

Product Certification Report

Release No : 08I010007

Product Model	FWS-2150
Description	5 LAN ports Desktop Network Appliance
Test Configuration	<input checked="" type="checkbox"/> New product <input checked="" type="checkbox"/> System : FWS-2150 <input checked="" type="checkbox"/> PCB : FWB-2150 REV.A1.0 <input checked="" type="checkbox"/> BIOS : FWS-2150 BIOS Rev 1.0 (03/14/2008) <input checked="" type="checkbox"/> M/B Chipset : <input checked="" type="checkbox"/> North Bridge : VIA CN700 <input checked="" type="checkbox"/> South Bridge : VIA VT8237R <input checked="" type="checkbox"/> VGA Chipset : Integrated UniChrome™ Pro graphics <input checked="" type="checkbox"/> Audio Chipset : N/A <input checked="" type="checkbox"/> Ethernet Chipset : 5 x PCI 10/100 w/Realtek 8100C (2 port by pass) <input checked="" type="checkbox"/> I/O Chipset : ITE IT8712F-S <input checked="" type="checkbox"/> TV Chipset : N/A <input checked="" type="checkbox"/> Remark : FWS-2150 QE NPDP P5 External Report
<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Pass with Deviation Comment: _____ _____	

2008/03/18

Issue date

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Manager

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1. I/O Peripheral Function Test.....	4
2. Power Consumption Test.....	6
3. Timer Accuracy Test.....	7
3-1. System Clock & RTC Clock Test.....	7
3-2. Watchdog Timer Test.....	7
4. Network HUB / LAN Connection Test.....	8
4-1. LAN LED Function Test :.....	8
4-2. Network HUB / LAN Connects Test:.....	8
5. Hardware Compatibility.....	10
5-1. CPU Compatibility Test.....	10
5-2. Memory Compatibility Test.....	10
5-3. HDD Compatibility Test.....	10
5-4. CD/DVD-ROM Compatibility Test.....	11
5-5. USB Function Test.....	11
5-5.1. USB Basic Function Test :.....	11
5-5.2. USB Compatible Test :.....	12
5-5.3. Install Windows XP Professional from USB CD-ROM Device.....	12
5-5.4. USB Devices Full Loading Test.....	12
5-6. Peripheral Compatibility- Storage Device Test.....	12
5-6.1. Compact Flash Compatibility Test.....	13
5-7. COM Port Function Test.....	13
5-7.1. COM Port Burn In Test.....	13
5-8. Disk On Module [DOM] Compatibility Test.....	13
5-9. Mini PCI Card Compatibility Test.....	13
5-10. COM/LPT Ports & RS-232/422/485 Function Test.....	13
5-11. Status LED Test.....	14
5-12. LAN Bypass Function Test.....	14
5-13. Console Redirection Function Test.....	14
5-14. Mechanism construction check.....	15
6. O.S. Compatibility Test.....	16
6-1. English-[] Linux RedHat 9.0 , [X]Fedora Core 7.....	16
6-2. Windows XP Professional English Version.....	18
6-3. Windows XP Professional Simplified-Chinese Version.....	20
6-4. Windows XP Professional Japanese Version.....	21
7. BIOS Function Test.....	22
7-1. Memory Beep Test.....	22
7-2. Standard CMOS Features.....	22
7-3. Boot Sequence Test.....	22
7-4. Power Management Test.....	22
7-4.1. APM Power Management Test.....	22
7-4.2. ACPI Power Management Test.....	22
7-5. Power On Function Test.....	23
7-6. Wake Up Event Test.....	23
7-7. Ac Loss Auto Restart.....	24
7-8. CMOS Backup / Clear CMOS Test.....	24
7-9. Boot ROM Test.....	24
7-10. Supervisor / User Password Test.....	24
7-11. CRT / LCD / TV Function Test.....	24
7-12. TV Standard Function Test.....	25
7-13. Init Display First Function Test.....	25
7-14. On-Chip Serial ATA Function Test.....	25
7-15. SATA Mode – IDE / RAID Function Test.....	25
7-16. PC Health Status.....	25
7-17. Swap Floppy Drive & Boot up Floppy Seek Function Test.....	26
7-18. USB Onboard Device Function Test :.....	26
7-19. COM Address / IRQ Test.....	26
7-20. BIOS AWDFLASH Program Test.....	26

Platform Information:

Item	Device Information	Test Item
System	FWS-2150 A1.0	
PCB Model / Version	FWB-2150 Rev.1.0	
BIOS / Version	FWS-2150 Rev 1.0 (03/14/2008)	
CPU Type	VIA Eden ULV 500MHz	1,2,3,4,5,6,7
Memory Type	DSL DDR2 667MHz 1GB (7DE12 D9HNL) x 1 Transcend DDR2 800MHz 512MB (7UB32 D9DCL) Kingston DDR2 800MHz 1GB (0742SJJ V59C1512804)	5
SATA	Seagate ST380815AS 3.5" SATA HDD 80GB	5,6,7
IDE	FUJITSU MHV2040AT 2.5" IDE HDD 40GB	5,6,7
USB Floppy	MITSUMI D353FUE	5,6,7
USB CDROM	ASUS DRW-1604P-D/WHT/G	5,6,7
Compact Flash	Transcend CompactFlash 4GB / FIX UDMA Transcend CompactFlash 4GB / FIX PIO	5
CRT	ViewSonic E653 15" CRT CTX PR-960F 19" CRT	6,7
Operating System	Windows XP Professional English Version V2002 Service Pack 2	1,2,3,4,5,6,7
	Linux Fedora Core 7 English	6
Power Adapter	ENG 3A-621DA19 INPUT:100-240V , 50-60Hz , 1.5A OUTPUT:19V / 3.16A	1,2,3,4,5,6,7

1. I/O Peripheral Function Test

The Result:

I/O Function	Result			Note
	Pass	Fail	N/A	
IDE Channel 0 Master	X			CFD1
IDE Channel 0 Slave			X	
IDE Channel 1 Master	X			
IDE Channel 1 Slave	X			
IDE Channel 2 Master	X			SATA2
IDE Channel 3 Master	X			SATA1
SATA1 / Serial ATA Connector 1	X			IDE Channel 3 Master
SATA2 / Serial ATA Connector 2	X			IDE Channel 2 Master
Compact Flash	X			
DOM (Disk On Module) – 44 Pin	X			Transcend / TS512MDOM44V / 512MB / IDE 44 Pin
COM 1-232	X			
COM 1 Console	X			
COM 2-232	X			
PS/2 Mouse & Keyboard (Internal)	X			
USB 1/2 Ports	X			
USB 3/4 Ports	X			
USB 2.0 1/2 Ports	X			
USB 2.0 3/4 Ports	X			
DIMM Slots	X			
Watchdog Software Control	X			
FAN Connector	X			
Front Panel	Result N/A			Notes
	Pass	Fail	N/A	
Power On Button	X			
IDE LED	X			
On Board Buzzer	X			
Power LED	X			
Reset Switch	X			
Status LED	X			
LAN Bypass LED	Disable	X		Depends on BIOS
	Forced Mode	X		
	Watchdog Mode	X		
Jumpers Function	Result N/A			Notes
	Pass	Fail	N/A	
Clear CMOS	X			
Power Connector & Function	Result			Notes
	Pass	Fail	N/A	
DC IN	X			Used Power Adapter
LAN Connector & Function	Result			Notes
	Pass	Fail	N/A	
LAN Active / Link LED	LAN1	X		
	LAN2	X		
	LAN3	X		
	LAN4	X		
	LAN5	X		
LAN Speed LED	LAN1	X		

	LAN2	X			
	LAN3	X			
	LAN4	X			
	LAN5	X			
LAN 10/100 Ethernet		X			
PCI Connector & Function	Result			Notes	
	Pass	Fail	N/A		
Mini PCI Slot		X			

2. Power Consumption Test

Platform Information:

Item	Device Information
System	FWS-2150 A1.0
PCB Model / Version	FWB-2150 Rev.A1.0
BIOS / Version	FWS-2150 Rev 1.0 (03/14/2008)
CPU Type	VIA Eden ULV 500MHz
Memory Type	KINGMAX DDR2 533MHz 512MB (KINGMAX KKEA88I4NAU)
IDE	FUJITSU MHV2060AT 2.5" IDE HDD 60GB
USB Floppy	MITSUMI D353FUE
USB CDROM	ASUS DRW-1604P-D/WHT/G
CRT	ViewSonic E653 15" CRT CTX PR-960F 19" CRT
Operating System	Windows XP Professional English Version V2002 Service Pack 2
Power Adapter	ENG 3A-621DA19 INPUT:100-240V , 50-60Hz , 1.5A OUTPUT:19V / 3.16A

Test Equipment:

Equipment	AC/DC Clamp Meter
Manufacturer	PROVA
Model name	CM-01
Standard	Reference to CE EN 61010 Test Procedure Reference to UL Test Procedure

Equipment Certified Calibration:

Calibrated Company	IPE (儀寶)
S/N	00004072 (DM215)
Report No	7C21P566
Calibration Date	Jan. 14,2008
Next Calibration Date	Jan. 13, 2009
Test By	Mick

Test Point: 1. Power on machine and boot into Windows environment

2. Run test software: Prime95 to make system heavy loading in order to measure its maximum current

3. Use Prova EN61010(set as 40A) to measure each current of system different mode

Test Environment	Power Adapter: ENG 3A-621DA19		AT Power: N/A				Note
	CPU: VIA Eden ULV 500MHz		CPU:N/A		CPU:N/A		
Os Environment	Windows SP2 English		N/A				
Normal Mode (+19V)	0.73	A	N/A	A	N/A	A	
Full Loading Mode (+19V)	0.83	A	N/A	A	N/A	A	

3. Timer Accuracy Test

3-1. System Clock & RTC Clock Test

- Test Points: 1. This test focuses on the accuracy of system clock and RTC
 2. Check your local time to adjust system clock and RTC in BIOS setup menu to fit system
 3. Check if the time is correct or not after 24 hours passed

Under Room Temperature: 25 °C

Item Function	Time Interval	Margin for error	Actual		Result			Note
					Pass	Fail	N/A	
System Clock in Power On Mode	24 hrs	+/-3 sec	0.0	Sec	X			Under Windows
RTC Clock in Power On Mode	24 hrs	+/-3 sec	0.0	Sec	X			
RTC Clock in Power Off Mode	24 hrs	+/-3 sec	0.78	Sec	X			

3-2. Watchdog Timer Test

- Test Points: 1. Setup every time-out interval to check if system can generate a reset while on setting time.
 2. Please pay attention to which method we would use to make system reset, Watchdog-IRQ n or Software Programming or BIOS Setup

Use Function as below:

Watchdog-IRQ n Software Programming.

BIOS Setup. No Support.

Under Room Temperature: 25°C / DOS Mode .

Time-out interval	IRQ	Reset	Margin For error	Actual		Result			Note
						Pass	Fail	N/A	
10 sec			+/- 20%	0	Sec	X			Software provided by Aaeon S/W
60 sec			+/- 20%	2	Sec	X			
255 sec			+/- 20%	4	Sec	X			
60 sec	10		+/- 20%		Sec			X	
60 sec	11		+/- 20%		Sec			X	
60 sec	15		+/- 20%		Sec			X	

4. Network HUB / LAN Connection Test

4-1. LAN LED Function Test :

- Test Points: 1. Active LED→ It shows flickering orange color while LAN is access
 2. Link LED→ It shows green color that is always on while LAN speed is 10/100 MBps
 →It shows red-orange color that is always on while LAN speed is 1000 MBps (Gigabit)

OnBoard LAN 1 : LED Indicator Lights Function Test [] No Support

Test Item	Active / Link LED (Flickering Green Color)	Speed LED (10/100: Green Color)	Note
Pass	X	X	
Fail			
N/A			

OnBoard LAN 2 : LED Indicator Lights Function Test [] No Support

Test Item	Active / Link LED (Flickering Green Color)	Speed LED (10/100: Green Color)	Note
Pass	X	X	
Fail			
N/A			

OnBoard LAN 3 : LED Indicator Lights Function Test [] No Support

Test Item	Active / Link LED (Flickering Green Color)	Speed LED (10/100: Green Color)	Note
Pass	X	X	
Fail			
N/A			

OnBoard LAN 4 : LED Indicator Lights Function Test [] No Support

Test Item	Active / Link LED (Flickering Green Color)	Speed LED (10/100: Green Color)	Note
Pass	X	X	
Fail			
N/A			

OnBoard LAN 5 : LED Indicator Lights Function Test [] No Support

Test Item	Active / Link LED (Flickering Green Color)	Speed LED (10/100: Green Color)	Note
Pass	X	X	
Fail			
N/A			

4-2. Network HUB / LAN Connects Test:

- Test Point: 1. A represents QE Windows XP Pro / B represents Tested machine (Under Windows)
 2. A ↔ B means to connect two computers each other by using “Ping” instruction
 3. Use CAT.6 network cable with RJ-45 connector to test
 4. Allow failure rate under 1/1000.

LAN1 Port Test : [X]10 , [X]100 , []1000 Mbps

Network HUB / HUB Speed	Transfer Mode	Cable Length	Function Test					Note
			Packet in Byte	Send	Onboard LAN Speed	Received	N/A	

HP J4095A 24 Ports	100 MBps	A ↔ B	100 M	8192	1000	100	999/1000		
D-Link DGS-1008T	1GBps	A ↔ B	100 M	8192	1000	100	999/1000		
Intel InBusiness 8 Port	100 MBps	A ↔ B	100 M	8192	1000	100	999/999		
Accton DeskTop-3005	100 MBps	A ↔ B	100 M	8192	1000	100	999/1000		
SVEC FD916H (10 Mbps HUB)	10 MBps	A ↔ B	100 M	8192	1000	10	999/999		

LAN2 Port Test : [X]10 , [X]100 , []1000 Mbps

Network HUB / HUB Speed		Transfer Mode	Cable Length	Function Test					Note
				Packet in Byte	Send	Onboard LAN Speed	Received	N/A	
HP J4095A 24 Ports	100 MBps	A ↔ B	100 M	8192	1000	100	999/1000		
D-Link DGS-1008T	1GBps	A ↔ B	100 M	8192	1000	100	1000/999		
Intel InBusiness 8 Port	100 MBps	A ↔ B	100 M	8192	1000	100	1000/1000		
Accton DeskTop-3005	100 MBps	A ↔ B	100 M	8192	1000	100	1000/999		
SVEC FD916H (10 Mbps HUB)	10 MBps	A ↔ B	100 M	8192	1000	10	1000/999		

LAN3 Port Test : [X]10 , [X]100 , []1000 Mbps

Network HUB / HUB Speed		Transfer Mode	Cable Length	Function Test					Note
				Packet in Byte	Send	Onboard LAN Speed	Received	N/A	
HP J4095A 24 Ports	100 MBps	A ↔ B	100 M	8192	1000	100	1000/999		
D-Link DGS-1008T	1GBps	A ↔ B	100 M	8192	1000	100	999/1000		
Intel InBusiness 8 Port	100 MBps	A ↔ B	100 M	8192	1000	100	999/999		
Accton DeskTop-3005	100 MBps	A ↔ B	100 M	8192	1000	100	1000/999		
SVEC FD916H (10 Mbps HUB)	10 MBps	A ↔ B	100 M	8192	1000	10	999/1000		

LAN4 Port Test : [X]10 , [X]100 , []1000 Mbps

Network HUB / HUB Speed		Transfer Mode	Cable Length	Function Test					Note
				Packet in Byte	Send	Onboard LAN Speed	Received	N/A	
HP J4095A 24 Ports	100 MBps	A ↔ B	100 M	8192	1000	100	999/999		
D-Link DGS-1008T	1GBps	A ↔ B	100 M	8192	1000	100	999/1000		
Intel InBusiness 8 Port	100 MBps	A ↔ B	100 M	8192	1000	100	999/1000		
Accton DeskTop-3005	100 MBps	A ↔ B	100 M	8192	1000	100	999/999		
SVEC FD916H (10 Mbps HUB)	10 MBps	A ↔ B	100 M	8192	1000	10	1000/999		

LAN5 Port Test : [X]10 , [X]100 , []1000 Mbps

Network HUB / HUB Speed		Transfer Mode	Cable Length	Function Test					Note
				Packet in Byte	Send	Onboard LAN Speed	Received	N/A	
HP J4095A 24 Ports	100 MBps	A ↔ B	100 M	8192	1000	100	1000/999		
D-Link DGS-1008T	1GBps	A ↔ B	100 M	8192	1000	100	1000/1000		
Intel InBusiness 8 Port	100 MBps	A ↔ B	100 M	8192	1000	100	1000/999		
Accton DeskTop-3005	100 MBps	A ↔ B	100 M	8192	1000	100	1000/999		
SVEC FD916H (10 Mbps HUB)	10 MBps	A ↔ B	100 M	8192	1000	10	1000/999		

5. Hardware Compatibility

5-1. CPU Compatibility Test

- Test Points: 1. This test focuses on the CPU compatibility
2. Run Prime95 Under Windows for 8 hours

Run Prime95 for 8 hours

OS	CPU Type	FSB	Result			Note
			Pass	Fail	N/A	
Windows Environment	VIA Eden 500 MHz	400M Hz	X			

5-2. Memory Compatibility Test

- Test Points: 1. "DIMM 2(1)" means to insert DIMM item 1 in DIMM slot 2
2. Power on machine then boot into DOS environment run "Memory Test Software"
3. Run MemTest overnight in DOS mode for each item

Memory List:

Item	Memory Brand	Memory Chipset	Frequency	Size (MB)	Note
01	DSL	7DE12 D9HNL	667MHz	1024MB	R2-200709
02	Kingston	Nanya NT5TU64M8BE-3C	533MHz	1024MB	R2-200722
03	Kingston	Nanya NT5TU64M8BE-3C	533MHz	1024MB	R2-200721
04	KINGMAX	KINGMAX KKEA88I4NAU-37XX	533MHz	512MB	R2-200601
05	Kingston	HYB18T512800BF3S	667MHz	512MB	R2-200715
06	Transcend	7UB32 D9DCL	800MHz	512MB	R2-200717
07	Kingston	0742SJJ V59C1512804	800MHz	1024MB	R2-200609

Test Result:

Environment Configuration	MemTest Version	Result			Note
		Pass	Fail	N/A	
DIMM 1(1)	1.70	X			Run 533 MHz
DIMM 1(2)	1.70	X			Run 533MHz
DIMM 1(3)	1.70	X			Run 533MHz
DIMM 1(4)	1.70	X			Run 533MHz
DIMM 1(5)	1.70	X			Run 533MHz
DIMM 1(6)	1.70	X			Run 533MHz
DIMM 1(7)	1.70	X			Run 533MHz

5-3. HDD Compatibility Test

- Test Points: 1. This test focuses on IDE HDD Devices compatibility
2. Check if HDD could be detected correctly during POST
3. Check HDD boot up function and read/write function

IDE HDD Compatibility Test:

Cable Type: [] 40 pin , [X] 44 pin , [] 80 pin

HDD Device	Detect Message		Booting Up		N/A	Note
	Pass	Fail	Pass	Fail		
Seagate ST940815A 40GB ATA-100 2.5" IDE HDD	X		X			ID-200702
FUJITSU MHV2040AT 40GB ATA-100 2.5" IDE HDD	X		X			
FUJITSU MHR2010AT 10GB ATA-100 2.5" IDE HDD	X		X			
FUJITSU MHK2060AT 6GB 2.5" IDE HDD	X		X			

SATA HDD Compatibility Test:

HDD Device	Detect Message	Booting Up	N/A	Note
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	Pass	Fail	Pass	Fail	
Seagate ST380815AS 80GB 3.5" SATA-II HDD	X		X		ID-200725
Seagate ST98823AS 120GB 2.5" SATA-I HDD	X		X		ID-200613
Western Digital WD1200BEVS-60RST0 120GB 2.5" SATA-I HDD	X		X		ID-200718

IDE and SATA Device Full Loading Test

IDE and SATA Device Full Loading Test		Detect Message		Booting Up		N/A	Note
		Pass	Fail	Pass	Fail		
Primary Master	FUJITSU MHV2040AT 40GB ATA-100 2.5" IDE HDD	X		X			
Primary Slave	FUJITSU MHK2060AT 6GB 2.5" IDE HDD	X		X			
SATA1	Seagate ST380815AS 80GB 3.5" SATA-II HDD	X		X			
SATA2	Western Digital WD1200BEVS-60RST0 120GB 2.5" SATA-I HDD	X		X			

5-4. CD/DVD-ROM Compatibility Test

- Test Points: 1. This test focuses on IDE CD/DVD-ROM Devices compatibility
 2. Check if CD/DVD-ROM could be detected correctly during POST
 3. Quickly move VCD or DVD seek bar in order to ensure display quality

Cable Type: [X] 40 pin , [] 44 pin , [] 80 pin

DVD/CD-ROM Device	Detect Message		Booting Up		Play VCD		Play DVD Forward 32X Backward 32X		Note
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	
Pioneer DVD-ROM DVD-121	X		X		X		X		CD-200303
4KUS CCD-52X6D 52X / CD-ROM	X		X		X		X		CD-2002000
SONY CDU4811 48X / CD-ROM	X		X		X		X		CD-030

5-5. USB Function Test

Test Points: 1. Enable/Disabled USB Function in BIOS then check if the result is fine or not Under Windows or DOS.

5-5.1. USB Basic Function Test :

USB In BIOS Setup Test :

In BIOS Setup Menu														
Test Item	USB Port	USB 1 / 2			USB 3 / 4			USB 5 / 6			USB 7 / 8			Note
		Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
USB Controller	Enable	X			X					X			X	Under Windows
	Disable	X			X					X			X	Under Windows
USB 2.0 Controller	Enable	X			X					X			X	Under Windows
	Disable	X			X					X			X	Under Windows
USB Keyboard Support	Enable	X			X					X			X	Under DOS 6.22
	Disable	X			X					X			X	Under DOS 6.22
USB Mouse Support	Enable	X			X					X			X	Under DOS 6.22
	Disable	X			X					X			X	Under DOS 6.22

USB System Booting Test :

- Test Points: 1. Set following devices as the first boot device in BIOS setup menu
 2. Restart and check if system could boot from them

System Booting Test														
Item	USB Port	USB 1 / 2			USB 3 / 4			USB 5 / 6			USB 7 / 8			Note
		Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
USB HDD		X			X					X			X	Please use USB thumb device to boot
USB FDD Mitsumi D353GUE		X			X					X			X	[FL-200201] Max 5V / 500mA
USB2.0 DRW-1604P-D/WHT/G/ASUS		X			X					X			X	[CD-200501]

5-5.2. USB Compatible Test :

Test Points: 1. Test Read and Write function for the following devices

[X]USB 1.1 [X] USB 2.0 Compatible Test

Item	USB Port	USB 1 / 2			USB 3 / 4			USB 5 / 6			USB 7 / 8			Note
		Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
USB 2.0 HUB ATEN/ 4 Port UH-204		X			X					X			X	[HB-200201]
USB FDD Mitsumi D353GUE		X			X					X			X	[FL-200201] Max 5V / 500mA
USB2.0 DRW-1604P-D/WHT/G/ASUS		X			X					X			X	[CD-200501]
USB HDD IBM IC25N020ATCS04-0 / 20GB / 4200RPM		X			X					X			X	1394b + USB2.0 External Box (MP-FBHUB20P-V2.0 E10-7073161D60)

5-5.3. Install Windows XP Professional from USB CD-ROM Device

Test Points: 1. This test focuses on whether we can install OS from USB devices or not

2. Install Windows XP Professional by High Speed USB2.0 CD/DVD-ROM

	Pass	Fail	N/A	Note
Install Windows XP Professional by HighSpeed Device: USB2.0 DRW-1604P-D/WHT/G/ASUS	X			Set it as first boot device in BIOS Setup Menu

5-5.4. USB Devices Full Loading Test

Test Points: 1. Connect each USB devices to the machine

2. Play VCD(DAT or MPG file) for each storage device for 8 hours in Windows to make system full loading

3. In the duration of test, check if system could work fine or not

USB Device Full Loading Test (Burn-In 8 Hrs):

USB Port	Installation		Function		Burn in		N/A	Note
	Pass	Fail	Pass	Fail	Pass	Fail		
USB1	X		X		X			Use Flashdisk
USB2	X		X		X			Use Flashdisk
USB3	X		X		X			Use Flashdisk
USB4	X		X		X			Use Flashdisk

5-6. Peripheral Compatibility- Storage Device Test

5-6.1. Compact Flash Compatibility Test

Test Points: 1. Most of the default value of CF card is set as IDE primary master so we may make the same setting before we use CF

2. Install OS from IDE or USB CD-ROM to IDE CF card according to following description.

Device item	Booting		Detected during POST		Install OS		N/A	Note
	Pass	Fail	Pass	Fail	Pass	Fail		
Type-I CF (Fix / PIO Mode)	X		X		X			CF Model: CF-200708
Type-I CF (Fix / UDMA Mode)	X		X		X			CF Model: CF-200706

5-7. COM Port Function Test

5-7.1. COM Port Burn In Test

Test Point: 1. Use BurnIn Test V5.1 Pro to test COM port reliability

2. Add all COM port of test machine into “COM Ports Selected” table and set “detect and loopback test” in Set Preferences→Serial Ports

3. Attach COM port loopbacks to each COM connector then burn in overnight

4. Com port status must be error free after finish test

BurnIn Test V5.1 Pro	Result			Note
	Pass	Fail	N/A	
COM1	X			
COM2	X			

5-8. Disk On Module [DOM] Compatibility Test

Test Point: Please pay attention to align pin 1 of DOM with pin 1 of socket.

Device Item	Detect Message		Booting UP		Read/ Write		Programming		N/A	Note
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail		
Transcend / TS512MDOM40V / 512MB / IDE 40 Pin									X	[DC-200703]
Transcend / TS512MDOM44V / 512MB / IDE 44 Pin	X		X		X		X			[DC-200704]

5-9. Mini PCI Card Compatibility Test

Test Result:

Device Item	Detect Message		Function Test		N/A	Note
	Pass	Fail	Pass	Fail		
GM-100 WLAN 11g Mini PCI Card (Model: Sky Thru GC-100)	X		X			MI-200601
GM-101 WLAN 11b/g 54Mbps Mini PCI Card (Model: VNT6655AM)	X		X			MI-200602
PER-C20S SATA RAID MiniPCI Card (Silicon Image Sil3512ECTU128 QF7227.1-1)	X		X			

5-10. COM/LPT Ports & RS-232/422/485 Function Test

Test Result:

Basic Function Test				
Test Item	Result			Note
	Pass	Fail	N/A	
RS-422 for COM2			X	Use loopback and WINSSD.exe to test RS-422 in Windows

RS-485 for COM2				X	Use ICP CON I-7044D D/IO Module in Windows
COM1	Serial Mouse	X			
	Serial Modem	X			
COM2	Serial Mouse	X			
	Serial Modem	X			

5-11. Status LED Test

- Test Step: 1. Status LED will work when power on
2. Check if status LED works fine

Status LED Function	Result			Note
	Pass	Fail	N/A	
Disable	X			
RED LED ON	X			
RED LED BLINK	X			
GREEN LED ON	X			
GREEN LED BLINK	X			

5-12. LAN Bypass Function Test

- Test Step: 1. LAN Bypass function only supports LAN1 and LAN2
2. Use bypass LAN port: LAN3 and LAN4 connectors to be a HUB when it works
3. Check LAN bypass LED works fine or not?

Test Result:

LAN Bypass Function Test				
Test Item	Result			Note
	Pass	Fail	N/A	
Disable	X			1. Bypass LED is always off. 2. Bypass function was always disabled 3. Watchdog function works fine
Force mode	X			1. Bypass LED is on when power on 2. Bypass function was always enabled 3. Watchdog function works fine
Watch Dog Mode	X			1. Bypass LED will turn on when WDT time up 2. Bypass function will enable when WDT time up 3. System will not restart when WDT time up

5-13. Console Redirection Function Test

Test Step:

1. We can control firewall system by console redirection, include display and PS/2 keyboard/mouse
2. First you need to connect PC and firewall system with COM cable
3. Enable "Console Redirection" and "Agent after Boot" items in firewall system BIOS
4. PC must open "Hyper terminal" and set the same baud rate with firewall system (Baud rate default value in BIOS is 19200)
5. Press "Tab" key to get control while firewall wall POST

Test Result:

Console Redirection Function Test				
Test Item	Result			Note
	Pass	Fail	N/A	
Control by PS/2 keyboard	X			
Control by PS/2 mouse	X			
Show in PC display	X			

5-14. Mechanism construction check

Test Result:

Test Item	Result			Note
	Pass	Fail	N/A	
Panel construction check			X	
Case construction check	X			
PCMICA construction check			X	
I/O Port connector check	X			Serial port / Parallel port / PS2 connector
USB connector check	X			
Component check	X			

6. O.S. Compatibility Test

6-1. English- Linux RedHat 9.0 , Fedora Core 7

No Support

Driver Information:

Chipset Software	driver has built-in the kernel
Graphics Media	driver has built-in the kernel
LAN Driver	driver has built-in the kernel
Audio Driver	driver has built-in the kernel

Install O.S. to IDE SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Linux Fedora Core 2.6.21-1.3194.fc7	X			
Boot into O.S.	X			

VGA Resolution Test:

Note: Pay attention to LCD Full Screen under Text Mode.

Color : 256 16bits: Thousands of Colors 32bits: Millions of Colors

Resolution	CRT			TTL			LVDS			Note
	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
640X480	X					X			X	
800X600	X					X			X	
1024X768	X					X			X	
1280X1024	X					X			X	
1600X1200	X					X			X	

CRT Model Name : CTX PR-960F

TTL Panel : N/A

LVDS Panel : N/A

Test Result:

Test Item	Result			Note
	Pass	Fail	N/A	
Install From IDE CD-ROM				
Install to HDD	X			
Base Function Test				
VGA Setup	X			
Soundcard Setup			X	
LAN & Modem Setup	X			
Printer Setup			X	
Mouse Setup	X			
Keyboard Setup	X			
Mount Floppy			X	mount /dev/fd0 /mnt/floppy
Mount CD-ROM	X			mount /dev/cdrom /mnt/cdrom
Mount USB Floppy	X			mount /dev/sda /mnt/floppy (or floppy1)
Mount USB CD-ROM	X			mount /dev/sda /mnt/cdrom
Mount USB HDD	X			mount -t vfat /dev/sda1 /mnt/usb
Virtual Consoles	X			Ctrl+Alt+F[1-7]
Display Function Test				
CRT -- Full Screen	X			
LCD -- Full Screen			X	
DVI -- Full Screen			X	
DVI + LCD			X	
CRT + LCD			X	
CRT + DVI			X	
Touch Screen Function Test				
8 Wire			X	
5 Wire			X	
Network Function Test				
Connect to Internet	X			
Ping IP Address	X			Ping
Audio Function Test				
Play Audio Function Test			X	Play Audio Test
MIC Function Test			X	Microphone Test
X Windows Application				
Start Button→Office	X			Office function
X-Window	X			Startx – Desktop in Linux

6-2. Windows XP Professional English Version

No Support

Driver Information:

Chipset Software	VIA 4 in 1 4.55V
Graphics Media	VIA / S3G 6.14.10.310
LAN Driver	5.663.1212.2006
Audio Driver	N/A

Install OS to IDE SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows XP Professional Service Pack 2 V2002 ACPI Mode	X			
English Windows XP Professional Service Pack 2 V2002 APM Mode	X			

Onboard RAID Function Test:

Installation	Result			Note
	Pass	Fail	N/A	
Set 2 SATA HDDs as RAID 0 and install Windows XP Professional Service Pack 2 V2002 ACPI Mode			X	
Set 2 SATA HDDs as RAID 1 and install Windows XP Professional Service Pack 2 V2002 ACPI Mode			X	

Test Points: 1. Before starting every test, you must install all drivers completely first

VGA Resolution Test

Note: Pay attention to LCD Full Screen under Text Mode.

Color : 256 16bit 24bit 32bit

Resolution	CRT (Please use CTX PR-960F to Test)			TTL			LVDS			Note
	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
640X480	X					X			X	
800X600	X					X			X	
1024X768	X					X			X	
1280X1024	X					X			X	
1600X1200	X					X			X	

CRT Model Name: CTX PR-960F (Max Resolution 1600x1200)

TTL Panel: N/A

LVDS Panel: N/A

Display Function 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

	Check VGA driver			Check Display			
	Pass	Fail	N/A	Pass	Fail	N/A	
In Windows Desktop	X			X			

Test Results:

Test Item	Pass	Fail	N/A	Note
Install From USB CD-ROM				
Install to HDD	X			
Display Function Test				
CRT -- Full Screen	X			
LCD -- Full Screen			X	
DVI --- Full Screen			X	
TV ---- Full Screen			X	
DVI + LCD			X	
CRT + LCD			X	
CRT + DVI			X	
CRT + TV			X	
CRT + LCD + TV			X	
External VGA Card Test (Dual Display)				
CHAINTECH NVIDIA GeForce4 MX440-8X			X	
Boot - Windows XP Professional Advanced Options Menu				
Safe Mode	X			
Safe Mode with Networking	X			
Safe Mode with Command Prompt	X			
Enable Boot Logging	X			
Enable VGA Mode	X			
Last known Good Configuration	X			
Directory Services Restore Mode (windows XP domain controllers only)	X			
Debugging Mode	X			
Disable automatic restart on system failure	X			
Start Windows Normally	X			
Reboot	X			
Return to OS Choices Menu	X			
Basic Function Test				
IDE Channel 0 Master	X			
IDE Channel 0 Slave	X			
IDE Channel 1 Master	X			
IDE Channel 1 Slave	X			
IDE Channel 2 Master	X			SATA2
IDE Channel 3 Master	X			SATA1
PS/2 Mouse and Keyboard	X			
USB Mouse and Keyboard	X			
LAN Function Test				
LAN1 --- Auto	X			
LAN2 --- Auto	X			
LAN3 --- Auto	X			
LAN4 --- Auto	X			
LAN5 --- Auto	X			
Start Menu				
Log off User	X			
Shut down	X			
Standby	X			
Restart	X			
Hibernate	X			

6-3. Windows XP Professional Simplified-Chinese Version

[] No Support

Driver Information:

Chipset Software	VIA 4 in 1 4.55V
Graphics Media	VIA / S3G 6.14.10.310
LAN Driver	5.663.1212.2006
Audio Driver	N/A

Install OS to [X]IDE []SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
Simplified Chinese Windows XP Professional Service Pack 2 V2002 ACPI Mode	X			

Test Results:

Test Item	Pass	Fail	N/A	Note
LAN Function Test				
LAN1 --- Auto	X			
LAN2 --- Auto	X			
LAN3 --- Auto	X			
LAN4 --- Auto	X			
LAN5 --- Auto	X			
Start Menu				
Log off User	X			
Shut down	X			
Standby	X			
Restart	X			
Hibernate	X			

6-4. Windows XP Professional Japanese Version

[] No Support

Driver Information:

Chipset Software	VIA 4 in 1 4.55V
Graphics Media	VIA / S3G 6.14.10.310
LAN Driver	5.663.1212.2006
Audio Driver	N/A

Install OS to [X]IDE []SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
Simplified Chinese Windows XP Professional Service Pack 2 V2002 ACPI Mode	X			

Test Results:

Test Item	Pass	Fail	N/A	Note
LAN Function Test				
LAN1 --- Auto	X			
LAN2 --- Auto	X			
LAN3 --- Auto	X			
LAN4 --- Auto	X			
LAN5 --- Auto	X			
Start Menu				
Log off User	X			
Shut down	X			
Standby	X			
Restart	X			
Hibernate	X			

7. BIOS Function Test

7-1. Memory Beep Test

Test Item	Function		N/A	Note
	Pass	Fail		
Check if there is beep sound during power on inserting no memory	X			

7-2. Standard CMOS Features

Test Item	Setting		Function		N/A	Note
	Pass	Fail	Pass	Fail		
Data (mm:dd:yy)	X		X			
Time (hh:mm:ss)	X		X			
IDE Channel 0 Master	X		X			CFD1
IDE Channel 0 Slave					X	
IDE Channel 1 Master	X		X			
IDE Channel 1 Slave	X		X			
IDE Channel 2 Master	X		X			SATA2
IDE Channel 3 Master	X		X			SATA1

7-3. Boot Sequence Test

Test Item	Result			Note
	Pass	Fail	N/A	
Floppy			X	
Hard Disk	X			
Removable (All Device Priority)			X	For Product BIOS Request
Hard Disk Boot Priority	X			
Hard Disk	X			
CDROM	X			
USB-FDD	X			
USB-ZIP	X			
USB-CDROM	X			
Legacy LAN (Boot ROM)	X			
First Boot Device	X			First Boot Device must be set to HDD in first edition SAP
Second Boot Device	X			
Third Boot Device	X			
Boot Other Device	X			
Disable	X			

7-4. Power Management Test

7-4.1. APM Power Management Test

Test Item	Setting Test	Result			Note
		Pass	Fail	N/A	
Normal Mode	Normal Mode	X			
HDD Power Down	Function Test	X			
Suspend Mode	Function Test	X			
Power Button	Delay 4 Sec	X			Soft-Off By PWRBTN
Power Button	Instant-Off	X			Soft-Off By PWRBTN

7-4.2. ACPI Power Management Test

Test Point:

1. While setting S1(POS) in BIOS ACPI option, boot into Windows then choice standby item to let system suspend. It

- must be resumed back correctly by moving PS/2 Keyboard or mouse
- While setting S3(STR) in BIOS ACPI option, boot into Windows then choice standby item to let system suspend. It must be resumed back correctly by pressing power button

Test Item	Result			Note
	Pass	Fail	N/A	
Enable	X			
Disable	X			
ACPI - S1 (POS)	X			
ACPI - S3 (STR)			X	
ACPI - S1 & S3			X	

7-5. Power On Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
Password			X	Only support ACPI Mode
Hot KEY			X	Only support ACPI Mode
MOUSE Move			X	Only support ACPI Mode
Keyboard 98			X	Only support ACPI Mode
Any KEY			X	Only support ACPI Mode
BUTTON ONLY	X			Only support ACPI Mode

7-6. Wake Up Event Test

Test Step:

1. Wake on MODEM→

- Connected COM port MODEM to machine and its power stays in on state.
- Connected phone cable to MODEM
- Power on machine then enter BIOS setup menu, ensure that “Power On by Ring” item is enabled.
- Turn off power by pressing shutdown button during POST
 - Machine will be powered on successfully by dialing from COM port MODEM
- Turn off computer from start menu in Windows OS
 - Machine will be powered on successfully by dialing from COM port MODEM

2. Wake on LAN→

- Connected machine and another PC with LAN cable.
- Power on machine then enter BIOS setup menu, enable “Wake up by PCI Card” item.
- Turn off power by pressing shutdown button during POST
 - Send magic packet to machine by key in it’s MAC address in another PC, then machine must be powered on successfully
- Turn off computer from start menu in Windows OS
 - Send magic packet to machine by key in it’s MAC address in another PC, then machine must be powered on successfully

Test Item	Result			Note
	Pass	Fail	N/A	
Power On by Ring / COM 1	Ring		X	Test by Modem
	+12V		X	Test by Multimeter
	+5V		X	Test by Multimeter
Power On by Ring / COM 2	Ring		X	Test by Modem
	+12V		X	Test by Multimeter
	+5V		X	Test by Multimeter
Wake On LAN (Wake up by PCI Card)			X	Before test, all drivers must be installed completely first
Wake On RTC (Resume by Alarm)			X	

7-7. Ac Loss Auto Restart

- Test Points: 1. Power on after Ac Loss Auto Restart Function only supports for ACPI mode
2. Ac Loss Auto Restart Function means that we turn off power by unplugging power cord directly without pressing power button
 3. Off → Ac Loss Auto Restart Function always off no matter shutdown normally or Ac Loss
 4. On → Ac Loss Auto Restart Function always on no matter shutdown normally or Ac Loss
 5. Auto → Ac Loss Auto Restart Function off while shutdown normally, and function on while Ac Loss

Test Item	Result			Note
	Pass	Fail	N/A	
Off	X			
On (Default)	X			1. Directly unplugging power cord then plugging power cord for 10 times, each time for 1 seconds
	X			2. Directly unplugging power cord then plugging power cord for 5 times, each time for 1 minutes
	X			3. Shutdown power normally then unplugging power cord, next time when you plugging power cord directly, machine still has to power on
Former-Sts (Auto)	X			1. Directly unplugging power cord then plugging power cord for 10 times, each time for 1 seconds
	X			2. Directly unplugging power cord then plugging power cord for 5 times, each time for 1 minutes
	X			3. Shutdown power normally then unplugging power cord, next time when you plugging power cord directly, machine still has to stay in off status

7-8. CMOS Backup / Clear CMOS Test

Test Item	Result			Note
	Pass	Fail	N/A	
CMOS Backup	X			
Clear CMOS Test	X			

7-9. Boot ROM Test

Test Item	Result			Note
	Pass	Fail	N/A	
Boot ROM to Novell 4.11 [RPL]			X	HUB : HP J4095A
Boot ROM to WinNT 4.0 [PXE]	LAN1	X		HUB : HP J4095A
	LAN2	X		HUB : HP J4095A
	LAN3	X		HUB : HP J4095A
	LAN4	X		HUB : HP J4095A
	LAN5	X		HUB : HP J4095A

7-10. Supervisor / User Password Test

Test Item	Result			Note
	Pass	Fail	N/A	
Supervisor Password	X			
User Password	X			

7-11. CRT / LCD / TV Function Test

Test Point: Boot display must be set to CRT+LCD in BIOS setup menu

Test Item	Result			Note
	Pass	Fail	N/A	
Boot Display -CRT	X			

Boot Display –LCD			X	
Boot Display –CRT+LCD			X	
Boot Display –DVI			X	
Boot Display –TV			X	
Boot Display –CRT+TV			X	
Boot Display –CRT+DVI			X	

7-12. TV Standard Function Test

Function Test		Result			Note
		Pass	Fail	N/A	
NTSC	S terminal (Composite)			X	
PAL				X	
NTSC	AV Terminal (Component)			X	
PAL				X	

7-13. Init Display First Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
PCI Slot			X	
On Board			X	

7-14. On-Chip Serial ATA Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
Auto			X	
Combined Mode			X	
Enhanced Mode			X	
SATA Only			X	
Enabled	X			
Disable	X			

7-15. SATA Mode – IDE / RAID Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
IDE			X	
RAID (Only support Enhanced Mode)			X	

7-16. PC Health Status

Voltage Monitoring Test	Result			Actual (V)	Note
	Pass	Fail	N/A		
(+) Vccp	X			0.75V	
(+) Vcore	X			1.92V	
(+) 3.3V	X			3.34V	
(+) 5V	X			5.34V	
(+) 12V	X			16.32V	
Voltage Battery	X			3.15V	
CPU Temp.	X			37°C	
System Temp.	X			55°C	
FAN 1 Speed	X			4560RPM	Use DC-12V/0.28A FAN

FAN 2 Speed	X			4560RPM	Use DC-12V/0.28A FAN
FAN 3 Speed	X			4560RPM	Use DC-12V/0.28A FAN

7-17. Swap Floppy Drive & Boot up Floppy Seek Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
Swap Floppy Drive	Enabled		X	
	Disabled		X	
Boot up Floppy Seek	Enabled		X	
	Disabled		X	

7-18. USB Onboard Device Function Test :

Test Item	Result			Note
	Pass	Fail	N/A	
USB Controller	X			
USB 2.0 Controller	X			
USB Keyboard Support	X			
USB Mouse Support	X			

7-19. COM Address / IRQ Test

COM Port Mouse : Logitech M-MM43

Test Item	BIOS Adjust		Function		Boot into Windows		N/A	Note
	Pass	Fail	Pass	Fail	Pass	Fail		
COM 1								
3F8 / IRQ4	X		X		X			
2F8 / IRQ3	X		X		X			
3E8 / IRQ4	X		X		X			
2E8 / IRQ3	X		X		X			
AUTO (3F8 / IRQ4)	X		X		X			
Disable	X		X		X			
COM 2								
3F8 / IRQ4	X		X		X			
2F8 / IRQ3	X		X		X			
3E8 / IRQ4	X		X		X			
2E8 / IRQ3	X		X		X			
AUTO (2F8 / IRQ3)	X		X		X			
Disable	X		X		X			

7-20. BIOS AWDFLASH Program Test

Test Points: 1. All we have to do is just type instruction: awdfash.exe XXX.BIN in DOS, and other parameter is no need
If it can not be run, then we can say the test is fail

Award Flash Tools Version	Result		
	Pass	Fail	N/A
8.88	X		