

# EMB-BT2

## P5 Verification Test Report

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

Issue date	QE Manager	Test Engineer
2016/01/20	KJ Wang	Danny Chen

## Specification Validation

### Main Specification

Item	Specification	Result			Note
		Pass	Fail	N/A	
CPU	J1900 / E3845, Bay Trail-D (4C @ 2GHz CPU, 688/750 (Turbo) GFX, ~10W TDP)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Memory	1 x SO-DIMM, max. 8GB, 204-pin DDR3L 1333 MHz, non-ECC, un-buffered memory	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Graphics	Intel® Graphics Media Accelerator	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I/O Chipset	Fintech 81866D-I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN	2x Realtek PCIe Gb LAN 8111G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio	Realtek® ALC887 (colay ALC892/886)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TPM	Infineon SLB9635 TT 1.2 (optional)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Expansion Slots	1 x Full-size Mini Card (PCIe optional) (mSATA default) 1 x PCIe x1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BIOS	64Mbit Flash ROM, AMI BIOS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
H/W Monitor	Temperature Monitor on CPU/Systemix Voltage Monitor on Vcore/5V/3.3V/12V Fan Monitor on CPU/Chassis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
WatchDog Timer	1~255 step by software program	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Smart Fan Control	Chassis Fan (fanless)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wake On LAN / PXE	Yes (WOL / PXE)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power State	S3, S4, S5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Graphics Chipset	Intel® Graphics Media Accelerator	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Graphics Multi Display	VGA+LVDS, Dual LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VGA	Up to 1920 x 1200 @60 Hz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Backlight Control	Voltage / PWM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Storage	2 x SATA 3Gb/s (one port colay with mSATA)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB	10 x USB 2.0 ports (6 ports at back panel, 4 ports at mid-board)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Display I/O	2 x LVDS, 1 x VGA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio I/O	Mic-in, Line-out, audio amplifier for 2x 2W/4 ohm speakers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN I/O	2 x RJ-45	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial Port	5 x RS-232, 1 x RS-232/422/485 supports 5V/12V/RI option (COM1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PS/2 Port	1 x PS/2 for keyboard / Mouse	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

DIO	8-bit Digital I/O interface (4-in /4-out)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
FAN	1 x Chassis Fan connector(s) (4-pin)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power Requirement	ATX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power Compliance	Compliant with EuP / ErP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Operating Temperature	32~140°F (0~60°C)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Operating Humidity	0%~90%RH, non-condensing	<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-Fedora	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	32bit only

## Platform Information

Item	Device Information	Test Item
PCB Model / Version	EMB-BT2 R1.02	1,2,3,4,5,6,7,8,9
BIOS / Version	R1.0 (EBT2AM10) (02/05/2015)	1,2,3,4,5,6,7,8,9
CPU Type	Intel® Celeron® CPU J1900 (2M Cache, 2.0 GHz)	1,2,3,4,5,6,7,8,9
Memory Type	Transcend DDR3L 1600 SO-DIMM 8G (SEC-K4B4G08460)	1,2,3,4,5,6,7,8,9
SATA HDD	WD WD10SPCX 2.5" SATA HDD 1TB	1,2,3,4,5,6,7,8,9
USB DVD-ROM	Pioneer DVR-XD11T	1,2,3,4,5,6,7,8,9
LCD Monitor	Dell U2713HM	1,2,3,4,5,6,7,8,9
	LG E2260	
	View Sonic VP2770-LED	
Operating System	<input checked="" type="checkbox"/> Linux Timesys18 Baytrail Fedora Remix- kernel 3.8.0-0	7-1
	<input checked="" type="checkbox"/> Windows 7 Ultimate SP1 English Version 32/64 Bit	7-2
	<input type="checkbox"/> Windows XP Professional English SP3 32/64 Bit	N/A
	<input checked="" type="checkbox"/> Windows 8.1 Enterprise English Version 32/64Bit	7-4
Power Supply	ATX Power Supply : FSP AURUM S Series AS-550 / 550W	1,2,3,4,5,6,7,8,9
Chipset Information with Windows 8.1 Enterprise English Version 32 Bit Driver Version		
SOC Bridge	Intel Bay Trail	
Super IO Chipset	Fintech 81866D	
VGA Chipset	Intel ® HD Graphics	
Audio Chipset	Realtek ALC887	
Ethernet Chipset	Realtek 8111G Ethernet x 2	

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# 1. Hardware Test

## 1.1. CPU Compatibility Test

CPU Information	Result			Note
	Pass	Fail	N/A	
Intel® Celeron® CPU J1900 (2M Cache, 2.0 GHz)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## 1.2. Memory Compatibility Test

Memory Information	Install OS			Note
	Pass	Fail	N/A	
DSL DDR3L 1333 4GB CL9 1.35V Hynix H5TC4G83AFR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*1 pcs Passmark Memtest86 V5.0b5
DSL DDR3L 1600 8GB CL11 1.35V PROMS 1317ZVH V73CBG04808RAJJ11	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*1 pcs Passmark Memtest86 V5.0b5
Transcend DDR3L 1333 4GB SEC 234 HYKO K4B2G0846D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*1 pcs Passmark Memtest86 V5.0b5
Transcend DDR3L 1600 4GB SEC 407 XYKO K4B4G0846D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*1 pcs Passmark Memtest86 V5.0b5
Transcend DDR3L 1600 8GB SEC 419 XYKO K4B4G0846D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*1 pcs Passmark Memtest86 V5.0b5
Innodisk DDR3L 1333 8GB Hynix H5TC4G83AFR M3S0-8GHSDLN9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*1 pcs Passmark Memtest86 V5.0b5
Innodisk DDR3L 1600 4GB SEC 419 BYKO K4G4G0846D M3S0-4GSSCLPC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*1 pcs Passmark Memtest86 V5.0b5
Innodisk DDR3L 1600 8GB Hynix H5TC4G83AFR M3S0-8GHSDLPC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*1 pcs Passmark Memtest86 V5.0b5

## 1.3. SATA Compatibility Test

### 1.3.1 SATA-IDE Mode Test

SATA IDE Mode		Result			Note
		Pass	Fail	N/A	
HDD	TOSHIBA DT01AC050 SATAIII 3.5" 500GB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	HGST HTS541010A9E680 SATAII 2.5 ITB/5400rpm	<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"/>	
SSD	Intel® SSD 530 Series 120GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	Toshiba MK3276GSX 2.5" 320GB/5400rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD	ADATA SX900 128GB (MLC)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 1.3.2 SATA-AHCI Mode 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"/>	
HDD	Seagate ST500DM002 SATAIII 3.5" 500GB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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 WD10JPVX SATAIII 2.5" 1TB/5400rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	HGST HTS541010A9E680 2.5" SATAIII 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"/>	
HDD	Toshiba MK3276GSX 2.5" 320GB/5400rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD	PLEXTOR M6S PX-128M6S 128GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD	Transcend SSD 16G TS16GSSD25S (SLC)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD	ADATA SX900 128GB (MLC)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD	Intel SSDSC2CW120A 120G (SLC)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

#### 1.4. Compact Flash Compatibility Test

[ x ] Not 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

#### 1.5. CFast Compatibility Test

[ x ] Not Support

Cfast Information	AAEON P/N	ATTO R/W			Note
		Pass	Fail	N/A	
	XXXXXXXXXXXX	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	XXXXXXXXXXXX	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

#### 1.6 m-SATA Compatibility Test

SATA AHCI Test		Result			Note
		Pass	Fail	N/A	
m-SATA	Innodisk mini 3SE DEMSM-32GD07SWADB-26 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
m-SATA	Innodisk D150Q DRPS-32GJ30AC1QT 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
m-SATA	Memo MSE-H series MRV012A032GT1M1C 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
m-SATA	Transcend TS8GMSA500 8GB SATAII	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
m-SATA	Sandisk SDSA5FK-032G-Q 32GB	<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 Version 32 Bit Driver													
CPU	Intel® Celeron® CPU J1900 (2M Cache, 2.0 GHz)												
Memory	DSL DDR3L 1600 8GB CL11 1.35V PROMS 1317ZVH V73CBG04808RAJJ11												
SSD HDD	PLEXTOR M6S PX-128M6S 128GB												
VGA	View Sonic VP2770-LED												
LVDS	AU G104SN02 V.2 PWM 800X600/18bit												
LVDS	AUO M215HW03 V1 1920*1080 48bit												
Color Quality	<input checked="" type="checkbox"/> 16bit <input type="checkbox"/> 24bit <input checked="" type="checkbox"/> 32bit												
Resolution	VGA			LVDS1			LVDS2			DVI			Note
	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
640X480	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
800X600	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	
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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1152X864	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X600	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X720	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X768	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X800	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X960	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X1024	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	
1360X768	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1366X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1440X900	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1440X1050	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1600X900	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1600X1200	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1680X1050	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1792X1344	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1856X1392	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1920X1080	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1920X1440	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Hot plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Rotation ( 0 / 90 /180 /270)

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

**Remark :**

- (1) Due to Intel limitation, only one display is supported under DOS; and please use VGA or LVDS1 port.
- (2) If you need to use dual display, please set VBIOS + LVDS1 (Enable) + LVDS2 (Enable) in BIOS.
- (3) We suggest to use LVDS1 port for LVDS display; If you want to use LVDS2 port as secondary display, its resolution is un-adjustable in OS and need to be set in BIOS.



### 2.1.2. Multi-Display Test

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

**Remark :**

- (1) Due to Intel limitation, only one display is supported under DOS; and please use VGA or LVDS1 port.
- (2) If you need to use dual display, please set VBIOS + LVDS1 (Enable ) + LVDS2 (Enable ) in BIOS.
- (3) We suggest to use LVDS1 port for LVDS display; If you want to use LVDS2 port as secondary display, its resolution is un-adjustable in OS and need to be set in BIOS.

### 2.1.3. Video Resolution Test

Test points:

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

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

### 2.1.4. Video Resolution Test

LVDS Model	Result			Note
	Pass	Fail	N/A	
1_AUO G065VN01 V.0 / 6.5" / 640x480 / 18bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2_AUO G065VN01 V.0 / 6.5" / 640x480 / 24bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3_Data Image 7" / 800*480 / 18bit (16:9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4_AU G084SN05 V.3 / 8.4" / 800*600 / 18bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
5_AU B104SN02 V.0 / 10.4" / 800*600 / 18bit (4:3)	<input 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 G150XG03 V.0 / 15" / 1024*768 / 18bit (4:3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8_AU M150XN07 V.2 / 15" / 1024x768 / 24bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
9_AUO G121XN01 V.0 / 12" 1024*768 / 18bit (4:3)	<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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
13_AU M201UN02 V.5 / 20.1" / 1600x1200x48bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
14_AUO T370HW01 / 37" / 1920x1080 / 48bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
15_AUO M190PW01 V0 / 19"/1440X900/48 bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
16_AU G104SN02 V.2 PWM 800X600/18bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
17_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	
Line out ( L / R Channel )	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Panel I/O Port
Microphone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Panel I/O Port
Microphone recorder	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Panel I/O Port
Line out ( L / R Channel )	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AAFP
Microphone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AAFP
Microphone recorder	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AAFP
AMP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6-channel mode for 5.1 speaker output	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
8-channel mode for 7.1 speaker output	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

## 2.3. LAN Function Test

[ ] No Support

Connect two computers via different speed LAN HUB by using "Ping" instruction (1000 times)										
1000MBps LAN HUB			D-Link DGS-1008D							
100MBps LAN HUB			HP J4095A 24 Ports							
10MBps LAN HUB			SVEC FD916H							
OnBoard LAN1		Realtek PCIe Gb LAN 8111G					MAC Address		00-E0-4C-68-00-0F	
OnBoard LAN2		Realtek PCIe Gb LAN 8111G					MAC Address		00-E0-4C-68-00-10	
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 ( S3/S4/S5)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BIOS Resume on PCIE/ XHCI set to Enabled.	
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"/>		
Download file			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Download 400MB file above	

### 2.3.2. Throughput Test

DUT Platform Information:

<input type="checkbox"/>	Fedora Core 14 – Kernel
<input type="checkbox"/>	Cent OS5.6
<input checked="" type="checkbox"/>	Ubuntu 13.04 Kernel 3.8.0-19-generic
<input type="checkbox"/>	Red Hat

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

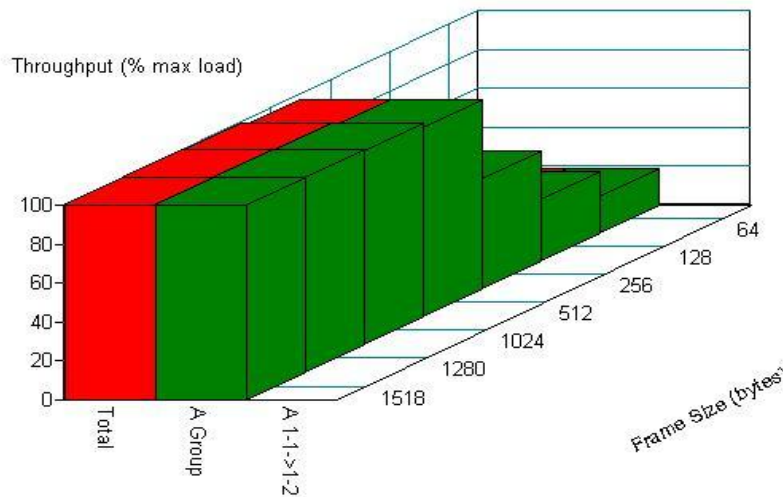
Graphics Media	Ubuntu13.04 Default setting
LAN	Realtek RTL-8169 Gigabit Ethernet Driver 7.3.21-K8-NAPI
Audio Driver	Ubuntu13.04 Default setting

SMB Platform Information:

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

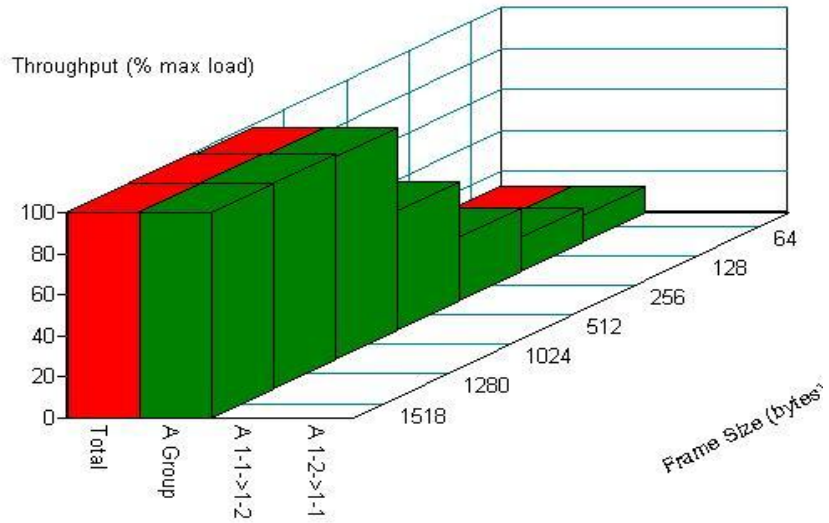
Test Result:

- Half Direction (LAN1: Realtek RTL-8111G Gigabit LAN → LAN2: Realtek RTL-8111G Gigabit LAN)



Name/Frame size	64	128	256	512	1024	1280	1518
Total	18.78906	31.16406	55.91406	96.90625	99.22656	100	100
A Group	18.78906	31.16406	55.91406	96.90625	99.22656	100	100
A 1-1->1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A 1-2->1-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2. Binary Direction (LAN1: Realtek RTL-8111G Gigabit LAN → LAN2: Realtek RTL-8111G Gigabit LAN)



Throughput vs Frame Size

<u>Name/Framesize</u>	<u>64</u>	<u>128</u>	<u>256</u>	<u>512</u>	<u>1024</u>	<u>1280</u>	<u>1518</u>
Total	12.60156	16.46875	30.39063	57.46094	98.45313	100	100
A Group	12.60156	16.46875	30.39063	57.46094	98.45313	100	100
A 1-1->1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A 1-2->1-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A

## 2.4. Connector and Jumper Test

[ ] No Support

Function Test	Result			Note
	Pass	Fail	N/A	
CHA FAN1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Debug1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CLRTC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
J1: RI & Voltage SEL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RI/5V/12V
J2:INV VOL SEL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12V/5V
J3:DC & PWM SEL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
J4:PAN VOL SEL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
J5:PAN VOL SEL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12V/5V
J6:DC & PWM SEL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
J7:INV VOL SEL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
AAFP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
F_Panel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HDD LED test with 6G_1, 6G_2, 3G_1, 3G_2, m-SATA

### 3. Integration Test

Hardware Information with Windows 8.1 Enterprise English Version 32 Bit Driver Version	
CPU	Intel® Celeron® CPU J1900 (2M Cache, 2.0 GHz)
Memory	Innodisk DDR3L 1600 8GB Hynix H5TC4G83AFR M3S0-8GHSDLPC
SATA HDD	WD WD10JPVX SATAIII 2.5" 1TB/5400rpm
Chipset Information with Windows 8.1 Enterprise English 32 Bit Driver Version	
Chipset Software	intel ® Chipset Device Software 9.4.4.1006 ( August / 01 /2013)
SOC Bridge	Intel Bay Trail
Super IO Chipset	Fintek F81866D
VGA Chipset	Intel ® HD Graphics 10.18.10.4303 (10/8/2015)
Audio Chipset	Intel ® Display Audio 6.16.0.3154 (9/9/2014) Realtek High Definition Audio 6.0.1.7083 (11/5/2013)
Ethernet Chipset	Realtek PCIe GBE 8111G Ethernet 8.20.815.2013 (8/15/2013)

#### 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"/>	(EHCI )Support enable
USB FDD Mitsumi D353GUE		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ASUS SDRW-08D2S-U		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Hub Test (Connect USB Device) HUB Port1: USB Keyboard / HUB Port2: USB Mouse / HUB Port3: USB HDD								
USB 2.0 HUB PowerSync / USB 2.0 4 Port HU-155					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Remark : 10 x USB 2.0 ports (6 ports at back panel, 4 ports at mid-board)

#### 3.2. Digital I/O Port Test

DIO Address	Result			Note
	Pass	Fail	N/A	
DIO VCC +5.0V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Input :5V / Output (H) : 5V / (L) : 0V

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

### 3.5. LPT Port Test

[ x ] Not Support

Test Item	Result			Note
	Pass	Fail	N/A	
XEROX Phaser 3124 Laser Printer	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test with STD Printer, SPP,,ECP mode

### 3.6. Burn In Test

Under Room Temperature: 26 °C

OS: Windows 8.1 Enterprise English SP1

Test Item	Result			Note	
	Pass	Fail	N/A		
Burn In Test V7.1(1001) Duty: 100 Time: over 12 hours	CPU	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>J1900 CPU</b>
	RAM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	COM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Video	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Disk	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Sound	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Network	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Parallel	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	USB	2.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3.0		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 VGA Card	Set Simultaneous Display and Reboot			Note
	Pass	Fail	N/A	
NVIDIA Geforce 6200 128MB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Adapter Sound Card	Play Sound			Note
	Pass	Fail	N/A	
SC3000 Audio card	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Win7 no Driver, detect test only
Adapter SCSI Card	Copy files to SCSI HDD			Note
	Pass	Fail	N/A	
ADAPTEC Ultra160 SCSI ASC-29160	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Win7 no Driver
Adapter Image Capture Card	Connect to CCD			Note
	Pass	Fail	N/A	
I-VIEW CP-1400AS (with Age STD-477FAI CCD)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Adapter LAN Card	Connect to Internet			Note
	Pass	Fail	N/A	
Intel GD82559 10/100 Mbps Fast Ethernet Adapter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	00-04-AC-8B-59-9E
IBM 10/100 Etherjet PCI management Adapter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows7
D-Link DFE-530TX DL10030 9941CD 10/100 LAN Card	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows7
RTL8139D 10/100 LAN card	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows7
Adapter RAID Card	SATA Function Test			Note
	Pass	Fail	N/A	
ADAPTEC 1420SA RoHS 4-Port SATA II RAID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows7
USB Card	Function Test			Note
	Pass	Fail	N/A	
D-Link DU-520 A1 NEC D7200100AGM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows7
SENSE UHA205 NEC D720101GJ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windows7
Modem card	Function Test			Note
	Pass	Fail	N/A	
MD V1456VQH-P2 Modem card	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Win7 no Driver, detect test only

### 4.2. PCI-Express Function Test

PCI-Express x1	Function Test			Note
	Pass	Fail	N/A	
SUNIX SATA1414 eSATA & SATAII x1Express card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	GEN1-108MB/s
SUNIX LAN1400 Marvell 88e8053 Gigabit LAN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	00-00-5A-11-C3-21
Intel GIGABIT CT DESKTOP ADAPTER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	68-05-CA-02-61-C3
Intel GIGABIT CT DESKTOP ADAPTER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	00-1B-21-C3-F8-1E
MOXA CP-118EL-A RS-232/422/485 PCI Express card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



PCI-Express x4	Function Test			Note
	Pass	Fail	N/A	
Adaptec AAR-1430SA SATAII HostRAID Controllers PCI-Express x4 RAID Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Intel GIGABIT ET2 Quad Port Svr Adptr (E1G44ET2BLK)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bear card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
PCI-Express x16	Function Test			Note
	Pass	Fail	N/A	
GIGABYTE GV-N240OC-1GI Rev.1.0 PCI-e2.0 (NVIDIA Chipset) PCI-Express x16 VGA Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
GIGABYTE GVR5670C-1GI (ATI Chipset) (ATI Chipset)PCI-Express x16 VGA Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
MSI MS-V040 RX1650-TD512E	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
ASUS GTX680-2GD5 GEN3 (ATI Chipset )PCI-Express x16 Graphics Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
ASUS GT620-1GD3-L-V2 PCI-e2.0 (NVIDIA Chipset) PCI-Express x16 VGA Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bear Card	4X GEN2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	8X GEN2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	16X GEN2	<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"/>	
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	
SanDisk SDSA5FK mSATA Card _32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default / mSATA
Innodisk D150Q DRPS-32GJ30AC1QT 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default / mSATA
Innodisk mini 3SE DEMSM-32GD07SWADB-26 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default / mSATA
Memo MSE-H series MRV012A032GT1M1C 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default / mSATA
Transcend TS8GMSA500 8GB SATAII	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default / mSATA
Sandisk SDSA5FK-032G-Q 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default / mSATA
Qualcom Atheros AR1111 Wireless Network Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Options / mini PCIE
cFeon SATA RAID Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Options / mini PCIE

### 4.3. Mini PCI Card Compatibility Test

[ X ] No Support

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

### 4.4. CardBus (PCMCIA) Compatibility Function Test

[ X ] No Support

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

(PC Card Type II HDD)	Slot 2 (Down)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCI GW-NS54SG Cardbus Adapter Wireless LAN Type-II	Slot 1 (Up)	32	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	[PC-200502]
	Slot 2 (Down)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCI GW-NS54SG Cardbus Adapter Wireless LAN Type-II	Slot 2 (Down)	16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	[PC-200502]

#### 4.5. ISA Slot Function Test

[ X ] No Support

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

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

##### 4.6.1. Device List: PC/104 Module

[ X ] No Support

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

##### 4.6.2. Device List: PC/104+ Module

[ X ] No Support

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

##### 4.6.3. Device List: PCI-104 Module

[ X ] No Support

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

##### 4.6.4. Device List: PCI/104 Express Module

[ X ] No Support

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

#### 4.7. SSD Modules Compatibility Test

SSD HDD Compatibility Test:

Cable Type:  IDE  SATA2  MLC  SLC

Test Item	Result			Note
	Pass	Fail	N/A	
Transcend SSD 16G TS16GSSD25S (SLC)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SATA3G port and SATA 3G port
ADATA SX900 128GB (MLC)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SATA3G port and SATA 3G port
Intel SSDSC2CW120A 120G (SLC)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SATA3G port and SATA 3G port

4.8. Peripheral Compatibility- Storage Device Test

4.8.1. Disk on Chip (DOC) Test

[ X ] No Support

Test Item		Result			Note
		Pass	Fail	N/A	
DOC 2000 Model	16MB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	M-System / MD2200-D16
DOC 2000 Onboard Address	CC00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	D000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	D400	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	D800	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DC00	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Disable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

4.8.2. Disk on module (SATA-DOM) Test

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

4.9. Riser Card Function Test

[ X ] No Support

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

## 5. Power Consumption Test

Hardware Information with Windows 8.1 Enterprise English Version 32 Bit Driver Version	
CPU	Intel® Celeron® CPU J1900 (2M Cache, 2.0 GHz)
Memory	DSL DDR3L 1600 8GB CL11 1.35V PROMS 1317ZVH V73CBG04808RAJJ11
SATA HDD	PLEXTOR M6S PX-128M6S 128GB

### 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					
Keyboard/Mouse	USB Keyboard: Microsoft 1366; USB mouse: Microsoft MSK-1113					
Note	Power consumption does not include HDD consumption.					
Power Supply	ATX Power				Note	
(Full Loading Mode) Windows 7 with Prime 95 Full Loading Test	(+12V)	0.71	A	8.52	W	Prime95 Version 259
	(+5V)	0.08		0.4		
	(+3.3V)	0.55		1.848		
	(5VSB)	0.36		1.8		
Full Loading Total Watt	12.568 (W)					
S3 mode: Measure the current value when system in S3 mode of windows and without running any	(5VSB)	0.06	A	0.3	W	
Suspend Total Watt	0.3 (W)					
Win. Idle mode: Measure the current value when system in windows mode and without running any program	(+12V)	0.19	A	2.28	W	
	(+5V)	0.09		0.45		
	(+3.3V)	0.57		1.88		
	(5VSB)	0.36		1.8		
Idle Total Watt	6.41(W)					
S5 mode: Measure the current value when system in S5 mode of windows and without running any	(5VSB)	0.06		0.3	W	Erp disable
Suspend Total Watt	0.3 (W)					
S5 mode: Measure the current value when system in S5 mode of windows and without running any	(5VSB)	0.03		0.15	W	Erp Enable
Suspend Total Watt	0.15 (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			
System Temperature1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	40°C	40.1°C	
System Temperature2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	40°C	39.2°C	
CPU Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	45°C	40.0°C	
Vcore	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.848V	0.82V	
+3VS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.053V	3.09V	
+5VS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.171V	5.13V	
+12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.320V	12.23V	
VCC3V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.056V	3.09V	
VSB3V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.392V	3.35V	
VSB5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.184V	5.17V	
VBAT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.200V	3.16V	

## 6. Time Accuracy Test

### 6.1. System Clock & RTC Clock Test

Under Room Temperature: 26 °C

Function	Item	Time Interval	Criteria	Actual	Result			Note
					Pass	Fail	N/A	
RTC Clock in Power On Mode		24 hrs	+/-2 sec	+0 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RTC Clock in Power Off Mode		24 hrs	+/-2 sec	+1 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 6.2. Booting Timer Test

Installation	Actual		Note
System Booting Time	5.10	Sec	Press the Power Button till "Beep" Sound appears

### 6.3. Watchdog Timer Test

Use Function as below:

[ ] No Support. Test with Hi-Safe0703

Time-Out Interval	Margin for error	Actual	Actual	Result			Note
				Pass	Fail	N/A	
10 sec	+ / - 10 %	10.5	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
60 sec	+ / - 10 %	60.4	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
255 sec	+ / - 10 %	255.5	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 Timesys18 Baytrail Fedora Remix- Kernel 3.8.0-0

[ ] No Support

Driver Information:

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

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
Timesys18 Baytrail Fedora Remix- kernel 3.8.0-0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Type uname -a AHCI

Test Result:

Test Item	Result			Note
	Pass	Fail	N/A	
<b>Display Function Test</b>				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1200
LVDS1-- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1080
LVDS2-- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1080
<b>Network Function Test</b>				
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"/>	
<b>Audio Function Test</b>				
Play Audio Function Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Play Audio Test
<b>Base Function Test</b>				
Mouse Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PS/2 USB
Keyboard Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PS/2 USB
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Console Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Support com1/com2 <minicom -s>
<b>X Windows Application</b>				
Start Button Office	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Office function
X-Window	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Startx – Desktop in Linux
<b>Command Test On Text Mode: Attention Delay Phenomenon</b>				
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 English Version 32/64Bit

[ X ] x32 Driver Information:

Chipset Software	Intel ® Chipset Device Software 9.4.4.1006 ( August / 01 /2013)
Graphics Media	Intel ® HD Graphics 10.18.10.4303 (10/8/2015)
Audio Driver	Intel ® Display Audio 6.16.0.3154 (9/9/2014) Realtek High Definition Audio 6.0.1.7083 (11/5/2013)
LAN Driver	Realtek PCIe GBE 8111G Ethernet 8.20.815.2013 (8/15/2013)
TPM Package	4.3.100.3287

[ X ] x64 Driver Information:

Chipset Software	Intel ® Chipset Device Software 9.4.4.1006 ( August / 01 /2013)
Graphics Media	Intel ® HD Graphics 10.18.10.4303 (10/8/2015)
Audio Driver	Intel ® Display Audio 6.16.0.3154 (9/9/2014) Realtek High Definition Audio 6.0.1.7083 (11/5/2013)
LAN Driver	Realtek PCIe GBE 8111G Ethernet 8.20.815.2013 (8/15/2013)
TPM Package	4.3.100.3287

### Install OS to SATA HDD:

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

### Test Results:

Test Item	Result			Note
	Pass	Fail	N/A	
<b>Single Display</b>				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2048*1152
LVDS1-- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1080
LVDS2-- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1080
<b>Boot - Windows 7 Ultimate Advanced Options Menu</b>				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Basic Function Test</b>				
PS/2 Keyboard & Mouse	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Keyboard & Mouse	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COM1~COM6
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>LAN Function Test</b>				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Audio Function Test</b>				
Front Line out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Front Microphone Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Line out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AAFP
Microphone Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AAFP
<b>Start Menu</b>				
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"/>	



### 7.4. Windows 8.1 Enterprise English Version 32/64Bit

[ X ] x32 Driver Information:

Chipset Software	Intel® Chipset Device Software 9.4.4.1006 ( August / 01 /2013)
Graphics Media	Intel® HD Graphics 10.18.10.4303 (10/8/2015)
Audio Driver	Intel® Display Audio 6.16.0.3154 (9/9/2014) Realtek High Definition Audio 6.0.1.7083 (11/5/2013)
LAN Driver	Realtek PCIe GBE 8111G Ethernet 8.20.815.2013 (8/15/2013)
TPM Package	4.3.100.3287

[ X ] x64 Driver Information:

Chipset Software	Intel® Chipset Device Software 9.4.4.1006 ( August / 01 /2013)
Graphics Media	Intel® HD Graphics 10.18.10.4303 (10/8/2015)
Audio Driver	Intel® Display Audio 6.16.0.3154 (9/9/2014) Realtek High Definition Audio 6.0.1.7083 (11/5/2013)
LAN Driver	Realtek PCIe GBE 8111G Ethernet 8.20.815.2013 (8/15/2013)
TPM Package	4.3.100.3287

### Install OS to SATA HDD:

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

### Test Results:

Test Item	Result			Note
	Pass	Fail	N/A	
<b>Single Display</b>				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2048*1152
LVDS1-- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1080
LVDS2-- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920*1080
<b>Boot - Windows 8.1 Enterprise Advanced Options Menu</b>				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Basic Function Test</b>				
PS/2 Keyboard & Mouse	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Keyboard & Mouse	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COM1 ~ COM6
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>LAN Function Test</b>				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Audio Function Test</b>				
Front Line out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Front Microphone Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Line out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AAFP
Microphone Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AAFP
<b>Start Menu</b>				
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 Version 64Bit Driver Version	
CPU	Intel® Celeron® CPU J1900 (2M Cache, 2.0 GHz)
Memory	DSL DDR3L 1600 8GB CL11 1.35V PROMS 1317ZVH V73CBG04808RAJJ11
SATA HDD	PLEXTOR M6S PX-128M6S 128GB

### 8.1. Advanced Test

Test Item	Result			Note	
	Pass	Fail	N/A		
<b>Power Management</b>					
Power Mode	AT Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	ATX Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ERP Function		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable / Disable
AC Power Loss	Power On	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Power Off	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Last State	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ACPI Sleep State	Suspend to RAM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Suspend Disabled	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Resume On PCIE/ XHCI / RING		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable / Disable
Wake system from S5	Fixed Time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Dynamic Time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>CPU Configuration</b>					
Intel Virtualization Technology		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable / Disable
<b>Super IO Configuration</b>					
Serial Port 1	RS232	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RS422	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RS485	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial Port 2		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial Port 3		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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"/>	
<b>Dynamic Digital IO</b>					
GPIO1~8		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Input / Output High / Output Low
<b>Trusted Computing</b>					
Security Device Support		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable / Disable
<b>USB Configuration</b>					
Legacy USB Support		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable / Disable
<b>Hardware Monitor</b>					
Hardware Monitor		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>IDE Configuration</b>					
Serial-ATA (SATA)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable / Disable
SATA Mode	AHCI Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	IDE Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial- ATA Port 1	Port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable / Disable
	Hot Plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial- ATA Port 2	Port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable / Disable
	Hot Plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 8.2. Chipset Test

Test Item	Result			Note	
	Pass	Fail	N/A		
<b>North Bridge</b>					
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"/>	
	LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	LVDS2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS	LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable / Disable
	LVDS Panel Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Backlight Invert	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Normal / Invert
	Backlight Level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 ~100%
LVDS 2	LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable / Disable
	LVDS Panel Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Remark : Due to Intel limitation, only one display is supported under DOS; and please use VGA or LVDS1 port.</b>
	Backlight Invert	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Normal / Invert
	Backlight Level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 ~100%
<b>South Bridge</b>					
PCI Express Port 0	Port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable / Disable
	GEN1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	GEN2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	AUTO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCI Express Port 1	Port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable / Disable
	GEN1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	GEN2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	AUTO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCI Express Port 2	Port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable / Disable
	GEN1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	GEN2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	AUTO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCI Express Port 3	Port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable / Disable
	GEN1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	GEN2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	AUTO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 8.3. Boot Test

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

### 8.4. CMOS Backup / Clear CMOS Test

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

### 8.5. AAEON Tag Check Utility

Test Item	Result			Note
	Pass	Fail	N/A	
Check AAEON BIOS OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AONCHECK.EXE BIOS need to setting Video: Legacy only.

### 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(20150202)	<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"/>
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"/>
	1min	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	255sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	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"/>
	Read Byte	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	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	Dark	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Light	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Dark	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Light	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 9. Performance Test

Hardware Information with Windows 8.1 Enterprise English Version 32 Bit Driver Version	
CPU	Intel® Celeron® CPU J1900 (2M Cache, 2.0 GHz)
Memory	DSL DDR3L 1600 8GB CL11 1.35V PROMS 1317ZVH V73CBG04808RAJJ11
SSD HD	PLEXTOR M6S PX-128M6S 128GB

### 9-1. Performance Test

Test Result: (Display set 1920\*1080 test)

Testing Software	Scope	Note
<b>PCMark2005</b>		Windows 8.1_32bit
PCMark	N/A	PCMarks
CPU	4900	
Memory	4498	
Graphics	1442	
HDD	34809	
<b>PCMark Vantage</b>		PCMarks
PCMarks	7198	
Memories	4589	
TV and Movies	N/A	
Gaming	5532	
Music	9403	
Communications	5861	
Productivity	9164	
HDD	33153	
Benchmark (B)	-	
Average Efficiency	-	

Testing Software	Scope	Note
<b>CPUmark99</b>		Windows 8.1_32bit
CPU mark99	208	

Testing Software	Scope	Note
<b>3Dmark2006 v120</b>		Windows 8.1_32bit
3Dmark Score	1635	
SM2.0 Score	561	
HDR/SM3.0 Score	599	
CPU Score	2348	
Benchmark (B)	-	
Average Efficiency	-	

<b>3Dmark Vantage</b>		Windows 8.1_32bit
3Dmark Score	P808	
GPU Score	631	
CPU Score	5110	
<b>3Dmark11 Professional Edition</b>		Windows 8.1_32bit
<b>Performance 1280*720</b>		
3Dmark 11Score	P262	
Graphics Score	224	
Physics Score	1556	
Combined Score	270	
<b>Entry 1024*600</b>		
3Dmark 11Score	E415	
Graphics Score	353	
Physics Score	1556	
Combined Score	337	

Testing Software	Scope	Note
<b>Final Reality V1.01—BenchMark Test</b>		Windows 8.1_32bit
2D image	22.62	Reality marks
3D	5.25	
Bus transfer	21.32	
Overall	12.87	
Benchmark (A)	-	

Testing Software	Scope	Note
<b>Performance Test 7.0</b>		Windows 8.1_32bit
PassMark Rating	690.1	
CPU Mark	1713.7	
2D Graphics Mark	197.3	
3D Graphics Mark	153.3	
Memory Mark	436.0	
Disk Mark	2413.4	
CD Mark	-	

Testing Software	Scope	Note
<b>Windows experience index</b>		Windows 8.1_32bit
Processor	6.8	
Memory	5.5	
Graphics	4.1	
Gaming graphics	4.2	
Primary hard disk	7.8	

SATA Performance				
CPU	Intel® Celeron® CPU J1900 (2M Cache, 2.0 GHz)			
Memory	DSL DDR3L 1600 8GB CL11 1.35V PROMS 1317ZVH V73CBG04808RAJJ11			
OS	Windows 8.1 Enterprise SP1 English Version 32bit			
Item	Comment / (unit)	Software	Score	Note
<b>SATA HDD No.1</b>	<b>WD / WD5000BPKX / SATAII 2.5" 500GB / 5400rpm</b>			
Single HDD SATAII port (SATA 3G)	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	18.0ms	
	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	89.8MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	129.2MB/s	
<b>SATA HDD No.2</b>	<b>HGST/ HTS541010A9E680 / SATAII 2.5" ITB / 5400rpm</b>			
Single HDD SATAII port (SATA 3G)	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	17.1ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	5%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	91.4MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	148.8MB/s	
<b>SATA HDD No.3</b>	<b>WD / WD10JPVX / SATAII 2.5" 500GB / 5400rpm</b>			
Single HDD SATAII port (SATA 3G)	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	19.7ms	
	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	84.3MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	235.5MB/s	

mSATA Performance				
CPU	Intel® Celeron® CPU J1900 (2M Cache, 2.0 GHz)			
Memory	DSL DDR3L 1600 8GB CL11 1.35V PROMS 1317ZVH V73CBG04808RAJJ11			
OS	Windows 8.1 Enterprise SP1 English Version 32bit			
Item	Comment / (unit)	Software	Score	Note
<b>mSATA No.1</b>	<b>Transcend TS8GMSA500 8GB SATAII</b>			
Single HDD SATAII port	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.3ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	3%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	81.6MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	87.4MB/s	
<b>mSATA No.2</b>	<b>SanDisk SSD U100 32GB / mSATA</b>			

Single HDD SATAII port	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.3ms	
	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	181.9MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	185.8MB/s	

SATA SSD Performance				
CPU	Intel® Celeron® CPU J1900 (2M Cache, 2.0 GHz)			
Memory	DSL DDR3L 1600 8GB CL11 1.35V PROMS 1317ZVH V73CBG04808RAJJ11			
OS	Windows 8.1 Enterprise SP1 English Version 32bit			
Item	Comment / (unit)	Software	Score	Note
<b>SATA SSD No.1</b>	<b>Intel® SSD 530 Series 120GB</b>			
Single HDD 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	4%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	193.3MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	220.7MB/s	

USB2.0 Performance				
CPU	Intel® Celeron® CPU J1900 (2M Cache, 2.0 GHz)			
Memory	DSL DDR3L 1600 8GB CL11 1.35V PROMS 1317ZVH V73CBG04808RAJJ11			
OS	Windows 8.1 Enterprise SP1 English Version 32bit			
Item	Comment / (unit)	Software	Score	Note
<b>USB 3.0 Flash</b>	<b>Transcend 16GB USB 3.0 Flash</b>			
Single HDD (Rear I/O USB2.0) USB1.2	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.8ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	3%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	32.5MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	34.1MB/s	
<b>USB 3.0 Flash</b>	<b>Transcend 16GB USB 3.0 Flash</b>			
Single HDD (Rear I/O USB2.0) USB3.4	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.8ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	3%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	31.0MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	34.0MB/s	
<b>USB 3.0 Flash</b>	<b>Transcend 16GB USB 3.0 Flash</b>			
Single HDD (Rear I/O USB2.0)	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.8ms	



USB5.6	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	3%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	31.0MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	33.2MB/s	
<b>USB 3.0 Flash</b>	<b>Transcend 16GB USB 3.0 Flash</b>			
Single HDD (USBHUB) USB5.6	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.8ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	3%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	31.0MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	33.2MB/s	
<b>USB 3.0 Flash</b>	<b>Transcend 16GB USB 3.0 Flash</b>			
Single HDD (USBHUB) USB7.8	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.8ms	
	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	31.0MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	34.0MB/s	

### 9-2. ACPI G3 Cold Boot Test

Under Room Temperature: 26 °C

OS: DOS

Test item	Result			Note
	Pass	Fail	N/A	
G3(AC loss) cold boot over 1000 cycles <loss rate: 0 /1000 times>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jumper setting auto power button or BIOS select " power on"

9-3. ACPI S5 Cold Boot Test

Under Room Temperature: 26 °C

OS: Windows8.1 Enterprise 64bit

Test item	Result			Note
	Pass	Fail	N/A	
S5(standby power) cold boot over 500 cycles < System should complete 500 cycles without any error or hang.>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Timer: on time set 1sec ; off time set 120~150sec. 2. "PassMark Rebooter" <Set 500 cycles, delay 30sec and enable "auto load Rebooter at startup">.