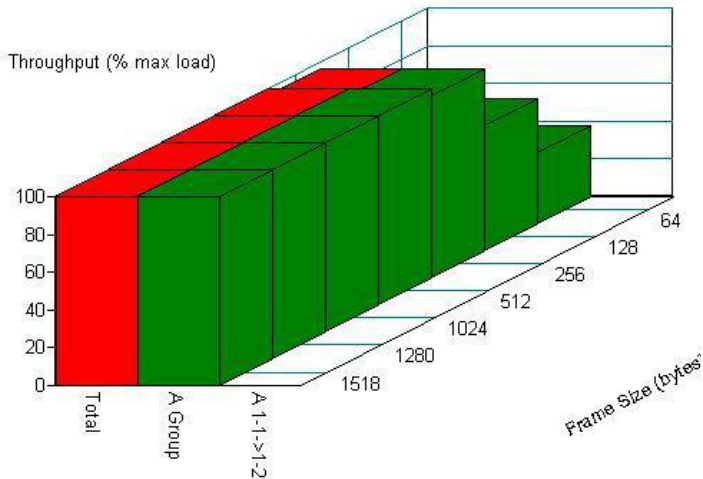
Graphics Media	Ubuntu12.04 Default setting
LAN	igb-4.1.2
Audio Driver	Ubuntu12.04 Default setting

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:

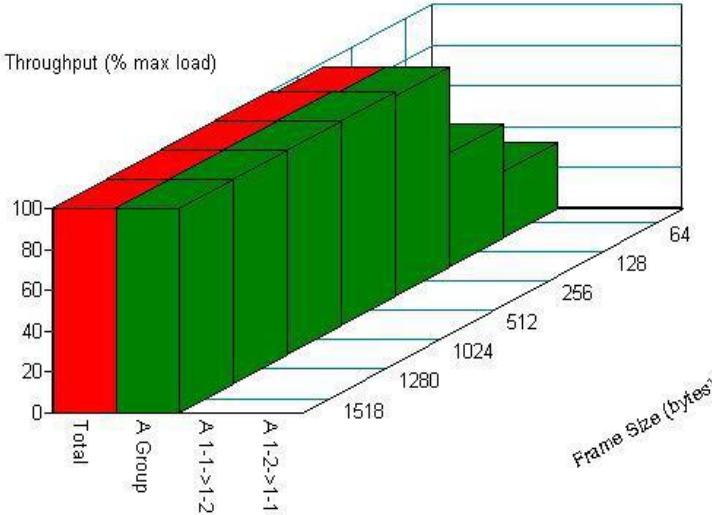
1. Half Direction (LAN1: Intel I211 Gigabit LAN → LAN2: Intel I211 Gigabit LAN)



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>
Total	37.3515625	65.96875	96.1328125	100	100	100	100
A Group	37.3515625	65.96875	96.1328125	100	100	100	100
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. Binary Direction (LAN1: Intel I211 Gigabit LAN ← →LAN2: Intel I211 Gigabit LAN)



<u>Name/Framesize</u>	<u>Throughput vs 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	31.9375	55.140625	97.6796875	100	100	100	100
A Group	31.9375	55.140625	97.6796875	100	100	100	100
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

### 3. Integration Test

Hardware Information with Windows 8.1 Enterprise English 64Bit Driver Version	
<b>CPU</b>	Intel® Celeron® Processor N2930 (2M Cache, up to 2.16 GHz)
<b>Memory</b>	Innodisk DDR3L 1600 8GB (SEC 431 BYKO K4B4G0846D)
<b>SATA HDD</b>	TOSHIBA MK1060GSC 2.5" 100GB/4200rpm
Chipset Information with Windows 8.1 Enterprise English 64Bit Driver Version	
<b>Chipset Software</b>	Intel Chipset Device Software 10.0 (04/24/2014)
<b>SOC Bridge</b>	Intel® Bay Trail
<b>Super IO Chipset</b>	Fintek F81866
<b>VGA Chipset</b>	Intel HD Graphics 10.18.10.3740 (07/04/2014)
<b>Audio Chipset</b>	Realtek High Definition Audio 6.0.1.7083 (11/05/2013)
	Intel Display Audio 6.16.0.3145 (04/17/2014)
<b>Ethernet Chipset</b>	Intel I211 Gigabit Network Connection 12.11.97.0 (03/11/2014)

#### 3.1. USB Port Integration Test

Item	USB Port	Boot			Function(Win 8.1)			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"/>	
ASUS SDRW-08D2S-U		<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 +5.0V	<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"/>	Test by Modem S3/S4/S5/DOS off
	+12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Test by Multimeter
	+5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Test by Multimeter

### 3.4. RS-422 / RS-485 Test

Test Item	Result			Note
	Pass	Fail	N/A	
RS-422 for COM2 & 3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use loopback and WINSSD.exe to test RS-422 in Windows
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 & 3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 1.2km 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"/>	Test with STD Printer, SPP,,ECP mode

### 3.6. Burn In Test

Under Room Temperature: 26 °C

Test Item	Result			Note
	Pass	Fail	N/A	
Burn In Test V7.1 Pro	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows 7 Ultimate English Version 32/64

Note: COM PORT Speed is set to 115200 bauds.

### 3.7. TPM Test

Under Room Temperature: 26 °C

Test Item	Result			Note
	Pass	Fail	N/A	
Turn on Bitlocker (c:)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows 8.1 Pro English Version 64 Bit
Turn off Bitlocker (c:)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## 4. Application Test

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

〔 X 〕 No Support

Adapter VGA Card	Set Simultaneous Display and Reboot			Note
	Pass	Fail	N/A	
CHANTECH NVIDIA GeForce4 MX440-8X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Adapter Sound Card	Play Sound			Note
	Pass	Fail	N/A	
Creative Sound BLASTER Live5.1	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 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 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 type="checkbox"/>	
INTEL PWLA8391GTBLK Pro/1000 Giga LAN Card	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>	

### 4.2. PCI-Express Function Test

〔 X 〕 No Support

PCI-Express x1	Function Test			Note
	Pass	Fail	N/A	
SUNIX SATA1414 eSATA & SATAII x1Express card	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sysconnect SK-9E21D 10 /100/1000 Base-T Adapter PCI-Express x1 LAN Card	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 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 type="checkbox"/>	
WINFAST PX6200 TC TDH PCI-Express x16 VGA Card	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Express card	Function Test			Note
	Pass	Fail	N/A	
SUNIX SATA II Express card	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SunBox 34mm Giga LAN Express Card	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>	
Sil3132 Mini PCI-E Function Test Card (USB Interface)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



## 4.3. Mini PCI Card Compatibility Test

〔 X 〕 No Support

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 type="checkbox"/>	
GM-101 WLAN 11b/g 54Mbps Mini PCI Card (Model: VNT6655AM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ADLINK mPCI-8750 ATI Rage XL Mini PCI VGA Card	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## 4.4. CardBus (PCMCIA) Compatibility Function Test

〔 X 〕 No Support

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 type="checkbox"/>	[PC-200200]
	Slot 2 (Down)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Kingston datapack DP-PCM2 / 2GB (PC Card TypeII HDD)	Slot 1 (Up)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	[PC-200201]
	Slot 2 (Down)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCi GW-NS54SG Cardbus Adapter Wireless LAN Type-II	Slot 1 (Up)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	[PC-200502]
	Slot 2 (Down)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCi GW-NS54SG Cardbus Adapter Wireless LAN Type-II	Slot 2 (Down)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	[PC-200502]

## 4.5. ISA Slot Function Test

〔 X 〕 No Support

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

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

〔 X 〕 No Support

## 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 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 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 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 type="checkbox"/>	

**4.7. SSD Modules Compatibility Test**

[ X ] No Support

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 type="checkbox"/>	

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

[ X ] No Support

**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 type="checkbox"/>	M-System / MD2200-D16
DOC 2000 Onboard Address	CC00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	D000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	D400	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	D800	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DC00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Disable	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>	
Transcend / TS512MDOM44V / 512MB / IDE 44 Pin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**4.9. Riser Card Function Test**

[ X ] No Support

Test Item	Result			Note
	Pass	Fail	N/A	
LAN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCI Slot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCI-e Slot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## 5. Time Accuracy Test

### 5.1. System Clock & RTC Clock Test

Under Room Temperature: 26 °C

Function	Item	Time Interval	Criteria	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	+0	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 5.2. Booting Timer Test

Installation	Actual		Note
System Booting Time	4.95	Sec	Press the Power Button till "Beep" Sound appears

### 5.3. Watchdog Timer Test

Use Function as below: Hi-safe

Time-Out Interval	Margin for error	Actual		Result			Note
				Pass	Fail	N/A	
10 sec	+ / - 10 %	10.43	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hi-safe 20141121
60 sec	+ / - 10 %	60.23	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
255 sec	+ / - 10 %	256.2	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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

## 6. O.S. Compatibility Test

### 6.1. English Ubuntu14.04

[ ] No Support

Driver Information:

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

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Ubuntu14.04 Kernel 3.13.0 -24 -generic	<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"/>	2048*1152
HDMI -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1080
LVDS -- Full Screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1920*1200
<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>				
PS/2 Mouse and keyboard	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
USB Mouse and Keyboard	<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 -p	<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

## 6.2. Windows 7 Ultimate English Version 32/64Bit

[ X ] x32 Driver Information:

Chipset Software	Intel Chipset Device Software 10.0 (04/24/2014)
Graphics Media	Intel Atom Processor E3800 Series/Intel Celeron Processor N2920/J1900 37.15.0.1091 (06/26/2014)
Audio Driver	Realtek High Definition Audio 6.0.1.7083 (11/05/2013) Intel Display Audio 6.16.0.3145 (04/17/2014)
LAN Driver	Intel I211 Gigabit Network Connection 12.11.97.0 (03/11/2014)

[ X ] 64 Driver Information:

Chipset Software	Intel Chipset Device Software 10.0 (04/24/2014)
Graphics Media	Intel Atom Processor E3800 Series/Intel Celeron Processor N2920/J1900 37.15.0.1091 (06/26/2014)
Audio Driver	Realtek High Definition Audio 6.0.1.7083 (11/05/2013) Intel Display Audio 6.16.0.3145 (04/17/2014)
LAN Driver	Intel I211 Gigabit Network Connection 12.11.97.0 (03/11/2014)

### 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"/>	

### 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"/>	2048*1152
HDMI -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1080
LVDS -- Full Screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1920*1200
<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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	
Touch function	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
TPM function	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LPT1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
USB 2.0/3.0 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Microphone Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
HDMI Audio Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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(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"/>	

### 6.3. Windows 8.1 Enterprise English Version 32/64Bit

[ X ] x32 Driver Information:

Chipset Software	Intel Chipset Device Software 10.0 (04/24/2014)
Graphics Media	Intel HD Graphics 10.18.10.3740 (07/04/2014)
Audio Driver	Realtek High Definition Audio 6.0.1.7083 (11/05/2013)
	Intel Display Audio 6.16.0.3145 (04/17/2014)
LAN Driver	Intel I211 Gigabit Network Connection 12.11.97.0 (03/11/2014)

[ X ] x64 Driver Information:

Chipset Software	Intel Chipset Device Software 10.0 (04/24/2014)
Graphics Media	Intel HD Graphics 10.18.10.3740 (07/04/2014)
Audio Driver	Realtek High Definition Audio 6.0.1.7083 (11/05/2013)
	Intel Display Audio 6.16.0.3145 (04/17/2014)
LAN Driver	Intel I211 Gigabit Network Connection 12.11.97.0 (03/11/2014)

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
windows 8.1 Enterprise 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"/>	2048*1152
HDMI -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1080
LVDS -- Full Screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1920*1200
<b>Boot - Windows 8.1 Enterprise 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	
Touch function	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
TPM function	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LPT1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
USB 2.0/3.0 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>				
Lint out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Line In Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Microphone Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
HDMI Audio Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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(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. BIOS Function Test

Hardware Information with Windows 8.1 Enterprise English 64Bit Driver Version	
CPU	Intel® Celeron® Processor N2930 (2M Cache, up to 2.16 GHz)
Memory	Innodisk DDR3L 1600 8GB (SEC 431 BYKO K4B4G0846D)
SATA HDD	TOSHIBA MK1060GSC 2.5" 100GB/4200rpm

### 7.1. Advanced Test

Test Item			Result			Note
			Pass	Fail	N/A	
Power Management	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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Power on/ Power off/ Last State
	ACPI settings	Enable ACPI Auto Configuration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
		Enable Hibernation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
		Sleeps state	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(S3)
		Suspend Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Wake Configuration	Wake on Ring	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
		Wake on LAN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
	S5 RTC Wake Settings	Wake system with Fixed Time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wake system with Dynamic Time		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Super IO Configuration	Serial port1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Serial port2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RS232/422/485	
	Serial port3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Serial port4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Parallel port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
CPU configuration	CPU information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Intel Virtualization	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
IDE configuration	Enable/Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	AHCI/IDE mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	SATA port0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Hot plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	SATA port1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
CSM Configuration	Hot plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	CSM Support	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
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"/>		
USB configuration	Legacy USB Support	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	USB Mass Storage Driver	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

## 7.2. Chipset Test

Test Item		Result			Note	
		Pass	Fail	N/A		
North Bridge	Primary Boot Display	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Memory information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
South Bridge	Azalia HD Audio	Enable/Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		HDMI code	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		HDMI Port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	USB configuration	OTG Support	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		USB Per Port Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		USB port0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rear IO USB3.0 port
		USB port1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rear IO USB2.0 port
		USB port2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CN37
		USB port3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CN17,CN18,CN10
		PCIe configuration	Port0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Port1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LAN CN26
	Port2		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CN10
Port3	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	CN37	

## 7.3. Boot Test

Test Item	Result			Note
	Pass	Fail	N/A	
Launch i210/211 PXE OpROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quiet Boot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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"/>	

## 7.4. 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 time&Data
Clear CMOS Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Clear time&Data

## 7.5. 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

## 7.6. 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"/>	



## 7.7. PC Health Status

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

Voltage Monitoring Test	Result			BIOS (V)	Note
	Pass	Fail	N/A		
CPU Temperature (DTS)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	40°C	
System Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	38°C	
Fan1 Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A   RPM	
Vcore	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.680V	
12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.968V	
5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.087V	
VDIMM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.368V	
VCC3V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.392V	
VSB3V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.392V	
VSB5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.992V	
VBAT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.264V	

## 7.8. Hi-safe Test

Test Item		Result			Note
		Pass	Fail	N/A	
Version(20141121 )		<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 10.43 sec
	1min	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 60.23sec
	255sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 256.2sec
	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 0xE000
	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"/>	

## 8. Performance Test

Hardware Information with Windows 7 Ultimate English 32Bit Driver Version	
CPU	Intel® Celeron® Processor N2930 (2M Cache, up to 2.16 GHz)
Memory	Innodisk DDR3L 1600 8GB (SEC 431 BYKO K4B4G0846D)
SATA HDD	TOSHIBA MK1060GSC 2.5" 100GB/4200rpm

### 8.1. Performance Test

Test Result: (Display set 1920\*1080 test)

Testing Software	Scope		Note
	AAEON	Ref.	
<b>PCMark2005</b>			<b>Windows 7_32</b>
PCMark	3390		PCMarks
CPU	4376		
Memory	4244		
Graphics	1379		
HDD	3416		
Benchmark (B)			
Average Efficiency	-		
<b>PCMark Vantage</b>			<b>Windows 7_32</b>
PCMarks	3408		PCMarks
Memories	2202		
TV and Movies	N/A		
Gaming	2459		
Music	3348		
Communications	3773		
Productivity	2652		
HDD	2052		
Benchmark (B)		-	
Average Efficiency			

Testing Software	Scope		Note
	AAEON	Ref.	
<b>CPUmark99</b>			<b>Windows 7_32</b>
CPU mark99	178		

Testing Software	Scope		Note
	AAEON	Ref.	
<b>3Dmark2006 v120</b>			<b>Windows7_32</b>
3Dmark Score	1555		
SM2.0 Score	535		
HDR/SM3.0 Score	571		
CPU Score	2118		
Benchmark (B)		-	
Average Efficiency		-	

3Dmark11 Professional Edition			Windows 7_32
<b>Extreme 1920*1080</b>			
3Dmark 11Score	X94		
Graphics Score	85		
Physics Score	1610		
Combined Score	91		
<b>Performance 1280*720</b>			
3Dmark 11Score	P262		
Graphics Score	224		
Physics Score	1594		
Combined Score	273		
<b>Entry 1024*600</b>			
3Dmark 11Score	E464		
Graphics Score	395		
Physics Score	1605		
Combined Score	387		

Testing Software	Scope		Note
	AAEON	Ref.	
<b>Final Reality V1.01—BenchMark Test</b>			Windows 7_32
2D image	25.29		
3D	5.68		
Bus transfer	16.27		
Overall	13.15		
Benchmark (A)	-		

Testing Software	Scope		Note
	AAEON	Ref.	
<b>Performance Test 7.0</b>			Windows 7_32
PassMark Rating	577.2		
CPU Mark	2030.8		
2D Graphics Mark	166.5		
3D Graphics Mark	145.1		
Memory Mark	417.2		
Disk Mark	328.7		
CD Mark	-	-	

Testing Software	Scope		Note
	AAEON	Ref.	
<b>Windows experience index</b>			<b>Windows 7_32</b>
Processor	6.2		
Memory	7.3		
Graphics	4.0		
Gaming graphics	4.1		
Primary hard disk	5.9		

SATA Performance				
SATA HDD	TOSHIBA DT01ACA050 3.5" 500G/7200rpm			
CFast	Innodisk CFast 3SE 32GB			
CPU	Intel® Celeron® Processor N2930 (2M Cache, up to 2.16 GHz)			
Memory	DSL DDR3L 1600 8GB CL11 1.35V SEC K4B4G0846B			
OS	Windows 8.1 Enterprise English 64bit			
Item	Comment / (unit)	Software	Score	Note
Single HDD (SATA port 1) SATAII	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	17.7ms	
	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	127.2MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	188.1MB/s	
Single HDD CFast	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.2ms	
	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	170.2MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	188.1MB/s	

USB3.0/2.0 Performance				
USB Flash	Transcend JF770 USB3.0 32GB			
Item	Comment / (unit)	Software	Score	Note
Single HDD (Rear I/O USB3.0) USB3.0	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.7ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	10%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	69.9 MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	74.3 MB/s	
Single HDD (Rear I/O USB2.0) USB2.0	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.7ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	5%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	38.0 MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	41.9 MB/s	