

PFM-LNP

P5 Test Report

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

Issue date	Approval	Test Engineer
2010 / 08 / 03	Jansin Lee	Anderson Lin

Platform Information:

Product Model	PFM-LNP
Description	Intel Luna Pier PC/104 Board
Test Configuration	<input checked="" type="checkbox"/> New product <input checked="" type="checkbox"/> CPU Board : PFM-LNP A 1.0 <input checked="" type="checkbox"/> BIOS : PFM-LNP BIOS Rev1.2 (07/19/2010) <input checked="" type="checkbox"/> Chipset : <input checked="" type="checkbox"/> North Bridge : Integrated Pineview <input checked="" type="checkbox"/> South Bridge : Intel ICH8M <input checked="" type="checkbox"/> VGA Chipset : Integrated Pineview <input checked="" type="checkbox"/> Audio Chipset : N/A <input checked="" type="checkbox"/> Ethernet Chipset : Intel 82567V <input checked="" type="checkbox"/> I/O Chipset : SMSC 3114 <input checked="" type="checkbox"/> TV Chipset : N/A <input checked="" type="checkbox"/> Remark : QE P5 Test Report for PFM-LNP

Item	Device Information	Test Item
PCB Model / Version	PFM-LNP A 1.0	1,2,3,4,5,6,7,8
BIOS / Version	PFM-LNP BIOS Rev1.2 (07/19/2010)	1,2,3,4,5,6,7,8
CPU Type	Intel (R) ATOM N450 1.66GHz	1,2,3,4,5,6,7,8
Memory Type	Onboard DDR2-667 1 GB	1,2,3,4,5,6,7,8
SATA HDD	FUJITSU MHZ2080BH G2 80GB 2.5" SATA HDD	1,2,3,4,5,6,7,8
Primary IDE Master	N/A	1,2,3,4,5,6,7,8
Primary IDE Slave	N/A	1,2,3,4,5,6,7,8
CRT	ViewSonic E653 15"	1,2,3,4,5,6,7,8
Riser Card	N/A	1,2,3,4,5,6,7,8
Backplane	N/A	1,2,3,4,5,6,7,8
OS Install	Windows XP Professional English Version V2002 Service Pack 3	1,2,3,4,5,6,7,8
Power Supply	AT Power : ZECK ZKS-300W	1,2,3,4,5,6,7,8

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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 specifications or no test equipment

The test report would be tested and updated after version changed.

Test Result for Certification

1. I/O Peripheral Function Test

I/O Peripheral Function Test –I/O Function	Result		
	Pass	Fail	N/A
Primary IDE Master			X
Primary IDE Slave			X
Secondary IDE Master			X
Secondary IDE Slave			X
Third IDE Master			X
Third IDE Slave			X
RAID 0 Function Test			X
RAID 1 Function Test			X
SATA1 / Serial ATA Connector 1	X		
SATA2 / Serial ATA Connector 2			X
SATA3 / Serial ATA Connector 3			X
SATA4 / Serial ATA Connector 4			X
Compact Flash – Type I	X		
Compact Flash – Type II			X
DOC (Disk On Chip)			X
DOM (Disk On Module) – 40 Pin			X
DOM (Disk On Module) – 44 Pin			X
Audio Connector			X
Audio 5.1 Channel / S/P DIF			X
USB 1/2 Ports	X		
USB 3/4 Ports	X		
USB 5/6 Ports			X
USB 7/8 Ports			X
USB 2.0 1/2 Ports	X		
USB 2.0 3/4 Ports	X		
USB 2.0 5/6 Ports			X
USB 2.0 7/8 Ports			X
DVI Function			X
CD-In Connector			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		
CPU FAN Connector	X		
System FAN Connector			X

Front Panel		Result		
		Pass	Fail	N/A
IDE LED		X		
External Buzzer				X
On Board Buzzer		X		
Power LED		X		
Jumpers Function		Result		
		Pass	Fail	N/A
ATX simulates AT				X
LCD Power Select		X		
Clear CMOS		X		
Touch Screen Operating Mode Selection				X
Power Connector & Function		Result		
		Pass	Fail	N/A
5V only Power for Big 4P				X
ATX Power Connector				X
ATX Power_12V Connector		X		
External Power Connector(-12/-5V)				X
Option ATX Power Connector (PS-ON / +5VSB)				X
LAN Connector & Function		Result		
		Pass	Fail	N/A
LAN Speed LED	LAN1	X		
	LAN2			X
LAN Active LED	LAN1	X		
	LAN2			X
LAN Link LED	LAN1	X		
	LAN2			X
LAN 10/100 Ethernet		X		
LAN 1G Ethernet		X		
PCI Connector & Function		Result		
		Pass	Fail	N/A
Mini PCI Slots				X
PCI Slots				X
PCI Express				X
Mini PCI-Express		X		

2. Power Consumption Test (Run Prime95 Program)

Platform Information

CPU Board	PFM-LNP A 1.0
Carrier Board	N/A
BIOS	PFM-LNP BIOS Rev1.2 (07/19/2010)

Operating System	Windows XP Professional English Version V2002 Service Pack 3
CRT	ViewSonic E653 15"
Compact Flash	N/A
Expansion Board	N/A
Power Supply	ATX Power: ZECK ZKS-300W

Test Environment	ATX Power: (N/A)		AT Power: ZECK ZKS-300W		Note
Model	(N/A)		Intel (R) ATOM N450 1.66GHz		
CPU	(N/A)		Seagate 2.5" SATA H.D / ST9120823AS 120GB		
HDD	(N/A)		Onboard DDR2-667 1 GB		
RAM	(N/A)		Windows XP Professional English Version V2002 Service Pack 3		
OS Environment	(N/A)	A	-----	A	
Normal Mode (+5V)	(N/A)	A	-----	A	S1
Suspend Mode (+5V)	(N/A)	A	-----	A	
5VSB in Power Off Mode (just for ATX)	(N/A)	A	-----	A	
5VSB in Power On Mode (just for ATX)	(N/A)	A	-----	A	
5VSB in Suspend Mode (S1)	(N/A)	A	-----	A	Can't over 5VSB Power On & Off current.
Normal Mode (+12V)	(N/A)	A	0.96	A	
Suspend Mode (+12V)	(N/A)	A	-----	A	S1
Normal Mode (+3.3V) (just for ATX)	(N/A)	A	-----	A	
Suspend Mode (+3.3V) (just for ATX)	(N/A)	A	-----	A	

Normal Mode (-12V)	(N/A)	A	-----	A	
Suspend Mode (-12V)	(N/A)	A	-----	A	
Normal Mode (-5V)	(N/A)	A	-----	A	
Suspend Mode (-5V)	(N/A)	A	-----	A	

3. 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	10 sec	X		
	60 sec	X		
	255 sec	X		

4. Network HUB / LAN Connection Test

Location		LED Type				Result		
						Pass	Fail	N/A
LAN1 LED		Link / Speed LED				X		
		Active LED				X		
LAN2 LED		Link / Speed LED				X		
		Active 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	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	100 MBps	100	X		
		SVEC FD916H (10 Mbps HUB)	100M	10 MBps	10	X		

5. Hardware Compatibility

CPU Compatible Test							
CPU Type	FSB	Prime95 Version	Result				
			Pass	Fail	N/A		
Intel Luna Pier N450 1.66GHz	667 MHz	V25.9	X				
Memory Compatibility Test							
Memory Brand	Memory Chipset	Frequency	Size	MemTest86 Version	Result		
					Pass	Fail	N/A
On Board Memory	On Board Memory	667	1GB	V 4.00	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			Condenser				X
MIC Sound Recorder			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
8-channel mode for 7.1 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							X
NTSC		S Terminal					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
	Data Image 7" / 800*480 / 18bit (16:9)	3.3V	X		
	AU G084SN05 V.3 / 8.4" / 800*600 / 18bit (4:3)	3.3V	X		
	AUO G084SN05 v7 / 8.4" / 800*600 / 24bit (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)	5V			X
	Toshiba /12.1"/1280 x 768 x 18bit (16:9)	5V			X
	AU M170EG01 V.D/ 17"/ 1280*1024 / 48bit (4:3)	5V			X
	AU M170XW01 V.1 / 17" / 1280x768 / 24bit (16:9)	5V			X
	AUO T260XW02 / 26" / 1366x768 / 24bit	5V			X
	AU M201UN02 V.5 / 20.1" / 1600x1200x48bit	5V			X
	AUO T370HW01 / 37" / 1920x1080 / 48bit	12V			X
	AUO M190PW01 V0 / 19"/1440X900/48 bit	5V			X

PCI Slot Function (PCI Adapter Card) Test

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
I-VIEW CP-1400AS (with Age STD-477FAI CCD)	Capture Card			X
Intel GD82559 10/100 Mbps Fast Ethernet Adapter	LAN Card			X
3Com 3C905C-TXM ETHERLINK 10/100 PCI	LAN Card			X
D-Link DWL-520+ Wireless LAN	LAN Card			X
D-Link DU-520 USB 2.0	USB Hub Card			X
Tekram TR-822 Serial ATA 150 [SA-001] + SATA HDD Seagate ST3120026AS 120GB	SATA Card			X

ISA Slot Function Test

	Result		
	Pass	Fail	N/A
NE2000 Compatible LAN Card (RTL8019AS)			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
SunBox 34mm Giga LAN Express Card			X

Ralink RT2571WF WLAN Mini Card(USB Interface)				X
HDD Compatibility Test				
Model	Result			
	Pass	Fail	N/A	
Seagate 2.5" SATA H.D / MHY2080BH	X			
FUJITSU.MHZ2080BH 2.5" SATA H.D	X			
Transcend SSD 16G - TS16GSSD25S	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	
Mitsumi FLL3.5 D353GUE/FUE	X			
USB HDD 20GB	X			
USB Card Reader	X			
USB Mouse	X			
USB Flash drive Transcend 2GB	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			
Peripheral Compatibility-Storage Device				
Model	Interface	Result		
		Pass	Fail	N/A
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-3730	Intel 82559 LAN Module	X		
PCI/104 Express	AAEON PER-123				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 overnight		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	
Mini PCI.10/100 Base-Tx LAN (W/Intel.82551QM .A1.0) (Model:PER-C10L)	LAN			X	
GM-101 WLAN 11b/g 54Mbps Mini PCI Card (Model: VNT6655AM)	WLAN			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		X			
COM2		X			
COM3		X			
COM4		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 Typell HDD)			X
PCI GW-NS54SG Cardbus Adapter Wireless LAN Type-II			X

6. O.S. Compatibility Test

Installation Operation System Compatibility Test		Result			
		Pass	Fail	N/A	
Windows XP Professional English Version V2002 Service Pack 3		X			
Utility and Driver Test					
OS	Drivers Version		Result		
			Pass	Fail	N/A
Windows XP Professional English Version V2002 Service Pack 3	Chipset Software	Intel(R) Chipset Device Software 9.1.1.1004(10/16/2008)	X		
	Graphics Media	Intel(R) PineView Desktop Express Chipset Family 6.14.10.5080 (6/24/2009)	X		
	LAN Driver	Intel(R) 82567V-3 Gigabit Network Connection 10.1.0.0 (5/28/2009)	X		
	Audio Driver				X

7. BIOS Function Test

Test Item	Result		
	Pass	Fail	N/A
Monitor Beep Test	X		
Standard CMOS Setup Test	X		
Boot Sequence Test	X		
Power Management Test			
ATX Power Management Test			X
AT Power Management Test			X
Power On Function Test	X		
Wake Up Event Test	X		
Power On after Power Failure Test			X
CMOS Backup / Clear CMOS Test	X		
Boot ROM Test (RPL/PXE)			X
Supervisor / User Password Test	X		
CRT / LCD Function Test	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
BIOS AWIFLASH Program Test	X		

8. Performance Test

Platform Information

CPU Board	PFM-LN A1.0
Carrier Board	N/A
BIOS	PFM-LNP BIOS Rev1.2 (07/19/2010)
Operating System	English Windows XP Professional Service Pack 3
CPU	Intel (R) ATOM N450 1.66GHz
Memory	Onboard DDR2-667 1 GB
SATA HDD	Seagate 2.5" SATA H.D / ST9120823AS 120GB
Primary IDE Master	N/A
Primary IDE Slave	N/A
CRT	Viewsonic E653
LCD	N/A
Compact Flash	N/A
Expansion Board	N/A
Chipset Software	Intel(R) Chipset Device Software 9.1.1.1004(10/16/2008)
Graphics Media	Intel(R) PineView Desktop Express Chipset Family 6.14.10.5080 (6/24/2009)
LAN Driver	Intel(R) 82567V-3 Gigabit Network Connection 10.1.0.0 (5/28/2009)
Audio Driver	N/A
Touchscreen Driver	N/A
Power Supply	ATX Power: ZECK ZKS-300W

Test Result:

Testing Software	Result	Unit
PCMark2002		
CPU	2770	
Memory	7458	
HDD	1094	
Final Reality V1.01—BenchMark Test		
2D image	21.90	Reality marks
3D	4.06	
Bus transfer	40.76	
Overall	14.92	
3Dmark2001		

3DMark2001SE Build 330_Benchmark mode	3109	
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Test Result:

Testing Software	Result	Unit
PCMark05		
PCMark	1617	PCMarks
CPU	1550	
Memory	2587	
Graphics	635	
HDD	4046	
3Dmark2003 v360		
3Dmark Score	813	
CPU Score	265	