

Report NO: 16P010003

# BOXER-6638U

## Fanless Embedded Computer with 5<sup>th</sup> Generation Intel® Core™ I Series

### System Level Product Bulletin Compatibility Test Report

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

Issue date	QE Manager	Test Engineer
2016-03-31	KJ Wang	Danny Chen

**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	BOXER-6638U	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SBC	EPIC-BDU7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Processor	Intel CPU. Broadwell-U i3-5010U	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Chipset	Intel Broadwell M/D SoC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System Memory	204-pin SODIMM DDR3L 1600 MHz, up to 8 GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Display Interface	DB-15 x 1 for VGA DP x1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Storage Device	2.5" SATA HDD bay x 1 SIM slot x 1 mSATA x1 (Share with full-size Minicard)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Front I/O connector	USB typell x 2 for USB 3.0 DB-9 x 2 for RS-232 DB-9 x 2 for RS-232/422/485 Power switch x 1 LINE-OUT *1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Expansion Slot	Full-size Mini-card and SIM slot x 1 (share with mSATA) Half-size Mini-card x 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Software Support	AAEON Hi-Safe	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DC Input	ATX Mode 9-24V	<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 English 32/64 bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Windows8.1 English 32/64bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Windows 10 English 64bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Linux	Ubuntu 14.10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## Platform Information

Item	Device Information	Note
Product of department	PAA	
PCB Model / Version	BOXER-6638U	
CPU Board	EPIC-BDU7	
BIOS / Version	BOXER-6638U R1.1 (B638AM11) (03/10/2016)	
Driver folder	BOXER-6638U 20160307	
CPU Type	Intel® Core™ i3-5010U CPU @ 2.10GHz	
Memory Type	MEMPHIS DDR3L 1600 SO-DIMM 2GB ( D3SO256M646GLI-E261A)	
SATA HDD	TOSHIBA MK1060GSC 2.5" SATA HDD 100GB	
USB DVD-ROM	AOpen USB DVD-ROM / MODEL: EDR8865U	
LCD Monitor	ASUS PA238 _22" LED ViewSonic VP2770 _ 27" LED DELL U2713HM_27"LED Samsung LU28D590_28" LED	
LVDS	N/A	
Compact Flash	N/A	
Daughter Board	N/A	
Expansion Board	N/A	
Operating System	<input checked="" type="checkbox"/> Linux Ubuntu 14.10	
	<input checked="" type="checkbox"/> Windows 7 Ultimate SP1 32/64Bit	
	<input checked="" type="checkbox"/> Windows 8.1 Enterprise English Version 32/64Bit	
	<input checked="" type="checkbox"/> Windows 10 Enterprise English Version 64Bit	
Power Supply	ATX Power Supply :	
	AT Power Supply:	
	DC Adapter : FSP060-DBAE1 _ 12V	
<b>Chipset Information</b>		
SoC Bridge	Intel Broadwell Quad/dual core SOC processor	
Super IO Chipset	Fintek 81866D	
Audio Chipset	Realtek High Definition Audio	
Ethernet Chipset	Intel I218-LM / Intel I211	

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# 1. Hardware Compatibility

## 1.1. CPU Compatibility Test

CPU Information (Information and frequency should show correct value)	Result			Note
	Pass	Fail	N/A	
Intel® Core™ i3-5010U CPU @ 2.10GHz	<input checked="" 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"/>	

## 1.2. Memory Compatibility Test

Memory Information (a. Information and frequency should show correct value. b. Memtest result should not error or halt)	AAEON P/N	Result			Note
		Pass	Fail	N/A	
<b>DDR3L SO-DIMM</b>					
MEMPHIS DDR3L 1600 SO-DIMM 2GB ( D3SO256M646GLI-E261A)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*
Transcend DDR3L-1600 2GB (SEC 501 BYMA K4B2G0846Q)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CTOS
Transcend DDR3L-1600 4GB (SEC 446 XYKO K4B4G0846D)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CTOS
Transcend DDR3L-1600 8GB (SEC 449 BYKO K4B4G0846D)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CTOS
InnoDisk DDR3L-1600 2GB (SEC 434 BYKO K4B2G0846Q)	AP-DR968D3002 GX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CTOS
InnoDisk DDR3L-1600 4GB (SEC 425 BYKO K4B4G0846D)	968D3004GZ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CTOS
InnoDisk DDR3L-1600 8GB (SEC 446 BYKO K4B4G0846D)	968D3008GW	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CTOS
ADATA DDR3L-1600 2GB ( ADDS1600C2G11-BMIK)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ADATA DDR3L-1600 2GB (ADDS16008G-BMIE)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Kingston DDR3L-1600 2GB ( KVR16LS11S6)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## 1.3. SATA Compatibility Test

### 1.3.1 Onboard SATA( AHCI) Test

SATA Device Information (Information and size should show correct value with IDE and AHCI mode)		AAEON P/N	Result			Note
			Pass	Fail	N/A	
SATAII	TOSHIBA MK1060GSC 2.5" SATA HDD 100GB		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SATAII	TOSHIBA MK1676GSX 2.5" SATA HDD 160GB		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SATAIII	WD WD5000LPVX 2.5" SATAIII 500GB		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SATAIII	WD WD3200BEVT 2.5" SATAIII 320GB		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SATAIII	HGST HTS541010 2.5" SATAIII 1TB		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

SSD	Transcend TS32GSSD370 2.5".32GB.SATA III SSD MLC.	968C032G2D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CTOS
SSD	Transcend.TS64GSSD370 2.5".64GB. SATA III.SSD.MLC	968C64G003	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CTOS
SSD	Transcend.TS128GSSD370 2.5" SATA3 SSD.128GB.MLC.	968C128G0W	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CTOS

### 1.3.2 Onboard SATA (RAID) Test

[ x ] Not Support

SATA RAID Test (RAID function should work properly)		Result			Note
		Pass	Fail	N/A	
RAID-0 (HDDx2) Striping/Span Test	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RAID-1 (HDDx2) Mirror Test	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RAID-5 (HDDx3) Striping/Span Test Rotation Parity	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RAID-10 (HDDx3) Striping/Span Test Mirroring	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 1.4. Flash Card Compatibility Test

Compact Flash Information (a. Information and size should show correct value (b. R/W and HDD LED should work properly)	AAEON P/N	Result			Note
		Pass	Fail	N/A	
	XXXXXXXXXX	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	XXXXXXXXXX	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
CFast Information (a. Information and size should show correct value (b. R/W and HDD LED should work properly)	AAEON P/N	Result			Note
		Pass	Fail	N/A	
Innodisk.DECFA-04GD07AC2DT-26 4G.SLC	968C004G0P	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
InnoDisk.DECFA-08GD07RC2SC-26 8GB.MLC.3ME.	AP-SS968C008 G10	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Innodisk.3ME.DECFA-16GD07RC2DC-26 16GB.MLC.	968C016G4C	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Innodisk.DECFA-32GD07RC2DC-26 SATA3.MLC.32GB	968C032G2B	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Innodisk.DECFA-64GD07RC2DC-26 SATA3.MLC.64GB.CFAST.	AP-SS968C064 G2T	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Innodisk.DECFA-A28D07RC2DC-26 SATA3.MLC.128GB	AP-SS968C128 G19	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
m-SATA Information (a. Information and size should show correct value (b. R/W and HDD LED should work properly)	AAEON P/N	Result			Note
		Pass	Fail	N/A	
Half Size					
Transcend.TS8GMSM610 Mini SSD.8GB.SATA 2 mSATA,	968C008G0F	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	BOXER-6638U Halt Size not support mSATA

Transcend.TS16GMSM610 Mini SSD.16GB.SATAII mSATA.MLC	AP-SS968C016 G2C	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Transcend.TS32GMSM610 Half size.32G MLC..	AP-SS968C032 G21	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Full Size</b>					
Transcend TS16GMSA370 (TF)Full-size.16GB.mSATA.MLC	AP-SS968C016 G2Z	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CTOS
Transcend TS32MSA370 (TF)Full-size.32GB.mSATA.MLC	968C032G32	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CTOS
Transcend TS64GMSA370 (TF)Full-size.64GB.mSATA.MLC	968C064G2K	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CTOS
Transcend.TS64GMA740 (TF)Full-size.64GB.mSATA.MLC		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Full Size / Mini PCIe Slot 2
innoDisk mSATA D150Q 32GB		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Full Size / Mini PCIe Slot 2

### 1.5. Monitor Compatibility Test

Monitor Information	Result			Note
	Pass	Fail	N/A	
<b>a. Monitor should display under DOS and OS environment.</b>				
<b>b. Monitor should not appear ghost or ripples.</b>				
<b>VGA</b>				
ASUS PA238 _22" LED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ViewSonic VP2770 _27" LED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DELL U2713HM_27"LED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>DVI</b>				
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	BOXER 6638U not support DVI
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>HDMI (Test with 5M HDMI cable)</b>				
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	BOXER 6638U not support HDMI
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Display port</b>				
ASUS PA238 _22" LED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Samsung LU28D590_28" LED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ViewSonic VP2770 _27" LED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DELL U2713HM_27"LED	<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

Configuration													
CPU	Intel @ Core™ i3-5010U CPU @ 2.10GHz												
Memory	MEMPHIS DDR3L 1600 SO-DIMM 2GB ( D3SO256M646GLI-E261A)												
SATA HDD	TOSHIBA MK1060GSC 2.5" SATA HDD 100GB												
VGA	ASUS PA238 _22" LED												
DVI	N/A												
HDMI	N/A												
Display port	ViewSonic VP2770 _ 27" LED												
Operating system	Windows 8.1 Enterprise English 64bit												
Color Quality	<input checked="" type="checkbox"/> 16bit <input type="checkbox"/> 24bit <input checked="" type="checkbox"/> 32bit												
Resolution	VGA			Display Port			HDMI1/HDMI2			LVDS			Note
	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
800X600	<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"/>	
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"/>	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X800	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X1024	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1360X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1366X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1600X900	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1600X1200	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1680X1050	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1920X1080	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1920X1200	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2048X1152	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2560X1440	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3840 X 2160	<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"/>	
EDID check	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Hot plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rotation(0/90/180/270)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
DOS Display	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

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

#### 2.1.2. Multi-Display Output Test

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



### 2.1.3. Video Resolution Test

Test points:

1. BIOS disable LVDS.
2. Power on without inserting any VGA/DVI/HDMI/DP connector until system reaches Windows desktop
3. Plug VGA connector into test machine while system reaches Windows then check Graphics driver and display.
4. Check VGA output Brightness is normal and it shows "Ghost Image" / "Flicker" or not
5. Repeat step2~4 for DVI / HDMI / DP testing.

Test item		Result			Note
		Pass	Fail	N/A	
Display should working normal in Windows Desktop	VGA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DVI	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	HDMI	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Display port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 2.2. Audio Function Test

[ ] No Support

Function Test		Result			Note
		Pass	Fail	N/A	
L (Left) Channel		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
R (Right) Channel		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Display Port Audio		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
AMP (Left and Right)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	AMP should mute when Audio jack plug in
CD_In		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Line In		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
MICROPHONE		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6-channel mode for 5.1 speaker output		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
8-channel mode for 7.1 speaker output		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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) Command: ping xxx.xxx.xx.xx -l 65500 -n 1000										
1000MBps LAN HUB		D-Link DGS-1008D								
100MBps LAN HUB		Accton Desktop-3005								
10MBps LAN HUB		SVEC FD916H								
OnBoard LAN1		Intel I211					MAC Address		00-07-32-35-EF-67	
OnBoard LAN2		Intel I218-LM					MAC Address		00-07-32-35-EF-66	
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	
LAN Boot (PXE)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Internet Browser (DHCP Server)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

#### 2.3.2. Throughput Test

DUT Platform Information:

<input type="checkbox"/>	Fedora 15 Kernel 2.6.27
<input type="checkbox"/>	Cent 5.5 kernel
<input checked="" type="checkbox"/>	Ubuntu14.10 kernel 3.16.0-23
<input type="checkbox"/>	Red Hat kernel

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

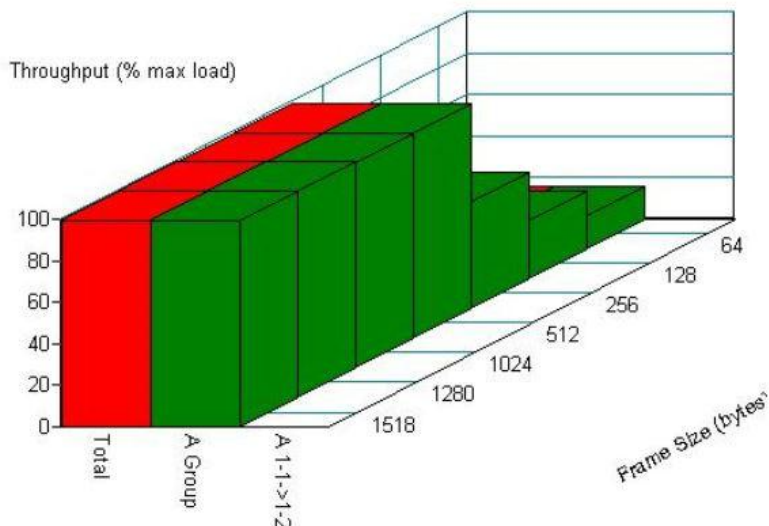
Graphics Media	Fedora Default setting
LAN	LAN1→ Intel I211 Gigabit Network Connection
	LAN2→ Intel I218-LM Gigabit Network Connection
Audio Driver	Fedora Default setting
CPU information	Intel ® Core™ i3-5010U CPU @ 2.10GHz

SMB Platform Information:

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

Test Result:

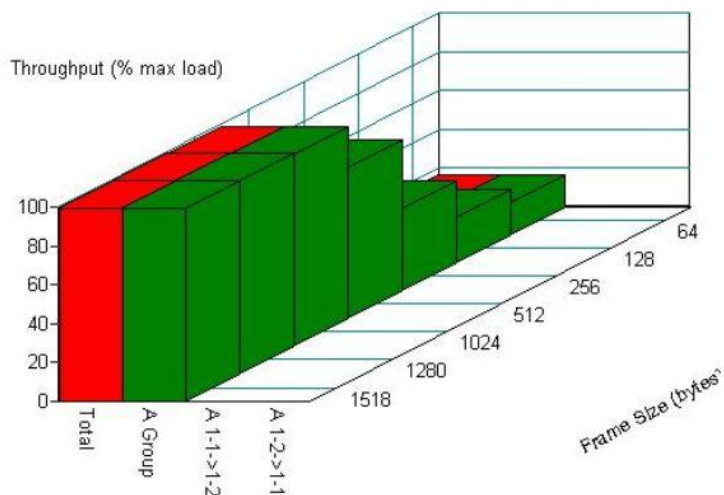
1. Half Direction (LAN1: Intel I211 Gigabit Ethernet → LAN2: Intel I218-LM Gigabit Ethernet)



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	15.6953125	27.296875	50.5	98.453125	98.453125	99.2265625	99.2265625
A Group	15.6953125	27.296875	50.5	98.453125	98.453125	99.2265625	99.2265625
A 1-1->1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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



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	16.46875	22.65625	41.9921875	76.796875	98.453125	99.2265625	99.2265625
A Group	16.46875	22.65625	41.9921875	76.796875	98.453125	99.2265625	99.2265625
A 1-1->1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A 1-2->1-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A

### 2.4. COM Ports Test

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

### 2.5. RS-422 / RS-485 Test

Test Item	Result			Note
	Pass	Fail	N/A	
RS-422 for COM1 / COM3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use loopback and WINSSD.exe to test RS-422 in Windows
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. The communication between the RS-422 port of two boards is linked by one 1.2km cable on Windows Terminal. 2. Confirm RS422 can work properly from G3 status
RS-485 for COM1 / COM3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use ICP CON I-7044D D/IO Module in Windows(Support Auto flow control)
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. The communication between the RS-485 port of two boards is linked by one 1.2km cable on Windows Terminal 2. Confirm RS485 can work properly from G3 status

### 2.6. 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 type="checkbox"/>	

### 2.7. Digital I/O Test

[ x ] Not Support

Test item	Result			Note
	Pass	Fail	N/A	
DIO VCC +5V or +3.3V	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 2.8. USB Port Integration Test

Item	USB Port	USB2.0 ports (under OS)			USB3.0 ports (under OS)			Note
		Pass	Fail	N/A	Pass	Fail	N/A	
USB HDD:	Seagate USB HDD	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Flash:	Kingston 32GB	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Transcend 128GB	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB DVD ROM:	AOpen EDR8865U	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB keyboard:	Microsoft 1366	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB mouse:	ASUS MO96UOB	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB FDD:	Mitsumi D353GUE	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB2.0 HUB:	Kingston 4GB	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	






### 2.9. CAN BUS Test

[ x ] Not Support

CAN BUS Compatibility Test		Result			Note
		Pass	Fail	N/A	
ICP I-7565-H2-G CR		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
30 meter transmission test		Result			Note
		Pass	Fail	N/A	
125K Baud rate	S mode (11bit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	E mode (29bit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
500K Baud rate	S mode (11bit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	E mode (29bit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1M Baud rate	S mode (11bit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	E mode (29bit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 2.10. POE LAN Function Test

[ x ] Not 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							
POE Camera		ETROVISION EV8581U-BL 2M Fixed dome Camera *2							
		ETROVISION EV8782Q-BD 3MP Bullet Camera *2							
POE LAN		MAC Address							
Device	POE LED	Active LED	LAN1			LAN2			Note
			Pass	Fail	N/A	Pass	Fail	N/A	
1000MBps Switch			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
100MBps Switch			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10MBps HUB			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
POE camera			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wake On LAN			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN Boot (PXE)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internet Browser (DHCP Server)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
POE camera recode test over 12 hours.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 2.11. GPS Function Test

[ x ] Not Support

Test item		Result			Note
		Pass	Fail	N/A	
Time-To-First-Fix (TTFF)	cold start Fix time<35s	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Warm start Fix time<35s	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
X / Y coordinate check		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 2.12. Touch Function Test

[ x ] Not Support

Test item		Result			Note
		Pass	Fail	N/A	
The calibrating result is correct.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
After touch panel is calibrated, drawing test result is precise enough.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Windows icon should work properly when used touch to execute.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Right-Click function should work properly.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Multi touch should work properly	Multi draw	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	For multi touch panel
	Rotation / zoom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Touch and right-click should work properly during Burnintest running.	Windows7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BurninTest test item must include CPU/RAM/2D/3D/Video
	Windows8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Windows10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 3. Expansion card and Application Test

#### 3.1. Expansion Slot Compatibility Test

Test point: Device should work properly in windows environment

Mini PCI Express Card	Result			Note
	Pass	Fail	N/A	
HUAWEI EM680 3G Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Full Size / Mini PCIe Slot 2
SIERRA WIRELESS MC8790	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Full Size / Mini PCIe Slot 2
QUECTEL UC20 3G Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Full Size / Mini PCIe Slot 2
AzureWave AW-NE768 PCI-e Wireless Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Halt Size / Mini PCIe Slot 1
AzureWave AW-NB290H PCI-e Wireless Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Halt Size / Mini PCIe Slot 1

#### 3.2. Expansion Card Integration Test

Test Item	Result			Note
	Pass	Fail	N/A	
1. Connect devices to all of expansion slots. 2. No error during OS and driver installation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

#### 3.3. Display port Converter Compatibility Test

Test Item			Result			Note
			Pass	Fail	N/A	
DP to HDMI converter: LPC-1504	DOS display	Full screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	OS display	Full screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Max resolution:
DP to DVI converter: LPC-1503	DOS display	Full screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	OS display	Full screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Max resolution:

## 4. Time Accuracy Test

### 5.1. 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"/>	

### 5.2. Booting Timer Test

Installation	Actual	Note
System Booting Time	2.4 Sec	Press the Power Button till "Beep" Sound appears

### 5.3. Watchdog Timer Test

Use Function as below: Hi-Safe 20160115

[ ] No Support.

Time-Out Interval	Criteria	Actual	Result			Note
			Pass	Fail	N/A	
10 sec	+/- 10%	10 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
60 sec	+/- 10%	62 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
255 sec	+/- 10%	263 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Note : Under Room Temperature: 26°C



## 5. O.S. Compatibility Test

### 5.1. English Ubuntu 14.10 Kernel 3.16.0-23-generic

[ ] No Support

Driver Information:

Chipset Software	System default
Graphics Media	System default
Audio Driver	System default
LAN Driver	Intel I211 igb-5.2.9.4 / Intel I218-LM e1000e-3.1.0.2

Install OS to SATA HDD :

Installation	Result			Note
	Pass	Fail	N/A	
English Ubuntu14.10 kernel 3.16.0-23-generic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Type uname -a

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"/>	
DVI -- Full Screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
LVDS -- Full Screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
VGA + DVI	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
VGA + LVDS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
DVI + LVDS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<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"/>	
Keyboard Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Console Redirection	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
DVD-ROM Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	USB
USB 3.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>X Windows Application</b>				
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
<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
ls / clear .....; cd /dev /ls -l	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Command instruction

## 5.2. Windows 7 Ultimate English Version 32/64Bit

{ } No Support

{ } x32 Driver Information:

Chipset Software	Intel ® Chipset Device Software 10.0 (2014/04/24)
Graphics Media	Intel ® HD Graphics 5500 10.18.14.4156 ( 3/3/2015 )
Audio Driver	Realtek High Definition Audio 6.0.1.6873 (3/29/2013)
LAN Driver	Intel ® Ethernet Connection I218-LM 12.12.50.4 (6/12/2014) Intel ® I211 Gigabit Network Connection 12.11.97.0 (5/15/2014)

{ X } x64 Driver Information:

Chipset Software	Intel ® Chipset Device Software 10.0 (2014/04/24)
Graphics Media	Intel ® HD Graphics 5500 10.18.14.4156 ( 3/3/2015 )
Audio Driver	Realtek High Definition Audio 6.0.1.6873 (3/29/2013)
LAN Driver	Intel ® Ethernet Connection I218-LM 12.12.50.4 (6/12/2014) Intel ® I211 Gigabit Network Connection 12.11.97.0 (5/15/2014)

### Install OS to SATA HDD :

Installation	Result			Note
	Pass	Fail	N/A	
English Windows7 Ultimate 64bit UEFI mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 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"/>	
Display Port -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS -- Full Screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Boot – Windows8.1 Enterprise Advanced Options Menu</b>				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. msconfig 2. safe boot.
<b>Basic Function Test</b>				
PS/2 Mouse and Keyboard	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 3.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TPM Function	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>LAN Function Test</b>				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Intel I218-LM
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Intel I211
<b>Audio Function Test</b>				
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"/>	
S/P DIF Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<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"/>	
Sleep (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"/>	

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

[ X ] x32 Driver Information:

Chipset Software	Intel ® Chipset Device Software 10.0 (2014/04/24)
Graphics Media	Intel ® HD Graphics 5500 10.18.14.4332 ( 11/20/2015 )
Audio Driver	Realtek High Definition Audio 6.0.1.6873 (3/29/2013)
LAN Driver	Intel ® Ethernet Connection I218-LM 12.12.50.4 (6/12/2014) Intel ® I211 Gigabit Network Connection 12.11.97.0 (5/15/2014)

[ X ] x64 Driver Information:

Chipset Software	Intel ® Chipset Device Software 10.0 (2014/04/24)
Graphics Media	Intel ® HD Graphics 5500 10.18.14.4332 ( 11/20/2015 )
Audio Driver	Realtek High Definition Audio 6.0.1.6873 (3/29/2013)
LAN Driver	Intel ® Ethernet Connection I218-LM 12.12.50.4 (6/12/2014) Intel ® I211 Gigabit Network Connection 12.11.97.0 (5/15/2014)

Install OS to SATA HDD Card:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows8.1 Enterprise 32bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
English Windows8.1 Enterprise 64bit UEFI mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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"/>	
Display Port -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS -- Full Screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Boot – Windows8.1 Enterprise Advanced Options Menu</b>				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. msconfig 4. safe boot.
<b>Basic Function Test</b>				
PS/2 Mouse and Keyboard	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 3.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TPM Function	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>LAN Function Test</b>				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Intel I218-LM
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Intel I211
<b>Audio Function Test</b>				
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"/>	
S/P DIF Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<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"/>	
Sleep (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"/>	

### 5.4. Windows 10 Enterprise English Version 32/64Bit

[ ] x32 Driver Information:

Chipset Software	
Graphics Media	
Audio Driver	
LAN Driver	

[ X ] x64 Driver Information:

Chipset Software	Intel ® Chipset Device Software 10.1.1 (2015/06/3)
Graphics Media	Intel ® HD Graphics 5500 10.18.15.4256 ( 7/17/2015 )
Audio Driver	Realtek High Definition Audio 6.0.1.7541 (6/18/2015)
LAN Driver	Intel ® Ethernet Connection I218-LM 12.12.50.4 (6/12/2014) Intel ® I211 Gigabit Network Connection 12.11.97.0 (5/15/2014)

#### Install OS to SATA HDD Card:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows10 Enterprise 32bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
English Windows10 Enterprise 64bit UEFI mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

#### 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"/>	
Display Port -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS -- Full Screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Boot – Windows8.1 Enterprise Advanced Options Menu</b>				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5. msconfig 6. safe boot.
<b>Basic Function Test</b>				
PS/2 Mouse and Keyboard	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 3.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TPM Function	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>LAN Function Test</b>				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Intel I218-LM
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Intel I211
<b>Audio Function Test</b>				
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"/>	
S/P DIF Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<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"/>	
Sleep (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"/>	

## 6. BIOS Function Test

Configuration	
CPU	Intel ® Core™ i3-5010U CPU @ 2.10GHz
Memory	MEMPHIS DDR3L 1600 SO-DIMM 2GB ( D3SO256M646GLI-E261A)
Storage	TOSHIBA MK1060GSC 2.5" SATA HDD 100GB
O.S	Windows 8.1 Enterprise English 32/64bit

### 7.1. Advanced Test

Test Item	Result			Note	
	Pass	Fail	N/A		
<b>CPU Configuration</b>					
Intel Virtualization Tech	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
EIST	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>SATA Configuration</b>					
SATA Controller	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable	
SATA Mode	AHCI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SATA Controller Speed	Default	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	GEN1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	GEN2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	GEN3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SATA 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"/>	Enable / Disable
SATA 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"/>	Enable / Disable
mSATA Port	Port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable / Disable
<b>Power Management</b>					
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"/>	
Power Saving (ERP) Control		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable / Disable
AC Power Loss	Power off	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Power on	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Last state	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Enable Hibernation		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable / Disable
ACPI Sleep State	Suspend Disabled	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Suspend to RAM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wake System with Fixed Time		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wake System with Dynamic Time		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>SIO 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	Enable / Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial Port 3	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 4	Enable / Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Hardware Monitor</b>					
PC Health Status		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>USB Configuration</b>					
Legacy USB Support		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

USB Mass Storage Driver Support	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
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### 7.2. Chipset Test

Test Item			Result			Note
			Pass	Fail	N/A	
Graphics Configuration	Primary Boot Display	VBIOS Default	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		CRT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Display Port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Secondary Boot display	CRT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		DP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Memory Configuration			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCH-IO Configuration	Azalia Configuration		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable/Auto
	LAN1 NIC ( Intel i218)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
	LAN2 NIC ( Intel i211)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mini Card Slot ( Halt -Size )	PCIe Speed	Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		GEN1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		GEN2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mini Card Slot 2 ( Full -Size )	mSATA		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	PCI Express		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	PCIe Speed	Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		GEN1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		GEN2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 7.3. 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"/>	
Launch Intel I211 PXE OpROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Launch Intel I218 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	

### 7.4. CMOS Backup / Clear CMOS Test

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

### 7.5. 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

### 7.6. 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"/>	

### 7.7. Hi-safe Test

Test Item	Result			Note	
	Pass	Fail	N/A		
Version(20160115)	<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 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"/>	
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 62sec
	255sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 263sec
	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 0x4040
	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"/>	

### 7.8. Negative Test

#### 7.9.1 USB Keyboard Negative Test

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

#### 7.8.2 Suspend S3 Negative Test

Methods	Result			Note	
	Pass	Fail	N/A		
1. Resume from S3. 2. Confirm com ports(RS232/422/485), DIO, smartfan, LVDS backlight control, USB ports can work properly.	RS232/422/485	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DIO	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	SmartFan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	LVDS Backlight control	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	USB ports	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

7.8.3 UEFI Mode Negative Test

Methods	Result			Note
	Pass	Fail	N/A	
1. Install Windows with UEFI mode. 2. Clear CMOS. 3. Confirm BIOS\Boot device was not loss "Windows boot manager" and should boot into Windows properly.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



## 7. Performance Test

Configuration	
CPU	Intel ® Core™ i3-5010U CPU @ 2.10GHz
Memory	MEMPHIS DDR3L 1600 SO-DIMM 2GB ( D3SO256M646GLI-E261A)
Storage	TOSHIBA MK1060GSC 2.5" SATA HDD 100GB
O.S	Windows 8.1 Enterprise English 32/64bit

### 8.1. System Performance Test

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

Testing Software	Scope		Note
	AAEON	Ref.	
<b>PCMark2005</b>			<b>Windows 8.1 64bit</b>
PCMark		-	PCMarks
CPU	7269	-	
Memory	7866	-	
Graphics	2925	-	
HDD	4123	-	
Benchmark (B)		-	
Average Efficiency		-	
<b>PCMark Vantage</b>			
PCMarks	6332	-	PCMarks
Memories	3631	-	
TV and Movies	3601	-	
Gaming	4348	-	
Music	5821	-	
Communications	9123	-	
Productivity	5923	-	
HDD	3371	-	
Benchmark (B)		-	
Average Efficiency		-	

Testing Software	Scope		Note
	AAEON	Ref.	
<b>3Dmark2006 v120</b>			<b>Windows 8.1 64bit</b>
3Dmark Score	5429	-	
SM2.0 Score	1765	-	
HDR/SM3.0 Score	2399	-	
CPU Score	2869	-	
Benchmark (B)		-	
Average Efficiency		-	

<b>3Dmark11 Professional Edition</b>			<b>Windows 8.1 64bit</b>
<b>Performance 1280*720 (Default)</b>			
3Dmark 11Score	P1082	-	
Graphics Score	1012	-	
Physics Score	2733	-	
Combined Score	783	-	

Testing Software	Scope		Note
	AAEON	Ref.	
<b>Performance Test 7.0</b>			<b>Windows 8.1 32bit</b>
PassMark Rating	956.7	-	
CPU Mark	2817.8	-	
2D Graphics Mark	351.7	-	
3D Graphics Mark	336.8	-	
Memory Mark	621.2	-	
Disk Mark	418.0	-	
CD Mark		-	

## 8.2. Storage Performance Test

SATA HDD Performance (HDD performance should meet specification)				
SATA HDD	WD WD5000LPVX 2.5" SATAIII HDD 500GB			
CPU	Intel @ Core™ i3-5010U CPU @ 2.10GHz			
Memory	MEMPHIS DDR3L 1600 SO-DIMM 2GB ( D3SO256M646GLI-E261A)			
OS	Windows 8.1 Enterprise English 64bit			
Item	Comment / (unit)	Software	Score	Note
SATAIII port should be meet SATA6G > 300MB	Maximum Read	ATTO Disk Benchmark	405 MB/s	
	Maximum Write	ATTO Disk Benchmark	75 MB/s	

USB3.0/2.0 Performance				
USB Flash	Kingston USB3.0 32GB / Kingston USB2.0 4GB			
Item	Comment / (unit)	Software	Transfer Rate (MB/s)	Note
USB3.0	Maximum Read	ATTO Disk Benchmark	158 MB/s	
	Maximum Write	ATTO Disk Benchmark	26 MB/s	
USB2.0	Maximum Read	ATTO Disk Benchmark	21 MB/s	
	Maximum Write	ATTO Disk Benchmark	5 MB/s	

mSATA / CFast /CF performance				
mSATA	Transcend.TS64GMA740 (TF)Full-size.64GB.mSATA.MLC			
CFast	N/A			
CF	N/A			
Item	Comment / (unit)	Software	Transfer Rate (MB/s)	Note
mSATA	Maximum Read	ATTO Disk Benchmark	527 MB/s	BOXER-6638U Not Support
	Maximum Write	ATTO Disk Benchmark	50 MB/s	
CFast	Maximum Read	ATTO Disk Benchmark	MB/s	
	Maximum Write	ATTO Disk Benchmark	MB/s	
CF	Maximum Read	ATTO Disk Benchmark	MB/s	
	Maximum Write	ATTO Disk Benchmark	MB/s	

## 8. Stability test

### 9.1. Run In Test

Under Room Temperature: 26 °C

OS: Windows 8.1 Enterprise English 64bit

Test Item	Result			Note	
	Pass	Fail	N/A		
Burn In Test V8.0( 1041 ) Duty: 100 Time: over 12 hours <System should not error or hang during testing.>	CPU	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RAM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	COM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	3.0	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Note: COM PORT Speed Set to 115200.

### 9.2. Reboot Test

Under Room Temperature: 26 °C

OS: Windows 8.1 Enterprise English 64bit

Test Tool: Passmark rebooter.exe

Test item	Result			Note
	Pass	Fail	N/A	
Reboot test for 1000 cycles <System should not error or hang during testing.>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 9.3. 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"

### 9.4. 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">.