

Report NO:15E010013

GENE-BT04

Intel Bay Trial SOC Platform GENE Board

Board Level Product P5 Test Report

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

Issue date

2015/07/29

Approval

KJ Wang

Test Engineer

Aslen Hsieh

Summary Table of DTS:

Defect No.	Severity	Description

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	P2P2-1003	1. New Test Report	
2011/02/23	P2P3-1101	1. Re-composing test Items	
2011/03/04	P2P3-1102	1. Add Specification Validation	
2012/05/29	P2P3-1201	1. Add Summary Table of DTS	
2013/12/6	P2P3-1301	<ol style="list-style-type: none"> 1. Rename document : [Board Level Product P2-P3 Verification Test Plan & Report Template] 2. Chapter1:Memory compatibility add AAeon P/N 3. Chapter1:Add CFast and m-SATA test item. 4. Chapter3:Add RS422 1.2KM/115200bps transmission test 5. Chapter3:BurninTest test add USB2.0/3.0. 6. Chapter5: Modify power consumption test item. 7. Chapter7: add Windows XP Professional English Version 32/64Bit and Windows 8 Pro English Version 32/64Bit test. 8. Chapter8: Change BIOS format from Award to AMI and add Hi-Safe, Hi-Manager test item. 9. Chapter9: Add SATA performance test and USB3.0 performance. 10. Remove Chapter10: Other Tests.. 	
2014/10/03	P2P3-1401	<ol style="list-style-type: none"> 1. Page 1 rename: Board Level Product P2-P3 Test Report. 2. Remove platform information\test item and add driver folder item. 3. Chapter2.1: add EDID check, DOS display, 3840*2160, hot plug. 4. Chapter2.2: modify from "dual display test" to "Multi display test." 5. Remove chapter 2.3 "Boot ROM to Novell 4.11 [RPL]" item 6. Chapter2.3.2: add "CPU information" 7. Chapter2.4: change from optional function to "Jumper and connector function test" 8. Chapter3.4: RS422/485 add test from G3 status. 9. Add chapter 4.10 Display port converter compatibility test. 10. Chapter7.1: remove "halt" test item. 11. Chapter7.2/7.3/7.4: add touch and TPM function test 12. Chapter9: update performance test program. 13. Add chapter 10. Negative Test. 	

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 Validation

Main Specification

Item		Specification	Result			Note
			Pass	Fail	N/A	
Form Factor		3.5" GENE Board – 146mm x 101.6mm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Processor		Intel Bay Trail Quad core N2807/J1900 SOC processor (4.3W/10W) 1.58/2.0GHz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System Memory		DDR3L SO-DIMM slot x1, Max up to 4GB RAM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Chipset		Intel Bay Trail Dual core N2807/J1900 SOC processor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VGA/LCD Controller	Chip	Intel Bay Trail Dual/Quad core N2807/J1900 SOC processor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	HDMI	HDMI up to 2560 x 1200	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Super I/O		Fintek 81801U	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ethernet		Intel LAN i211AT x4/2 Gigabit Ethernet, RJ-45 x 4/2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Storage		1 x CFAST 1 x SATA (optional)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio		N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial Port		1 x COM (RS-232)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Digital I/O		1 x DIO 4bit (2in, 2out) with box pin header	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
K/B and Mouse		One K/B and Mouse internal connector	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Universal Serial Bus		1 x USB3.0 Support 900mA 2 x USB2.0 Total support 1.0A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Expansion Interface		1 x Mini Card (for USB only) 1 x DIO 4bit (2in, 2out) with box pin header 1 X LPC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Watchdog Timer		1~255 step by software program	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hardware Monitor		Monitoring system temperature, voltage status	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Switch		1 x Power Switch w/LED P/N:1601613200	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DC-IN		1 x DC-IN lockable connector P/N:1652503209	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power Requirement		1 x DC-IN lockable connector P/N:1652503209. DC 12V & ATX mode 1x Power Switch on board P/N: 1601613200	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

O.S. Support

Item		Specification	Result			Note
			Pass	Fail	N/A	
Microsoft Windows	Windows 7 English 32/64 Bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Windows 8 English 32/64 Bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Linux	LINUX Kernel 2.6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Environmental Specifications

Item	Specification
Operating temperature	0°C ~ 60°C
Storage Temperature	-40~176°F (-40~80°C)
Operating Humidity	0~90% relative humidity, non-condensing
Vibration	N/A
Shock	N/A
Drop	N/A
EMI	Pre-Scan only (by CE & FCC Class A)

Note: Please refer Environment Test Report for detail information

Platform Information

Item	Device Information	Note
Product of department	ECD	
PCB Model / Version	GENE-BT04 REV A1.0	
CPU Board	GENE-BT04	
BIOS / Version	GENE-BT04 R1.0 (GBT4AM10) (07/01/2015)	
Driver folder	SAP-BETA (\\nas3):\Products\GENE-BT04	
CPU Type	Intel® Celeron® Processor J1900 / 1.99GHz (2M Cache, up to 2.42 GHz) Intel® Celeron® Processor N2807 / 1.58GHz (1M Cache, up to 2.16 GHz)	
Memory Type	Innidisk / SEC K4B4G 0846D / DDR3L-1600 / 4GB	
SATA HDD	HGST HTS725050A 2.5" 7200rpm SATAIII 500GB	
CFast	Innidisk / CFast3ME / 64GB	
USB DVD-ROM	BUFFALO BDXL-PC6U2	
LCD Monitor	LG Flatron E2260 / 1920*1080 / 22" monitor Asus PA238Q / 1920*1080 / 23" monitor BENQ BL2710 / WQHD 2560 x 1440 / 27" monitor	
Operating System	<input checked="" type="checkbox"/> Linux English U buntu14.04 Kernel 3.13.0 -32 -generic-pae #57 <input checked="" type="checkbox"/> Windows 7 Ultimate SP1 English Version 32/64 Bit <input checked="" type="checkbox"/> Windows 8.1 Enterprise English Version 32/64Bit	
Power Supply	DC Adapter : FSP / FSP060-DBAB1 / 12V= 5.0A MAX (60W MAX)	
Chipset Information		
North Bridge	Intel Bay Trail Dual core N2807/J1900 SOC processor	
South Bridge	Intel Bay Trail Dual core N2807/J1900 SOC processor	
Super IO Chipset	Fintek 81801U	
VGA Chipset	Intel Chipset Device Utility 10.0 (04/24/2014)	
Audio Chipset	Intel Atom Processor E3800 Series/Intel Celeron Processor 37.15.0.1127 (04/20/2015) Intel Display Audio 6.16.0.3150 (7/8/2014)	
Ethernet Chipset	Intel I211 Gigabit Network Connection 12.11.97.0 (3/11/2014)	

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1. Hardware Test

1.1. CPU Compatibility Test

CPU Information	Result			Note
	Pass	Fail	N/A	
Intel® Celeron® Processor J1900 / 1.99GHz (2M Cache, up to 2.42 GHz)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Intel® Celeron® Processor N2807 / 1.58GHz (1M Cache, up to 2.16 GHz)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.2. Memory Compatibility Test

Memory Information	AAEON P/N	MEM V5.01 For 3 loops			Note
		Pass	Fail	N/A	
Innidisk / SEC K4B2G0846Q / DDR3L-1600 / 2GB	968D3002GX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MemTest86 V5.01
Innidisk / SEC K4B4G0846D / DDR3L-1600 / 4GB	968D3004GZ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MemTest86 V5.01
Innidisk / SEC K4B4G0846D / DDR3L-1600 / 8GB	968D3008GW	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MemTest86 V5.01
Transcend / SEC K4B2G0846Q / DDR3L-1600 / 2GB	968D3002GK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MemTest86 V5.01
Transcend / SEC K4B4G0846D / DDR3L-1600 / 4GB	968D3004G6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MemTest86 V5.01
Transcend / SEC K4B4G0846D / DDR3L-1600 / 8GB	968D3008G7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MemTest86 V5.01

1.3. SATA Compatibility Test

1.3.1 Onboard SATA (IDE) Test

SATA Device Information	Result			Note
	Pass	Fail	N/A	
HGST HTS725050A 2.5" 7200rpm SATAIII 500GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows7_64bit

1.3.2 Onboard SATA (AHCI) Test

SATA AHCI Test	Result			Note
	Pass	Fail	N/A	
TOSHIBA MK1665GSX 2.5" 5400rpm SATAII 160GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
WD WD5000BPKX / 500GB 7200 RPM / 16MB Cache / SATA 6.0Gb/s / 2.5" SATA HDD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows8_32bit

1.4. CFast Compatibility Test

CFast Information	P/N	ATTO R/W			Note
		Pass	Fail	N/A	
Innidisk / CFast3ME / 8GB	DECFA-08GD07RC2SC-26	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ubuntu14.04
Innidisk / CFast3ME / 16GB	DECFA-16GD07RC2DC-26	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innidisk / CFast3ME / 32GB	DECFA-32GD07RC2DC-26	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows8_64bit
Innidisk / CFast3ME / 64GB	DECFA-64GD07RC2DC-26	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows7_32bit
Innidisk / CFast3ME / 128GB	DECFA-A28GD07RC2DC-26	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows8_32bit

2. Basic Function Test

2.1. Video Function Test

2.1.1. Single Output Function Test

Hardware Information with Windows 7 Ultimate English Version 32 Bit Driver Version										
CPU	Intel® Atom CPU J1900 / 1.99GHz									
Memory	Innidisk / SEC K4B4G0846D / DDR3L-1600 / 4GB									
SATA HDD	Innidisk / CFast3ME / 64GB									
HDMI	Asus / PA238Q / 23" LCD monitor / 1920*1080 LG Flatron E2260 / 1920*1080 / 22" monitor BENQ / BL2710 / 27" LCD monitor / 2560*1440									
LVDS port	N/A									
Color Quality	<input checked="" type="checkbox"/> 16bit <input type="checkbox"/> 24bit <input checked="" type="checkbox"/> 32bit									
Resolution	HDMI 1			HDMI 2			LVDS			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 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X600	<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"/>	
1280X720	<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"/>	
1280X768	<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"/>	
1280X800	<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"/>	
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1366X768	<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"/>	
1400X1050	<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"/>	
1440X900	<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"/>	
1600X900	<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"/>	
1600X1200	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1680X1050	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 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"/>	
2048X1152	<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"/>	
2560X1440	<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"/>	
3840 X 2160	<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"/>	
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(0/90/ 180/270)	<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"/>	
DOS Display	<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"/>	

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

2.1.2. Multi-Display Output Test

Selection	Output	Result			Note
		Pass	Fail	N/A	
Dual Display Clone	HDMI 1 +HDMI 2	<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 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 G120XN01 V.0 / 12.1" / 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 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	
Intel Display Audio (HDMI)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
L (Left) Channel	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
R (Right) Channel	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
CD_In	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Line In	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
MICROPHONE	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Amplifier R-channel output	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Amplifier L-channel output	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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)															
Command: ping xxx.xxx.xx.xx -l 65500 -n 1000															
1000Mbps LAN HUB		D-Link DGS-1008D													
100Mbps LAN HUB		Accton Desktop-3005													
10Mbps LAN HUB		SVEC FD916H													
OnBoard LAN1		Intel I211 Gigabit LAN						MAC Address			00-07-32-32-72-09				
OnBoard LAN2		Intel I211 Gigabit LAN						MAC Address			00-07-32-32-72-0A				
OnBoard LAN3		Intel I211 Gigabit LAN						MAC Address			00-07-32-32-72-0B				
OnBoard LAN4		Intel I211 Gigabit LAN						MAC Address			00-07-32-32-72-0C				
LAN Speed	Link / Speed LED	Active LED	LAN 1			LAN 2			LAN 3			LAN 4			Note
			Pass	Fail	N/A	Pass	Fail	N/A	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"/>	<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"/>	<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"/>	<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"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	<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 15
<input type="checkbox"/>	Cent 5.5
<input checked="" type="checkbox"/>	Ubuntu 14.04 Kernel 3.13.0-32-generic-pae #57
<input type="checkbox"/>	Red Hat

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

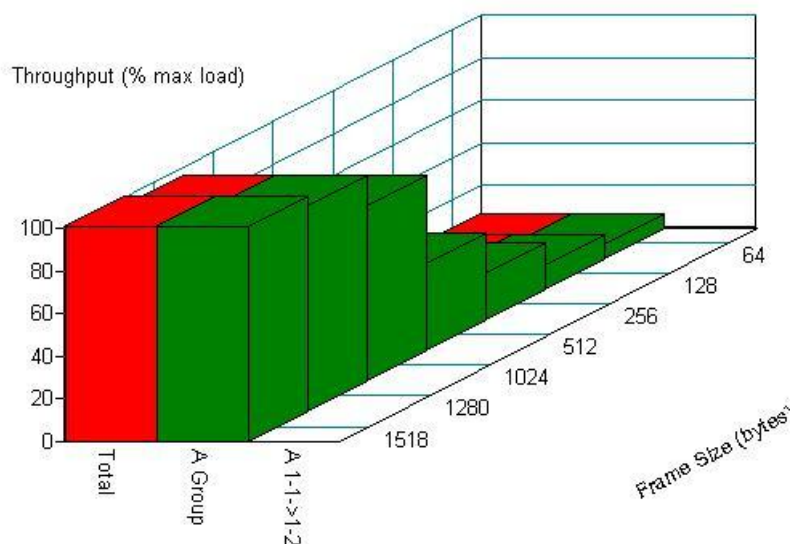
Graphics Media	System default
LAN	System default
Audio Driver	Intel I211 Gigabit Network Connection / igb-4.1.2
CPU information	Intel® Atom CPU E3845 1.91GHz

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:

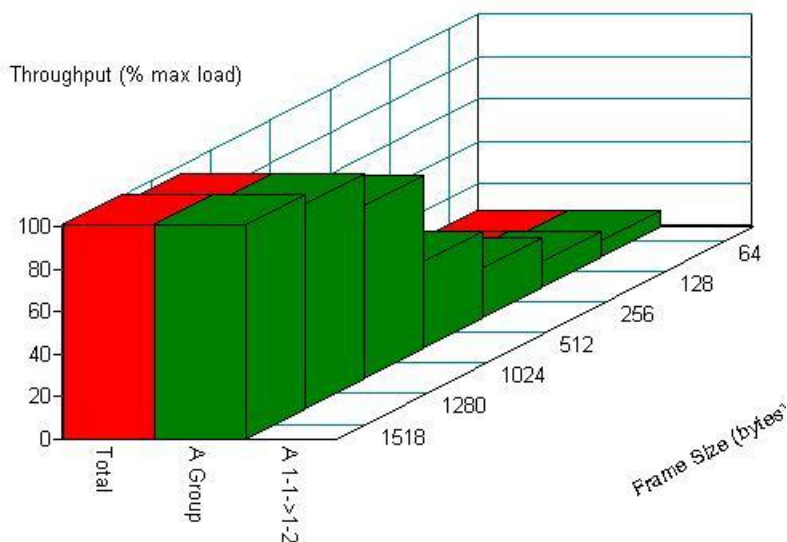
1. Half Direction (LAN1: Intel I211 Gigabit Network → LAN2: Intel I211 Gigabit Network)



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	6.4140625	11.0546875	21.109375	40.4453125	81.4375	96.1328125	100
A Group	6.4140625	11.0546875	21.109375	40.4453125	81.4375	96.1328125	100
A 1-1->1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A

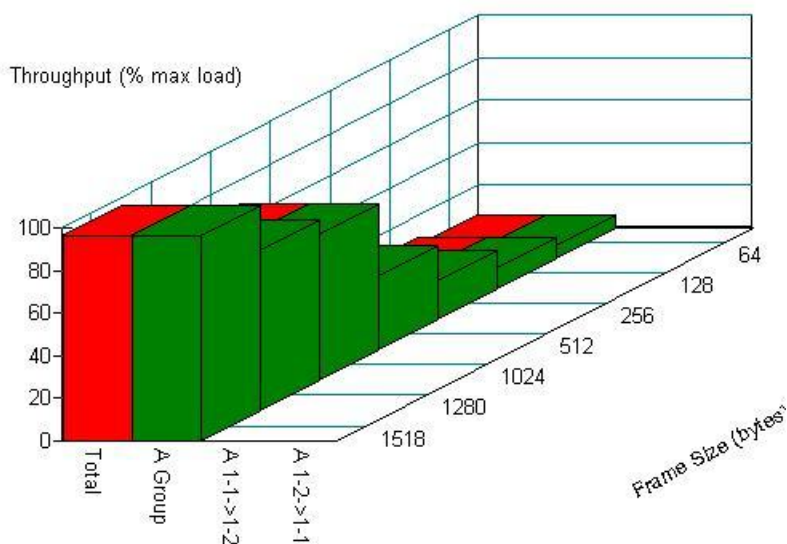
2. Half Direction (LAN3: Intel I211 Gigabit Network → LAN4: Intel I211 Gigabit Network)



Throughput vs Frame Size

<u>Name/Frame size</u>	<u>64</u>	<u>128</u>	<u>256</u>	<u>512</u>	<u>1024</u>	<u>1280</u>	<u>1518</u>
Total	7.1875	11.828125	22.65625	40.4453125	80.6640625	96.1328125	100
A Group	7.1875	11.828125	22.65625	40.4453125	80.6640625	96.1328125	100
A 1-1->1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A

3. Binary Direction (LAN1: Intel I211 Gigabit Network ↔ LAN2: Intel I211 Gigabit Network)

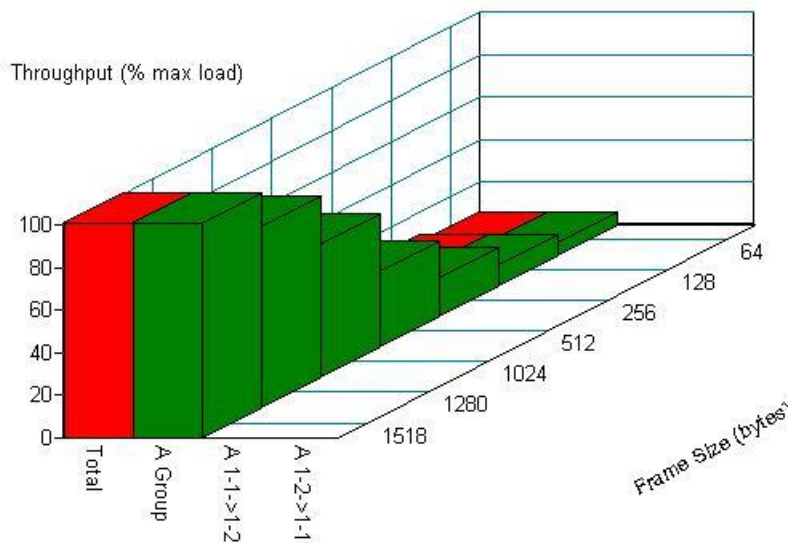


Throughput vs Frame Size

<u>Name/Frame size</u>	<u>64</u>	<u>128</u>	<u>256</u>	<u>512</u>	<u>1024</u>	<u>1280</u>	<u>1518</u>
Total	5.640625	9.5078125	18.015625	34.2578125	68.2890625	74.4765625	96.1328125
A Group	5.640625	9.5078125	18.015625	34.2578125	68.2890625	74.4765625	96.1328125

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

4. Binary Direction (LAN3: Intel I211 Gigabit Network ⇔ LAN4: Intel I211 Gigabit Network)



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	5.640625	9.5078125	18.015625	35.03125	62.1015625	84.53125	100
A Group	5.640625	9.5078125	18.015625	35.03125	62.1015625	84.53125	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

2.4. Jumper and Connector Function Test

[] No Support

Function Test	Result			Note
	Pass	Fail	N/A	
Clear CMOS Jumper (JP12_1,3,5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Auto Power Button Enable/Disable Selection (JP12_2,4,6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3. Integration Test

Hardware Information with Windows 7 Ultimate English SP1 32 Bit Driver Version	
CPU	Intel® Atom CPU J1900 / 1.99GHz
Memory	Innidisk / SEC K4B4G0846D / DDR3L-1600 / 4GB
HDD/CFD	Innidisk / CFast3ME / 64GB

3.1. USB Port Integration Test

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"/>	
BUFFALO BRXL-PC6U2		<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								
ATake / 4 Port USB 2.0 HUB		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transend HUB3 / 4 Port USB 3.0 HUB		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DIO 4bit (2in, 2out)

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 COM3	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Use loopback and WINSSD.exe to test RS-422 in Windows
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1. The communication between the RS-422 port of two boards is linked by one 1.2km cable on Windows Terminal. 2. Confirm RS422 can work properly from G3 status
RS-485 for COM3	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Use ICP CON I-7044D D/IO Module in Windows(Support Auto flow control)
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1. The communication between the RS-485 port of two boards is linked by one 1.2km cable on Windows Terminal 2. Confirm RS485 can work properly from G3 status

4. Application Test

4.1. PCI-Express Function Test

Mini PCI Express Card	Function Test			Note
	Pass	Fail	N/A	
Ralink RT2571WF WLAN Mini Card (USB Interface)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CN13

4.2. SSD Modules Compatibility Test

SSD HDD Compatibility Test:

Cable Type: IDE SATA2 MLC SLC

Test Item	Result			Note
	Pass	Fail	N/A	
Intel SSD 530 Series 120GB SATA III	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

4.3. Display port Converter Compatibility Test

Test Item			Result			Note
			Pass	Fail	N/A	
DP to HDMI converter: LPC-1504	DOS display	Full screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	OS display	Full screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Max resolution:
DP to DVI converter: LPC-1503	DOS display	Full screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	OS display	Full screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Max resolution:

5. Power Consumption Test

Hardware Information with Windows 7 Ultimate English SP1 32 Bit Driver Version	
CPU	Intel® Atom CPU N2807 / 1.58GHz
Memory	Innidisk / SEC K4B4G0846D / DDR3L-1600 / 4GB
HDD/CFD	Innidisk / CFast3ME / 64GB

5.1. AT/ATX Power Consumption

Test Equipment						
Equipment	Digital Multimeter					
Manufacturer	HOLA					
Model name	DM-1240					
Test Environment						
ATX Power Model	FSP / FSP060-DBAB1 / 12V= 5.0A MAX (60W MAX)					
Power Supply	DC Power				Note	
(Full Loading Mode) Windows 7 with Prime 95 Full Loading Test	(+12V)	0.65	A	7.80	W	Prime95 Version 259
Full Loading Total Watt	7.80 (W)					
S3 mode: Measure the current value when system in S3 mode of windows and without running any	(+12V)	0.05	A	0.6	W	
Suspend Total Watt	0.6 (W)					
Win. Idle mode: Measure the current value when system in windows mode and without running any program	(+12V)	0.42	A	5.04	W	
Idle Total Watt	5.04 (W)					
S5 mode: Measure the current value when system in S5 mode of windows and without running any	(+12V)	0.06	A	0.72	W	Erp disable
Suspend Total Watt	0.72 (W)					
S5 mode: Measure the current value when system in S5 mode of windows and without running any	(+12V)	N/A	A	N/A	W	Erp Enable
Suspend Total Watt	N/A (W)					

5.2. PC Health Status

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

Voltage Monitoring Test	Result			BIOS (V)	Actual (V)		Note
	Pass	Fail	N/A				
CPU Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	61°C	6°C		
System Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	59°C	59°C		
Fan1 Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NA	RPM	NA	RPM
Vcore	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.840 V	0.72V		
VMEM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.352V	1.34V		
+3.3V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.296V	3.32V		
3VSB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.328V	3.32V		
VBAT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.184V	3.18V		

5.4. CMOS Battery Test

Test Point: Calculated result should be > 5 years.

Battery: CR2032

Capacity 225mA

Check item	Measured Voltage		Measured Current		Calculate Result		Result			Note
							Pass	Fail	N/A	
Battery leakage	3.1	V	1.7	uA	15.1	years	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Calculate result=225mA/measured current / 365days/24hours

6. Time Accuracy Test

6.1. 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	+2	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RTC Clock in Power Off Mode		24 hrs	+/-2 sec	+2	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

6.2. Booting Timer Test

Installation	Actual		Note
System Booting Time	2.7	Sec	Press the Power Button till "Beep" Sound appears

6.3. Watchdog Timer Test

Use Function as below: [Hi-Safe v20150422](#)

[] No Support.

Time-Out Interval	Criteria	Actual		Result			Note
				Pass	Fail	N/A	
10 sec	+/- 10%	10.9	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
60 sec	+/- 10%	60.2	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
255 sec	+/- 10%	263.4	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Note : Under Room Temperature: 26°C

7. O.S. Compatibility Test

7.1. English Ubuntu 14.04 Kernel 3.13.0-32-generic-pae #57

[] No Support

Driver Information:

Chipset Software	System default
Graphics Media	System default
Audio Driver	System default
LAN Driver	Intel I211 Gigabit Network Connection / e1000e-3.1.0.2

Install OS to IDE HDD/SATA HDD/ CF Card:

Installation	Result			Note
	Pass	Fail	N/A	
English Ubuntu14.04 Kernel 3.13.0 -32 -generic- pae #57	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Type uname -a

Test Result:

Test Item	Result			Note
	Pass	Fail	N/A	
Display Function Test				
HDMI 1 -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDMI 2 -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Network Function Test				
Connect to Internet – LAN 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Connect to Internet – LAN 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Connect to Internet – LAN 3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Connect to Internet – LAN 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio Function Test				
Play Audio Function Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Play Audio Test
Base Function Test				
Mouse Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Keyboard Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB DVD-ROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 3.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
X Windows Application				
Start Button Office	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Office function
X-Window	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Startx – Desktop in Linux
Command Test On Text Mode: Attention Delay Phenomenon				
uname -a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show information
Shutdown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Init 0 or shutdown -h now
Restart the Computer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Init 6 or shutdown -r now
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

[X] x32 Driver Information:

Chipset Software	Intel Chipset Device Utility 10.0 (04/24/2014)
Graphics Media	Intel Atom Processor E3800 Series/Intel Celeron Processor 37.15.0.1127 (04/20/2015)
Audio Driver	Intel Display Audio 6.16.0.3150 (7/8/2014)
LAN Driver	Intel I211 Gigabit Network Connection 12.11.97.0 (3/11/2014)

[X] x64 Driver Information:

Chipset Software	Intel Chipset Device Utility 10.0 (03/26/2014)
Graphics Media	Intel Atom Processor E3800 Series/Intel Celeron Processor 37.15.0.1127 (04/20/2015)
Audio Driver	Intel Display Audio 6.16.0.3150 (7/8/2014)
LAN Driver	Intel I211 Gigabit Network Connection 12.11.97.0 (3/11/2014)

Install OS to IDE HDD/SATA HDD/ CF Card:

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	
Single Display				
HDMI 1 -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDMI 2 -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot - Windows 7 Ultimate Advanced Options Menu				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Basic Function Test				
PS/2 Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 3.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN Function Test				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Connect to Internet – LAN 3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Connect to Internet – LAN 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio Function Test				
Line Out Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	
Start Menu				
Log off User	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shut down (S5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Standby / Sleep (S3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Restart	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hibernate (S4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

7.3. Windows 8.1 Enterprise English Version 32/64Bit

[] No Support

[X] x32 Driver Information:

Chipset Software	Intel Chipset Device Utility 10.0 (03/26/2014)
Graphics Media	Intel HD Graphics 10.18.10.3958 (9/30/2014)
Audio Driver	Intel Display Audio 6.16.0.3154 (9/9/2014)
LAN Driver	Intel I211 Gigabit Network Connection 12.11.97.0 (3/11/2014)

[X] x64 Driver Information:

Chipset Software	Intel Chipset Device Utility 10.0 (03/26/2014)
Graphics Media	Intel HD Graphics 10.18.10.3958 (9/30/2014)
Audio Driver	Intel Display Audio 6.16.0.3154 (9/9/2014)
LAN Driver	Intel I211 Gigabit Network Connection 12.11.97.0 (3/11/2014)

Install OS to IDE HDD/SATA HDD/ CF Card:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows8.1 Enterprise	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Test Results:

Test Item	Result			Note
	Pass	Fail	N/A	
Single Display				
HDMI 1 -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDMI 2 -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot – Windows8.1 Enterprise Advanced Options Menu				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Basic Function Test				
PS/2 Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 3.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN Function Test				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Connect to Internet – LAN 3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Connect to Internet – LAN 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio Function Test				
Line Out Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	
Start Menu				
Log off User	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shut down (S5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sleep (S3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Restart	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hibernate (S4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8. BIOS Function Test

Hardware Information with Windows 7 Ultimate English SP1 32 Bit Driver Version	
CPU	Intel® Atom CPU J1900 / 1.99GHz
Memory	Innidisk / SEC K4B4G0846D / DDR3L-1600 / 4GB
HDD	Innidisk / CFast3ME / 64GB

8.1. Advanced Test

Test Item			Result			Note
			Pass	Fail	N/A	
ACPI settings	ACPI Sleeps state	S3 (Suspend to RAM)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Suspend Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Power Mode	ATX Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		AT Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Restore AC Power Loss	Power on	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Power off	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Last State	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Power on/ Power off/ Last State
	ACPI Sleeps state	S3 (Suspend to RAM)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Suspend Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Wake on Ring		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled
Wake system with Fixed Time		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled	
Wake system with Dynamic Time		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled	
F81801 Super IO Configuration	Serial port1 Configuration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RS-232	
Hardware monitor		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
CPU Configuration	CPU information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
IDE Configuration	Serial- ATA (SATA)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled
	SATA Speed Support		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Gen1 / Gen2
	SATA Mode		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AHCI / IDE Mode
	SATA Port 0		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled
	SATA Port 0 HotPlug		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled
	SATA Port 1		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled
	SATA Port 1 HotPlug		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled
Dynamic Digital IO Configuration	Digital Pin1 (GP30) Direction		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Input / Output
	Digital Pin1 (GP30) Level		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hi / Low
	Digital Pin2 (GP31) Direction		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Input / Output
	Digital Pin2 (GP31) Level		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hi / Low
	Digital Pin3 (GP32) Direction		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Input / Output
	Digital Pin3 (GP32) Level		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hi / Low
	Digital Pin4 (GP33) Direction		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Input / Output
	Digital Pin4 (GP33) Level		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hi / Low
USB Configuration	Legacy USB Support	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled	

8.2. Chipset Test

Test Item			Result			Note
			Pass	Fail	N/A	
North Bridge	Primary IGFX Boot Display	VBIOS Default	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		HDMI 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		HDMI 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
South Bridge	USB configuration	USB OTG Support	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	PCI mode / Disabled
		XHCI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled Auto/Smart Auto
		USB port 0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled
		USB port 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled
		USB port 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled
		USB port 3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled
	PCI Express Configuration	PCI Express port 0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled
		PCI Express port 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled
		PCI Express port 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled
		PCI Express port 3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled

8.3. Boot Test

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

8.4. CMOS Backup / Clear CMOS Test

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

8.5. AAEON Tag Check Utility

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

8.6. Supervisor / User Password Test

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

8.7. Hi-safe Test

Test Item		Result			Note
		Pass	Fail	N/A	
Version(1.2015.04.22)		<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"/>	
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"/>	
DIO	DIO1~4 High	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DIO1~4 Low	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
WatchDog	10sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 10.9 sec
	1min	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 60.2 sec
	255sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual263.4sec
	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 0xF000
	Read Byte	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Slave Address A0h
	Read Word	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Result / Read	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

9. Performance Test

Hardware Information with Windows 7 Ultimate English SP1 32 Bit Driver Version	
CPU	Intel® Atom CPU J1900 / 1.99GHz
Memory	Innidisk / SEC K4B4G0846D / DDR3L-1600 / 4GB
HDD/CFD	Innidisk / CFast3ME / 64GB

9.1. Performance Test

Test Result: (Display set 1920*1080 test)

Testing Software	Scope		Note
	AAEON	Ref.	
PCMark2005			Windows 7
PCMark	5448	-	PCMarks
CPU	4940	-	
Memory	3517	-	
Graphics	2848	-	
HDD	8801	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	
PCMark 7			Windows 7
PCMark Suite	2402	-	PCMarks
Lightweight Suite	2140	-	
Productivity Suite	1880	-	
Entertainment Suite	4097	-	
Creativity Suite	1922	-	
Computation Suite	6726	-	
System Storage Suite	3562	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	

Testing Software	Scope		Note
	AAEON	Ref.	
3Dmark2006 v121			Windows 7
3Dmark Score	2528	-	
SM2.0 Score	824	-	
HDR/SM3.0 Score	1018	-	
CPU Score	2279	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	

3Dmark11 Professional Edition			Windows 7
Extreme 1920*1080			
3Dmark 11Score	X95		
Graphics Score	86		
Physics Score	1660		
Combined Score	94		
Performance 1280*720			
3Dmark 11Score	P265		
Graphics Score	226		
Physics Score	1672		
Combined Score	275		
Entry 1024*600			
3Dmark 11Score	E416		
Graphics Score	352		
Physics Score	1661		

Combined Score	345		
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Testing Software	Scope		Note
	AAEON	Ref.	
Performance Test 7.0			Windows 7
PassMark Rating	642.3	-	
CPU Mark	1546.6	-	
2D Graphics Mark	182.1	-	
3D Graphics Mark	147.9	-	
Memory Mark	478.5	-	
Disk Mark	1081.9	-	
CD Mark		-	

Testing Software	Scope		Note
	AAEON	Ref.	
Windows experience index			Windows 7
Processor	6.1	-	
Memory	5.5	-	
Graphics	4.1	-	
Gaming graphics	5.7	-	
Primary hard disk	5.9	-	

SATA Performance				
SATA HDD	Innodisk 3ME 64GB CFast			
CPU	Intel® Atom CPU J1900 / 1.99GHz			
Memory	Innidisk / SEC K4B4G0846D / DDR3L-1600 / 4GB			
OS	Windows 7 Ultimate English Version 32Bit			
Item	Comment / (unit)	Software	Score	Note
Single HDD (SATA port 1) SATAIII	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.1ms	
	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	211.4MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	215.5 MB/s	SATAII 150~300MB SATAIII up 300M/B

SATA Performance				
SATA HDD	TOSHIBA MK1665GSX 2.5" 5400rpm SATAII 160GB			
CPU	Intel® Atom CPU J1900 / 1.99GHz			
Memory	Innidisk / SEC K4B4G0846D / DDR3L-1600 / 4GB			
OS	Windows 7 Ultimate English Version 32Bit			
Item	Comment / (unit)	Software	Score	Note
Single HDD (SATA port 1) SATAIII	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	20.6ms	
	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	76.0MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	225.2 MB/s	SATAII 150~300MB SATAIII up 300M/B

SATA Performance				
SATA HDD	WD WD5000BPKX / 500GB 7200 RPM / 16MB Cache / SATA 6.0Gb/s / 2.5" SATAHDD			
CPU	Intel® Atom CPU J1900 / 1.99GHz			
Memory	Innidisk / SEC K4B4G0846D / DDR3L-1600 / 4GB			
OS	Windows 7 Ultimate English Version 32Bit			
Item	Comment / (unit)	Software	Score	Note
Single HDD (SATA port 1) SATAIII	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	16.4ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	3%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	97.4MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	192.5 MB/s	SATAII 150~300MB SATAIII up 300M/B

USB3.0 Performance				
USB Flash	Apacer / AH450 / USB3.0 / 32GB			
Item	Comment / (unit)	Software	Transfer Rate (MB/s)	Note
USB3.0 (CN17)	Maximum Read	ATTO Disk Benchmark	134217 MB/s	
	Maximum Write	ATTO Disk Benchmark	19132 MB /s	
USB2.0 (CN18)	Maximum Read	ATTO Disk Benchmark	43648 MB/s	
	Maximum Write	ATTO Disk Benchmark	13808 MB /s	
USB2.0 (CN19)	Maximum Read	ATTO Disk Benchmark	43862 MB/s	
	Maximum Write	ATTO Disk Benchmark	13815 MB /s	

USB2.0 Performance				
USB Flash	TDK / USB2.0 / 32GB			
Item	Comment / (unit)	Software	Transfer Rate (MB/s)	Note
USB3.0 (CN17)	Maximum Read	ATTO Disk Benchmark	17895 MB/s	
	Maximum Write	ATTO Disk Benchmark	6985 MB /s	
USB2.0 (CN18)	Maximum Read	ATTO Disk Benchmark	18064 MB/s	
	Maximum Write	ATTO Disk Benchmark	7041 MB /s	
USB2.0 (CN19)	Maximum Read	ATTO Disk Benchmark	17385 MB/s	
	Maximum Write	ATTO Disk Benchmark	6749 MB /s	

10. Negative Test

10.1 USB Keyboard Negative Test

Methods	Result			Note
	Pass	Fail	N/A	
1. Boot into BIOS setup manual. 2. Press NumLock or ScrLk and press arrow key. 3. confirm arrow key function are normally	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

10.2 Suspend S3 Negative Test

Methods		Result			Note
		Pass	Fail	N/A	
1. Resume from S3. 2. Confirm com ports(RS232/422/485), DIO, smartfan, LVDS backlight control can work properly.	RS232/422/485	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DIO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Smart Fan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	LVDS Backlight control	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

10.3 Power Supply Negative Test

Methods	Result			Note
	Pass	Fail	N/A	
1. Test with ATX connector models. 2. Boot with ATX power supply "SeaSonic SSR-450RM" 3. Confirm SATA HDD can work properly	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

11. Stability test

11.1. Burn In Test

Under Room Temperature: 26 °C

OS: Windows 7 Ultimate English SP1

Test Item		Result			Note
		Pass	Fail	N/A	
Burn In Test V8.0(1037) Duty: 100 Time: over 12 hours	CPU	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RAM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	COM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Video	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Disk	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Sound	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Network	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Parallel	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	USB	2.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Note: COM PORT Speed Set to 9600.

11.2. Reboot Test

Under Room Temperature: 26 °C

OS: English Windows 7 Ultimate SP1 (32bit)

Reboot Test	Result			Note
	Pass	Fail	N/A	
Reboot test for 1000 cycles (AP: Passmark rebooter.exe)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

11.3. Cold Boot Test

Under Room Temperature: 26 °C

OS: DOS

Cold Boot Test	Result			Note
	Pass	Fail	N/A	
AC loss cold boot test for 1000 cycles	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	