

Report NO:15P010001

BOXER-6403

Fanless Embedded Computer with Intel Atom Processor

P5 Test Report

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

Issue date

2015/03/25

Approval

KJ Wang

Test Engineer

Leo Liu

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"> 1. Rename document : [System Level Product P2-P3 Verification Test Plan & Report Template] 2. Chapter3:Add RS422 1.2KM/115200bps transmission test 3. Chapter3:BurninTest test add USB2.0/3.0. 4. Chapter5: Modify power consumption test item. 5. Chapter7: add Windows XP Professional English Version 32/64Bit and Windows 8 Pro English Version 32/64Bit test. 6. Chapter8: Change BIOS format from Award to AMI and add Hi-Safe, Hi-Manager test item. 7. Chapter9: Add SATA performance test and USB3.0 performance. 8. Remove Chapter10: Other Tests. 	
2014/10/03	P2P3-1401	<ol style="list-style-type: none"> 1. Rename document: [System Level Product P2-P3 Test report Template] 2. Remove platform information\test item and add driver folder. 3. Chapter2.1: add EDID check, DOS display, 3840*2160, hot plug. 4. Chapter2.2: modify from “dual display test” to “Multi display test. 5. Remove chapter 2.3 “Boot ROM to Novell 4.11 [RPL]” item 6. Chapter2.3.2: add “CPU information” 7. Chapter2.4 add test point. 8. Add chapter 4.10 Display port converter compatibility test. 9. Chapter7.1: remove “halt” test item. 10. Chapter7.2/7.3/7.4: add touch and TPM function test 11. Chapter9: update performance test program. 12. Add chapter 11. Negative Test. 	

Note :

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

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

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

Specification Validation

Main Specification

Item	Specification	Result			Note
		Pass	Fail	N/A	
Processor	Intel® Celeron® Processor N2807 (1M Cache, up to 2.16 GHz) Intel® Celeron® Processor N2930 (2M Cache, up to 2.16 GHz) Intel® Celeron® Processor J1900 (2M Cache, up to 2.42 GHz) Intel® Atom™ Processor E3825 (1M Cache, 1.33 GHz)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System Memory	DDR3L1333 SODIMM X 1, Max. 4GB/8GB(4GB for N2807, 8GB for J1900/N2930)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Storage	mSATA (half-size) space	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Video	HDMI x 1 18/24bit single channel Onboard LVDS x1 (internal) Support Dual independent display	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Rear I/O panel	Lockable DC jack x 1 HDMI x 1 RJ-45 x 2 for for RS-232/422/485 (BIOS selection) RJ-45 x 2 for for 10/100/1000Mbps GbE Intel LAN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Front I/O panel	Power Button USB 3.0 x 1 USB 2.0 x 3 DIO x 6 (DI x 4, DO x 2, , w/o isolation)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internal Connector	18/24 bit single channel LVDS x 1 USB 2.0 x1 DDR3L 204-pin SODIMM x 1 LPC connector x 1 Minicard x 2 Full x1: For 3G/4G/Wifi w/ SIM x 1 Half x1: For mSATA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Side I/O panel	Antenna hole x 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Expansion	Half Minicard x1 (mSATA) Full Minicard x1 w/ SIM slot (Minicard w/ SIM, BOM optional mSATA) One USB 2.0 pin header on board LPC connector onboard LVDS x1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Digital I/O Spec	Digital Input - Input Channels: 4 - Input Voltage: 0 to 20VDC at 25Hz - Dry Contacts _ Input Level _ Logic level 0: Close to GND _ Logic level 1: Open - Wet Contacts _ Input Level _ Logic level 0: +3V max. _ Logic level 1: 5 ~ 20V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

	Digital Output - Output Channels: 2 - On-state Voltage: open collector to 30 V - 30 mA max. load - Power Dissipation 150 mW				
Power Supply	DC 12V input with lockable connector ATX mode (optional for AT by Jumper/BIOS setting)	<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 32/64bits	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Windows 8.1 32/64bits	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Linux	Linux by Fedora kernel 2.6.3 up	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Environmental Specifications

Item	Specification
Operating temperature	-20°C ~ 40°C without Air _ mSATA -20°C ~ 55°C with Air _ mSATA
Storage temperature	-30°C ~ 80°C
Storage humidity	5 ~ 95% @ 40C, non-condensing
Vibration	3G RMS / 5 ~ 500Hz / operation – mSATA
Shock	20G peak acceleration (11 msec. duration) –mSATA
Drop	TBD (1 Corner, 3 Edge, 6 Surface)
EMC	CE /FCC class A

Note: Please refer Environment Test Report for detail information

Platform Information

Item	Device Information	Note
Product of department	PAA	
SYSTEM Model	BOXER-6403 A1.0	
PCB Model / Version	PBA-BT01 A0.2	
BIOS / Version	BOXER-6403 R0.8 (B403AM08) (12/05/2014) x64	
Driver folder	20141203	
CPU Type	Intel Celeron J1900 1.99GHz	
Memory Type	Transcend DDR3L-1600 8GB(SEC 431 BYKO K4B4G0846D)	
mSATA	Innodisk mini 3ME 32GB	
USB DVD-ROM	Lite-on 8X(eNAU808)	
LCD Monitor	CHIMEI 22"(22SH-L)	
LVDS	AUO B116XW02 V.0 / 11.6" / 1366x768 / 18bit (16:9)	
Operating System	<input checked="" type="checkbox"/> Fedora 20 Kernel 3.11.10-301.fc20.i686	
	<input checked="" type="checkbox"/> Windows 7 Ultimate 32/64Bit	
	<input checked="" type="checkbox"/> Windows 8.1 Enterprise English Version 32/64Bit	
Power Supply	DC Adapter : FSP 12V(FSP060-DBAB1)	
Chipset Information		
North Bridge	Intel Atom Processor E3800 Series/Intel Celeron Processor N2920/J1900	
Audio Chipset	Intel Display Audio 6.16.0.3150 (7/8/2014)	
Ethernet Chipset	Intel I211 Gigabit Network Connection 12.11.97.0 (3/11/2014)	
	Intel I211 Gigabit Network Connection #2 12.11.97.0 (3/11/2014)	

Summary Table of contents:

1. Hardware Function Test	8
1.1. CPU Compatibility Test	8
1.2. Memory Compatibility Test.....	8
2. Basic Function Test.....	9
2.1. Video Function Test	9
2.2. LAN Function Test	10
2.3. Optional Function Test	13
2.4. Modular System Industrial Workstation Function Test.....	14
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
4. Application Test	17
4.1. PCI-Express Function Test.....	17
5. Power Consumption Test	18
5.1. AT/ATX Power Consumption	18
5.2. PC Health Status	18
6. Time Accuracy Test.....	19
6.1. System Clock & RTC Clock Test.....	19
6.2. Watchdog Timer Test	19
7. O.S. Compatibility Test	20
7.1. English Fedora 20 – Kernel 3.11.10-301. fc20. i686	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.....	23
8.3. Boot Test	23
8.4. CMOS Backup / Clear CMOS Test	24
8.5. AAEON Tag Check Utility.....	24
8.6. Supervisor / User Password Test	24
8.7. Hi-safe Test.....	24
9. Performance Test	25
10. Negative Test	27
10.1 USB Keyboard Negative Test.....	27
10.2 Suspend S3 Negative Test.....	27

1. Hardware Function Test

1.1. CPU Compatibility Test

CPU Information	Result			Note
	Pass	Fail	N/A	
Intel Celeron J1900 1.99GHz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Intel Celeron N2930 1.83GHz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.2. Memory Compatibility Test

Memory Information	AAEON P/N	MEM V5.01 For 3 loops			Note
		Pass	Fail	N/A	
Transcend DDR3L-1600 8GB(SEC 431 BYKO K4B4G0846D)	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tanscend DDR3L-1600 4GB(SEC 407 XYKO K4B4G0846D)	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
InnoDisk DDR3L-1333 8GB(Skhynix H5TC4G83AFR)	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DSL DDR3L-1333 4GB(Skhynix H5TC4G83AFR)	N/A	<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 J1900 1.99GHz												
Memory	Transcend DDR3L-1600 8GB(SEC 431 BYKO K4B4G0846D)												
mSATA	Innodisk 32GB												
VGA	CHIMEI 22"(22SH-L)												
HDMI	CHIMEI 22"(22SH-L)												
Color Quality	<input checked="" type="checkbox"/> 16bit <input type="checkbox"/> 24bit <input checked="" type="checkbox"/> 32bit												
Resolution	VGA			DVI			HDMI1			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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1024X768	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1152X864	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X720	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X768	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X800	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X960	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X1024	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1360X768	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1366X768	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1400X1050	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1440X900	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1600X900	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1680X1050	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1920X1080	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
EDID check	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Hot plug	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rotation(0/90/ 180/270)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DOS Display	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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

2.1.2. Multi-Display Output Test

Selection	Output	Result			Note
		Pass	Fail	N/A	
Dual Display Clone	HDMI + 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

**2.1.4. Video Resolution Test**

LVDS Model	Result			Note
	Pass	Fail	N/A	
LVDS 1_AUO B116XW02 V.0 / 10.1" / 1280x800 / 18bit (16:9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2.2. LAN Function Test

[] No Support

Connect two computers via different speed LAN HUB by using "Ping" instruction (1000 times) Command: ping 172.16.11.92 -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 Network Connection					MAC Address		00-07-32-12-45-9C	
On Board LAN2		Intel I211 Gigabit Network Connection					MAC Address		00-07-32-12-45-9B	
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"/>		
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"/>		

2.2.2. Throughput Test

DUT Platform Information:

<input type="checkbox"/>	Fedora 15
<input type="checkbox"/>	Cent 5.5
<input checked="" type="checkbox"/>	Ubuntu 11.04 Kernel 2.6.38-8-generic
<input type="checkbox"/>	Red Hat

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

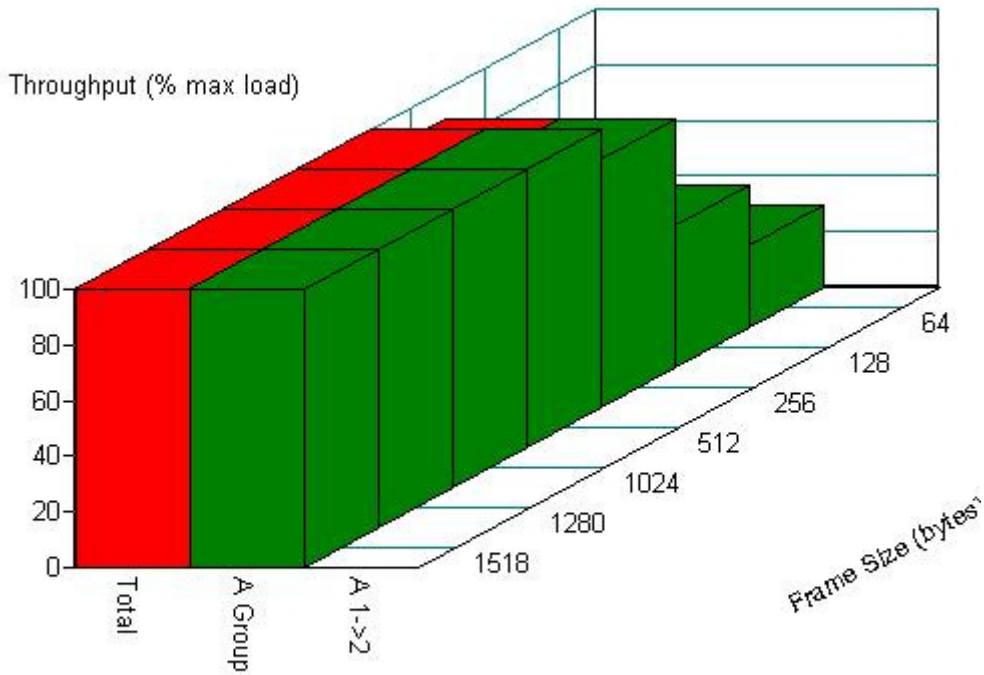
Graphics Media	Ubuntu Default setting
LAN	LAN1 → Intel I211 Gigabit Network Connection Ethernet: 5.0.3-k
	LAN2 → Intel I211 Gigabit Network Connection Ethernet: 5.0.3-k
Audio Driver	Ubuntu Default setting
CPU information	Intel Celeron J1900 1.99GHz

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:

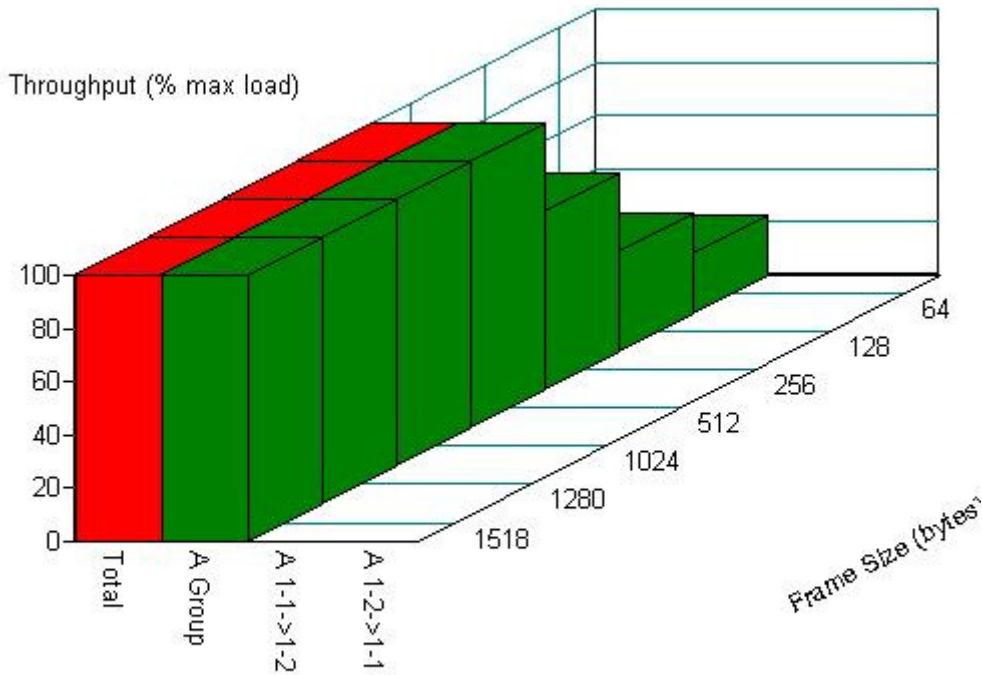
1. Half Direction (LAN1: Intel I211 Gigabit Network Connection Ethernet → LAN2: Intel I211 Gigabit Network Connection Ethernet)



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	28.84375	50.5	89.171875	100	100	100	100
A Group	28.84375	50.5	89.171875	100	100	100	100
A 1->2	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2. Binary Direction (LAN1: Intel I211 Gigabit Network Connection Ethernet → LAN2: Intel I211 Gigabit Network Connection Ethernet)



Throughput vs Frame Size

<u>Name/Frame size</u>	<u>64</u>	<u>128</u>	<u>256</u>	<u>512</u>	<u>1024</u>	<u>1280</u>	<u>1518</u>
Total	21.8828125	37.3515625	66.7421875	100	100	100	100
A Group	21.8828125	37.3515625	66.7421875	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

2.3. Optional Function Test

[] No Support

Test points:

3G: Download at least 1 MB file from internet. No error or crash while file transmission

GPS: TTFF less than 3 minutes

Wireless: Download at least 500 MB file from Server PC. No error or crash while file transmission

Bluetooth: Download / upload at least 5MB file with Bluetooth device.

Function Test	Result			Note
	Pass	Fail	N/A	
3G Module (HUAWEI EM820W)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Downlink Speed:840.21Kbps Uplink Speed:608.87kbps
Wireless LAN (Qualcomm Atheros AR5BWB225)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bluetooth (Qualcomm Atheros AR5BWB225)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2.4. Modular System Industrial Workstation Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
DC power outlet / inlet	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power On / Off	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power LED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3. Integration Test

Hardware Information with Windows 7 Ultimate English SP1 32 Bit Driver Version	
CPU	Intel Celeron J1900 1.99GHz
Memory	Transcend DDR3L-1600 8GB(SEC 431 BYKO K4B4G0846D)
mSATA	Innodisk 32GB
Chipset Information with Windows 7 Ultimate English SP1 32 Bit Driver Version	
Chipset Software	Intel Chipset Device Software 10.0 (2014-04-24)
North Bridge	Intel Atom Processor E3800 Series/Intel Celeron Processor N2920/J1900
VGA Chipset	Intel Atom Processor E3800 Series/Intel Celeron Processor N2920/J1900 36.15.0.1097 (9/9/2014)
Audio Chipset	Intel Display Audio 6.16.0.3150 (7/8/2014)
Ethernet Chipset	Intel I211 Gigabit Network Connection 12.11.97.0 (3/11/2014)
	Intel I211 Gigabit Network Connection #2 12.11.97.0 (3/11/2014)

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"/>	
Lite-on USB2.0 DVD-R/W eNAU808		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Hub Test (Connect USB Device) HUB Port1: USB Keyboard / HUB Port2: USB Mouse / HUB Port3: USB HDD								
USB 2.0 HUB PowerSync / USB 2.0 4 Port HU-155					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3.2. Digital I/O Port Test

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

3.3. COM Port Integration Test

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

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

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 V7.1(1006) 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"/>	
	GPGPU	<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.

4. Application Test

4.1. PCI-Express Function Test

Mini PCI Express Card	Function Test			Note
	Pass	Fail	N/A	
AzureWave WiFi & BT (AW-NB100H)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ANATEL WiFi & BT (WPEA-152GN)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wireless LAN (Qualcomm Atheros AR5BWB225)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bluetooth (Qualcomm Atheros AR5BWB225)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

5. Power Consumption Test

Hardware Information with Windows 7 Ultimate English SP1 32 Bit Driver Version	
CPU	Intel Celeron J1900 1.99GHz
Memory	Transcend DDR3L-1600 8GB(SEC 431 BYKO K4B4G0846D)
mSATA	Innodisk 32GB

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			
VCORE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.858	0.824	
+12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.21	12.320	
+5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.04	4.840	
VMEM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.368	1.384	
+3.3V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.29	3.312	
3VSB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.312	3.28	
5VSB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.040	5.03	
VBAT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.232	3.12	
CPU Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	36°C	34°C	
SYS Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	25°C	26.2°C	

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	-2 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RTC Clock in Power Off Mode		24 hrs	+/-2 sec	+1 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

6.2. Watchdog Timer Test

Use Function as below: Hi-safe 20141208

[] No Support.

Time-Out Interval	Margin for error	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%	60	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
255 sec	+/- 10%	255	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 Fedora 20 – Kernel 3.11.10-301. fc20. i686

[] No Support

Driver Information:

Chipset Software	System default
Graphics Media	System default
Audio Driver	System default
LAN Driver	Intel Gigabit Ethernet Network Driver 5.0.3-k

Install OS to mSATA:

Installation	Result			Note
	Pass	Fail	N/A	
English Fedora 20 3.11.10-301. Fc20.i686	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Type uname -a

Test Result:

Test Item	Result			Note
	Pass	Fail	N/A	
Display Function Test				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VGA + LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Network Function Test				
Connect to Internet – LAN 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Connect to Internet – LAN 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Base Function Test				
Mouse Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Keyboard Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DVD-ROM Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
X Windows Application				
Start Button Office	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Office function
X-Window	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Startx – Desktop in Linux
Command Test On Text Mode: Attention Delay Phenomenon				
uname -a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show information
Shutdown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Init 0 or shutdown -h now
Restart the Computer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Init 6 or shutdown -r now
ls / clear; cd /dev /ls -l	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Command instruction

7.2. Windows 7 Ultimate English Version 32/64Bit

No Support

x32 Driver Information:

Chipset Software	Intel Chipset Device Software 10.0 (2014-04-24)
Graphics Media	Intel Atom Processor E3800 Series/Intel Celeron Processor N2920/J1900 36.15.0.1097 (9/9/2014)
Audio Driver	Intel Display Audio 6.16.0.3150 (7/8/2014)
LAN Driver	Intel I211 Gigabit Network Connection 12.11.97.0 (3/11/2014) Intel I211 Gigabit Network Connection #2 12.11.97.0 (3/11/2014)

x64 Driver Information:

Chipset Software	Intel Chipset Device Software 10.0 (2014-04-24)
Graphics Media	Intel Atom Processor E3800 Series/Intel Celeron Processor N2920/J1900 37.15.0.1097 (9/9/2014)
Audio Driver	Intel Display Audio 6.16.0.3150 (7/8/2014)
LAN Driver	Intel I211 Gigabit Network Connection 12.11.97.0 (3/11/2014) Intel I211 Gigabit Network Connection #2 12.11.97.0 (3/11/2014)

Install OS to mSATA:

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

Test Results:

Test Item	Result			Note
	Pass	Fail	N/A	
Single Display				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot - Windows 7 Ultimate Advanced Options Menu				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Basic Function Test				
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN Function Test				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Start Menu				
Log off User	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shut down (S5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Standby	<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

[X] x32 Driver Information:

Chipset Software	Intel Chipset Device Software 10.0 (2014-04-24)
Graphics Media	Intel HD Graphics 10.18.10.3958 (9/26/2014)
Audio Driver	Intel Display Audio 6.16.0.3154 (9/9/2014)
LAN Driver	Intel I211 Gigabit Network Connection 12.11.97.0 (3/11/2014) Intel I211 Gigabit Network Connection #2 12.11.97.0 (3/11/2014)

[X] x64 Driver Information:

Chipset Software	Intel Chipset Device Software 10.0 (2014-04-24)
Graphics Media	Intel HD Graphics 10.18.10.3958 (9/26/2014)
Audio Driver	Intel Display Audio 6.16.0.3154 (9/9/2014)
LAN Driver	Intel I211 Gigabit Network Connection 12.11.97.0 (3/11/2014) Intel I211 Gigabit Network Connection #2 12.11.97.0 (3/11/2014)

Install OS to mSATA:

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

Test Results:

Test Item	Result			Note
	Pass	Fail	N/A	
Single Display				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot - Windows 7 Ultimate Advanced Options Menu				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Basic Function Test				
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN Function Test				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Start Menu				
Log off User	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shut down (S5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Standby	<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	
CPU	Intel Celeron J1900 1.99GHz
Memory	Transcend DDR3L-1600 8GB(SEC 431 BYKO K4B4G0846D)
mSATA	Innodisk 32GB

8.1. Advanced Test

Test Item		Result			Note
		Pass	Fail	N/A	
CPU Configuration	Intel Virtualization Technology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SATA Mode	IDE Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	AHCI Mode	<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"/>	
Dynamic Digital IO	DIO0~5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power Mode	ATX Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	AT Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
AC Power Loss	Last State	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Always On	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Always Off	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
S5 RTC Wake up	Wake system with Dynamic time	<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"/>	
SIO Configuration	Serial port 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RS232	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RS422	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RS485	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Serial port 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	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 3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.2. Chipset Test

Test Item			Result			Note
			Pass	Fail	N/A	
Display Control Configuration	Primary IGFX	VBIOS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Boot Display	LFP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	LVDS		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Panel1 Mode		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Single channel
	LVDS Backlight Level		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	LVDS Backlight Type		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
South Bridge Configuration	Audio Controller		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.3. Boot Test

Test Item		Result			Note
		Pass	Fail	N/A	
Quiet Boot		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Launch Intel I217 PXE OpROM		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Launch Intel I210 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(20141208)	<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
DIO	DIO1~4 High	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DIO1~4 Low	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DIO5~6 High	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DIO5~6 Low	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
WatchDog	10sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 11 sec
	1min	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 65sec
	255sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 270sec
	Auto Reload	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

9. Performance Test

Hardware Information with Windows 7 Ultimate English SP1 32 Bit Driver Version	
CPU	Intel Celeron J1900 1.99GHz
Memory	Transcend DDR3L-1600 8GB(SEC 431 BYKO K4B4G0846D)
mSATA	Innodisk 32GB

9.1. Performance Test

Test Result: (Display set 1920*1080 test)

Testing Software	Scope		Note
	AAEON	Ref.	
PCMark2005			
PCMark	5340	-	PCMarks
CPU	4871	-	
Memory	4450	-	
Graphics	2846	-	
HDD	13131	-	
PCMark Vantage			
PCMarks	5586	-	PCMarks
Memories	3642	-	
TV and Movies	3010	-	
Gaming	5417	-	
Music	6298	-	
Communications	4162	-	
Productivity	6552	-	
HDD	14297	-	

Testing Software	Scope		Note
	AAEON	Ref.	
3Dmark2006 v120			
3Dmark Score	1628	-	
SM2.0 Score	560	-	
HDR/SM3.0 Score	595	-	
CPU Score	2372	-	

3Dmark11 Professional Edition			
Performance 1280*720 (Default)			
3Dmark 11Score	X93	-	
Graphics Score	84	-	
Physics Score	1925	-	
Combined Score	94	-	

Testing Software	Scope		Note
	AAEON	Ref.	
Performance Test 7.0			
PassMark Rating	629.2	-	
CPU Mark	1542.0	-	
2D Graphics Mark	179.0	-	
3D Graphics Mark	149.6	-	
Memory Mark	478.7	-	
Disk Mark	815.4	-	

Testing Software	Scope		Note
	AAEON	Ref.	
Windows experience index			
Processor	6.1	-	
Memory	5.5	-	
Graphics	4.2	-	
Gaming graphics	5.7	-	
Primary hard disk	5.9	-	

SATA Performance				
mSATA	Innodisk 32GB			
CPU	Intel Celeron J1900 1.99GHz			
Memory	Transcend DDR3L-1600 8GB(SEC 431 BYKO K4B4G0846D)			
OS	Windows 7 Ultimate 32			
Item	Comment / (unit)	Software	Score	Note
Single HDD (mSATA port) SATAII	Long bench(32mb zones)-Random access / (ms) (smaller is better)	HD Tach version 3.0.4.0 free	19.2ms	
	Long bench(32mb zones)-CPU utilization / (%,+/-2%) (smaller is better)	HD Tach version 3.0.4.0 free	0%	
	Long bench(32mb zones)-Average read / (MB/s)	HD Tach version 3.0.4.0 free	193.8MB/s	
	Long bench(32mb zones)-Burst Speed / (MB/s)	HD Tach version 3.0.4.0 free	243.1MB/s	SATAII 150~300MB SATAIII up 300M/B

USB3.0 Performance				
USB Flash	Transcend USB3.0 32GB			
Item	Comment / (unit)	Software	Transfer Rate (MB/s)	Note
USB3.0	Maximum Read	ATTO Disk Benchmark	89MB/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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	LVDS Backlight control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	