

P5 Verification Test Plan

Release No : 09I010010

Product Model	BP-216QH-P4E8
Description	Rackmount.PICMG 1.316-Slot BP.4*PCI. 8*-E.Quad Segmet.AT/ATX.Rev.A1.0
Test Configuration	<input checked="" type="checkbox"/> New product <input checked="" type="checkbox"/> CPU Board : FSB-960H A1.0-A <input checked="" type="checkbox"/> BIOS : FSB-960 BIOS Rev 1.1 For EG (06/03/2008) <input checked="" type="checkbox"/> Carrier Board : BP-216QH-P4E8 <input checked="" type="checkbox"/> Chipset : <input checked="" type="checkbox"/> CPU : Intel ® Core™ 2 CPU E8400 @ 3.00GHz <input checked="" type="checkbox"/> North Bridge : Intel Bearlake Q35 <input checked="" type="checkbox"/> South Bridge : Intel 82801 IR ICH9R <input checked="" type="checkbox"/> VGA Chipset : Intel Bearlake Q35 <input checked="" type="checkbox"/> Audio Chipset : N/A <input checked="" type="checkbox"/> Ethernet Chipset : Intel 82562V/Intel 82573V/E <input checked="" type="checkbox"/> I/O Chipset : Winbond W83627HG <input checked="" type="checkbox"/> Remark : QE NPDP P5 Report for BP-216QH-P4E8
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

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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

Platform Information:

Item	Device Information	Test Item
PCB Model	FSB-960H A1.0-A	
Carrier Board	BP-216QH-P4E8	
BIOS / Version	FSB-960 BIOS Rev 1.1 For EG (06/03/2008)	
CPU Type	Intel ® Core ™ 2 CPU E8400 @ 3.00GHz	
Memory Type	DSL DDR2 677 2GB (ELPIDA E110 BACSE-6E-E)	
SATA	Transcend DOM Card 2GB	
Primary IDE Master	N/A	
Primary IDE Slave	N/A	
CRT	ViewSonic E70	
LCD	N/A	
Compact Flash	N/A	
PCI-104	N/A	
Backplane	NA/	
Operating System	[] Linux-RedHat 9.0 or [] Fedora Core 4.0 [] Fedora Core 6.0	N/A
	Windows Server 2003 English Version / Standard Edition 5.2.3790	N/A
	Windows Server 2003 English Version /Standard x64 Edition	N/A
	Windows XP Professional English Version V2002 Service Pack 3	N/A
	Windows XP Embedded Service Pack2	1.2.3.4.5.6.7
	Windows XP Professional Japanese Version V2002 Service Pack 2	N/A
	Windows XP Professional English Version /Standard x64 Edition	N/A
	Windows 2000 Professional English Version V5.00.2195 Service Pack4	N/A
	Windows 2000 Professional Simplified-Chinese Version V5.00.2195 Service Pack4	N/A
	Windows 2000 Professional Japanese Version V5.00.2195 Service Pack4	N/A
	Windows Server 2000 English Version	N/A
	Windows 98SE English Version V4.10.2222A	N/A
	MS-DOS 6.22 English Version	N/A
Power Supply	ATX Power : HP2-6500P	1.2.3.4.5.6.7
	AT Power :	N/A
	DC 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
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) – SATA	X		
DOM (Disk On Module) – 44 Pin			X
COM 1-232			X
COM 2-232			X
COM 3-232			X
COM 4-232			X
COM 2-422			X
COM 2-485			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 5/6 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 Port	X		
DVI Function			X

DIO Connector			X
Card Bus			X
PC/104			X
PC/104-Plus			X
PCI-104			X
CD-In Connector			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
FAN1 Connector	X		
FAN2 Connector	X		
PCI Express Mini Card	X		
Speaker Connector			X
Power Button			X
Front Panel	Result		
	Pass	Fail	N/A
Power On Button			X
IDE LED			X
External Buzzer			X
On Board Buzzer			X
Power LED			X
Reset Switch			X
Jumpers Function	Result		
	Pass	Fail	N/A
ATX simulates AT			X
Audio Out Selection (W/O & W/ Amplifier)			X
LCD Power Select			X
COM1-Ring			X
COM2-Ring			X
COM3-Ring			X
COM4-Ring			X
Clear CMOS			X
Touch Screen Operating Mode Selection			X
Clock Shift of TFT LCD			X
Power Connector & Function	Result		
	Pass	Fail	N/A
DC 12V Power Connector			X
ATX 24 Pin Power Connector			X
Standard ATX Power Connector	X		
ATX Power 12V Connector			X
AT Power 12V Connector			X
Big 4P Power Connector			X

Mini 4P Power 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 4		X		
PCI Express x16		X		
PCI Express				X

2. Power Connector Test

Test Method	Result		
	Pass	Fail	N/A
DC Power Connector- Power On/Off for 10 times in DOS			X
ATX Connector - Power On/Off for 10 times in DOS	X		
AT Connector - Power On/Off for 10 times in DOS			X
5V Only - Power On/Off for 10 times in DOS			X

3. Timer Accuracy Test

System Clock & RTC Clock Test				
Test Method	Margin for error	Result		
		Pass	Fail	N/A
System Clock in Power On Mode	±1 second during 24 hours			X
RTC Clock in Power On Mode	±1 second during 24 hours			X
RTC Clock in Power Off Mode	±1 second during 24 hours			X
Watchdog Timer Test		Result		
		Pass	Fail	N/A
Time-out Interval	10 sec			X
	20 sec			X
	120 sec			X

4. Network HUB / LAN Connection Test

Location		LED Type				Result		
						Pass	Fail	N/A
LAN1~2 LED		Active LED						X
		Link LED						X
		Speed LED						X
Location	Speed	HUB Type	Cable Length	HUB Speed	Onboard LAN Speed	Result		
						Pass	Fail	N/A
		D-Link DGS-1008D	100M	1GBps	100			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® Core™ 2 CPU E8400 @ 3.00GHz		1333 MHz	V2414	X			
Memory Compatibility Test							
Memory Brand	Memory Chipset	Frequency	Size	MemTest86 Version	Result		
					Pass	Fail	N/A
DSL	ELPIDA E110 BACSE-6E-E	DDR2-667	2GB	MT211	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			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	Data Image 7" / 800*480 / 18bit (16:9)	3.3V			X
	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
	AU B104SN02 / 10.4" / 800*600 / 18bit (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)	3.3V			X
	AU M170EG01 / 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	26V			X
TTL	Toshiba LTM10C209A / 10.4" / 640*480 / 18bit (4:3)	5V			X
	NEC NL8060AC31-12 / 12.1" / 800*600 / 18bit (4:3)	3.3/5V			X
	Sharp LQ121S1DG11 / 12.1" / 800*600 / 18bit (4:3)	3.3V			X
	LG LM151X2-C2TH / 15.1" / 1024x768 / 18bit (4:3)	3.3V			X
	Fujitsu FLC38XGC6V-06 / 15" / 1024*768 / 36bit (4:3)	5V			X

PCI Slot Function (PCI Adapter Card) Test

Model	Type	Result		
		Pass	Fail	N/A
CHAINTECH NVIDIA GeForce4 MX440-8X	VGA Card	X		
SC3000 CMI8738/C3DX	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		
Adapter LEMEL PCI Audio Crad	Audio Crad	X		
ADAPTEC 1420SA RoHS 4-Port SATA II RAID	RAID Card			X
LEMEL MD V1456VQH-P2 PCI MODEM Card	Modem 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
Creative CT4170 Sound Blaster Sound Card			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 Controllers PCI-Express x4 LAN 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

HDD Compatibility Test			
IDE / SATA Model	Result		
	Pass	Fail	N/A
Western Digital WD800BEVS-22RST0 80GB 2.5" SATA	X		
Western Digital WD 1600AAJS-00PSA0 160GB	X		
Seagate ST3160811AS 160GB	X		
Transcend DOM Card 2GB	X		
CD/DVD-ROM Compatibility Test			
Model	Result		
	Pass	Fail	N/A
ASUS DVD-E818A 18X DVD ROM	X		
Pioneer DVD-ROM DVD-128A	X		
IDE Cable Function test			
IDE Model	Result		
	Pass	Fail	N/A
40 Pin Cable ATA66			X
44 Pin Cable ATA33			X
80 Pin Cable ATA100			X
USB Function Test			
USB Basic Function Test	Result		
	Pass	Fail	N/A
USB Controller	X		
USB 2.0 Controller	X		
USB Keyboard Support	X		
USB Mouse Support	X		
USB 1.1 Compatible Test	Result		
	Pass	Fail	N/A
USB 1.1 Compatible Test	X		
USB 2.0 Compatible Test	Result		
	Pass	Fail	N/A
USB 2.0 Compatible Test	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		
USB Device Full Loading Test	Result		
	Pass	Fail	N/A
Mitsumi FLL3.5 D353GUE/FUE	X		
USB HDD 20GB	X		
USB Mouse	X		

USB Thumb drive Sandisk 1G		X			
Floppy Disk Controller Function Test		Result			
		Pass	Fail	N/A	
Copy and compare file between C: and A / B:				X	
Change Floppy to None value				X	
Swap FDD				X	
Peripheral Compatibility-Storage Device					
Model	Interface	Result			
		Pass	Fail	N/A	
DOC				X	
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-FA00	Mini-PCI Converter			X
	AAEON PCM-3794	SCSI Module			X
	AAEON PCM-3730	Intel 82559 LAN Module			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 (Use PCI-104 transform board: MBC-1TM Rev.A1.0)	Interface	Result		
		Pass	Fail	N/A
GM-100 WLAN 11g Mini PCI Card (Model: Sky Thru GC-100)	LAN			X
GM-101 WLAN 11b/g 54Mbps Mini PCI Card (Model: VNT6655AM)	LAN			X
PER-C20S SATA RAID MiniPCI Card (Silicon Image Sil3512ECTU128 QF7227.1-1)	SATA			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 TypeII 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
Linux-RedHat 9.0 or Fedora Core 4.0 X Fedora Core 6.0			X		
Windows Server 2003 English Version / Standard Edition 5.2.3790					X
Windows Server 2003 English Version /Standard x64 Edition					X
Windows Vista™ Ultimate English Version					X
Windows XP Professional English Version V2002 Service Pack 3			X		
Windows XP Professional English Version /Standard x64 Edition					X
Windows 2000 Professional English Version V5.00.2195 Service Pack4					X
Windows Server 2000 English Version					X
Windows 98SE English Version V4.10.2222A					X
DOS 6.22 English Version					X
Utility and Driver Test					
OS	Drivers Version		Result		
			Pass	Fail	N/A
Linux-Fedora Core 6.0	Chipset Software	N/A			X
	Graphics Media	N/A			X
	LAN Driver	N/A			X
	Audio Driver	N/A			X
Windows Server 2003 English Version Standard Edition 5.2.3790	Chipset Software	N/A			X
	Graphics Media	N/A			X
	LAN Driver	N/A			X
	Audio Driver	N/A			X
Windows Vista™ Ultimate English Version	Chipset Software	N/A			X
	Graphics Media	N/A			X
	LAN Driver	N/A			X
	Audio Driver	N/A			X
Windows XP Embedded English Version	Chipset Software	Intel Chipset Device Software Ver:8.3.0.1013(03/05/2007)	X		
	Graphics Media	Intel G33/G31 Express Chipset FamilyVer:6.14.10.4833(05/25/2007)	X		
	LAN Driver	Intel 82562V-2 10/100 Network Connection Ver:9.8.20.0(04/13/2007) Intel PRO /1000 PL Network Connection Ver:9.8.20.0(04/13/2007)	X		
	Audio Driver	N/A			X
Windows XP Professional x64 Edition English Version Service Pack 2 V2002	Chipset Software	N/A			X
	Graphics Media	N/A			X
	LAN Driver	N/A			X
	Audio Driver	N/A			X

Windows 2000 Professional English Version V5.00.2195 Service Pack 4	Chipset Software	N/A			X
	Graphics Media	N/A			X
	LAN Driver	N/A			X
	Audio Driver	N/A			X
Windows Server 2000 English Version	Chipset Software	N/A			X
	Graphics Media	N/A			X
	LAN Driver	N/A			X
	Audio Driver	N/A			X
Windows 98SE English Version V4.10.2222A	Chipset Software	N/A			X
	Graphics Media	N/A			X
	LAN Driver	N/A			X
	Audio Driver	N/A			X

7. 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			
AT Power Management Test			X
ATX 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 (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
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