

# QE Verification Test Plan

Release No : 06E010021

<b>Product Model</b>	<b>PCM-8500</b>
<b>Description</b>	<b>AIO Compact Board. Socket 478. DT.LCD/LAN/ 5.1 Audio/6USB/Mini PCI/PCMCIA/ATX.</b>
<b>Test Configuration</b>	<input checked="" type="checkbox"/> New product <input checked="" type="checkbox"/> PCB : PCM-8500 Rev.A1.01 <input checked="" type="checkbox"/> BIOS : PCM-8500 BIOS Rev.1.2 (05/25/2004)  <input checked="" type="checkbox"/> Chipset : <input checked="" type="checkbox"/> CPU Type : Intel Celeron 2.00GHz (100x20.0) <input checked="" type="checkbox"/> North Bridge : Intel i845GV <input checked="" type="checkbox"/> South Bridge : Intel 82801(ICH4) + ITE8712 <input checked="" type="checkbox"/> VGA Chipset : i845GV <input checked="" type="checkbox"/> Audio Chipset : Realtek ALC650 <input checked="" type="checkbox"/> Ethernet Chipset : Intel EP 82562ET <input checked="" type="checkbox"/> I/O Chipset : ITE IT-8712F-A  <input checked="" type="checkbox"/> Remark : QE Bulletin Report
<b>Test Result Summary</b>	
<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Pass with Deviation <b>Comment:</b> _____ _____	

2006/08/22

Issue date

Wenyuan Yang

Manager

Andrew Ku

Test Engineer

## Summary Table of contents :

Summary Table of contents	2
Platform Information	3
1. I/O Peripheral Function Test	4
2. Power Consumption Test	5
3. Network HUB / LAN Connection Test	7
4. Hardware compatibility	7
5. O.S. Compatibility Test	10
6. BIOS Function Test	11
7. Performance Test	11

**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:**

Item	Device Information	Test Item
PCB Model / Version	PCM-8500 Rev.A1.01	1,2,3,4,5,,6,7,
BIOS / Version	PCM-8500 BIOS Rev.1.2 (05/25/2004)	1,2,3,4,5,,6,7,
CPU Type	Intel Celeron 2.00GHz (100x20.0)	1,2,3,4,5,,6,7,
Memory Type	Kingston / D328DL-60 /512MB	1,2,3,4,5,,6,7,
Primary IDE Master	IBM / IC35L060AVV207-0 /61.4GB / ATA33	1,2,3,4,5,,6,7
Primary IDE Slave	TEAC / CD-540E / 40X	1,2,3,4,5,,6,7
CRT	ViewSonic E773	1,2,3,4,5,,6,7,
LCD	N/A	
Compact Flash	N/A	
Riser Card	N/A	
Backplane	N/A	
Operating System	[ X ] Linux-RedHat 9.0 or [ ] Fedora Core 4	5
	Windows Server 2003 English Version / Standard Edition 5.2.3790	N/A
	Windows XP Professional English Version V2002 Service Pack 2	5
	Windows 2000 Professional English Version V5.00.2195 Service Pack 4	1,2,3,4,5,,6,7,
	Windows 98SE English Version V4.10.2222A	N/A
	Windows NT Workstation 4.0 English Version Service Pack 6	N/A
	MS-DOS 6.22	1,2,3,4,5,,6,7,
	Power Supply	ATX Power : SHARK / SPC5110-250ATZ2 250W
	AT Power :	N/A

## Test Result for Certification

### 1. I/O Peripheral Function Test

I/O Peripheral Function Test –I/O Function	Result		
	Pass	Fail	N/A
Floppy Connector / Driver A:	X		
Primary IDE Master	X		
Primary IDE Slave	X		
Secondary IDE Master			X
Secondary IDE Slave			X
Third IDE Master			X
Third IDE Slave			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
COM 1	X		
COM 2-232	X		
COM 2-422	X		
COM 2-485	X		
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		
Audio 5.1 Channel / S/P DIF	X		
LPT 1	X		
LPT 2			X
SIR / 115.2 Kbps			X
FIR / 4M bps			X
USB 1&2 Ports	X		
USB 3&4 Ports	X		
USB 5 Ports	X		
USB 6 Ports	X		
USB 2.0 1 & 2 Ports	X		

USB 2.0 3 & 4 Ports	X		
USB 2.0 5 Ports	X		
USB 2.0 6 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		
CPU FAN Connector			X
System FAN Connector	X		
Front Panel	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
Power On Button	X		
IDE LED	X		
External Buzzer	X		
On Board Buzzer	X		
Power LED	X		
Reset Switch	X		
Keyboard Lock			X
Jumpers Function	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
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	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
ATX Power Connector	X		
ATX Power_12V Connector	X		
AT Power Connector (P8 & P9)			X

I/O Peripheral Function Test – 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		
I/O Peripheral Function Test – PCI Connector & Function		Result		
		Pass	Fail	N/A
PCI Slots		X		

## 2. Power Consumption Test (Run Prime95 Program)

Mode	Test Environment	ATX Power: Aopen FSP300-60AT			AT Power:		
		CPU: Celeron 2.0GHz		CPU:	CPU:		CPU:
OS Environment	WIN 2K						
Normal Mode (+5V)	0.26	A	A	A	A	A	A
Suspend Mode (+5V)	0.26	A	A	A	A	A	A
5VSB in Power Off Mode (ATX Mode)	0.20	A	A	-----	A	-----	A
5VSB in Power On Mode (ATX Mode)	0.03	A	A	-----	A	-----	A
Normal Mode (+12V)	2.98	A	A	A	A	A	A
Suspend Mode (+12V)	0.38	A	A	A	A	A	A
Normal Mode (+3.3V) (ATX Mode)	2.50	A	A	-----	A	-----	A
Suspend Mode (+3.3V) (ATX Mode)	2.45	A	A	-----	A	-----	A
Normal Mode (-12V)		A	A	A	A	A	A
Suspend Mode (-12V)		A	A	A	A	A	A
Normal Mode (-5V)		A	A	A	A	A	A
Suspend Mode (-5V)		A	A	A	A	A	A

## 3. Network HUB / LAN Connection Test

Location		LED Type				Result		
						Pass	Fail	N/A
OnBoard LAN1 LED		Active LED				X		
		Link LED				X		
		Speed LED				X		
OnBoard LAN2 LED		Active LED						X
		Link LED						X
		Speed LED						X
Location	Speed	HUB Type	Cable Length	HUB Speed	Onboard LAN Speed	Result		
LAN1	10/100/1000 Mbps	HP J4095A 24 Ports	100M	100 Mbps	100	X		
		D-Link DGS-1008T	100M	1Gbps	100	X		
						Pass	Fail	N/A

		Intel InBusiness 8 Ports	100M	100 Mbps	100	X		
		LEMEL LM-S5 5 Ports	100M	100 Mbps	100	X		
		Accton Desktop-3005	100M	100 Mbps	100	X		
		SVEC FD916H	100M	10 Mbps	10	X		
Location	Speed	Type	Cable Length	HUB Speed	Onboard LAN Speed	Result		
						Pass	Fail	N/A
LAN2	10/100/1000 Mbps	HP J4095A 24 Ports	100M	100 Mbps				X
		D-Link DGS-1008T	100M	1Gbps				X
		Intel InBusiness 8 Ports	100M	100 Mbps				X
		LEMEL LM-S5 5 Ports	100M	100 Mbps				X
		Accton Desktop-3005	100M	100 Mbps				X
		SVEC FD916H	100M	10 Mbps				X

#### 4. Hardware Compatibility

CPU Compatible Test							
Type	Clock Speed	FSB	Prime95 Version	Result			
				Pass	Fail	N/A	
Intel Celeron 2.00GHz	2.00GHz		V2414	X			
Memory Compatibility Test							
Brand / Memory Size	Chipset	Frequency	MemTest86 Version	Result			
				Pass	Fail	N/A	
Kingston / 512MB	D328DL-60		V1.65	X			
On Board Audio Function Test							
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			X		
NTSC	S Terminal		X		
PAL			X		
On Board LCD Function Test					
TFT LCD	Type	Voltage	Result		
			Pass	Fail	N/A
LVDS	AU B104SN02 / 10.4" / 800*600 / 18bit	3.3V	X		
	Hyundai HT12X11-200 / 12.1" / 1024*768 / 18bit	3.3V	X		
	Samsung LTM150XH-L04 / 1024*768 / 24bit	3.3V	X		
	AU M170EG01 / 17" / 1280*1024 / 48bit	5V	X		
TTL	Toshiba LTM10C209A / 10.4" / 640*480 / 18bit	5V			X
	Sharp LQ121S1DG11 / 12.1" / 800*600 / 18bit	3.3V			X
	Fujitsu FLC38XGC6V-06 / 15" / 1024*768 / 36bit	3.3V			X
PCI Slot Function (PCI Adapter Card) Test					
Model	Type	Result			
		Pass	Fail	N/A	
Matrox G450	VGA Card	X			
CHAINTECH NVIDIA GeForce4 MX440-8X	VGA Card	X			
SC3000 CMI8738/C3DX	Sound Card	X			
Takram DC-395U V1.02	SCSI Card	X			
Intel GD82559 10/100 Mbps Fast Ethernet Adapter	LAN Card	X			
Genuine GM56-AMI2019	Modem Card	X			
ABIT HotRod 100 Pro	RAID Card	X			
D-Link DU-520 USB 2.0	Other Card	X			
HDD Compatibility Test					
Model	Result				
	Pass	Fail	N/A		
Hitachi / HDS722525VLAT80 / 250GB / ATA-100	X				
IBM / DTLA-307045 / 46.1GB / ATA-100	X				
FUJITSU / MPE 3136AH / 13.6GB / ATA-66	X				



<b>CD/DVD-ROM Compatibility Test</b>			
<b>Model</b>	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
Acer DVPI640A / 16X / DVD-ROM	X		
Pioneer / DVR-A11FXC1 / 8X DVD-RW / 6X DVD-RW	X		
IBM HL-DT-ST / GCR-8480B / 48X / CD-ROM	X		
<b>IDE Cable Function test</b>			
<b>IDE Model</b>	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
40 Pin Cable ATA33	X		
<b>USB Function Test</b>			
<b>USB Basic Function Test (USB1/2 on USBRJ1 connector)</b>	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
USB Controller	X		
USB 2.0 Controller	X		
USB Keyboard Support	X		
USB Mouse Support	X		
<b>USB 1.1 Compatible Test</b>	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
USB 1.1 Compatible Test	X		
<b>USB 2.0 Compatible Test</b>	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
USB 2.0 Compatible Test	X		
<b>USB 2.0 Function Test</b>	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
Use High Speed Device USB2.0 CD-R/W Ben-Q / 4824W1-ON2 to play Nero CD/DVD Speed	X		
<b>USB Device Full Loading Test</b>			
USB Device Full Loading Test	X		
<b>Floppy Disk Controller Function Test</b>	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
Copy and compare file between C: and A / B:	X		
Change Floppy to None value	X		
Swap FDD	X		
<b>COM Port Send / Receive Test</b>	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
Use software program: COMTEST.exe	X		
Use software program: LL5.exe	X		
<b>COM/LPT Ports &amp; RS-232/422/485 Function Test</b>	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
RS-422 for COM2	X		
RS-485 for COM2	X		
COM1	X		

COM2	X		
COM3	X		
COM4	X		
LPT1	X		
LPT2			X

## 5. O.S. Compatibility Test

Installation Operation System Compatibility Test		Result			
		Pass	Fail	N/A	
Linux-Red-Hat 9.0 Kernel 2.4.20-8		X			
Windows XP Professional English Version V2002 Service Pack 2		X			
Windows 2000 Professional English Version V5.00.2195 Service Pack 4		X			
MS-DOS 6.22		X			
Utility and Driver Test					
OS	Drivers Version		Result		
			Pass	Fail	N/A
Linux-Red-Hat 9.0 / Kernel 2.4.20-8	Audio Driver	Default driver	X		
	Graphics Media	Default driver	X		
	LAN Driver	Default driver	X		
Windows XP Professional English Version V2002 Service Pack 2	Audio Driver	Realtek AC97 Ver: 5.10.0.5100	X		
	Graphics Media	Intel / 82845G/GL/GV Ver:6.13.10.3510	X		
	LAN Driver	Intel / Pro/100VE Ver:6.4.14.0	X		
Windows 2000 Professional English Version V5.00.2195 Service Pack 4	Audio Driver	Realtek AC97 Ver: 5.10.0.5100	X		
	Graphics Media	Intel / 82845G/GL/GV Ver:6.13.10.3510	X		
	LAN Driver	Intel / Pro/100VE Ver:6.4.14.0	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		
Wake Up Event Test	X		
Power On after Power Failure Test	X		
CMOS Backup / Clear CMOS Test	X		
Boot ROM Test (PXE)	X		
Supervisor / User Password Test	X		
CRT / LCD / TV Function Test	X		
TV Standard Function Test	X		
Init Display First 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		

## 7. Performance Test

<b>English Windows 2000 Professional with SP4 5.00.2195 + 1024x768x32bit / 60Hz + Direct 9.0</b>		
<b>ZD WinBench 99 V2.0</b>		<b>Unit</b>
Business Disk WinMark99	7460	Thousand bytes/sec
High-End Disk WinMark99	17100	Thousand bytes/sec
Business Graphics WinMark99	127	
High-End Graphics WinMark99	526	
<b>Final Reality V1.01—BenchMark Test (Reality Marks)</b>		
2D Image	17.18	
3D	5.56	
Bus transfer	14.83	
Overall	10.44	Reality marks
<b>ZD Multimedia Content Creation Winstone 2004 V1.0.1</b>		
Multimedia Content Creation Winstone 2004		12.4
<b>3Dmark2001SE Pro (Demo version)</b>		
3DMark2001SE Build 330_Benchmark mode		<b>1185</b>
<b>English Windows XP Professional with SP2 V2002 + 1024x768x32bit / 60Hz + Direct 9.0</b>		
<b>Business Winstone 2004 v1.0.1</b>		
Business Winstone2004		<b>10</b>