

QE P5 Verification Test Plan

Release No : 06I010011

Product Model	HSB-813S
Description	PCISA Half-Size SBC
Test Configuration	<input checked="" type="checkbox"/> New product <input checked="" type="checkbox"/> PCB : HSB-813S A1.0 <input checked="" type="checkbox"/> BIOS : HSB-813S BIOS Rev 1.1(12/07/2006) for Giga-bit LAN <input checked="" type="checkbox"/> Chipset : <input checked="" type="checkbox"/> North Bridge : Intel 82855GE <input checked="" type="checkbox"/> South Bridge : 82801 DB (ICH4) <input checked="" type="checkbox"/> VGA Chipset : Intel 82855GE <input checked="" type="checkbox"/> Ethernet Chipset : Intel 82562EZ /82551QM / 82541GI <input checked="" type="checkbox"/> I/O Chipset : IT-8712F-A <input checked="" type="checkbox"/> Remark : QE NPDP P5 External Report
Test Result Summary	
<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Pass with Deviation Comment: _____ _____	

2006/12/18

Issue date

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Manager

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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	HSB-813S Rev:A1.0	1,2,3,4,5,,6,7,8,9,10,11
BIOS / Version	HSB-813S BIOS Rev 1.1(12/07/2006) for Giga-bit LAN	1,2,3,4,5,,6,7,8,9,10,11
CPU Type	Intel Celeron M processor 1.30GHz (100x13.0)	1,2,3,4,5,,6,7,8,9,10,11
Memory Type	NANYA / NT5DS64M8AF-75B / SODDR266 /1GB	1,2,3,4,5,,6,7,8,9,10,11
Primary IDE Master	IBM / IC35L060AVV207-0 /61.4GB / ATA33	1,2,3,4,5,,6,7,8,9,10,11
Primary IDE Slave	TEAC / CD-540E / 40X	1,2,3,4,5,,6,7,8,9,10,11
CRT	ViewSonic E773	1,2,3,4,5,,6,7,8,9,10,11
LCD	N/A	
Compact Flash	N/A	
Riser Card	N/A	
Backplane	N/A	
Operating System	[<input checked="" type="checkbox"/>] Linux-RedHat 9.0 or [<input type="checkbox"/>] Fedora Core 4	9
	Windows Server 2003 English Version / Standard Edition 5.2.3790	N/A
	Windows XP Professional English Version V2002 Service Pack 2	9
	Windows 2000 Professional English Version V5.00.2195 Service Pack 4	1,2,3,4,5,,6,7,8,9,10,11
	Windows 98SE English Version V4.10.2222A	9
	Windows NT Workstation 4.0 English Version Service Pack 6	N/A
	MS-DOS 6.22	1,2,3,4,5,,6,7,8,9,10,11
	Power Supply	ATX Power : SHARK / SPC5110-250ATZ2 250W
	AT Power :	N/A

Test Result for Certification

1. Dynamic / Boot_UP Burn_In Test

Test Method	Test Condition	Result		
		Pass	Fail	N/A
Diagnostics Software Burn-In Test.	0°C ~60°C, 30%RH~80%RH, 48 hrs	X		
Power On/Off Test.	0°C ~60°C, 30%RH~80%RH, 24hrs	X		
High Temperature Storage Test (Just for PPC)	60 °C (48 Hours)			X
Low Temperature Storage Test (Just for PPC)	-20 °C (48 Hours)			X
Humidity Test (Just for PPC)	40 °C/95%RH (48 Hours)			X
Cold Start Test (Just for PPC)	-5 °C (Doing 50 times Power On/Off)			X

2. Power On and Reset Test

Test Method	Test Condition	Result		
		Pass	Fail	N/A
Power On/Off Test in DOS Mode-100V Power Function Test	10 times in Room Temperature	X		
Power On/Off Test in DOS Mode-210V Power Function Test	10 times in Room Temperature	X		
KB Reset in Dos Mode-110V Power Function Test	20 times in Room Temperature	X		
Hardware Reset in Dos Mode-110V Power Function Test	20 times in Room Temperature	X		

3. 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) – 40 Pin	X		
DOM (Disk On Module) – 44 Pin			X
COM 1	X		
COM 2-232	X		

COM 2-422	X		
COM 2-485	X		
COM 2-Ring /+5V /+12V	X		
COM 3			X
COM 4			X
COM 5			X
COM 6			X
PS/2 Mouse & Keyboard (Internal)	X		
PS/2 Mouse & Keyboard (External)	X		
Audio Connector	X		
Audio 5.1 Channel / S/P DIF			X
LPT 1	X		
LPT 2			X
SIR / 115.2 Kbps	X		
FIR / 4M bps			X
USB 1/2 Ports	X		
USB 3/4 Ports	X		
USB 5 Ports	X		
USB 7/8 Ports			X
USB 2.0 1/2 Ports	X		
USB 2.0 3/4 Ports	X		
USB 2.0 5 Ports	X		
USB 2.0 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
TV-out / AV Terminal			X
Touch Screen – 8 Wire			X
Touch Screen – 5 Wire			X
DIMM Slots	X		
Watchdog IRQ n			X
Watchdog Software Control	X		
CPU FAN Connector	X		
System FAN Connector			X

Front Panel		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		
Keyboard Lock				X
Jumpers Function		Result		
		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		
		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		
		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
PCI Slots		X		
PCI Express				X

4. Power Consumption Test (Run Prime95 Program)

Test Environment Mode	ATX Power: SHARK / SPC5110-250ATZ2 250W				AT Power:			
	CPU: Celeron M 1.2GHz		CPU: Pentium M 1.4GHz		CPU:		CPU:	
OS Environment	WIN 2K		WIN 2K					
Normal Mode (+5V)	1.89	A	1.80	A		A		A
Suspend Mode (+5V)	1.75	A	1.60	A		A		A
5VSB in Power Off Mode (ATX Mode)	0.26	A	0.23	A	----	A	-----	A
5VSB in Power On Mode (ATX Mode)	0.26	A	0.23	A	----	A	-----	A
Normal Mode (+12V)	0.95	A	0.90	A		A		A
Suspend Mode (+12V)	0.25	A	0.25	A		A		A
Normal Mode (+3.3V) (ATX Mode)		A		A	----	A	-----	A
Suspend Mode (+3.3V) (ATX Mode)		A		A	----	A	-----	A
Normal Mode (-12V)		A		A		A		A
Suspend Mode (-12V)		A		A		A		A
Normal Mode (-5V)		A		A		A		A
Suspend Mode (-5V)		A		A		A		A

5. Power Connector Test (110V / 220V)

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
5V Only - Power On/Off for 10 times in DOS			X

6. 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		
	60 sec	X		
	255 sec	X		

7. Network HUB / LAN Connection Test

Location		LED Type				Result		
						Pass	Fail	N/A
LAN1 LED		Active LED				X		
		Link LED				X		
		Speed LED				X		
LAN2 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
LAN1	10/100/1000 Mbps	HP J4095A 24 Ports	100M	100 Mbps	100	X		
		D-Link DGS-1008T	100M	1Gbps	1000	X		
		Intel InBusiness 8 Ports	100M	100 Mbps	100	X		
		LEMEL LM-S5 5 Ports	100M	100 Mbps	100	X		
		Accton Desktop-3005	100M	100 Mbps	100	X		
		SVEC FD916H	100M	10 Mbps	10	X		
Location	Speed	Type	Cable Length	HUB Speed	Onboard LAN Speed	Result		
						Pass	Fail	N/A
LAN2	10/100/1000 Mbps	HP J4095A 24 Ports	100M	100 Mbps				X
		D-Link DGS-1008T	100M	1Gbps				X
		Intel InBusiness 8 Ports	100M	100 Mbps				X
		LEMEL LM-S5 5 Ports	100M	100 Mbps				X
		Accton Desktop-3005	100M	100 Mbps				X
		SVEC FD916H	100M	10 Mbps				X

8. Hardware Compatibility

CPU Compatible Test							
Type	Clock Speed	FSB	Prime95 Version	Result			
				Pass	Fail	N/A	
Intel Pentium M processor 1.40GHz	133		V2414	X			
Celeron M 1.2GHz			V2414	X			
Memory Compatibility Test							
Brand / Memory Size	Chipset	Frequency	MemTest86 Version	Result			
				Pass	Fail	N/A	
NANYA /1GB	NT5DS64M8AF-75B	266	V1.65	X			
ELPIDA /256MB	M2S56D40ATP	266	V1.65	X			
Daughter Board Audio Function Test							
Audio Basic Function Test				Result			
				Pass	Fail	N/A	
System Sound				X			

CD_In		X			
CD_In Sound Recorder		X			
Play Sound Recorder		X			
Line Out		X			
Line In		X			
Line In Sound Record		X			
MIC Speaker	Dynamic	X			
	Condenser	X			
MIC Sound Recorder	Dynamic	X			
	Condenser	X			
Audio 5.1 Channel with S/P DIF Function Test			Result		
			Pass	Fail	N/A
2-channel mode for stereo speaker output					X
4-channel mode for 4 speaker output					X
6-channel mode for 5.1 speaker output					X
S/P DIF function Test	Input				X
	Output				X
On Board TV Function Test			Result		
			Pass	Fail	N/A
NTSC	AV Terminal				X
PAL					X
NTSC	S Terminal				X
PAL					X
On Board LCD Function Test					
TFT LCD	Type	Voltage	Result		
			Pass	Fail	N/A
LVDS	AUO G065VN01 V.0 / 6.5" / 640x480 / 18bit (4:3)	3.3V	X		
	AU B104SN02 / 10.4" / 800*600 / 18bit (4:3)	3.3V	X		
	Hyundai HT12X11-200 / 12.1" / 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
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
CECUBE GC-R9250PCI-D3 (ATI REDEON9250 256MB)		VGA Card	X		
CHAINTECH NVIDIA GeForce4 MX440-8X		VGA Card	X		
SC3000 CMI8738/C3DX		Sound Card	X		
Takram DC-395U V1.02		SCSI Card	X		

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		
Realtek RTL8139B Ethernet	LAN Card	X		
D-Link DGE-530T 1000BASE-T Gigabit Ethernet Adapter	LAN Card	X		
D-Link DWL-520+ Wireless LAN	LAN Card	X		
ADAPTEC 1420SA RoHS 4-Port SATA II RAID	RAID 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
SksKonnect SK-9E21D 10/100/1000Base-T Adapter PCI-Express X1 LAN Card			X
WinFast PX6200 TC TDH PCI-Express X16 VGA Card			X

HDD Compatibility Test

Model	Result		
	Pass	Fail	N/A
Hitachi / HDS722525VLAT80 / 250GB / ATA-100	X		
IBM / DTLA-307045 / 46.1GB / ATA-100	X		
FUJITSU / MPE 3136AH / 13.6GB / ATA-66	X		
Seagate / ST340014A / 40GB / Barracuda 7200.7	X		
Seagate / ST3160812A / 160GB	X		
Quantum / Fireball Plug AS / 30GB / ATA-100	X		
Seagate / ST310210A / 10.2GB / ATA-66	X		
Western / WD400BB-75DEA0 / 40GB / ATA-100	X		
Seagate / ST3120026AS / 120GB / ATA-100 / S-ATA	X		

CD/DVD-ROM Compatibility Test

Model	Result		
	Pass	Fail	N/A
Acer DVP1640A / 16X / DVD-ROM	X		
Creative DVD1240E / 12X / DVD-ROM	X		
IBM HL-DT-ST / GCR-8480B / 48X / CD-ROM	X		
Pioneer / DVD-121 / 16X / DVD-ROM	X		
PHILIPS CDD5301 / PBC03210G / 32X10X40 / 12X DVD / CD-RW / DVD-ROM	X		
SAMSUNG / SH-W08 / DVD+R 8X / DVD-R 8X / CD-R 32X	X		
NEC / ND-2500A / DVD R/RW / +R8X-R8X	X		
TEAC / CD-540E / 40X / CD-ROM	X		

IDE Cable Function test					
IDE Model		Result			
		Pass	Fail	N/A	
40 Pin Cable ATA33		X			
44 Pin Cable ATA33				X	
80 Pin Cable ATA100				X	
USB Function Test					
USB Basic Function Test (USB1/2 on USBRJ1 connector)		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	
Use High Speed Device USB2.0 CD-R/W Ben-Q / 4824W1-ON2 to play Nero CD/DVD Speed		X			
USB Device Full Loading Test		Result			
		Pass	Fail	N/A	
Model	Type	Pass	Fail	N/A	
CyberLink Power DVD XP4.0	Remote Control	X			
BENQ 4824WI-ON2	CD-RW	X			
Thumb Device	Storage	X			
USB HDD IBM IC25N020ATCS04-0 / 20GB / 4200RPM (1394b + USB2.0 External Box (MP-FBHUB20P-V2.0 E10-7073161D60))	HDD	X			
Mitsumi FL3.5D353GUE/FUE	Floppy	X			
ASUS DRW-1604P	DVD-RW	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
FUJITSU MCB3064SS		SCSI			X
IO-Mega zip 100 parallel port		Parallel	X		
IO-Mega zip 100MB Internal ATAPI Drive		IDE	X		

DOC2000 M-System / MD2200-D16					X
PQI FC512 512MB		Type-I CF Card	X		
HITACHI / HMS360402D5CF00		Type- II CF Card	X		
Digital I/O Connector Test			Result		
			Pass	Fail	N/A
Input Address: ()					X
Output Address: ()					X
VCC: ()					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-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
COM Port Send / Receive Test			Result		
			Pass	Fail	N/A
Use software program: COMTEST.exe			X		
Use software program: LL5.exe			X		
Disk On Module [DOM] Compatibility Test					
Model		Interface	Result		
			Pass	Fail	N/A
DOM-256-026P Rev: A1K20		IDE 40 Pin	X		
DOM-064-426P Rev: A2A11		IDE 44 Pin			X
Mini PCI Card Compatibility Test					
Model		Interface	Result		
			Pass	Fail	N/A
GM-100 WLAN 11g Mini PCI Card (Model: Sky Thru GC-100)		Wireless LAN	X		
GM-101 WLAN 11b/g 54Mbps Mini PCI Card (Model: VNT6655AM)		Wireless LAN	X		
PER-C200 4 Port USB 2.0 Mini PCI Card (Chip: NEC D720101GJ)		USB 2.0	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
COM5			X
COM6			X
LPT1	X		
LPT2			X
Card Bus(PCMCIA) Compatibility Function Test			
Model	Result		
	Pass	Fail	N/A
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
PQI 16MB Compact Flash Adapter (64MB PQI CF Card inserting)			X
PCi GW-NS54SG Cardbus Adapter Wireless LAN Type-II			X

9. O.S. Compatibility Test

Installation Operation System Compatibility Test		Result			
		Pass	Fail	N/A	
Linux-Red-Hat 9.0 Kernel 2.4.20-8		X			
Fedora Core 4				X	
Windows Server 2003 English Version / Standard Edition 5.2.3790				X	
Windows XP Professional English Version V2002 Service Pack 2		X			
Windows 2000 Professional English Version V5.00.2195 Service Pack 4		X			
Windows 98SE English Version V4.10.2222A				X	
Windows NT Workstation 4.0 English Version Service Pack6				X	
MS-DOS 6.22		X			
Utility and Driver Test					
OS	Drivers Version		Result		
			Pass	Fail	N/A
Linux-Red-Hat 9.0 / Kernel 2.4.20-8	Graphics Media	Default	X		
	LAN Driver	Default	X		
	Audio Driver				X
Windows Server 2003 English Version / Standard Edition 5.2.3790	Graphics Media				X
	LAN Driver				X
	Audio Driver				X
Windows XP Professional English Version V2002 Service Pack 2	Graphics Media	Intel 82852/82855 GM/GE Graphics Ver.:6.13.1.3485	X		
	LAN Driver	Intel PR0/1000 MT Network Ver.: 8.5.14.0	X		

Windows 2000 Professional English Version V5.00.2195 Service Pack 4	Graphics Media	Intel 82852/82855 GM/GE Graphics Ver::6.13.1.3485	X		
	LAN Driver	Intel PRO/1000 MT Network Ver:: 8.5.14.0	X		
Windows 98SE English Version V4.10.2222A	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X
Windows NT Workstation 4.0 English Version 4.00.1381 Service Pack6	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X

10. BIOS Function Test

Test Item	Result		
	Pass	Fail	N/A
Memory Beep Test	X		
Standard CMOS Setup Test	X		
Boot Sequence Test	X		
Power Management Test			
APM Power Management Test	X		
ACPI Power Management Test	X		
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 / TV 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		

11. Performance Test

English Windows 2000 Professional with SP4 5.00.2195 + 1024x768x32bit / 60Hz + Direct 9.0		
ZD WinBench 99 V2.0		Unit
Business Disk WinMark99	5440	Thousand bytes/sec
High-End Disk WinMark99	20800	Thousand bytes/sec
Business Graphics WinMark99	278	
High-End Graphics WinMark99	810	
Final Reality V1.01—BenchMark Test (Reality Marks)		
2D Image	19.91	
3D	6.87	
Bus transfer	23.76	
Overall	13.31	Reality marks
ZD 3D Winbench 2000 V1.1		
3D WinMark 2000	56.8	Frames / sec
ZD Multimedia Content Creation Winstone 2004 V1.0.1		
Multimedia Content Creation Winstone 2004	17.1	
3Dmark2001SE Pro (Demo version)		
3DMark2001SE Build 330_Benchmark mode	1730	
English Windows XP Professional with SP2 V2002 + 1024x768x32bit / 60Hz + Direct 9.0		
Business Winstone 2004 v1.0.1		
Business Winstone2004	15.2	