

P5 Verification Test Report

Release No: 08E010024

Product Model	EPIC-8526
Description	Intel 852GM + ICH4 EPIC Board
Test Configuration	<input checked="" type="checkbox"/> New product <input checked="" type="checkbox"/> PCB : EPIC-8526 A0.4 <input checked="" type="checkbox"/> BIOS : EPIC-8526 BIOS Rev 1.1 (06/20/2008) <input checked="" type="checkbox"/> Chipset : <input checked="" type="checkbox"/> North Bridge : Intel 852GM <input checked="" type="checkbox"/> South Bridge : Intel ICH4 <input checked="" type="checkbox"/> VGA Chipset : Intel 852GM integrated VGA <input checked="" type="checkbox"/> Audio Chipset : Realtek ALC655 AC'97 codec <input checked="" type="checkbox"/> Ethernet Chipset : 10/100Mbps(RTL8100C),1Gbps(RTL8100S) <input checked="" type="checkbox"/> I/O Chipset : IT-8712F <input checked="" type="checkbox"/> TV Chipset : Chrontel CH7009B <input checked="" type="checkbox"/> Remark : QE NPDP P5 External Report
<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Pass with Deviation Comment: _____ _____	

2008/06/26

Issue date

Wenyuan Yang

Manager

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Test Engineer

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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.

Platform Information:

Item	Device Information
PCB Model / Version	EPIC-8526 A0.4
BIOS / Version	EPIC-8526 Rev 1.1(06/20/2008)
CPU Type	Intel Pentium M 2.00GHz /2M / 533MHz (Dothan)
Memory Type	Kingston DDR333 SODIM 1GB
SATA	N/A
Primary IDE Master	WD/WD800BB-00JHA0 / 80GB
Primary IDE Slave	Pioneer DVD-126D
CRT	ViewSonicE653
LCD	N/A
Compact Flash	Kingston FIX / UDMA /Type-I CF /2GB
Backplane	N/A
Riser Card	N/A
Operating System	<input type="checkbox"/> Linux-RedHat 9.0 or <input checked="" type="checkbox"/> Fedora Core 4.0
	Windows XP Professional English Version V2002 Service Pack 2
	Windows XP Professional Simplified-Chinese Version V2002 Service Pack 2
	Windows XP Professional Japanese Version V2002 Service Pack 2
Power Supply	ATX Power : Seventeam ST-302HLP

1. I/O Peripheral Function Test

The Result:

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 I	X			
Compact Flash – Type II			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			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

Platform Information:

PCB Model / Version	EPIC-8526 A0.2
BIOS	EPIC-8526 Rev 0.6(08/14/2007)
Operating System	Windows XP Professional English Version V2002 Service Pack 2
CPU	Intel Pentium M 2.00GHz /2M / 533MHz (Dothan)
Memory	Kingston DDR333 SODIM 1GB
SATA HDD	N/A
Primary IDE Master	WD/Wd800BB-00JHA0 / 80GB
Primary IDE Slave	Pioneer DVD-126D
CRT	ViewSonicE653
LCD	N/A
Compact Flash	N/A
Backplane	N/A
Riser Card	N/A
Chipset Software	Intel Chipset Ver:8.1.1.1001 Date:5/31/2006
Graphics Media	Intel 82852/82855 GM/GME Grapics Controller Ver:6.14.10.4497 Date:2/7/2006
LAN Driver	Realtek RTL8139/810X Ethernet NIC Ver: 5.663.1212.2006 Date:3/16/2007
Audio Driver	Realtek AC'97 Audio Ver:5.10.0.6160 Date:8/18/2006
Touchscreen Driver	N/A
Power Supply	Seventeam ST-302HLP

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	6118P016
Calibration Date	19, January, 2007
Next Calibration Date	18, January, 2008
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

Test Environment / Model	ATX Power: Seventeam ST-302HLP				AT Power:ZKS 300W				Note
	CPU:2.0G		CPU:1.6G		CPU: 2.0G		CPU: 1.6G		
Normal Mode (+5V)	0.32	A	0.55	A	0.27	A	0.26	A	
Suspend Mode (+5V)	0.05	A	0.06	A	-----	A	-----	A	
5VSB in Power Off Mode (just for ATX)	0	A	0	A	-----	A	-----	A	
5VSB in Power On Mode (just for ATX)	0	A	0	A	-----	A	-----	A	
Normal Mode (+12V)	3.31	A	2.54	A	3.04	A	2.54	A	
Suspend Mode (+12V)	1.27	A	0.89	A	-----	A	-----	A	

Normal Mode (+3.3V) (just for ATX)	0	A	0	A	-----	A	-----	A	
Suspend Mode (+3.3V) (just for ATX)	0	A	0	A	-----	A	-----	A	
Normal Mode (-12V)	0	A	0	A	-----	A	-----	A	
Suspend Mode (-12V)	0	A	0	A	-----	A	-----	A	
Normal Mode (-5V)	0	A	0	A	-----	A	-----	A	
Suspend Mode (-5V)	0	A	0	A	-----	A	-----	A	

3. Timer Accuracy Test

3-1. System Clock & RTC Clock Test

- Test Points: 1. This test focuses on the accuracy of system clock and RTC
 2. Check your local time to adjust system clock and RTC in BIOS setup menu to fit system
 3. Check if the time is correct or not after 24 hours passed

Under Room Temperature: 25 °C

Item Function	Time Interval	Margin for error	Actual		Result			Note
					Pass	Fail	N/A	
System Clock in Power On Mode	24 hrs	+/-3 sec	+1	Sec	X			Under Windows
RTC Clock in Power On Mode	24 hrs	+/-3 sec	+1	Sec	X			
RTC Clock in Power Off Mode	24 hrs	+/-3 sec	0	Sec	X			

3-2. Watchdog Timer Test

- Test Points: 1. Setup every time-out interval to check if system can generate a reset while on setting time.
 2. Please pay attention to which method we would use to make system reset, Watchdog-IRQ n or Software Programming or BIOS Setup

Use Function as below:

Watchdog-IRQ n Software Programming.

BIOS Setup. No Support.

Under Room Temperature: 25°C / DOS Mode .

Time-out interval	IRQ	Reset	Margin for error	Actual		Result			Note
						Pass	Fail	N/A	
10 sec		X	+/- 20%	10	Sec	X			Software provided by Aaeon S/W
60 sec		X	+/- 20%	62	Sec	X			
255 sec		X	+/- 20%	257	Sec	X			
60 sec	10		+/- 20%		Sec			X	
60 sec	11		+/- 20%		Sec			X	
60 sec	15		+/- 20%		Sec			X	

4. Network HUB / LAN Connection Test

4-1. LAN LED Function Test :

Test Points: 1. Active LED→ It shows flickering orange color while LAN is access

2. Link / Speed LED→ It shows green color that is always on while LAN speed is 10/100 MBps

→It shows red-orange color that is always on while LAN speed is 1000 MBps (Gigabit)

OnBoard LAN 1 : LED Indicator Lights Function Test [] No Support

Test Item	Active LED (Flickering Orange Color)	Link / Speed LED (10/100: Green Color) (Gigabit: Red-Orange Color)	Note
Pass	X	X	
Fail			
N/A			

OnBoard LAN 2 : LED Indicator Lights Function Test [] No Support

Test Item	Active LED (Flickering Orange Color)	Link / Speed LED (10/100: Green Color) (Gigabit: Red-Orange Color)	Note
Pass	X	X	
Fail			
N/A			

4-2. Network HUB / LAN Connects Test:

Test Point: 1. A represents QE Windows XP Pro / B represents Tested machine (Under Windows)

2. A ↔ B means to connect two computers each other by using “Ping” instruction

3. Use CAT.6 network cable with RJ-45 connector to test

4. Allow failure rate under 1/1000.

LAN1 Port Test : [X]10 , [X]100 , [X]1000 Mbps

Network HUB / HUB Speed		Transfer Mode	Cable Length	Function Test					Note
				Packet in Byte	Send	Onboard LAN Speed	Received	N/A	
HP J4095A 24 Ports	100 MBps	A ↔ B	100 M	8192	1000	X	999		
D-Link DGS-1008T	1GBps	A ↔ B	100 M	8192	1000	X	1000		
D-Link DES-1316 PoE Switch	100 MBps	A ↔ B	100 M	8192	1000	X	999		
Intel InBusiness 8 Port	100 MBps	A ↔ B	100 M	8192	1000	X	1000		
Accton DeskTop-3005	100 MBps	A ↔ B	100 M	8192	1000	X	1000		
SVEC FD916H (10 Mbps HUB)	10 MBps	A ↔ B	100 M	8192	1000	X	999		

LAN2 Port Test : [X]10 , [X]100 , [X]1000 Mbps

Network HUB / HUB Speed		Transfer Mode	Cable Length	Function Test					Note
				Packet in Byte	Send	Onboard LAN Speed	Received	N/A	
HP J4095A 24 Ports	100 MBps	A ↔ B	100 M	8192	1000	X	999		
D-Link DGS-1008T	1GBps	A ↔ B	100 M	8192	1000	X	999		
D-Link DES-1316 PoE Switch	100 MBps	A ↔ B	100 M	8192	1000	X	999		
Intel InBusiness 8 Port	100 MBps	A ↔ B	100 M	8192	1000	X	1000		
Accton DeskTop-3005	100 MBps	A ↔ B	100 M	8192	1000	X	1000		
SVEC FD916H (10 Mbps HUB)	10 MBps	A ↔ B	100 M	8192	1000	X	999		

5. Hardware Compatibility

5-1. CPU Compatibility Test

- Test Points: 1. This test focuses on the CPU compatibility and makes it heavy loading
2. Run Prime95 Under Windows for 8 hours

Run Prime95 for 8 hours

OS	CPU Type	FSB	Result			Note
			Pass	Fail	N/A	
Windows Environment	Pentium M Dothan 1.73 / 2M / RH80536 / 740 / 5611B171 / SL7SA	533 MHz	X			
	Pentium M 2.0GHz / RH80536 760 5536B887 SL7SM	533MHz	X			

5-2. Memory Compatibility Test

- Test Points: 1. "DIMM 2(1)" means to insert DIMM item 1 in DIMM slot 2
2. Power on machine then boot into DOS environment run "Memory Test Software"
3. Run MemTest at least 24 hours in DOS mode for each item

Memory List:

Item	Memory Brand	Memory Chipset	Frequency	Size (MB)	Note
01	Kingston	DDR333 SODIMM SAMSUNG K4H510838C-ZCCC	133	1GB	
02	Kingston	DDR333 SODIMM NANYA NT5DS16M16CT -6K 54937300CP	N/A	256MB	
03	Transcend	DDR400 SODIMM SAMSUNG K4H510838D-UCCC	N/A	512MB	
04	SAMSUNG	DDR333 SODIMM SEC 625 VCB3 K4H510838D	N/A	1GB	
05	ATP	DDR333 SODIMM AT64L64M8SHB3S	N/A	512MB	
06					
07					

Test Result:

Environment Configuration	MemTest Version	Result			Note
		Pass	Fail	N/A	
DIMM 1(1)	1.65	X			
DIMM 2(1)				X	
DIMM 1(1) + DIMM 2(1)				X	
DIMM 1(2)	1.65	X			
DIMM 2(2)				X	
DIMM 1(2) + DIMM 2(2)				X	
DIMM 1(3)	1.65	X			
DIMM 2(3)				X	
DIMM 1(3) + DIMM 2(3)				X	
DIMM 1(4)	1.65	X			
DIMM 2(4)				X	
DIMM 1(4) + DIMM 2(4)				X	
DIMM 1(5)	1.65	X			
DIMM 2(5)				X	

DIMM 1(5) + DIMM 2(5)				X	
DIMM 1(6)				X	
DIMM 2(6)				X	
DIMM 1(6) + DIMM 2(6)				X	
DIMM 1(7)				X	
DIMM 2(7)				X	
DIMM 1(7) + DIMM 2(7)				X	

5-3. On Board Audio Function Test

5-3.1. Audio Basic Function Test

- Test Points:
1. Check if the sound driver can be installed correctly in Windows
 2. Use the AP program supplied by sound driver to test sound function
 3. Please pay attention to Left / Right sound output
 4. Adjust sound of speaker and system to the max volume then move cursor around, check if there is any noise appeared

The Result:

Function Test		Result			Note
		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			Dynamic microphone [DP-2003002]
	Condenser	X			Condenser Microphone [DP-2003001]
MIC Sound Recorder	Dynamic	X			Dynamic microphone [DP-2003002]
	Condenser	X			Condenser Microphone [DP-2003001]

5-3.2. Audio 5.1 Channel with S/P DIF Function Test

Speaker Device→Creative inspire 5.1 digital 5600

Function Test		Result			Note
		Pass	Fail	N/A	
Speaker configuration					
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	

5-4. On Board TV Function Test

Test Result:

Function Test		Result			Note
		Pass	Fail	N/A	
NTSC	S terminal	X			SHARP LCD TV LC-20S5T
PAL		X			
NTSC	AV Terminal	X			SHARP LCD TV LC-20S5T
PAL		X			

5-5. On Board LCD Function Test

Test Point: 1. Please pay more attention to panel color, resolution, and shift issue when you test LCD
2. Check LCD display in POST and Windows mode

Test Result:

TFT LCD Model		Result			Note
		Pass	Fail	N/A	
LVDS	AUO G065VN01 V.0 / 6.5" / 640x480 / 18bit (4:3)			X	LM-200604 / 3.3V
	AUO G065VN01 V.0 / 6.5" / 640x480 / 24bit (4:3)	X			LM-200608 / 3.3V
	AU B104SN02 / 10.4" / 800*600 / 18bit (4:3)	X			LM-200113 / 3.3V
	AU G150XG01 V.0 / 15" / 1024*768 / 18bit (4:3)	X			LM-200115 / 3.3V
	AU M150XN07 V.2 / 15" / 1024x768 / 24bit (4:3)	X			LM-200603 / 3.3V
	AU M170EG01 / 17" / 1280*1024 / 48bit (4:3)	X			LM-200601 / 5V
	AU M170XW01 V.1 / 17" / 1280x768 / 24bit (16:9)			X	LM-200606 / 5V
	AUO T260XW02 / 26" / 1366x768 / 24bit			X	
	AU M201UN02 V.5 / 20.1" / 1600x1200x48bit			X	LM-200607 / 5V
	AUO T370HW01 / 37" / 1920x1080 / 48bit			X	
TTL	Toshiba LTM10C209A / 10.4" / 640*480 / 18bit (4:3)			X	LM-200100 / 5V
	NEC NL8060AC31-12 / 12.1" / 800*600 / 18bit (4:3)			X	LM-200101 / 3.3/5V
	Sharp LQ121S1DG11 / 12.1" / 800*600 / 18bit (4:3)			X	LM-200102 / 3.3V
	LG LM151X2-C2TH / 15.1" / 1024x768 / 18bit (4:3)			X	LM-200605 / 3.3V
	Fujitsu FLC38XGC6V-06 / 15" / 1024*768 / 36bit (4:3)			X	LM-200602 / 5V

5-6. PCI Slot Function (PCI Adapter Card) Test

Adapter VGA Card	Install Driver			Set Simultaneous Display and Reboot			Note
	Pass	Fail	N/A	Pass	Fail	N/A	
CECUBE GC-R9250PCI-D3 (ATI REDEON9250 256MB)			X			X	[VC-200601]
CHAINTECH NVIDIA GeForce4 MX440-8X			X			X	[VC-200200]
Adapter Sound Card	Install Driver			Play Sound			Note
	Pass	Fail	N/A	Pass	Fail	N/A	
SC3000 CMI8738/C3DX			X			X	[SC-001]
Adapter SCSI Card	Install Driver			Copy files to SCSI HDD			Note
	Pass	Fail	N/A	Pass	Fail	N/A	
Takram DC-395U V1.02			X			X	[SS-200200]
ADAPTEC Ultra160 SCSI ASC-29160			X			X	[SS-200601]
Adapter Image Capture Card	Install Driver			Connect to CCD			Note
	Pass	Fail	N/A	Pass	Fail	N/A	
I-VIEW CP-1400AS (with Age STD-477FAI CCD)			X			X	[CP-200501]
Adapter LAN Card	Install Driver			Connect to Internet			Note
	Pass	Fail	N/A	Pass	Fail	N/A	
Intel GD82559 10/100 Mbps Fast Ethernet Adapter			X			X	[NW-013]
3Com 3C905C-TXM ETHERLINK 10/100 PCI			X			X	[NW-016]
D-Link DWL-520+ Wireless LAN			X			X	[NW-2002001]
Adapter RAID Card	Install Driver			RAID 0, 1, 10 Function Test			Note
	Pass	Fail	N/A	Pass	Fail	N/A	
ADAPTEC 1420SA RoHS 4-Port SATA II RAID			X			X	[SS-200602]
MODEM Card							

	Pass	Fail	N/A	Pass	Fail	N/A	
LEMEL MD V1456VQH-P2 PCI MODEM Card			X			X	[MD-200200]
Other Card	Install Driver			Check Device Status			Note
	Pass	Fail	N/A	Pass	Fail	N/A	
D-Link DU-520 USB 2.0			X			X	[DU-001]
Tekram TR-822 Serial ATA 150 [SA-001] + SATA HDD Seagate ST3120026AS 120GB			X			X	[SA-001] + [ID-200305]

5-7. PCI-Express Function Test

PCI-Express Device

PCI-Express Device	Install Driver		Function Test		N/A	Note
	Pass	Fail	Pass	Fail		
SUNIX SATA1414 VER 1.1 PCI-Express x1 SATA Card					X	[eSATA-200602]
SksKonnnect SK-9E21D 10/100/1000 Base-T Adapter PCI-Express x1 LAN Card					X	[NW-200503] [NW-200504]
Adaptec AAR-1430SA SATAII HostRAID Controllers PCI-Express x4 RAID Card					X	[RA-200701]
PCI-Express Device	Install Driver		Function Test (Dual Display)		N/A	Note
	Pass	Fail	Pass	Fail		
ASUS EAX1600PRO/TD/256M/A (ATI Chipset) PCI-Express x16 VGA Card					X	[VC-200602]
WinFast PX6200 TC TDH PCI-Express x16 VGA Card					X	[VC-200501]

5-8. HDD Compatibility Test

- Test Points: 1. This test focuses on IDE HDD Devices compatibility
 2. Check if HDD could be detected correctly during POST
 3. Check HDD boot up function and read/write function

IDE HDD Compatibility Test:

Cable Type: [] 40 pin , [X] 44 pin , [] 80 pin

HDD Device	Detect Message		Booting Up		N/A	Note
	Pass	Fail	Pass	Fail		
Seagate ST3400620A 400GB 3.5" IDE HDD	X		X			ID-200709
Hitachi HDS722525VLAT80 250GB ATA100 3.5" IDE HDD					X	ID-2002003
IBM DTLA-307045 46.1GB ATA100 3.5" IDE HDD					X	ID-041
Seagate ST315320A 15.3GB ATA33 3.5" IDE HDD	X		X			ID-048
FUJITSU MPE 3136AH 13.6GB ATA66 3.5" IDE HDD	X		X			ID-033
Seagate ST340014A 40GB Barracuda 7200.7 3.5" IDE HDD					X	ID-200611
Seagate ST3160812A 160GB 3.5" IDE HDD					X	ID-200618
Quantum Fireball Plug AS 30GB ATA100 3.5" IDE HDD	X		X			ID-200111
Seagate ST310210A 10.2GB ATA66 3.5" IDE HDD					X	ID-050
Western WD1600JB-00REA0 160GB ATA100 3.5" IDE HDD					X	ID-200617

SATA HDD Compatibility Test:

HDD Device	Detect Message		Booting Up		N/A	Note
	Pass	Fail	Pass	Fail		
Seagate ST3120026AS 120GB 3.5" SATA-I HDD					X	ID-200305
Seagate ST3120827AS 120GB 3.5" SATA-I HDD					X	ID-200505
Western Digital WD1200JS-00MHB1 120GB 3.5" SATA-I HDD					X	ID-200509

Western Digital WD800JD-00LSA0 80GB 3.5" SATA-I HDD					X	ID-200510
Western Digital WD1600JD-00HBB0 160GB 3.5" SATA HDD					X	ID-200609
Seagate ST98823AS 80GB 2.5" SATA HDD					X	ID-200613
Seagate ST3160811AS 160GB 3.5" SATA-II HDD					X	ID-200619
Western Digital WD 1600AAJS-00PSA0 160GB 3.5" SATA-II HDD					X	ID-200707

IDE and SATA Device Full Loading Test

IDE and SATA Device Full Loading Test		Detect Message		Booting Up		N/A	Note
		Pass	Fail	Pass	Fail		
Primary Master	Western / WD400BB-75DEA0 / 40GB ATA-100					X	ID-2002001
Primary Slave	Hitachi / HDS722525VLAT80 / 250GB / ATA-100					X	ID-2002003
Secondary Master	FUJITSU / MPE 3136AH / 13.6GB / ATA-66					X	ID-033
Secondary Slave	Maxtor 4G160J8 / 160GB / ATA-133					X	ID-200206
SATA1	Seagate / ST3120026AS 120GB / ATA-100 / SATA					X	ID-200305
SATA2	Seagate / ST3120827AS 120GB / ATA-100 / SATA					X	ID-200505
SATA3	Seagate / ST3120827AS 120GB / ATA-100 / SATA					X	ID-200505
SATA4	Seagate / ST3120827AS 120GB / ATA-100 / SATA					X	ID-200505

5-9. CD/DVD-ROM Compatibility Test

- Test Points: 1. This test focuses on IDE CD/DVD-ROM Devices compatibility
 2. Check if CD/DVD-ROM could be detected correctly during POST
 3. Quickly move VCD or DVD seek bar in order to ensure display quality

Cable Type: [] 40 pin , [X] 44 pin , [] 80 pin

DVD/CD-ROM Device	Detect Message		Booting Up		Play VCD		Play DVD Forward 32X Backward 32X		Note
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	
Pioneer DVD-ROM DVD-126D CD 40X / DVD 16X	X		X		X				CD-200609
BenQ DW1655 OB2 16 x DVD ReWriter	X		X		X				CD-200610
Acer DVP1640A / 16X / DVD-ROM / ATA33	X		X		X				CD-044
Pioneer / DVR-A11FXC1 / 8X DVD-RW / 6X DVD-RW / ATA66	X		X		X				CD-200605
IBM HL-DT-ST / GCR-8480B / 48X / CD-ROM/ ATA33	X		X		X		---	---	CD-2002013
Pioneer / DVD-121 / 16X / DVD-ROM / ATA66	X		X		X				CD-200303
SAMSUNG / SH-W08 / DVD+R 8X / DVD-R 8X / CD-R 32X / ATA33	X		X		X				CD-200404
NEC / ND-2500A / DVD R/RW / +R8X-R8X / ATA33	X		X		X				CD-200403

5-10. USB Function Test

Test Points: 1. Enable/Disabled USB Function in BIOS then check if the result is fine or not Under Windows or DOS.

5-10.1. USB Basic Function Test :

USB In BIOS Setup Test :

In BIOS Setup Menu					
USB Port	USB 1 / 2	USB 3 / 4	USB 5 / 6	USB 7 / 8	Note

Test Item		Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A		
USB Controller	Enable	X			X			X						X	Under Windows
	Disable	X			X			X						X	Under Windows
USB 2.0 Controller	Enable	X			X			X						X	Under Windows
	Disable	X			X			X						X	Under Windows
USB Keyboard Support	Enable	X			X			X						X	Under DOS 6.22
	Disable	X			X			X						X	Under DOS 6.22
USB Mouse Support	Enable			X			X			X				X	Under DOS 6.22
	Disable			X			X			X				X	Under DOS 6.22

USB System Booting Test :

- Test Points: 1. Set following devices as the first boot device in BIOS setup menu
2. Restart and check if system could boot from them

System Booting Test														
Item	USB Port	USB 1 / 2			USB 3 / 4			USB 5 / 6			USB 7 / 8			Note
		Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
USB HDD		X			X			X					X	Please use USB thumb device to boot
USB FDD Mitsumi D353GUE		X			X			X					X	[FL-200201] Max 5V / 500mA
USB2.0 DRW-1604P-D/WHT/G/ASUS		X			X			X					X	[CD-200501]

5-10.2. USB Compatible Test :

- Test Points: 1. Test Read and Write function for the following devices

USB 1.1 USB 2.0 Compatible Test

Item	USB Port	USB 1 / 2			USB 3 / 4			USB 5 / 6			USB 7 / 8			Note
		Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
USB 2.0 HUB ATEN/ 4 Port UH-204		X			X			X					X	[HB-200201]
USB FDD Mitsumi D353GUE		X			X			X					X	[FL-200201] Max 5V / 500mA
USB2.0 DRW-1604P-D/WHT/G/ASUS		X			X			X					X	[CD-200501]
USB HDD IBM IC25N020ATCS04-0 / 20GB / 4200RPM		X			X			X					X	1394b + USB2.0 External Box (MP-FBHUB20P-V2.0 E10-7073161D60)

5-10.3. Install Windows XP Professional from USB CD-ROM Device

- Test Points: 1. This test focuses on whether we can install OS from USB devices or not

2. Install Windows XP Professional by High Speed USB2.0 CD-R/W BenQ 4824W1-0N2 [CD-200304]

	Pass	Fail	N/A	Note
Install Windows XP Professional by HighSpeed Device: USB2.0 DRW-1604P-D/WHT/G/ASUS	X			Set it as first boot device in BIOS Setup Menu

5-10.4. USB Devices Full Loading Test

Test Points: 1. Connect each USB devices to the machine

2. Play VCD(DAT or MPG file) for each storage device for 8 hours in Windows to make system full loading
3. In the duration of test, check if system could work fine or not

USB Device Full Loading Test (Burn-In 8 Hrs):

USB Port	Installation		Function		Burn in		N/A	Note
	Pass	Fail	Pass	Fail	Pass	Fail		
USB1	X		X		X			BENQ 4824WI-ON2
USB2	X		X		X			Mitsumi FLL3.5 D353GUE/FUE
USB3	X		X		X			USB HDD 20GB
USB4	X		X		X			USB Card Reader
USB5	X		X		X			USB Mouse
USB6	X		X		X			USB Thumb drive Transcend 256MB

5-11. Floppy Disk Controller Function Test

Test Result:

Test Item	Result (1.44M)			Note
	Pass	Fail	N/A	
Copy and compare file between C: and A / B:			X	
Change Floppy to None value			X	
Swap FDD			X	

5-12. Peripheral Compatibility- Storage Device Test

5-12.1. Storage Device Test

Device item	Booting		Detected in POST		Read/Write		N/A	Note
	Pass	Fail	Pass	Fail	Pass	Fail		
MO [SCSI]	-----						X	FUJITSU MCB3064SS [MO-001]
ZIP 100 [Parallel]	-----		X		X			Iomega ZIP100P2 [ZIP-200401]
DOC 2000 Model	16MB						X	M-System / MD2200-D16
DOC 2000 Onboard Address	CC00						X	
	D000						X	
	D400						X	
	D800						X	
	DC00						X	
	Disable						X	

5-12.2. Compact Flash Compatibility Test

Test Points: 1. Most of the default value of CF card is set as IDE primary master so we may make the same setting before we use CF

2. Install OS from IDE or USB CD-ROM to IDE CF card according to following description.

Device item	Booting		Detected during POST		Install OS		N/A	Note
	Pass	Fail	Pass	Fail	Pass	Fail		
Type-I CF (Fix / PIO Mode)	X		X		X			CF Model: Transcend CF Card 4GB for Industrial TS4GCF45I
Type-I CF (Fix / UDMA Mode)	X		X		X			CF Model: Kingston CF 2GB

5-13. Digital I/O Connector Test

Position: _____ / VCC: _____ V

Input Address: _____ / Output Address: _____

Device item	Input Address		Output Address		VCC		GND		N/A	Note
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail		
DIO-1 Function Test									X	
DIO-2 Function Test									X	

5-14. Adapter Compatibility- Industry Control Card PC/104, PC/104+, PCI-104 Modules

5-14.1. Device List: PC/104 Module

Device item	Device Detection		Function		N/A	Note
	Pass	Fail	Pass	Fail		
AAEON PCM-5600					X	Modem Module
AAEON PCM-3115B					X	PCMCIA Module

5-14.2. Device List: PC/104+ Module

Device item	Device Detection		Function		N/A	Note
	Pass	Fail	Pass	Fail		
AAEON PCM-3430	X		X			SCSI Module

5-14.3. Device List: PCI-104 Module

Remark: If you want to use PCM-3730, don't forget to adjust LAN1 to INT B, LAN2 to INT C and LAN3 to INT D

Device item	Device Detection		Function		N/A	Note
	Pass	Fail	Pass	Fail		
AAEON PCM-FA00					X	Mini-PCI Converter
AAEON PCM-3794					X	2 Slots PCMCIA Module
AAEON PCM-3730					X	Intel 82559 LAN Module

5-15. On-Board SCSI Function Test

Test Points: 1. This test focuses on SCSI Devices compatibility

2. Check if the SCSI Devices could be detected correctly during POST

3. Check SCSI Devices boot up function and read/write function

Device List:

Device Item	Booting		Format		Read / Write		Programming		N/A	Note
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail		
RICOH MP7060S / 24X / SCSI-CD-ROM									X	CD-045
Fujitsu MCB3064SS / MO Device									X	MO-001
Seagate 32155W / 2.15GB									X	SD-001
IBM DNES-309170 / 9GB									X	SD-004
Seagate ST39205LW/P 9GB / Ultra160 / LVD									X	SD-200101

5-16. On-Board RAID Function Test

	Booting		Format		Read / Write		Install OS		N/A	Note
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail		
Set SATA HDDs as RAID 0									X	
Set SATA HDDs as RAID 1									X	
Set SATA HDDs as RAID 10									X	
Set SATA HDDs as RAID 5									X	

5-17. COM Port Function Test

5-17.1. COM Port Burn In Test

Test Point: 1. Use BurnIn Test V5.1 Pro to test COM port reliability

2. Add all COM port of test machine into “COM Ports Selected” table and set “detect and loopback test” in Set Preferences→Serial Ports

3. Attach COM port loopbacks to each COM connector then burn in overnight

4. Com port status must be error free after finish test

BurnIn Test V5.1 Pro	Result			Note
	Pass	Fail	N/A	
COM1	X			
COM2	X			
COM3	X			
COM4	X			
COM5			X	
COM6			X	

5-18. Disk On Module [DOM] Compatibility Test

Test Point: Please pay attention to align pin 1 of DOM with pin 1 of socket.

Device Item	Detect Message		Booting UP		Read/ Write		Programming		N/A	Note
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail		
Transcend / TS512MDOM40V / 512MB / IDE 40 Pin									X	[DC-200703]
Transcend / TS512MDOM44V / 512MB / IDE 44 Pin	X		X		X		X			[DC-200704]

5-19. Mini PCI Card Compatibility Test

Test Result:

Device Item	Detect Message		Function Test		N/A	Note
	Pass	Fail	Pass	Fail		
GM-100 WLAN 11g Mini PCI Card (Model: Sky Thru GC-100)					X	MI-200601
GM-101 WLAN 11b/g 54Mbps Mini PCI Card (Model: VNT6655AM)					X	MI-200602
PER-C20S SATA RAID MiniPCI Card (Silicon Image Sil3512ECTU128 QF7227.1-1)					X	

5-20. COM/LPT Ports & RS-232/422/485 Function Test

Test Result:

Basic Function Test					
Test Item		Result			Note
		Pass	Fail	N/A	
RS-422 for COM2		X			Use loopback and WINSSD.exe to test RS-422 in Windows
RS-485 for COM2		X			Use ICP CON I-7044D D/IO Module in Windows
COM1	Serial Mouse	X			
	Serial Modem	X			
COM2	Serial Mouse	X			
	Serial Modem	X			
COM3	Serial Mouse	X			
	Serial Modem	X			
COM4	Serial Mouse	X			
	Serial Modem	X			
COM5	Serial Mouse			X	
	Serial Modem			X	
COM6	Serial Mouse			X	
	Serial Modem			X	
LPT1		X			Epson Stylus C61 Printer
LPT2				X	Epson Stylus C61 Printer

5-21. CardBus(PCMCIA) Compatibility Function Test

Test Result:

Device Item		Bit	Detect Message		Function Test		N/A	Note
			Pass	Fail	Pass	Fail		
Intel PRO/Wireless 2011B LAN PC Card (WPC2011BWW)	Slot 1 (Up)	16					X	[PC-200200]
	Slot 2 (Down)						X	
PQI 16MB Compact Flash Adapter (64MB PQI CF Card inserting)	Slot 1 (Up)	16					X	[PC-200100]
	Slot 2 (Down)						X	
Kingston datapack DP-PCM2 / 2GB (PC Card TypeII HDD)	Slot 1 (Up)	32					X	[PC-200201]
	Slot 2 (Down)						X	
PCi GW-NS54SG Cardbus Adapter Wireless LAN Type-II	Slot 1 (Up)	32					X	[PC-200502]
	Slot 2 (Down)						X	
PQI 16MB Compact Flash Adapter (64MB PQI CF Card inserting)	Slot 1 (Up)	16					X	[PC-200100] + [PC-200502]
PCi GW-NS54SG Cardbus Adapter Wireless LAN Type-II	Slot 2 (Down)	16						

6. O.S. Compatibility Test

6-1. English-[] Linux RedHat 9.0 , [X] Fedora Core 4

[] No Support

Driver Information:

Chipset Software	Default driver
Graphics Media	Default driver
LAN Driver	Default driver
Audio Driver	Default driver

Install OS to IDE SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Fedora core4 2.6.11-1.1369	X			

VGA Resolution Test:

Note: Pay attention to LCD Full Screen under Text Mode.

Color : 256 16bits: Thousands of Colors 32bits: Millions of Colors

Resolution	CRT			TTL			LVDS			Note
	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
640X480	X					X	X			
800X600	X					X	X			
1024X768	X					X			X	
1280X1024			X			X			X	
1600X1200			X			X			X	

CRT Model Name: VIEWSONIC E653

TTL Panel: N/A

LVDS Panel: AU 10.4" 800*600 /18 Bit

Test Result:

Test Item	Result			Note
	Pass	Fail	N/A	
Install From IDE CD-ROM				
Install to HDD	X			

Base Function Test				
VGA Setup	X			redhat-config-xfree86
Soundcard Setup	X			redhat-config-soundcard
LAN & Modem Setup	X			redhat-config-network
Printer Setup			X	redhat-config-printer (LPT)
Mouse Setup	X			redhat-config-mouse (PS/2)
Keyboard Setup	X			redhat-config-keyboard
Mount Floppy			X	mount /dev/fd0 /mnt/floppy
Mount CD-ROM	X			mount /dev/cdrom /mnt/cdrom
Mount USB Floppy	X			mount /dev/sda /mnt/floppy (or floppy1)
Mount USB CD-ROM			X	mount /dev/sda /mnt/cdrom
Mount USB HDD	X			mount -t vfat /dev/sda1 /mnt/usb
Virtual Consoles	X			Ctrl+Alt+F[1-7]
Display Function Test				
CRT -- Full Screen	X			
LCD -- Full Screen			X	
DVI -- Full Screen			X	
DVI + LCD			X	
CRT + LCD	X			
CRT + DVI	X			
Touch Screen Function Test				
8 Wire			X	
5 Wire			X	
Network Function Test				
Connect to Internet			X	
Ping IP Address	X			Ping
Telnet IP Address			X	telnet
Audio Function Test				
Play Audio Function Test	X			Play Audio Test
MIC Function Test	X			Microphone Test
X Windows Application				
Start Button→Office	X			Office function
X-Window	X			Startx – Desktop in Linux
Command Test On Text Mode: Attention Delay Phenomenon.				
uname -a	X			Show information
Log Out			X	
Shutdown			X	Init 0 or shutdown -h now
Restart the Computer			X	Init 6 or shutdown -r now
Halt	X			Power Off Mode
ls / clear; cd /dev /ls -l			X	Command instruction

6-2. Windows XP Professional English Version

[] No Support

Driver Information:

Chipset Software	Intel Chipset Ver:8.1.1.1001 Date:5/31/2006
Graphics Media	Intel 82852/82855 GM/GME Grapics Controller Ver:6.14.10.4497 Date:2/7/2006
LAN Driver	Realtek RTL8139/810X Ethernet NIC Ver: 5.663.1212.2006 Date:3/16/2007
Audio Driver	Realtek AC'97 Audio Ver:5.10.0.6160 Date:8/18/2006

Install OS to [X]IDE []SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows XP Professional Service Pack 2 V2002 ACPI Mode	X			
English Windows XP Professional Service Pack 2 V2002 APM Mode	X			

Onboard RAID Function Test:

Installation	Result			Note
	Pass	Fail	N/A	
Set 2 SATA HDDs as RAID 0 and install Windows XP Professional Service Pack 2 V2002 ACPI Mode			X	
Set 2 SATA HDDs as RAID 1 and install Windows XP Professional Service Pack 2 V2002 ACPI Mode			X	

Test Points: 1. Before starting every test, you must install all drivers completely first

VGA Resolution Test

Note: Pay attention to LCD Full Screen under Text Mode.

Color : [X] 256 [X] 16bit [] 24bit [X] 32bit

Resolution	CRT (Please use CTX PR-960F to Test)			TTL			LVDS			Note
	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
640X480	X					X	X			
800X600	X					X	X			
1024X768	X					X	X			
1280X1024	X					X	X			
1600X1200	X					X			X	

CRT Model Name: CTX PR-960F (Max Resolution 1600x1200)

Test Results:

Test Item	Pass	Fail	N/A	Note
Install From USB CD-ROM				
Install to HDD	X			
Display Function Test				
CRT -- Full Screen	X			
LCD -- Full Screen	X			
DVI --- Full Screen	X			
TV ---- Full Screen	X			
DVI + LCD	X			
CRT + LCD	X			
CRT + DVI	X			
CRT + TV	X			
CRT + LCD + TV			X	
External VGA Card Test (Dual Display)				
CHANTECH NVIDIA GeForce4 MX440-8X			X	
Boot - Windows XP Professional Advanced Options Menu				
Safe Mode	X			
Safe Mode with Networking			X	
Safe Mode with Command Prompt			X	
Enable Boot Logging			X	
Enable VGA Mode			X	
Last known Good Configuration	X			
Directory Services Restore Mode (windows XP domain controllers only)			X	
Debugging Mode			X	
Disable automatic restart on system failure			X	
Start Windows Normally	X			
Reboot	X			
Return to OS Choices Menu	X			
Basic Function Test				
IDE Primary Master	X			
IDE Primary Slave	X			
IDE Secondary Master			X	
IDE Secondary Slave			X	
PS/2 Mouse and Keyboard	X			
USB Mouse and Keyboard	X			
LAN Function Test				
LAN1 --- Auto	X			
LAN2 --- Auto	X			
Audio Function Test				
Audio 5.1 Channel / S/P DIF Test			X	
Play Audio Function Test	X			
Microphone Function Test	X			
Touch Screen of Wire				
8 Wire			X	
5 Wire			X	
Start Menu				
Log off User	X			
Shut down	X			
Standby	X			
Restart	X			
Hibernate	X			

6-3. Windows XP Professional Simplified-Chinese Version

No Support

Driver Information:

Chipset Software	N/A
Graphics Media	N/A
LAN Driver	N/A
Audio Driver	N/A

Install OS to IDE SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
Simplified Chinese Windows XP Professional Service Pack 2 V2002 ACPI Mode	X			

Onboard RAID Function Test:

Installation	Result			Note
	Pass	Fail	N/A	
Set 2 SATA HDDs as RAID 0 and install Windows XP Professional Service Pack 2 V2002 ACPI Mode			X	
Set 2 SATA HDDs as RAID 1 and install Windows XP Professional Service Pack 2 V2002 ACPI Mode			X	

Test Points: 1. Before starting every test, you must install all drivers completely first

VGA Resolution Test

Note: Pay attention to LCD Full Screen under Text Mode.

Color : 256 16bit 24bit 32bit

Resolution	CRT			TTL			LVDS			Note
	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
640X480			X			X			X	
800X600	X					X			X	
1024X768	X					X			X	
1280X1024			X			X			X	
1600X1200			X			X			X	

CRT Model Name: ViewsonicE653

TTL Panel: N/A

LVDS Panel: N/A

Test Results:

Test Item	Pass	Fail	N/A	Note
Install From USB CD-ROM				
Install to HDD	X			
Display Function Test				

CRT -- Full Screen			X	
LCD -- Full Screen			X	
DVI --- Full Screen			X	
TV ---- Full Screen			X	
DVI + LCD			X	
CRT + LCD			X	
CRT + DVI			X	
CRT + TV			X	
CRT + LCD + TV			X	
External VGA Card Test (Dual Display)				
CHAINTECH NVIDIA GeForce4 MX440-8X			X	
Boot - Windows XP Professional Advanced Options Menu				
Safe Mode			X	
Safe Mode with Networking			X	
Safe Mode with Command Prompt			X	
Enable Boot Logging			X	
Enable VGA Mode			X	
Last known Good Configuration			X	
Directory Services Restore Mode (windows XP domain controllers only)			X	
Debugging Mode			X	
Disable automatic restart on system failure			X	
Start Windows Normally	X			
Reboot			X	
Return to OS Choices Menu			X	
Basic Function Test				
IDE Primary Master	X			
IDE Primary Slave	X			
IDE Secondary Master			X	
IDE Secondary Slave			X	
PS/2 Mouse and Keyboard	X			
USB Mouse and Keyboard	X			
LAN Function Test				
LAN1 --- Auto			X	
LAN2 --- Auto			X	
Audio Function Test				
Audio 5.1 Channel / S/P DIF Test			X	
Play Audio Function Test			X	
Microphone Function Test			X	
Touch Screen of Wire				
8 Wire			X	
5 Wire			X	
Start Menu				
Log off User			X	
Shut down	X			
Standby			X	
Restart	X			
Hibernate			X	

6-4. Windows XP Professional Japanese Version

[] No Support

Driver Information:

Chipset Software	N/A
Graphics Media	N/A
LAN Driver	N/A
Audio Driver	N/A

Install OS to [X] IDE [] SATA HDD:

Installation	Result			Note
	Pass	Fail	N/A	
Japanese Windows XP Professional Service Pack 2 V2002 APM Mode	X			

Onboard RAID Function Test:

Installation	Result			Note
	Pass	Fail	N/A	
Set 2 SATA HDDs as RAID 0 and install Windows XP Professional Service Pack 2 V2002 ACPI Mode			X	
Set 2 SATA HDDs as RAID 1 and install Windows XP Professional Service Pack 2 V2002 ACPI Mode			X	

Test Points: 1. Before starting every test, you must install all drivers completely first

VGA Resolution Test

Note: Pay attention to LCD Full Screen under Text Mode.

Color : [] 256 [] 16bit [] 24bit [X] 32bit

Resolution	CRT			TTL			LVDS			Note
	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
640X480			X			X			X	
800X600	X					X			X	
1024X768	X					X			X	
1280X1024			X			X			X	
1600X1200			X			X			X	

CRT Model Name:VIEWSONIC E653

Test Results:

Test Item	Pass	Fail	N/A	Note
Install From USB CD-ROM				
Install to HDD	X			
Display Function Test				
CRT -- Full Screen			X	
LCD -- Full Screen			X	
DVI --- Full Screen			X	
TV ---- Full Screen			X	
DVI + LCD			X	
CRT + LCD			X	
CRT + DVI			X	
CRT + TV			X	
CRT + LCD + TV			X	
External VGA Card Test (Dual Display)				
CHANTECH NVIDIA GeForce4 MX440-8X			X	
Boot - Windows XP Professional Advanced Options Menu				
Safe Mode			X	
Safe Mode with Networking			X	
Safe Mode with Command Prompt			X	
Enable Boot Logging			X	
Enable VGA Mode			X	
Last known Good Configuration			X	
Directory Services Restore Mode (windows XP domain controllers only)			X	
Debugging Mode			X	
Disable automatic restart on system failure			X	
Start Windows Normally			X	
Reboot			X	
Return to OS Choices Menu			X	
Basic Function Test				
IDE Primary Master	X			
IDE Primary Slave	X			
IDE Secondary Master			X	
IDE Secondary Slave			X	
PS/2 Mouse and Keyboard	X			
USB Mouse and Keyboard	X			
LAN Function Test				
LAN1 --- Auto			X	
LAN2 --- Auto			X	
Audio Function Test				
Audio 5.1 Channel / S/P DIF Test			X	
Play Audio Function Test			X	
Microphone Function Test			X	
Touch Screen of Wire				
8 Wire			X	
5 Wire			X	
Start Menu				
Log off User			X	
Shut down	X			
Standby			X	
Restart	X			
Hibernate			X	

7. BIOS Function Test

7-1. Memory Beep Test

Test Item	Function		N/A	Note
	Pass	Fail		
Check if there is beep sound during power on inserting no memory	X			

7-2. Standard CMOS Features

Test Item	Setting		Function		N/A	Note
	Pass	Fail	Pass	Fail		
Data (mm:dd:yy)	X		X			
Time (hh:mm:ss)	X		X			
IDE Primary Master	X		X			
IDE Primary Slave	X		X			
IDE Secondary Master					X	
IDE Secondary Slave					X	
Drive A (Floppy)					X	1.44M,3.5 in. / None
Drive B (Floppy)					X	1.44M,3.5 in. / None

7-3. Boot Sequence Test

Test Item	Result			Note
	Pass	Fail	N/A	
Floppy			X	
Hard Disk	X			
Removable (All Device Priority)			X	For Product BIOS Request
HDD-0:	X			
SCSI			X	
CDROM	X			
HDD-1:	X			
HDD-2:	X			
ZIP 100			X	
USB HDD	X			
USB Floppy	X			
USB CD-ROM	X			
LAN [Boot From LAN First]	X			
First Boot Device	X			First Boot Device must be set to HDD in first edition SAP
Second Boot Device	X			
Third Boot Device	X			
Boot Other Device	X			
Disable	X			

7-4. Power Management Test

7-4.1. APM Power Management Test

Test Item	Setting Test	Result			Note
		Pass	Fail	N/A	
Normal Mode	Normal Mode	X			
HDD Power Down	Function Test			X	
Suspend Mode	Function Test	X			
Power Button	Delay 4 Sec	X			Soft-Off By PWRBTN
Power Button	Instant-Off	X			Soft-Off By PWRBTN

7-4.2. ACPI Power Management Test

Test Point:

1. While setting S1(POS) in BIOS ACPI option, boot into Windows then choice standby item to let system suspend. It must be resumed back correctly by moving PS/2 Keyboard or mouse
2. While setting S3(STR) in BIOS ACPI option, boot into Windows then choice standby item to let system suspend. It must be resumed back correctly by pressing power button

Test Item	Result			Note
	Pass	Fail	N/A	
Enable	X			
Disable	X			
ACPI - S1 (POS)	X			
ACPI - S3 (STR)	X			
ACPI - S1 & S3	X			

7-5. Power On Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
Password			X	Only support ACPI Mode
Hot KEY			X	Only support ACPI Mode
MOUSE Move			X	Only support ACPI Mode
Keyboard 98			X	Only support ACPI Mode
Any KEY			X	Only support ACPI Mode
BUTTON ONLY			X	Only support ACPI Mode

7-6. Wake Up Event Test

Test Step:

1. Wake on MODEM→

- 1.1. Connected COM port MODEM to machine, and MODEM power stay in off state
- 1.2. Power on machine then enter BIOS setup menu, enable “Power On by Ring” item.
- 1.3. Turn off power by pressing shutdown button during POST
 - 1.3.1. Turn on COM port MODEM’s power, then machine must be powered on successfully
- 1.4. Turn off computer from start menu in Windows OS
 - 1.4.1. Turn on COM port MODEM’s power, then machine must be powered on successfully

2. Wake on LAN→

- 2.1. Connected machine and another PC with LAN cable.
- 2.2. Power on machine then enter BIOS setup menu, enable “Wake up by PCI Card” item.
- 2.3. Turn off power by pressing shutdown button during POST
 - 2.3.1. Send magic packet to machine by key in it’s MAC address in another PC, then machine must be powered on successfully
- 2.4. Turn off computer from start menu in Windows OS
 - 2.4.1. Send magic packet to machine by key in it’s MAC address in another PC, then machine must be powered on successfully

Test Item		Result			Note
		Pass	Fail	N/A	
Power On by Ring / COM 1	Ring	X			Test by Modem
	+12V	X			Test by Multimeter
	+5V	X			Test by Multimeter
Power On by Ring / COM 2	Ring	X			Test by Modem
	+12V	X			Test by Multimeter
	+5V	X			Test by Multimeter
Power On by Ring	Ring	X			Test by Modem

/ COM 3	+12V	X		Test by Multimeter
	+5V	X		Test by Multimeter
Power On by Ring / COM 4	Ring	X		Test by Modem
	+12V	X		Test by Multimeter
	+5V	X		Test by Multimeter
Wake On LAN (Wake up by PCI Card)		X		Before test, all drivers must be installed completely first
Wake On RTC (Resume by Alarm)			X	

7-7. Power On after Power Failure Test

Test Points: 1. Power on after power failure function only supports for ACPI mode

2. Power failure means that we turn off power by unplugging power cord or turn off power supply directly without pressing power button
3. Off→ Power failure function always off no matter shutdown normally or power failure
4. On→ Power failure function always on no matter shutdown normally or power failure
5. Auto→ Power failure function off while shutdown normally, and function on while power failure

Test Item	Result			Note
	Pass	Fail	N/A	
Off	X			Default value must set to "Off"
On	X			1. Directly turn off then on power supply for 10 times, each time for 1 seconds
	X			2. Directly turn off then on power supply for 5 times, each time for 1 minutes
	X			3. Shutdown power normally then turn off power supply, next time when you turn on power supply directly, machine still has to power on
Former-Sts (Auto)	X			1. Directly turn off then on power supply for 10 times, each time for 1 seconds
	X			2. Directly turn off then on power supply for 5 times, each time for 1 minutes
	X			3. Shutdown power normally then turn off power supply, next time when you turn on power supply directly, machine still has to stay in off status

7-8. CMOS Backup / Clear CMOS Test

Test Item	Result			Note
	Pass	Fail	N/A	
CMOS Backup	X			
Clear CMOS Test	X			

7-9. Boot ROM Test

Test Item	Result			Note
	Pass	Fail	N/A	
Boot ROM to Novell 4.11 [RPL]			X	HUB : HP J4095A
Boot ROM to WinNT 4.0 [PXE]	X			HUB : HP J4095A

7-10. Supervisor / User Password Test

Test Item	Result			Note
	Pass	Fail	N/A	
Supervisor Password	X			
User Password	X			

7-11. CRT / LCD / TV Function Test

Test Point: Boot display must be set to CRT+LCD in BIOS setup menu

Test Item	Result			Note
	Pass	Fail	N/A	
Boot Display –CRT	X			
Boot Display –LCD	X			
Boot Display –CRT+LCD	X			
Boot Display –DVI	X			
Boot Display –TV	X			
Boot Display –CRT+TV			X	
Boot Display –CRT+DVI	X			

7-12. TV Standard Function Test

Function Test		Result			Note
		Pass	Fail	N/A	
NTSC	S terminal (Composite)	X			SHARP LCDTV LC-20S5T
PAL		X			
NTSC	AV Terminal (Component)	X			KONKA / T3731A / AC220V /50Hz
PAL		X			

7-13. Init Display First Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
PCI Slot			X	
On Board			X	

7-14. On-Chip Serial ATA Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
Auto			X	
Combined Mode			X	
Enhanced Mode			X	
SATA Only			X	
Disable			X	

7-15. SATA Mode – IDE / RAID Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
IDE			X	
RAID (Only support Enhanced Mode)			X	

7-16. PC Health Status

Voltage Monitoring Test	Result			Actual (V)	Note
	Pass	Fail	N/A		
(+) Vccp	X			1.12	
(+) Vcore	X			1.28	
(+) 1.5V			X		
(+) CPUVcore			X		
(+) 2.6V			X		
(+) 3.3V	X			3.24	
(+) 5V	X			4.94	
(+) 12V	X			11.90	
(-) 12V			X		
(-) 5V			X		
(+) 3.3VSB			X		
(+) 5VSB	X			4.91	
Voltage Battery (Above 3V)	X			3.21	
CPU Fan Speed	X			4821	RPM
System Fan Speed			X		RPM
Current CPU Temp.	X			47	
System Temp.	X			42	
MCH Temp.			X		

7-17. Swap Floppy Drive & Boot up Floppy Seek Function Test

Test Item		Result			Note
		Pass	Fail	N/A	
Swap Floppy Drive	Enabled			X	
	Disabled			X	
Boot up Floppy Seek	Enabled			X	
	Disabled			X	

7-18. USB Onboard Device Function Test :

Test Item	Result			Note
	Pass	Fail	N/A	
USB Controller	X			
USB 2.0 Controller	X			Run Nero CD-DVD Speed V2.10
USB Keyboard Support	X			
USB Mouse Support			X	

7-19. COM Address / IRQ Test

COM Port Mouse : Logitech M-MM43

Test Item	BIOS Adjust		Function		Boot into Windows		N/A	Note
	Pass	Fail	Pass	Fail	Pass	Fail		
COM 1								
3F8 / IRQ4	X		X		X			
2F8 / IRQ3							X	
3E8 / IRQ4							X	
2E8 / IRQ3							X	
AUTO (3F8 / IRQ4)							X	
Disable							X	
COM 2								
3F8 / IRQ4							X	

2F8 / IRQ3	X		X		X			
3E8 / IRQ4							X	
2E8 / IRQ3							X	
AUTO (2F8 / IRQ3)							X	
Disable							X	
COM 3								
3F8 / 2F8 / 3E8 / 2E8 ; IRQ3							X	
3F8 / 2F8 / 3E8 / 2E8 ; IRQ4							X	
3F8 / 2F8 / 3E8 / 2E8 ; IRQ5							X	
3F8 / 2F8 / 3E8 / 2E8 ; IRQ7							X	
3F8 / 2F8 / 3E8 / 2E8 ; IRQ10	X		X		X			
3F8 / 2F8 / 3E8 / 2E8 ; IRQ11							X	
Disable							X	
COM 4								
3F8 / 2F8 / 3E8 / 2E8 ; IRQ3							X	
3F8 / 2F8 / 3E8 / 2E8 ; IRQ4							X	
3F8 / 2F8 / 3E8 / 2E8 ; IRQ5	X		X		X			
3F8 / 2F8 / 3E8 / 2E8 ; IRQ7							X	
3F8 / 2F8 / 3E8 / 2E8 ; IRQ10							X	
3F8 / 2F8 / 3E8 / 2E8 ; IRQ11							X	
Disable							X	
COM 5								
4F8 / IRQ 10							X	
/ IRQ							X	
COM 6								
4E8 / IRQ 11							X	
/ IRQ							X	

7-20. LPT Address / IRQ Test

Printer Type : EPSON Stylus C61

Test Item	BIOS Adjust		Function		Boot into Windows		N/A	Note
	Pass	Fail	Pass	Fail	Pass	Fail		
LPT 1								
Disabled	X		X		X			
LPT1 Mode(378 / IRQ 7)								
SPP	X		X		X			
EPP	X		X		X			
ECP	X		X		X			
ECP+EPP	X		X		X			
LPT1 Mode(278 / IRQ 5)								
SPP	X		X		X			
EPP	X		X		X			
ECP	X		X		X			
ECP+EPP	X		X		X			
LPT1 Mode(3BC / IRQ 7)								
SPP	X		X		X			
ECP	X		X		X			
LPT 2								
Disabled							X	
LPT2 Mode(3BC / IRQ7)								
SPP							X	
ECP / DMA 1							X	
ECP / DMA 3							X	

LPT2 Mode(378 / IRQ7)							
SPP							X
EPP / EPP 1.7							X
EPP / EPP 1.9							X
ECP / DMA 1							X
ECP / DMA 3							X
ECP/EPP / DMA 1 / EPP 1.7							X
ECP/EPP / DMA 1 / EPP 1.9							X
ECP/EPP / DMA 3 / EPP 1.7							X
ECP/EPP / DMA 3 / EPP 1.9							X
LPT2 Mode(278 / IRQ5)							
SPP							X
EPP / EPP 1.7							X
EPP / EPP 1.9							X
ECP / DMA 1							X
ECP / DMA 3							X
ECP/EPP / DMA 1 / EPP 1.7							X
ECP/EPP / DMA 1 / EPP 1.9							X
ECP/EPP / DMA 3 / EPP 1.7							X
ECP/EPP / DMA 3 / EPP 1.9							X

7-21. BIOS AWDFLASH Program Test

Test Points: 1. All we have to do is just type instruction: awdfash.exe XXX.BIN in DOS, and other parameter is no need
If it can not be run, then we can say the test is fail

BIOS BIN file	62947.BIN		
Award Flash Tools Version	Result		
	Pass	Fail	N/A
879	X		

8. Performance Test

Platform Information:

PCB Model / Version	EPIC-8526 A0.2
BIOS	EPIC-8526 Rev 0.6(08/14/2007)
Operating System	Windows XP Professional V2002 Service Pack 2
CPU	Intel Pentium M 2.00GHz /2M / 533MHz (Dothan)
Memory	Kingston DDR333 SODIM 1GB
SATA HDD	N/A
Primary IDE Master	Seagate ST3160812A 160GB
Primary IDE Slave	Pioneer DVD-126D
CRT	ViewSonicE653
LCD	N/A
Compact Flash	N/A
Backplane	N/A
Riser Card	N/A
Chipset Software	Intel Chipset Ver:8.1.1.1001 Date:5/31/2006
Graphics Media	Intel 82852/82855 GM/GME Grapics Controller Ver:6.14.10.4497 Date:2/7/2006
LAN Driver	Realtek RTL8139/810X Ethernet NIC Ver: 5.663.1212.2006 Date:3/16/2007
Audio Driver	Realtek AC'97 Audio Ver:5.10.0.6160 Date:8/18/2006
Touchscreen Driver	N/A
Power Supply	Seventeam ST-302HLP

Test Result:

Testing Software	Result	Unit
ZD WinBench 99 V2.0		
Business Disk WinMark99	9630	Thousand bytes/sec
High-End Disk WinMark99	29700	Thousand bytes/sec
Business Graphics WinMark99	233	
High-End Graphics WinMark99	1070	
PCMark2002		
CPU	6724	
Memory	10407	
HDD	805	
Final Reality V1.01—BenchMark Test		
2D image	36.58	
3D	7.98	
Bus transfer	38.44	
Overall	21.13	Reality marks
ZD 3D Winbench 2000 V1.1		
3D WinMark 2000	40	Frames / sec
3Dmark2001SE Pro (Demo version)		
3DMark2001SE Build 330 Benchmark mode	1323	
ZD Multimedia Content Creation Winstone 2004 V1.0.1 (Up Pentium III 800 MHZ CPU)		
Multimedia Content Creation Winstone 2004	24.5	
Business Winstone 2004 v1.0.1 (Up Pentium III 800 MHZ CPU)		
Business Winstone2004	17.5	

Test Result:

Testing Software	Result	Unit
PCMark05		
PCMark	N/A	PCMarks
CPU	3152	
Memory	1803	
Graphics	N/A	
HDD	3307	
3Dmark2003 v360		
3Dmark Score	60	
CPU Score	N/A	

Remark: Please uses below two performance software to test mainboard if the chipset is new enough.
(ex. Intel Core 2 Duo CPU)