

PBA-BT02

Mother 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	Approval	Test Engineer
2015/05/26	KJ Wang	Aslen Hsieh

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	TBD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Processor	Intel® Valleyview SoC (Type-3 Package), E3845, 1.91GHz (4 core)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System Memory	204-pin DDR3L 1333MHz SODIMM x 1, Max 8GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Chipset	Intel® Valleyview SoC (Type-3 Package) E3845, 1.91GHz (4 core)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VGA/LCD Controller (Dual View)	Chip : _ Intel Valleyview SoC processors integrated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	_ Support dual view / simultaneous display	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	_ Support LVDS or HDMI,VGA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	LVDS : LCD 18/24-bit dual channel LVDS LCDs , up to 1920 x 1200 @ 60 Hz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DVI-D : Up to 1920x1080 @ 60 Hz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ethernet	VGA : D-Sub 15 x 1 Resolution: up to 2560 x 1600 @ 60 Hz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	HDMI : (option) Up to 1920x1080 @ 60 Hz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ethernet	Controller : Intel® I211 Gigabit controller, RJ-45 x 2 Interface : PCI Express	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TPM	Infineon SLB9635 TT 1.2 (Option)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I/O Chips	F81866D TBD (support 6x UART)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BIOS	SPI BIOS – 8MB flash	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Keyboard/Mouse	One K/B and Mouse internal connector	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio	TBD, Line-In/ Line-out connector	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Storage	SATA S-ATA II x 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	SSD CFast x 1 (Sim Card Socket)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial Port	Six COM ports: one onboard: D-sub and three internal pin-header _ COM 1: RS-232 (Ring / +5V / +12V,) (jumper select) _ COM 2 RS-232(Ring / +5V / +12V), (jumper select) _ COM 3, 4: RS-232/ RS-422/ RS-485 (Ring / +5V / +12V), RS-485 with auto Flow & isolation 3000Vdc (jumper select) _ COM5 RS-232 (DB-9, co-layout pin header) _ COM6 RS-232 (DB-9, co-layout pin header)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Universal Serial Bus	USB 2.0 Ports – 2 on Internal Connectors, 3 on Rear Ports, 2 on front Ports USB 3.0 Ports – 1 on Rear Ports (Co-layout pin header)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

External 3.3V & PS-on	5V Pin header x 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Digital I/O	8-bit Digital I/O (Programmable)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power 5V & 12V	Pin header x 1 (for 2x SATA HDD)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LED	LEDx3 System / HDD / LAN 1 TX / LAN 1 RX / LAN 2 TX / LAN 2 RX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Expansion Interface	Mini Card slots x 2 (USB & PCIe signal)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	PCIe(x1) x2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
WatchDog Timer	Chipset TBD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hardware Monitor	Chipset TBD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RTC	Chipset Intel® Valleyview SoC (Type 3 Package)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power Input	9~30Vdc, AT or ATX (supports external +5V stand-by power input), 3-pin terminal block, (co-layout 3-pin power connector). Over voltage / low voltage / short circuit / reverse / surge (1000Vdc)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dimension	210x170mm	<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	Fedora 2.6.30	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Environmental Specifications

Item	Specification
Operating temperature	-20°C ~ 70°C

Note: Please refer Environment Test Report for detail information

Platform Information

Item	Device Information	Note
Product of department	PAA	
PCB Model / Version	PBA-BT02 A1.0	
CPU Board	PBA-BT02	
Carrier Board	N/A	
BIOS / Version	PBA-BT02 R1.1 (RBT2AM11) (05/06/2015)	
Driver folder	SAP-BETA (\\nas3):\Products\PBA-BT02\20141028	
CPU Type	Intel® Atom CPU E3845 1.91GHz	
Memory Type	DSL DDR3L-1600 8GB (SEC K4B4G0846B)	
SATA HDD	TOSHIBA MK1676GSX 2.5" 5400rpm SATAII 160GB	
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	
LVDS	AUO M215HW03 V1 / 21" / 1920*1080 / 48bit	
Compact Flash	N/A	
Daughter Board	N/A	
Expansion Board	N/A	
	N/A	
Operating System	<input checked="" type="checkbox"/> Linux English Ubuntu12.04 Kernel 3.2.0 -23 -generic-pae #36-ubuntu	
	<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	ATX Power Supply : N/A	
	AT Power Supply: N/A	
	DC Adapter : FSP Adapter FSP120-AAB / 19V / 6.32 A	
Battery Model	N/A	
Chipset Information		
North Bridge	Intel® Valleyview SoC (Type-3 Package) E3845, 1.91GHz (4 core)	
South Bridge	Intel® Valleyview SoC (Type-3 Package) E3845, 1.91GHz (4 core)	
Super IO Chipset	Fintek F81866D	
VGA Chipset	Intel Atom Processor E3800 Series/Intel Celeron Processor 36.15.0.1091 (06/26/2014)	
Audio Chipset	Intel Display Audio 6.16.0.3145 (4/17/2014)	
	Realtek High Definition Audio 6.0.1.7083 (11/5/2013)	
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® Atom CPU E3845 1.91GHz	<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	
DSL DDR3L-1600 2GB (hynix H5TC2G83EFR)	XXXXX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Memtest86 V5.01
DSL DDR3L-1600 8GB (SEC K4B4G0846B)	XXXXX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Memtest86 V5.01
ADATA DDR3L-1600 4GB (3YE27 D9GBJ)	XXXXX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Memtest86 V5.01
Kingston DDR3L-1600 2GB (D2516EC4BXGGB)	XXXXX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Memtest86 V5.01
Kingston DDR3L-1600 4GB (D512BED1FPGG8U)	XXXXX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Memtest86 V5.01
InnoDisk DDR3L-1600 2GB(SEC K4B2G0846D)	968D300 2GX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
InnoDisk DDR3L-1600 4GB(SEC K4B4G0846D)	968D300 4GZ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Memtest86 V5.01
InnoDisk DDR3L-1600 8GB(SEC K4B4G0846D)	968D300 8GW	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.3. SATA Compatibility Test

1.3.1 Onboard SATA (IDE) Test

SATA Device Information	Result			Note
	Pass	Fail	N/A	
WD / WD3200LPVX / 320GB /5400 RPM / 8M /SATAIII / 2.5" SATA HDD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows7_32bit
Hitachi / HTS725050A / 500 GB / SATA III 7200 RPM / 2.5" SATA HDD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows8_32bit

1.3.3 Onboard SATA (AHCI) Test

SATA AHCI Test	Result			Note
	Pass	Fail	N/A	
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"/>	Windows7_32bit
Seagate ST9160412AS / 7200 RPM/16MB Cache /SATA 3.0Gb/s 2.5" SATA HDD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows7_32bit
TOSHIBA MK13276GSX 2.5" 5400rpm SATAII 320GB				Windows7_32bit
TOSHIBA MK1676GSX 2.5" 5400rpm SATAII 160GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows8_32bit
Hitachi / HTS721010A9E630/ 1TB/SATA III 7200 RPM / 2.5" SATA HDD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows8_64bit
Fujitsu / MHY2040BH / 40GB /5400 RPM /2.5" SATA HDD /SATA 1.5Gb/s	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Linux

1.4. CFast Compatibility Test

Cfast Information	AAEON P/N	ATTO R/W			Note
		Pass	Fail	N/A	
InnoDisk / D150 Series / 4GB	XXXXXXXXXX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
InnoDisk / D150 Series / 2GB	XXXXXXXXXX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2. Basic Function Test

2.1. Video Function Test

2.1.1. Single Output Function Test

Hardware Information with Windows 7 Ultimate English Version 32 Bit Driver Version										
CPU	Intel® Atom CPU E3845 1.91GHz									
Memory	ADATA DDR3L-1600 4GB (3YE27 D9GBJ)									
SATA HDD	WD WD5000BPKX / 500GB 7200 RPM / 16MB Cache / SATA 6.0Gb/s / 2.5" SATA HDD									
VGA	Asus / PA238Q / 23" LCD monitor / 1920*1080 Dell UltraSharp U2713HM / 27" LCD monitor / 2560*1440									
DVI	BENQ / BL2710 / 27" LCD monitor / 2560*1440									
HDMI	N/A									
Display port	N/A									
Color Quality	<input checked="" type="checkbox"/> 16bit <input type="checkbox"/> 24bit <input checked="" type="checkbox"/> 32bit									
Resolution	VGA			DVI			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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1024X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1152X864	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X600	<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"/>	
1280X720	<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"/>	
1280X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X800	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X960	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X1024	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1360X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1366X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1400X1050	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1400X900	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1600X900	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1600X1200	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1680X1050	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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 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 UltraSharp U2713HM(2048X1152)
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"/>	
2560X1600	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DOS Display	<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"/>	

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	VGA + DVI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dual Display Clone	VGA+LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dual Display Clone	DVI+ LVDS	<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	
LVDS	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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 G121XN01 V.0 / 15" / 1024*768 / 18bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	8_AU M150XN07 V.2 / 15" / 1024x768 / 24bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	9_Toshiba /12.1"/1280 x 768 x 18bit (16:9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	10_AU M170EG01 V.D/ 17" / 1280*1024 / 48bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	11_AU M170XW01 V.1 / 17" / 1280x768 / 24bit (16:9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	12_AUO T260XW02 / 26" / 1366x768 / 24bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	







2.2. Audio Function Test

[] No Support

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

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		00-02-02-A0-00-0A	
OnBoard LAN2		Intel I211 Gigabit LAN					MAC Address		00-02-02-A0-00-0B	
LAN Speed	Link / Speed LED	Active LED	LAN 1 (CN31)			LAN 2 (CN30)			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"/>		
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 15 Kernel 2.6.27
<input type="checkbox"/>	Cent 5.5
<input checked="" type="checkbox"/>	Ubuntu 12.04 Kernel 3.2.0-23.generic-pae #36
<input type="checkbox"/>	Red Hat

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

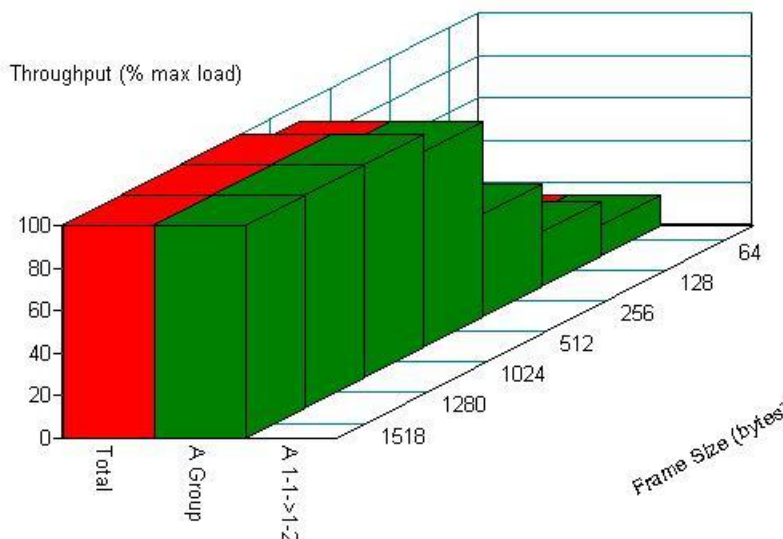
Graphics Media	Ubuntu_Default setting
LAN	Intel I211 Gigabit Network Connection / igb-4.1.2 Intel I211 Gigabit Network Connection / igb-4.1.2
Audio Driver	Ubuntu_Default setting
CPU information	Intel® Atom CPU E3845 1.91GHz

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 :

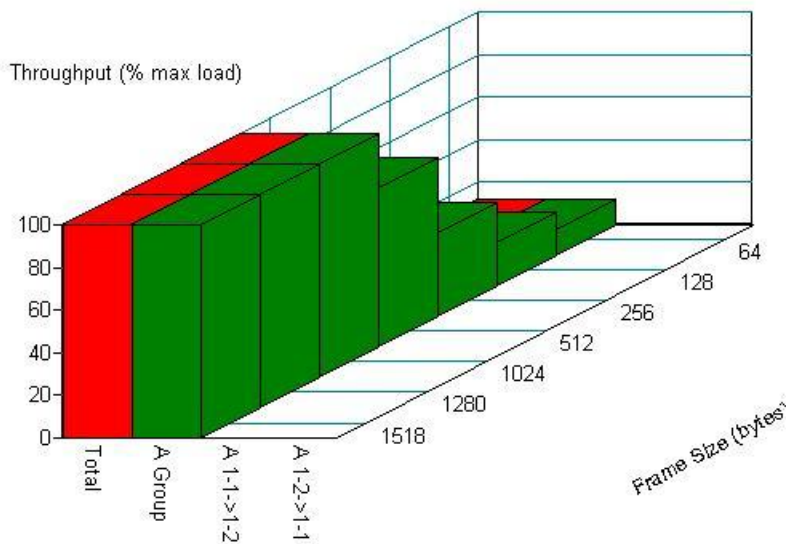
1.Half Direction (LAN1: Intel I211 Gigabit Network → LAN2: Intel I211 Gigabit Network)



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	14.1484375	24.9765625	47.40625	91.4921875	100	100	100
A Group	14.1484375	24.9765625	47.40625	91.4921875	100	100	100
A 1-1->1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2. Binary Direction (LAN1: Intel I211 Gigabit 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	11.828125	19.5625	38.8984375	73.703125	100	100	100
A Group	11.828125	19.5625	38.8984375	73.703125	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

2.4. Jumper and Connector Function Test

[] No Support

Function Test	Result			Note
	Pass	Fail	N/A	
Front Panel Connector (JP1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS Port Backlight Lightness Control Mode Selection (JP2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS Port BacklightInverter VCCSelection (JP3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS PortOperating VDDSelection (JP4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Clear CMOS Jumper (JP8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Auto Power Button Enable/Disable Selection (JP9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM1Pin9Function Selection (JP10)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM2Pin9 Function Selection (JP11)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM4Mode Selection (JP12)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM3Mode Selection (JP13)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM4 RX/DCD Termination Selection (JP14)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM4 TX/DTR Termination Selection (JP15)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM3 TX/DTR Termination Selection (JP16)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM3 RX/DCD Termination Selection (JP17)	<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 E3845 1.91GHz
Memory	ADATA DDR3L-1600 4GB (3YE27 D9GBJ)
HDD/CFD	WD WD5000BPKX / 500GB 7200 RPM / 16MB Cache / SATA 6.0Gb/s / 2.5" SATA HDD

3.1. USB Port Integration Test

Item	USB Port	Boot			Function(Win 7)			Note
		Pass	Fail	N/A	Pass	Fail	N/A	
USB HDD		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB FDD Mitsumi D353GUE		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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								
USB 2.0 HUB PowerSync / USB 2.0 4 Port HU-155					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3.2. Digital I/O Port Test

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

3.3. COM Port Integration Test

Test Item	Result			Note
	Pass	Fail	N/A	
Serial Modem Dial Out	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial Modem Ring In	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test by Modem
Serial Modem +12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test by Multimeter
Serial Modem +5V	<input checked="" type="checkbox"/>	<input 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	<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"/>	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 COM2	<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"/>	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 Slot Function (PCI Adapter Card) Test

Adapter USB Card	Copy files to SCSI HDD			Note
	Pass	Fail	N/A	
DLink DU-520 USB 2.0 / 5-Port PCI Adapter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Adapter LAN Card	Connect to Internet			Note
	Pass	Fail	N/A	
Intel Gigabit CT Desktop Adapter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
INTEL PWLA8391GTBLK Pro/1000 Giga LAN Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dlink DFE-530TX 10/ 100 LAN Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Adapter COM Port Card	COM Function Test			Note
	Pass	Fail	N/A	
Uptech UT420 2-Port RS-232 PCI 32-bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

4.2. PCI-Express Function Test

PCI-Express x1	Function Test			Note
	Pass	Fail	N/A	
SUNIX LAN 1400 Gigabit Ethernet PCI-Express LAN Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DigiFusion PETRP02A 2 Port RS-232 PCI-E card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DigiFusion Realtek 8111E PCI-E GIGA LAN card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Intel Gigabit CT Desktop Adapter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mini PCI Express Card	Function Test			Note
	Pass	Fail	N/A	
PER-C41C COM Mini PCI-e Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM-ME232S2 RS232 *2 module	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
AzureWave AW-NB041H	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
WIFI-RT3593-DB (PCI-e Interface)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Realtek RT2571WF MS-6877 Mini Card (USB Interface)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

4.3. Riser Card Function Test

Test Item		Result			Note
		Pass	Fail	N/A	
PCI Slot	PER-T310 Rev.A1.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCI-e Slot	PER-T310 Rev.A1.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

5. Power Consumption Test

Hardware Information with Windows 7 Ultimate English SP1 32 Bit Driver Version	
CPU	Intel® Atom CPU E3845 1.91GHz
Memory	ADATA DDR3L-1600 4GB (3YE27 D9GBJ)
HDD/CFD	WD WD5000BPKX / 500GB 7200 RPM / 16MB Cache / SATA 6.0Gb/s / 2.5" SATA HDD

5.1. AT/ATX Power Consumption

Test Equipment				
Equipment	Digital Multimeter			
Manufacturer	HOLA			
Model name	DM-1240			
Test Environment				
DC Power Model	FSP Adapter FSP120-AAB / 19V / 6.32 A			
Power Supply	DC Power (19V)			Note
(Normal Mode) Windows 7 with Prime 95 Full Loading Test	(+19V)	0.76	A	
Suspend Total Watt	14.44 (W)			
Suspend in Windows 7 (S3)	(+19V)	0.10	A	
Suspend Total Watt	1.9 (W)			
Max rush current during boot to Windows	(+19V)	0.47	A	
Suspend Total Watt	8.93 (W)			
Windows 7 Without running any Software	(+19V)	0.40	A	
Suspend Total Watt	7.6 (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 (Diode) Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	39 °C	40 °C	
CPU Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	53 °C	51 °C	
System Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	37 °C	39 °C	
VCORE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.904 V	0.62 V	
VMEM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.360 V	1.34 V	
+12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.144 V	12.0V	
+5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.129 V	5.12 V	
5VSB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.160 V	5.11 V	
VBAT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.168 V	3.19 V	

5.3. DC Power Switch (9v ~ 30v)

Test Environment	Switch	Result			Note
		Pass	Fail	N/A	
Run Burnintest V8.0 Pro (Build 1037) for the full 15 min in Windows 8.1	(+31.5V)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	(+30V)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	(+24V)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	(+19V)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	(+9V)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	(+8.5V)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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	V	1.8	uA	14.2	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	0	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RTC Clock in Power Off Mode		24 hrs	+/-2 sec	+1	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

6.2. Booting Timer Test

Installation	Actual	Note
System Booting Time	11.3 Sec	Press the Power Button till "Beep" Sound appears

6.3. Watchdog Timer Test

Use Function as below: Hi-Safe v20150216

[] No Support.

Time-Out Interval	Criteria	Actual		Result			Note
				Pass	Fail	N/A	
10 sec	+/- 10%	10.3	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
60 sec	+/- 10%	60.1	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
255 sec	+/- 10%	256	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 12.04 Kernel 3.20.0-23-generic-pae #36

[] No Support

Driver Information:

Chipset Software	Intel Chipset Device Utility 10.0 (04/24/2014)
Graphics Media	Intel Atom Processor E3800 Series/Intel Celeron Processor 36.15.0.1091 (6/26/2014)
Audio Driver	Intel Display Audio 6.16.0.3145 (4/17/2014) Realtek High Definition Audio 6.0.1.7083 (11/15/2013)
LAN Driver	Intel I211 Gigabit Network Connection 12.11.97.0 (03/11/2014)

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

Installation	Result			Note
	Pass	Fail	N/A	
English Ubuntu12.04 kernel 3.20.0-23-generic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Type uname -a

Test Result:

Test Item	Result			Note
	Pass	Fail	N/A	
Display Function Test				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920 x 1080
DVI -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920 x 1080
LVDS -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920 x 1080
Network Function Test				
Connect to Internet – LAN 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Connect to Internet – LAN 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio Function Test				
Play Audio Function Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Play Audio Test
Base Function Test				
Mouse Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Keyboard Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Console Redirection	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
USB DVD-ROM Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 3.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
X Windows Application				
Start Button Office	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Office function
X-Window	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Startx – Desktop in Linux
Command Test On Text Mode: Attention Delay Phenomenon				
uname -a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show information
Shutdown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Init 0 or shutdown -h now
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 36.15.0.1091 (06/26/2014)
Audio Driver	Intel Display Audio 6.16.0.3145 (4/17/2014)
	Realtek High Definition Audio 6.0.1.7083 (11/5/2013)
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 (04/24/2014)
Graphics Media	Intel Atom Processor E3800 Series/Intel Celeron Processor 36.15.0.1091 (06/26/2014)
Audio Driver	Intel Display Audio 6.16.0.3145 (4/17/2014)
	Realtek High Definition Audio 6.0.1.7083 (11/5/2013)
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				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920x 1080
DVI -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920x 1080
LVDS -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920x 1080
VGA + DVI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920x1080
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"/>	
TPM Function	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN Function Test				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio Function Test				
Line Out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Line In Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Microphone Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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	<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"/>	

7.4. Windows 8.1 Enterprise English Version 32/64Bit

[] No Support

[X] x32 Driver Information:

Chipset Software	Intel Chipset Device Utility 10.0 (04/24/2014)
Graphics Media	Intel(R) HD Graphics Series 10.18.10. 3740 (7/4/2014)
Audio Driver	Intel Display Audio 6.16.0.3145 (4/17/2014)
	Realtek High Definition Audio 6.0.1.7083 (11/5/2013)
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 (04/24/2014)
Graphics Media	Intel(R) HD Graphics Series 10.18.10. 3740 (7/4/2014)
Audio Driver	Intel Display Audio 6.16.0.3145 (4/17/2014)
	Realtek High Definition Audio 6.0.1.7083 (11/5/2013)
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				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920 x 1080
DVI -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920 x 1080
LVDS -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920 x 1080
Boot – Windows8.1 Enterprise Advanced Options Menu				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. msconfig 2. safe boot.
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"/>	
Audio Function Test				
Line Out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Line In Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Microphone Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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	<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 E3845 1.91GHz
Memory	ADATA DDR3L-1600 4GB (3YE27 D9GBJ)
HDD/CFD	WD WD5000BPKX / 500GB 7200 RPM / 16MB Cache / SATA 6.0Gb/s / 2.5" SATA HDD

8.1. Advanced Test

Test Item	Result			Note	
	Pass	Fail	N/A		
Power Mode	ATX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	AT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Restore AC Power Loss	Power on	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Power off	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Last State	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ACPI settings	Suspend Dis able	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	S3 (Suspend to RAM)	<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 on LAN		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled
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"/>	
CPU configuration	CPU information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IDE configuration	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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled
	Hot Plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled
USB configuration	XHCI Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Legacy USB Support	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	USB Port1 Location	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rear IO / Header(U27)
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"/>	
Super IO Configuration	Serial port 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Serial port 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Serial port 3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RS-232/422 Driver / RS485 Driver
	Serial port 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RS-232/422 Driver / RS485 Driver
	Serial port 5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Serial port 6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hardware monitor		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dynamic Digital IO	DIO Port 1 ~ DIO Port 8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.2. Chipset Test

Test Item	Result			Note		
	Pass	Fail	N/A			
Intel IGD Configuration	Primary Display	VBIOS Default	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		CRT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		DVI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS panel Configuration	LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled/Disabled	
	Panel Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Color Depth	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18 / 24 / 36 / 48 bit	
	Backlight Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Backlight Level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Audio controller	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled / Disabled
PCI Express Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto / Gen 2 / Gen 1
Configuration Hot Plug	<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
Launch Legacy Network PXE OpROM	<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 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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
User Password	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.7. Hi-safe Test

Test Item	Result			Note
	Pass	Fail	N/A	
Version(20150216)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System Information	CPU Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Model Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Display Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1920x1080
	RAM Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Support single DIMM
H/W Monitor	Info	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Fan Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Voltage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
DIO	DIO1~4 High	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	DIO1~4 Low	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	DIO5~8 High	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	DIO5~8 Low	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
WatchDog	10sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Actual 10.3 sec
	1min	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Actual 60.1sec
	255sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Actual 256 sec
	Auto Reload	<input checked="" 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
	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 E3845 1.91GHz
Memory	ADATA DDR3L-1600 4GB (3YE27 D9GBJ)
HDD/CFD	WD WD5000BPKX / 500GB 7200 RPM / 16MB Cache / SATA 6.0Gb/s / 2.5" SATA HDD

9.1. Performance Test

Test Result: (Display set 1920*1080 test)

Testing Software	Scope		Note
	AAEON	Ref.	
PCMark2005			Windows 7
PCMark	4195	-	PCMarks
CPU	3884	-	
Memory	3092	-	
Graphics	2576	-	
HDD	6699	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	
PCMark 7			Windows 7
PCMarks	1710	-	PCMarks
Lightweight	1301	-	
Productivity	931	-	
Creativity	3417	-	
Entertainment	1524	-	
Computation	5911	-	
System Storage	1837	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	

Testing Software	Scope		Note
	AAEON	Ref.	
3Dmark2006 v120			Windows 7
3Dmark Score	2174	-	
SM2.0 Score	724	-	
HDR/SM3.0 Score	864	-	
CPU Score	1893	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	

Testing Software	Scope		Note
	AAEON	Ref.	
Performance Test 7.0			Windows 7
PassMark Rating	508.9	-	
CPU Mark	1248.8	-	
2D Graphics Mark	133.6	-	
3D Graphics Mark	142.1	-	
Memory Mark	337.3	-	
Disk Mark	805.2	-	

CD Mark	-	-	
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Testing Software	Scope		Note
	AAEON	Ref.	
Windows experience index			Windows 7
Processor	5.1	-	
Memory	5.5	-	
Graphics	4.1	-	
Gaming graphics	5.6	-	
Primary hard disk	5.9	-	

SATA Performance				
SATA HDD	WD WD5000BPKX / 500GB 7200 RPM / 16MB Cache / SATA 6.0Gb/s / 2.5" SATA HDD			
CPU	Intel® Atom CPU E3845 1.91GHz			
Memory	ADATA DDR3L-1600 4GB (3YE27 D9GBJ)			
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	16.6ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	7%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	92.2MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	199.6MB/s	SATAII 150~300MB SATAIII up 300M/B

USB Performance				
USB Flash	Transcend USB3.0 8GB			
Item	Comment / (unit)	Software	Transfer Rate (MB/s)	Note
USB2.0 (CN30_Port_1)	Maximum Read	ATTO Disk Benchmark	39886 MB/s	
	Maximum Write	ATTO Disk Benchmark	39709 MB/s	
USB3.0 (CN30_Port_2)	Maximum Read	ATTO Disk Benchmark	185554MB/s	
	Maximum Write	ATTO Disk Benchmark	136724 MB/s	
USB2.0 (CN31_Port_1)	Maximum Read	ATTO Disk Benchmark	39650 MB/s	
	Maximum Write	ATTO Disk Benchmark	39945 MB/s	
USB2.0 (CN31_Port_2)	Maximum Read	ATTO Disk Benchmark	39073 MB/s	
	Maximum Write	ATTO Disk Benchmark	40064 MB/s	
USB3.0 (CN27_Port_1)	Maximum Read	ATTO Disk Benchmark	185127 MB/s	
	Maximum Write	ATTO Disk Benchmark	137424 MB/s	
USB2.0 (CN26_Port_1)	Maximum Read	ATTO Disk Benchmark	32225 MB/s	
	Maximum Write	ATTO Disk Benchmark	37179 MB/s	
USB2.0 (CN26_Port_2)	Maximum Read	ATTO Disk Benchmark	33263 MB/s	
	Maximum Write	ATTO Disk Benchmark	37334 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 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"/>	

10.3 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"/>	
	SmartFan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	LVDS Backlight control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

11. Stability test

11.1. Run 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Network	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Parallel	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	USB	2.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.0		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Note: COM PORT Speed Set to 115200.

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"/>	