

Report NO: 14E010014

EPIC-KB07

AMD eKabini Platform EPIC Board

P5 Verification 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
2014/08/11	Tom Lin	Louie Lee

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	
2012/0529	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.. 	

Note :

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

- Pass: Functionality work perfectly
Fail: Functionality failed and must be resolved in the next version
N/A: Functionality Not Applicable or Not Available

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

Specification Validation

Main Specification

Item	Specification	Result			Note
		Pass	Fail	N/A	
Form Factor	EPIC Board – 165 x 115mm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Processor	AMD eKabini Quad/dual core SOC processor (BGA based, ≤ 25W) up to 2G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System Memory	1 x 204-pin Dual channel DDR3/DDR3L 1600MHz SO-DIMM up to 8GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Chipset	AMD eKabini Quad/dual core SOC processor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ethernet	Realtek 8111E 10/100/1000Base LANs, RJ-45 X2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio	HD Audio Realtek ALC 662 Codec Co-lay Realtek ALC 892	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BIOS	AMI BIOS 64Mbit SPI ROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I/O Chip	ITE8518(Embedded controller)+Fintek 81866D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Storage	2 x SATA III connectors on board, 1 x mSATA Full Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD	2 x Full size Mini card one support mSATA module control by H/W	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DIO	16-bits Digital I/O interface (8-in /8-out) co-lay with LPT Port control by hardware Control by jumper	<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"/>	
H/W Status Monitor	Monitoring system temperature, voltage, and cooling fan status	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Expansion Interface	2 x Mini card socket (1 x Mini card, 1 x mSATA) 1 x SIM Card socket 1 x BIO(TBD) 1 x Touch panel screen controller and connector(Optional) 1 x TPM(Optional)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power Requirement	1 x ATX 4-pin connector for DC12 power input. 1 x DC 8.5~24V DC input 1 x CPU smart fan, 1 x SATA power with 4-pin wafer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test 5.8~27V
Chipset	AMD eKabini Quad/dual core SOC processor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Graphic Engine	AMD eKabini Quad/dual core SOC processor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Resolution	CRT up to 2048 x 1536 @ 75 Hz LCD up to 1920 x 1200 @85Hz(Pixel clock 25-112 Mhz) Display 1/2 up to 1920 x 1200p @ 60 Hz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Output Interface	1 x VGA, 2 x Display, 2 x 18/24bits Single/Dual LVDS control by DIP Switch. Co-lay S/W GPIO control DP/LVDS by BIOS(Nice to have)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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O.S. Support

Item	Specification	Result			Note
		Pass	Fail	N/A	
Microsoft Embedded	Windows XP Embedded	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Microsoft Windows	Windows 7, 32bit / 64bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Windows XP Pro, 32bit bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Windows 8 32bit/64bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Linux	Linux-Fedora 17	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Environmental Specifications

Item	Specification
Operating temperature	32~140°F (0~60°C)
Storage temperature	-4~158°F (-20~70°C)
Operating humidity	10~80%, non-condensing
EMC	CE & FCC Class A

Note: Please refer to Environment Test Report for detail information

Platform Information

Item	Device Information	Test Item
PCB Model / Version	EPIC-KB07 A0.2	1,2,3,4,5,6,7,8,9
Carrier Board	N/A	N/A
BIOS / Version	EPIC-KB07 R1.1 (PKB7AM11) (07/04/2014)	1,2,3,4,5,6,7,8,9
EC / Version	N/A	N/A
CPU Type	AMD G-Series GX-217GA 1.65GHz 15 Watt (2 core) AMD G-Series GX-420CA 2GHz L2:2M 25W (4 core)	1,2,3,4,5,6,7,8,9
Memory Type	DSL DDR3 1066 4GB ELPIDA J2108BCSE-DJ-F	1,2,3,4,5,6,7,8,9
SATA HDD	TOSHIBA HDS721010DLE630 SATAIII 3.5" 1TB/7200rpm	1,2,3,4,5,6,7,8,9
SATA DVD-ROM	Pioneer DVR-217	1,2,3,4,5,6,7,8,9
USB DVD-ROM	ASUS-SDRW-08D2S-U	1,2,3,4,5,6,7,8,9
LCD Monitor	Dell U2713HM	1,2,3,4,5,6,7,8,9
Operating System	<input checked="" type="checkbox"/> Linux English Ubuntu13.04 Kernel 3.8.0-19.generic	7-1
	<input checked="" type="checkbox"/> Windows 7 Ultimate SP1 English Version 32/64 Bit	7-2
	<input checked="" type="checkbox"/> Windows 8.1 Enterprise English Version 32/64Bit	7-3
Power Supply	ATX Power Supply : Zippy HG2-6400P 400W	1,2,3,4,5,6,7,8,9
Chipset Information with 7 Ultimate SP1 English Version 32 Bit Driver Version		
Chipset Software	CATALYST Install Manager 8.0.915.0 06/04/2013	
PCH Bridge	AMD eKabini Quad/dual core SOC processor	
Super IO Chipset	Fintek 81866D	
VGA Chipset	AMD Radeon HD 8400E 13.151.0.1 (08/19/2013)	
Audio Chipset	AMD High Definition Audio Device 7.12.0.7716 (06/25/2013)	
	Realtek High Definition Audio 6.0.1.6873 (3/29/2013)	
Ethernet Chipset	Realtek PCIe GBE Family Controller 7.73.618.2013 (6/18/2013)	

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1. Hardware Test

1.1. CPU Compatibility Test

CPU Information	Result			Note
	Pass	Fail	N/A	
AMD G-Series GX-217GA 1.65GHz 15 Watt (2 core)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
AMD G-Series GX-420CA 2GHz L2:2M 25W (4 core)	<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 DDR3 1066 4GB ELPIDA J2108BDBG-DJ-F	14D6C04G01	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with GX-420CA
DSL DDR3 1600 8GB Hynix H5TQ4G83MFR	14D6B02G2F	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with GX-217GA/ GX-420CA
DSL DDR3 1333 8GB ELPIDA J4208BBBG-GN-F	968D3008G2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with GX-217GA
Transcend DDR3 1066 2GB SEC K4B1G0846G-BCH9	14D6B02G2F	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with GX-420CA
Transcend DDR3 1066 4GB SEC K4B2G0846D		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with GX-217GA
Transcend DDR3 1333 1GB SEC K4B1G0846G	AP-DR14D6A01G49	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with GX-217GA
Transcend DDR3 1333 4GB SEC K4B2G0846D	AP-DR14D6A04G00	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with GX-420CA
Transcend DDR3 1600 4GB SEC K4B4G0846B	AP-5S968D3004GA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with GX-420CA
Innodisk DDR3 1066 4GB Hynix H5TQ2G83CFR	14D6C04G07	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with GX-217GA
Innodisk DDR3 1333 4GB Hynix H5TQ2G83BFR		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with GX-420CA
Innodisk DDR3L 1333 8GB M3s0-8GHSDLN9-E93 Hynix H5TC4G83AFR		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with GX-420CA
Innodisk DDR3L 1600 8GB m3S0-8GHSDLPC		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with GX-420CA
Apacer DDR3 1333 4GB Hynix H5TQ2G83BFR		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with GX-420CA

1.3. SATA Compatibility Test

1.3.1 SATA-IDE Mode Test

SATA IDE Mode		Result			Note
		Pass	Fail	N/A	
HDD	TOSHIBA HDS721010DLE630 SATAIII 3.5" 1TB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows7_32
HDD	Seagate ST500DM002 3.5" SATAIII 500GB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows7_64
HDD	Hitachi HDS721050CLA362 3.5" SATAIII 500GB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	Seagate Barracuda 7200.12 SATA3 500G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD	ADATA SSD SX900 128GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Win8.1_64
SATA DOM	Innodisk SATADOM 3ME series 16GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DVD	Pioneer DVR-217	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

DVD	ASUS BW-14D1XT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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1.3.2 Onboard SATA-AHCI Mode Test

SATA AHCI Test	Result			Note
	Pass	Fail	N/A	
WD WD500AKX SATAIII 3.5" 500GB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows8_64bit
TOSHIBA HDS721010DLE630 SATAIII 3.5" 1TB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows7_32
Seagate ST500LT012-9WS142 2.5" 500GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows8.1_32
WD WD5000LPVX-22V0TT0 2.5" 500GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ubuntu11.04
ADATA SSD SX900 128GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.3.3 Onboard m-SATA Test

m-SATA Test	AAEON P/N	Result			Note
		Pass	Fail	N/A	
InnoDisk D150Q 32GB	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Read max: 130MB Write max: 122MB
SanDisk SDSA5FK-032G-Q 32GB	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Read max: 494MB Write max: 111MB
MemoRight MRV012A0 32GB	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Read max: 91MB Write max: 58MB
Transcend TS64GMSA 740 64GB	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Read max: 523MB Write max: 179MB
Transcend TS64GMSA 630 64GB	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Read max: 282MB Write max: 80MB

1.4. Keyboard/Mouse Compatibility Test

Keyboard/mouse Information		Result			Note
		Pass	Fail	N/A	
PS/2 Keyboard	ATake KJ-118	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	GoodVision JSKJ-8831	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PS/2 Mouse	Genius NetScroll 120	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Kinyo KM-V2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Keyboard	Microsoft 1366	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Logitech K200	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Mouse	Microsoft 1113	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Logitech M-U0003	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.5. USB Compatibility Test

Power Supply Information		Result			Note
		Pass	Fail	N/A	
DVD ROM	LITE-ON eNAU808-T29	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install Win8.1
DVD ROM	ASUS-SDRW-08D2S-U	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install Win7
DVD ROM	Pioneer DVR XD11T	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install Win8.1
Blu-Ray	Pioneer BDR-XD04T	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB3.0 Flash	USB3.0 Kingston DT Ultimate G2 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB3.0 Flash	Sony USB3.0 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB2.0 Flash	USB2.0 ADATA C802 2GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB2.0 Flash	USB2.0 SanDisk 8GB	<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	AMD G-Series GX-420CA 2GHz L2:2M 25W (4 core)												
Memory	Innodisk DDR3L 1333 8GB M3s0-8GHSDLN9-E93 Hynix H5TC4G83AFR												
SATA HDD	TOSHIBA HDKPC03A2A02J 3.5" 7200rpm SATAIII 1TB												
VGA	DELL U2713HM 27" 2560*1440												
Display port	BENQ BL2710 27" 2560*1440												
LVDS1	AUO G121XN01 V.0 / 12" 1024*768 / 18bit												
LVDS2	AUO M215HW03 V1 / 21" 1920X1080 48bit												
Color Quality	<input checked="" type="checkbox"/> 16bit <input type="checkbox"/> 24bit <input checked="" type="checkbox"/> 32bit												
Resolution	VGA			DP			LVDS1			LVDS2			Note
	Pass	Fail	N/A	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"/>	<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"/>	<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"/>	<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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X600	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<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"/>	<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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X960	<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"/>	<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"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1360X768	<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"/>	<input checked="" type="checkbox"/>	
1366X768	<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"/>	<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"/>	<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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1600X1200	<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"/>	
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"/>	<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"/>	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1920X1080	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1920X1200	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2560X1440	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	
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"/>	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rotation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rotation (0 / 90 /180 /270)

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

2.1.2. Multi-Display Test

Selection	Output	Result			Note
		Pass	Fail	N/A	
Dual Display Clone	VGA+LVDS1	<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+LVDS2	<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	LVDS1+LVDS2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Selection	Output	Result			Note
		Pass	Fail	N/A	
Dual Display Clone	VGA+DP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dual Display Clone	VGA+LVDS2	<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	DP+LVDS2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2.1.3. Video Resolution Test

Test points:

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

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

2.1.4. Video Resolution Test

LVDS Model	Result			Note
	Pass	Fail	N/A	
1_AUO G065VN01 V.0 / 6.5" / 640x480 / 18bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2_AUO G065VN01 V.0 / 6.5" / 640x480 / 24bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3_Data Image 7" / 800*480 / 18bit (16:9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4_AUO G084SN05 V.3 / 8.4" / 800*600 / 18bit (4:3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5_AU B104SN02 V.0 / 10.4" / 800*600 / 18bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6_AUO G084SN05 v7 / 8.4" / 800*600 / 24bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7_AU G150XG01 V.0 / 15" / 1024*768 / 18bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
8_AU M150XN07 V.2 / 15" / 1024x768 / 24bit (4:3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9_AUO G121XN01 V.0 / 12" 1024*768 / 18bit (4:3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10_AU M170EG01 V.D/ 17" / 1280*1024 / 48bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
11_AU M170XW01 V.1 / 17" / 1280x768 / 24bit (16:9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
12_AUO T260XW02 / 26" / 1366x768 / 24bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
13_AU M201UN02 V.5 / 20.1" / 1600x1200x48bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
14_AUO T370HW01 / 37" / 1920x1080 / 48bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
15_AUO M190PW01 V0 / 19"/1440X900/48 bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
16_AUO M215HW03 V1 / 21" 1920X1080 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"/>	
Line In	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Line in recorder	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MICROPHONE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Microphone recorder	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DP Audio	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DP2 Audio (Optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
HDMI Audio	<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"/>	

2.3. LAN Function Test

[] No Support

Connect two computers via different speed LAN HUB by using "Ping" instruction (1000 times)										
1000MBps LAN HUB			D-Link DGS-1008D							
100MBps LAN HUB			HP J4095A 24 Ports							
10MBps LAN HUB			SVEC FD916H							
OnBoard LAN1		IntelR PHY I217LM Gigabit LAN					MAC Address		00-07-32-64-12-87	
OnBoard LAN2		IntelR I210AT Gigabit LAN					MAC Address		00-07-32-64-12-88	
LAN Speed	Link / Speed LED	Active LED	LAN 1			LAN 2			Note	
			Pass	Fail	N/A	Pass	Fail	N/A		
1000MBps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
100MBps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
10MBps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Wake On LAN			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	S1/S3/S4/S5/DOS off	
Boot ROM to Novell 4.11 [RPL]			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
LAN Boot (PXE)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Internet Browser (DHCP Server)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

2.3.2. Throughput Test

DUT Platform Information:

<input type="checkbox"/>	Fedora Core 14 – Kernel
<input type="checkbox"/>	Cent OS5.6
<input checked="" type="checkbox"/>	Ubuntu 11.04 Kernel 2.6.38-8-generic
<input type="checkbox"/>	Red Hat

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

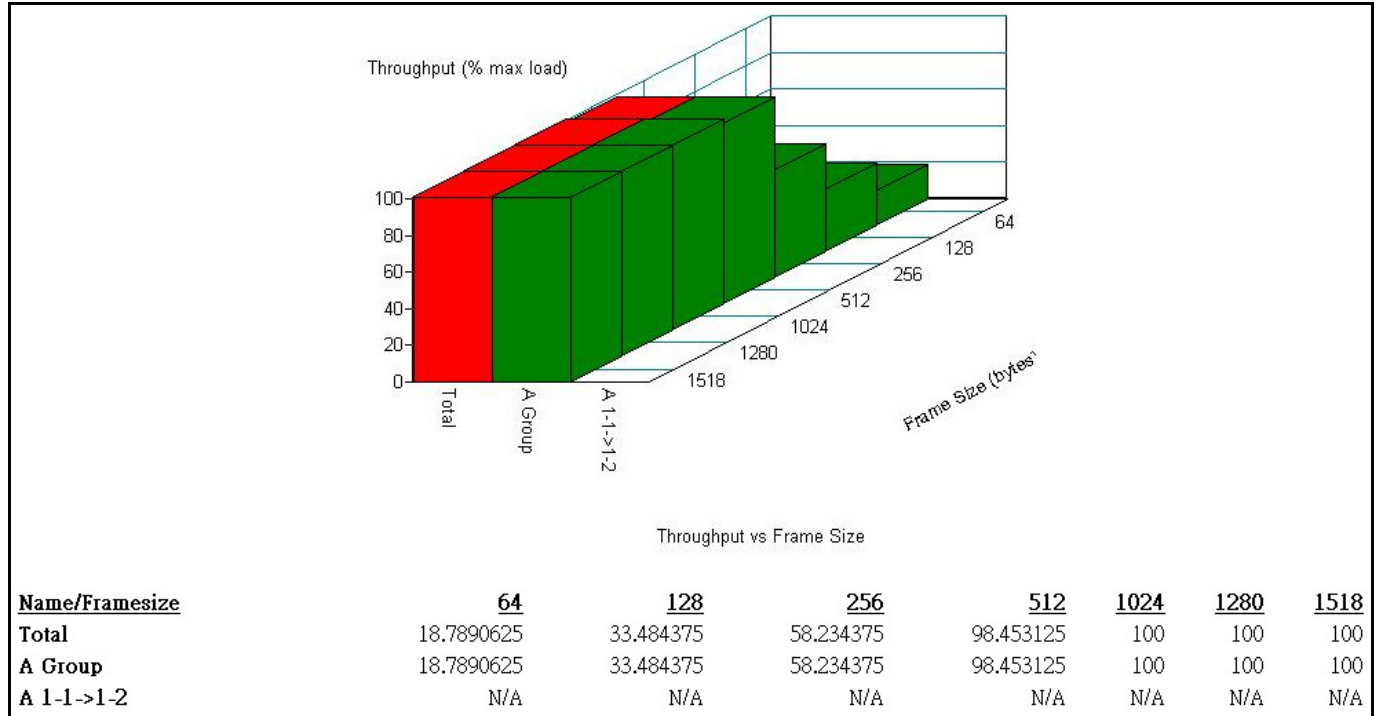
Graphics Media	Ubuntu 11.04 Default setting
LAN	LAN1 Realtek Gigabit LAN -RTL8168.036
	LAN2 Realtek Gigabit LAN -RTL8168.036
Audio Driver	Ubuntu 11.04 Default setting

SMB Platform Information:

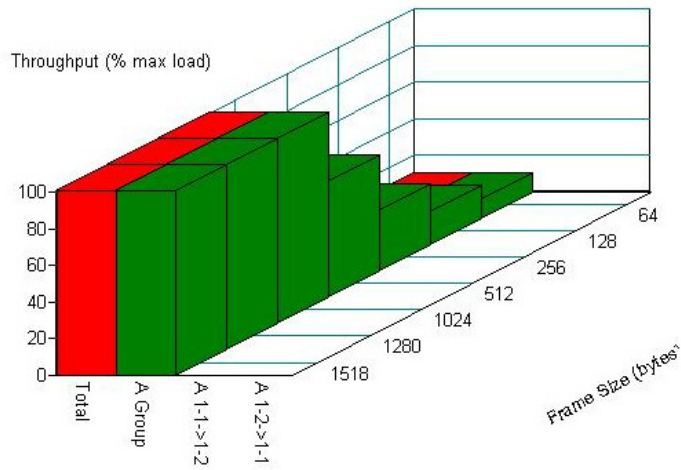
Chassis	SPIRENT Smartbits 600B
Chassis Version	2.80.003 (Cur) 2.50.000
Chassis Serial #	06014047
Library	6.00-29
API	5.50.42.01
File	0550042
Module	2 * LAN-3324A SmartMetrics XD 4-Port 10/100/1000Base-T Gigabit Ethernet
Test Software	SmartFlow5.50.42.1

Test Result:

1. Half Direction (LAN1: Realtek RTL8111 Gigabit LAN → LAN2: Realtek RTL8111 Gigabit LAN)



2. Binary Direction (Realtek RTL8111 Gigabit LAN ↔ LAN2: Realtek RTL8111 Gigabit LAN)



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	10.28125	18.015625	32.7109375	62.875	100	100	100
A Group	10.28125	18.015625	32.7109375	62.875	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. Connector and Jumper Test

[] No Support

Function Test	Result			Note
	Pass	Fail	N/A	
LPD_DIO Selection (JP9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
AT/ATX Selection (JP8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Touch Screen Selection (JP12)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	A0.2 no connector
Ring_12V_5V Selection (JP10)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ring_12V_5V Selection (JP14)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS1 VCC Selection (JP3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS2 VCC Selection (JP6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS1 Backlight Voltage Selection (JP1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS2 Backlight Voltage Selection (JP4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS1 Backlight Control Selection (JP2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS2 Backlight Control Selection (JP5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Clear CMOS Selection (CN9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
mSATA_PCl e Selection (CN37)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM1 Slew Selection (JP13)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
COM2 Slew Selection (JP11)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
AMP-R Channel Connector (CN27)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	A0.2 no connector
AMP-L Channel Connector (CN28)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	A0.2 no connector

3. Integration Test

	Hardware Information with Windows 7 Ultimate English Version 32 Bit Driver Version
CPU	AMD G-Series GX-420CA 2GHz L2:2M 25W (4 core)
Memory	Innodisk DDR3L 1333 8GB M3s0-8GHSDLN9-E93 Hynix H5TC4G83AFR
SATA HDD	TOSHIBA HDKPC03A2A02J 3.5" 7200rpm SATAIII 1TB
	Chipset Information with 7 Professional English SP1 32 Bit Driver Version
Chipset Software	CATALYST Install Manager 8.0.915.0 06/04/2013
APU Bridge	AMD eKabini Quad/dual core SOC processor
Super IO Chipset	Fintek 81866D
VGA Chipset	AMD Radeon HD 8400E 13.151.0.1 (08/19/2013)
Audio Chipset	AMD High Definition Audio Device 7.12.0.7716 (06/25/2013) Realtek High Definition Audio 6.0.1.6873 (3/29/2013)
Ethernet Chipset	Realtek PCIe GBE Family Controller 7.73.618.2013 (6/18/2013)

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"/>	
ASUS SDRW-08D2S-U		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Hub Test (Connect USB Device) HUB Port1: USB Keyboard / HUB Port2: USB Mouse / HUB Port3: USB HDD								
USB 2.0 HUB PowerSync / USB 2.0 4 Port HU-155					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3.2. Digital I/O Port Test

DIO Address ()	Result			Note
	Pass	Fail	N/A	
DIO VCC +5.0V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test under DOS

3.3. COM Port Integration Test

Test Item	Result			Note
	Pass	Fail	N/A	
Serial Modem Dial Out	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial Modem	Ring In	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Test by Modem S3/S4/S5/DOS off
	+12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Test by Multimeter COM1/COM2
	+5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Test by Multimeter COM1/COM2
Transmission	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AP: PComm

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"/>	The communication between the RS-422 port of two boards is linked by one 1.2km cable on Windows Terminal
RS-485 for COM1/2 (DB9 pin1 and pin3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use ICP CON I-7044D D/IO Module in Windows(Support Auto flow control)
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The communication between the RS-485 port of two boards is linked by one 1.2km cable on Windows Terminal

3.5. LPT Port Test

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

3.6. Burn In Test

Under Room Temperature: 26 °C

OS: Windows 7 Ultimate English SP1

Test Item	Result			Note	
	Pass	Fail	N/A		
Burn In Test V7.1(1006) Duty: 100 Time: over 12 hours	CPU	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RAM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	COM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COM1~6
	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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	*2

Note: COM PORT Speed Set to 115200.

4. Application Test

4.1. PCI-Express Function Test

Mini PCI Express Card	Function Test			Note
	Pass	Fail	N/A	
Azurewave AW-NB100H 802.11b/g/n Wi-Fi & BT Combo (USB/PCI-E Interface)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PCI-E and USB single
COM-ME232S2 RS232 *2 module	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IO-MESATA 3132ME R1.1 SATAII*2 module	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Huawei Gobi 3000 HS-USB Mobile Broadband Device	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	With SIM card PCIE1A2

4.2. SSD Modules Compatibility Test

SSD HDD Compatibility Test:

Cable Type: IDE SATA2 MLC SLC

Test Item	Result			Note
	Pass	Fail	N/A	
ADATA SSD SX900 128GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

5. Power Consumption Test

Hardware Information with Windows 7 Ultimate English Version 32 Bit Driver Version	
CPU	AMD G-Series GX-420CA 2GHz L2:2M 25W (4 core)
Memory	Innodisk DDR3L 1600 8GB m3S0-8GHSDLPC
SATA HDD	TOSHIBA HDKPC03A2A02J 3.5" 7200rpm SATAIII 1TB

5.1. AT/ATX Power Consumption

Test Equipment						
Equipment	Digital Multimeter					
Manufacturer	Hola					
Model name	DM-1240					
Test Environment						
ATX Power Model	Seventeam ST-400EAG-05F 400W					
Keyboard/Mouse	PS/2 keyboard Kinyo VKB-768; PS/2 Mouse Genius NetScroll 120					
Note	Power consumption does not include HDD consumption.					
Power Supply	ATX Power					Note
(Full Loading Mode) Windows 7 with Prime 95 Full Loading Test	(+12V)	1	A	12	W	Prime95 Version 259
Full Loading Total Watt	12 (W)					
S3 mode: Measure the current value when system in S3 mode of windows and without running any	(+12V)	0.1	A	1.2	W	
Suspend Total Watt	1.2 (W)					
Win. Idle mode: Measure the current value when system in windows mode and without running any program	(+12V)	0.46	A	5.52	W	
Idle Total Watt	5.52 (W)					
Power on - Boot sequence: Measure the maximum current value of between system power on and boot-up to O.S.	(+12V)	1.35	A	16.2	W	
Power On Total Watt	16.2 (W)					
S5 mode: Measure the current value when system in S5 mode of windows and without running any	(+12V)	0.08	A	0.96	W	Erp disable
Suspend Total Watt	0.96 (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"/>	59°C	57.4°C	
System Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	46°C	44°C	
Fan1 Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4518 RPM	4500 RPM	
Vcore	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.92V	0.92V	
DDR1.5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.54V	1.52V	
+5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.171V	5.11V	
+12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.232V	12.04V	

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"/>	Test with GX-420CA
RTC Clock in Power Off Mode		24 hrs	+/-2 sec	+1	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with GX-217GA

6.2. Booting Timer Test

Installation	Actual		Note
System Booting Time	4.0	Sec	Press the Power Button till "Beep" Sound appears

6.3. Watchdog Timer Test

Use Function as below:

[] No Support. Test with Hi-Safe20140612

Time-Out Interval	Margin for error	Actual		Result			Note
				Pass	Fail	N/A	
10 sec	+ / - 10 %	10.1	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
60 sec	+ / - 10 %	60.5	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
255 sec	+ / - 10 %	255.1	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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

7. O.S. Compatibility Test

7.1. English Ubuntu13.04 Kernel 3.8.0-19.generic

[] No Support

Driver Information:

Chipset Software	amd-driver-installer-13.151-x86.x86_64.run
Graphics Media	amd-driver-installer-13.151-x86.x86_64.run
Audio Driver	Fedora 19 default
LAN Driver	r8168-8.036.00.tar.bz2

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Ubuntu13.04 Kernel 3.8.0-19.generic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Type uname -a IDE mode

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*1200
DP -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1200
LVDS1 18bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1024*768
LVDS2 48bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1200
Network Function Test				
Connect to Internet -- LAN 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Connect to Internet -- LAN 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio Function Test				
Play Audio Function Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Play Audio Test
Base Function Test				
Mouse Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PS/2 USB
Keyboard Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PS/2 USB
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Console Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Support com1/com2 <minicom -s>
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
Halt	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Power Off Mode
ls / clear; cd /dev /ls -l	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Command instruction

7.2. Windows 7 Ultimate English Version 32/64Bit

[X] x32/64 Driver Information:

Chipset Software	CATALYST Install Manager 8.0.915.0 06/04/2013
Graphics Media	AMD Radeon HD 8280E 13.151.0.0 (8/19/2013)-- GX-217GA AMD Radeon HD 8400E 13.151.0.1 (08/19/2013)
Audio Driver	AMD High Definition Audio Device 7.12.0.7716 (06/25/2013) Realtek High Definition Audio 6.0.1.6873 (3/29/2013)
LAN Driver	Realtek PCIe GBE Family Controller 7.73.618.2013 (6/18/2013)

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows 7 Ultimate ACPI Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	32bit AHCI mode/420GA 64bit IDE mode /217CA

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"/>	2048*1152
Display port (CN12)-- Full Screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1920*1080,A0.2 no connector
HDMI Port – Full Screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1920*1080,A0.2 no connector
Display port (CN7) – Full Screen (Optional)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2560*1440
LVDS1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1024*768
LVDS2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1200
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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PS/2 keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COM1~COM6
TPM	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	A0.2 no module
LPT1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 2.0/3.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Touch Device	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	A0.2 no connector.
LAN Function Test				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CN5
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CN6
Audio Function Test				
Line Out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Line In Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Microphone Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDMI Audio Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	A0.2 no connector
DP Audio Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Start Menu				
Log off User	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shut down (S5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Standby(S3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Restart	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hibernate (S4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

7.3. Windows 8.1 Enterprise English Version 32/64Bit

[X] x32/64 Driver Information:

Chipset Software	CATALYST Install Manager 8.0.915.0 (08/19/2013)
Graphics Media	AMD Radeon HD 8280E 13.151.0.0 (8/19/2013)-- GX-217GA AMD Radeon HD 8400E 13.251.0.0 (12/06/2013) –GX-420CA
Audio Driver	AMD High Definition Audio Device 9.0.0.9902 (06/12/2013) Realtek High Definition Audio 6.0.1.6873 (3/29/2013)
LAN Driver	Realtek PCIe GBE Family Controller 8.18.621.2013 (6/21/2013)

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows 8.1 Enterprise ACPI Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	32bit AHCI mode -217CA 64bit IDE mode -420GA

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"/>	2048*1152
Display port -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1080
LVDS1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1024*768
LVDS2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1080
Basic Function Test				
PS/2 Mouse	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PS/2 keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COM1~COM6
TPM	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
LPT1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 2.0/3.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Touch Device	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
LAN Function Test				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio Function Test				
Line Out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Line In Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Microphone Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DP Audio Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Start Menu				
Log off User	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shut down (S5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Standby(S3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Restart	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hibernate (S4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8. BIOS Function Test

Hardware Information with Windows 7 Ultimate English Version 32Bit Driver Version	
CPU	AMD G-Series GX-420CA 2GHz L2:2M 25W (4 core)
Memory	Innodisk DDR3L 1333 8GB M3s0-8GHSDLN9-E93 Hynix H5TC4G83AFR
SATA HDD	TOSHIBA HDKPC03A2A02J 3.5" 7200rpm SATAIII 1TB

8.1. Advanced Test

Test Item	Result			Note		
	Pass	Fail	N/A			
ACPI settings	Suspend Disable	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Enable/Disable	
	Sleeps state (S1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
	Sleeps state (S3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Dynamic Digital IO	DIO0~15	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	JP9 select DIO	
Trusted Computing	TPM SUPPORT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
	Clear TPM	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
CPU configuration	CPU information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
SATA configuration	SATA controller	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Enable/Disable	
	AHCI mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	IDE mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
USB configuration	Legacy USB Support	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
F81866 Super IO configuration	Serial port 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
	RS232/422/485	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Serial port2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
	RS232/422/485	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Serial port3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
	Serial port4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
	Serial port5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
	Serial port6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
	Parallel Port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
SmartFAN	CN2	Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Full speed.
		Manual Duty mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Auto Duty-Cycle mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power management	Power mode	AT/ATX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Power on/power off/last state	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Resume from PCIE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	S5 RTC Wake settings					
	Wake system with Dynamic time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Wake system with fixed time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

8.2. Chipset Test

Test Item			Result			Note
			Pass	Fail	N/A	
System Agent (SA) Configuration	GFX Configuration	DP0 output mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DP(CN7) or LVDS(CN11) display SW1 need to setting.
		LVDS panel type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1600*900, 1280*1024, 1024*768, 800*600 18bit
		LVDS1 BL level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0~100% DC mode and PWM mode
		LVDS1 BL type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Normal/inverted
		DP1 output mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DP/LVDS (Default)
		LVDS2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable /disable
		LVDS2 panel type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18bit:1024*768/1024*600/800*600/800*480/640*480 (If connect VGA cable, 800*480 and 640*480 will not display in POST.) 24bit:1366*768/1280*768/1024*768 48bit:1920*1200/1920*1080/1600*1200/1440*900/1280*1024
		LVDS2 BL Level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0~100% DC mode and PWM mode
		LVDS2 BL type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Normal/inverted
		Memory Configuration		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
South Bridge	HD Audio Azalia Device	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Control Realtek audio only.	

8.3. Boot Test

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

8.4. CMOS Backup / Clear CMOS Test

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

8.5. AAEON Tag Check Utility

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

8.6. Supervisor / User Password Test

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

8.7. Hi-safe Test

Test Item	Result			Note		
	Pass	Fail	N/A			
Version(20140618)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PKB7A		
System Information	CPU Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Model Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Display Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	RAM Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Support single DIMM	
H/W Monitor	Info	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Fan Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Voltage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
DIO	DIO1~8 High	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	DIO1~8 Low	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	DIO9~16 High	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	DIO9~16 Low	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
WatchDog	10sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 10.1 sec	
	1min	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 60.5sec	
	255sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 255.1sec	
	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 0xB00	
	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"/>		
Smart FAN	Chipset	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Fan Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Speed control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Off Speed TMP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Full Speed TMP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Backlight	Inverter1	DC mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AD_5247_0x2E
		PWM mode	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Inverter2	DC mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AD_5247_0x5c
		PWM mode	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

9. Performance Test

	Hardware Information with Windows 7 Ultimate English Version 32 Bit Driver Version
CPU	AMD G-Series GX-420CA 2GHz L2:2M 25W (4 core)
Memory	Innodisk DDR3L 1333 8GB M3s0-8GHSDLN9-E93 Hynix H5TC4G83AFR
SATA HDD	TOSHIBA HDKPC03A2A02J 3.5" 7200rpm SATAIII 1TB

9-1. Performance Test

Test Result: (Display set 1920*1080 test)

Testing Software	Scope		Note
	AAEON	Ref.	
PCMark2005			Windows 7
PCMark	3132	-	PCMarks
CPU	2334	-	
Memory	3106	-	
Graphics	3828	-	
HDD	9582	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	
PCMark Vantage			PCMarks
PCMarks	2581	-	
Memories	2100	-	
TV and Movies	1471	-	
Gaming	1598	-	
Music	3498	-	
Communications	3113	-	
Productivity	2188	-	
HDD	5974	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	

Testing Software	Scope		Note
	AAEON	Ref.	
CPUmark99			Windows 7
CPU mark99	208	-	

Testing Software	Scope		Note
	AAEON	Ref.	
3Dmark2006 v120			Windows 7
3Dmark Score	1933		
SM2.0 Score	902		
HDR/SM3.0 Score	947		
CPU Score	401		
Benchmark (B)	-	-	
Average Efficiency	-	-	

3Dmark11 Professional Edition			Windows 7
Extreme 1920*1080			
3Dmark 11Score	X167		
Graphics Score	157		
Physics Score	298		
Combined Score	180		
Performance 1280*720			
3Dmark 11Score	P511		
Graphics Score	572		
Physics Score	321		
Combined Score	569		
Entry 1024*600			
3Dmark 11Score	E615		
Graphics Score	912		
Physics Score	287		
Combined Score	622		

Testing Software	Scope		Note
	AAEON	Ref.	
Final Reality V1.01—BenchMark Test			Windows 7
2D image	30.90	-	Reality marks
3D	5.84	-	
Bus transfer	15.23	-	
Overall	14.77	-	
Benchmark (A)	-	-	

Testing Software	Scope		Note
	AAEON	Ref.	
Performance Test 7.0			
PassMark Rating	395	-	
CPU Mark	499.5	-	
2D Graphics Mark	124.3	-	
3D Graphics Mark	274.6	-	
Memory Mark	466.8	-	
Disk Mark	1175.3	-	
CD Mark	-	-	

Testing Software	Scope		Note
	AAEON	Ref.	
Windows experience index			Windows 7
Processor	2.5	-	
Memory	4.9	-	
Graphics	4.6	-	
Gaming graphics	6.0	-	
Primary hard disk	5.9	-	

SATA Performance				
SATA HDD	TOSHIBA HDKPC03A2A02J 3.5" 7200rpm SATAIII 1TB			
CPU	AMD G-Series GX-420CA 2GHz L2:2M 25W (4 core)			
Memory	Innodisk DDR3L 1333 8GB M3s0-8GHSDLN9-E93 Hynix H5TC4G83AFR			
OS	Windows 7 Ultimate English Version 32 Bit			
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	19.0ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	8%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	158.4MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	374.3MB/s	SATAII 150~300MB SATAIII up 300M/B

USB2.0 Performance				
USB Flash	Kingston DT Ultimate G2 32GB			
Item	Comment / (unit)	Software	Transfer Rate (MB/s)	Note
USB2.0	Maximum Read	ATTO Disk Benchmark	32MB/s	
	Maximum Write	ATTO Disk Benchmark	16MB/s	

USB3.0 Performance				
USB Flash	Sony USB3.0 32GB			
Item	Comment / (unit)	Software	Transfer Rate (MB/s)	Note
USB3.0	Maximum Read	ATTO Disk Benchmark	84MB/s	
	Maximum Write	ATTO Disk Benchmark	23MB/s	