

# QE 【Mainboard】

## P5 Verification Test Plan

Release 08E010019

Product Model	<b>EPIC-9456</b>
Description	<b>Intel 945GM(E) + ICH7-M EPIC Board</b>
Test Configuration	<input checked="" type="checkbox"/> New product <input checked="" type="checkbox"/> CPU Board : EPIC-9456 A0.2 <input checked="" type="checkbox"/> BIOS : EPIC-9456 BIOS Rev 1.0 (02/27/2008) <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Chipset : <input checked="" type="checkbox"/> CPU : Intel Core 2 Duo / Core Duo / Core Solo / Celeron M(Yonah 65nm) Processor up to 2.16GHz FSB:533 / 667 MHz <input checked="" type="checkbox"/> North Bridge : Intel 945GM(E) <input checked="" type="checkbox"/> South Bridge : Intel ICH7-M <input checked="" type="checkbox"/> VGA Chipset : Intel 945GM(E) Integrated VGA <input checked="" type="checkbox"/> Audio Chipset : Realtek ALC655 <input checked="" type="checkbox"/> Ethernet Chipset : Intel EP82573L 10/100/1000Mb <input checked="" type="checkbox"/> I/O Chipset : ITE IT8712KX + Fintek F81216DG <input checked="" type="checkbox"/> TV Chipset : Intel 945GM(E) Integrated VGA  <input checked="" type="checkbox"/> Remark : P5 Test for EPIC-9456 BIOS Rev 1.0 (02/27/2008)
<b>Test Result Summary</b>	
<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Pass with Deviation Comment: _____ _____	

2008/05/30

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 / Version	EPIC-9456 A0.2	1,2,3,4,5,6,7,8,9
BIOS / Version	EPIC-9456 BIOS Rev 1.0 (02/27/2008)	1,2,3,4,5,6,7,8,9
CPU Type	Intel CPU.Core 2 Duo 2.16 GHz.667MHz FSB.Merom T7400.LF80537GF0484M	1,2,3,4,5,6,7,8,9
Memory Type	Kingston DDR II 667 2GB(7QE12 D9HNL)	1,2,3,4,5,6,7,8,9
SATA	N/A	N/A
Primary IDE Master	Seagate ST3160815A 160GB 3.5" IDE HDD	1,2,3,4,5,6,7,8,9
Primary IDE Slave	SONY DDU1632 48X CD-ROM/16X DVD-ROM	1,2,3,4,5,6,7,8,9
CRT	ViewSonic E70 17" Monitor	1,2,3,4,5,6,7,8,9
LCD	N/A	N/A
Compact Flash	N/A	N/A
Backplane	N/A	N/A
Riser Card	N/A	N/A
Operating System	[ ] Linux-RedHat 9.0 or [ X ] Fedora Core 6.0	7
	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 2	1,2,3,4,5,6,7,8,9
	Windows XP Professional Simplified-Chinese Version V2002 Service Pack 2	7
	Windows XP Professional Japanese Version V2002 Service Pack 2	7
	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	N/A
	AT Power :ZECK-ZKS-300W	1,2,3,4,5,6,7,8,9

## Test Result for Certification

### 1. I/O Peripheral Function Test

I/O Function	Result			Note
	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 (UDMA)	X			
Compact Flash – Type (PIO)	X			
DOC (Disk On Chip)			X	
DOM (Disk On Module) – 40 Pin			X	Transcend / TS512MDOM40V / 512MB / IDE 40 Pin
DOM (Disk On Module) – 44 Pin	X			Transcend / TS512MDOM44V / 512MB / IDE 44 Pin
COM 1-232	X			
COM 2-232	X			
COM 2-422	X			
COM 2-485	X			ICP CON I-7044D D/IO Module
COM 2-Ring /+5V /+12V	X			
COM 3-232	X			
COM 4-232	X			
COM 5-232			X	
COM 6-232			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 Ports	X			
DVI Function	X			
DIO Connector	X			
Card Bus			X	
PC/104			X	
PC/104-Plus			X	
PCI-104	X			
CD-In Connector	X			
TFT TTL LCD			X	
TFT LVDS LCD	X			
TV-out / S Terminal	X			SHARP LCDTV LC-20S5T
TV-out / AV Terminal	X			SHARP LCDTV LC-20S5T
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			Notes
	Pass	Fail	N/A	
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	Result			Notes
	Pass	Fail	N/A	
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	Result			Notes
	Pass	Fail	N/A	
ATX Power Connector			X	
ATX Power_12V Connector			X	
AT Power Connector (P8 & P9)			X	
Big 4P Power Connector(12V)	X			
Mini 4P Power Connector			X	
External Power Connector (-12/-5V)			X	
Option ATX Power Connector (PS-ON / +5VSB)			X	
LAN Connector & Function	Result			Notes

		Pass	Fail	N/A	
LAN Link / Speed LED	LAN1	X			
	LAN2	X			
LAN Active LED	LAN1	X			
	LAN2	X			
LAN 10/100 Ethernet		X			
LAN 1G Ethernet				X	HUB:D-Link DGS-1008T
PCI Connector & Function	Result			Notes	
	Pass	Fail	N/A		
Mini PCI Slot				X	
PCI Slot				X	
PCI Express				X	NW-200503 / NW-200504

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

### Platform Information:

PCB Model / Version	EPIC-9456 A0.2
BIOS	EPIC-9456 BIOS Rev 1.0 (02/27/2008)
Operating System	Windows XP Professional V2002 Service Pack 2
CPU	Intel Core 2 Duo T7400 2.16GHz
Memory	Kingstion DDR II 667 2GB(7QE12 D9HNL)
SATA HDD	N/A
Primary IDE Master	Seagate ST3160815A 160GB 3.5" IDEHDD
Primary IDE Slave	SONY DDU1632 48X CD-ROM/16X DVD-ROM
CRT	ViewSonic E70 17" Monitor
LCD	N/A
Compact Flash	N/A
Backplane	N/A
Riser Card	N/A
Chipset Software	Intel Chipset Device Software Ver:8.3.1.1009(07/26/2007)
Graphics Media	Mobile Intel 945 Express Chipset Family Ver:6.14.10.4864(08/24/2007)
LAN Driver	Intel PRO/1000 PL Network Connection Ver:9.10.8.0(08/30/2007)
Audio Driver	Realtek AC'97 Audio Ver:5.10.0.6260(09/24/2007)
Touchscreen Driver	N/A
Power Supply	AT Power :ZECK-ZKS-300W

### Test Equipment:

Equipment	AC/DC Clamp Meter
Manufacturer	PROVA
Model name	CM-01
Standard	Reference to CE EN 61010 Test Procedure
	Reference to UL Test Procedure

### Equipment Certified Calibration:

Calibrated Company	IPE (儀寶)
S/N	00004072 (DM215)
Report No	7C21P566
Calibration Date	Jan. 14, 2008
Next Calibration Date	Jan. 13, 2009
Test By	Mick

- Test Point:**
1. Power on machine and boot into Windows environment
  2. Run test software: Prime95 to make system heavy loading in order to measure its maximum current
  3. Use Prova EN61010(set as 40A) to measure each current of system different mode

Model	Test Environment	AT Power: ZECK-ZKS-300W		AT Power:N/A		Note
		CPU: Intel Core 2 Duo T7400 2.16GHz		CPU:N/A		
OS Environment	Windows XP Professional V2002 Service Pack 2					
Normal Mode (+5V)		N/A	A	N/A	A	
Suspend Mode (+5V)		N/A	A	N/A	A	
5VSB in Power Off Mode (just for ATX)		N/A	A	N/A	A	
5VSB in Power On Mode (just for ATX)		N/A	A	N/A	A	
Normal Mode (+12V)		3.02	A	N/A	A	
Suspend Mode (+12V)		1.53	A	N/A	A	
Normal Mode (+3.3V) (just for ATX)		N/A	A	N/A	A	
Suspend Mode (+3.3V) (just for ATX)		N/A	A	N/A	A	
Normal Mode (-12V)		N/A	A	N/A	A	
Suspend Mode (-12V)		N/A	A	N/A	A	
Normal Mode (-5V)		N/A	A	N/A	A	
Suspend Mode (-5V)		N/A	A	N/A	A	

### 3. Power Connector Test

Test Method	Result		
	Pass	Fail	N/A
ATX Connector - Power On/Off for 10 times in DOS			X
AT Connector - Power On/Off for 10 times in DOS			X
12V Only - Power On/Off for 10 times in DOS	X		
DC Adapter - Power On/Off for 10 times in DOS			X

### 4. Timer Accuracy Test

System Clock & RTC Clock Test				
Test Method	Margin for error	Result		
		Pass	Fail	N/A

System Clock in Power On Mode	±2 second during 24 hours	X		
RTC Clock in Power On Mode	±2 second during 24 hours	X		
RTC Clock in Power Off Mode	±2 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		

## 5. Network HUB / LAN Connection Test

Location		LED Type				Result		
						Pass	Fail	N/A
LAN1 LED		Active LED				X		
		Link / Speed LED				X		
LAN2 LED		Active LED				X		
		Link / Speed LED				X		
Location	Speed	HUB Type	Cable Length	HUB Speed	Onboard LAN Speed	Result		
						Pass	Fail	N/A
Onboard LAN1	10/100/1000 Mbps	HP J4095A 24 Ports	100M	100 MBps	100	X		
		D-Link DGS-1008T	100M	1GBps	100	X		
		D-Link DES-1316 PoE Switch	100M	100 MBps	100	X		
		Intel InBusiness 8 Port	100M	100 MBps	100	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	HP J4095A 24 Ports	100M	100 MBps	100	X		
		D-Link DGS-1008T	100M	1GBps	100	X		
		D-Link DES-1316 PoE Switch	100M	100 MBps	100	X		
		Intel InBusiness 8 Port	100M	100 MBps	100	X		
		Accton DeskTop-3005	100M	100 MBps	100	X		
		SVEC FD916H (10 Mbps HUB)	100M	10 MBps	10	X		

## 6. Hardware Compatibility

CPU Compatible Test					
CPU Type	FSB	Prime95 Version	Result		
			Pass	Fail	N/A
Intel Core 2 Duo T7400 2.16GHz	667	V24.14	X		
Intel Core Duo T2500 2.0GHz	667	V24.14	X		
Intel Core Duo Celeron M 440 1.86GHz	533	V24.14	X		
Memory Compatibility Test					



Memory Brand	Memory Chipset	Frequency	Size	Mem Test86 Version	Result		
					Pass	Fail	N/A
Kingston	7QE22 D9HNL	667	1GB	V1.70	X		
Transcend	ELPIDA E5108AG-5C-E	533	512MB	V1.70	X		
DSL	HYNIX HY5PS12821A	533	512MB	V1.70	X		
<b>Audio Basic Function Test</b>					<b>Result</b>		
					<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
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		
<b>Audio 5.1 Channel with S/P DIF Function Test</b>					<b>Result</b>		
					<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
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
<b>On Board TV Function Test</b>					<b>Result</b>		
					<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
NTSC		AV Terminal			X		
PAL					X		
NTSC		S Terminal			X		
PAL					X		
<b>TFT LCD Model</b>				<b>Result</b>			
				<b>Pass</b>	<b>Fail</b>	<b>N/A</b>	
LVDS	AUO G065VN01 V.0 / 6.5" / 640x480 / 18bit (4:3)			X			
	AUO G065VN01 V.0 / 6.5" / 640x480 / 24bit (4:3)			X			
	AU G084SN05 V.3 / 8.4" / 800*600 / 18bit (4:3)			X			
	AU G150XG01 V.0 / 15" / 1024*768 / 18bit (4:3)			X			
	AU M150XN07 V.2 / 15" / 1024x768 / 24bit (4:3)			X			
	AU M170EG01 V.D / 17" / 1280*1024 / 48bit (4:3)			X			
	AU M170XW01 V.1 / 17" / 1280x768 / 24bit (16:9)			X			
	AUO T260XW02 / 26" / 1366x768 / 24bit			X			
AU M201UN02 V.5 / 20.1" / 1600x1200x48bit			X				

	AUO T370HW01 / 37" / 1920x1080 / 48bit	X		
TTL	Toshiba LTM10C209A / 10.4" / 640*480 / 18bit (4:3)			X
	NEC NL8060AC31-12 / 12.1" / 800*600 / 18bit (4:3)			X
	Sharp LQ121S1DG11 / 12.1" / 800*600 / 18bit (4:3)			X
	LG LM151X2-C2TH / 15.1" / 1024x768 / 18bit (4:3)			X
	Fujitsu FLC38XGC6V-06 / 15" / 1024*768 / 36bit (4:3)			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
Takram DC-395U V1.02	SCSI 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
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

**PCI-Express Function Test**

Model	Result		
	Pass	Fail	N/A
SUNIX SATA1414 VER 1.1 PCI-Express x1 SATA Card (Just for CN39)			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
SUNIX SATA II Express card (+ eSATA HDD External Box) (CN3)			X
Bear Mini-Express Function Test Card (CN47)			X

**HDD Compatibility Test**

Model	Result		
	Pass	Fail	N/A
Maxtor VAM51JJ0 40GB ATA/133 3.5" IDE HDD	X		
Western / WD800JB-00JJC0 / 80GB ATA-100 3.5" IDE HDD	X		
Seagate ST380013A 80GB ATA100 3.5" IDE HDD	X		
Western WD1600JB-00REA0 160GB ATA100 3.5" IDE HDD	X		
Western Digital WD800EVS-22RST0 80GB 2.5" SATA HDD	X		
Seagate ST3160811AS 160GB 3.5" SATA-II HDD	X		

CD-ROM Compatibility Test			
Model	Result		
	Pass	Fail	N/A
Pioneer DVD-ROM DVD-126D CD 40X / DVD 16X	X		
Pioneer DVD-ROM DVD-128A CD 40X / DVD 16X	X		
ASUS / DVD-ROM/DVD-E616A CD 40X / DVD 16X	X		
IBM HL-DT-ST / GCR-8480B / 48X / CD-ROM/ ATA33	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	
Remark: (1) CN14 is special connector that has only on1 USB port. (2) USB speed is limited at USB 1.X no matter USB 2.0 in BIOS is enabled or not.		Pass	Fail
USB Controller		X	
USB 2.0 Controller		X	
USB Keyboard Support		X	
USB Mouse Support		X	
USB 1.1 Compatible Test		Result	
		Pass	Fail
USB 1.1 Compatible Test		X	
USB 2.0 Compatible Test		Result	
		Pass	Fail
USB 2.0 Compatible Test		X	
USB 2.0 Function Test		Result	
		Pass	Fail
Install Windows XP Professional from HighSpeed Device: SONY USB2.0 DVD-R/W DRX-830UL		X	
USB Device Full Loading Test		Result	
Model		Pass	Fail
USB1		X	
USB2		X	
USB3		X	
USB4		X	
USB5		X	
USB6		X	
USB7		X	
USB8		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	
MO [SCSI]	SCSI			X	
ZIP 100 [Parallel]	Parallel	X			
IOMega ZIP100MB Internal ATAPI Drive	IDE			X	
DOC				X	
Type-I CF	Fix / PIO Mode	X			
Type-I CF	Fix / UDMA Mode	X			
Digital I/O Connector Test		Result			
(CN33, BIOS Setting: 8 In / 8 Out / 4 In, 4out)		Pass	Fail	N/A	
Input Address: 801H (Fixed on BIOS)		X			
Output Address: 801H (Fixed on BIOS)		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			
Remark: COM1 ~ COM4 (from ITE-IT8712KX)		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		
<b>Mini PCI Card Compatibility Test</b>				
Model	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
<b>COM/LPT Ports &amp; RS-232/422/485 Function Test</b>		Result		
		Pass	Fail	N/A
RS-422 for COM2		X		
RS-485 for COM2		X		
COM1		X		
COM2		X		
COM3		X		
COM4		X		
COM5				X
COM6				X
LPT1		X		
LPT2				X
<b>Card Bus(PCMCIA) Compatibility Function Test</b>				
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	

## 7. O.S. Compatibility Test

Installation Operation System Compatibility Test	Result		
	Pass	Fail	N/A
[ ] Linux-RedHat 9.0 or [ 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 XP Professional English Version V2002 Service Pack 2	X		
Windows XP Professional Simplified-Chinese Version V2002 Service Pack 2	X		
Windows XP Professional Japanese Version V2002 Service Pack 2	X		
Windows XP Professional English Version /Standard x64 Edition			X
Windows 2000 Professional English Version V5.00.2195 Service Pack4			X

Windows 2000 Professional Simplified-Chinese Version V5.00.2195 Service Pack4				X	
Windows 2000 Professional Japanese Version V5.00.2195 Service Pack4				X	
Windows Server 2000 English Version				X	
Windows 98SE English Version V4.10.2222A				X	
MS-DOS 6.22 English Version				X	
<b>Utility and Driver Test</b>					
OS	Drivers Version		Result		
			Pass	Fail	N/A
Fedora Core 6	Chipset Software	Use default driver	X		
	Graphics Media	Use default driver	X		
	LAN Driver	Use default driver	X		
	Audio Driver	Use default driver	X		
Windows Server 2003 English Version Standard Edition 5.2.3790	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X
Windows Server 2003 English Version Standard x64 Edition	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X
Windows XP Professional English Version V2002 Service Pack 2	Chipset Software	Intel Chipset Device Software Ver:8.3.1.1009(07/26/2007)	X		
	Graphics Media	Mobile Intel 945 Express Chipset Family Ver:6.14.10.4864(08/24/2007)	X		
	LAN Driver	Intel PRO/1000 PL Network Connection Ver:9.10.8.0(08/30/2007)	X		
	Audio Driver	Realtek AC'97 Audio Ver:5.10.0.6260(09/24/2007)	X		
Windows XP Professional Simplified-Chinese Version V2002 Service Pack 2	Chipset Software	Intel Chipset Device Software Ver:8.3.1.1009(07/26/2007)	X		
	Graphics Media	Mobile Intel 945 Express Chipset Family Ver:6.14.10.4864(08/24/2007)	X		
	LAN Driver	Intel PRO/1000 PL Network Connection Ver:9.10.8.0(08/30/2007)	X		
	Audio Driver	Realtek AC'97 Audio Ver:5.10.0.6260(09/24/2007)	X		
Windows XP Professional Japanese Version V2002 Service Pack 2	Chipset Software	Intel Chipset Device Software Ver:8.3.1.1009(07/26/2007)	X		
	Graphics Media	Mobile Intel 945 Express Chipset Family Ver:6.14.10.4864(08/24/2007)	X		
	LAN Driver	Intel PRO/1000 PL Network Connection Ver:9.10.8.0(08/30/2007)	X		
	Audio Driver	Realtek AC'97 Audio Ver:5.10.0.6260(09/24/2007)	X		
Windows XP Professional x64 Edition English Version Service Pack 2 V2002	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X
Windows 2000	Chipset Software				X

Professional English Version V5.00.2195 Service Pack 4	Graphics Media			X
	LAN Driver			X
	Audio Driver			X
Windows 2000 Professional Simplified-Chinese Version V5.00.2195 Service Pack4	Chipset Software			X
	Graphics Media			X
	LAN Driver			X
	Audio Driver			X
Windows 2000 Professional Japanese Version V5.00.2195 Service Pack4	Chipset Software			X
	Graphics Media			X
	LAN Driver			X
	Audio Driver			X
Windows Server 2000 English Version	Chipset Software			X
	Graphics Media			X
	LAN Driver			X
	Audio Driver			X
Windows 98SE English Version V4.10.2222A	Chipset Software			X
	Graphics Media			X
	LAN Driver			X
	Audio Driver			X

## 8. BIOS Function Test

Test Item	Result		
	Pass	Fail	N/A
Memory Beep Test	X		
Standard CMOS Setup Test	X		
Boot Sequence Test	X		
<b>Power Management Test</b>			
APM Power Management Test	X		
ACPI Power Management Test	X		
Power On Function Test			X
Wake Up Event Test	X		
Power On after Power Failure Test (SW has removed auto item from BIOS)	X		
CMOS Backup / Clear CMOS Test	X		
Boot ROM Test (Only support PXE)	X		
Supervisor / User Password Test	X		
CRT / LCD / TV Function Test	X		
TV Standard Function Test	X		
Init Display First Function Test			
1. BIOS has fixed it as onboard output while we select "Onboard VGA"	X		
2. There is no PCI Express slot on ECB-910A			
On-Chip Serial ATA Function Test	X		
SATA Mode-IDE/RAID Function Test			X
<b>PC Health Status</b>			
Voltage Monitor Test	X		
FAN Speed Monitor Test	X		
Temperature Monitor Test	X		
Floppy Function Test	X		

USB Onboard Device Function Test	X		
COM Address / IRQ Test	X		
LPT Address / IRQ Test	X		
BIOS AWDFLASH Program Test	X		

## 9. Performance Test

PCB Model / Version	EPIC-9456 A0.1
BIOS	EPIC-9456 BIOS Rev 1.0 (02/27/2008)
Operating System	Windows XP Professional V2002 Service Pack 2
CPU	Intel CPU.Core 2 Duo 2.16 GHz.667MHz FSB.Merom T7400.LF80537GF0484M
Memory	Kingstion DDR II 667 2GB(7QE12 D9HNL)
SATA HDD	N/A
Primary IDE Master	Seagate ST3160815A 160GB 3.5" IDE HDD
Primary IDE Slave	SONY DDU1632 48X CD-ROM/16X DVD-ROM
CRT	ViewSonic E70 17" Monitor
LCD	N/A
Compact Flash	N/A
Backplane	N/A
Riser Card	N/A
Chipset Software	Intel Chipset Device Software Ver:8.3.1.1009(07/26/2007)
Graphics Media	Mobile Intel 945 Express Chipset Family Ver:6.14.10.4864(08/24/2007)
LAN Driver	Intel PRO/1000 PL Network Connection Ver:9.10.8.0(08/30/2007)
Audio Driver	Realtek AC'97 Audio Ver:5.10.0.6260(09/24/2007)
Touchscreen Driver	N/A
Power Supply	AT Power :ZECK-ZKS-300W

## Test Result:

Testing Software	Result	Unit
<b>ZD WinBench 99 V2.0</b>		
Business Disk WinMark99	8230	Thousand bytes/sec
High-End Disk WinMark99	21300	Thousand bytes/sec
Business Graphics WinMark99	389	
High-End Graphics WinMark99	1060	
<b>PCMark2002</b>		
CPU	8533	
Memory	26579	
HDD	766	
<b>Final Reality V1.01—BenchMark Test</b>		
2D image	49.67	
3D	7.29	
Bus transfer	77.39	
Overall	30.52	Reality marks
<b>ZD 3D Winbench 2000 V1.1</b>		
3D WinMark 2000	128	Frames / sec
<b>3Dmark2001SE Pro (Demo version)</b>		
3DMark2001SE Build 330_Benchmark mode	5439	



<b>ZD Multimedia Content Creation Winstone 2004 V1.0.1 (Up Pentium III 800 MHZ CPU)</b>		
<b>Multimedia Content Creation Winstone 2004</b>	<b>37</b>	
<b>Business Winstone 2004 v1.0.1 (Up Pentium III 800 MHZ CPU)</b>		
<b>Business Winstone2004</b>	<b>17.7</b>	