

Report NO: 15E010004

PICO-BT01

Intel Bay Trail Soc PICO-ITX Board

Board Level Product P5 Test Report

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

Issue date	Approval	Test Engineer
2015/02/12	KJ Wang	Danny Chen

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	1. Rename document : [Board Level Product P2-P3 Verification Test Plan & Report Template] 2. Chapter1:Memory compatibility add AAeon P/N 3. Chapter1:Add Cfast and m-SATA test item. 4. Chapter3:Add RS422 1.2KM/115200bps transmission test 5. Chapter3:BurninTest test add USB2.0/3.0. 6. Chapter5: Modify power consumption test item. 7. Chapter7: add Windows XP Professional English Version 32/64Bit and Windows 8 Pro English Version 32/64Bit test. 8. Chapter8: Change BIOS format from Award to AMI and add Hi-Safe, Hi-Manager test item. 9. Chapter9: Add SATA performance test and USB3.0 performance. 10. Remove Chapter10: Other Tests..	

Note :

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

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

This test report would 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	PICO-BT01	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Form Factor	PICO-ITX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Processor	Intel Bay Trail SoC E3845/E3825 Processors up to 1.91GHz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System Memory	04-pin DDR3L 1066/1333MHz SODIMM x 1, Max up to 8GB.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Chipset	Intel Bay Trail SOC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I/O Chips	Fintek F81801	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ethernet	1 x Intel I211	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wake on LAN	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BIOS	Interface-SPI Capacitor-AMI BIOS -32MB ROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Watchdog Timer	Chipset – Fintek F81801 Function – 255 levels	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RTC	Bay Trail SoC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
H/W Status Monitor	Chipset – Fintek F81801 Function – Vcore , +1.35V_DDR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Expansion Interface	1 x mSATA/MiniCard (default mSATA, full size), [Setup by BIOS] 1 x MiniCard (half size)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Battery	Lithium battery	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power Supply Request	+12V DC, AT or ATX (default and supports external +5V stand-by power input)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Board Size	3.94" (L) x 2.756" (W) (100mm x 72mm)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Display	Support CRT/TFT LCD/DP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Resolution	LVDS (18/24bit) up to 1440 x900@ 60Hz [select by BIOS or jumper] VGA up to 2048 x1152 @ 60Hz, DP up to 2560 x 1400 @ 60Hz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LCD Brightness	1. PWM mode is default setting, but it can be configured into voltage mode with jumper selection. 2. The resolution of the brightness level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Combination	Support dual display: LVDS + VGA, LVDS +DP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Storage	1 x SATA2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Solid Storage Disk interface	interface 1 x mSATA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial Port	2 COM ports: internal pin headers (F81438 chipset) for 2 COM ports _ COM 1: RS-232 _ COM 2: RS-232/RS-422/RS-485 (Ring/+5V /+12V)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RS-232 x 1, RS-232/422/485 (auto flow) x1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB	1 x USB 3.0 Ports (by Real IO)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

	1 x USB 2.0 Ports (by Real IO) [Co-lay pin header] 1 x USB 2.0 Ports (by internal pin headers)				
	USB 3.0 x 1 USB 2.0 x 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Digital I/O	2 IN/ 2 OUT (Default)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	4 ch Digital I/O (Programmable)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio	HD Audio Codec (Realtek ALC892)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Buzzer , Audio Function (1x Line out)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BIO	The BIO use the 80-pins connector: USB x2 PCIe x1 Line –out x1 SMBus x1 GPIO x1 LPC x1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

O.S. Support

Item	Specification	Result	Note
Microsoft Windows	Windows 7 Ultimate English (32Bit)	<input checked="" type="checkbox"/>	
	Windows 7 Ultimate English (64Bit)	<input checked="" type="checkbox"/>	
	Windows 8.1 Enterprise English (32Bit)	<input checked="" type="checkbox"/>	
	Windows 8.1 Enterprise English (64Bit)	<input checked="" type="checkbox"/>	
Linux	Linux Fedora	<input checked="" type="checkbox"/>	

Environmental Specifications

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

Note: Please refer Environment Test Report for detail information

Platform Information

Item	Device Information	Test Item
Project Name	PICO-BT01	1,2,3,4,5,6,7,8,9
Mother Board / Version	PICO-BT01 Rev 0.2	1,2,3,4,5,6,7,8,9
BIOS / Version	PICO-BT01 R1.1 (ZBT1AM11) (02/05/2015) for E series CPU	1,2,3,4,5,6,7,8,9
CPU Type	Intel® Bay Trail Soc E3845/E3825 Processor up to 1.91GHz	1,2,3,4,5,6,7,8,9
Memory Type	Transcend DDR3L 1600 8GB (K4B4G08460) 1.35V InnoDisk DDR3L-1333 8GB (M3S0-8GHSDLN9) 1.35V InnoDisk DDR3L-1066 4GB (M3S0-4GHSCLM7-26) 1..35V	1,2,3,4,5,6,7,8,9
SATA HDD	TOSHIBA / MK1665GSX / 160GB / 2.5" SATA HDD	1,2,3,4,5,6,7,8,9
M-SATA	SanDisk SSD U100 32GB / mSATA	1,2,3,4,5,6,7,8,9
USB DVD-ROM	Iomega DVDRW8X-U	1,2,3,4,5,6,7,8,9
LED	BenQ BL2710 LED 27" ViewSonic VP2770-LED 27"	1,2,3,4,5,6,7,8,9
LVDS	AUO T260XW02 / 26" / 1366x768 / 24bit	1,2,3,4,5,6,7,8,9
Compact Flash	N/A	1,2,3,4,5,6,7,8,9
Daughter Board	N/A	1,2,3,4,5,6,7,8,9
Expansion Board	N/A	1,2,3,4,5,6,7,8,9
	N/A	1,2,3,4,5,6,7,8,9
Operating System	<input checked="" type="checkbox"/> Ubuntu 14.04 LTS – Kernel 3.13.0.24-generic-pae #46	7-1
	<input checked="" type="checkbox"/> Windows 7 Ultimate English 32 Bit / 64Bit	7-2
	<input checked="" type="checkbox"/> Windows 8.1 Enterprise English 32 Bit / 64Bit	7-3
Power Supply	ATX Power Supply Seventeam ST-350BKV 350W FSP Aurum S Series AS-550 550W	1,2,3,4,5,6,7,8,9
	AT Power Supply: N/A	1,2,3,4,5,6,7,8,9
	DC Adapter : N/A	1,2,3,4,5,6,7,8,9
Battery Model	N/A	1,2,3,4,5,6,7,8,9
Chipset Information with Windows 8.1 Enterprise English SP1 64 Bit Driver Version		
Chipset Software	Intel Chipset Device Software 10.0 (2014-03-26)	
North Bridge	Intel Bay Trail SOC	
Super IO Chipset	Fintek F81801	
VGA Chipset	Intel HD Graphics 10.18.10.3958 (09/30/2014)	
Audio Chipset	Realtek High Definition Audio 6.0.1.7083 (11/5/2013)	
	Intel Display Audio 6.16.0.3154 (09/09/2014)	
Ethernet Chipset	Intel i211 Gigabit Network Connection / 12.11.97.0 (3/11/2014)	
	Realtek PCIe GBE Family Controller 8.1510.2013 (5/10/2013)- From BIO Card	

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1. Hardware Test

1.1. CPU Compatibility Test

CPU Information	Result			Note
	Pass	Fail	N/A	
Intel® Atom™ Processor E3825 (1M Cache, 1.33 GHz)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Intel® Atom™ Processor E3845 (2M Cache, 1.91 GHz)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.2. Memory Compatibility Test_DDR3L

Memory Information	AAEON P/N	MEM V5.01 For 3 loops			Note
		Pass	Fail	N/A	
InnoDisk DDR3L-1066 4GB (M3S0-4GHSCLM7-26) 1..35V	XXXXXXXXXX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
InnoDisk DDR3L-1066 2GB (M3S0-2GHSCLM7-26) 1..35V	XXXXXXXXXX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transcend DDR3L-1333 / 2GB SO-DIMM 1.35V	XXXXXXXXXX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transcend DDR3L-1333 / 4GB SO-DIMM 1.35V	XXXXXXXXXX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transcend DDR3L-1600 / 8GB SO-DIMM 1.35V	XXXXXXXXXX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DSL DDR3L-1600 / 8GB SO-DIMM 1.35V	XXXXXXXXXX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
InnoDisk DDR3L-1333 8GB (M3S0-8GHSDLN9) 1..35V	XXXXXXXXXX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
InnoDisk DDR3L-1600 8GB (M3S0-8GHSDLPC) 1..35V	XXXXXXXXXX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ADATA DDR3L-1600 8GB SO-DIMM 1.35V	XXXXXXXXXX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.3. SATA Compatibility Test

1.3.1 Onboard SATA (IDE) Test

SATA IDE Mode		Result			Note
		Pass	Fail	N/A	
HDD	TOSHIBA / MK1665GSX / 160GB / 2.5" SATA HDD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	WD / WD5000BPKX / 2.5' SATA HDD 500GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	TOSHIBA / DT01ACA50 / SATAIII 3.5" 500GB / 7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	WD / WD10SPCX / 1TB /2.5" SATA HDD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
mSATA	Memo MSE-H Series 32GB MLC / mSATA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
mSATA	SanDisk SSD U100 32GB / mSATA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
mSATA	Memo MS500 Series 128GB MLC / mSATA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD	Crucial / CT256M550SSD1 / 2.5" SATA SSD 256GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.3.2 Onboard SATA (RAID) Test

[X] No Support

SATA RAID Test		Result			Note
		Pass	Fail	N/A	
RAID-0 (HDDx2) Striping/Span Test		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RAID-1 (HDDx2)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Mirror Test		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RAID-5 (HDDx3) Striping/Span Test		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Rotation Parity		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RAID-10 (HDDx3) Striping/Span Test		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mirroring		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.3.3 Onboard SATA (AHCI) Test [] No Support

SATA AHCI Test		Result			Note
		Pass	Fail	N/A	
HDD	TOSHIBA / MK1676GSX / 160GB / 2.5" SATA HDD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	TOSHIBA / MK1665GSX / 160GB / 2.5" SATA HDD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	WD / WD5000BPKX / 2.5" SATA HDD 500GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	TOSHIBA MK3276GSX / 2.5" SATA HDD 320GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	Seagate / ST9160412AS / 2.5" SATA HDD 160GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	Western Digital / WD1600BEVT/ 160GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	HGST / HTS721010A9E630 / 1TB 2.5" SATA HDD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
mSATA	Memo MSE-H Series 32GB MLC / mSATA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
mSATA	SanDisk SSD U100 32GB / mSATA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
mSATA	Memo MS500 Series 128GB MLC / mSATA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD	Crucial / CT256M550SSD1 / 2.5" SATA SSD 256GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.4. IDE Compatibility Test [x] No Support

IDE Device Information	Result			Note
	Pass	Fail	N/A	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Slot at 1/2/3/4/OS
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.5. Compact Flash Compatibility Test [x] No Support

Compact Flash Information	Result			Note
	Pass	Fail	N/A	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test at Windows 7 or Data Transfer (Read/Write) / Slot
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.6. CFast Compatibility Test [X] No Support

Cfast Information	AAEON P/N	ATTO R/W			Note
		Pass	Fail	N/A	
Transcend 500 series CFast 16GB	XXXXXXXXXX	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innodisk D150Q standard 32GB	XXXXXXXXXX	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innodisk DC1T-04GT21W1D Wide-Temp 4GB	XXXXXXXXXX	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.7. m-SATA Compatibility Test

[] No Support

m-SATA Information	AAEON P/N	ATTO R/W			Note
		Pass	Fail	N/A	
Memo MSE-H Series 32GB MLC / mSATA		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SanDisk SSD U100 32GB / mSATA		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Win8.1 32bit
Memo MS-500 Series 8GB / mSATA		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TS8GMSA500 8GB / mSATA		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Memo MS-500 Series 128GB / mSATA		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Win7 64bit

2. Basic Function Test

2.1. Video Function Test

2.1.1. Single Output Function Test

Hardware Information with Windows 8.1 Enterprise English SP1 32 Bit Driver Version										
CPU	Intel® Atom™ Processor E3845 (2M Cache, 1.91 GHz)									
Memory	Transcend DDR3L-1333 / 4GB SO-DIMM 1.35V									
HDD	TOSHIBA / MK1665GSX / 160GB / 2.5" SATA HDD									
Display Port	BenQ BL2710 LED 27"									
LVDS	AUO T260XW02 / 26" / 1366x768 / 24bit									
VGA	ViewSonic VP2770-LED 27"									
Color Quality	<input checked="" type="checkbox"/> 16bit <input type="checkbox"/> 24bit <input checked="" type="checkbox"/> 32bit									
Resolution	VGA			Display Port			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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1152X864	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X600	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X720	<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"/>	
1280X768	<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"/>	
1280X800	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X960	<input 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"/>	
1280X1024	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1360X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1366X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1400X1050	<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"/>	
1440X900	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1600X900	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1600X1200	<input 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"/>	
1680X1050	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1792X1344	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1856X1392	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1920X1080	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	
2048X1152	<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"/>	
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"/>	
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"/>	
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 with Full Screen under POST screen and Text Mode.

2.1.2. Dual Output Function Test

[] No Support

Selection	Output	Result			Note
		Pass	Fail	N/A	
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	DP + LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2.1.3. Video Resolution Test

Test points:

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

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

2.1.4. Video Resolution Test

[] No Support

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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5_AU B104SN02 V.0 / 10.4" / 800*600 / 18bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6_AUO G084SN05 v7 / 8.4" / 800*600 / 24bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7_AU G150XG01 V.0 / 15" / 1024*768 / 18bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
8_AU M150XN07 V.2 / 15" / 1024x768 / 24bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
9_AU / G121XN01 V.0 / 12.1" / 1024*768 / 18bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
10_AU M170EG01 V.D/ 17" / 1280*1024 / 48bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
11_AU M170XW01 V.1 / 17" / 1280x768 / 24bit (16:9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
12_AUO T260XW02 / 26" / 1366x768 / 24bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13_AU M201UN02 V.5 / 20.1" / 1600x1200x48bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
14_AUO T370HW01 / 37" / 1920x1080 / 48bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
15_AUO M190PW01 V0 / 19"/1440X900/48 bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
16_AUO LG185XW010 / 18.5" / 1366X768 /24bit (16:9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
17_AUO LM215HW030 / 21.5" / 1920X1080/48bit (16:9)	<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"/>	From Onboard
R (Right) Channel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	From Onboard
Line Out	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	From Onboard
Line Out and w/2W Amp	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	From BIO Card Rev A0.2
Line In	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
MICROPHONE	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
MIC REC	<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		Accton Desktop-3005								
10Mbps LAN HUB		SVEC FD916H								
OnBoard LAN1		Intel i211 Gigabit Network Connection					MAC Address		00-07-32-2D-E5-40	
BIO Card LAN1		Realtek 8111E Network Connection					MAC Address		00-E0-4C-68-00-06	
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 Mode	
LAN Boot (PXE)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	BIO Card LAN Port not support PXE	
Internet Browser (DHCP Server)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Remark : LAN2 by BIO Card Rev A0.2

2.3.2. Throughput Test

[] No Support

DUT Platform Information:

<input type="checkbox"/>	Fedora 15
<input type="checkbox"/>	Cent 5.5
<input checked="" type="checkbox"/>	Ubuntu 14.04 LTS– Kernel 3.13.0-24-generic-pae #46
<input type="checkbox"/>	Red Hat

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

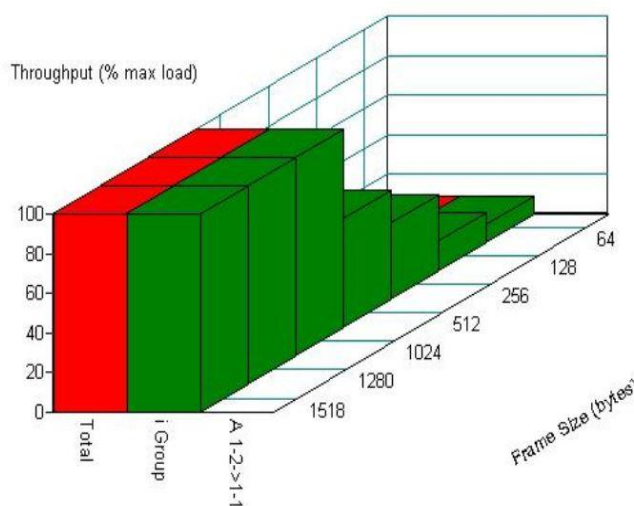
CPU Type	Intel® Atom™ Processor E3845 (2M Cache, 1.91 GHz)
Graphics Media	Ubuntu 14.04Default setting
LAN	LAN1→Intel I211 LAN -3.1.0.2-NAPI
	LAN2→Realtek 8111E LAN – 8.037.00-NAPI (from BIO Card)
Audio Driver	Ubuntu 14.04Default setting

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:

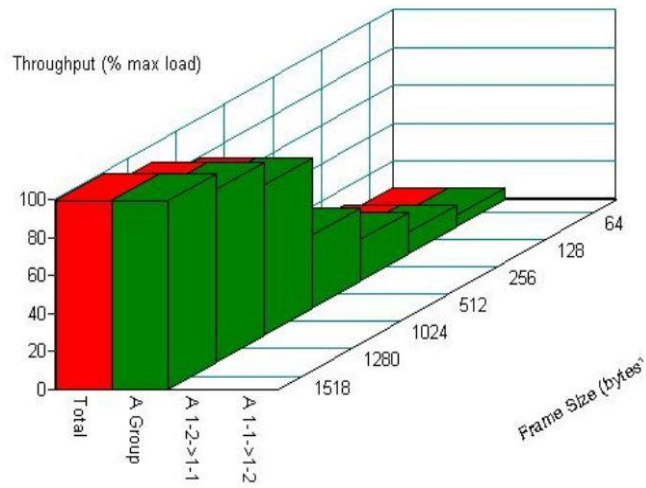
- Half Direction (LAN1: Intel I211 10/100/1G Ethernet → LAN2: Realtek 8111E 10/100/1G Ethernet)



Throughput vs Frame Size

Name/Frame size	64	128	256	512	1024	1280	1518
Total	8.734375	14.921875	38.125	54.3671875	100	100	100
i Group	8.734375	14.921875	38.125	54.3671875	100	100	100
A 1-2->1-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2. Binary Direction(LAN1: Intel I211 10/100/1G Ethernet → LAN2: Realtek 8111E 10/100/1G Ethernet)



Throughput vs Frame Size

<u>Name/Frame size</u>	<u>64</u>	<u>128</u>	<u>256</u>	<u>512</u>	<u>1024</u>	<u>1280</u>	<u>1518</u>
Total	5.640625	11.0546875	21.109375	38.125	78.34375	90.71875	99.2265625
A Group	5.640625	11.0546875	21.109375	38.125	78.34375	90.71875	99.2265625
A 1-2->1-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A 1-1->1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A

3. Integration Test

	Hardware Information with Windows 8.1 Enterprise English SP1 Device
CPU	Intel® Atom™ Processor E3845 (2M Cache, 1.91 GHz)
Memory	Transcend DDR3L-1333 / 4GB SO-DIMM 1.35V
HDD	TOSHIBA / MK1665GSX / 160GB / 2.5" SATA HDD
	Chipset Information with Windows 8.1 Enterprise SP1 32 Bit Driver Version
Chipset Software	Intel(R) Chipset Device Software / 10.0 (03/26/2013)
North Bridge	Intel Bay Trail SOC
Super IO Chipset	Fintek F81801
VGA Chipset	Intel HD Graphics / 10.18.10.3740 (07/04/2014)
Audio Chipset	Realtek High Definition Audio 6.0.1.7083 (11/05/2013) Intel ® Display Audio 6.16.0.3145 (4/17/2014)
Ethernet Chipset	Intel i211 Gigabit Network Connection / 12.11.97.0 (3/11/2014) Realtek PCIe GBE Family Controller 8.1510.2013 (5/10/2013)- From BIO Card

3.1. USB Port Integration Test

USB3.0 x1 / USB2.0 x2

Item	USB Port	Boot			Function(Win 8.1)			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"/>	
Iomega DVDRW8X-U		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Hub Test (Connect USB Device) HUB Port1: USB Keyboard / HUB Port2: USB Mouse / HUB Port3: USB HDD								
USB 2.0 HUB PowerSync / USB 2.0 4 Port HU-155								<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

3.2. Digital I/O Port Test

DIO Address (___)	Result			Note
	Pass	Fail	N/A	
DIO VCC +5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Input: 5V / Output (H):5V / (L):0V

3.3. COM Port Integration Test

[] No Support

Test Item	Result			Note
	Pass	Fail	N/A	
Serial Modem Dial Out	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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-232 /RS-422 / RS-485 Test

[] No Support

Test Item	Result			Note
	Pass	Fail	N/A	
RS-422 for COM2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use loopback and WINSSD.exe to test RS-422 in Windows
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The communication between the RS-485 port of two boards is linked by one 1200m cable on Windows Terminal
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"/>	The communication between the RS-485 port of two boards is linked by one 1200m cable on Windows Terminal
RS-232 for COM1 & COM2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COM Port Speed (Kbits/sec) 300 / 9600 / 115200 Test

3.5. LPT Port Test

[x] No Support

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

OS: Windows 8.1 Enterprise 64bit English SP1

Test Item	Result			Note	
	Pass	Fail	N/A		
Burn In Test V8.0(1025) Duty: 100 Time: over 12 hours	CPU	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	E3845 CPU
	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"/>	
	GPU	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Disk	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Sound	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Network	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Parallel	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	USB	2.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Note: COM PORT Speed Set to 115200.

4. Application Test

4.1. PCI Slot Function (PCI Adapter Card) Test

[x] No Support

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 COM Port Card	Connect to CCD			Note
	Pass	Fail	N/A	
Uptech UT420 2-Port RS-232 PCI 32-bit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Adapter LAN Card	Connect to Internet			Note
	Pass	Fail	N/A	
INTEL PWLA8391GTBLK Pro/1000 Giga LAN Card	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dlink DFE-530TX 10/ 100 LAN Card	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Adapter I/O Card	SATA Function Test			Note
	Pass	Fail	N/A	
Tekram TR-822 Sil3112A 2-Port SATA RAID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Adaptec 1210SA 2-Port SATA RAID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DLink DU-520 USB 2.0 / 5-Port PCI Adapter	<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	
Intel GIGABIT CT DESKTOP ADAPTER PCI-Express X1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Not Support
Uptech UTB230 USB3.0 PCI-Express X1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
MOXA CP-118EL-A _8 Port RS-232 PCI-E Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
PCI-Express x4	Function Test			Note
	Pass	Fail	N/A	
Adaptec AAR-1430SA SATAII Host RAID Controllers PCI-Express x4 RAID Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Not Support
Intel @Gigabit ET2 Quad Port Svr Adppter	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
PCI-Express x16	Function Test			Note
	Pass	Fail	N/A	
GIGABYTE GV-R567OC-1GI PCI-Express x16 VGA Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Not Support
MSI Radeon X1650 Series PCI-Express x16 VGA Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	Not Support
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	
Qualcom Atheros AR9002WB-1NG Wireless Network	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Half Size / Wireless
Broadcom 802.11n Network Adapter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Half Size / Wireless
MS6877 802.11g Mini Card Wireless Adapter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Full Size / Wireless
Memo MSE-H Series 32GB MLC / mSATA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Full Size / mSATA
SanDisk SSD U100 32GB / mSATA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Full Size / mSATA
Memo MS-500 Series 8GB / mSATA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Full Size / mSATA

TS8GMSA500 8GB / mSATA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Full Size / mSATA
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4.3. BIO Card Function Test (Option)

BIO Card _ SKU1	Function Test			Note
	Pass	Fail	N/A	
LAN Port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(PER-T352 Rev.0.2)
USB 2.0 Port x 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Speaker L	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Speaker R	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BIO Card _ SKU2	Function Test			Note
	Pass	Fail	N/A	
USB 2.0 Port x 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(PER-T352 Rev.0.2)
Speaker L	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Speaker R	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mini PCIE Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SIM Card (3G WIFI)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

5. Power Consumption Test

	Hardware Information with Windows 7 Ultimate English SP1 32 Bit Driver Version
CPU	Intel® Celeron CPU J1900 @ 1.99GHz
Memory	InnoDisk DDR3L 1333 SODIMM 8GB (M3S0-8GHSDLN9)
HDD	WD WD5000BPKX SATAIII 2.5" 500G HDD

5.1. ATX Power Consumption

Test Equipment						
Equipment	AC/DC Digital Clamp meter					
Manufacturer	KYORITSU					
Model name	2010					
Test Environment						
ATX Power Model	Seventeam P-CG / ST-450P-CG					
Power Supply	ATX Power					Note
(Full Loading Mode) Windows 7 with Prime 95 Full Loading Test	(+12V)	1.14	A	13.68	W	Prime95 Version 279
Full Loading Total Watt	13.68 (W)					
Win. Idle mode: Measure the current value when system in windows mode and without running any program	(+12V)	0.50	A	6.00	W	
Idle Total Watt	6.00 (W)					
Power on - Boot sequency: Measure the maximum current value of between system power on and boot-up to O.S.	(+12V)	0.85	A	10.2	W	
Power On Total Watt	10.2 (W)					
System into S3 mode	(+12V)	0.05	A	0.60	W	
System into S5 mode	(+12V)	0.03	A	0.36	W	
Suspend Total Watt	0.96 (W)					

Remark : without BIO Card

5.2. ATX Power Consumption

	Hardware Information with Windows 8.1 Enterprise English SP1 64 Bit Driver Version
CPU	Intel® Atom™ Processor E3845 (2M Cache, 1.91 GHz)
Memory	InnoDisk DDR3L 1333 SODIMM 8GB (M3S0-8GHSDLN9)
HDD	TOSHIBA MK3276GSX SATAII 2.5" 320G HDD

5.1. AT/ATX Power Consumption

Test Equipment						
Equipment	AC/DC Digital Clamp meter					
Manufacturer	KYORITSU					
Model name	2010					
Test Environment						
ATX Power Model	Seventeam P-CG / ST-450P-CG					
Power Supply	ATX Power					Note
(Full Loading Mode) Windows 7 with Prime 95 Full Loading Test	(+12V)	0.84	A	10.08	W	Prime95 Version 279
Full Loading Total Watt	10.08 (W)					

Win. Idle mode: Measure the current value when system in windows mode and without running any program	(+12V)	0.40	A	4.80	W	
Idle Total Watt	4.80 (W)					
Power on - Boot sequency: Measure the maximum current value of between system power on and boot-up to O.S.	(+12V)	0.78	A	9.36	W	
Power On Total Watt	9.36 (W)					
System into S3 mode	(+12V)	0.05	A	0.60	W	
System into S5 mode	(+12V)	0.03	A	0.36	W	
Suspend Total Watt	0.96 (W)					

Remark : without BIO Card

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"/>	55°C	53.6°C	
System Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	50°C	49.1°C	
VCORE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	+0.720V	+0.731V	
VMEM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	+1.352V	+1.348V	
FAN1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	RPM	RPM	
FAN2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	RPM	RPM	
+3.3V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	+3.312V	+3.331V	
3VSB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	+3.328V	+3.333V	
VBTA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	+3.184V	+3.201V	

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	+2	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

6.2. Booting Timer Test

Installation	Actual		Note
System Booting Time	5.9	Sec	Press the Power Button till "Beep" Sound appears

6.3. Watchdog Timer Test

Use Function as below:

No Support.

Time-Out Interval	Criteria	Actual		Result			Note
				Pass	Fail	N/A	
10 sec	+/- 10%	10.2	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ZBT1AWDT.exe
60 sec	+/- 10%	59	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
255 sec	+/- 10%	245	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 14.04 LTS– Kernel 3.13.0-24-generic-pae #46

[] No Support

Driver Information:

Chipset Software	System default
Graphics Media	System default
Audio Driver	System default
LAN Driver	Intel I211- 3.1.0.2 –NAPI Realtek 8111-8.037.00-NAPI (from BIO Card)

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Ubuntu 14.04 LTS – Kernel 3.13.0.24-generic-pae #46	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	uname -a

Test Result:

Test Item	Result			Note
	Pass	Fail	N/A	
Display Function Test				
Display Port -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DVI -- Full Screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	From BIO Card
Audio Function Test				
Play Audio Function Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Play Audio Test
Base Function Test				
Mouse Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Keyboard Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Console Redirection	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 3.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
X Windows Application				
Start Button Office	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Office function
X-Window	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Startx – Desktop in Linux
Command Test On Text Mode: Attention Delay Phenomenon				
uname -a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show information
Shutdown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Init 0 or shutdown -h now
Restart the Computer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Init 6 or shutdown -r now
Halt -P	<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 SP1 English Version 32/64Bit

[X] x32 Driver Information:

Chipset Software	Intel Chipset Device Software 10.0 (2014-03-26)
Graphics Media	Intel Atom Processor E3800 series /Intel Celeron Processor N2930/J1900 36.15.0.1097 (09/09/2014)
Audio Driver	Intel Display Audio 6.16.0.3150 (07/08/2014) Realtek High Definition Audio 6.0.1.7083 (11/5/2013)
LAN Driver	Intel ® i211 Gigabit Network Connection 12.11.97.0 (3/11/2014) Realtek PCIe GBE Network Connection 7.73.618.2013 (6/18/2013)

[X] x64 Driver Information:

Chipset Software	Intel Chipset Device Software 10.0 (2014-03-26)
Graphics Media	Intel Atom Processor E3800 series /Intel Celeron Processor N2930/J1900 36.15.0.1097 (09/09/2014)
Audio Driver	Intel Display Audio 6.16.0.3150 (07/08/2014) Realtek High Definition Audio 6.0.1.7083 (11/5/2013)
LAN Driver	Intel ® i211 Gigabit Network Connection 12.11.97.0 (3/11/2014) Realtek PCIe GBE Network Connection 7.73.618.2013 (6/18/2013)

Install OS to SATA HDD:

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

Test Results:

Test Item	Result			Note
	Pass	Fail	N/A	
Single Display				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2048 x 1152
Display Port -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2560 x 1440
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				
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 3.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN Function Test				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	From BIO Card
Audio Function Test				
Line Out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Line In Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Microphone Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Start Menu				
Log off User	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shut down (S5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Standby(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 Pro English Version 32/64Bit

[X] x32 Driver Information:

Chipset Software	Intel Chipset Device Software 10.0 (2014-03-26)
Graphics Media	Intel HD Graphics 10.18.10.3958 (09/30/2014)
Audio Driver	Realtek High Definition Audio 6.0.1.7083 (11/5/2013) Intel Display Audio 6.16.0.3154 (09/09/2014)
LAN Driver	Intel i211 Gigabit Network Connection / 12.11.97.0 (3/11/2014) Realtek PCIe GBE Family Controller 8.1510.2013 (5/10/2013)- From BIO Card

[X] x64 Driver Information:

Chipset Software	Intel Chipset Device Software 10.0 (2014-03-26)
Graphics Media	Intel HD Graphics 10.18.10.3958 (09/30/2014)
Audio Driver	Realtek High Definition Audio 6.0.1.7083 (11/5/2013) Intel Display Audio 6.16.0.3154 (09/09/2014)
LAN Driver	Intel i211 Gigabit Network Connection / 12.11.97.0 (3/11/2014) Realtek PCIe GBE Family Controller 8.1510.2013 (5/10/2013)- From BIO Card

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows 8.1 Enterprise ACPI Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AHCI Mode
English Windows 8.1 Enterprise ACPI Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IDE Mode

Test Results:

Test Item	Result			Note
	Pass	Fail	N/A	
Single Display				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2048 x 1152
Display Port -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2560 x 1440
LVDS -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot - Windows 8.1 Enterprise Advanced Options Menu				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Basic Function Test				
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 3.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN Function Test				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	From BIO Card
Audio Function Test				
Line Out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Line In Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Microphone Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Start Menu				
Log off User	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shut down (S5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Standby(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 SP1 32 Bit Driver Version	
BIOS	PICO-BT01 R0.1 (ZBT1AM01) (12/08/2014)
CPU	Intel® Atom™ Processor E3845 (2M Cache, 1.91 GHz)
Memory	Transcend DDR3L-1333 / 4GB SO-DIMM 1.35V
HDD	WD / WD5000BPKX / SATAII 2.5" 500GB / 7200rpm

8.1. Advanced Test

Test Item		Result			Note
		Pass	Fail	N/A	
ACPI settings	Suspend Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	S3 Only (Suspend to RAM)	<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"/>	
Power Mode	AT Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ATX Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CPU configuration	CPU Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Digital I/O configuration	GP24 ~ GP27	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Input: 5V / Output Hi : 5V Output Low :0V
SATA configuration	SATA -ATA controller	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
	AHCI mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	IDE mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RAID mode	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	PICO-BT01 not Support RAID
	SATA Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	GEN1 /GEN2 Speed compare by HD Tach 3.0.1.0
SATA Port 0	Enable / Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Hot Plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SATA Port 1	Enable / Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Hot Plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB configuration	Legacy USB Support	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable/Auto
	USB 3.0 Support	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Enable/Disable
F81801 Super IO configuration	Serial Port 1~ 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
	Serial port 1 Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Serial port 2 Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RS-232 / RS-422 / RS- 485
	Parallel Port configuration	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Enable/Disable
S5 RTC wake Settings	Wake system with Fixed Time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
	Wake system with Dynimic Time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable

8.2. Chipset Test

Test Item	Result			Note
	Pass	Fail	N/A	
South Bridge				
Azalia HD Audio	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
USB Per Port Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
PCIE/mSATA Select	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Mini-PCIE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
	Hot Plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
	Mini-PCIE 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
	Hot Plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
North Bridge				
Primary IGFX Boot Display	VBIOS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	CRT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	DP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LVDS1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
LCD Panel Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Color Depth	18/24 bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Backlight Type	Normal / Inverted	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Backlight Level	0~100%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8.3. Boot Test

Test Item	Result			Note
	Pass	Fail	N/A	
Boot up Numlock State	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Quiet Boot	<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 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 PXE	<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"/>	CN1
Clear CMOS Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	JP1

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(20141029)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
System Information	CPU Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Model Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Display Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RAM Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Support single DIMM
H/W Monitor	Info	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Fan Speed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	PICO-BT01 not Support Fan Speed
	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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	DIO1~4 Low	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	DIO5~8 High	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 In / 2 Out
	DIO5~8 Low	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2 In / 2 Out
WatchDog	10sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 10sec
	1min	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 61sec
	255sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 262sec
	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 0xE000
	Read Byte	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Slave Address A0h
	Read Word	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Result / Read	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Backlight Controller	Light	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Dark	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AD_5247_0x5C

9. Performance Test

Hardware Information with Windows 8.1 Enterprise English SP1 64 Bit Driver Version	
CPU	Intel ® Celeron CPU J1900 @ 1.99GHz
Memory	InnoDisk DDR3L 1333 SODIMM 8GB (M3S0-8GHSDLN9)
HDD	TOSHIBA DT01ACA050 SATAIII 3.5" HDD 500GB

Test Result: (Display set 1920*1080 test)

Testing Software	Scope		Note
	AAEON	Ref.	
3Dmark2006 v121			Windows 8.1
3Dmark Score	1614		
SM2.0	552		
HDR/SM3.0	592		
CPU Score	2353		
3Dmark11 v120			Windows 8.1
3Dmark Score	267		
Graphics Score	228		
Physics Score	1783		
Combined Score	270		
Benchmark (B)			

Testing Software	Scope		Note
	AAEON	Ref.	
Final Reality V1.01—BenchMark Test			Windows 7
2D image	31.76	-	
3D	6.30	-	
Bus transfer	22.98	-	
Overall	16.44	-	
Benchmark (A)			-

Testing Software	Scope		Note
	AAEON	Ref.	
Performance7			Windows 8.1
PassMark Rating	804.2	-	
CPU Mark	2283.5	-	
2D Graphics Mark	190.0	-	
3D Graphics Mark	154.6	-	
Memory Mark	999.9	-	
Disk Mark	960.7	-	

Testing Software	Scope		Note
	AAEON	Ref.	
Windows experience index			Windows 7
Processor	4.1	-	
Memory	5.5	-	
Graphics	4.3	-	
Gaming graphics	5.6	-	
Primary hard disk	5.9	-	

SATA Performance				
CPU	Intel® Celeron® Processor N2807 2.16GHz(2Core) / 1M Cache			
Memory	Transcend DDR3L-1333 / 4GB SO-DIMM 1.35V			
OS	Windows 8.1 Enterprise SP1 English Version 32bit			
Item	Comment / (unit)	Software	Score	Note
SATA HDD No.1	WD / WD5000BPKX / SATAII 2.5" 500GB / 7200rpm			
Single HDD (CN15) SATAII port	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	16.4ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	0%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	90.2MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	231.9MB/s	
SATA HDD No.2	TOSHIBA / MK1665GSX / SATAII 2.5" 160GB / 5400rpm			
Single HDD (CN15) SATAII port	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	17.2ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	14%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	71.7MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	217.5MB/s	
SATA SSD No.3	TOSHIBA / DT01ACA50 / SATAIII 3.5" 500GB / 7200rpm			
Single HDD (CN15) SATAII port	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	17.3ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	22%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	124.3MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	227.2MB/s	

SATA SSD Performance				
CPU	Intel® Celeron® Processor N2807 2.16GHz(2Core) / 1M Cache			
Memory	Transcend DDR3L-1333 / 4GB SO-DIMM 1.35V			
OS	Windows 8.1 Enterprise SP1 English Version 32bit			
Item	Comment / (unit)	Software	Score	Note
SATA SSD No.1	Crucial / CT256M550SSD1 / 2.5" SATA SSD 256GB			
Single HDD (CN15) SATAII port	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	9%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	167.8MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	225.9MB/s	

mSATA Performance				
CPU	Intel® Celeron® Processor N2807 2.16GHz(2Core) / 1M Cache			
Memory	Transcend DDR3L-1333 / 4GB SO-DIMM 1.35V			
OS	Windows 8.1 Enterprise SP1 English Version 32bit			
Item	Comment / (unit)	Software	Score	Note
mSATA No.1	Memo MSE-H Series 32GB MLC / mSATA			
Single HDD (CN15) SATAII port	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.2ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	11%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	72.8MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	82.6MB/s	
mSATA No.2	SanDisk SSD U100 32GB / mSATA			
Single HDD (CN15) SATAII port	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.2ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	8%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	152.9MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	226.7MB/s	

USB3.0 Performance				
CPU	Intel® Celeron® Processor N2807 2.16GHz(2Core) / 1M Cache			
Memory	Transcend DDR3L-1333 / 4GB SO-DIMM 1.35V			
OS	Windows 8.1 Enterprise SP1 English Version 32bit			
Item	Comment / (unit)	Software	Score	Note
USB 3.0 Flash	Transcend 16GB USB 3.0 Flash			
Single HDD (Rear I/O USB3.0) USB3.0(CN10)	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.7ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	17%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	71.4MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	75.8MB/s	
USB 3.0 Flash	Transcend 32GB USB 3.0 Flash			
Single HDD (Rear I/O USB3.0) USB3.0(CN10)	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.7ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	22%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	70.2MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	79.1MB/s	

USB2.0 Performance				
CPU	Intel® Celeron® Processor N2807 2.16GHz(2Core) / 1M Cache			
Memory	Transcend DDR3L-1333 / 4GB SO-DIMM 1.35V			
OS	Windows 8.1 Enterprise SP1 English Version 32bit			
Item	Comment / (unit)	Software	Score	Note
USB 2.0 Flash	Kingston 4GB USB 2.0 Flash			
Single HDD (Rear I/O USB2.0) USB2.0(CN10)	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	1.4ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	7%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	20.6MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	22.1MB/s	
USB 2.0 Flash	Kingston 4GB USB 2.0 Flash			
Single HDD USB2.0(CN11)	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.7ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	7%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	20.6MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	22.1MB/s	

9.2. Memory Test

Test Item	Result			Note
	Pass	Fail	N/A	
Memtest 86+ V5.01 Overnight Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	