

Product Certification Report

Release No : 05I010014

Product Model	FWB-880M
Product Description	Intel Pentium 4 2U Firewall System
Test Reason	<input checked="" type="checkbox"/> New product <input checked="" type="checkbox"/> PCB : FWB-880M A1.0 <input checked="" type="checkbox"/> BIOS : FWB-880 BIOS Rev 1.0 (10/06/2005) <input checked="" type="checkbox"/> Chipset : <input checked="" type="checkbox"/> CPU Type : (1) Intel® Pentium® 4 Processor 3.80GHz / L2 Cache: 2MB (670系列) (2) Intel® Pentium® D Processor 2.80GHz / FSB: 800MHz / L2 Cache: 2x1M (200x14.0, 2CPUs) Dual Core CPU (820 系列) (3) Intel® Pentium® D Processor 3.20GHz / FSB: 800MHz / L2 Cache: 2x1M (200x16.0, 2CPUs) Dual Core CPU (840 系列) (4) Intel® Pentium® 4 Processor 3.60GHz / FSB: 800MHz / L2 Cache: 1MB (200x18.0) (561 系列) (5) Intel® Pentium® 4 Processor 3.80GHz / FSB: 800MHz / L2 Cache: 1MB (200x19.0) (571 系列) <input checked="" type="checkbox"/> North Bridge : Intel 945G <input checked="" type="checkbox"/> South Bridge : Intel 82801GB(ICH7) <input checked="" type="checkbox"/> VGA Chipset : Integrated VGA on Intel 945G <input checked="" type="checkbox"/> Audio Chipset : Realtek ALC655 AC97 CODEC (Daughter Board) <input checked="" type="checkbox"/> Ethernet Chipset : RJ-45 x1 Intel 82562EZ, 10/100Mb LAN optional <input checked="" type="checkbox"/> I/O Chipset : Winbond W83627EHF <input checked="" type="checkbox"/> TV Chipset : N/A <input checked="" type="checkbox"/> Remark : FWB-880M A1.0 NPDP P5 QE Test Report

2005/10/28

Wenyuan Yang

Jojo Lin

Issue date

Manager

Test Engineer

Test Result for Certification

Dynamic / Boot_UP Burn_In Test		
Test Method	Test Condition	Result
Diagnostics Software Burn-In Test.	0°C ~60°C, 48 hrs	PASS
Power On/Off Test.	0°C ~60°C, 24hrs	PASS
Voltage Range Test		
Power On/Off Test in DO-100V Power Function Test	10 times in Room Temperature	PASS
Power On/Off Test in DOS-210V Power Function Test	10 times in Room Temperature	PASS
KB Reset in Dos Mode-110V Power Function Test	20 times in Room Temperature	PASS
Hardware Reset in Dos Mode-110V Power Function Test	20 times in Room Temperature	PASS
I/O Peripheral Function Test – I/O Function		Result
Floppy Connector / Driver A:		PASS
Primary IDE Master		PASS
Primary IDE Slave		PASS
SATA1 / Serial ATA Connector 1		PASS
SATA2 / Serial ATA Connector 2		PASS
SATA3 / Serial ATA Connector 3		PASS
SATA4 / Serial ATA Connector 4		PASS
DOM (Disk On Module) - 40 Pin		PASS
COM 1-232		PASS
COM1-Ring		PASS
COM 2-232		PASS
COM 2-422		PASS
COM 2-485		PASS
COM 2-Ring		PASS
Clear CMOS		PASS
PS/2 Mouse (External)		PASS
PS/2 Keyboard (External)		PASS
Audio Connector		PASS
Audio 5.1 Channel / S/P DIF		PASS
LPT 1		PASS
SIR / 115.2 Kbps		PASS
USB 1&2 Ports		PASS
USB 3&4 Ports		PASS
USB 5 Ports		PASS
USB 6 Ports		PASS
USB 7 Ports		PASS
USB 8 Ports		PASS
USB 2.0 1 & 2 Ports		PASS
USB 2.0 3 & 4 Ports		PASS
USB 2.0 5 Ports		PASS
USB 2.0 6 Ports		PASS
USB 2.0 7 Ports		PASS
USB 2.0 8 Ports		PASS
VGA Display		PASS
DIMM Slots		PASS
Watchdog IRQ n		PASS
Watchdog Software Control		PASS

I/O Peripheral Function Test –Front Panel and Other connector							Result
Power On Button							PASS
IDE LED							PASS
External Buzzer							PASS
On Board Buzzer							PASS
Power LED							PASS
Reset Switch							PASS
Keyboard Lock							PASS
Ext. K/B Connector							PASS
CPU FAN Connector							PASS
System FAN Connector							PASS
CN1							PASS
FAN1							PASS
FAN2							PASS
FAN3							PASS
FAN4							PASS
FAN5							PASS
I/O Peripheral Function Test – Power Connector & Function							Result
ATX Power Connector (20 Pin)							PASS
ATX Power Connector (24 Pin)							PASS
ATX Power_12V Connector							PASS
Big 4P Power Connector							PASS
Mini 4P Power Connector							PASS
I/O Peripheral Function Test – LAN Connector & Function							Result
LAN Active LED			LAN1				PASS
LAN Link LED			LAN1				PASS
LAN 10/100 Ethernet							PASS
I/O Peripheral Function Test – PCI Connector & Function							Result
PCI Slots							PASS
PCI Express							PASS
Power Consumption Test (Minimum loading in DOS Mode)							
	ATX Power: 24Pin Aopen AO350-12AHN			ATX Power: 24Pin Seventeam ST-352HLP			
	CPU: Intel® Pentium® 4 Processor 3.80GHz / L2 Cache: 2MB (670系列)	CPU:		CPU: Intel® Pentium® D Processor 3.20GHz / FSB: 800MHz / L2 Cache: 2x1M (200x16.0, 2CPUs) Dual Core CPU (840系列)	CPU:		
Normal Mode (+5V)	2.40	A		A	1.81	A	A
Suspend Mode (+5V)	2.05	A		A	1.45	A	A
5VSB in Power Off Mode (just for ATX)	0.17	A		A	0.23	A	----- A
Normal Mode (+12V)	4.56	A		A	7.18	A	A
Suspend Mode (+12V)	3.11	A		A	5.40	A	A
Normal Mode (+3.3V) (just for ATX)	0	A		A	0	A	----- A
Suspend Mode (+3.3V) (just for ATX)	0	A		A	0	A	----- A
Normal Mode (-12V)	0	A		A	0	A	A
Suspend Mode (-12V)	0	A		A	0	A	A
Power Connector Test (110V/220V)			Voltage Range			Result	
ATX Connector Power On/Off for 10 times in DOS						PASS	
Timer Accuracy Test							

System Clock & RTC Clock Test				
Test Method		Margin for error		Result
System Clock in Power On Mode		+-1 second during 24 hours		PASS
RTC Clock in Power On Mode		+-1 second during 24 hours		PASS
RTC Clock in Power Off Mode		+-1 second during 24 hours		PASS
Watchdog Timer Test				Result
Time-out Interval		10 sec		PASS
		60 sec		PASS
		255 sec		PASS
Network HUB / LAN Connection Test				Result
OnBoard LAN1 LED		Active LED		PASS
		Link LED		PASS
LAN Location	LAN Speed	HUB Type	HUB Speed	Result
LAN1	10/100 Mbps	HP J4095A 24 Ports	100 MBps	PASS
		D-Link DGS-1008T	1000 MBps	PASS
		D-Link DGS-1008T	1000 MBps	PASS
		Intel InBusiness 8 Port	10 MBps	PASS
		LEMEL LM-S5 5 Port	100 MBps	PASS
		Accton DeskTop-3005	100 MBps	PASS
		SVEC FD916H (10 Mbps HUB)	10 MBps	PASS
		HP J4095A 24 Ports	100 MBps	PASS
	1Gbps	D-Link DGS-1008T	1Gbps	PASS
		D-Link DGS-1008T	1Gbps	PASS
Hardware Compatibility				
CPU Compatible Test				
Type	Speed	FSB	Run HCT Version	Result
Intel® Pentium® 4 Processor / L2 Cache: 2MB (670 系列)	3.8	800	9.5	PASS
Intel® Pentium® D Processor / L2 Cache: 2x1M (200x14.0, 2CPUs) Dual Core CPU (820 系列)	2.8	800	9.5	PASS
Memory Compatibility Test				
Brand	Chipset	Frequency	Size	Result
DSL DDR2 SDRAM	ELPIDA E5108AE-5C-E	PC2-4200	1GB	PASS
DSL DDR2 SDRAM	ELPIDA E5108AE-5C-E	PC2-4200	512MB	PASS
DSL DDR2 SDRAM	ELPIDA E5116AB-5C-E	PC2-4200	256MB	PASS
KINGMAX	ELPIDA E5108AB-5C-E	DDR2 533	1GB	PASS
On Board Audio Function Test				
Audio Basic Function Test				Result
System Sound				PASS
Play CD_IN				PASS
Play Sound Recorder				PASS
Line Out				PASS
Line In				PASS
Line In Sound Record				PASS
MIC Speaker		Dynamic		PASS
		Condenser		PASS
MIC Sound Recorder		Dynamic		PASS
		Condenser		PASS
Audio 5.1 Channel with S/P DIF Function Test				Result
Speaker configuration				PASS

2-channel mode for stereo speaker output		PASS
4-channel mode for 4 speaker output		PASS
6-channel mode for 5.1 speaker output		PASS
S/P DIF function Test	Input	PASS
	Output	PASS
PCI Slot Function (PCI Adapter Card) Test		
Model	Type	Result
EP-P80P Rev:0.1: PCI Debug Card	Debug Card	PASS
Matrox G450	VGA Card	PASS
CHAINTECH NVIDIA GeForce4 MX440-8X	VGA Card	PASS
SC3000 CMI8738/C3DX	Sound Card	PASS
Takram DC-395U V1.02	SCSI Card	PASS
Adaptec Ultra160 SCSI ASC-29160	SCSI Card	PASS
D-Link FE-530TX Fast Ethernet Adapter	LAN Card	PASS
Intel SB82559 (10/100Mbps)	LAN Card	PASS
D-Link DGE-530T 1000BASE-T Gigabit Ethernet Adapter	LAN Card	PASS
D-Link DWL-520+ Wireless LAN	LAN Card	PASS
Genuine GM56-AMI2019	Modem Card	PASS
ABIT HotRod 100 Pro	RAID Card	PASS
D-Link DU-520 USB 2.0	Other Card	PASS
Tekram TR-822 Serial ATA 150 [SA-001] + SATA HAA Seagate ST312 0026AS 120GB [ID-200305]	Other Card	PASS
PCI-Express Function Test		
Model		Result
WinFast PX6200 TC TDH PCI-Express x16 VGA Card		PASS
HHDD Compatible Test		
Model		Result
Hitachi / HDS722525VLAT80 / 250GB / ATA-100		PASS
IBM / DTLA-307045 / 46.1GB / ATA-100		PASS
FUJITSU / MPE 3136AH / 13.6GB / ATA-66		PASS
Maxtor / 4G160J8 / 160GB / ATA-133		PASS
Quantum / Fireball Plug AS / 30GB / ATA-100		PASS
Seagate / ST310210A / 10.2GB / ATA-66		PASS
Western / WD400BB-75DEA0 / 40GB / ATA-100		PASS
Seagate / ST3120026AS / 120GB / ATA-100 / S-ATA		PASS
CD/DVD-ROM Compatibility Test		
Model		Result
Acer DVP1640A / 16X / DVD-ROM		PASS
Creative DVD1240E / 12X / DVD-ROM		PASS
IBM HL-DT-ST / GCR-8480B / 48X / CD-ROM		PASS
Pioneer / DVD-121 / 16X / DVD-ROM		PASS
PHILIPS CDD5301 / PBC03210G / 32X10X40 / 12X DVD / CD-RW / DVD-ROM		PASS
SAMSUNG / SH-W08 / DVD+R 8X / DVD-R 8X / CD-R 32X		PASS
NEC / ND-2500A / DVD R/RW / +R8X-R8X		PASS
TEAC / CD-540E / 40X / CD-ROM		PASS
IDE Cable Function test		
IDE Model		Result
40 Pin Cable ATA33		PASS
44 Pin Cable ATA33		PASS
80 Pin Cable ATA100		PASS
USB Function Test		
USB Basic Function Test		Result
USB Controller		PASS
USB 2.0 Controller		PASS

USB Keyboard Support		PASS	
USB 1.1 Compatible Test		Result	
USB 1.1 Compatible Test		PASS	
USB 2.0 Compatible Test		Result	
USB 2.0 Compatible Test		PASS	
USB Extention Devices Function Test			
Model	Type	Result	
Power DVD XP4.0	CyberLink	PASS	
USB2.0 CD-ROM / 4824WI-ON2	BENQ	PASS	
USB HDD IC25N020ATCS04-0 (include USB2.0 2.5" External USB Box)		PASS	
USB HDD IBM DARA-206000 6GB [ID-200401] (include USB2.0 2.5" External USB Box)	Fujitsu	PASS	
FLL3.5 D353GUE/FUE	MITSUMI	PASS	
ZIP 100	Iomega	PASS	
Floppy Disk Controller Function Test		Result	
Copy and compare file between C: and A / B:		PASS	
Swap FDD		PASS	
Check BIOS → "Report No FDD For Win95"		PASS	
Peripheral Compatibility-Storage Device			
Model	Interface	Result	
FUJITSU MCB3064SS	SCSI	PASS	
IOmega zip 100 parallel port	Parallel	PASS	
IOmega zip 100MB Internal ATAPI Drive	IDE	PASS	
COM Port Send / Receive Test		Result	
Use software program: COMTEST.exe		PASS	
Use software program: LL5.exe		PASS	
Disk On Module [DOM] Compatibility Test			
Model	Interface	Result	
DOM-256-026P Rev: A1K20	IDE 40 Pin	PASS	
COM/LPT Ports & RS-232/422/485 Function Test		Result	
RS-422 for COM2		PASS	
RS-485 for COM2		PASS	
COM1		PASS	
COM2		PASS	
LPT1		PASS	
O.S. Compatibility Test			
Installation Operation System Compatible Test		Result	
Linux-RedHat 9.0 / Kernel 2.4.20-8		PASS	
Windows Server 2003 Standard Edition 5.2.3790 Build 37900		PASS	
Windows Server 2003 Standard x64 Edition Service Pack 1		PASS	
Windows XP Professional V2002 Service Pack 2		PASS	
Windows XP Professional x64 Edition Version 2003 Service Pack 1		PASS	
Windows 2000 Professional 5.00.2195 with Service Pack 4		PASS	
Windows 2000 Professional 5.00.2195 with Service Pack 4 (Server)		PASS	
DOS 6.22		PASS	
Utility and Driver Test			
OS	Drivers Version		Result
Linux-RedHat 9.0 / Kernel 2.4.20-8	VGA	Integrated VGA on Intel 945G	PASS
	LAN	RJ-45 X1 Intel 82562EZ, 10/100Mb LAN optional	PASS
	Audio	Realtek ALC655 AC97 CODEC (Daughter Board)	PASS
Windows Server 2003 Standard Edition 5.2.3790 Build 37900	VGA	Intel® 82945G Express Chipset Family 6.14.10.4363	PASS

	LAN	Intel® PRO/100VE Network Connection 8.0.19.0 3/4/2005	PASS
	Audio	Intel chipset does not provide Audio driver	PASS
Windows Server 2003 Standard x64 Edition Service Pack 1	VGA	Intel® 82945G Express Chipset Family 6.14.10.4323 5/20/2005	PASS
	LAN	Intel® PRO/100VE Network Connection 8.0.19.0 3/4/2005	PASS
	Audio	Intel chipset does not provide Audio driver	PASS
Windows XP Professional V2002 Service Pack 2	VGA	Intel® 82945G Express Chipset Family 6.14.10.4363	PASS
	LAN	Intel® PRO/100VE Network Connection 8.0.19.0 3/4/2005	PASS
	Audio	Realtek AC'97 Audio 5.10.0.5820 3/25/2005	PASS
Windows XP Professional x64 Edition Version 2003 Service Pack 1	VGA	Intel® 82945G Express Chipset Family 6.14.10.4323 5/20/2005	PASS
	LAN	Intel® PRO/100VE Network Connection 8.0.19.0 3/4/2005	PASS
	Audio	Intel chipset does not provide Audio driver	PASS
Windows 2000 Professional 5.00.2195 with Service Pack 4	VGA	Intel® 82945G Express Chipset Family 6.14.10.4363	PASS
	LAN	Intel® PRO/100VE Network Connection 8.0.19.0 3/4/2005	PASS
	Audio	Realtek AC'97 Audio 5.10.0.5820	PASS
Windows 2000 Professional 5.00.2195 with Service Pack 4 (Server)	VGA	Intel® 82945G Express Chipset Family 6.14.10.4363	PASS
	LAN	Intel® PRO/100VE Network Connection 8.0.19.0 3/4/2005	PASS
	Audio	Realtek AC'97 Audio 5.10.0.5820	PASS
DOS 6.22			PASS
BIOS Function Test			Result
Standard CMOS Setup Test			PASS
Boot Sequence Test			PASS
Power Management Test			
APM Power Management Test			PASS
ACPI Power Management Test			PASS
Wake Up Event Test			PASS
Power On after Power Failure Test			PASS
CMOS Backup / Clear CMOS Test			PASS
Boot ROM Test (RPL/PXE)			PASS
Supervisor / User Password Test			PASS
CRT / LCD / TV Function Test			PASS
Init Display First Function Test			PASS
SATA Mode-IDE/RAID Function Test			PASS
PC Health Status			
Voltage Monitor Test			PASS
FAN Speed Monitor Test			PASS
Temperature Monitor Test			PASS
Swap Floppy Drive & Boot up Floppy Seek Function Test			PASS
USB Onboard Device Function Test			PASS
COM Address / IRQ Test			PASS
LPT Address / IRQ Test			PASS
BIOS AWDFLASH Program Test			PASS
Touch Screen LCD for Serial Ports Test		Address	IRQ
COM1		3F8	IRQ4
COM2		2F8	IRQ3

Performance Test		
English Windows 2000 Professional with SP4 5.00.2195 + 1280x1024x32bit / 60Hz + Direct 9.0		
ZD WinBench 99 V2.0		Unit
Business Disk WinMark99	10400 ^{2.3}	Thousand bytes/sec
High-End Disk WinMark99	38700 ^{2.4}	Thousand bytes/sec
Business Graphics WinMark99	357 ^{2.4}	
High-End Graphics WinMark99	916 ^{2.4}	
Final Reality V1.01—BenchMark Test (Reality Marks)		
2D image	34.09	
3D	5.44	
Bus transfer	61.32	
Overall	22.42	Reality marks
ZD 3D Winbench 2000 V1.1		
3D Winbench 2000 Processor Test	4.96 ^{1.7.29.35.57.101.102.103.104.105.106.107}	
3D WinMark 2000	205 ^{2.7.12.31.33.42.43.48.58.59.63.64}	Frames / sec
ZD Multimedia Content Creation Winstone 2004 V1.0.1		
Multimedia Content Creation Winstone 2004	2.3 / score:25.5 / variance:6.9%	
3Dmark2001SE Pro (Demo version)		
3DMark2001SE Build 330_Benchmark mode	5297	
English Windows XP Professional with SP2 V2002 + 1280x1024x32bit / 60Hz + Direct 9.0		
System Integrated Application Test		Result
A. System Integrated Application Test (Burn-In 8 Hrs):		PASS