

Report NO: 15E010006

EPIC-BDU7

Compatibility Test Report

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

Issue date

2015/06/18

Approval

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Test Engineer

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Version Released Records

Date	Version	Change History	Note
2010/04/21	P3-1001	1. Re-composing test Items	
2010/06/01	P2P3-1001	1. New Test Report	
2010/06/21	P2P3-1002	1. Add BIOS -> SPI ROM Setting (South Bridge - GPIO)	
2010/12/02	P2P2-1003	1. New Test Report	
2011/02/23	P2P3-1101	1. Re-composing test Items	
2011/03/04	P2P3-1102	1. Add Specification Validation	
2012/05/29	P2P3-1201	1. Add Summary Table of DTS	
2013/12/6	P2P3-1301	<ol style="list-style-type: none"> 1. Rename document : [Board Level Product P2-P3 Verification Test Plan & Report Template] 2. Chapter1:Memory compatibility add AAeon P/N 3. Chapter1:Add CFast and m-SATA test item. 4. Chapter3:Add RS422 1.2KM/115200bps transmission test 5. Chapter3:BurninTest test add USB2.0/3.0. 6. Chapter5: Modify power consumption test item. 7. Chapter7: add Windows XP Professional English Version 32/64Bit and Windows 8 Pro English Version 32/64Bit test. 8. Chapter8: Change BIOS format from Award to AMI and add Hi-Safe, Hi-Manager test item. 9. Chapter9: Add SATA performance test and USB3.0 performance. 10. Remove Chapter10: Other Tests.. 	
2014/10/03	P2P3-1401	<ol style="list-style-type: none"> 1. Page 1 rename: Board Level Product P2-P3 Test Report. 2. Remove platform information\test item and add driver folder item. 3. Chapter2.1: add EDID check, DOS display, 3840*2160, hot plug. 4. Chapter2.2: modify from "dual display test" to "Multi display test. 5. Remove chapter 2.3 "Boot ROM to Novell 4.11 [RPL]" item 6. Chapter2.3.2: add "CPU information" 7. Chapter2.4: change from optional function to "Jumper and connector function test" 8. Chapter3.4: RS422/485 add test from G3 status. 9. Add chapter 4.10 Display port converter compatibility test. 10. Chapter7.1: remove "halt" test item. 11. Chapter7.2/7.3/7.4: add touch and TPM function test 12. Chapter9: update performance test program. 13. Add chapter 10. Negative Test. 	

Note :

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

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

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

Specification Validation

Main Specification

Item	Specification	Result			Note
		Pass	Fail	N/A	
Form Factor	EPIC Board	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Processor	5th Generation Intel® Broadwell U Dual Core™ i3/i5/i7 ULT Processor SoC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System Memory	1 x 204-pin DDR3L 1600MHz SO-DIMM up to 8GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Chipset	5th Generation Intel® Broadwell U Dual Core™ i3/i5/i7 ULT Processor SoC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Resolution	CRT up to 1920 x 1200 @ 60Hz LCD up to 1920 x 1200 @ 60Hz Display Port up to 3840 x 2160 @ 60Hz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LCD Interface	VGA, LVDS1, DP, LVDS2 (Optional), eDP (Optional)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I/O Chip	Fintek 81866D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ethernet	Intel® WGI211AT x 1/ WGI218LM x 1, RJ-45 x 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BIOS	AMI BIOS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Storage	SATA 6.0 Gb/s x 2, mSATA x 1 (Full size, default)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial Port	RS-232 x 4 RS-232/422/485 x 2 (COM2 & COM3) (Ring/+5V/+12V) COM2 (Rear side I/O) & COM3 on the top one of pin headers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Parallel Port	SPP/EPP/ECP x 1 (Optional) controlled by BIOS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Universal Serial Bus	2 x USB3.0 on rear I/O 4 x USB 2.0 with box header, USB1/2 total support 1.5A on rear I/O	<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 controlled by BIOS (DIO default)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio	1 x Audio Box Header connector (Line-in/Line-out/Mic-in) Audio Amp. 2W Realtek ALC 892	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
KB & Mouse	1 x box header supports PS/2 K/B & Mouse	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wake on LAN	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Watchdog Timer	1~255sec support by AAEON Hi-safe	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
H/W Status Monitor	Support by AAEON Hi-safe	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Expansion Interface	Mini-card full size #1 (Shared with mSATA) (Optional) SIM slot x 1 support by mini-card #1 full size (Optional) Mini-card half size #2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

	PCI-104 x 1 (optional) Touch panel screen controller and connector x 1 (optional) TPM x 1 (optional)				
Battery	Lithium RTC battery	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power Requirement	+9-24V, AT/ATX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power Consumption (Typical)	38W	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System cooling	Heat spreader, cooler (Optional)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Board Size (L x W)	165 x 115mm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Gross Weight	0.88 lb (0.4 Kg)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

O.S. Support

Item	Specification	Result			Note
		Pass	Fail	N/A	
Microsoft Windows	Windows 7, 32bit / 64bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Windows 8 ,32bit / 64bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Linux	Linux Ubuntu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Environmental Specifications

Item	Specification
Operating temperature	32~140°F (0~60°C)
Storage temperature	-40~176°F (-40~80°C)
Operating humidity	0~90% relative humidity, non-condensing

Note: Please refer to Environment Test Report for detail information

Platform Information

Item	Device Information	Note
PCB Model / Version	EPIC-BDU7 A1.0	1,2,3,4,5,6,7,8,9,10
Carrier Board	N/A	N/A
BIOS / Version	EPIC-BDU7 R1.1(PB9UAM11)(06/02/2015)	1,2,3,4,5,6,7,8,9,10
CPU Type	Intel® Core(TM) i7-5650U CPU (4M Cache, up to 3.20GHz)	1,2,3,4,5,6,7,8,9,10
	Intel® Core(TM) i5-5350U CPU (3M Cache, up to 2.90GHz)	
	Intel® Core(TM) i3-5010U CPU (3M Cache, 2.10GHz)	
Memory Type	ADATA ADS1600W8G11-BMIE DDR3L 1600 8GX16 (Micron 3KE77 D9QBJ)	1,2,3,4,5,6,7,8,9,10
SATA HDD	TOSHIBA DT01AC050 SATAIII 3.5" 500GB/7200rpm	1,2,3,4,5,6,7,8,9,10
SATA DVD-ROM	LITE-ON iHAS324-07 WU	1,2,3,4,5,6,7,8,9,10
USB DVD-ROM	Pioneer DVR-XD11T	1,2,3,4,5,6,7,8,9,10
LCD Monitor	Philips 244E2SB/96 24"	1,2,3,4,5,6,7,8,9,10
	BenQ BL2710PT 27"	1,2,3,4,5,6,7,8,9,10
LVDS	AUO M215HW03 V1 1920*1080 48bit	1,2,3,4,5,6,7,8,9,10
Operating System	<input checked="" type="checkbox"/> Linux English Ubuntu12.04 Kernel 3.2.0-23.generic-pae #36	7-1
	<input checked="" type="checkbox"/> Windows 7 Ultimate 32/64Bit	7-2
	<input checked="" type="checkbox"/> Windows 8.1 Enterprise English 32/64 Bit	7-3
Power Supply	ATX Power Supply : FSP EVEREST 85PLUS 650W	1,2,3,4,5,6,7,8,9,10
	AT Power Supply: N/A	N/A
	DC Adapter	FSP060-DBAE1 12V/5A SINPRO MPU130-108 24V/5.42A
Chipset Information with Windows 8.1 Enterprise English Version 64 Bit Driver Version		
Chipset Software	Intel Chipset Device Software 10.0 (4/24/2014)	
SOC Bridge	Intel Broadwell Quad/dual core SOC processor	
Super IO Chipset	Fintek 81866D	
VGA Chipset	Intel(R) HD Graphics 10.18.10.4080 (1/5/2015)	
Audio Chipset	Realtek High Definition Audio 6.3.9600.16384 (8/21/2013)	
	Intel Display Audio 6.16.0.3161 (11/5/2014)	
Ethernet Chipset	Intel Ethernet Connection I218-LM 12.6.47.1 (3/28/2013)	
	Intel I211 Gigabit Network Connection 12.6.47.1 (3/28/2013)	

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1. Hardware Test

1.1. CPU Compatibility Test

CPU Information	Result			Note
	Pass	Fail	N/A	
Intel® Core(TM) i7-5650U CPU (4M Cache, up to 3.20GHz)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Intel® Core(TM) i5-5350U CPU (3M Cache, up to 2.90GHz)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Intel® Core(TM) i3-5010U CPU (3M Cache, 2.10GHz)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.2. Memory Compatibility Test

Memory Information	Result			Note
	Pass	Fail	N/A	
DSL DDR3L 1600 2GB CL11 1.35V (hynix H5TC2G83EFR-PBA)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innodisk DDR3L 1600 8GB M3S0-8GHS DLPC (hynix H5TC4G83AFR-PBA)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transcend DDR3L 1600 8GB (SEC 419 XYKO K4B4G0846D)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Kingston KVR16LS6/2 1.35V 2GB (Kingston D2516EC4BXGGB)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Kingston KVR16LS11/4 1.35V 4GB (Kingston D5128ED1FPGGNU)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Kingston KVR16LS11/8 1.35V 8GB (Kingston D5128ED1FPGGNU)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ADATA ADS1600W2G11-BMIK DDR3L 1600 2GX8 (Micron 41K77 D9PSH)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ADATA ADS1600W4G11-BMIE DDR3L 1600 4GX8 (Micron 3YE17 D9QBJ)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ADATA ADS1600W8G11-BMIE DDR3L 1600 8GX16 (Micron 3KE77 D9QBJ)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.3. SATA Compatibility Test

1.3.1 Onboard SATA (AHCI) Test

SATA AHCI Test		Result			Note
		Pass	Fail	N/A	
HDD	WD WD20EZRX SATAIII 3.5" 2TB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows 8.1 64 bit
HDD	TOSHIBA DT01AC050 SATAIII 3.5" 500GB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	WD WD10SPCX SATAIII 2.5" 1TB/5400rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	WD WD5000BPKX 2.5" 500GB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ubuntu 12.04
HDD	TOSHIBA MK3276GSX SATAII 2.5" 320GB/5400rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows 7 32bit
HDD	WD WD3200BEVT SATAII 2.5" 320GB/5400rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	HITACHI HTS543216A7A384 SATAII 2.5" 160GB/5400rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows 7 64 bit
SSD	PLEXTOR M6S PX-128M6S 128GB SSD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows 8.1 32 bit
SSD	CRUCIAL M550 SATAIII 2.5" 256GB SSD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows 8.1 64 bit

1.4. mSATA Compatibility Test

m-SATA Information	Result			Note
	Pass	Fail	N/A	
Innodisk mSATA D150Q 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R/W
Innodisk mini 3SE DEMSM-32GD07SWADB-26 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R/W
Innodisk 3SE DEMSR-32GD06SWBQB-26 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows 8.1 32 bit

Memo Right MS-500 seris MRMAJ5A128GC7M2C00 128GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows 8.1 64 bit
Memo Right MS-500 MRMAJ5A008GC1M2C00 8GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R/W
Memo MSE-H series MRV012A032GT1M1C 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R/W
Transcend TS8GMSA500 8GB SATAII	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R/W
Transcend TS64GMSA740 64GB SATAIII	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R/W
Sandisk SDSA5FK-032G-Q 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows 7 64 bit

1.5. USB Compatibility Test

DVD Information	Result			Note
	Pass	Fail	N/A	
JetFlash Transcend 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	USB3.0
ADATA C103 16GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SanDisk Cruzer 8.02 8GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	USB2.0
Apacer AH326 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Iomega DVDRW8X-U	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LITE-ON eNAU808-T295	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.6. Keyboard/Mouse Compatibility Test

Keyboard/mouse Information		Result			Note
		Pass	Fail	N/A	
PS/2 Keyboard	ASUS PK1100	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PS/2 Mouse	Logitech M-S43	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Keyboard	Microsoft 1366	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ASUS PK1100U	<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-BT83	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2. Basic Function Test

2.1. Video Function Test

2.1.1. Single Output Function Test

Hardware Information with Windows 8.1 Enterprise English 64 Bit Driver Version													
CPU	Intel® Core(TM) i7-5650U CPU (4M Cache, up to 3.20GHz)												
Memory	ADATA ADS1600W8G11-BMIE DDR3L 1600 8GX16												
SATA HDD	TOSHIBA DT01AC050 SATAIII 3.5" 500GB/7200rpm												
VGA	Philips 244E2SB/96 24"												
DP	BenQ BL2710PT 27"												
4K2K DP	Sumsung U28d590d												
LVDS	AUO M215HW03 V1 1920*1080 48bit												
eDP	CHIMEI INNOLUX N116HSE-EA1 Rev.C1												
Color Quality	<input checked="" type="checkbox"/> 16bit <input type="checkbox"/> 24bit <input checked="" type="checkbox"/> 32bit												
Resolution	VGA			DP			LVDS			eDP(Optional)			Note
	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
800X600	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1024X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1152X864	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X600	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<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 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"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X800	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X960	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X1024	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1360X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1366X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1440X900	<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"/>	
1400X1050	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1600X900	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1600X1200	<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"/>	
1680X1050	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1792X1344	<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"/>	
1856X1392	<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"/>	
1920X1080	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1920X1200	<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"/>	
1920X1440	<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"/>	
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"/>	
3840X2160	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Rotation(0/90/180/270)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DOS Display	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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

2.1.2. Multi-Display Output Test

Selection	Output	Result			Note
		Pass	Fail	N/A	
Dual Display Clone	VGA+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+LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dual Display Clone	LVDS+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+eDP+DP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test by i7 SKU
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2.1.3. Video Resolution Test

Test points:

1. Power on without inserting any VGA connector until system reaches Windows desktop
2. Plug VGA connector into test machine while system reaches Windows then check VGA driver and display
3. Check VGA output Brightness is normal and it shows "Ghost Image" / "Flicker" or not

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

2.1.4. Video Resolution Test

LVDS Model		Result			Note
		Pass	Fail	N/A	
LVDS	1_AUO G104SN02 V.2 PWM 800X600/18bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2_AUO G121XN01 V.07 /12.1 / 800*600 / 18bit (4:3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3_AUO G185XW01 / 18" / 1366x768 / 24bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	4_AUO M215HW03 V1 1920*1080 48bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	







2.2. Audio Function Test

[] No Support

Function Test	Result			Note
	Pass	Fail	N/A	
Stereo Audio RIGHT Channel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Left / Right Channel (CN6)
Stereo Audio LEFT Channel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Line out	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	
DP Audio	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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			Accton Desktop-3005							
10MBps LAN HUB			SVEC FD916H							
OnBoard LAN1		Intel® I218-LM Gigabit LAN					MAC Address		00-07-32-11-11-1E	
OnBoard LAN2		Intel® I211 Gigabit LAN					MAC Address		00-07-32-11-11-1F	
LAN Speed	Link / Speed LED	Active LED	LAN 1			LAN 2			Note	
			Pass	Fail	N/A	Pass	Fail	N/A		
1000MBps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
100MBps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
10MBps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Wake On LAN			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	S3/S4/S5/DOS	
LAN Boot (PXE)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Internet Browser (DHCP Server)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

2.3.2. Throughput Test

DUT Platform Information:

<input type="checkbox"/>	Fedora 15
<input type="checkbox"/>	Cent 5.5
<input checked="" type="checkbox"/>	English Ubuntu12.04 Kernel 3.2.0-23.generic-pae #36
<input type="checkbox"/>	Red Hat

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

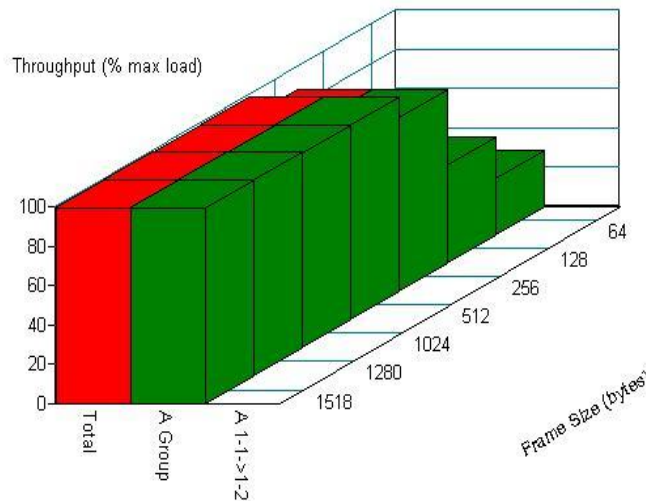
Graphics Media	Ubuntu 12.04 Default setting
LAN	LAN1→ Intel Ethernet Connection I218-LM / e1000e-3.1.0.2
	LAN2→ Intel I211 Gigabit Network Connection / igb-5.2.9.4
Audio Driver	Ubuntu 12.04 Default setting -
CPU information	

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:

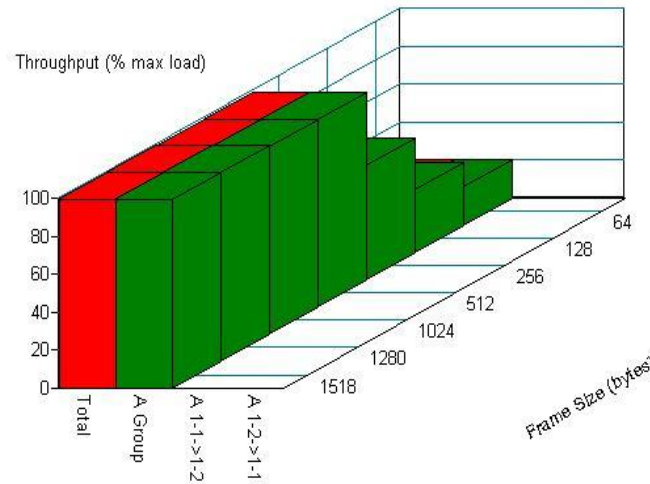
- Half Direction (LAN1: Intel Ethernet Connection I218-LM → LAN2: Intel I211 Gigabit Network Connection)



Throughput vs Frame Size

Name/Frame size	64	128	256	512	1024	1280	1518
Total	28.0703125	48.953125	87.625	98.453125	98.453125	99.2265625	99.2265625
A Group	28.0703125	48.953125	87.625	98.453125	98.453125	99.2265625	99.2265625
A 1-1->1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A 1-2->1-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2. Binary Direction (LAN1: Intel Ethernet Connection I218-LM ↔ LAN2: Intel I211 Gigabit Network Connection)



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	19.5625	32.7109375	59.78125	98.453125	98.453125	99.2265625	99.2265625
A Group	19.5625	32.7109375	59.78125	98.453125	98.453125	99.2265625	99.2265625
A 1-1->1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A 1-2->1-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2.4. Jumper and Connector Function Test

[] No Support

Function Test	Result			Note
	Pass	Fail	N/A	
JP1 PCI-104 I/O Voltage Selection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
JP2 Clear CMOS Jumper	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
JP3 Touch Screen 4/5/8 Wire Mode Selection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
JP4 AT/ATX Power Supply Mode Selection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
JP10 LVDS Port1 Backlight Inverter Voltage Selection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
JP11 LVDS Port1 Operating Voltage Selection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
JP12 LVDS Port1 Backlight Lightness Control Mode Selection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
JP13 COM2 (D-SUB) Ring/+12V/+5V Selection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
JP14 COM3 (Wafer) Ring/+12V/+5V Selection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CN7 USB 2.0 Port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CN8 Front Panel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CN9 USB 2.0 Port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CN11 USB 2.0 Port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3. Integration Test

Hardware Information with Windows 8.1 Enterprise English 64 Bit Driver Version	
CPU	Intel® Core(TM) i7-5650U CPU (4M Cache, up to 3.20GHz)
Memory	ADATA ADS1600W8G11-BMIE DDR3L 1600 8GX16
HDD/CFD	TOSHIBA DT01AC050 SATAIII 3.5" 500GB/7200rpm

3.1. USB Port Integration Test

Item	USB Port	Boot			Function(Win 8)			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 (___)	Result			Note
	Pass	Fail	N/A	
DIO VCC +5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3.3. COM Port Integration Test

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

3.4. RS-422 / RS-485 Test

Test Item	Result			Note
	Pass	Fail	N/A	
RS-422 for COM2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use loopback and WINSSD.exe to test RS-422 in Windows
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. The communication between the RS-422 port of two boards is linked by one 1.2km cable on Windows Terminal. 2. Confirm RS422 can work properly from G3 status
RS-485 for COM2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use ICP CON I-7044D D/IO Module in Windows(Support Auto flow control)
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. The communication between the RS-485 port of two boards is linked by one 1.2km cable on Windows Terminal 2. Confirm RS485 can work properly from G3 status

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 8.1 Enterprise English 64Bit

Test Item		Result			Note
		Pass	Fail	N/A	
Burn In Test V8.0 Pro (1025) Duty: 100 Time: over 12 hours	CPU	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VGA Hotfix install
	RAM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	COM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Video	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Disk	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Sound	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Network	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Parallel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	USB	2.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.0		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Note: COM PORT Speed Set to 115200.

4. Application Test

4.1. PCI Slot Function (PCI Adapter Card) Test

Adapter USB Extend Card	Function Test			Note
	Pass	Fail	N/A	
D-Link DU-520 USB2.0 5Ports Extend Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PCI-104⇒ PCI
Adapter COM port Extend Card	Function Test			Note
Pass	Fail	N/A		
Uptech RS-232+Parallel Extend Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PCI-104⇒ PCI
Adapter LAN Card	Connect to Internet			Note
Pass	Fail	N/A		
Intel GD82559 10/100 Mbps Fast Ethernet Adapter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PCI-104⇒ PCI
INTEL PWLA8391GTBLK Pro/1000 Giga LAN Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
D-Link DFE-530TX PCI Adapter LAN Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SYNNEX MD-56KVP PCI modem Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Adapter RAID Card	SATA Function Test			Note
Pass	Fail	N/A		
Adaptec AAR-1210SA RoHS 2-Port RAID Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PCI-104⇒ PCI

4.2. PCI-Express Function Test

Mini PCI Express Card	Function Test			Note
	Pass	Fail	N/A	
HUAWEI EM680 3G Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(full size)
SATA Sil3132ME	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM-ME232s2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ralink RAK-RT3092 Mini Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ralink RT3593 Mini Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
AzureWave AW-NB037H(PCI-e Wireless+ USB Bluetooth)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
AzureWave AW-NB041H(PCI-e Wireless+ USB Bluetooth)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
AzureWave AW-NB100H(PCI-e Wireless+ USB Bluetooth)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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

4.3.1. Device List: PC/104+ Module

Test Item	Result			Note
	Pass	Fail	N/A	
PER-C10L A1.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test by PCM-FA00
PER-C20S A0.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PER-C40C B0.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ralink RT2561ST wireless card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

5. Power Consumption Test

Hardware Information with Windows 8.1 Enterprise English 64 Bit Driver Version	
CPU	Intel® Core(TM) i7-5650U CPU (4M Cache, up to 3.20GHz)
Memory	ADATA.ADS1600W8G11-BMIE DDR3L 1600 8GX16
HDD/CFD	TOSHIBA DT01AC050 SATAIII 3.5" 500GB/7200rpm

5.1. AT/ATX Power Consumption

Test Equipment						
Equipment	Digital Multimeter					
Manufacturer	HOLA					
Model name	DM-1240					
Test Environment						
ATX Power Model	FSP EVEREST 85PLUS 650W					
Power Supply	AT/ATX Power					Note
(Full Loading Mode) Windows 7 with Prime 95 Full Loading Test	(+12V)	3.24	A	38.88	W	Prime95 Version 259
Full Loading Total Watt	38.88 (W)					
S3 mode: Measure the current value when system in S3 mode of windows and without running any	(+12V)	0.66	A	7.92	W	
Suspend Total Watt	7.92 (W)					
Win. Idle mode: Measure the current value when system in windows mode and without running any program	(+12V)	1.07	A	12.84	W	
Idle Total Watt	12.84 (W)					
Power on - Boot sequence: Measure the maximum current value of between system power on and boot-up to O.S.	(+12V)	1.97	A	23.64	W	
Power On Total Watt	23.64 (W)					
S5 mode: Measure the current value when system in S5 mode of windows and without running any	(+12V)	0.45	A	5.4	W	Erp disable
Suspend Total Watt	5.4 (W)					
S5 mode: Measure the current value when system in S5 mode of windows and without running any	(+12V)	0.34	A	4.08	W	Erp Enable
Suspend Total Watt	4.08 (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"/>	66°C	53 °C	
System Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	24°C	24 °C	
Fan Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5097 RPM	5094 RPM	
Vcore	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.784V	1.76V	
VMEM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.376V	1.36V	
+12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.056V	11.92V	
+5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.003V	4.98V	
5VSB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.040V	4.96V	
VBAT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.200V	3.16V	

5.2. Power Status

Chroma PROGRAMMABLE DC POWER SUPPLY Model :62012P-600-8

Test Point: Voltage + /- 5%

Test Item	Result			Note
	Pass	Fail	N/A	
9V (8.5V)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
24V (25.5V)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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	0	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

6.2. Booting Timer Test

Installation	Actual		Note
System Booting Time	3.54	Sec	Press the Power Button till "Beep" Sound appears

6.3. Watchdog Timer Test

Use Function as below:

Test with Hi-Safe1224

Time-Out Interval	Criteria	Actual		Result			Note
				Pass	Fail	N/A	
10 sec	+/- 10%	11.50	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
60 sec	+/- 10%	61.63	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
255 sec	+/- 10%	258.61	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Note : Under Room Temperature: 26°C

7. O.S. Compatibility Test

7.1. English Ubuntu 12.04 Kernel 3.2.0-23-generic-pae #36

Driver Information:

Chipset Software	Ubuntu12.04 default
Graphics Media	Ubuntu12.04 default
Audio Driver	Ubuntu12.04 default
LAN Driver	Intel Ethernet Connection I218-LM / e1000e-3.1.0.2 Intel I211 Gigabit Network Connection / igb-5.2.9.4

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

Installation	Result			Note
	Pass	Fail	N/A	
English Ubuntu12.04 kernel 3.2.0-23-generic-pae #36	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Type uname -a

Test Result:

Test Item	Result			Note
	Pass	Fail	N/A	
Display Function Test				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DP -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS1 -- 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 (Line-out / Audio Amp)
Base 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"/>	
Console Redirection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DVD-ROM Test	<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"/>	
X Windows Application				
Start Button Office	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Office function
X-Window	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Startx – Desktop in Linux
Command Test On Text Mode: Attention Delay Phenomenon				
uname -a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show information
Shutdown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Init 0 or shutdown -h now
Restart the Computer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Init 6 or shutdown -r now
ls / clear; cd /dev /ls -l	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Command instruction

7.2. Windows 7 Ultimate English Version 32/64Bit

[] x32 Driver Information:

Chipset Software	Intel Chipset Device Software 10.0 (4/24/2014)
Graphics Media	Intel HD Graphics 6000 10.18.14.4080 (1/5/2015)
Audio Driver	Realtek High Definition Audio 6.0.1.6873 (3/29/2013)
	Intel Display Audio 6.16.0.3161 (11/5/2014)
LAN Driver	Intel Ethernet Connection I218-LM 12.12.50.4 (6/12/2014)
	Intel I211 Gigabit Network Connection 12.11.97.0 (5/15/2014)

[] x64 Driver Information:

Chipset Software	Intel Chipset Device Software 10.0 (4/24/2014)
Graphics Media	Intel HD Graphics 6000 10.18.14.4080 (1/5/2015)
Audio Driver	Realtek High Definition Audio 6.0.1.6873 (3/29/2013)
	Intel Display Audio 6.16.0.3161 (11/5/2014)
LAN Driver	Intel Ethernet Connection I218-LM 12.12.50.4 (6/12/2014)
	Intel I211 Gigabit Network Connection 12.11.97.0 (5/15/2014)

Install OS to mSATA / SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows 7 Ultimate ACPI Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Test Results:

Test Item	Result			Note
	Pass	Fail	N/A	
Single Display				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DP-- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS1 -- 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				
Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PS/2, USB
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	
TPM Function	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Touch Device	<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"/>	
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

[] x32 Driver Information:

Chipset Software	Intel Chipset Device Software 10.0 (4/24/2014)
Graphics Media	Intel HD Graphics 10.18.10.4080 (1/5/2015)
Audio Driver	Realtek High Definition Audio 6.3.9600.16384 (8/21/2013)
	Intel Display Audio 6.16.0.3161 (11/5/2014)
LAN Driver	Intel Ethernet Connection I218-LM 12.6.47.1 (3/28/2013)
	Intel I211 Gigabit Network Connection 12.6.47.1 (3/28/2013)

[] x64 Driver Information:

Chipset Software	Intel Chipset Device Software 10.0 (4/24/2014)
Graphics Media	Intel HD Graphics 10.18.10.4080 (1/5/2015)
Audio Driver	Realtek High Definition Audio 6.3.9600.16384 (8/21/2013)
	Intel Display Audio 6.16.0.3161 (11/5/2014)
LAN Driver	Intel Ethernet Connection I218-LM 12.6.47.1 (3/28/2013)
	Intel I211 Gigabit Network Connection 12.6.47.1 (3/28/2013)

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

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

Test Results:

Test Item	Result			Note
	Pass	Fail	N/A	
Single Display				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DP-- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS1 -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot – Windows8.1 Enterprise Advanced Options Menu				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Basic Function Test				
Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PS/2, USB
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	
TPM Function	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Touch Device	<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"/>	
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 8.1 Enterprise English 64 Bit Driver Version	
CPU	Intel® Core(TM) i7-5650U CPU (4M Cache, up to 3.20GHz)
Memory	ADATA ADS1600W8G11-BMIE DDR3L 1600 8GX16
HDD/CFD	TOSHIBA DT01AC050 SATAIII 3.5" 500GB/7200rpm

8.1. Advanced Test

Test Item	Result			Note		
	Pass	Fail	N/A			
CPU configuration	Hyper-threading	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Active Processor Cores	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Intel Virtualization Technology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
SATA configuration	SATA controller	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
	SATA Controller speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Hot Plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Power management	Power mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AT/ATX	
	Power Saving Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Restore AC Power Loss	Power Off	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Power On	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Last State	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Enable Hibernation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	ACPI Sleep State	Sleeps state (S3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Suspend Disable	<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"/>	S5 RTC Wake settings	
	Wake system with Dynamic time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
PME/Ring	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Wake on LAN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
SIO Configuration	Serial port 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Serial port 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RS232/422/485	
	Serial port 3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RS232/422/485	
	Serial port 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Serial port 5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Serial port 6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Parallel Port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
AMT Configuration	Un-configure ME	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Disable ME	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
CSM Configuration		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Trusted Computing	Security Device Support	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
	TPM State	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
	Pending operation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	None / TPM Clear	
USB configuration	Legacy USB Support	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	USB Mass Storage Driver Support	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Digital IO port configuration		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	I/O Port : 0xA02 Bit0(port1) – Bit7(Port8) 0xA03 Bit0(port9) – Bit7(Port16)	

8.2. Chipset Test

Test Item		Result			Note
		Pass	Fail	N/A	
System Agent (SA) Configuration	Memory Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Memory Frequency Limiter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Max TOLUD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Memory Remap	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Graphics Configuration	Primary Boot Display	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CRT / LVDS1 / LVDS2
	Secondary Boot Display	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CRT / LVDS1 / LVDS2
	LVDS1 panel type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	LVDS1 Color Depth	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18bit / 24bit / 36 bit / 48bit
	LVDS1 Backlight type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Normal/inverted
	LVDS1 Backlight level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0~100%
PCH-IO Configuration (PCI Express Configuration)	Azalia	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Onboard LAN1 NIC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(Intel i218)
	Onboard LAN2 NIC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(Intel i211)
	Mini-card Slot 2 (Half-size)				
	Hot Plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable
	ASPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto
	PCIe Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto/Gen1/Gen2
	Mini-card Slot 2 (Full-size)				
	Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	mSATA / PCI Express
	Hot Plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable
ASPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto	
PCIe Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto/Gen1/Gen2	

8.3. Boot Test

Test Item	Result			Note
	Pass	Fail	N/A	
Boot up Numlock State	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quiet Boot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Launch Intel 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 Date and time
Clear CMOS Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Clear Date

8.5. AAEON Tag Check Utility

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

8.6. Supervisor / User Password Test

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

8.7. Hi-safe Test

Test Item		Result			Note
		Pass	Fail	N/A	
Version(20141224)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EPIC-ULT07
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	DIO1~4 High	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DIO1~4 Low	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DIO5~8 High	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DIO5~8 Low	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
WatchDog	10sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 11.50 sec
	1min	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 61.63sec
	255sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 258.61sec
	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 0xF040
	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 Controller	SMBUS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SMBus Address 0xE000
	Inverter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AD_5247_0x5c
	0~100%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.8. Hi-Manager Test

Test Item	Result			Note
	Pass	Fail	N/A	
Version(20150205)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Alarm Clock	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Remote Recovery	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
KVM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Schedule	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Device Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

9. Performance Test

Hardware Information with Windows 8.1 Enterprise 64 Bit Driver Version	
CPU	Intel® Core(TM) i7-5650U CPU (4M Cache, up to 3.20GHz)
Memory	ADATA ADS1600W8G11-BMIE DDR3L 1600 8GX16
HDD/CFD	TOSHIBA DT01AC050 SATAIII 3.5" 500GB/7200rpm

9.1. Performance Test

Test Result: (Display set 1920*1080 test)

Testing Software	Scope		Note
	AAEON	Ref.	
PCMark2005			
PCMark	N/A	-	
CPU	10951	-	
Memory	10337	-	
Graphics	3267	-	
HDD	6944	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	
PCMark Vantage			
PCMarks	8150	-	
Memories	4935	-	
TV and Movies	0	-	
Gaming	4771	-	
Music	7162	-	
Communications	12504	-	
Productivity	6870	-	
HDD	3713	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	

Testing Software	Scope		Note
	AAEON	Ref.	
3Dmark2006 v120			
3Dmark Score	5029	-	CPU Turbo mode off
SM2.0 Score	1712	-	
HDR/SM3.0 Score	2090	-	
CPU Score	2998	-	
Benchmark (B)	-	-	

Testing Software	Scope		Note
	AAEON	Ref.	
Performance Test 7.0			
PassMark Rating	1794.4	-	
CPU Mark	4982.5	-	
2D Graphics Mark	433.3	-	
3D Graphics Mark	546.9	-	
Memory Mark	2028.7	-	
Disk Mark	1005.9	-	

Testing Software	Scope		Note
	AAEON	Ref.	
Windows experience index			
Processor	7.6	-	
Memory	7.5	-	
Graphics	4.8	-	
Gaming graphics	5.4	-	
Primary hard disk	5.9	-	

SATA Performance				
SATA HDD	TOSHIBA DT01AC050 SATAIII 3.5" 500GB/7200rpm			
	Innodisk 3SE DEMSR-32GD06SWBQB-26 32GB (mSATA)			
CPU	Intel® Core(TM) i7-5650U CPU (4M Cache, up to 3.20GHz)			
Memory	ADATA ADS1600W8G11-BMIE DDR3L 1600 8GX16			
OS	Windows 8.1 Enterprise 64 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	16.7 ms	
	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	131.4MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	353.8MB/s	SATAII 150~300MB SATAIII up 300M/B
Single HDD (SATA port 2) SATAIII	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	16.8ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	9%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	130.1MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	430.2MB/s	SATAII 150~300MB SATAIII up 300M/B
Single HDD (mSATA port) SATAII	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.1ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	2 %	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	352.6MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	365.3MB/s	SATAII 150~300MB SATAIII up 300M/B

USB3.0 Performance				
USB Flash	JetFlash Transcend 32GB			
Item	Comment / (unit)	Software	Transfer Rate (MB/s)	Note
USB3.0	Maximum Read	ATTO Disk Benchmark	87.438 MB/s	
	Maximum Write	ATTO Disk Benchmark	30.411 MB/s	

USB2.0 Performance

USB Flash	SanDisk Cruzer 8.02 8GB			
Item	Comment / (unit)	Software	Transfer Rate (MB/s)	Note
USB3.0	Maximum Read	ATTO Disk Benchmark	17.676 MB/s	
	Maximum Write	ATTO Disk Benchmark	5.312 MB/s	

10. Negative Test

10.1 USB Keyboard Negative Test

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

10.2 Suspend S3 Negative Test

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