

Report NO: 12CO010008

COM-QM77 Rev.B

Intel QM77 chipset + COM Express CPU Module 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

2012/09/27

Approval

Tom Lin

Test Engineer

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	

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	
Product Name	COM-QM77	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Form Factor	COM Express, Basic Module, Pin-out Type VI: 125mm x 95mm (4.92" x 3.75")	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Thickness of PCB	2.0mm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Processor	Intel Ivy Bridge processors BGA1023 Low Power (17W~25W) Dual/Quad Core, 25W is main focus. 17W CPU are not yet available from Intel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test wit 25W
Chipset	Intel QM77 PCH	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System Memory	SODIMM x 2 supports DDRIII 1333/1600, Max. 16GB (per DIMM 8GB max) ==> Channel 0 on the upper side ==> Channel 1 on the down side ==> 204-pin SODIMM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VGA/LCD Controller	Intel Ivy Bridge processors integrated CRT: up to 2560 x 2048 LVDS: up to 1920 x 1200	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LCD Interface	Up to 24-bit dual-channel LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Digital Display	Digital Display Interface x2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with DVI and HDMI
Shared Memory	Shared system memory above 512MB/ DVMT 5.0 (TBC w/Intel))	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TPM	Meet TPM v1.2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ethernet	Intel 82579LM, Gigabit Ethernet PHY	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I/O Chips	QM77 (Winbond SIO on the carrier board)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
K/B and Mouse	From LPC interface on carrier board	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Watchdog Timer Chipset	Embedded Controller iTE8518 ==> LPC interface	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hardware Monitor Chipset	Embedded Controller iTE8518	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Expansion Interface	PCI-Express [x16] x 1 (Gen 3.0) LPC bus x 1 SMBus x 1 UART x 2 I2C x 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BIOS	SPI type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
EEPROM	Atmel AT24C02 (Ref) ==> SOP 8, 2Kb, Serial EEPROM ==> Save BIOS and configuration data	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wake on LAN	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BBS (BIOS Boot Spec.)	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio	High definition audio interface	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SATA Interface	SATA 2.0 port x 4 (include SATA 3.0 x 2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Floppy Drive Interface	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Parallel Port	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial Port	from LPC to EC , then to Carrier board (ECx2, CBx2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

GPIO	Up to 4 input and 4 output ==> Signals from ITE 8518	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Universal Serial Bus	USB 2.0 x 8 (include USB 3.0 x 4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Linux	Linux-Fedora 16 or later	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with Ubuntu 11.10

Environmental Specifications

Item	Specification
Operating temperature	32~140 °F (0~60 °C)
Storage temperature	-4~176 °F (-40~80 °C)
Operating humidity	0%~90%RH, 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	COM-QM77 B1.0	1,2,3,4,5,6,7,8,9
Carrier Board	ECB-917T Rev :A1.0_0_0	1,2,3,4,5,6,7,8,9
BIOS / Version	COM-QM77 R2.2(CM77BM22) (09/10/2012) BIOS Release	1,2,3,4,5,6,7,8,9
EC / Version	CM77BE14	1,2,3,4,5,6,7,8,9
CPU Type	Intel® Core™ i7-3555LE Processor (4M Cache, up to 3.20 GHz)	1,2,3,4,5,6,7,8,9
Memory Type	Transcend DDR3-1333 8GB SEC HYKO K4B4G0846B	1,2,3,4,5,6,7,8,9
SATA HDD	Seagate Barracuda 7200.9 / 160G (ST3160811AS)→SATA2	1,2,3,4,5,6,7,8,9
	Seagate Momentus 7200.2 /120G (ST9120823AS)→ SATA2	
	WD WD6402AAEX / 640GB→SATA3	
	Seagate Barracuda 7200.12 / 1TB (ST31000524AS)→ SATA3	
SATA DVD-ROM	TOSHIBA MK1676GSX /160G → SATA2	1,2,3,4,5,6,7,8,9
	Pioneer DVR-212BK	
USB DVD-ROM	LG GH20NS15	1,2,3,4,5,6,7,8,9
	Aopen EDR8865U	
	ASUS-DRW-1604P	
LCD Monitor	Pioneer DVR-XD 10T	1,2,3,4,5,6,7,8,9
	EIZNO EV2335W 23.5"	
	Asus VE228H 22"	
	Viewsonic VT2430-NT 24"	
LVDS	DELL U2410 24"	1,2,3,4,5,6,7,8,9
	PHILIPS 244E2SB/96 24"	
	AUO G150XG01 V.0 / 15" / 1024*768 / 18bit (4:3)	
Operating System	AUO M150XN07 V.2 / 15" / 1024x768 / 24bit (4:3)	7-1
	AUO G121XN01 V.0 / 12" 1024*768	7-2
	<input checked="" type="checkbox"/> Linux English Ubuntu 11.10 Kernel 3.0.0-24	7-3
Power Supply	<input checked="" type="checkbox"/> Windows 7 Ultimate SP1 English Version 32/64 bit	1,2,3,4,5,6,7,8,9
	<input checked="" type="checkbox"/> Windows XP Professional English SP3 32bit	
	ATX Power Supply : Seasonic S12II-430Bronze	
	ATX Power Supply : Seasonic S12II-330W	
	ATX Power Supply :Seventeam ST-500T-CG	
Chipset Software	ATX Power Supply: Seventeam ST-350BKV	Chipset Information with 7 Ultimate SP1 English Version 32 Bit Driver Version
	AT Power Supply: ZECK ZKS-300W	
Chipset Software	Intel Chipset Device Software 9.3.0.1019 (12/06/2012)	
PCH Bridge	Intel QM77	
Carrier board Super IO Chipset	Winbond W83627DHG	
EC Chipset	ITE IT8518	
VGA Chipset	Intel HD Graphics 4000 8.15.10.2656 (02/17/2012)	
Audio Chipset	Realtek High Definition Audio 6.0.1.6526 (12/13/2011)	
Ethernet Chipset	Intel 82579LM Gigabit Network 11.15.12.0 (11/30/2011)	
	Intel 82583V Gigabit Network 11.14.48.0 (10/13/2011)---ECB-917T	
TPM	Infineon security platform software 3.7 (Build 2281)	
USB 3.0	Intel USB3.0 eXtensible Host controller 1.0.4.225 (3/27/2012)	

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1. Hardware Test

1.1. CPU Compatibility Test

CPU Information	Result			Note
	Pass	Fail	N/A	
Intel® Core™ i7-3555LE Processor (4M Cache, up to 3.20 GHz)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows 7

1.2. Memory Compatibility Test

Memory Information	MEM V4.20			Note
	Pass	Fail	N/A	
Panram DDR3-1333-CL9 1207-10102261G-002	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Single DIMM boot and two DIMM for Memtest4.2
DSL DDR3 1066 4GB CL7-ELPIDA J2108BCSE-DJ-F	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Single DIMM boot and two DIMM for Memtest4.2
InnoDisk DDR3-1333 4GB Hynix H5TQ2G83BFR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Single DIMM boot and two DIMM for Memtest4.2
InnoDisk DDR3-1333 2GB Hynix H5TQ2G83BFR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Single DIMM boot and two DIMM for Memtest4.2
InnoDisk DDR3-1333 1GB Hynix H5TQ1G83DFR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Single DIMM boot and two DIMM for Memtest4.2
Transcend DDR3-1333 1GB SEC BCH9-K4B1G0846G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Single DIMM boot and two DIMM for Memtest4.2
Transcend DDR3-1066 2GB SEC BCH9-K4B1G0846G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Single DIMM boot and two DIMM for Memtest4.2
Transcend DDR3-1333 2GB SEC HCH9-K4B2G0846D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Single DIMM boot and two DIMM for Memtest4.2
Transcend DDR3-1333 4GB SEC BCH9-K4B2G0846D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Single DIMM boot and two DIMM for Memtest4.2
Transcend DDR3-1333 4GB SEC BCH9-K4B2G0846C	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Single DIMM boot and two DIMM for Memtest4.2
Transcend DDR3-1333 4GB Hynix H5TQ2G83CFR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Single DIMM boot and two DIMM for Memtest4.2
Transcend DDR3-1333 8GB SEC HYKO K4B4G0846B	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Single DIMM boot and two DIMM for Memtest4.2
Transcend DDR3 1333 / 8G Micron IVD22D9PBC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Single DIMM boot and two DIMM for Memtest4.2

1.3. SATA Compatibility Test

1.3.1 Onboard SATA Test

SATA Device Information	Result			Note
	Pass	Fail	N/A	
Seagate Barracuda 7200.9 / 160G (ST3160811AS)→SATA2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Seagate Momentus 7200.2 /120G (ST9120823AS)→ SATA2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TOSHIBA MK1676GSX /160G → SATA2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
WD WD6402AAEX / 640GB→SATA3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Seagate Barracuda 7200.12 / 1TB (ST31000524AS)→ SATA3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.3.2 Onboard SATA (RAID) Test

SATA RAID Test		Result			Note
		Pass	Fail	N/A	
RAID-0 (HDDx2) Striping/Span Test	1. WD WD6402AAEX / 640GB→SATA3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2. WD WD6402AAEX / 640GB→SATA3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RAID-1 (HDDx2) Mirror Test	1. WD WD6402AAEX / 640GB→SATA3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2. WD WD6402AAEX / 640GB→SATA3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RAID-5 (HDDx3) Striping/Span Test Rotation Parity	1. TOSHIBA MK1676GSX /160G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2. TOSHIBA MK1676GSX /160G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3. TOSHIBA MK1676GSX /160G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.3.3 Onboard SATA (AHCI) Test

SATA AHCI Test		Result			Note
		Pass	Fail	N/A	
Seagate Barracuda 7200.12 / 1TB (ST31000524AS)→ SATA3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Slot at 1/2/3/4/OS	
TOSHIBA MK1676GSX /160G → SATA2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

1.4. USB DVD-ROM Compatibility Test

Compact Flash Information		Result			Note
		Pass	Fail	N/A	
Aopen EDR8865U	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test at Windows 7 & Windows XP	
ASUS-DRW-1604P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Pioneer DVR-XD 10T	<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® Core™ i7-3555LE Processor (4M Cache, up to 3.20 GHz)									
Memory	Transcend DDR3-1333 8GB SEC HYKO K4B4G0846B									
SATA HDD	WD WD6402AAEX / 640GB									
VGA	Viewsonic VT2430-NT 24"									
DVI	Asus VE228H 22"									
Display port	EIZNO EV2335W 23.5"									
HDMI	DELL U2410 24"									
LVDS	AUO G121XN01 V.0 / 12" 1024*768									
Color Quality	<input checked="" type="checkbox"/> 16bit <input type="checkbox"/> 24bit <input checked="" type="checkbox"/> 32bit									
Resolution	VGA			DVI/HDMI			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 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"/>	
1280X720	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	
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"/>	
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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1600X900	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1600X1200	<input 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"/>	
1600X1050	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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 checked="" 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"/>	
1920X1440	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2048X1536	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rotation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rotation (0 / 90 /180 /270)

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

2.1.2. Dual Output Function Test

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

Single Display	HDMI+ LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dual Display Clone		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2.1.3. Video Resolution Test

Test points:

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

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

2.1.4. Video Resolution Test

LVDS Model	Result			Note
	Pass	Fail	N/A	
1_AUO G065VN01 V.0 / 6.5" / 640x480 / 18bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2_AUO G065VN01 V.0 / 6.5" / 640x480 / 24bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3_Data Image 7" / 800*480 / 18bit (16:9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4_AU G084SN05 V.3 / 8.4" / 800*600 / 18bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
5_AU B104SN02 V.0 / 10.4" / 800*600 / 18bit (4:3)	<input 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 G150XG01 V.0 / 15" / 1024*768 / 18bit (4:3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15_AUO M190PW01 V0 / 19"/1440X900/48 bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	







2.2. Audio Function Test

{ } No Support

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

2.3. LAN Function Test

[] No Support

Connect two computers via different speed LAN HUB by using "Ping" instruction (1000 times)									
1000MBps LAN HUB		D-Link DGS-1008D							
100MBps LAN HUB		HP J4095A 24 Ports							
10MBps LAN HUB		SVEC FD916H							
OnBoard LAN1		Intel @ 82579LM Gigabit Network Connection				MAC Address		88-88-88-88-87-88	
OnBoard LAN2		Intel @ 82583V Gigabit Network Connection				MAC Address		00-0A-C4-5D-78-00	
LAN Speed	Link / Speed LED	Active LED	LAN 1			LAN 2			Note
			Pass	Fail	N/A	Pass	Fail	N/A	
1000MBps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
100MBps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10MBps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wake On LAN			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot ROM to Novell 4.11 [RPL]			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
LAN Boot (PXE)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internet Browser (DHCP Server)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2.3.2. Throughput Test

DUT Platform Information:

<input type="checkbox"/>	Fedora Core 14 – Kernel
<input type="checkbox"/>	Cent 5.5
<input checked="" type="checkbox"/>	Ubuntu 11.04 Kernel 2.6.38-8-generic----Install with AHCI mode
<input type="checkbox"/>	Red Hat

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

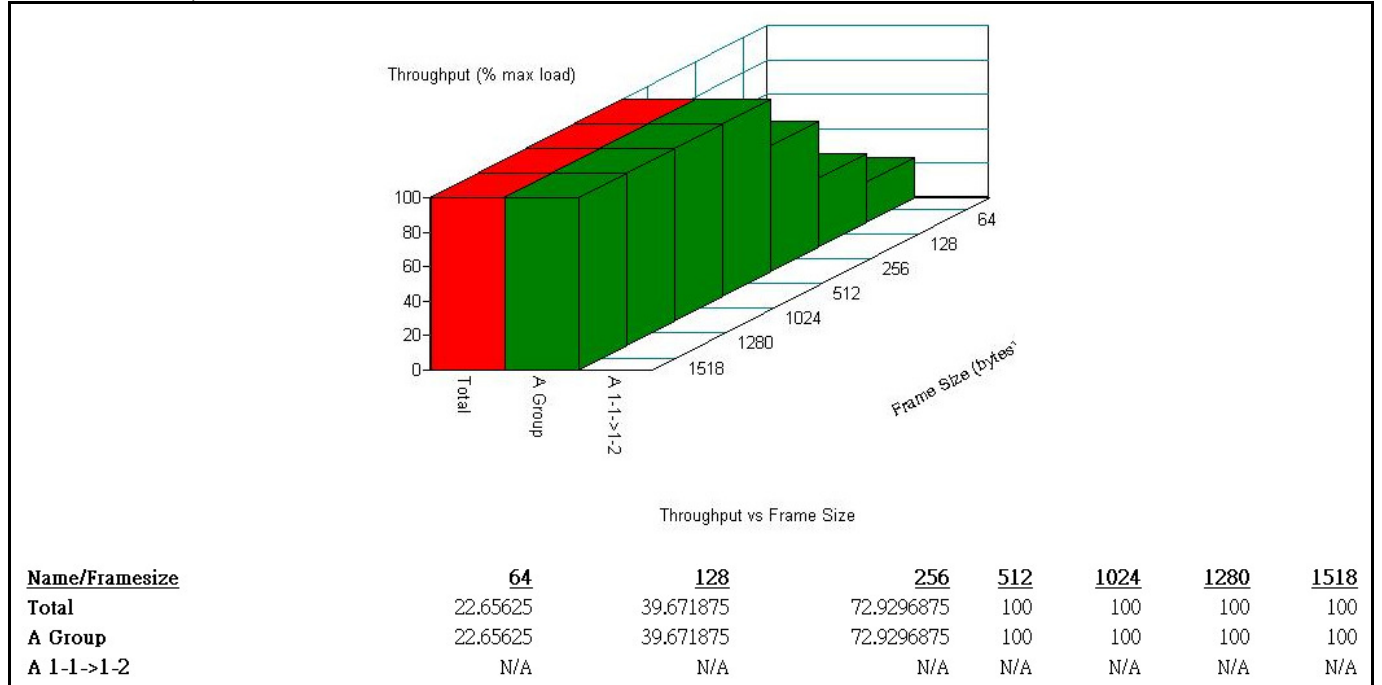
Graphics Media	Ubuntu 11.04 Default setting
LAN	LAN1 Intel 82579LM Gigabit Network Ubuntu 11.04 Default setting-1.2.20-k2
	LAN2 Intel G82583V Gigabit Network Ubuntu Core Default setting-1.2.20-k2
Audio Driver	Ubuntu 11.04 Default setting

SMB Platform Information:

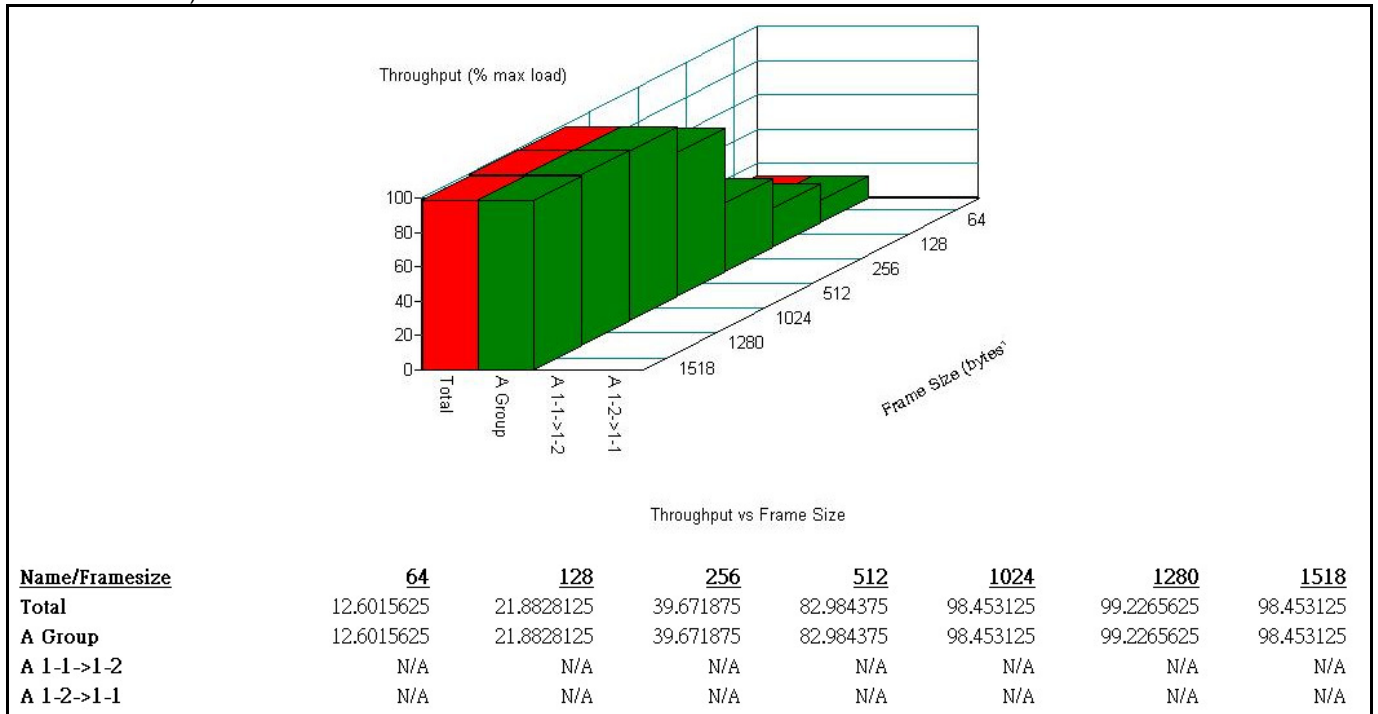
Chassis	SPIRENT Smartbits 600B
Chassis Version	2.80.003 (Cur) 2.50.000
Chassis Serial #	06014047
Library	6.00-29
API	5.50.42.01
File	0550042
Module	2 * LAN-3324A SmartMetrics XD 4-Port 10/100/1000Base-T Gigabit Ethernet
Test Software	SmartFlow5.50.42.1

Test Result:

1. Half Direction (LAN1: Intel ® 82579LM Gigabit Network Connection → LAN2: Intel ® 82583V Gigabit Network Connection)



2. Binary Direction (LAN1: Intel @ 82579LM Gigabit Network Connection → LAN2: Intel @ 82583V Gigabit Network Connection)



2.4. Optional Function Test

[] No Support

Function Test	Result			Note
	Pass	Fail	N/A	
3G Module	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
GPS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Transcend TS32GNSA300 ATA - mSATA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bluetooth	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

3. Integration Test

Hardware Information with Windows 7 Ultimate English Version 32 Bit Driver Version	
CPU	Intel® Core™ i7-3555LE Processor (4M Cache, up to 3.20 GHz)
Memory	Transcend DDR3-1333 8GB SEC HYKO K4B4G0846B
SATA HDD	WD WD6402AAEX / 640GB 3.5" SATAIII
Chipset Information with 7 Professional English SP1 32 Bit Driver Version	
Chipset Software	Intel Chipset Device Software 9.3.0.1019 (12/06/2012)
PCH Bridge	Intel QM77
Carrier board Super IO Chipset	Winbond W83627DHG
EC Chipset	ITE IT8518
VGA Chipset	Intel HD Graphics 4000 8.15.10.2656 (02/17/2012)
Audio Chipset	Realtek High Definition Audio 6.0.1.6526 (12/13/2011)
Ethernet Chipset	Intel 82579LM Gigabit Network 11.15.12.0 (11/30/2011)
	Intel 82583V Gigabit Network 11.14.48.0 (10/13/2011)---ECB-917T
TPM	Infineon security platform software 3.7 (Build 2281)
USB 3.0	Intel USB3.0 eXtensible Host controller 1.0.4.225 (3/27/2012)

3.1. USB Port Integration Test

Item	USB Port	Boot			Function(Win 7)			Note
		Pass	Fail	N/A	Pass	Fail	N/A	
USB HDD		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB FDD Mitsumi D353GUE		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SONY USB2.0 DVD-R/W DRX-830UL		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Hub Test (Connect USB Device) HUB Port1: USB Keyboard / HUB Port2: USB Mouse / HUB Port3: USB HDD								
USB 2.0 HUB PowerSync / USB 2.0 4 Port HU-155								<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

3.2. Digital I/O Port Test

DIO Address (284,285)	Result			Note
	Pass	Fail	N/A	
DIO VCC +3.3V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ITE IT8518

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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Use loopback and WINSSD.exe to test RS-422 in Windows
RS-485 for COM2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Use ICP CON I-7044D D/IO Module in Windows(Support Auto flow control)
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The communication between the RS-485 port of two boards is linked by one 1.2km cable on Windows Terminal

3.5. LPT Port Test

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

3.6. Burn In Test

Under Room Temperature: 26 °C

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

Note: COM PORT Speed is set to 115200 bauds.

4. Application Test

4.1. PCI Slot Function (PCI Adapter Card) Test [X] No Support

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

4.2. PCI-Express Function Test

PCI-Express x1	Function Test			Note
	Pass	Fail	N/A	
SUNIX SATA1414 eSATA & SATAII x1Express card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Intel GIGABIT CT DESKTOP ADAPTER (EXPI9301CTBLK)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Uptech UTB230 / USB3.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCI-Express x4	Function Test			Note
	Pass	Fail	N/A	
Adaptec AAR-1430SA SATAII HostRAID Controllers PCI-Express x4 RAID Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Intel GIGABIT ET2 Quad Port Svr Adptr (E1G44ET2BLK)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Uptech UTB300 Combo(USB3.0 + SATA)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCI-Express x16	Function Test			Note
	Pass	Fail	N/A	
ASUS EAX1600PRO/TD/256M/A (ATI Chipset) PCI-Express x16 VGA Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ASUS ENGT220/DI/1GD2(LP)/A PCI-Express x16 VGA Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
GIGABYTE GVR5670C-1GI (ATI Chipset) PCI-Express x16 VGA Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
GIGABYTE GV-R5670C-IG1 PCI-E X16 Graphic card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ASUS GTX680 PCI-Express X16 Gen3 Graphic card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Express card	Function Test			Note

	Pass	Fail	N/A	
SUNIX SATA II Express card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SunBox 34mm Giga LAN Express Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Mini PCI Express Card	Function Test			Note
	Pass	Fail	N/A	
AzureWave AW-NB041H 802.11 b/g/n+ 802.15BT combo card (USB/PCI-E Interface)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
COM-ME232S2 RS232 *2 module	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

4.3. Mini PCI Card Compatibility Test [X] No Support

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

4.4. CardBus (PCMCIA) Compatibility Function Test [X] No Support

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

4.5. ISA Slot Function Test [X] No Support

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

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

4.6.1. Device List: PC/104 Module [X] No Support

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

4.6.2. Device List: PC/104+ Module [X] No Support

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

4.6.3. Device List: PCI-104 Module [X] No Support

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

4.6.4. Device List: PCI/104 Express Module [X] No Support

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

4.7. SSD Modules Compatibility Test

SSD HDD Compatibility Test:

Cable Type: IDE SATA2 MLC SLC

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

4.8. Peripheral Compatibility- Storage Device Test**4.8.1. m-SATA**

Test Item	Result			Note
	Pass	Fail	N/A	
Transcend TS32GNSA300 ATA – 32GB mSATA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Memo MSE-H series mSATA 32GB MLC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SanDisk SDSA5FK-032G-Q 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

4.8.2. Disk on module (SATA-DOM) Test

Test Item	Result			Note
	Pass	Fail	N/A	
Innodisk SATADOM 1GB(DES9-01GT11C2S)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

4.9. Riser Card Function Test [X] No Support

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

5. Power Consumption Test

Hardware Information with Windows 7 Ultimate English Version 32 Bit Driver Version	
CPU	Intel® Core™ i7-3555LE Processor (4M Cache, up to 3.20 GHz)
Memory	Transcend DDR3-1333 8GB SEC HYKO K4B4G0846B
SATA HDD	WD WD6402AAEX / 640GB 3.5" SATAIII

5.1. AT/ATX Power Consumption

Test Equipment						
Equipment	AC/DC Digital Clamp meter					
Manufacturer	KYORITSU					
Model name	2010					
Test Environment						
AT Power Model	Seventeam ST-350BKV					
Keyboard	USB keyboard Logitech K200					
Mouse	USB mouse Logitech M-U0003					
CPU	Intel® Core™ i7-3555LE Processor (4M Cache, up to 3.20 GHz)					
Memory	Transcend DDR3-1333 8GB SEC HYKO K4B4G0846B					
Power Supply	ATX Power					Note
(Full Loading Mode) Windows 7 with Prime 95 Full Loading Test	(+12V)	1.97	A	23.64	W	Prime95 Version 259
Win. Idle mode: Measure the current value when system in windows mode and without running any program	(+12V)	0.92	A	11.04	W	
Power on - Boot sequence: Measure the maximum current value of between system power on and boot-up to O.S.	(+12V)	1.79	A	21.48	W	
Power off (S5 mode)	(5VSB)	0.08	A	0.4	W	
S3 mode: Measure the current value when system in S3 mode of windows and without running any	(5VSB)	0.16	A	0.8	W	

5.2. PC Health Status

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

On Module H/W Monitor Voltage Monitoring Test	Result			BIOS (V)	Actual (V)	Note
	Pass	Fail	N/A			
VAC_IN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.035	12.29	
V5A2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.164	5.01	
V3.3S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.296	3.3	
V1.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.534	1.502	
V5A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.047	5.01	
Vcore	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.847	0.841	
CPU temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	61°C	50°C	
SYS temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	38°C	39°C	
System Fan Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2678 RPM	2580 RPM	

W83627DHG HW Monitor Voltage Monitoring Test	Result			BIOS (V)	Actual (V)	Note
	Pass	Fail	N/A			
12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.94	12.29	
5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.122	5.01	
VSB5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.096	4.94	
AVCC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.456	3.23	
VCC3V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.456	3.23	
VSB3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.360	3.23	
VBAT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.328	3.25	
System temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	37°C	33°C	
Module temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	45°C	50°C	
System Fan Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2678 RPM	2580 RPM	

Test Mode	USB Power measurement with dummy load				Note
	Idle (4.75v~5.20v)	S3 (4.75v~5.20v)	Power off (S5) (4.75v~5.20v)	Condition	
USB1 (USB3.0)	4.92	4.96	4.95	On board	
USB2 (USB3.0)	4.92	4.96	4.95	On board	
USB3 (USB3.0)	4.93	4.96	4.95	On board	
USB4 (USB3.0)	4.93	4.96	4.95	On board	
USB1 (Right)	4.91	4.94	4.93	By cable	
USB1 (Left)	4.91	4.94	4.93	By cable	

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

6.2. Booting Timer Test

Installation	Actual		Note
System Booting Time	4.8	Sec	Press the Power Button till "Beep" Sound appears

6.3. Watchdog Timer Test

Use Function as below: RU.exe

[] No Support.

Time-Out Interval	Margin for error	Actual		Result			Note
				Pass	Fail	N/A	
10 sec	+ / - 10 %	10	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
60 sec	+ / - 10 %	63	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
255 sec	+ / - 10 %	280	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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

7. O.S. Compatibility Test

7.1. English Ubuntu 11.10 Kernel 3.0.0-24

[] No Support

Driver Information:

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

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Ubuntu 11.10 Kernel 3.0.0-24-generic-pae #40	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Type uname -a AHCI 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"/>	
HDMI-- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DVI -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Network Function Test				
Connect to Internet – LAN 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Connect to Internet – LAN 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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"/>	USB and PS2
Keyboard Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	USB and PS2
USB 2.0 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
Halt	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Power Off Mode
ls / clear; cd /dev /ls -l	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Command instruction

7.2. Windows 7 Ultimate English Version 32/64Bit

[] No Support

[X] x32 Driver Information:

Chipset Software	Intel Chipset Device Software 9.3.0.1019 (12/06/2012)
Graphics Media	Intel HD Graphics 4000 8.15.10.2656 (02/17/2012)
Audio Driver	Realtek High Definition Audio 6.0.1.6526 (12/13/2011)
LAN Driver	Intel 82579LM Gigabit Network 11.15.12.0 (11/30/2011)
	Intel 82583V Gigabit Network 11.14.48.0 (10/13/2011)---ECB-917T

[X] x64 Driver Information:

Chipset Software	Intel Chipset Device Software 9.3.0.1019 (12/06/2012)
Graphics Media	Intel HD Graphics 4000 8.15.10.2656 (02/17/2012)
Audio Driver	Realtek High Definition Audio 6.0.1.6526 (12/13/2011)
LAN Driver	Intel 82579LM Gigabit Network 11.15.12.0 (11/30/2011)
	Intel 82583V Gigabit Network 11.14.48.0 (10/13/2011)---ECB-917T

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"/>	AHCI

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"/>	
DVI -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDMI--Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot - Windows 7 Ultimate Advanced Options Menu				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Basic Function Test				
PS/2 Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LPT1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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"/>	
S/P DIF Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Start Menu				
Log off User	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shut down (S5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Standby(S3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Standby(S1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	Win7_64 had not support S4 mode.

7.3. Windows XP SP3 English Version 32/64Bit

[X] x32 Driver Information:

Chipset Software	Intel Chipset Device Software 9.3.0.1019 (12/06/2012)
Graphics Media	Intel HD Graphics 4000 6.14.10.5400(02/22/2012)
Audio Driver	Realtek ALC892 5.10.0.6482 (10/18/2011)
LAN Driver	Intel 82579LM Gigabit Network 11.15.12.0 (11/30/2011)
	Intel 82583GV Gigabit Network 11.11.48.0 (10/13/2011)

[] x64 Driver Information: [X] No Support

Chipset Software	
Graphics Media	
Audio Driver	
LAN Driver	

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows XP SP3 ACPI Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RAID5

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"/>	
DVI -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDMI -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot - Windows XP 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"/>	
LPT1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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"/>	
S/P DIF Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Start Menu				
Log off User	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shut down (S5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Standby(S3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Standby(S1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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	Intel® Core™ i7-3555LE Processor (4M Cache, up to 3.20 GHz)
Memory	Transcend DDR3-1333 8GB SEC HYKO K4B4G0846B
SATA HDD	WD WD6402AAEX / 640GB 3.5" SATAIII

8.1. Main Test

Test Item	Result			Note
	Pass	Fail	N/A	
System Date	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.2. Advanced Test

8.2.1. ACPI Setting

Test Item	Setting Test	Result			Note
		Pass	Fail	N/A	
S3	(Suspend to RAM)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
S1	(CPU Stop Clock)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

8.2.2. Trusted Computing Test

Test Item	Result			Note
	Pass	Fail	N/A	
Security Device Support (Disable)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Detect TPM device under Windows.
Security Device Support (Enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TPM State (Disable)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TPM State (Enabled)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pending operation(None)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pending operation (Enabled Take Ownership)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pending operation (Disable Take Ownership)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pending operation (TPM Clear)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.2.3. CPU Configuration

Test Item	Result			Note
	Pass	Fail	N/A	
Hyper-threading	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	For Win XP & Linux
Intel Virtualization Technology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.2.4. SATA Configuration

Test Item	Result			Note
	Pass	Fail	N/A	
SATA Controller	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SATA Mode (IDE)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SATA Mode (AHCI)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SATA Mode (RAID)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.2.5. IAMT Function Test

Test Item	Result			Note	
	Pass	Fail	N/A		
Intel AMT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Un-Configure ME	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
IAMT remote control	Turn off	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Reset	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Power on	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	G3 state power on	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ECB-917T JP2 need to short

8.2.6. USB Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
Legacy USB Support	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB3.0 Support	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.2.7. On-Module I/O Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
Serial port1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	For ITE IT851x
Serial port2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Restore on Power Loss	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Smart Fan mode configuration	Full mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5049rpm
	Manual mode by PWM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	100% 5014rpm 50% 3369 rpm 0% 0 rpm
	Auto mode by PWM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Test with start 60 Off 55 Start PWM 40 Slope 8

8.2.8. Digital I/O Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
Dynamic Digital I/O	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.2.9. Super I/O Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
Serial port0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	For Winbond W83627DHG
Serial port1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.3. PCH-I/O Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
Power mode (ATX)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power mode (AT)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Azalia Internal HDMI Codec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Azalia HDMI Codec port B	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	For HDMI
Azalia HDMI Codec port C	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Azalia HDMI Codec port D	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
PCH LAN Controller	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wake on LAN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCI Express Configuration 1~7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.4. Graphics Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
PEG0-Gen speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Primary Display	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internal Graphics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DVMT Pre-Allocated	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
DVMT Total Gfx Mem	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

8.4.1. Advanced Display Function Test

Test Item	Result			Note	
	Pass	Fail	N/A		
Boot Display select	VBIOS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	CRT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	HDMI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DVI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	CRT+LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot Display Select	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test under Advanced display control	
Primary IGFX Boot Display (VBIOS Default)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Primary IGFX Boot Display (CRT)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Primary IGFX Boot Display (LFP)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Primary IGFX Boot Display (EFP)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Primary IGFX Boot Display (EFP2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Secondary IGFX Boot Display (CRT)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Secondary IGFX Boot Display (LFP)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Secondary IGFX Boot Display (EFP)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Secondary IGFX Boot Display (EFP2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
LCD panel Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Active LFP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Panel Color Depth	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Backlight Control (PWM Inverted)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Backlight Control (PWM Normal)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
LVDS Backlight Level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0~100%	

8.5. Boot Test

Test Item	Result			Note
	Pass	Fail	N/A	
Quiet Boot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Launch I82579LM PXE OpROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Launch I82583V PXE OpROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot from HDD	<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 DVD ROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Boot from USB DVD ROM	<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 LAN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.6. 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

8.7. 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"/>	

8.8. BIOS SPI ROM

Test Item	Result			Note
	Pass	Fail	N/A	
Set South Bridge GPIO (LOW)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No battery bios test
Clear CMOS Disable	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Load Optimized Defaults Disable

8.9. Supervisor / User Password Test

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

9. Performance Test

Hardware Information with Windows 7 Ultimate English Version 32 Bit Driver Version	
CPU	Intel® Core™ i7-3555LE Processor (4M Cache, up to 3.20 GHz)
Memory	Transcend DDR3-1333 8GB SEC HYKO K4B4G0846B
SATA HDD	WD WD6402AAEX / 640GB 3.5" SATAIII

9-1. Performance Test

Test Result: (Display set 1920*1080 test)

Testing Software	Scope		Note
	AAEON	Ref.	
PCMark2002			Only for Windows 7
CPU	N/A	-	
Memory	29771	-	
HDD	2552	-	
Benchmark (A)	-	-	
PCMark2005			Windows 7
PCMark	6503	-	PCMarks
CPU	5828	-	
Memory	6730	-	
Graphics	3541	-	
HDD	7422	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	

Testing Software	Scope		Note
	AAEON	Ref.	
3Dmark2003 v360			Only for Windows 7
3Dmark Score	7782	-	Program resolution setting 1024*768
CPU Score	1181	-	
Benchmark (A)	-	-	
3Dmark2006 v120			Windows 7
3Dmark Score	2363	-	Program resolution setting 1920*1080
CPU Score	2255	-	
SM2.0 Score	799	-	
HDR/SM3.0 Score	915	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	

Testing Software	Scope		Note
	AAEON	Ref.	
Final Reality V1.01—BenchMark Test			Windows 7
2D image	34.2	-	Reality marks
3D	4.92	-	
Bus transfer	33.70	-	
Overall	18.02	-	
Benchmark (A)	-	-	

Testing Software	Scope		Note
	AAEON	Ref.	
PCMark Vantage			
PCMarks	5359	-	PCMarks
TV and Movies	3815	-	
Memories	3569	-	
Music	5328	-	
Communications	5924	-	
Productivity	4387	-	
HDD	4930	-	
Gaming	3384	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	

Testing Software	Scope		Note
	AAEON	Ref.	
Performance Test 7.0			
PassMark Rating	862.4	-	
CPU Mark	2468.8	-	
2D Graphics Mark	219.1	-	
3D Graphics Mark	234.0	-	
Memory Mark	691.5	-	
Disk Mark	671.7	-	
Benchmark (A)	-	-	

SATA Performance				
SATA HDD	Seagate Barracuda XT ST32000641AS / 2TB			
Item	Comment / (unit)	Software	Score	Note
Single HDD (SATA port 1) SATA3.0	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	16.4	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	4	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	110.9	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	331.4	
Single HDD (SATA port 2) SATA3.0	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	16.4	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	3	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	110.8	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	304.2	
Single HDD (SATA port 3) SATA 2.0	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	16.3	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	4	

	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	111	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	214.9	

USB3.0 Performance				
SATA HDD	Transcend JetFlash / 16GB			
Item	Comment / (unit)	Software	Score	Note
Single HDD (USB port 1) USB3.0	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.6	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	6	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	71.5	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	74.7	
Single HDD (USB port 2) USB3.0	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.6	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	6	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	71.5	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	73.7	
Single HDD (USB port 3) USB3.0	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.6	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	6	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	71.5	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	74.2	
Single HDD (USB port 4) USB3.0	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.6	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	6	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	71.5	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	74.1	