

Report NO:15P010002

# AHP-1154

## 15" Fanless Touch Panel with Intel Celeron J1900/N2930

### System Level Product P5 Test Report Template

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

Issue date

2015/02/06

Approval

KJ Wang

Test Engineer

Jack Huang

**Version Released Records**

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

**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	AHP-1154	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Construction	Plastic front bezel and steal back chassis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Display	15", XGA, 1024x768, 450 nit, LED backlight	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Touch Screen	5-wire Touch Window	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CPU Board	GENE-BT05	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Processor	Intel® Celeron® Processor J1900 (2M Cache, up to 2.42 GHz) Intel® Celeron® Processor N2930 (2M Cache, up to 2.16 GHz)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System Memory	204-pin DDR3L 1066/1333MHz SODIMM x 1, up to 8 GB, Default 2GB RAM Inside	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Storage	CFast Socket X 1 (Easy-to-swap) SATA 2.5" HDD bay x 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bottom I/O	USB type A x 1 for USB 3.0 USB type A x 3 for USB 2.0 DB-9 for RS-485/422/232 x 2 DB-9 for RS-232 x 2 RJ-45 x 2 for 10/100/1000 base-T DB-15 x 1 for VGA 3-pin terminal block x1 for 9~30 Vdc power input Power button x 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Expansion	Mini card x 2 (Full-size x 1, Half-size x 1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mounting	Panel / VESA / Desktop mount	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power Supply	DC 9~30V w/3-pin terminal block, ATX Power function DC 12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dimensions	Follow AHP-1152	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Color	Front cover: Black and Silver ; Back chassis: Silver	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**O.S. Support**

Item	Specification	Result			Note
		Pass	Fail	N/A	
Microsoft Windows	Windows 8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Windows 7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Windows Embedded standard 7 32bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Linux	Linux kernel 2.6.x or above	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Environmental Specifications**

Item	Specification
Operating temperature	-4°F ~ 122°F (-20°C ~ 55°C) ( CF & HDD ) without airflow -4°F ~ 140°F (-20°C ~ 60°C) ( CF & HDD ) with 0.5 m/s airflow
Storage temperature	-4 ~ 158° F (-20 ~ 70° C)
Storage humidity	5 ~ 90% @ 40C, non-condensing
Vibration	1g RMS / 5~ 500Hz / operation – With HDD
Shock	20G peak acceleration (11 ms duration) – With HDD
Drop	76 cm (1 Corner, 3 Edge, 6 Surface)
EMC	CE /FCC class A
ESD	4 kV / 8 kV ( need to test 8 kV / 12 kV.)

**Note:** Please refer Environment Test Report for detail information

## Platform Information

Item	Device Information	Test Item
Product Name	AHP-1154	1,2,3,4,5,6,7,8,9,10
PCB Model / Version	GENE-BT05	1,2,3,4,5,6,7,8,9,10
BIOS / Version	AHP-1154 R1.0(H1F4BM10) (03/19/2015) AHP-1154 R1.0(H1F4CM10) (03/19/2015)	1,2,3,4,5,6,7,8,9,10
CPU Type	Intel® Celeron® Processor J1900 (2M Cache, up to 2.42 GHz) Intel® Celeron® Processor N2930 (2M Cache, up to 2.16 GHz)	1,2,3,4,5,6,7,8,9,10
Memory Type	DSL DDR3L 1600 8GB SEC K4B4G0846B	1,2,3,4,5,6,7,8,9,10
SATA HDD	WDC WD5000LPVT-22G33T0 2.5" 500GB/5400rpm	1,2,3,4,5,6,7,8,9,10
SATA DVD-ROM	Pioneer DVR-217	1,2,3,4,5,6,7,8,9,10
USB DVD-ROM	ASUS-SDRW-08D2S-U	1,2,3,4,5,6,7,8,9,10
LCD Monitor	Dell U2410 1920*1200	1,2,3,4,5,6,7,8,9,10
	LG E2260 1920*1080	
	ASUS VG23AH 1920*1080	
Operating System	<input checked="" type="checkbox"/> Linux English Ubuntu14.04 kernel 3.13.9.i686.PAE	7-1
	<input checked="" type="checkbox"/> Windows 7 Ultimate English Version 32/64Bit	7-2
	<input checked="" type="checkbox"/> Windows 8.1 Enterprise English Version 32/64Bit	7-3
Power Supply	ATX Power Supply : Zippy HG2-6400P 400W	1,2,3,4,5,6,7,8,9,10
Chipset Information with Windows 8.1 Enterprise English 32 Bit Driver Version		
Chipset Software	Intel Chipset Device Utility 10.0 (04/24/2014)	
SOC Bridge	Intel® Bay Trail SoC	
Super IO Chipset	Fintek F81866	
VGA Chipset	Intel HD Graphics 10.18.10.3958 (09/30/2014)	
Audio Chipset	Realtek High Definition Audio 6.0.1.7083 (11/05/2013)	
Ethernet Chipset	Intel(R) i211 Gigabit Network Connection1 12.11.97.0 (03/11/2014)	

## Summary Table of contents:

1. Hardware Test .....	7
1.1. CPU Compatibility Test .....	7
1.2. Memory Compatibility Test.....	7
1.3. SATA Compatibility Test .....	7
1.4. Keyboard/Mouse Compatibility Test.....	8
1.5. USB Compatibility Test .....	8
1.7. CFAST Compatibility Test.....	9
1.8. Modular System Industrial Workstation Function Test.....	9
1.9. Mechanism construction check .....	9
2. Basic Function Test.....	10
2.1. Video Function Test .....	10
2.2. Audio Function Test .....	12
2.3. LAN Function Test .....	12
3. Integration Test .....	15
3.1. USB Port Integration Test.....	15
3.2. Digital I/O Port Test.....	15
3.3. COM Port Integration Test .....	15
3.4. RS-422 / RS-485 Test.....	16
3.5. Burn In Test .....	16
3.6. Reboot Test .....	16
4. Application Test .....	17
4.1. PCI-Express Function Test.....	17
4.2. SSD Modules Compatibility Test .....	17
4.3. Peripheral Compatibility- Storage Device Test .....	17
4.4. Display port Converter Compatibility Test .....	17
5. Power Consumption Test .....	18
5.1. AT/ATX Power Consumption .....	18
5.2. PC Health Status .....	18
5.3. DC Power Switch.....	18
6. Time Accuracy Test.....	19
6.1. System Clock & RTC Clock Test.....	19
6.2. Booting Timer Test .....	19
6.3. Watchdog Timer Test .....	19
7. O.S. Compatibility Test .....	20
7.1. English Ubuntu14.04 .....	20
7.2. Windows 7 Ultimate English Version 32/64Bit .....	21
7.3. Windows 8.1 Enterprise English Version 32/64Bit .....	22
8. BIOS Function Test .....	23
8.1. Advanced Test .....	23
8.2. Chipset Test.....	24
8.3. Boot Test .....	24
8.4. CMOS Backup / Clear CMOS Test .....	25
8.5. AAEON Tag Check Utility.....	25
8.6. Supervisor / User Password Test .....	25
8.7. Hi-safe Test.....	25
9. Performance Test .....	26
10. Negative Test .....	29
10.1 USB Keyboard Negative Test.....	29
10.2 Suspend S3 Negative Test.....	29

# 1. Hardware Test

## 1.1. CPU Compatibility Test

CPU Information	Result			Note
	Pass	Fail	N/A	
Intel® Celeron® Processor J1900 (2M Cache, up to 2.42 GHz)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Intel® Celeron® Processor N2930 (2M Cache, up to 2.16 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 1600 8GB CL11 1.35V SEC K4B4G0846B	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Passmark Memtest86 V5.0b5;
DSL DDR3L 1600 2GB CL11 1.35V hynix H5TC2G83EFR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Passmark Memtest86 V5.0b5;
Transcend DDR3L 1333 2GB SEC K4B2G0846D-HYK0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Passmark Memtest86 V5.0b5;
Transcend DDR3L 1333 4GB SEC K4B2G0846D-HYK0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Passmark Memtest86 V5.0b5
Transcend DDR3L 1600 8GB SEC K4B4G0846B-HYK0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Passmark Memtest86 V5.0b5
Transcend DDR3L 1600 4GB SEC K4B4G0846B-HYK0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Passmark Memtest86 V5.0b5
Innodisk DDR3L 1333 2GB Hynix H5TC2G83EFR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Passmark Memtest86 V5.0b5;
Innodisk DDR3L 1333 4GB Hynix H5TC4G83AFR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Passmark Memtest86 V5.0b5
Innodisk DDR3L 1333 8GB M3S0-8GHSDLN-E93 Skhynix H5TC4G83AFR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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	Seagate ST500DM002 SATAIII 3.5" 500GB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	TOSHIBA HDS721010DLE630 3.5" 1TB/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"/>	
HDD	TOSHIBA MK1060GSC 2.5" 100G/5400rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	Hitachi HDS721050CLA362 3.5" 500GB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	Hitachi Z5K320-250 2.5" 250GB/5400rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	WDC WD5000AAKX-22ERMA0 3.5" 500GB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	WDC WD20EZR-00DC0B0 3.5" 2TB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	WDC WD5000LPVT-22G33T0 2.5" 500GB/5400rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD	Intel SSD 520 Series 120GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD	KingSton SH103S3120G 120GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD	ADATA SX800 128MB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SATA DOM	Innodisk SATADOM-SV 3ME series 4GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SATA DOM	Innodisk SATADOM-SV 3ME series 16GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

SATA DOM	Mach Xtreme MXSSD2MJTD4G-H	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DVD	Pioneer DVR-217	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DVD	ASUS BW-14D1XT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 1.3.2 Onboard SATA-AHCI Mode Test

SATA AHCI Test		Result			Note
		Pass	Fail	N/A	
HDD	Seagate ST500DM002 SATAIII 3.5" 500GB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Win8_64bit
HDD	TOSHIBA HDS721010DLE630 3.5" 1TB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Win8_64bit
HDD	TOSHIBA MK3276GSX 2.5" 320GB/5400rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R/W
HDD	Hitachi HDS721050CLA362 3.5" 500GB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R/W
HDD	Hitachi Z5K320-250 2.5" 250GB/5400rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R/W
HDD	WDC WD5000AAKX-22ERMA0 3.5" 500GB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R/W
HDD	WDC WD20EZR-00DC0B0 3.5" 2TB/7200rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R/W
HDD	WDC WD5000LPVT-22G33T0 2.5" 500GB/5400rpm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R/W
SSD	Intel SSD 520 Series 120GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R/W
SSD	KingSton SH103S3120G 120GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R/W
SATA DOM	Innodisk SATADOM-SV 3ME series 4GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R/W
SATA DOM	Innodisk SATADOM-SV 3ME series 16GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R/W
SATA DOM	Mach Xtreme MXSSD2MJTD4G-H	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	R/W
DVD	Pioneer DVR-217	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install OS
DVD	ASUS BW-14D1XT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install OS

### 1.4. Keyboard/Mouse Compatibility Test

Keyboard/mouse Information		Result			Note
		Pass	Fail	N/A	
PS/2 Keyboard	ATake KJ-118	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	GoodVision JSKJ-8831	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PS/2 Mouse	Genius NetScroll 120	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Kinyo KM-V2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Keyboard	Microsoft 1366	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Logitech K200	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Mouse	Microsoft 1113	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Logitech M-U0003	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 1.5. USB Compatibility Test

USB Information		Result			Note
		Pass	Fail	N/A	
DVD ROM	Pioneer DVR-XD11T	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DVD ROM	ASUS-SDRW-08D2S-U	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DVD ROM	Pioneer DVR XD10T	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Blu-Ray	Pioneer BDR-XD04T	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Can play BD
USB Flash	USB3.0 Kingston DT Ultimate G2 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Flash	USB3.0 Transcend 8GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Flash	USB2.0 ADATA C802 2GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Flash	USB2.0 SanDisk 8GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



### 1.7. CFast Compatibility Test

CFast Information		Result			Note
		Pass	Fail	N/A	
Transcend	500 series CFast 16GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innodisk	DC1T-04GT21W1D Wide-Temp 4GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innodisk	CFast 3ME Series 64G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innodisk	CFast 3ME Series 16G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 1.8. Modular System Industrial Workstation Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
AC power outlet / inlet	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FSP FSP084-DMAA1
Power On / Off	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 1.9. Mechanism construction check

Test Item	Result			Note
	Pass	Fail	N/A	
Case construction check	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PCMCIA construction check	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
CFast Card construction check	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Component check	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## 2. Basic Function Test

### 2.1. Video Function Test

#### 2.1.1. Single Output Function Test

Hardware Information with Windows 7 Ultimate English Version 32 Bit Driver Version													
CPU	Intel® Celeron® Processor N2930 (2M Cache, up to 2.16 GHz)												
Memory	DSL DDR3L-1600 2GB SEC D3SS56081XL												
SATA HDD	TOSHIBA MQ01ABD032 320GB												
VGA	ASUS VG23AH 24" 1920*1080 /Dell 2713HM												
DVI	N/A												
HDMI	N/A												
Display port	N/A												
Color Quality	<input checked="" type="checkbox"/> 16bit <input type="checkbox"/> 24bit <input checked="" type="checkbox"/> 32bit												
Resolution	VGA			LVDS			HDMI			DP			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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1152X864	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<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 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 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"/>	
1280X960	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<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 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"/>	
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"/>	
1400X1050	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<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 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"/>	
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 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"/>	
1920X1200	<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"/>	
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"/>	
2048X1152	<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"/>	
2560X1440	<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"/>	
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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rotation(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 + LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

#### 2.1.3. Video Resolution Test

## Test points:

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

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

## 2.1.4. Video Resolution Test

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 G150XG01 V.0 / 15" / 1024*768 / 18bit (4:3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8_AU M150XN07 V.2 / 15" / 1024x768 / 24bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
9_Toshiba /12.1"/1280 x 768 x 18bit (16:9)	<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"/>	







## 2.2. Audio Function Test

[ ] No Support

Function Test	Result			Note	
	Pass	Fail	N/A		
L (Left) Channel	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
R (Right) Channel	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
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									
On Board LAN1	Intel I211 Gigabit LAN						MAC Address	00-11-A1-22-24-54		
On Board LAN2	Intel I211 Gigabit LAN						MAC Address	00-11-A1-22-24-55		
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"/>	S1/S3/S4/S5/DOS	
LAN Boot (PXE)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Internet Browser (DHCP Server)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

### 2.3.2. Throughput Test

DUT Platform Information:

<input type="checkbox"/>	Fedora Core 14 – Kernel
<input type="checkbox"/>	Cent OS5.6
<input checked="" type="checkbox"/>	Ubuntu 12.04 Installation failed.
<input type="checkbox"/>	Red Hat

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

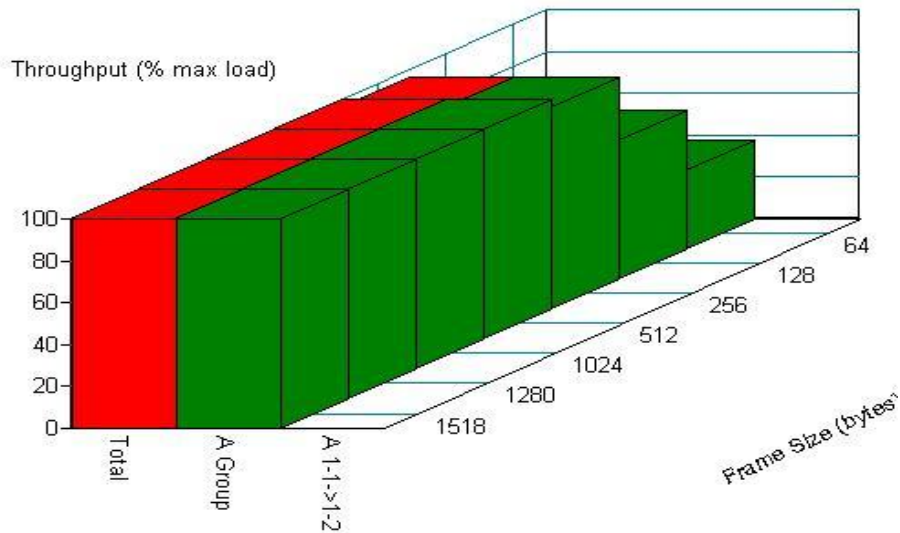
Graphics Media	Ubuntu12.04 Default setting
LAN	igb-4.1.2 igb-4.1.2
Audio Driver	Ubuntu12.04 Default setting
CPU information	Intel® Celeron® Processor J1900 (2M Cache, up to 2.42 GHz)

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:

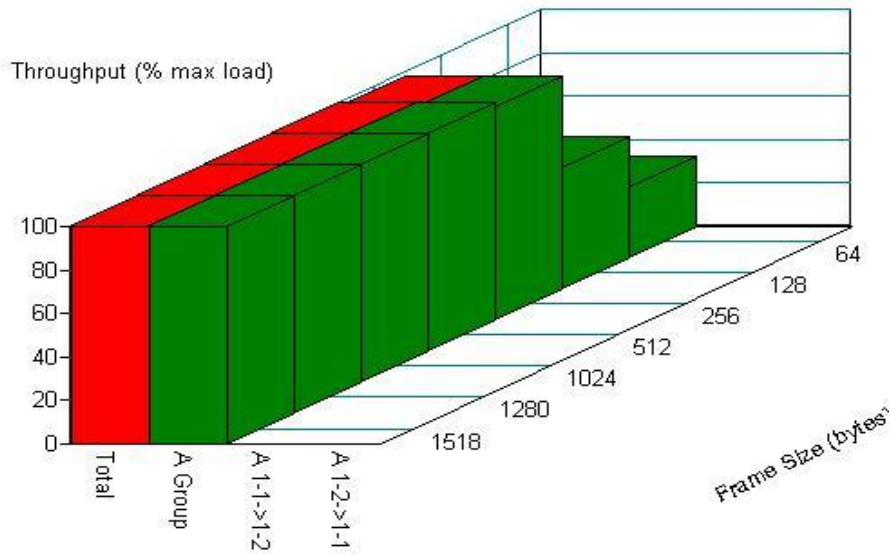
1. Half Direction (LAN1: Intel I211 Gigabit LAN → LAN2: Intel I211 Gigabit LAN)



Throughput vs Frame Size

Name/Frame size	64	128	256	512	1024	1280	1518
Total	37.3515625	65.96875	96.1328125	100	100	100	100
A Group	37.3515625	65.96875	96.1328125	100	100	100	100
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 LAN ← →LAN2: Intel I211 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	31.9375	55.140625	97.6796875	100	100	100	100
A Group	31.9375	55.140625	97.6796875	100	100	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

### 3. Integration Test

Hardware Information with Windows 7 Ultimate English SP1 32 Bit Driver Version	
CPU	Intel® Celeron® Processor J1900 (2M Cache, up to 2.42 GHz)
Memory	DSL DDR3L 1600 8GB CL11 1.35V SEC K4B4G0846B
HDD/CFD	WDC WD5000LPVT-22G33T0 2.5" 500GB/5400rpm
Chipset Information with Windows 7 Ultimate English SP1 32 Bit Driver Version	
Chipset Software	Intel Chipset Device Utility 10.0 (04/24/2014)
SOC Bridge	Intel® Bay Trail SoC
Super IO Chipset	Fintek F81866
VGA Chipset	Intel Atom Processor E3800 Series/Intel Celeron Processor N2920/J1900 37.15.0.1097 (9/9/2014)
Audio Chipset	Realtek High Definition Audio 6.0.1.7083 (11/05/2013)
Ethernet Chipset	Intel(R) i211 Gigabit Network Connection1 12.11.97.0 (03/11/2014)

#### 3.1. USB Port Integration Test

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

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

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

#### 3.3. COM Port Integration Test

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

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

Test Item	Result			Note
	Pass	Fail	N/A	
RS-422 for COM2	<input 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"/>	<ol style="list-style-type: none"> <li>The communication between the RS-422 port of two boards is linked by one 1.2km cable on Windows Terminal</li> <li>Confirm RS422 can work properly from G3 status</li> </ol>
RS-485 for COM2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use ICP CON I-7044D D/IO Module in Windows(Support Auto flow control)
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ol style="list-style-type: none"> <li>The communication between the RS-485 port of two boards is linked by one 1200m cable on Windows Terminal</li> <li>Confirm RS485 can work properly from G3 status</li> </ol>

### 3.5. Burn In Test

Under Room Temperature: 26 °C

OS: Windows 7 Ultimate English SP1

Test Item	Result			Note	
	Pass	Fail	N/A		
Burn In Test V8.0(1019) Duty: 100 Time: over 12 hours	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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	USB	2.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Note: COM PORT Speed Set to 115200.

### 3.6. Reboot Test

Under Room Temperature: 26 °C

OS:

Reboot Test	Result			Note
	Pass	Fail	N/A	
Reboot test for 1000 cycles (AP: Passmark rebooter.exe)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



## 4. Application Test

### 4.1. PCI-Express Function Test

Mini PCI Express Card	Function Test			Note
	Pass	Fail	N/A	
HUAWEI EM680 3G Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test with SIM card CN37
AzureWave AW-NB100H	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CN10,CN37
SATA Sil3132ME	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CN37 Set Gen1
COM-ME232s2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CN37
AzureWave AW-NB037 Wireless /blueTooth	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CN10,CN37

### 4.2. SSD Modules Compatibility Test

SSD HDD Compatibility Test:

Cable Type:  IDE  SATA2  MLC  SLC

Test Item	Result			Note
	Pass	Fail	N/A	
Transcend SSD 16G - TS16GSSD25S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Intel 520 120G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 4.3. Peripheral Compatibility- Storage Device Test

#### 4.3.1. Disk on module (SATA-DOM) Test

Test Item	Result			Note
	Pass	Fail	N/A	
Innodisk SATADOM-SV 3ME (DESSV-16GD07SC1SC-E93)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 4.4. Display port Converter Compatibility Test

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

## 5. Power Consumption Test

	Hardware Information with Windows 7 Ultimate English SP1 32 Bit Driver Version
<b>CPU</b>	Intel® Celeron® Processor N2930 (2M Cache, up to 2.16 GHz) 7.5W
<b>Memory</b>	DSL DDR3L 1600 8GB CL11 1.35V SEC K4B4G0846B
<b>HDD/CFD</b>	WDC WD5000LPVT-22G33T0 2.5" 500GB/5400rpm

### 5.1. AT/ATX Power Consumption

Please refer to the "Power Supply Electronics Test Report".

### 5.2. PC Health Status

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

Voltage Monitoring Test	Result			BIOS (V)	Actual (V)	Note
	Pass	Fail	N/A			
CPU Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	44°C	40.2°C	
System Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	40°C	36.2°C	
Fan1 Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A   RPM	N/A   RPM	
Vcore	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.864V	0.85V	
12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.144V	12.02V	
5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.087V	5.05V	
VDIMM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.376V	1.36V	
VCC3V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.408V	3.36V	
VSB3V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.408V	3.36V	
VSB5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.040V	5.05V	
VBAT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.168V	3.18V	

### 5.3. DC Power Switch

Test Environment	Switch	DC Power(9V~30V)		Note
(Normal Mode) Windows 7 with Prime 95 Full Loading Test	(+9V)	2.20	A	
	(+12V)	1.61	A	
	(+16V)	1.17	A	
	(+24V)	0.81	A	
	(+30V)	0.68	A	
Suspend in Windows 7 (S3)	(+9V)	0.04	A	
	(+12V)	0	A	
	(+16V)	0	A	
	(+24V)	0	A	
	(+30V)	0	A	
Max rush current during boot to Windows	(+9V)	2.02	A	
	(+12V)	1.59	A	
	(+16V)	1.06	A	
	(+24V)	0.80	A	
	(+30V)	0.64	A	
Windows 7 Without running any Software	(+9V)	1.71	A	
	(+12V)	1.35	A	
	(+16V)	0.91	A	
	(+24V)	0.63	A	
	(+30V)	0.52	A	

## 6. Time Accuracy Test

### 6.1. System Clock & RTC Clock Test

Under Room Temperature: 26 °C

Function	Item	Time Interval	Margin for error	Actual		Result			Note
						Pass	Fail	N/A	
RTC Clock in Power On Mode		24 hrs	+/-2 sec	+1	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RTC Clock in Power Off Mode		24 hrs	+/-2 sec	+0.5	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

### 6.2. Booting Timer Test

Installation	Actual		Note
System Booting Time	5.5	Sec	Press the Power Button till "Beep" Sound appears

### 6.3. Watchdog Timer Test

Use Function as below: Hi-safe <Hi-Saft 20150202>

[ ] No Support.

Time-Out Interval	Margin for error	Actual		Result			Note
				Pass	Fail	N/A	
10 sec	+/- 10%	10.4	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
60 sec	+/- 10%	60.8	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
255 sec	+/- 10%	256.4	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 Ubuntu14.04

[ ] No Support

Driver Information:

Chipset Software	System default
Graphics Media	System default
Audio Driver	System default
LAN Driver <I211>	igb-4.1.2
LAN Driver <I211>	igb-4.1.2

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Ubuntu14.04 Kernel 3.13.0 -23 -generic-pae #57-ubuntu	<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*1080
LVDS -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1024*768
<b>Network Function Test</b>				
Connect to Internet – LAN 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	I211
Connect to Internet – LAN 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	I211
<b>Audio Function Test</b>				
Play Audio Function Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	
Touch Function	<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
Halt	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Power Off Mode
ls / clear .....; cd /dev /ls -l	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Command instruction

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

[ ] No Support

[ ] x32 Driver Information:

Chipset Software	Intel Chipset Device Utility 10.0 (04/24/2014)
Graphics Media	Intel Atom Processor E3800 Series/Intel Celeron Processor N2920/J1900 37.15.0.1097 (9/9/2014)
Audio Driver	Realtek High Definition Audio 6.0.1.7083 (11/05/2013)
LAN Driver	Intel(R) i211 Gigabit Network Connection1 12.11.97.0 (03/11/2014)
	Intel(R) i211 Gigabit Network Connection1 12.11.97.0 (03/11/2014)

[ ] x64 Driver Information:

Chipset Software	Intel Chipset Device Utility 10.0 (04/24/2014)
Graphics Media	Intel Atom Processor E3800 Series/Intel Celeron Processor N2920/J1900 37.15.0.1097 (9/9/2014)
Audio Driver	Realtek High Definition Audio 6.0.1.7083 (11/05/2013)
LAN Driver	Intel(R) i211 Gigabit Network Connection1 12.11.97.0 (03/11/2014)
	Intel(R) i211 Gigabit Network Connection1 12.11.97.0 (03/11/2014)

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

Installation	Result			Note
	Pass	Fail	N/A	
English Windows 7 Ultimate ACPI Mode	<input 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"/>	1920*1080
LVDS -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1024*768
<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>				
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 2.0/3.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	USB2.0*3; USB3.0*1
Touch Function	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TPM Function	<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>				
Line Out Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	
<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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Restart	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hibernate (S4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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

[ ] No Support

[ ] x32 Driver Information:

Chipset Software	Intel Chipset Device Utility 10.0 (04/24/2014)
Graphics Media	Intel HD Graphics 10.18.10.3958 (09/26/2014)
Audio Driver	Realtek High Definition Audio 6.0.1.7083 (11/05/2013)
LAN Driver	Intel(R) i211 Gigabit Network Connection1 12.11.97.0 (03/11/2014)
	Intel(R) i211 Gigabit Network Connection1 12.11.97.0 (03/11/2014)

[ ] x64 Driver Information:

Chipset Software	Intel Chipset Device Utility 10.0 (04/24/2014)
Graphics Media	Intel HD Graphics 10.18.10.3958 (09/30/2014)
Audio Driver	Realtek High Definition Audio 6.0.1.7083 (11/05/2013)
LAN Driver	Intel(R) i211 Gigabit Network Connection1 12.11.97.0 (03/11/2014)
	Intel(R) i211 Gigabit Network Connection1 12.11.97.0 (03/11/2014)

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 AHCI 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"/>	1920*1080
LVDS -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1024*768
<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>				
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 2.0/3.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	USB2.0*3; USB3.0*1
Touch Function	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TPM function	<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>				
Line Out Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	
<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 7 Ultimate English SP1 32 Bit Driver Version
<b>CPU</b>	Intel® Celeron® Processor N2930 (2M Cache, up to 2.16 GHz) 7.5W
<b>Memory</b>	DSL DDR3L 1600 8GB CL11 1.35V SEC K4B4G0846B
<b>HDD/CFD</b>	WD WD6402AAEX 3.5" 640G/7200rpm

### 8.1. Advanced Test

Test Item		Result			Note	
		Pass	Fail	N/A		
Power Management	Power Mode	ATX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		AT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Restore AC Power Loss	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Power on/ Power off/ Last State
		ERP Function	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
	ACPI settings	Enable ACPI Auto Configuration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
		Enable Hibernation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
		Sleeps state (S3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Lock Legacy Resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Wake Configuration	Wake on Ring	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
		Wake on LAN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable
S5 RTC Wake Settings	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"/>		
Super IO Configuration	Serial port1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Serial port2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	RS232/422/485	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Serial port3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	RS232/422/485	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Serial port4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
CPU configuration	CPU information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
IDE configuration	Enable/Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	AHCI/IDE mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	SATA port0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Hot plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	SATA port1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Hot plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Touch Device	Enable/Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Trusted Computing	TPM SUPPORT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Clear TPM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
USB configuration	Legacy USB Support	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	USB Mass Storage Driver Support	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

### 8.2. Chipset Test

Test Item		Result			Note	
		Pass	Fail	N/A		
North Bridge	Primary Boot Display	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LVDS /CRT /VBIOS	
	IGD –LCD Control	LVDS Enable/Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		Flat Panel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1024*768
		Channel Select	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Single
		Backlight Level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0~100% DC: 100%=5.03V; 50%=2.38V; 0%=0.02V PWM: 100%=3.35V; 50%=1.71V; 0%=0V
		Color Depth	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	24bit
	Memory information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
South Bridge	PCIe configuration	Port0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable LAN CN27
		Port1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable /Disable LAN CN26
		Port2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable CN10
		Port3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enable/Disable CN37
	USB configuration	XHCI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	USB3.0 and 2.0 function
		USB2.0 EHCI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	USB2.0 function
		USB port0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rear IO USB3.0 port
		USB port1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rear IO USB2.0 port
		USB port2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CN37
		USB port3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	USB HUB, control CN10,CN17,CN18

### 8.3. Boot Test

Test Item	Result			Note
	Pass	Fail	N/A	
Boot up Numlock State	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quiet Boot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Launch Intel I211 PXE OpROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot From Hard Disk	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot From CDRom	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot From USB HDD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot From USB Floppy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot From USB CD-ROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot from LAN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



## 8.4. CMOS Backup / Clear CMOS Test

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

## 8.5. AAEON Tag Check Utility

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

## 8.6. Supervisor / User Password Test

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

## 8.7. Hi-safe Test

Test Item	Result			Note	
	Pass	Fail	N/A		
Version(20150311)	<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 10.4 sec
	1min	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 60.8sec
	255sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 256.2sec
	Auto Reload	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SMBus	SMBus IO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SMBus Address 0xF040
	Read Byte	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Slave Address A0h
	Read Word	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Result / Read	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Backlight Controller	DC Voltage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	PWM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CPU, SYS, SYS2

## 9. Performance Test

Hardware Information with Windows 7 Pro English Version 32 Bit Driver Version	
CPU	Intel® Celeron® Processor J1900 (2M Cache, up to 2.42 GHz)
Memory	DSL DDR3L 1600 2GB CL11 1.35V SEC K4B4G0846B
SATA HDD	TOSHIBA MK1060GSC 2.5" 100G/5400rpm

### 9.1. Performance Test

Test Result: (Display set 1024\*768 test)

Testing Software	Scope		Note
	AAEON	Ref.	
<b>PCMark2005</b>			Windows 7_32
PCMark	4326		PCMarks
CPU	4480		
Memory	3556		
Graphics	2852		
HDD	3667		
Benchmark (B)			
Average Efficiency		-	
<b>PCMark Vantage</b>			
PCMarks	3404		PCMarks
Memories	2262		
TV and Movies	2720		
Gaming	2606		
Music	3071		
Communications	3268	-	
Productivity	2632	-	
HDD	2091	-	
Benchmark (B)		-	
Average Efficiency			

Testing Software	Scope		Note
	AAEON	Ref.	
<b>CPUmark99</b>			Windows 7_32
CPU mark99	206	-	

Testing Software	Scope		Note
	AAEON	Ref.	
<b>3Dmark2006 v120</b>			Windows7_32
3Dmark Score	2527		
SM2.0 Score	817		
HDR/SM3.0 Score	1020		
CPU Score	2353		
Benchmark (B)		-	
Average Efficiency		-	

<b>3Dmark11 Professional Edition</b>		Windows 7_32	
<b>Performance 1280*720</b>			
3Dmark 11Score	P267		
Graphics Score	228		
Physics Score	1677		
Combined Score	276		
<b>Entry 1024*600</b>			
3Dmark 11Score	E421		
Graphics Score	357		
Physics Score	1639		
Combined Score	347		

Testing Software	Scope		Note
	AAEON	Ref.	
<b>Performance Test 7.0</b>			
PassMark Rating	562.2		
CPU Mark	1706.7		
2D Graphics Mark	153.6		
3D Graphics Mark	152.7		
Memory Mark	430.2		
Disk Mark	362.3		
CD Mark	-	-	

Testing Software	Scope		Note
	AAEON	Ref.	
<b>Windows experience index</b>			Windows 7_32
Processor	6.1		
Memory	5.5		
Graphics	4.3		
Gaming graphics	5.8		
Primary hard disk	5.1		

SATA Performance				
SATA HDD	TOSHIBA MK1060GSC 2.5" 100G/5400rpm			
CFast	Innodisk CFast 3ME 16GB			
CPU	Intel® Celeron® Processor J1900 (2M Cache, up to 2.42 GHz)			
Memory	DSL DDR3L 1600 8GB CL11 1.35V SEC K4B4G0846B			
OS	Windows7 32bit			
Item	Comment / (unit)	Software	Score	Note
Single HDD (SATA port 1) SATAII	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	19.0ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	2%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	43.6MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	96.7MB/s	
Single HDD CFast	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	0.1ms	

	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	5%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	194.6MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	187.7MB/s	

CFast Performance					
SATA HDD	TOSHIBA MK1060GSC 2.5" 100G/5400rpm				
CFast	Innodisk CFast 3ME 16GB				
CPU	Intel® Celeron® Processor J1900 (2M Cache, up to 2.42 GHz)				
Memory	DSL DDR3L 1600 8GB CL11 1.35V SEC K4B4G0846B				
OS	Windows7 32bit				
Item	Comment / (unit)	Software	Test Results	Score	Spec
CFast SATAIII	Transfer Size: 0.5 to 8192.0KB Total Length: 256MB	ATTO Disk Benchmark V2.47	Write Max	42.676MB/S	150MB/S
			Read Max	212.622MB/S	310MB/S

USB3.0 Performance				
USB Flash	Transcend JF700 USB3.0 8GB (Transcend Spec 52 MB/S)			
Item	Comment / (unit)	Software	Transfer Rate (MB/s)	Note
USB3.0 (Rear I/O USB3.0)	Maximum Write	ATTO Disk Benchmark	21.226 MB/s	
	Maximum Read	ATTO Disk Benchmark	54.229 MB/s	
USB2.0 (Rear I/O USB2.0 port 1)	Maximum Write	ATTO Disk Benchmark	21.140 MB/s	
	Maximum Read	ATTO Disk Benchmark	43.983 MB/s	
USB2.0 (Rear I/O USB2.0 port 2)	Maximum Write	ATTO Disk Benchmark	20.195 MB/s	
	Maximum Read	ATTO Disk Benchmark	43.790 MB/s	
USB2.0 (Rear I/O USB2.0 port 3)	Maximum Write	ATTO Disk Benchmark	20.825 MB/s	
	Maximum Read	ATTO Disk Benchmark	43.648 MB/s	

## 10. Negative Test

### 10.1 USB Keyboard Negative Test

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

### 10.2 Suspend S3 Negative Test

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