

P5 Verification Test Plan

Release No : 09I010001

Product Model	FWS-7300
Description	6 port 1U Network Appliance
Test Configuration	<input checked="" type="checkbox"/> New product <input checked="" type="checkbox"/> System : FWS-7300 <input checked="" type="checkbox"/> PCB : FWS-7300 A1.0 <input checked="" type="checkbox"/> BIOS : FWS-7300 BIOS Rev 1.0 (12/01/2008) <input checked="" type="checkbox"/> LAN Module : Intel 82541PI PCI-Ex1 10/100/1000Mb RJ-45 *4 Intel 82574L PCI-Ex1 10/100/1000Mb RJ-45 *2 <input checked="" type="checkbox"/> Expansion card : PER-C34L A0.1 (Intel 82574L PCI-Ex1 10/100/1000Mb RJ-45 *2) <input checked="" type="checkbox"/> Chipset : <input checked="" type="checkbox"/> North Bridge : Intel 910GMLE <input checked="" type="checkbox"/> South Bridge : Intel 82801FBM(ICH6M) <input checked="" type="checkbox"/> VGA Chipset : Integrated VGA on Intel 910GMLE <input checked="" type="checkbox"/> Audio Chipset : N/A <input checked="" type="checkbox"/> Ethernet Chipset : Intel 82541PI PCI 10/100/1000Mb RJ-45 *4 Intel 82574L PCI-Ex1 10/100/1000Mb RJ-45 *2 <input checked="" type="checkbox"/> I/O Chipset : ITE 8712 <input checked="" type="checkbox"/> TV Chipset : N/A <input checked="" type="checkbox"/> Remark : QE P5 Report for FWS-7300 A1.0
Test Result Summary	
<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Pass with Deviation Comment: _____ _____	

2009/01/13

Issue date

Wenyuan Yang

Manager

Eva Yeh

Test Engineer

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There are 3 test results in this document; they are described as follows:

Pass: Function worked perfectly

Fail: Function failed and must be modified in the next version

N/A: Outside of specification or no test equipment

Platform Information:

System	FWS-7300
PCB Model / Version	FWB-7300 A1.0
BIOS	FWS-7300 BIOS Rev 1.0 (12/01/2008)
Operating System	English Windows XP Professional Service Pack 3 V2002
CPU	Intel (R) Celeron(R) M processor 600MHz (Onboard) Intel (R) Pentium(R) M processor 1.8GHz(Socket)
Memory	A-DATA AD29608A8A-3EG DDRII 667 1GB
VGA	Integrated VGA on Intel 910GMLE
SATA HDD	Seagate ST380815AS 80GB
Primary IDE Master	N/A
Primary IDE Slave	N/A
LAN Module	Intel 82541PI 10/100/1000Mb RJ-45 x 4 Intel 82574L 10/100/1000Mb RJ-45 x 2
Expansion card	PER-C34L A0.1 (Intel 82574L LAN x 2)
CRT	ViewSonic E70
LCD	N/A
Compact Flash	N/A
Backplane	N/A
Riser Card	PER-R19P A0.1 PCI Slot x 2
Chipset Software	Intel(R) Chipset Software Installation utility 8.1.1.1010
Graphics Media	Mobile Intel(R) 915GM/GMS,910GML Express Chipset Family 6.14.10.4764 (1/13/2007)
LAN	LAN1→ Intel(R) PRO/1000 MT Network Connection 8.5.14.0 (3/8/2005) (from FWB-7300 82541PI 10/100/1000Mb RJ-45)
	LAN2→ I Intel(R) PRO/1000 MT Network Connection 8.5.14.0 (3/8/2005) (from FWB-7300 82541PI 10/100/1000Mb RJ-45)
	LAN3→ Intel(R) PRO/1000 MT Network Connection 8.5.14.0 (3/8/2005) (from FWB-7300 82541PI 10/100/1000Mb RJ-45)
	LAN4→ Intel(R) PRO/1000 MT Network Connection 8.5.14.0 (3/8/2005) (from FWB-7300 82541PI 10/100/1000Mb RJ-45)
	LAN5→ Intel(R) 82574L Gigabit Network Connection 10.2.16.0 (11/13/2007) (from FWB-7300 82574L 10/100/1000Mb RJ-45)
	LAN6→ Intel(R) 82574L Gigabit Network Connection 10.2.16.0 (11/13/2007) (from FWB-7300 82574L 10/100/1000Mb RJ-45)

	LAN7→ Intel(R) 82574L Gigabit Network Connection 10.2.16.0 (11/13/2007) (from PER-C34L A0.1 82574L 10/100/1000Mb RJ-45)
	LAN8→ Intel(R) 82574L Gigabit Network Connection 10.2.16.0 (11/13/2007) (from PER-C34L A0.1 82574L 10/100/1000Mb RJ-45)
Audio Driver	N/A
Power Supply	FSP FSP180-50PLA

Test Result for Certification

1. I/O Peripheral Function Test

I/O Function	Result			Note
	Pass	Fail	N/A	
Floppy Connector / Driver A:			X	
IDE Channel 0 Master	X			
IDE Channel 0 Slave	X			
IDE Channel 2 Master	X			
IDE Channel 2 Slave	X			
IDE Channel 3 Master			X	
IDE Channel 3 Slave			X	
RAID 0 Function Test			X	
RAID 1 Function Test			X	
SATA1 / Serial ATA Connector 1	X			SATA1
SATA2 / Serial ATA Connector 2	X			SATA2
SATA3 / Serial ATA Connector 3			X	
SATA4 / Serial ATA Connector 4			X	
Compact Flash – Type I	X			Master
Compact Flash – Type II			X	HITACHI/HMS360402D5CF00/2G
DOC (Disk On Chip)			X	
DOM (Disk On Module) – 40 Pin	X			Type: DOM-256-026P
DOM (Disk On Module) – 44 Pin			X	Type: DOM-064-426P
COM 1-232	X			Support Console
COM 2-232	X			Support Console
COM 2-422			X	
COM 2-485			X	ADAM-4011
COM 2-Ring /+5V /+12V			X	
COM 3			X	
COM 4			X	
COM 5			X	
COM 6			X	
PS/2 Mouse & Keyboard (Internal)	X			
PS/2 Mouse & Keyboard (External)			X	
Audio Connector			X	No onboard audio chipset
Audio 5.1 Channel / S/P DIF			X	

LPT 1			X	Reserved for LCM
LPT 2			X	
SIR / 115.2 Kbps			X	
FIR / 4M bps			X	
USB 1/2 Ports	X			USB1 on front panel
USB 3/4 Ports	X			CN2 on pin header
USB 5/6 Ports	X			CN5 on pin header
USB 7 Ports			X	
USB 2.0 1/2 Ports	X			USB1 on front panel
USB 2.0 3/4 Ports	X			CN2 on pin header
USB 2.0 5/6 Ports	X			CN5 on pin header
USB 2.0 7 Ports			X	
DVI Function			X	
DIO Connector			X	
Card Bus			X	
PC/104			X	
PC/104-Plus			X	
PCI-104			X	
TFT TTL LCD			X	
TFT LVDS LCD			X	
TV-out / S Terminal			X	
TV-out / AV Terminal			X	
Touch Screen – 8 Wire			X	
Touch Screen – 5 Wire			X	
DIMM Slots	X			
Watchdog IRQ n			X	
Watchdog Software Control	X			H/W monitor utility v1.83
LAN1 –LAN8 Active LED	X			
LAN1 –LAN8 Link LED	X			
LCM keypad	X			
Software reset button	X			
VGA Connector	X			
FAN1 connector	X			
FAN2 connector	X			
FAN3 connector	X			System FAN Speed
Front Panel	Result			Notes

		Pass	Fail	N/A	
HDD LED		X			FP1 and Front Panel
Power LED		X			FP1 and Front Panel
Status LED		X			Front Panel
LAN Bypass LED	Disable	X			Depends on BIOS
	Forced Mode	X			
	Watchdog Mode	X			
Power On Button		X			FP1
External Buzzer		X			FP2
On Board Buzzer		X			FP2
Reset Switch		X			FP1
Keyboard Lock				X	
Jumpers Function	Result			Notes	
	Pass	Fail	N/A		
CF Card Master/Slave Selection				X	
ATX simulates AT				X	
Audio Out Selection (W/O & W/ Amplifier)				X	
LCD Voltage Selection				X	
COM2-Ring/5V/12V Selection				X	
COM2 RS-232/422/485 Selection				X	
Clear CMOS		X			
Touch Screen Operating Mode Selection				X	
Clock Shift of TFT LCD				X	
Power Connector & Function	Result			Notes	
	Pass	Fail	N/A		
ATX Power Connector 20pin		X			ATX2
ATX Power Connector 24pin				X	
ATX Power_12V Connector		X			ATX1
AT Power Connector (P8 & P9)				X	
PWR1 (Mini4P)		X			
Big 4P Power Connector		X			
Mini 4P Power Connector		X			
External Power Connector (-12/-5V)				X	

Option ATX Power Connector (PS-ON / +5VSB) CN1				X	
SATA Power Connector		X			PWR1/2
LAN Connector & Function		Result			Notes
		Pass	Fail	N/A	
LAN Speed/Link LED	LAN1 ~ LAN8	X			
LAN Active LED	LAN1 ~ LAN8	X			
LAN 10/100 Ethernet		X			
LAN 1G Ethernet		X			
PCI Connector & Function		Result			Notes
		Pass	Fail	N/A	
Mini PCI slot		X			
PCI Slots		X			
PCI Express				X	
PCI X				X	
Status LED Function		Result			Notes
		Pass	Fail	N/A	
Disable		X			Depends on BIOS
RED LED ON		X			
RED LED BLINK		X			
GREEN LED ON		X			

2. Timer Accuracy Test

System Clock & RTC Clock Test				
Test Method	Margin for error	Result		
		Pass	Fail	N/A
RTC Clock in Power On Mode	±3 second during 24 hours	X		
RTC Clock in Power Off Mode	±3 second during 24 hours	X		
Watchdog Timer Test		Result		
		Pass	Fail	N/A
Time-out Interval (Software provided by ITE Hardware Monitor 1.83)	10 sec	X		
	60 sec	X		
	255 sec	X		
LAN Bypass Function Test		Result		
		Pass	Fail	N/A
Disable		X		
Force mode		X		

Watch Dog Mode	X		
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3. Network HUB / LAN Connection Test

Location		LED Type				Result		
						Pass	Fail	N/A
LAN1 LED	Active LED				X			
	Link LED				X			
	Speed LED						X	
LAN2 LED	Active LED				X			
	Link LED				X			
	Speed LED						X	
LAN3 LED	Active LED				X			
	Link LED				X			
	Speed LED						X	
LAN4 LED	Active LED				X			
	Link LED				X			
	Speed LED						X	
LAN5 LED	Active LED				X			
	Link LED				X			
	Speed LED						X	
LAN6 LED	Active LED				X			
	Link LED				X			
	Speed LED						X	
LAN7 LED	Active LED				X			
	Link LED				X			
	Speed LED						X	
LAN8 LED	Active LED				X			
	Link LED				X			
	Speed LED						X	
Location	Speed	HUB Type	Cable Length	HUB Speed	Onboard LAN Speed	Result		
						Pass	Fail	N/A
Onboard LAN1	10/100/1000 Mbps	D-Link DGS-1008T	100M	1GBps	1000	X		
		Accton DeskTop-3005	100M	10/100 MBps	100	X		
		SVEC FD916H (10 Mbps HUB)	100M	10 MBps	10	X		
Onboard LAN2	10/100/1000 Mbps	D-Link DGS-1008T	100M	1GBps	1000	X		
		Accton DeskTop-3005	100M	10/100 MBps	100	X		
		SVEC FD916H (10 Mbps HUB)	100M	10 MBps	10	X		
Onboard	10/100/1000	D-Link DGS-1008T	100M	1GBps	1000	X		

LAN3	Mbps	Accton DeskTop-3005	100M	10/100 MBps	100	X		
		SVEC FD916H (10 Mbps HUB)	100M	10 MBps	10	X		
Onboard LAN4	10/100/1000 Mbps	D-Link DGS-1008T	100M	1GBps	1000	X		
		Accton DeskTop-3005	100M	10/100 MBps	100	X		
		SVEC FD916H (10 Mbps HUB)	100M	10 MBps	10	X		
Onboard LAN5	10/100/1000 Mbps	D-Link DGS-1008T	100M	1GBps	1000	X		
		Accton DeskTop-3005	100M	10/100 MBps	100	X		
		SVEC FD916H (10 Mbps HUB)	100M	10 MBps	10	X		
Onboard LAN6	10/100/1000 Mbps	D-Link DGS-1008T	100M	1GBps	1000	X		
		Accton DeskTop-3005	100M	10/100 MBps	100	X		
		SVEC FD916H (10 Mbps HUB)	100M	10 MBps	10	X		
Onboard LAN7	10/100/1000 Mbps	D-Link DGS-1008T	100M	1GBps	1000	X		
		Accton DeskTop-3005	100M	10/100 MBps	100	X		
		SVEC FD916H (10 Mbps HUB)	100M	10 MBps	10	X		
Onboard LAN8	10/100/1000 Mbps	D-Link DGS-1008T	100M	1GBps	1000	X		
		Accton DeskTop-3005	100M	10/100 MBps	100	X		
		SVEC FD916H (10 Mbps HUB)	100M	10 MBps	10	X		

SmartBits Test:

DUT Platform Information:

System	FWS-7300
PCB Model / Version	FWB-7300 A1.0
BIOS	FWS-7300 BIOS Rev.0.8 (09/15/2008)
Operating System	English Linux Fedora Core 8 Ver :2.6.23.1-42.fc8
CPU	Intel (R) Pentium(R) M processor 1.8GHz
Memory	Transcend DDR2 667 SODIMM 2GB (SEC 752 HCE6 K4T1G084QQ)
SATA HDD	Seagate ST3160815AS 160GB
Primary IDE Master	N/A
Primary IDE Slave	N/A
LAN Module	Intel 82541PI 10/100/1000Mb RJ-45 x 4 Intel 82574L 10/100/1000Mb RJ-45 x 2
Expansion card	PER-C34L A0.1 (Intel 82574L LAN x 2)
CRT	ViewSonic E70
LCD	N/A
Compact Flash	N/A
Backplane	N/A
Riser Card	N/A
Chipset Software	N/A
Graphics Media	Linux Fedora Core 8 Default setting
LAN	LAN1→ Intel 82541PI 10/100/1000Mb RJ-45 : Linux Fedora Core 8 Default setting (from FWB-7300 82541PI 10/100/1000Mb RJ-45 PCI Interface)
	LAN2→ Intel 82541PI 10/100/1000Mb RJ-45 : Linux Fedora Core 8 Default setting (from FWB-7300 82541PI 10/100/1000Mb RJ-45 PCI Interface)
	LAN3→ Intel 82541PI 10/100/1000Mb RJ-45 : Linux Fedora Core 8 Default setting (from FWB-7300 82541PI 10/100/1000Mb RJ-45 PCI Interface)
	LAN4→ Intel 82541PI 10/100/1000Mb RJ-45 : Linux Fedora Core 8 Default setting (from FWB-7300 82541PI 10/100/1000Mb RJ-45 PCI Interface)
	LAN5→ Intel(R) 82574L Gigabit Network Connection (from FWB-7300 82574L 10/100/1000Mb RJ-45 PCIE Interface)
	LAN6→ Intel(R) 82574L Gigabit Network Connection (from FWB-7300 82574L 10/100/1000Mb RJ-45 PCIE Interface)
	LAN7→ Intel(R) 82574L Gigabit Network Connection (from PER-C34L A0.1 82574L 10/100/1000Mb RJ-45 PCIE Interface)
	LAN8→ Intel(R) 82574L Gigabit Network Connection (from PER-C34L A0.1 82574L 10/100/1000Mb RJ-45 PCI Interface)
Audio Driver	N/A
Power Supply	FSP FSP180-50PLA

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 Purpose:

1. To determine the DUT throughput as defined in RFC 1242.
2. All tests must be complied with RFC-2544 & RFC-1242

Test Procedure:

Send a specific number of frames at a specific rate through the DUT and then count the frames that are transmitted by the DUT. If the count of offered frames is equal to the count of received frames, the fewer frames are received than were transmitted, the rate of the offered stream is reduced and the test is rerun (Defined in RFC 2544)

Test Key Point:

Minimum LAN requirement: 2 port

Frame size: 64, 128, 256, 512, 1024, 1280, 1518 bytes

Direction: Half, Dual

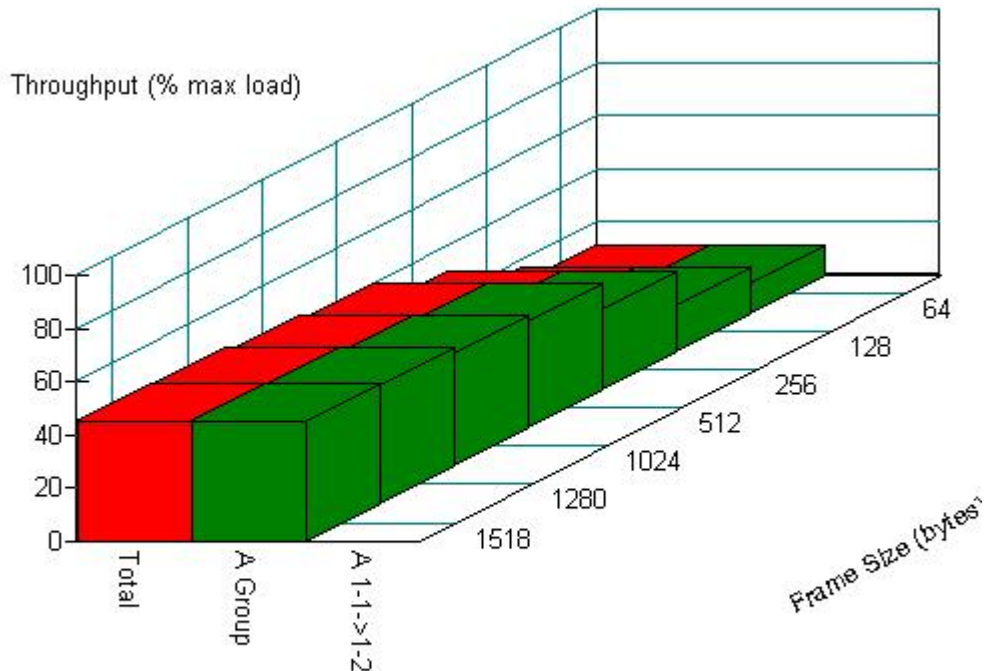
Tolerable packet loss rate: 0%

Iteration constants: 30 sec

DUT environment: Fedora Core Router Mode

Test Result:

1. Half Direction (LAN1: Intel 82541PI 10/100/1000Mb RJ-45 (from FWB-7300 82541PI 10/100/1000Mb RJ-45 PCI Interface)→ LAN2: Intel 82541PI 10/100/1000Mb RJ-45 (from FWB-7300 82541PI 10/100/1000Mb RJ-45 PCI Interface))

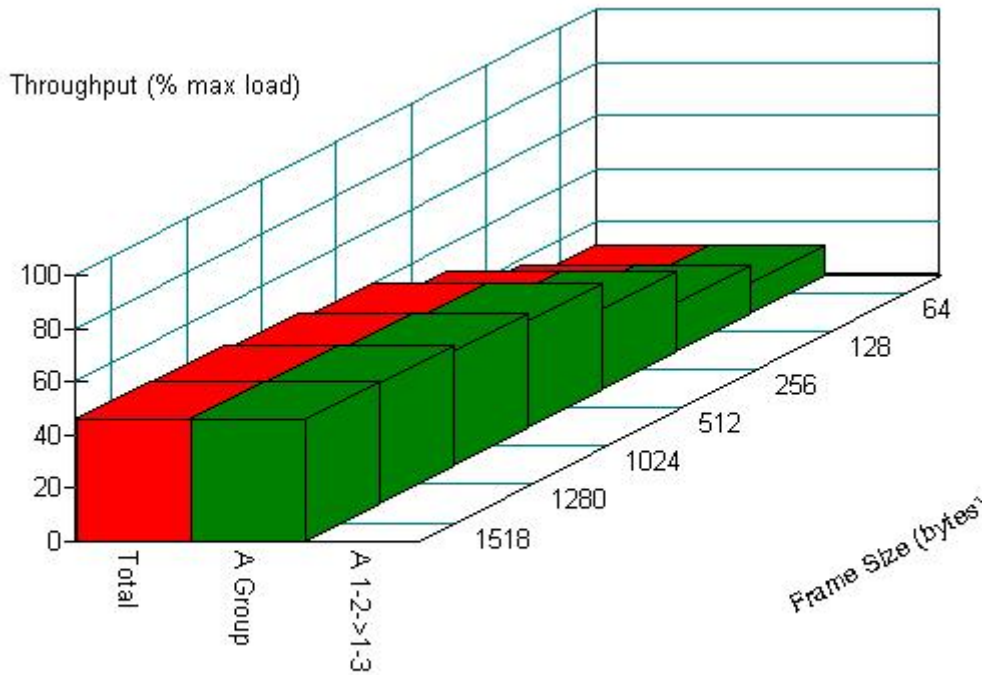


Throughput vs Frame Size

Throughput Table

Framesize Name	64	128	256	512	1024	1280	1518
Total	11.0546875	17.2421875	29.6171875	39.671875	41.9921875	44.3125	45.0859375
A Group	11.0546875	17.2421875	29.6171875	39.671875	41.9921875	44.3125	45.0859375
A 1-1→1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2. Half Direction (LAN2: Intel 82541PI 10/100/1000Mb RJ-45 (from FWB-7300 82541PI 10/100/1000Mb RJ-45 PCI Interface)→ LAN3: Intel 82541PI 10/100/1000Mb RJ-45 (from FWB-7300 82541PI 10/100/1000Mb RJ-45 PCI Interface))

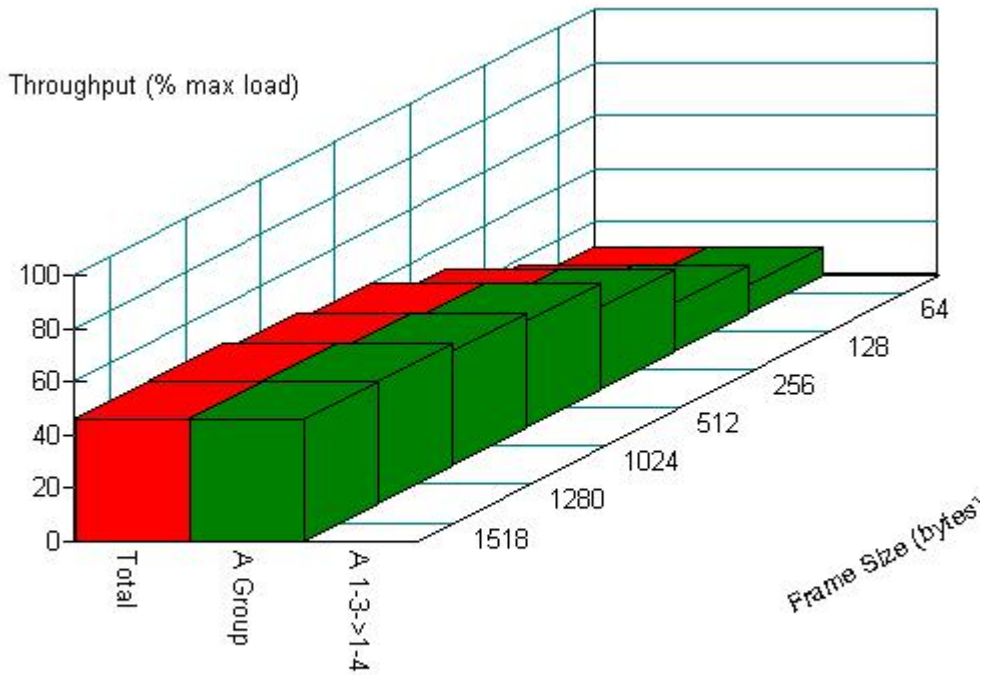


Throughput vs Frame Size

Throughput Table

Framesize Name	64	128	256	512	1024	1280	1518
Total	11.0546875	18.015625	29.6171875	39.671875	42.765625	45.0859375	45.859375
A Group	11.0546875	18.015625	29.6171875	39.671875	42.765625	45.0859375	45.859375
A 1-2->1-3	N/A	N/A	N/A	N/A	N/A	N/A	N/A

3. Half Direction (LAN3: Intel 82541PI 10/100/1000Mb RJ-45 (from FWB-7300 82541PI 10/100/1000Mb RJ-45 PCI Interface) → LAN4: Intel 82541PI 10/100/1000Mb RJ-45 (from FWB-7300 82541PI 10/100/1000Mb RJ-45 PCI Interface))

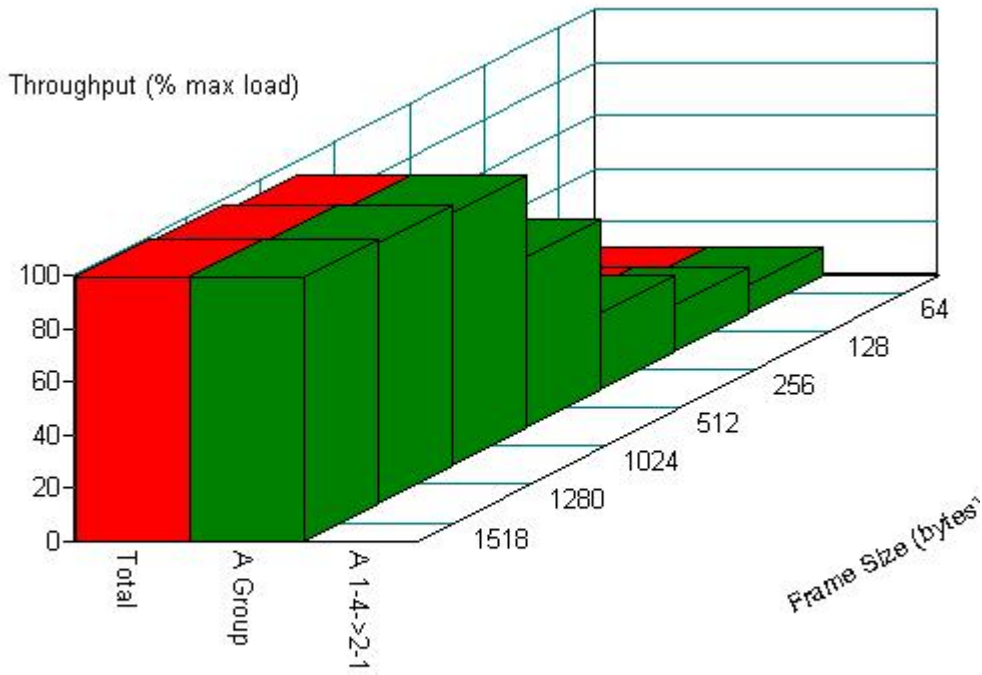


Throughput vs Frame Size

Throughput Table

Framesize Name	64	128	256	512	1024	1280	1518
Total	10.28125	18.015625	30.390625	39.671875	42.765625	45.859375	45.859375
A Group	10.28125	18.015625	30.390625	39.671875	42.765625	45.859375	45.859375
A 1-3->1-4	N/A	N/A	N/A	N/A	N/A	N/A	N/A

4. Half Direction (LAN4: Intel 82541PI 10/100/1000Mb RJ-45 (from FWB-7300 82541PI 10/100/1000Mb RJ-45 PCI Interface) → LAN5: Intel(R) 82574L Gigabit Network Connection (from FWB-7300 82574L 10/100/1000Mb RJ-45 PCIE Interface))

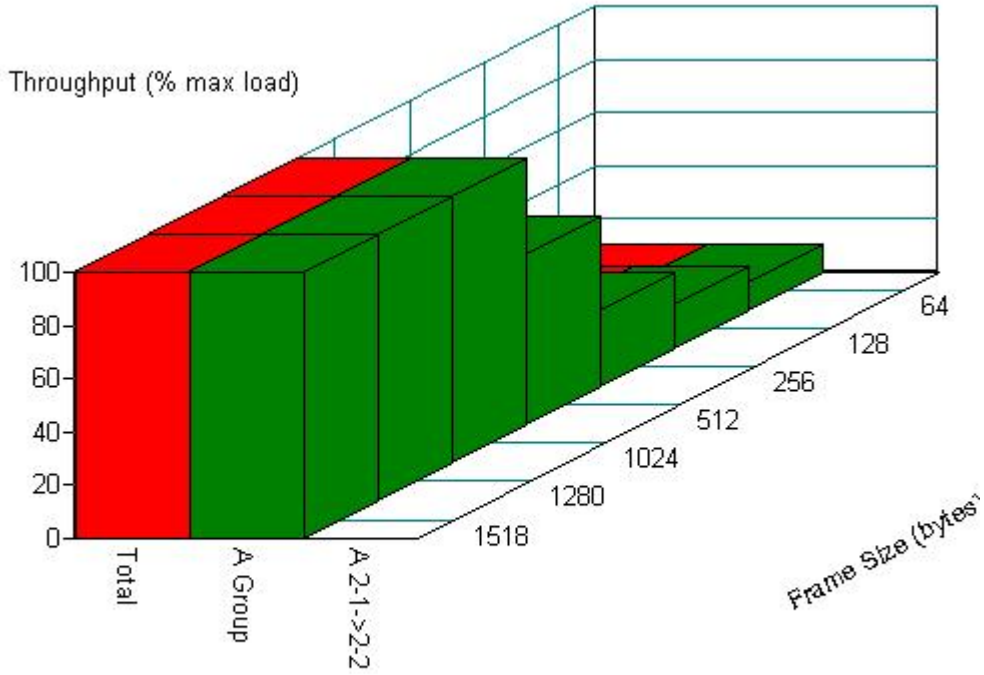


Throughput vs Frame Size

Throughput Table

Framesize Name	64	128	256	512	1024	1280	1518
Total	10.28125	17.2421875	28.0703125	63.6484375	94.5859375	97.6796875	99.2265625
A Group	10.28125	17.2421875	28.0703125	63.6484375	94.5859375	97.6796875	99.2265625
A 1-4->2-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A

5. Half Direction (LAN5: Intel(R) 82574L Gigabit Network Connection (from FWB-7300 82574L 10/100/1000Mb RJ-45 PCIE Interface) → LAN6: Intel(R) 82574L Gigabit Network Connection (from FWB-7300 82574L 10/100/1000Mb RJ-45 PCIE Interface))

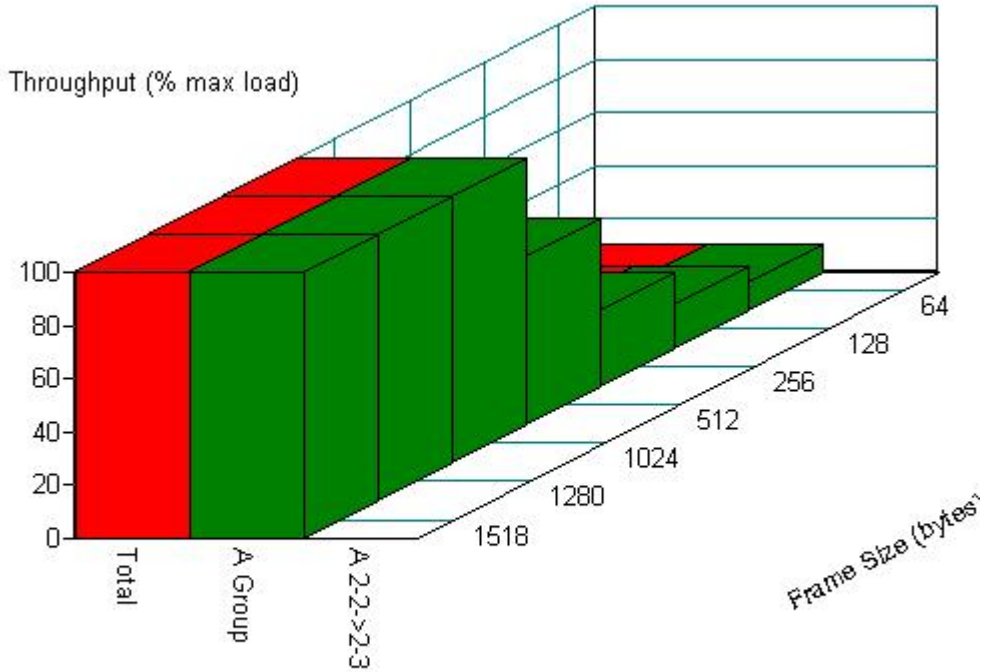


Throughput vs Frame Size

Throughput Table

Framesize Name	64	128	256	512	1024	1280	1518
Total	10.28125	16.46875	28.0703125	63.6484375	100	100	100
A Group	10.28125	16.46875	28.0703125	63.6484375	100	100	100
A 2-1->2-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A

6. Half Direction (LAN6: Intel(R) 82574L Gigabit Network Connection (from FWB-7300 82574L 10/100/1000Mb RJ-45 PCIE Interface) → LAN7: Intel(R) 82574L Gigabit Network Connection (from PER-C34LA0.1 82574L 10/100/1000Mb RJ-45 PCIE Interface))

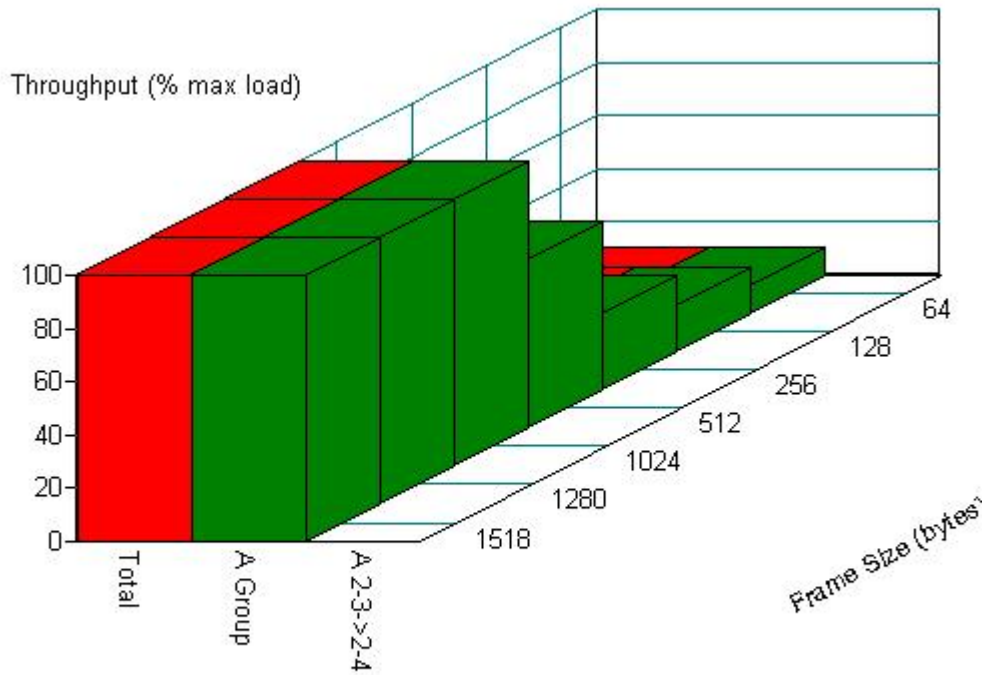


Throughput vs Frame Size

Throughput Table

Framesize Name	64	128	256	512	1024	1280	1518
Total	10.28125	16.46875	28.0703125	62.875	100	100	100
A Group	10.28125	16.46875	28.0703125	62.875	100	100	100
A 2-2->2-3	N/A	N/A	N/A	N/A	N/A	N/A	N/A

7. Half Direction (LAN7: Intel(R) 82574L Gigabit Network Connection (from PER-C34L A0.1 82574L 10/100/1000Mb RJ-45 PCIE Interface) → LAN8: Intel(R) 82574L Gigabit Network Connection (from PER-C34L A0.1 82574L 10/100/1000Mb RJ-45 PCIE Interface))

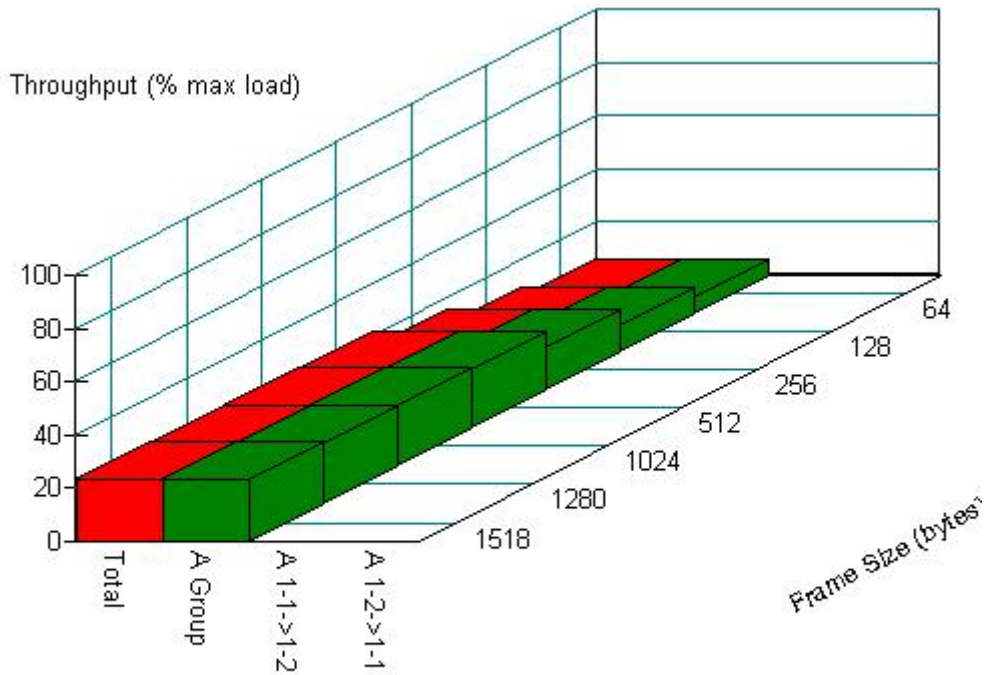


Throughput vs Frame Size

Throughput Table

Framesize Name	64	128	256	512	1024	1280	1518
Total	10.28125	17.2421875	28.0703125	62.875	100	100	100
A Group	10.28125	17.2421875	28.0703125	62.875	100	100	100
A 2-3->2-4	N/A	N/A	N/A	N/A	N/A	N/A	N/A

8. Binary Direction (LAN1: Intel 82541PI 10/100/1000Mb RJ-45 (from FWB-7300 82541PI 10/100/1000Mb RJ-45 PCI Interface)→ LAN2: Intel 82541PI 10/100/1000Mb RJ-45 (from FWB-7300 82541PI 10/100/1000Mb RJ-45 PCI Interface))

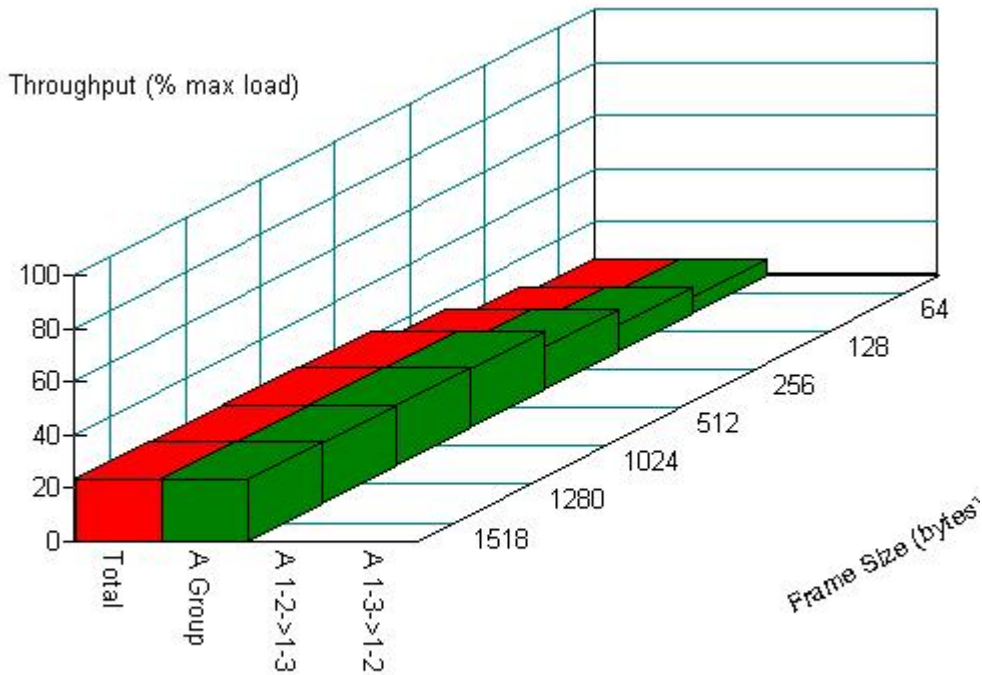


Throughput vs Frame Size

Throughput Table

Framesize Name	64	128	256	512	1024	1280	1518
Total	5.640625	9.5078125	15.6953125	21.109375	21.8828125	21.8828125	22.65625
A Group	5.640625	9.5078125	15.6953125	21.109375	21.8828125	21.8828125	22.65625
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

9. Binary Direction (LAN2: Intel 82541PI 10/100/1000Mb RJ-45 (from FWB-7300 82541PI 10/100/1000Mb RJ-45 PCI Interface)→ LAN3: Intel 82541PI 10/100/1000Mb RJ-45 (from FWB-7300 82541PI 10/100/1000Mb RJ-45 PCI Interface))

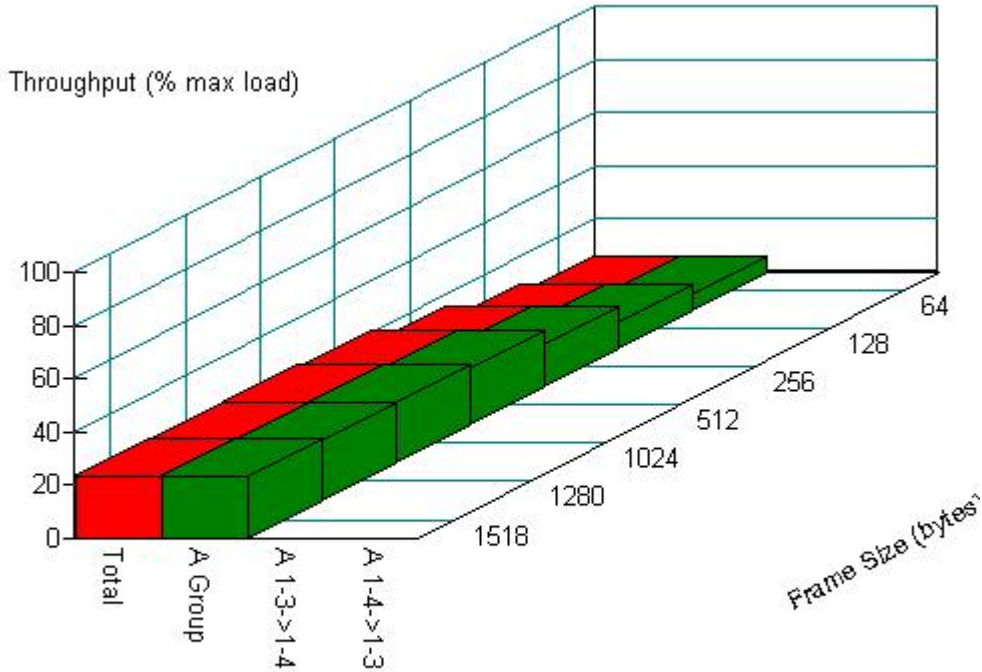


Throughput vs Frame Size

Throughput Table

Framesize Name	64	128	256	512	1024	1280	1518
Total	5.640625	9.5078125	15.6953125	21.109375	21.8828125	21.8828125	22.65625
A Group	5.640625	9.5078125	15.6953125	21.109375	21.8828125	21.8828125	22.65625
A 1-2->1-3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A 1-3->1-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A

10. Binary Direction (LAN3: Intel 82541PI 10/100/1000Mb RJ-45 (from FWB-7300 82541PI 10/100/1000Mb RJ-45 PCI Interface) → LAN4: Intel 82541PI 10/100/1000Mb RJ-45 (from FWB-7300 82541PI 10/100/1000Mb RJ-45 PCI Interface))

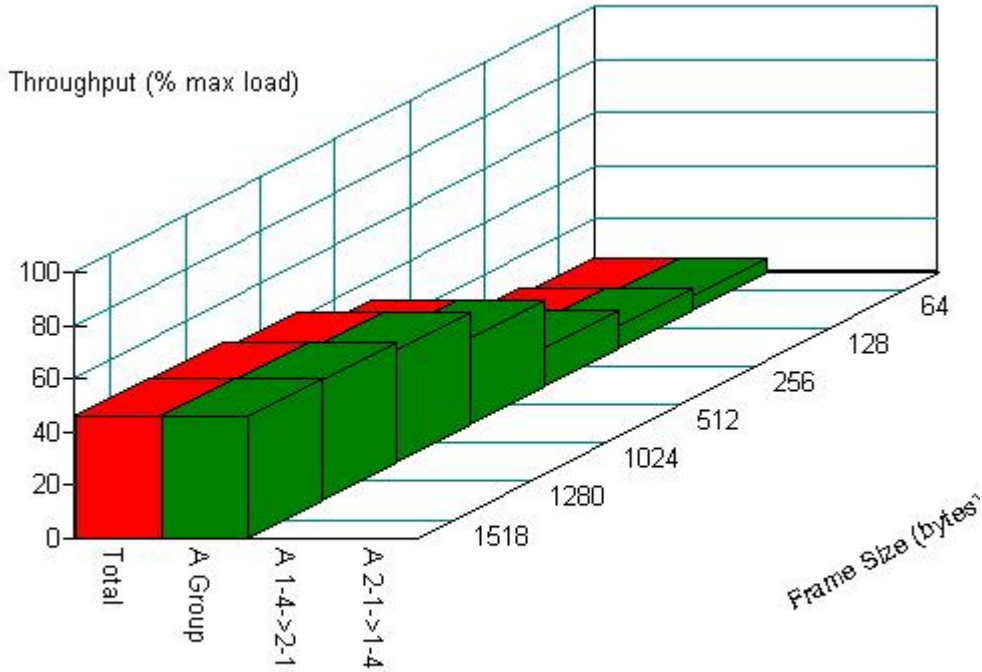


Throughput vs Frame Size

Throughput Table

Framesize Name	64	128	256	512	1024	1280	1518
Total	5.640625	9.5078125	15.6953125	20.3359375	21.8828125	21.8828125	22.65625
A Group	5.640625	9.5078125	15.6953125	20.3359375	21.8828125	21.8828125	22.65625
A 1-3->1-4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A 1-4->1-3	N/A	N/A	N/A	N/A	N/A	N/A	N/A

11. Binary Direction(LAN4: Intel 82541PI 10/100/1000Mb RJ-45 (from FWB-7300 82541PI 10/100/1000Mb RJ-45 PCI Interface) → LAN5: Intel(R) 82574L Gigabit Network Connection (from FWB-7300 82574L 10/100/1000Mb RJ-45 PCIE Interface))

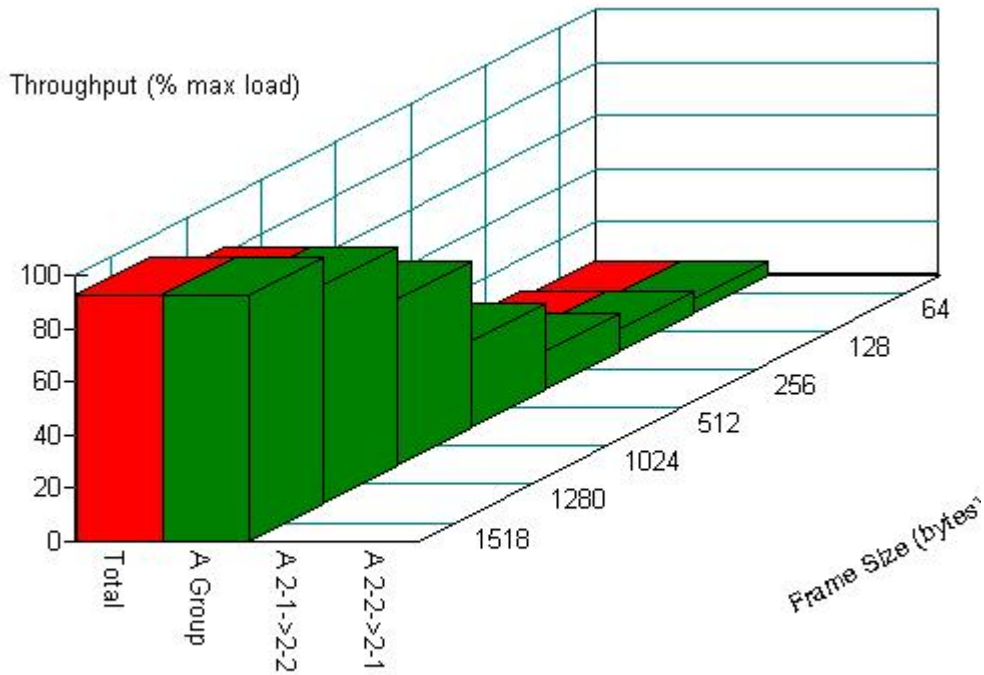


Throughput vs Frame Size

Throughput Table

Framesize Name	64	128	256	512	1024	1280	1518
Total	4.8671875	7.9609375	14.1484375	31.9375	41.9921875	45.0859375	45.859375
A Group	4.8671875	7.9609375	14.1484375	31.9375	41.9921875	45.0859375	45.859375
A 1-4->2-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A 2-1->1-4	N/A	N/A	N/A	N/A	N/A	N/A	N/A

12. Binary Direction (LAN5: Intel(R) 82574L Gigabit Network Connection (from FWB-7300 82574L 10/100/1000Mb RJ-45 PCIE Interface) → LAN6: Intel(R) 82574L Gigabit Network Connection (from FWB-7300 82574L 10/100/1000Mb RJ-45 PCIE Interface))

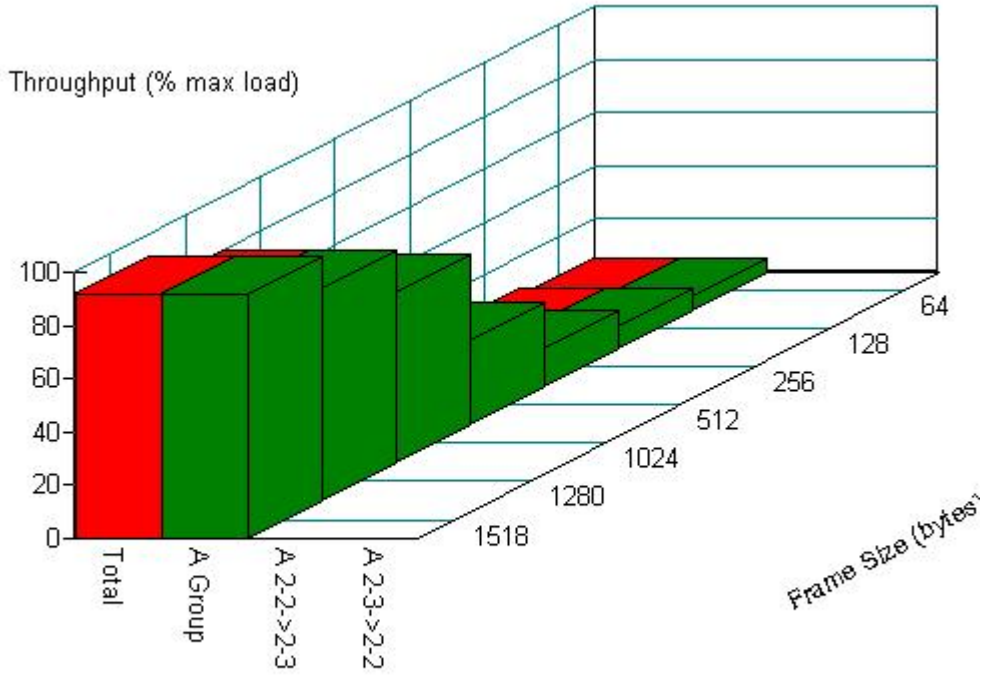


Throughput vs Frame Size

Throughput Table

Framesize Name	64	128	256	512	1024	1280	1518
Total	4.8671875	7.9609375	14.1484375	31.9375	62.1015625	81.4375	92.265625
A Group	4.8671875	7.9609375	14.1484375	31.9375	62.1015625	81.4375	92.265625
A 2-1->2-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A 2-2->2-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A

13. Binary Direction (LAN6: Intel(R) 82574L Gigabit Network Connection (from FWB-7300 82574L 10/100/1000Mb RJ-45 PCIE Interface) → LAN7: Intel(R) 82574L Gigabit Network Connection (from PER-C34LA0.1 82574L 10/100/1000Mb RJ-45 PCIE Interface))

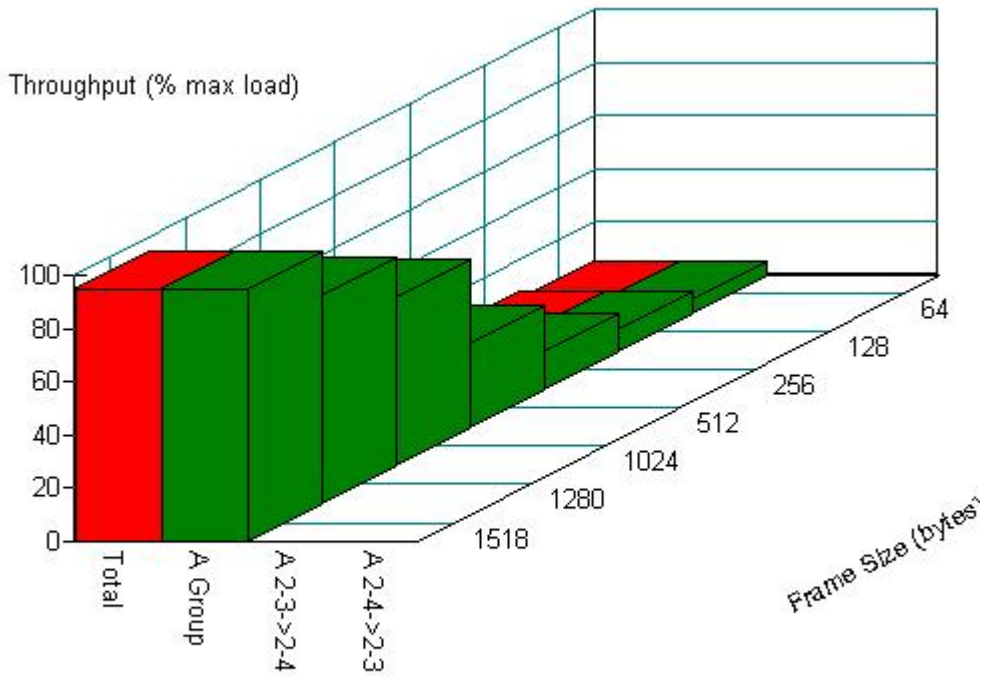


Throughput vs Frame Size

Throughput Table

Framesize Name	64	128	256	512	1024	1280	1518
Total	4.8671875	7.9609375	14.1484375	31.1640625	63.6484375	79.1171875	91.4921875
A Group	4.8671875	7.9609375	14.1484375	31.1640625	63.6484375	79.1171875	91.4921875
A 2-2->2-3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A 2-3->2-2	N/A	N/A	N/A	N/A	N/A	N/A	N/A

14. Binary Direction (LAN7: Intel(R) 82574L Gigabit Network Connection (from PER-C34L A0.1 82574L 10/100/1000Mb RJ-45 PCIE Interface) → LAN8: Intel(R) 82574L Gigabit Network Connection (from PER-C34L A0.1 82574L 10/100/1000Mb RJ-45 PCIE Interface))



Throughput vs Frame Size

Throughput Table

Framesize Name	64	128	256	512	1024	1280	1518
Total	4.8671875	7.9609375	14.1484375	31.1640625	62.875	77.5703125	94.5859375
A Group	4.8671875	7.9609375	14.1484375	31.1640625	62.875	77.5703125	94.5859375
A 2-3->2-4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
A 2-4->2-3	N/A	N/A	N/A	N/A	N/A	N/A	N/A

4. Hardware Compatibility

CPU Compatible Test							
CPU Type		FSB	Prime95 Version	Result			
				Pass	Fail	N/A	
Intel(R) Celeron(R) M Processor 600MHz		400	V2414	X			
Intel(R) Pentium(R) M Processor 1.8GHz		400	V2414	X			
Intel(R) Celeron(R) M Processor 1.5GHz		400	V2414	X			
Memory Compatibility Test							
Memory Brand	Memory Chipset	Frequency	Size	MemTest86 Version	Result		
					Pass	Fail	N/A
DSL SDRAM	ELPIDA E5108AGBG-6E-E	DDRII 667	512MB	V1.70	X		
Transcend SDRAM	HYNIX HY5PS121621BFP-C4	DDRII 533	256MB	V1.70	X		
A-DATA SDRAM	A-DATA AD29608A8A-3EG	DDRII 667	1GB	V1.70	X		
Transcend DDR2 667 SODIMM 2GB	Transcend DDR2 667 SODIMM 2GB (SEC 752 HCE6 K4T1G084QQ)	DDRII 667	2GB	V1.70	X		
Audio Basic Function Test					Result		
					Pass	Fail	N/A
System Sound							X
CD_In							X
CD_In Sound Recorder							X
Play Sound Recorder							X
Line Out							X
Line In							X
Line In Sound Record							X
MIC Speaker			Dynamic				X
			Condenser				X
MIC Sound Recorder			Dynamic				X
			Condenser				X
Audio 5.1 Channel with S/P DIF Function Test					Result		
					Pass	Fail	N/A
2-channel mode for stereo speaker output							X
4-channel mode for 4 speaker output							X
6-channel mode for 5.1 speaker output							X
S/P DIF function Test		Input					X
		Output					X
On Board TV Function Test					Result		
					Pass	Fail	N/A
NTSC		AV Terminal					X

PAL	S Terminal		X
NTSC			X
PAL			X

On Board LCD Function Test

TFT LCD	Type	Voltage	Result		
			Pass	Fail	N/A
LVDS	AUO G065VN01 V.0 / 6.5" / 640x480 / 18bit (4:3)	3.3V			X
	AUO G065VN01 V.0 / 6.5" / 640x480 / 24bit (4:3)	3.3V			X
	AU B104SN02 / 10.4" / 800*600 / 18bit (4:3)	3.3V			X
	AU G150XG01 V.0 / 15" / 1024*768 / 18bit (4:3)	3.3V			X
	AU M150XN07 V.2 / 15" / 1024x768 / 24bit (4:3)	3.3V			X
	AU M170EG01 / 17" / 1280*1024 / 48bit (4:3)	5V			X
	AU M170XW01 V.1 / 17" / 1280x768 / 24bit (16:9)	5V			X
	AUO T260XW02 / 26" / 1366x768 / 24bit				X
	AU M201UN02 V.5 / 20.1" / 1600x1200x48bit	5V			X
	AUO T370HW01 / 37" / 1920x1080 / 48bit				X
TTL	Toshiba LTM10C209A / 10.4" / 640*480 / 18bit (4:3)	5V			X
	NEC NL8060AC31-12 / 12.1" / 800*600 / 18bit (4:3)	3.3/5V			X
	Sharp LQ121S1DG11 / 12.1" / 800*600 / 18bit (4:3)	3.3V			X
	LG LM151X2-C2TH / 15.1" / 1024x768 / 18bit (4:3)	3.3V			X
	Fujitsu FLC38XGC6V-06 / 15" / 1024*768 / 36bit (4:3)	5V			X

PCI Slot Function (PCI Adapter Card) Test(PER-R19P A0.1 PCI Slot x 2)

Model	Type	Result		
		Pass	Fail	N/A
CHANTECH NVIDIA GeForce4 MX440-8X	VGA Card	X		
CREATIVE Sound BLASTER Live5.1	Sound Card	X		
ADAPTEC Ultra160 SCSI ASC-29160	SCSI Card	X		
3Com 3C905C-TXM ETHERLINK 10/100 PCI	LAN Card	X		
D-Link DWL-520+ Wireless LAN	LAN Card	X		
LEMEL MD V1456VQH-P2 PCI MODEM Card	Modem Card	X		
Tekram TR-822 Serial ATA 150 [SA-001] + 2.5" SATA HDD FUJITSU MHY2060BH 60GB	SATA Card	X		

ISA Slot Function Test

	Result		
	Pass	Fail	N/A
Creative CT4170 Sound Blaster Sound Card			X
Adaptec AHA-1510/20/22B SCSI Card			X

PCI-Express Function Test

Model	Result		
	Pass	Fail	N/A
SUNIX SATA1414 VER 1.1 PCI-Express x1 SATA Card			X
SksKonnnect SK-9E21D 10/100/1000 Base-T Adapter PCI-Express x1 LAN Card			X
Adaptec AAR-1430SA SATAII HostRAID Controllers PCI-Express x4 RAID Card			X
ASUS EAX1600PRO/TD/256M/A (ATI Chipset) PCI-Express x16 VGA Card			X

WinFast PX6200 TC TDH PCI-Express x16 VGA Card			X
HDD Compatibility Test			
Model	Result		
	Pass	Fail	N/A
Seagate ST3160815A 160GB 3.5" IDE HDD	X		
Seagate ST380215A 80GB 3.5" IDE HDD	X		
Seagate ST380815AS 80GB 3.5" SATA HDD	X		
FUJITSU MHY2060BH 60GB 2.5" SATA HDD	X		
CD/DVD-ROM Compatibility Test			
Model	Result		
	Pass	Fail	N/A
ASUS DVD-E818A 18X DVD ROM	X		
Pioneer DVD-ROM DVD-127A	X		
IDE Cable Function test			
IDE Model	Result		
	Pass	Fail	N/A
40 Pin Cable ATA100	X		
44 Pin Cable ATA33			X
80 Pin Cable ATA100	X		
USB Function Test			
USB Basic Function Test	Result		
	Pass	Fail	N/A
USB Controller	X		
USB 2.0 Controller	X		
USB Keyboard Support	X		
USB Mouse Support			X
USB 1.1 Compatible Test	Result		
	Pass	Fail	N/A
USB 1.1 Compatible Test	X		
USB 2.0 Compatible Test	Result		
	Pass	Fail	N/A
USB 2.0 Compatible Test	X		
USB 2.0 Function Test	Result		
	Pass	Fail	N/A
Install Windows XP Professional from HighSpeed Device: USB2.0 DRW-1604P-D/WHT/G/ASUS	X		
Floppy Disk Controller Function Test	Result		
	Pass	Fail	N/A
Copy and compare file between C: and A / B:			X
Change Floppy to None value			X
Swap FDD			X

Peripheral Compatibility-Storage Device					
Model	Interface	Result			
		Pass	Fail	N/A	
FUJITSU MCB3064SS	SCSI			X	
IOMega ZIP 100 parallel port	Parallel			X	
IOMega ZIP100MB Internal ATAPI Drive	IDE			X	
DOC				X	
Type-I CF	Fix / PIO Mode	X			
Type-I CF	Fix / UDMA Mode	X			
Digital I/O Connector Test		Result			
		Pass	Fail	N/A	
Input Address:				X	
Output Address:				X	
VCC: (5V)				X	
DIO-1 Function Test				X	
DIO-2 Function Test				X	
Adapter Compatibility- Industry Control Card PC/104, PC/104+, PCI-104 Modules					
Interface	Model	Type	Result		
			Pass	Fail	N/A
PC/104	AAEON PCM-5600	Modem Module			X
	AAEON PCM-3115B	PCMCIA Module			X
PC/104+	AAEON PCM-3430	SCSI Module			X
PCI-104	AAEON PCM-FA00	Mini-PCI Converter			X
	AAEON PCM-3794	SCSI Module			X
	AAEON PCM-3730	Intel 82559 LAN Module			X
On-Board SCSI Function Test					
Model	Interface	Result			
		Pass	Fail	N/A	
RICOH MP7060S	SCSI-CDROM 24X			X	
Fujitsu MCB3064SS	SCSI-MO Device			X	
Seagate 32155W	SCSI-HDD 2.15GB			X	
IBM DNES-309170	SCSI-HDD 9GB			X	
Seagate ST39205LW/P	9GB / Ultra160 / LVD			X	
On-Board RAID Function Test					
Model	Interface	Result			
		Pass	Fail	N/A	
Set SATA HDDs as RAID 0	SATA			X	
Set SATA HDDs as RAID 1	SATA			X	
Set SATA HDDs as RAID 10	SATA			X	
Set SATA HDDs as RAID 5	SATA			X	
COM Function Test		Result			
		Pass	Fail	N/A	

COM Port Burn In Test 10 mins		X		
Disk On Module [DOM] Compatibility Test				
Model	Interface	Result		
		Pass	Fail	N/A
Transcend / TS512MDOM40V / 512MB	IDE 40 Pin			X
Transcend / TS512MDOM44V / 512MB	IDE 44 Pin			X
Mini PCI Card Compatibility Test				
Model	Interface	Result		
		Pass	Fail	N/A
GM-101 WLAN 11b/g 54Mbps Mini PCI Card (Model: VNT6655AM)	LAN	X		
COM/LPT Ports & RS-232/422/485 Function Test		Result		
		Pass	Fail	N/A
RS-422 for COM2				X
RS-485 for COM2				X
COM1 (Console)		X		
COM2 (Console)		X		
COM3				X
COM4				X
COM5				X
COM6				X
LPT1				X
LPT2				X
Card Bus(PCMCIA) Compatibility Function Test				
Model	Result			
	Pass	Fail	N/A	
Intel PRO/Wireless 2011B LAN PC Card (WPC2011BWW)			X	
PQI 16MB Compact Flash Adapter (64MB PQI CF Card inserting)			X	
Kingston datapack DP-PCM2 / 2GB (PC Card TypeII HDD)			X	
PCi GW-NS54SG Cardbus Adapter Wireless LAN Type-II			X	
LAN Bypass Function Test				
Model	Result			
	Pass	Fail	N/A	
Disable	X			
Force mode	X			
Watch Dog Mode	X			
Console Redirection Function Test				
Model	Result			
	Pass	Fail	N/A	
Control by PS/2 keyboard	X			
Control by PS/2 mouse			X	
Show in PC display	X			

Software Reset Function Test			
Model	Result		
	Pass	Fail	N/A
Release software reset button	X		
Press software reset button	X		
LCM Function Test			
Model	Result		
	Pass	Fail	N/A
Turning the display off	X		
Turning the display on	X		
Press any key to test keypad	X		

5. O.S. Compatibility Test

Installation Operation System Compatibility Test				Result		
				Pass	Fail	N/A
[<input type="checkbox"/>] Linux-RedHat 9.0 or [<input type="checkbox"/>] Fedora Core 4.0 [<input checked="" type="checkbox"/>] Fedora Core 8.0				X		
Windows Server 2003 English Version / Standard Edition 5.2.3790						X
Windows Server 2003 English Version /Standard x64 Edition						X
Windows XP Professional English Version V2002 Service Pack 3				X		
Windows XP Professional Simplified-Chinese Version V2002 Service Pack 2						X
Windows XP Professional Japanese Version V2002 Service Pack 2						X
Windows XP Professional English Version /Standard x64 Edition						X
Windows 2000 Professional English Version V5.00.2195 Service Pack4						X
Windows 2000 Professional Simplified-Chinese Version V5.00.2195 Service Pack4						X
Windows 2000 Professional Japanese Version V5.00.2195 Service Pack4						X
Windows Server 2000 English Version						X
Windows 98SE English Version V4.10.2222A						X
Windows Vista™ Ultimate English Version				X		
DOS 6.22 English Version						X
DOS 6.22 Japanese Version						X
Utility and Driver Test						
OS		Drivers Version		Result		
				Pass	Fail	N/A
English Linux Fedora Core 8 Ver :2.6.23.1-42.fc8	Chipset Software	N/A				X
	Graphics Media	Default driver		X		

	LAN Driver	LAN1~LAN4 → FWB-7300 82541PI 10/100/1000Mb RJ-45 → Default driver LAN5~LAN6 → FWB-7300 82574L 10/100/1000Mb RJ-45 →Use e1000e-0.4.1.7.tar LAN7~LAN8 → PER-C34L A0.1 82574L 10/100/1000Mb RJ-45→ Use e1000e-0.4.1.7.tar	X		
	Audio Driver	N/A			X
Windows Server 2003 English Version Standard Edition 5.2.3790	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X
Windows Server 2003 English Version Standard x64 Edition	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X
Windows XP Professional English Version V2002 Service Pack 3	Chipset Software	Intel(R) Chipset Software Installation utility 8.1.1.1010	X		
	Graphics Media	Mobile Intel(R) 915GM/GMS,910GML Express Chipset Family 6.14.10.4764 (1/13/2007)	X		
	LAN Driver	LAN1~LAN4 → Intel(R) PRO/1000 MT Network Connection 8.10.3.0(8/20/2008) (from FWB-7300 82541PI 10/100/1000Mb RJ-45) LAN5~LAN6 → Intel(R) Gigabit CT Desktop Adapter 10.3.49.0 (8/5/2008) (from FWB-7300 82574L 10/100/1000Mb RJ-45) LAN7~LAN8 → Intel(R) Gigabit CT Desktop Adapter 10.3.49.0 (8/5/2008) (from PER-C34L A0.1 82574L 10/100/1000Mb RJ-45)	X		
	Audio Driver	N/A			X
Windows XP Professional Simplified-Chinese Version V2002 Service Pack 2	System				X
	Graphics Media				X
	LAN Driver				X

	Audio Driver				X
Windows XP Professional Japanese Version V2002 Service Pack 2	System				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X
Windows XP Professional x64 Edition English Version Service Pack 2 V2002	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X
Windows 2000 Professional English Version V5.00.2195 Service Pack 4	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X
Windows 2000 Professional Simplified-Chinese Version V5.00.2195 Service Pack4	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X
Windows 2000 Professional Japanese Version V5.00.2195 Service Pack4	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X
Windows Server 2000 English Version	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X
Windows 98SE English Version V4.10.2222A	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X
Windows Vista™ Ultimate English Version	Chipset Software	Default Driver	X		
	Graphics Media	Default Driver	X		

	LAN Driver	LAN1~LAN4 (Vista Default Driver)→ Intel(R) PRO/1000 MT Network Connection 8.1.37.2 (6/21/2006) (from FWB-7300 82541PI 10/100/1000Mb RJ-45) LAN5~LAN6 → Intel(R) Gigabit Desktop Adapters 10.3.29.0 (5/19/2008) (from FWB-7300 82574L 10/100/1000Mb RJ-45) LAN7~LAN8 → Intel(R) Gigabit Desktop Adapters 10.3.29.0 (5/19/2008) (from PER-C34L A0.1 82574L 10/100/1000Mb RJ-45)	X		
	Audio Driver	N/A			X

6. BIOS Function Test

Test Item	Result		
	Pass	Fail	N/A
Memory Beep Test	X		
Standard CMOS Setup Test	X		
Boot Sequence Test	X		
Power Management Test			
APM Power Management Test	X		
ACPI Power Management Test	X		
Power On Function Test			X
Wake Up Event Test	X		
Power On after Power Failure Test (On/Off)	X		
CMOS Backup / Clear CMOS Test	X		
Boot ROM Test (PXE)	X		
Supervisor / User Password Test	X		
CRT / LCD / TV Function Test(CRT Only)	X		
TV Standard Function Test			X
Init Display First Function Test	X		
On-Chip Serial ATA Function Test	X		
SATA Mode-IDE/RAID Function Test			X
PC Health Status			
Voltage Monitor Test	X		
FAN Speed Monitor Test	X		
Temperature Monitor Test	X		
Swap Floppy Drive & Boot up Floppy Seek Function Test			X
USB Onboard Device Function Test	X		
COM Address / IRQ Test	X		

LPT Address / IRQ Test			X
BIOS AWDFLASH Program Test	X		
Status LED Function	X		
LAN Bypass Function Test	X		

7. Performance Test

Platform Information

Item	Device Information
System	FWS-7300
PCB Model / Version	FWB-7300 A1.0
BIOS / Version	FWS-7300 BIOS Rev 0.8 (09/15/2008)
CPU Type	Intel (R) Pentium(R) M processor 1.8GHz
Memory Type	Transcend DDR2 667 SODIMM 2GB (SEC 752 ZCE6 K4T1G084QD)
VGA	Integrated VGA on Intel 910GMLE
SATA HDD	Seagate ST380815AS 80GB
Primary IDE Master	N/A
Primary IDE Slave	ASUS DVD-E818A DVD-ROM
CRT	ViewSonic E70 17"
LCD	N/A
Compact Flash	N/A
Backplane	N/A
Riser Card	N/A
Operating System	Windows XP Professional Version 2002 Service Pack 3
Power Supply	FSP FSP180-50PLA

Test result:

Testing Software	Result	Unit
PCMark2002		
CPU	6125	
Memory	10522	
HDD	1684	
Final Reality V1.01—BenchMark Test		
2D image	34.10	
3D	6.41	
Bus transfer	46.14	
Overall	20.68	Reality marks
3Dmark2001		
3DMark2001SE Build 330_Benchmark mode	3965	

Test result:

Testing Software	Result	Unit
PCMark05		
PCMark	N/A	PCMarks
CPU	2913	
Memory	2368	
Graphics	604	
HDD	5250	
3Dmark2003 v360		
3Dmark Score	834	
CPU Score	440	

Remark: Please uses below two performance software to test mainboard if the chipset is new enough.
(ex. Intel Core 2 Duo CPU)