

Report NO: 14E010008

EPB-CV101

Embedded Controller

P5 Verification Test Report

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

Issue date	Approval	Test Engineer
2014/04/29	Tom Lin	Danny Chen

Version Released Records

Date	Version	Change History	Note
2010/04/21	P3-1001	1. Re-composing test Items	
2010/06/01	P2P3-1001	1. New Test Report	
2010/06/21	P2P3-1002	1. Add BIOS -> SPI ROM Setting (South Bridge - GPIO)	
2010/12/02	P2P2-1003	1. New Test Report	
2011/02/23	P2P3-1101	1. Re-composing test Items	
2011/03/04	P2P3-1102	1. Add Specification Validation	
2012/05/29	P2P3-1201	1. Add Summary Table of DTS	

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 / CPU Board	EPB-CV101 R1.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Processor + Chipset	Intel Cedar View N2600/N2800/D2550(TBD) + Intel NM10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Super I/O Chipset	Fintek F81866D-I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System Memory	DDR3 800/1066 MHz, On board 2G RAM, up to 4 GB (D2550/N2800).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Storage	2.5" HDD bay x 1(SATA interface)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Front I/O panel	Power ON/OFF switch x 1 System ON LED x 1 HDD active LED x 1 LAN LED (Link + Active) x 3 sets USB 2.0 port x 2 Power button w/ power on LED COM port x2: COM 5/6: RS-232	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
On-board connector	USB connector x 2 SATA connector x 2 SATA power (5V) connector x 2 LVDS (optional)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Expansion	CFast x1 co-lay with CF connector Mini Card x 2 (One full size, one half size) SIM slot (optional)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power Supply	AT/ATX Power function DC Input 12V~24, with 2-pin Phoenix connector Over-Voltage Protection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Graphic Option	CRT / LVDS / DVI / DVI+CRT / DVI+LVDS / CRT+LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Watchdog Timer	1~255 step by software program	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ethernet	Boot from LAN support Wake on LAN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial Port	COM 1: RS-232/422/485 COM 2: RS-232/422/485 COM3~6: RS-232 COM1 & COM2 setting by BIOS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

O.S. Support

Item	Specification	Result	Note
Microsoft Windows	Windows XP Professional English SP3 32 Bit	☒	
Microsoft Windows	Windows 7 32 bit	☒	
Linux Fedora	Fedora Linux 10 or above	☒	

Environmental Specifications

Item	Specification
Operating temperature	0°C ~ 60°C

Note: Please refer Environment Test Report for detail information

Platform Information

Item	Device Information	Test Item
Model Name	EPB-CV101 R1.0	1,2,3,4,5,6,7,8,9
BIOS / Version	EPB-CV101 R1.0 (BCV1AM10) (02/18/2014)	1,2,3,4,5,6,7,8,9,
CPU Type	Intel ® Atom™ CPU N2600 1.60GHz Intel ® Atom™ CPU N2800 1.86GHz Intel ® Atom™ CPU D2550 1.86GHz	1,2,3,4,5,6,7,8,9,
Onboard Memory	DDR3 800 MHz , On Board 2G RAM	1,2,3,4,5,6,7,8,9,
SATA HDD	TOSHIBA MK1676GSX SATA 2.5 160GB	1,2,3,4,5,6,7,8,9,
USB DVD-ROM	Pioneer DVR-XD10T USB DVD	1,2,3,4,5,6,7,8,9,
VGA	ViewSonic VT2430-NT	1,2,3,4,5,6,7,8,9,
DVI	PHILIPS 244E2SB "24"	1,2,3,4,5,6,7,8,9,
LVDS	TFT LVDS / 1280*768 /18bit /12.1 /LM-200801	1,2,3,4,5,6,7,8,9,
Compact Flash CFast	Transcend Compact Flash 4GB	
Daughter Board	N/A	
Operating System	<input checked="" type="checkbox"/> Ubuntu 10.10	7-1
	<input checked="" type="checkbox"/> Windows 7 Ultimate 32 Bit	7-2
	<input checked="" type="checkbox"/> Windows XP Professional English SP3 32 Bit	7-3
Power Supply	ATX Power Supply : Not Support	
	AT Power Supply: Not Support	
	DC Adapter : DC Input 12V~24, with 2 pin Phoenix connector	1,2,3,4,5,6,7,8,9,
Chipset Information with Win7 Ultimate English SP1 32 Bit Driver Version		
Chipset Software	Intel ® Chipset Device Software 9.2.2.1034 (July/20/2011)	
South Bridge	Intel NM10	
Super IO Chipset	Fintek F81866D-I	
VGA Chipset	Intel ® Graphics Media Accelerator 3600 Serise 8.14.8.1086 (8/17/2012)	
Audio Chipset	Realtek High Definition Audio 6.0.1.6873 (03/29/2013)	
	Intel ® Display Audio 6.14.0.3081 (06/09/2011)	
Ethernet Chipset	Realtek RTL8111E PCIe GBE Giga LANs Controller 7.73.618.2013 (6/18/2013)	

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1. Hardware Test

1.1. CPU Compatibility Test

CPU Information	Result			Note
	Pass	Fail	N/A	
Intel® Atom™ CPU N2600 1.60GHz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prime95
Intel® Atom™ CPU N2800 1.86GHz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Intel® Atom™ CPU D2550 1.86GHz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.2. Memory Compatibility Test

Memory Information	MEM V4.0			Note
	Pass	Fail	N/A	
DDR3 800 MHz , On Board 2G RAM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.3. SATA Compatibility Test

1.3.1 Onboard SATA (IDE Mode) Test

SATA Device Information	Result			Note
	Pass	Fail	N/A	
WD WD3200BEVT SATA HDD 320GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Under Win 7
TOSHIBA MK1661GSY SATA HDD 160GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Under Win XP

1.3.2 Onboard SATA (RAID) Test [x] No Support

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

1.3.3 Onboard SATA (AHCI Mode) Test

SATA AHCI Test	Result			Note
	Pass	Fail	N/A	
TOSHIBA MK1665GSX SATA HDD 160GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Under Win 7
TOSHIBA MK5076GSX SATA HDD 500GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Under Win XP
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.4. IDE Compatibility Test

IDE Device Information	Result			Note
	Pass	Fail	N/A	
	<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"/>	

1.5. Compact Flash Compatibility Test

Compact Flash Information	Result			Note
	Pass	Fail	N/A	
Transcend Compact Flash 4GB	<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 Win7 Ultimate English SP1 32 Bit Driver Version										
CPU	Intel © Atom™ CPU N2800 1.86GHz									
Memory	DDR3 800 MHz , On Board 2G RAM									
HDD	TOSHIBA MK1665GSX SATA HDD 160GB									
VGA	ASUS VE228 "22"									
DVI	PHILIPS 244E2SB "24"									
LVDS	1366 x 768 24bit LG185XW010									
Color Quality	<input checked="" type="checkbox"/> 16bit <input type="checkbox"/> 24bit <input checked="" type="checkbox"/> 32bit									
Resolution	VGA			DVI			LVDS			Note
	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
640X480	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
800X600	<input 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"/>	
1024X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1152X864	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X600	<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"/>	
1280X720	<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"/>	
1280X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X800	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X960	<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"/>	
1280X1024	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1360X765	<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 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"/>	
1400X1050	<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"/>	
1440X900	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1600X900	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1600X1200	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1600X1050	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1680X1050	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1856X1392	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1920X1080	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rotation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rotation (0 / 90 /180 /270)

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

2.1.2. Dual Output Function Test

Selection	Output	Result			Note
		Pass	Fail	N/A	
Dual Display Clone	DVI + CRT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dual Display Clone	DVI + LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dual Display Clone	CRT + 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	
LVDS	1.TFT LVDS / 1280*768 /18bit /12.1 /LM-200801	<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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	8_AU M150XN07 V.2 / 15" / 1024x768 / 24bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	9_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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	13_AU M201UN02 V.5 / 20.1" / 1600x1200x48bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	14_AUO T370HW01 / 37" / 1920x1080 / 48bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	15_AUO M190PW01 V0 / 19"/1440X900/48 bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	







2.2. Audio Function Test

[] No Support

Function Test	Result			Note
	Pass	Fail	N/A	
L (Left) Channel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
R (Right) Channel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MIC Recorder	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6-channel mode for 5.1 speaker output	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
8-channel mode for 7.1 speaker output	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
S/P DIF function Test	Input	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Output	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2.3. LAN Function Test

[] No Support

Connect two computers via different speed LAN HUB by using "Ping" instruction (1000 times)										
1000Mbps LAN HUB		D-Link DGS-1008D								
100Mbps LAN HUB		HP J4095A 24 Ports								
10Mbps LAN HUB		SVEC FD916H								
OnBoard LAN1	Realtek RTL8111E PCIe GBE Giga LANs Controller						MAC Address	00-E0-4C-68-00-07		
OnBoard LAN2	Realtek RTL8111E PCIe GBE Giga LANs Controller						MAC Address	00-E0-4C-68-00-09		
On Board LAN3	Realtek RTL8111E PCIe GBE Giga LANs Controller						MAC Address	00-E0-4C-68-00-08		
LAN Speed	Link / Speed LED	Active LED	LAN 1			LAN 2 / 3			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"/>		
Boot ROM to Novell 4.11 [RPL]			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>		

2.3.2. Throughput Test

DUT Platform Information:

<input type="checkbox"/>	Fedora Core 13
<input type="checkbox"/>	Cent 5.5
<input checked="" type="checkbox"/>	Ubuntu 10.10 Kernel 2.6.35-22-generic #33
<input type="checkbox"/>	Red Hat

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

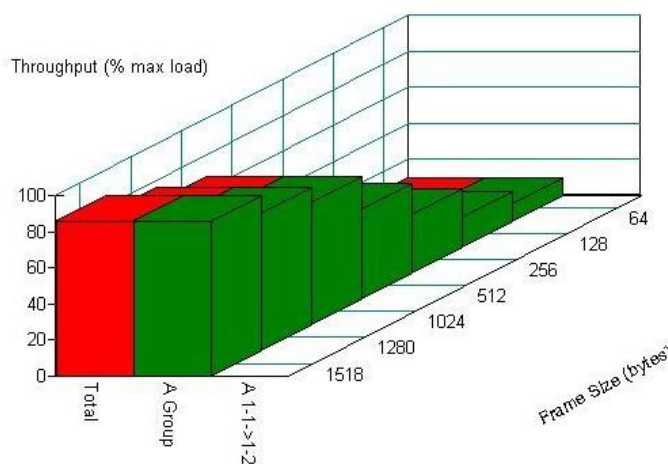
Graphics Media	Ubuntu Default setting
LAN	LAN1→ Realtek RTL8111E PCIe GBE Giga LANs Controller: r8168-8.036.00
	LAN2→ Realtek RTL8111E PCIe GBE Giga LANs Controller: r8168-8.036.00
	LAN3→ Realtek RTL8111E PCIe GBE Giga LANs Controller: r8168-8.036.00
Audio Driver	Ubuntu Default setting

SMB Platform Information:

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

Test Result:

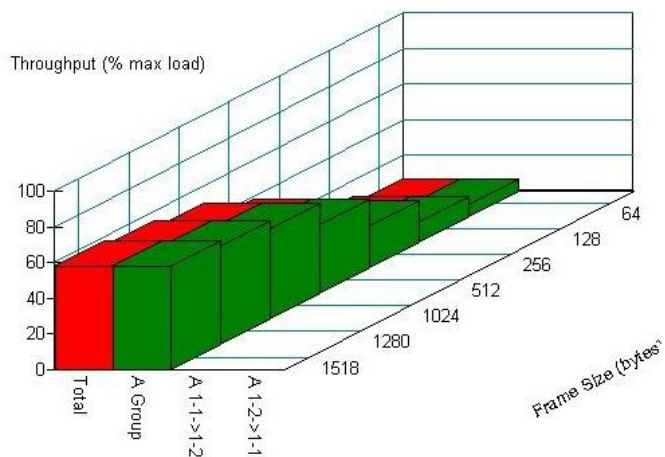
1.Half Direction (LAN1: Realtek RTL8111E PCIe GBE Giga LANs → LAN2: Realtek RTL8111E PCIe GBE Giga LANs)



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	9.5078125	16.46875	31.9375	48.953125	67.515625	75.25	85.3046875
A Group	9.5078125	16.46875	31.9375	48.953125	67.515625	75.25	85.3046875
A 1-1->1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A

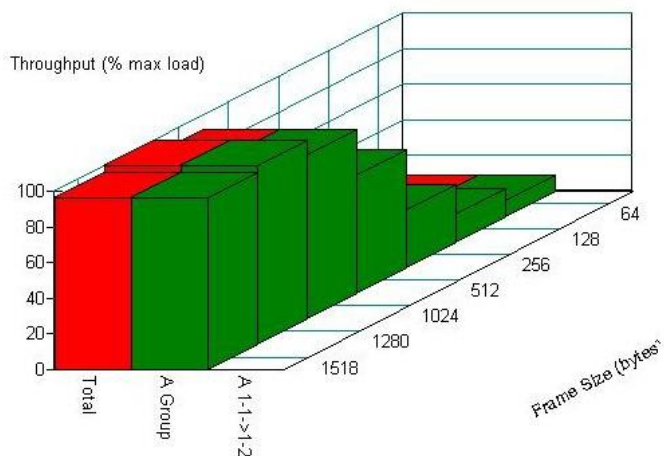
2. Binary Direction (LAN1: Realtek RTL8111E PCIe GBE Giga LANs → LAN2: I Realtek RTL8111E PCIe GBE Giga LANs)



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	6.4140625	11.0546875	22.65625	38.125	49.7265625	54.3671875	57.4609375
A Group	6.4140625	11.0546875	22.65625	38.125	49.7265625	54.3671875	57.4609375
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

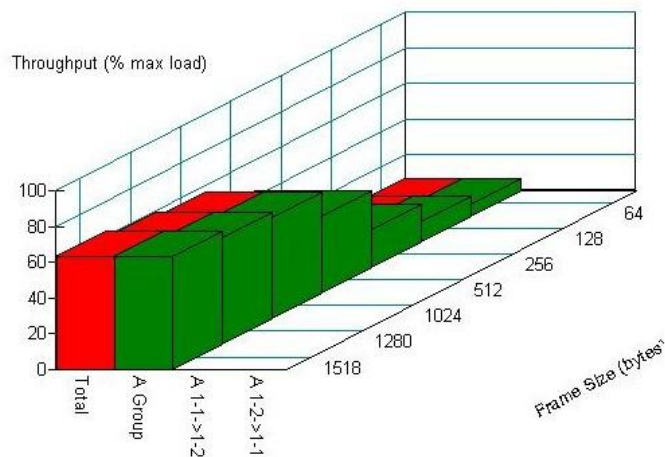
1.Half Direction (LAN1: Realtek RTL8111E PCIe GBE Giga LANs → LAN3: I Realtek RTL8111E PCIe GBE Giga LANs)



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	8.734375	15.6953125	31.9375	65.96875	91.4921875	100	96.1328125
A Group	8.734375	15.6953125	31.9375	65.96875	91.4921875	100	96.1328125
A 1-1->1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2. Binary Direction (LAN1: Realtek RTL8111E PCIe GBE Giga LANs → LAN3: Realtek RTL8111E PCIe GBE Giga LANs)



Throughput vs Frame Size

Name/Frame size	64	128	256	512	1024	1280	1518
Total	6.4140625	11.0546875	20.3359375	42.765625	55.9140625	59.0078125	62.875
A Group	6.4140625	11.0546875	20.3359375	42.765625	55.9140625	59.0078125	62.875
A 1-1->1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A 1-2->1-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2.4. Optional Function Test

[] No Support

Function Test	Result			Note
	Pass	Fail	N/A	
3G Module	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
GPS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Wireless LAN	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bluetooth	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

3. Integration Test

Hardware Information with XP Professional English SP3 32 Bit Driver Version	
CPU	Intel ® Atom™ CPU N2600 1.60GHz Intel ® Atom™ CPU N2800 1.86GHz Intel ® Atom™ CPU D2550 1.86GHz
Memory	DDR3 800 MHz , On Board 2G RAM
HDD	TOSHIBA MK1676GSX SATA 2.5 160GB

3.1. USB Port Integration Test – USB 2.0 Ports * 6

Item	USB Port	Boot			Function			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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Input:3V / Output (H):3V / Output (L):0V

3.3. COM Port Integration Test

Test Item	Result			Note
	Pass	Fail	N/A	
Serial Modem Ring In	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test by Modem (COM1~ COM6)
+12V	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test by Multimeter
+5V	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test by Multimeter

3.4. RS-232 / RS-422 / RS-485 Test

Test Item	Result			Note
	Pass	Fail	N/A	
RS-232 for “ COM1~COM6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test speed 300 / 9600 / 115200 bit/sec
RS-422 for “COM1” “COM2”	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The communication between the RS-422 port of two boards is linked by one 1200m cable on Windows Terminal
RS-485 for “COM1” “COM2”	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use ICP CON I-7044D D/IO Module in Windows(Support Auto flow control)
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The communication between the RS-485 port of two boards is linked by one 1200 m cable on Windows Terminal

3.5. LPT Port Test

Test Item	Result			Note
	Pass	Fail	N/A	
XEROX Phaser 3124 Laser Printer	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

3.6. Burn In Test

Under Room Temperature: 26 °C

Test Item	Result			Note
	Pass	Fail	N/A	
Burn In Test V7.0 Pro	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Note: COM PORT Speed Set to 115200.

4. Application Test

4.1. PCI Slot Function (PCI Adapter Card) Test

Adapter VGA Card	Set Simultaneous Display and Reboot			Note
	Pass	Fail	N/A	
CHAINTECH NVIDIA GeForce4 MX440-8X	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Adapter Sound Card	Play Sound			Note
	Pass	Fail	N/A	
Creative Sound BLASTER Live5.1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Adapter SCSI Card	Copy files to SCSI HDD			Note
	Pass	Fail	N/A	
ADAPTEC Ultra160 SCSI ASC-29160	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Adapter Image Capture Card	Connect to CCD			Note
	Pass	Fail	N/A	
I-VIEW CP-1400AS (with Age STD-477FAI CCD)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Adapter LAN Card	Connect to Internet			Note
	Pass	Fail	N/A	
Intel GD82559 10/100 Mbps Fast Ethernet Adapter	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
INTEL PWLA8391GTBLK Pro/1000 Giga LAN Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Adapter RAID Card	SATA Function Test			Note
	Pass	Fail	N/A	
ADAPTEC 1420SA RoHS 4-Port SATA II RAID	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

4.2. PCI-Express Function Test

PCI-Express x1	Function Test			Note
	Pass	Fail	N/A	
SUNIX SATA1414 eSATA & SATAII x1Express card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sysconnect SK-9E21D 10 /100/1000 Base-T Adapter PCI-Express x1 LAN Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
PCI-Express x4	Function Test			Note
	Pass	Fail	N/A	
Adaptec AAR-1430SA SATAII HostRAID Controllers PCI-Express x4 RAID Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
PCI-Express x16	Function Test			Note
	Pass	Fail	N/A	
ASUS EAX1600PRO/TD/256M/A (ATI Chipset) PCI-Express x16 VGA Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
WINFAST PX6200 TC TDH PCI-Express x16 VGA Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Express card	Function Test			Note
	Pass	Fail	N/A	
SUNIX SATA II Express card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
SunBox 34mm Giga LAN Express Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Mini PCI Express Card	Function Test			Note
	Pass	Fail	N/A	
AzureWave AW-037 802.11b/g/n + Blue Tooth	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Half Size
cFeon RAID Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Full Size
M-SATA Card	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

4.3. Mini PCI Card Compatibility Test

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

4.4. CardBus (PCMCIA) Compatibility Function Test

Device Item	Bit	Function Test			Note
		Pass	Fail	N/A	
Intel PRO/Wireless 2011B LAN PC Card (WPC2011BWW)	Slot 1 (Up)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[PC-200200]
	Slot 2 (Down)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Kingston datapack DP-PCM2 / 2GB (PC Card TypeII HDD)	Slot 1 (Up)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[PC-200201]
	Slot 2 (Down)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
PCi GW-NS54SG Cardbus Adapter Wireless LAN Type-II	Slot 1 (Up)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[PC-200502]
	Slot 2 (Down)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
PCi GW-NS54SG Cardbus Adapter Wireless LAN Type-II	Slot 2 (Down)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[PC-200502]

4.5. ISA Slot Function Test

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

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

4.6.1. Device List: PC/104 Module

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

4.6.2. Device List: PC/104+ Module

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

4.6.3. Device List: PCI-104 Module

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

4.6.4. Device List: PCI/104 Express Module

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

4.7. SSD Modules Compatibility Test

SSD HDD Compatibility Test:

Cable Type: IDE SATA2 MLC SLC

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

4.8. Peripheral Compatibility- Storage Device Test

4.8.1. Disk on Chip (DOC) Test

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

4.8.2. Disk on module (DOM) Test

Test Item	Result			Note
	Pass	Fail	N/A	
Transcend / TS512MDOM40V / 512MB / IDE 40 Pin	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Transcend / TS512MDOM44V / 512MB / IDE 44 Pin	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

5. Power Consumption Test

Hardware Information with XP Professional English SP3 32 Bit Driver Version	
CPU	Intel ® Atom™ CPU N2800 1.86GHz
Memory	DDR3 800 MHz , On Board 2G RAM
HDD	TOSHIBA MK1676GSX SATA 2.5 160GB

5.1. AT/ATX Power Consumption

Test Equipment					
Equipment	AC/DC Digital Clamp meter				
Manufacturer	KYORITSU				
Model name	2010				
Test Environment					
ATX Power Model	Seventeam P-CG / ST-450P-CG				
Power Supply	ATX Power				Note
(Full Loading Mode) Windows xp with Prime 95 Full Loading Test	(+12V)	1.37	A	16.44	W Prime95 Version 259
Full Loading Total Watt	30 (W)				
Win. Idle mode: Measure the current value when system in windows mode and without running any program	(+12V)	1.02	A	12.24	W
Idle Total Watt	12.96 (W)				
Power on - Boot sequency: Measure the maximum current value of between system power on and boot-up to O.S.	(+12V)	1.25	A	15.00	W
Power On Total Watt	43.68 (W)				
System into S3 mode	(+12V)	0.05	A	0.6	
System into S5 mode	(+12V)	0.03	A	0.36	
Suspend Total Watt	0.96 (W)				

5.2. PC Health Status

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

Voltage Monitoring Test	Result			BIOS (V)	Actual (V)	Note
	Pass	Fail	N/A			
CPU Temp	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	47°C	44°C	
System Temp	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	43°C	41°C	
CPU VCore	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.976V	1.08V	
1.5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.544V	1.51V	
GFX-VCC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1V	1.12V	
12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.432V	12.25V	

6. Time Accuracy Test

6.1. System Clock & RTC Clock Test

Under Room Temperature: 26 °C

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

6.2. Booting Timer Test

Installation	Actual		Note
System Booting Time	3.7	Sec	Press the Power Button till "Beep" Sound appears

6.3. Watchdog Timer Test

Use Function as below:

[] No Support.

Time-Out Interval	Criteria	Actual		Result			Note
				Pass	Fail	N/A	
10 sec	+/-10%	10	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hi-Safe Utility
60 sec	+/-10%	60	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
255 sec	+/-10%	251	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Note : Under Room Temperature: 26°C / DOS Mode

7. O.S. Compatibility Test

7.1. English Ubuntu 10.10 Kernel 2.6.35-22-generic #33

[] No Support

Driver Information:

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

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Ubuntu 10.10 Kernel 2.6.35-22-generic #33	<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"/>	
DVI -- Full Screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
LVDS -- Full Screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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"/>	
Connect to Internet – LAN 3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio Function Test				
Play Audio Function Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Play Audio Test
Base Function Test				
USB Mouse Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Keyboard 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
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 Software 9.2.2.1034 (July/20/2011)
Graphics Media	Intel ® Graphics Media Accelerator 3600 Serise 8.14.8.1086 (8/17/2012)
Audio Driver	Realtek High Definition Audio 6.0.1.6873 (03/29/2013) Intel ® Display Audio 6.14.0.3081 (06/09/2011)
LAN Driver	Realtek RTL8111E PCIe GBE Giga LANs Controller 7.73.618.2013 (6/18/2013)

No Support

x64 Driver Information:

Chipset Software	
Graphics Media	
Audio Driver	
LAN Driver	

Install OS to SATA HDD :

Installation	Result			Note
	Pass	Fail	N/A	
English Windows 7 X86 Ultimate ACPI Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SATA set to IDE mode
English Windows 7 X86 Ultimate ACPI Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SATA set to AHCI mode

Test Results:

Test Item	Result			Note
	Pass	Fail	N/A	
Single Display				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS-- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DVI - 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				
PS/2 Mouse and Keyboard	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CF Card	<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"/>	
LAN3 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio Function Test				
Line Out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Line In Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Microphone Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
S/P DIF Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Start Menu				
Log off User	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shut down (S5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Standby (S3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Restart	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hibernate (S4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

7.3. Windows XP Professional English Version 32/64Bit

[] No Support

[X] x32 Driver Information:

Chipset Software	Intel © Chipset Device Software 9.2.2.1034 (July/20/2011)
Graphics Media	Intel © Corporation Atom N2000/D2000 Series Embedded Graphics Driver 1.15.0.3190 (9/18/2012)
LAN Driver	Realtek RTL8111E PCIe GBE Giga LANs Controller 5.792.1208.2011 (12/8/2011)
Audio Driver	Realtek High Definition Audio 5.0.0.6299 (1/25/2011)

[X] No Support

[] x64 Driver Information:

Chipset Software	
Graphics Media	
LAN Driver	
Audio Driver	

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows XP 32bit Professional	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SATA set to IDE mode
English Windows XP 32bit Professional	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SATA set to AHCI mode

Test Results:

Test Item	Result			Note
	Pass	Fail	N/A	
Single Display				
VGA -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LVDS-- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DVI - Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot - Windows XP Professional Advanced Options Menu				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Basic Function Test				
PS/2 Mouse and Keyboard	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CF Card	<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"/>	
LAN3 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio Function Test				
Line Out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Line In Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Microphone Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
S/P DIF Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Start Menu				
Log off User	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shut down (S5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Standby (S3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Restart	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hibernate (S4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8. BIOS Function Test

CPU	Intel ® Atom™ CPU N2800 1.86GHz
Memory	DDR3 800 MHz , On Board 2G RAM
HDD	TOSHIBA MK1676GSX SATA 2.5 160GB

8.1. Advanced Test

Test Item		Result			Note
		Pass	Fail	N/A	
ACPI settings	Enable Hibernation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Sleeps state (S1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Sleeps state (S3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Both S1 & S3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Sleeps state (Disable)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Wake on Ring	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RTC Wake Setting	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wake system with Fixed Time Wake system with Dynamic Time
CPU Configuration	Hyper-threading	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IDE Configuration	SATA controller	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	AHCI mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	IDE 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"/>	
COM Port Configuration F81866	Serial Port 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Disable & Enable
	Serial Port 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Serial Port 3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Serial Port 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Serial Port 5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Serial Port 6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	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"/>	

6.2 Chipset Test

Test Item	Setting Test	Result			Note	
		Pass	Fail	N/A		
Host Bridge	Fixed Graphics Memory size 128MB/256MB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
South Bridge	Onboard Device	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Power Mode	AT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		ATX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Restore AC Power loss	PWR off	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		PWR on	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Last State		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

8.1. Boot Sequence Test

Test Item	Result			Note
	Pass	Fail	N/A	
Quiet Boot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Launch LAN 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 FDD	<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 USB FDD	<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"/>	

8.5. CMOS Backup / Clear CMOS Test

Test Item	Result			Note
	Pass	Fail	N/A	
CMOS Backup	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Clear CMOS Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	JP9 Jumper

8.5.1 After Clear CMOS , Display will show " CMOS Checksum Error"

Test Item	Result			Note
	Pass	Fail	N/A	
CMOS Checksum Error	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	AMI BIOS not support

8.6. AAEON Tag Check Utility

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

8.10. Supervisor / User Password Test

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

9. Performance Test

Hardware Information with Win7 Ultimate SP1 32 Bit Driver Version	
CPU	Intel ® Atom™ CPU N2800 1.86GHz
Memory	DDR3 800 MHz , On Board 2G RAM
HDD	TOSHIBA MK1676GSX SATA 2.5 160GB

9.1. Performance Test

Test Result: Display set

Testing Software	Scope		Note
	AAEON	Ref.	
PCMark2002			Only for Windows 7
CPU	N/A	-	
Memory	7727	-	
HDD	1757	-	
Benchmark (A)	-	-	
PCMark2005			Windows 7
PCMark	--	-	PCMarks
CPU	2261	-	
Memory	2967	-	
Graphics	709	-	
HDD	4853	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	

Testing Software	Scope		Note
	AAEON	Ref.	
3Dmark2003 v360			Only for Windows 7
3Dmark Score	1496	-	
CPU Score	305	-	
Benchmark (A)	-	-	
3Dmark2006 v120			Windows 7
3Dmark Score	331	-	
CPU Score	969	-	
SM 2.0	129	-	
HDR/SM 3.0	101	-	

Testing Software	Scope		Note
	AAEON	Ref.	
Final Reality V1.01—BenchMark Test			Windows 7
2D image	25.37	-	Reality marks
3D	3.45	-	
Bus transfer	12.00	-	
Overall	11.31	-	
Benchmark (A)	-	-	
Testing Software	Scope		Note

	AAEON	Ref.	
PCMark7			
PCMark	798	-	
CPU	-	-	
Memory	-	-	
HDD	-	-	
Benchmark (A)	-	-	
PCMark Vantage			
PCMarks	2145	-	
TV and Movies	1477	-	
Memories	919	-	
Music	2492	-	
Communications	1653	-	
Productivity	1891	-	
HDD	2909	-	
Gaming	1427	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	

Testing Software	Scope		Note
	AAEON	Ref.	
Performance Test 7.0			
PassMark Rating	401.8	-	
CPU Mark	824.6	-	
2D Graphics Mark	143.4	-	
3D Graphics Mark	111.0	-	
Memory Mark	272.8	-	
Disk Mark	505.2	-	
Benchmark (A)	-	-	