

QE 【 Mainboard 】

P5 Verification Test Plan

Release No : 06E010025

Product Model	PFM-550S
Description	VIA Mark Processor PC/104 CPU Module
Test Configuration	<input checked="" type="checkbox"/> New product <input checked="" type="checkbox"/> PCB : PFM-550s Rev:A1.0-A <input checked="" type="checkbox"/> BIOS : PFM-550S BIOS Rev 1.0 (05/26/2006) <input checked="" type="checkbox"/> Chipset : <input checked="" type="checkbox"/> CPU Type : VIA Mark C3 533A MHz (133x4.0) <input checked="" type="checkbox"/> North Bridge : VIA Mark <input checked="" type="checkbox"/> South Bridge : VIA VT82C686B <input checked="" type="checkbox"/> VGA Chipset : VIA VT8606, Share up to 32MB <input checked="" type="checkbox"/> Audio Chipset : Optional Audio Board (PER-U00A Audio+USB Daughter Board) <input checked="" type="checkbox"/> Ethernet Chipset : Realtek RTL8100BL <input checked="" type="checkbox"/> I/O Chipset : VIA VT82C686B <input checked="" type="checkbox"/> TV Chipset : N/A <input checked="" type="checkbox"/> Remark : PFM-550S A1.0-A NPDP QE P5 Report
Test Result Summary	
<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Pass with Deviation Comment: _____ _____	

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Issue date

Wenyuan Yang

Manager

JOJO Lin

Test Engineer

Platform Information:

PCB Model / Version	PFM-550S A1.0-A	
BIOS Version	PFM-550S BIOS Rev 1.0 (05/26/2006)	
Operating System	Linux-RedHat 9.0 / Kernel 2.4.20-8	N/A
	Windows Server 2003 English Version / Standard Edition 5.2.3790	N/A
	Windows XP Professional English Version V2002 Service Pack 2	1,3,6,7,8,9,10,11,12
	Windows 2000 Professional English Version V5.00.2195 Service Pack 4	N/A
	Windows 98SE English Version V4.10.2222A	N/A
	Windows NT Workstation 4.0 English Version Service Pack6	N/A
	MS-DOS 6.22	2,4,5
Primary IDE Master	HITACHI HDS722580VLAT20 85.3GB	
Primary IDE Slave	BenQ DVD-ROM 1650V	
CRT	ViewSonic E70	
LCD	N/A	
Compact Flash	Type-I SanDisk Compact Flash Card 256MB	
Backplane	N/A	
Riser Card	N/A	
Power Supply	ATX Power	N/A
	AT Power	1,2,3,4,5,6,7,8,9,10,11,12

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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

Test Result for Certification

1. Dynamic / Boot_UP Burn_In Test

Test Method	Test Condition	Result
Diagnostics Software Burn-In Test.	0 ~60 , 48 hrs	Pass
Power On/Off Test.	0 ~60 , 24hrs	Pass

2. Voltage Range Test

Test Method	Test Condition	Result
Power On/Off Test in DOS-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-100V Power Function Test	20 times in Room Temperature	Pass

3. I/O Peripheral Function Test

I/O Function	Result
Primary IDE Master	Pass
Primary IDE Slave	Pass
Compact Flash - Type I	Pass
COM 1	Pass
COM 1-232	Pass
COM 1-Ring /+5V (JP2)	Pass
COM 2	Pass
COM 2-232	Pass
COM 2-485	Pass
COM 2-Ring /+5V (JP2)	Pass
Clear CMOS (JP1)	Pass
PS/2 Mouse & Keyboard (Internal)	Pass
Audio Connector	Pass
VLCD Voltage (5V or 3.3V) (JP3)	Pass
LPT 1	Pass
SIR / 115.2 Kbps	Pass
USB 1&2 Ports	Pass
USB 3&4 Ports	Pass
VGA Display	Pass
PC/104	Pass
PC/104-Plus	Pass
PCI-104	Pass
LCD / TTL	Pass
LCD / LVDS / Channel 1	Pass
DIMM Slots	Pass
Internal KB & Mouse	Pass
Watchdog Software Control	Pass
Front Panel and Other connector	Result
IDE LED	Pass
External Buzzer (CN13 Pin 3~ 4)	Pass

On Board Buzzer		Pass
Power LED		Pass
Reset Switch		Pass
Internal K/B and Mouse Connector (CN15)		Pass
10/100 Base Ethernet Connector (CN3)		Pass
Battery Connector (CN9)		Pass
AT Power Connector (CN10)		Pass
Power Connector & Function		Result
Big 4P Power Connector (CN10)		Pass
LAN Connector & Function		Result
LAN Active LED	LAN1	Pass
LAN Link LED	LAN1	Pass
LAN 10/100 Ethernet		Pass

4. Power Consumption Test (Burring-In Speed2000 Program)

	ATX Power:		AT Power: LEMACS SP2-4300F 300W			
	CPU:	CPU:	CPU: VIA Mark C3 533A MHz		CPU:	
Normal Mode (+5V)	A	A	2.26	A		A
Suspend Mode (+5V)	A	A	1.57	A		A
5VSB in Power Off Mode (ATX Mode)	A	A	-----	A	-	A
5VSB in Power On Mode (ATX Mode)	A	A	-----	A	--	A
Normal Mode (+12V)	A	A	0	A		A
Suspend Mode (+12V)	A	A	0	A		A
Normal Mode (+3.3V) (ATX Mode)	A	A	-----	A	-	A
Suspend Mode (+3.3V) (ATX Mode)	A	A	-----	A	-	A
Normal Mode (-12V)	A	A	0	A		A
Suspend Mode (-12V)	A	A	0	A		A
Normal Mode (-5V)	A	A	0	A		A
Suspend Mode (-5V)	A	A	0	A		A

5. Power Connector Test (110V / 220V)

Test Method	Result
AT Connector Power On/Off for 10 times in DOS	Pass

6. 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

7. Network HUB / LAN Connection Test

Location		LED Type		Result
OnBoard LAN1 LED		Active LED		Pass
		Link LED		Pass
Location	Speed	HUB Type	HUB Speed	Result
LAN1	10/100 Mbps	HP J4095A 24 Ports	100 Mbps	Pass
		D-Link DGS-1008T	1Gbps	Pass
		Intel InBusiness 8 Ports	10 Mbps	Pass
		LEMEL LM-S5 5 Ports	100 Mbps	Pass
		Accton Desktop-3005	100 Mbps	Pass
		SVEC FD916H	10 Mbps	Pass

8. Hardware Compatibility

CPU Compatible Test				
Type	Speed	FSB	Prime95 Version	Result
VIA C3 533A MHz (133x4.0)			V2412	Pass
Memory Compatibility Test				
Brand / Memory Size	Chipset	Frequency	MemTest86 Version	Result
ELPIDA 512MB	HB52RF648DC-75B	133	1.65	Pass
KINGMAX 128MB	KSV684T4A2A-07L	133	1.65	Pass
On Board Audio Function Test				
Audio Basic Function Test Optional Audio Board (PER-U00A Audio+USB Daughter Board)				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
On Board LCD Function Test		
TFT LCD	Type	Voltage
LVDS	AU B104SN02 / 10.4" / 800*600 / 18bit	3.3V
	Hyundai HT12X11-200 / 12.1" / 1024*768 / 18bit	3.3V
TFT	Toshiba LTM10C209A / 10.4" / 640*480 / 18bit	5V
	Sharp LQ121S1DG11 / 12.1" / 800*600 / 18bit	3.3V
HDD 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
Western / WD400BB-75DEA0 / 40GB / ATA-100		Pass
CD/DVD-ROM Compatibility Test		
Model		Result
Acer DVP1640A / 16X / 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
BenQ DVD-ROM 1650V		Pass
IDE Cable Function test		
IDE Model		Result
44 Pin Cable ATA33		Pass
USB Function Test		
USB Basic Function Test		Result
USB Controller		Pass
USB Keyboard Support		Pass
USB Mouse Support		Pass
USB 1.1 Compatible Test		Result
USB 1.1 Compatible Test		Pass

USB Extension Devices Function Test			
Model		Type	Result
USB HDD IBM DARA-206000 6GB [ID-200401] (include USB2.0 2.5" External USB Box)		HDD	Pass
Mitsumi FL3.5D353GUE/FUE		Floppy	Pass
Peripheral Compatibility-Storage Device			
Model		Interface	Result
IO-Mega zip 100 parallel port		Parallel	Pass
IO-Mega zip 100MB Internal ATAPI Drive		IDE	Pass
PQI FC512 512MB		Type-I CF Card	Pass
HITACHI / HMS360402D5CF00		Type- CF Card	Pass
Adapter Compatibility- Industry Control Card PC/104, PC/104+, PCI-104 Modules			
Interface	Model	Type	Result
PC/104	AAEON PCM-3115B	PCMCIA Module	Pass
PC/104+	AAEON PCM-3430	SCSI Module	Pass
PC1-04	AAEON PCM-3730	Intel 82559 LAN Module	Pass
COM Port Send / Receive Test			Result
Use software program: COMTEST.exe			Pass
Use software program: LL5.exe			Pass
COM/LPT Ports & RS-232/422/485 Function Test			Result
RS-232 for COM1			Pass
RS-232 for COM2			Pass
RS-485 for COM2			Pass
COM1			Pass
COM2			Pass
LPT1			Pass

9.O.S. Compatibility Test

Installation Operation System Compatible Test		Result	
Linux-Red-Hat 9.0 / Kernel 2.4.20-8		Pass	
Windows XP Professional English Version V2002 with Service Pack 2		Pass	
Windows 98SE English Version V4.10.2222A		Pass	
Utility and Driver Test			
OS	Drivers Version	Result	
Linux-Red-Hat 9.0 / Kernel 2.4.20-8	VGA	Pass	
	LAN	Pass	
	Audio	Pass	
Windows XP Professional English Version V2002 with Service Pack 2	4 in 1 Version	VIA Service Pack 4.55v (VIA 4 in 1)	Pass
	VGA	S3 Graphics Twister 6.13.10.1031 12/25/2001	Pass
	LAN	Realtek RTL8139/810x Family Fast Ethernet NIC 5.612.413.2004 4/13/2004	Pass
	Audio Daughter Board:	PER-U00A Realtek AC'97 Audio for VIA (R) Audio Controller 5.10.0.5820 3/25/2005	Pass
Windows 98SE English Version V4.10.2222A	VGA		Pass
	LAN		Pass
	Audio		Pass
DOS 6.22		Pass	

10.BIOS Function Test

Test Item	Result
Standard CMOS Setup Test	Pass
Boot Sequence Test	Pass
Power Management Test	
APM Power Management Test	Pass
Power On Function Test	Pass
Wake Up Event 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
PC Health Status	
Voltage Monitor Test	Pass
FAN Speed Monitor Test	Pass
Temperature Monitor Test	Pass
USB Onboard Device Function Test	Pass
COM Address / IRQ Test	Pass
LPT Address / IRQ Test	Pass
BIOS AWDFLASH Program Test	Pass

11. 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	5680	Thousand bytes/sec
High-End Disk WinMark99	20800	Thousand bytes/sec
Business Graphics WinMark99	158	
High-End Graphics WinMark99	293	
Final Reality V1.01—BenchMark Test (Reality Marks)		
2D Image	3.46	
3D	2.84	
Bus transfer	4.5	
Overall	3.27	Reality marks
ZD 3D Winbench 2000 V1.1		
3D WinMark 2000	12.6	Frames / sec
ZD Multimedia Content Creation Winstone 2004 V1.0.1		
Multimedia Content Creation Winstone 2004		5.2
3Dmark2001SE Pro (Demo version)		
3DMark2001SE Build 330_Benchmark mode		262
English Windows XP Professional with SP2 V2002 + 1280x1024x32bit / 60Hz + Direct 9.0		
Business Winstone 2004 v1.0.1		
Business Winstone2004		4.6

12. System Integrated Application Test

Test Method	Result
A. System Integrated Application Test (Burn-In 8 Hrs):	Pass