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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
PCB Model / Version	COM-965 A1.0-A
Carrier Board	PER-T120 Rev.A1.0
BIOS / Version	AEC-6930 BIOS Rev 1.1 (05/18/2009)
CPU Type	Intel Core(TM)2 Duo CPU L7500 1.6GHz (Merom)
Memory Type	EPLIDA DDR2 667 SDRAM 2GB (E5108AJBG-6E-E) x 1pcs
SATA	Fujitsu MHZ2080BHG2 80GB 2.5" SATA HDD
Primary IDE Master	N/A
Primary IDE Slave	N/A
CRT	ViewSonic E70
LCD	N/A
Compact Flash	N/A
Backplane	N/A
Riser Card	1907R07P02 Rev. A1.1 (PCI interface)
Expansion Board	N/A
Operating System	Windows XP Professional English Version V2002 Service Pack 3
Power Supply	ATX Power Supply : N/A
	AT Power Supply: N/A
	DC Adapter : FSP-120AAB

## 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 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 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	
SIR / 115.2 Kbps			X	
FIR / 4M bps			X	
USB 1/2 Ports	X			

USB 3/4 Ports	X			
USB 2.0 1/2 Ports	X			
USB 2.0 3/4 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	
TV-out / AV Terminal			X	
Touch Screen – 8 Wire			X	
Touch Screen – 4/5 Wire			X	
DIMM Slots	X			
Watchdog IRQ n			X	
Watchdog Software Control	X			
FAN1 Connector	X			
FAN2 Connector			X	
Express card			X	
Speaker Connector			X	
LCD Backlight Power Connector			X	
DC in Connector	X			
PCI Express Mini Card			X	
Power Button	X			
Battery 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	
BIOS write protection Selection and boot Selection				X	
Backlight enable level Selection and LVDS Power Selection				X	
COM1 +12V/+5V/RING Selection				X	
COM2 +12V/+5V/RING Selection				X	
Auto Power button Selection and power on selection				X	
Power source selection				X	
FAN Power Selection		X			
CMOS Clear Selection		X			
LCD Brightness and speaker level Selection				X	
Power Connector & Function		Result			Notes
		Pass	Fail	N/A	
Standard AT Power Connector				X	
Standard ATX Power Connector				X	
5V Only Power Connector				X	
DC Adapter		X			
LAN Connector & Function		Result			Notes
		Pass	Fail	N/A	
LAN Link / Speed LED	LAN1	X			
	LAN2	X			
	LAN3	X			
	LAN4	X			
LAN Active LED	LAN1	X			
	LAN2	X			
	LAN3	X			
	LAN4	X			
LAN 10/100 Ethernet		X			
LAN 1G Ethernet		X			
PCI Connector & Function		Result			Notes
		Pass	Fail	N/A	

Mini PCI Slot			X	
PCI Slot	X			
PCI Express x1			X	
Express card			X	

## 2. Timer Accuracy Test

System Clock & RTC Clock Test				
Test Method	Margin for error	Result		
		Pass	Fail	N/A
RTC Clock in Power On Mode	±3 second during 24 hours	X		
RTC Clock in Power Off Mode	±3 second during 24 hours	X		
Watchdog Timer Test		Result		
		Pass	Fail	N/A
Time-out Interval	10 sec	X		
	60 sec	X		
	255 sec	X		

## 3. Network HUB / LAN Connection Test

Location		LED Type				Result		
						Pass	Fail	N/A
LAN1 LED		Link / Speed LED				X		
		Active LED				X		
LAN2 LED		Link / Speed LED				X		
		Active LED				X		
Location	Speed	HUB Type	Cable Length	HUB Speed	Onboard LAN Speed	Result		
						Pass	Fail	N/A
Onboard LAN1	10/100/1000 Mbps	D-Link DGS-1008T	100M	1GBps	1000	X		
		Accton DeskTop-3005	100M	100 MBps	100	X		
		SVEC FD916H (10 Mbps HUB)	100M	10 MBps	10	X		
Onboard LAN2	10/100/1000 Mbps	D-Link DGS-1008T	100M	1GBps	1000	X		
		Accton DeskTop-3005	100M	100 MBps	100	X		
		SVEC FD916H (10 Mbps HUB)	100M	10 MBps	10	X		

## 4. Hardware Compatibility

CPU Compatible Test							
CPU Type	FSB	Prime95 Version	Result				
			Pass	Fail	N/A		
Intel Core(TM)2 Duo CPU L7500 1.6GHz (Merom)	MHz	V.256	X				
	MHz	V.256			X		
Memory Compatibility Test							
Memory Brand	Memory Chipset	Frequency	Size	MemTest86 Version	Result		
					Pass	Fail	N/A
EPLIDAD DDR2 SDRAM	E5108AJBG-6E-E	667	2GB	V1.7	X		
						X	
						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
8-channel mode for 7.1 speaker output							X
S/P DIF function Test				Input			X
				Output			X
On Board TV Function Test					Result		
					Pass	Fail	N/A
NTSC	AV Terminal						X
PAL							X
NTSC	S Terminal						X
PAL							X
On Board LCD Function Test							



TFT LCD	Type	Voltage	Result		
			Pass	Fail	N/A
LVDS	AUO G065VN01 V.0 / 6.5" / 640x480 / 18bit (4:3)	3.3V			X
	AUO G065VN01 V.0 / 6.5" / 640x480 / 24bit (4:3)	3.3V			X
	Data Image 7" / 800*480 / 18bit (16:9)	3.3V			X
	AU G084SN05 V.3 / 8.4" / 800*600 / 18bit (4:3)	3.3V			X
	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
	Toshiba /12.1"/1280 x 768 x 18bit (16:9)	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	5V			X
	AUO M190PW01 V0 / 19"/1440X900/48 bit	5V			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
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 920-BR05 LAN CARD 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

**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 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
<b>HDD Compatibility Test</b>			
<b>Model</b>	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
Seagate / ST3160815A / 160GB /PATA-100			X
Fujitsu MHY2080BH 80GB 2.5" HDD / ATA-133 / SATA	X		
Western Digital/WD8800AAJS / 80GB / SATA II			X
HITACHI HDP725025GLA380 / 250GB / SATA 3.0Gb/s			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 ATA100			X
44 Pin Cable ATA33	X		
80 Pin Cable ATA100			X
<b>USB Function Test</b>			
<b>USB Basic Function Test</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>
Install Windows XP Professional from HighSpeed Device: USB2.0 DRW-1604P-D/WHT/G/ASUS	X		
<b>USB Device Full Loading Test</b>			
<b>Model</b>	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
BENQ 4824WI-ON2	X		
Mitsumi FLL3.5 D353GUE/FUE	X		
USB HDD 20GB	X		
USB Card Reader	X		
USB Mouse	X		
USB Flash drive Transcend 2GB	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	
FUJITSU MCB3064SS	SCSI			X	
IOMega ZIP 100 parallel port	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			
		Pass	Fail	N/A	
Input Address:				X	
Output Address:				X	
VCC: ( ), Position : ( )				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 SCSI Function Test					
Model	Interface	Result			
		Pass	Fail	N/A	
RICOH MP7060S	SCSI-CDROM 24X			X	
Fujitsu MCB3064SS	SCSI-MO Device			X	
Seagate 32155W	SCSI-HDD 2.15GB			X	
IBM DNES-309170	SCSI-HDD 9GB			X	
Seagate ST39205LW/P	9GB / Ultra160 / LVD			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	<b>Result</b>			
	Pass	Fail	N/A	
COM Port Burn In Test overnight	X			
<b>Disk On Module [DOM] Compatibility Test</b>				
Model	Interface	<b>Result</b>		
		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	<b>Result</b>		
		Pass	Fail	N/A
PCI 10/100 LAN Mini PCI Card (Model:PER-C10L)	LAN			X
GM-101 WLAN 11b/g 54Mbps Mini PCI Card (Model: VNT6655AM)	WLAN			X
COM/LPT Ports & RS-232/422/485 Function Test	<b>Result</b>			
	Pass	Fail	N/A	
RS-422 for COM2	X			
RS-485 for COM2 (Auto flow)	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	<b>Result</b>			
	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

## 5. O.S. Compatibility Test

Installation Operation System Compatibility Test	<b>Result</b>			
	Pass	Fail	N/A	
[ ] Linux-Red Hat 9.0 or [ X ] Fedora Core 7	X			
Windows Vista TM Ultimate English Version	X			

Windows Vista TM Ultimate x64 Edition 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 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 Server 2003 English Version / Standard Edition 5.2.3790		X			
Windows Server 2003 English Version /Standard x64 Edition		X			
Windows 98SE English Version V4.10.2222A				X	
DOS 6.22 English Version				X	
<b>Utility and Driver Test</b>					
OS	Drivers Version		Result		
			Pass	Fail	N/A
Linux-Fedora 9 / Kernel- 2.6.25-14-FC9	Chipset Software	Default Driver	X		
	Graphics Media	Default Driver	X		
	LAN Driver	Default Driver	X		
	Audio Driver	Default Driver	X		
Windows Vista TM Ultimate English Version	Chipset Software	N/A	X		
	Graphics Media	Mobile INTEL 965 Express chipset 7.14.10.1329 (2007/09/13)	X		
	LAN Driver	INTEL PRO/1000 PL & 82566MM Gigabit Ver.9.12.17.0	X		
	Audio Driver	Realtek High Definition Audio Ver.6.0.1.5464 (8/10/2007)	X		
Windows Vista TM Ultimate x64 Edition English Version	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X
Windows XP Professional English Version V2002 Service Pack 3	Chipset Software	Intel Chipset Device Software Ver.8.2.0.1014 Date:3/5/2007	X		
	Graphics Media	Intel 965 Express chipset Ver.6.14.10.4924 Date:2/8/2008	X		
	LAN Driver	Intel PRO/1000 PL Network Ver.9.7.34.0 Date:2/1/2007	X		
		Intel 82566MM Gigabit Network Ver.9.7.34.0 Date:2/1/2007			
Audio Driver	Realtek Audio Ver.5.10.0.5273 Date:6/28/2006	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 Professional English Version V5.00.2195 Service Pack 4	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X
Windows 2000 Professional Simplified-Chinese Version	Chipset Software				X
	Graphics Media				X

V5.00.2195 Service Pack4	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 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 98SE English Version V4.10.2222A	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				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		
<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	X		
CMOS Backup / Clear CMOS Test	X		
Boot ROM Test (RPL/PXE)	X		
Supervisor / User Password Test	X		
CRT / LCD / DVI / 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
<b>PC Health Status</b>			
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

### Platform Information

CPU Board	COM-965 A1.0
Carrier Board	PER-T120 Rev.A0.2
BIOS	AEC-6930 BIOS Rev 0.3(10/23/2008)
Operating System	English Windows XP Professional Service Pack 2 V2003
CPU	Intel Core(TM)2 Duo CPU L7500 1.6GHz
Memory	Transcend DDR2 667 SDRAM 2GB (SEC 801 HCE6 K4T1G084QQ) x 2pcs
SATA HDD	Fujitsu MHZ2080BHG2 80GB
Primary IDE Master	N/A
Primary IDE Slave	N/A
CRT	ViewSonic E70
LCD	N/A
Compact Flash	N/A
Expansion Board	N/A
Chipset Software	Intel Chipset Device Software Ver.8.2.0.1014 Date:3/5/2007
Graphics Media	Intel 965 Express chipset Ver.6.14.10.4924 Date:2/8/2008
LAN Driver	Intel PRO/1000 PL Network Ver.9.7.34.0 Date:2/1/2007 Intel 82566MM Gigabit Network Ver.9.7.34.0 Date:2/1/2007
Audio Driver	Realtek Audio Ver.5.10.0.5273 Date:6/28/2006
Touchscreen Driver	N/A
Power Supply	N/A

### Test result:

Testing Software	Result	Unit
<b>PCMark2002</b>		
CPU	6313	
Memory	19969	
HDD	1378	
<b>Final Reality V1.01—BenchMark Test</b>		
2D image	35.02	
3D	3.84	
Bus transfer	81.23	
Overall	24.80	Reality marks
<b>3Dmark2001</b>		

3DMark2001SE Build 330_Benchmark mode	3815	
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**Test Result:**

Testing Software	Result	Unit
<b>PCMark05</b>		
PCMark	3437	PCMarks
CPU	N/A	
Memory	N/A	
Graphics	N/A	
HDD	N/A	
<b>3Dmark2003 v360</b>		
3Dmark Score	1615	

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