

Report NO: 161010012

FWS-2252

INTEL BayTrail SoC 4 LANs Network Appliance

System Level Product

Compatibility Test Report

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

Issue date	QE Manager	Test Engineer
2016-06-06	KJ Wang	Louie Lee

Version Released Records

Date	Version	Change History	Note
5/26/2015	C0	1. Add UEFI,GPS,CANBUS,POE, Cold boot test item	

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	
Form Factor	Desktop 4-port Network Appliance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Processor	Onboard Intel Bay Trail Atom E3800 series/Celeron J1900 SoC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Chipset	BayTrail	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System Memory	1 x 204-pin DDR3(L) 1066/1333MHz SoDIMM up to 8GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
VGA controller	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Ethernet	INTEL i211 (Co-lay with INTEL i210), Gigabit Ethernet x 4 (Optional 1 pair bypass)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BIOS	AMI BIOS ROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial ATA	1 x SATA II port on board	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial Port	1 x RJ-45 Console	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Keyboard and Mouse	Reserve pin-header	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Universal Serial Bus	2 x USB 2.0 Type A on I/O side 1 x USB 3.0 Type A on I/O side	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Expansion Interface	Mini-Card socket x 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RTC	Internal RTC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Watchdog Timer	1~255 step by software programmable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Storage	CompactFlash™ socket x 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power Requirement	1 x 12V DC power in connector / 40W Power Adapter 4-pin DC power out connector for HDD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Rear I/O panel	2 x USB 2.0 Ports 1 x USB 3.0 Ports 4 x RJ-45 Ports 1 x RJ-45 Console 1 x 12V DC Power Input 1 x Software Reset Switch 1 x VGA Port (Optional)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Front I/O panel	1 x Power LED 1 x Status LED 1 x HDD Active LED 8 X LAN LEDs	<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 (32/64 bit)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Windows 8.1 (32/64 bit)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Linux	Cent OS 5.2 or above, X86-32 Bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Linux Fedora	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Yocto* Tool based Embedded Linux	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Platform Information

Item	Device Information	Note
Model Name	FWS-2252	
BIOS / Version	FWS-2252 R1.1(K252AM11)(03/25/2016)	
Driver	FWS-2250\20140904	
CPU Type	Intel® Celeron® Processor J1900(2M Cache, up to 2.42 GHz)	
Memory	Transcend DDR3L 1333 SO-DIMM 2G	
Compact Flash	Innodisk iCF 1ME 32GB	
USB DVD-ROM	Pioneer DVR-XD10T USB DVD	
SATA HDD	Toshiba MQ01ABF050 500GB	
VGA	Dell U2713HM	
Display Port	N/A	
LVDS	N/A	
Daughter Board	N/A	
Operating System	<input checked="" type="checkbox"/> English Ubuntu 14.04 Kernel 3.13.0-32-generic	
	<input checked="" type="checkbox"/> Windows 7 Ultimate 32 / 64 bit	
	<input checked="" type="checkbox"/> Windows 8.1 Enterprise 32 / 64 bit	
Power Supply	ATX Power Supply : No Support	
	AT Power Supply: No Support	
	DC Adapter : FSP FSP060-DBAE1 DC 12V Power Adapter	
Chipset Information with Windows7 Ultimate English SP1 Driver Version		
Chipset Software	Intel ® Chipset Device Software 10.0 (04/24/2014)	
South Bridge	Intel Bay Trail SOC	
VGA Chipset	Intel ® Atom™ Processor E3800 Series / Intel ® Celeron Processor N2920/J1900 36.15.0.1091 (6/26/2014)	
Ethernet Chipset	Intel ® I211 Gigabit Network Connection 12.11.97.0 (3/11/2014)	

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1. Hardware Test

1.1. CPU Compatibility Test

CPU Information	Result			Note
	Pass	Fail	N/A	
Intel® Celeron® Processor J1900(2M Cache, up to 2.42 GHz)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.2. Memory Compatibility Test

Memory Information (a. Information and frequency should show correct value. b. Memtest result should not error or halt)	AAEON P/N	Result			Note
		Pass	Fail	N/A	
DDR3L SO-DIMM					
Transcend DDR3L-1600 2GB(SEC 501 BYMA K4B2G0846Q)	AP-DR968D3002 GK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*
Transcend DDR3L-1600 4GB(SEC 446 XYKO K4B4G0846D)	AP-DR968D3004 G6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transcend DDR3L-1600 8GB(SEC 443 BYKO K4B4G0846D)	968D3008G7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
InnoDisk DDR3L-1600 2GB(SEC 434 BYKO K4B2G0846Q)	AP-DR968D3002 GX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
InnoDisk DDR3L-1600 4GB(SEC 425 BYKO K4B4G0846D)	968D3004GZ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
InnoDisk DDR3L-1600 8GB(SEC 446 BYKO K4B4G0846D)	968D3008GW	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.3. Compact Flash Compatibility Test

Compact Flash Information	Result			Note
	Pass	Fail	N/A	
Innodisk iCF9000 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innodisk iCF9000 64GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innodisk iCF8000 4GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innodisk iCF4000 Industrial 16GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innodisk iCF 1ME 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transcend Industrial Ultra 4GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transcend 266x 4GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ADATA Speedy 1GB	<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® Celeron® Processor J1900(2M Cache, up to 2.42 GHz)									
Memory	Transcend DDR3L 1600 4GB SEC K4B4G0846D *2									
Compact Flash	TOSHIBA MQ01ABF050 2.5" 500GB									
VGA	Dell U2713HM									
D-Port	N/A									
LVDS	N/A									
Color Quality	<input checked="" type="checkbox"/> 16bit <input type="checkbox"/> 24bit <input checked="" type="checkbox"/> 32bit									
Resolution	VGA			D-Port			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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1024X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1152X864	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X600	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X720	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X800	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X960	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X1024	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1360X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1366X768	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1400X1050	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1440X900	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1600X900	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1856X1392	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1920X1080	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2048X1152	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rotation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Rotation (0 / 90 /180 /270)

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

2.1.2. 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"/>	

2.2. 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			Accton Desktop-3005 5 Ports						
10Mbps LAN HUB			SVEC FD916H						
OnBoard LAN1	Intel® I211 Gigabit Network Connection					MAC Address	00-A0-C9-00-00-8B		
OnBoard LAN2	Intel® I211 Gigabit Network Connection					MAC Address	00-A0-C9-00-00-8C		
OnBoard LAN3	Intel® I211 Gigabit Network Connection					MAC Address	00-A0-C9-00-00-8D		
OnBoard LAN4	Intel® I211 Gigabit Network Connection					MAC Address	00-A0-C9-00-00-8E		
LAN Speed	Link / Speed LED	Active LED	LAN 1/2			LAN 3/4			Note
			Pass	Fail	N/A	Pass	Fail	N/A	
1000Mbps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
100Mbps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10Mbps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wake On LAN			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	S3/S4/S5
LAN Boot (PXE)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internet Browser (DHCP Server)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3. Integration Test

Hardware Information with Win7 Ultimate English SP1 32 Bit Driver Version	
CPU	Intel® Celeron® Processor J1900(2M Cache, up to 2.42 GHz)
Memory	Transcend DDR3L 1600 4GB SEC K4B4G0846D *2
HDD	TOSHIBA MQ01ABF050 2.5" 500GB

3.1. USB Port Integration Test (USB 3.0 x 1 / USB 2.0 x 2)

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)								
USB 2.0 HUB PowerSync / USB 2.0 4 Port HU-155					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Benchmark Test								
USB3.0 Read Speed					125MB/s			ATTO
USB2.0 Read Speed					44MB/s			

3.2. Console Port Integration Test

Test Item		Result			Note
		Pass	Fail	N/A	
Console redirection	BIOS display/control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DOS display/control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3.3. Reset Switch Test

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

4. Application Test

4.1. PCI-Express Function Test

Mini PCI Express Card	Function Test			Note
	Pass	Fail	N/A	
AzureWave AW-037 802.11b/g/n + Blue Tooth	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Half Size
AzureWave NB-100 802.11b/g/n + Blue Tooth	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Half Size

5. Power Consumption Test

Hardware Information with Windows7 Ultimate English SP1 32 Bit Driver Version	
CPU	Intel® Celeron® Processor J1900(2M Cache, up to 2.42 GHz)
Memory	Transcend DDR3L 1600 4GB SEC K4B4G0846D *2
HDD	TOSHIBA MQ01ABF050 2.5" 500GB

5.1. PC Health Status

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

Voltage Monitoring Test	Result			BIOS (V)	Note
	Pass	Fail	N/A		
CPU Temp	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	45°C	
System Temp	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	46°C	
System FAN Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8544RPM	Spec: 8000+-20%
VCORE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.828V	
1.35V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.368V	
12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.856V	
5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.00V	
1.8V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.812V	
5VSB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.992V	
VBAT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.168V	

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	-2	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RTC Clock in Power Off Mode		24 hrs	+/-2 sec	+0	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

6.2. Booting Timer Test

Installation	Actual		Note
System Booting Time	10	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%	9.8	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hi-Safe Ver. 20150630
60 sec	+/-10%	60.1	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
255 sec	+/-10%	256	Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Note : Under Room Temperature: 26°C /

7. O.S. Compatibility Test

7.1. English Ubuntu 14.04 Kernel 3.13.0-32-generic

[] No Support

Driver Information:

Chipset Software	System default
Graphics Media	System default
Audio Driver	N/A
LAN Driver	Intel i211 Igb-5.3.2/ Intel Gigabit Ethernet Network Driver.

Install OS to SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Ubuntu 14.04 Kernel 3.13.0-32-generic	<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"/>	2048*1150
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"/>	
Connect to Internet – LAN 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio Function Test				
Play Audio Function Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	
PS2 KB & MS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Console	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	minicom
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-P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Power Off Mode
ls / clear; cd /dev /ls -l	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Command instruction

7.2. Windows 7 Ultimate English Version 32/64Bit

[X] x32 Driver Information:

Chipset Software	Intel @ Chipset Device Software 10.0 (04/24/2014)
Graphics Media	Intel @ Atom™ Processor E3800 Series / Intel @ Celeron Processor N2920/J1900 36.15.0.1091 (6/26/2014)
LAN Driver	Intel @ I211 Gigabit Network Connection 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 @ Atom™ Processor E3800 Series / Intel @ Celeron Processor N2920/J1900 37.15.0.1091 (6/26/2014)
LAN Driver	Intel @ I211 Gigabit Network Connection 12.11.97.0 (3/11/2014)

Install OS to SATA HDD :

Installation	Result			Note
	Pass	Fail	N/A	
English Windows 7 Ultimate 32bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SATA set to AHCI mode
English Windows 7 Ultimate 64bit	<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"/>	2048*1152
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"/>	
USB 2.0/3.0 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"/>	
LAN4 --- 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 (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 8.1 Enterprise English Version 32/64Bit

[X] x32 Driver Information:

Chipset Software	Intel ® Chipset Device Software 10.0.21 (4/24/2014)
Graphics Media	Intel ® HD Graphics 10.18.10.3740 (07/04/2014)
LAN Driver	Intel ® I211 Gigabit Network Connection 12.11.97.0 (3/11/2014)

[X] x64 Driver Information:

Chipset Software	Intel ® Chipset Device Software 10.0.21 (4/24/2014)
Graphics Media	Intel ® HD Graphics 10.18.10.3740 (07/04/2014)
LAN Driver	Intel ® I211 Gigabit Network Connection 12.11.97.0 (3/11/2014)

Install OS to CF Card:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows 8.1 32bit Enterprise	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
English Windows 8.1 64bit Enterprise UEFI 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"/>	2048*1152
Boot – Windows 8 Enterprise Advanced Options Menu				
Safe Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	msconfig
Basic Function Test				
PS/2 Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
USB 2.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB 3.0 Removable Devices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Console	<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"/>	
LAN4 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Start Menu				
Sing Out	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shut down (S5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Standby (S3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Restart	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hibernate (S4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8. BIOS Function Test

Hardware Information with Win7 Ultimate SP1 32 Bit Driver Version	
CPU	Intel® Celeron® Processor J1900(2M Cache, up to 2.42 GHz)
Memory	Transcend DDR3L 1600 4GB SEC K4B4G0846D *2
HDD	TOSHIBA MQ01ABF050 2.5" 500GB

8.1. Advanced Test

Test Item			Result			Note
			Pass	Fail	N/A	
Power manager	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"/>	
	AT/ATX mode		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Restore AC loss<Power off/power on/last state>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CPU Configuration	CPU information		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Virtualization Technology		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SATA configuration	SATA controller		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Enable/Disable
	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"/>	
	XHCI Mode (USB3.0)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	EHCI Mode (USB2.0)		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Smart FAN	CPU_FAN1	Disable	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	BIOS:2960 rpm / Actual: 3043 rpm
		Full Mode	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	rpm
		Manual Mode	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0~255 BIOS (255): 2986 rpm / Actual : 3070 rpm BIOS :(100): 1630 rpm / Actual : 1677 rpm BIOS : (0):1626 rpm / Actual : 1680 rpm
	CHA_FAN2	Auto Mode	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	BIOS:1630 rpm / Actual: 1684 rpm
		Disable	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
		Manual	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
		Thermal Cruise mode	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Smart FAN IV mode	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
LED Bypass Status LED	LED OFF		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RED LED ON		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RED LED BLINK		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RED LED FAST BLINK		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	GREEN LED ON		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	GREEN LED BLINK		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	GREEN LED FASTBLINK		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN Bypass Kit	PWR ON PassTru		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	PWR ON Bypass		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	PWR OFF PassTru		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	PWR OFF Bypass		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	WDT Configuratio	System reset	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

	n	Force ByPass	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial Port Console Redirection	Enable/ Disable		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8.2 Chipset Test

Test Item		Result			Note
		Pass	Fail	N/A	
North Bridge Configuration	Memory Configuration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Display Control Configuration	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
South Bridge Configuration	Audio Controller	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Keep show

8.3. Boot Sequence Test

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

8.4. CMOS Backup / Clear CMOS Test

Test Item	Result			Note
	Pass	Fail	N/A	
CMOS Backup	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Clear CMOS Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CN3

8.5. 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

8.6. 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"/>	

8.7. Hi-safe Test

Test Item		Result			Note
		Pass	Fail	N/A	
Version(20150630)		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	K225A
System Information	CPU Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Model Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Display Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RAM Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Support single DIMM
H/W Monitor	Info	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

	Fan Speed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Voltage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
WatchDog	10sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	60sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	255sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Auto Reload	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SMBus	SMBus IO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SMBus Address 0xE000
	Read Byte	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Slave Address A0h
	Read Word	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Result / Read	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Smart FAN	Chipset	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Fan Speed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Temperature	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	CPU / SYS
	Speed control	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Off Speed TMP	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Full Speed TMP	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

9. Performance Test

Hardware Information with Win7 Ultimate SP1 32 Bit Driver Version	
CPU	Intel® Celeron® Processor J1900(2M Cache, up to 2.42 GHz)
Memory	Transcend DDR3L 1600 4GB SEC K4B4G0846D *2
HDD	TOSHIBA MQ01ABF050 2.5" 500GB

9.1. Performance Test

Test Result: Display set 1920*1080

Testing Software	Scope		Note
	AAEON	Ref.	
PCMark2005			Windows7_32
PCMark	4849	-	PCMarks
CPU	4898	-	
Memory	3770	-	
Graphics	3128	-	
HDD	5338	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	

Testing Software	Scope		Note
	AAEON	Ref.	
3Dmark2006 v121			Windows 7_32
3Dmark Score	1916	-	
CPU Score	2274	-	
SM 2.0	659	-	
HDR/SM 3.0	713	-	

Testing Software	Scope		Note
	AAEON	Ref.	
Performance Test 7.0			Windows7_32
PassMark Rating	640.5	-	
CPU Mark	1574.5	-	
2D Graphics Mark	1714.4	-	
3D Graphics Mark	170.2	-	
Memory Mark	484.8	-	
Disk Mark	751.5	-	
Benchmark (A)	-	-	

CF Performance	
CPU	Intel® Celeron® Processor J1900(2M Cache, up to 2.42 GHz)
Memory	Transcend DDR3L 1600 4GB SEC K4B4G0846D *2
CF Card	Innodisk iCF9000 32GB< IDE mode>
OS	Windows7 Ultimate 32bit

Item	Comment	Software	Score	Note
CF Card	Max read speed (MB/s)	ATTO	4MB/s	AHCI mode: R/W 4MB/s only
	Max write speed (MB/s)	ATTO	4MB/s	
USB3.0/2.0 Performance				
USB Flash	Kingston Ultimate G2 16GB			
Item	Comment	Software	Score	Note
(USB port 1) USB3.0	Max read speed (MB/s)	ATTO	100MB/s	
	Max write speed (MB/s)	ATTO	59MB/s	
(USB port 2/3) USB2.0	Max read speed (MB/s)	ATTO	44MB/s	
	Max write speed (MB/s)	ATTO	40MB/s	

10. Stability test

10.1. Run In Test

Under Room Temperature: 26 °C

OS: Windows 7 Ultimate English 32bit

Test Item	Result			Note	
	Pass	Fail	N/A		
Burn In Test V8.0(1041) Duty: 100 Time: over 12 hours <System should not error or hang during testing.>	CPU	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RAM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	COM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Video	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	2D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	3D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Disk	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Sound	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Network	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Parallel	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	USB	2.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Note: COM PORT Speed Set to 115200.

10.2. Reboot Test

Under Room Temperature: 26 °C

OS: Windows 7 Ultimate English 32bit

Test Tool: Passmark rebooter.exe

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

10.3. Cold Boot Test

Under Room Temperature: 26 °C

OS: DOS

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

11. LAN Performance Test

11.1 DUT and Test Equipments

11.1.1. DUT Specification

Hardware:

- Model name: FWS-2252 (M/B: FWB-2250 A1.1)
- CPU: Intel® Celeron® Processor J1900(2M Cache, up to 2.42 GHz)
- RAM: Innodisk DDR3L 1600 4GB InnoDisk DDR3L-1600 4GB(SEC 425 BYKO K4B4G0846D) X 2
- HDD: Transcend SSD TS16GSSD25S-S 16GB
- LAN Chip: Intel I211 Gigabit LAN x4

Software:

- BIOS: FWS-2252 R1.1(K252AM11)
- Operating System: CentOS5.6 kernel 2.6.18-238.e15PAE
- LAN driver: Intel Gigabit Internet Network Driver: igb 5.2.5

11.1.2. Test Equipments Specification

SPIRENT Smartbits

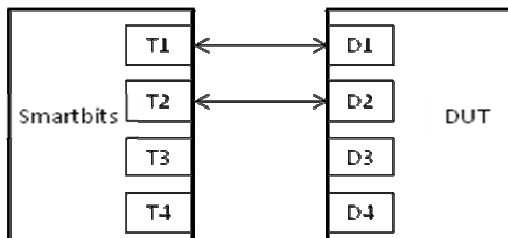
- Chassis: SPIRENT Smartbits 600B
- Chassis Version: 2.80.003 (Cur) 2.50.000
- Chassis Serial #: 06014047
- Library: 6.00-29
- API: 5.50.42.01
- File: 0550042
- Module: 2 * LAN-3324A SmartMetrics XD 4-Port 10/100/1000Base-T Gigabit Ethernet
- Test Software: SmartFlow5.50.42.1

11.2 RFC-2544 performance test (2 port)

11.2.1. Throughput test (2 port)

Test Description:

- In DUT System, set routing function enabled.
<# echo 1 > /proc/sys/net/ipv4/ip_forward>
- Test Configuration as below Figure.



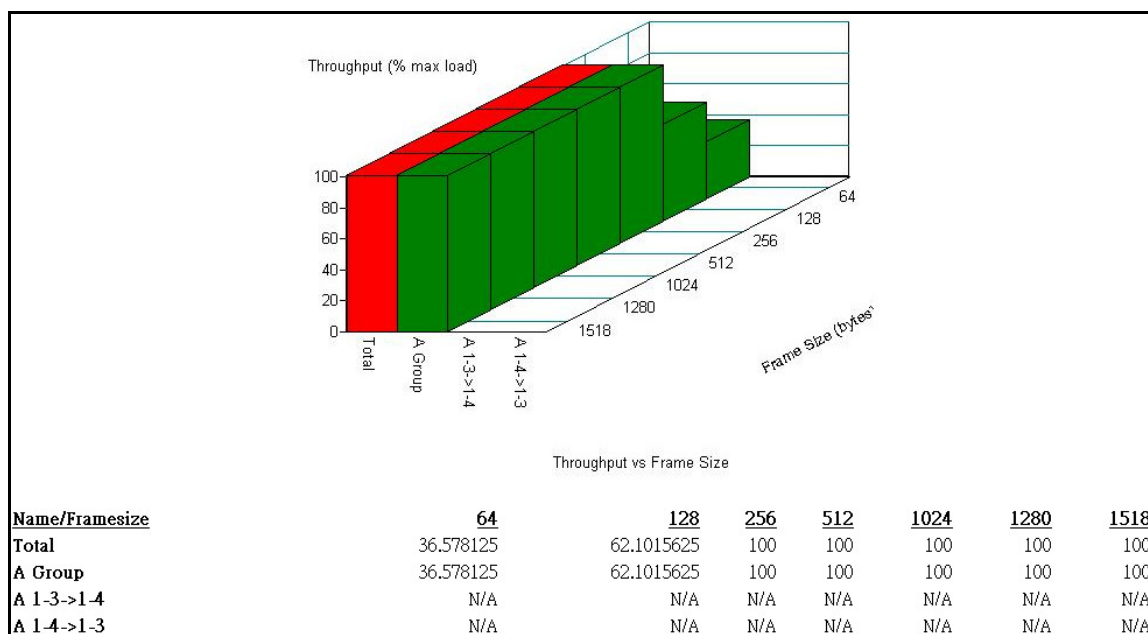
- Smartflow\Test Group to add port1<->port2 with Bi-directional,
- The tester set loading traffic from 1% to 100% and the traffic step is 50%.
- Interaction Constants Duration Time Set to 60 Sec.
- Test all LAN ports performance.

Test Result:

Test Group: <LAN1-LAN2 bi-directional>

Test Group: <LAN3-LAN4 bi-directional>

Speed: 1000_Full	Frame Size(bytes)						
LAN ports	64	128	256	512	1024	1280	1518
1-2	35.80469	61.32813	100	100	100	100	100
3-4	36.57813	62.10156	100	100	100	100	100



11.3 RFC-2544 performance test (4 ports)

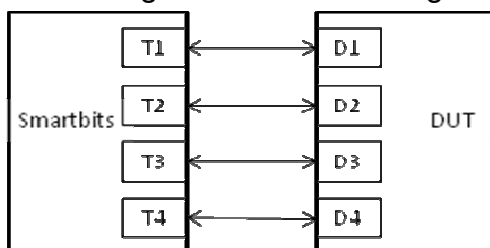
11.3.1. Throughput test

Test Description:

1. In DUT System, set routing function enabled.

```
<# echo 1 > /proc/sys/net/ipv4/ip_forward>
```

2. Test Configuration as below Figure.



3. Smartflow\Test Group to add port1<->port2 with Bi-directional, port3<->port4 with Bi-directional.

4. The tester set loading traffic from 1% to 100% and the traffic step is 50%.

5. Interaction Constants Duration Time Set to 60 Sec.

6. Test all LAN ports performance.

Test Result:

Test Group: <LAN1-LAN2 bi-directional> ; <LAN3-LAN4 bi-directional>

Speed: 1000_Full	Frame Size(bytes)						
LAN ports	64	128	256	512	1024	1280	1518
1 ~4	19.5625	31.9375	49.72656	100	100	100	100

