

QE 【Mainboard】

Verification Test Plan

Release No : 06I010006

Product Model	HSB-668I
Product Description	VIA Corefusion ISA Half-Size SBC
Test Environment	<input checked="" type="checkbox"/> New product <input checked="" type="checkbox"/> PCB : HSB-668I Rev .A1.0 <input checked="" type="checkbox"/> BIOS : HSB-668I BIOS Rev.1.0 (02/13/2006) <input checked="" type="checkbox"/> Chipset : <input checked="" type="checkbox"/> CPU Type : VIA Mark 533MHz <input checked="" type="checkbox"/> North Bridge : VIA Mark / Corefusion / 533MHz / 0.9V <input checked="" type="checkbox"/> South Bridge : VT82C686B / 0510CD <input checked="" type="checkbox"/> VGA Chipset : VIA Mark / Corefusion / 533MHz / 0.9V <input checked="" type="checkbox"/> Audio Chipset : Realtek ALC655 <input checked="" type="checkbox"/> Ethernet Chipset : Realtek RTL8100C / RTL8110S-32 <input checked="" type="checkbox"/> I/O Chipset : Winbond 83977ATF

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Issue date

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Summary Table of contents :

Summary Table of contents	3
1. Dynamic / Boot_UP Burn_In Test	4
2. Power On and Reset Test	4
3. I/O Peripheral Function Test	4
4. Power Consumption Test	6
5. Power Connector Test	7
6. Timer Accuracy Test	7
7. Network HUB / LAN Connection Test	7
8. Hardware compatibility	8
9. O.S. Compatibility Test	13
10. BIOS Function Test	13
11. Touch Screen LCD for Serial Ports Test	14
12. Performance Test	14
13. System Integrated Application Test	15

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:

PCB Model / Version	HSB-668I A1.0	
BIOS	HSB-668I BIOS Rev.1.0 (02/13/2006)	
Operating System	Linux-RedHat 9.0 / Kernel 2.4.20-8	
	Windows Server 2003 English Version / Standard Edition 5.2.3790	N/A
	Windows XP Professional English Version V2002 Service Pack 2	
	Windows 2000 Professional English Version V5.00.2195 Service Pack 4	
	Windows 98SE English Version V4.10.2222A	
	Windows NT Workstation 4.0 English Version with Service Pack6	
	MS-DOS 6.22	2,4,5
CPU	VIA C3 533A MHz (133x4.0)	
Memory	KINGMAX / KSV684T4A2A-07L / PC-133 /256MB	
Primary IDE Master	WD800BB-00JHA0 3.5" HDD 80GB ATA100	
Primary IDE Slave	BenQ CD-ROM 652A-674	
CRT	ViewSonic E773	
LCD	Toshiba LTM10C209A / 10.4" / 640*480 / 18bit	
Compact Flash	N/A	
Backplane	BP-206SS-P4-A1.0	
Riser Card	N/A	
Power Supply	ATX Power	1,2,3,4,5,6,7,8,9,10,11,12,13
	AT Power	5

Test Result for Certification

1. Dynamic / Boot_UP Burn_In Test

Test Method	Test Condition	Result
Diagnostics Software Burn-In Test.	0°C ~60°C , 48 hrs	Pass
Power On/Off Test.	0°C ~60°C , 24hrs	Pass

2. Voltage Range Test

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

3. I/O Peripheral Function Test

I/O Peripheral Function Test –I/O Function	Result
Floppy Connector / Driver A:	Pass
Primary IDE Master	Pass
Primary IDE Slave	Pass
Secondary IDE Master	Pass
Secondary IDE Slave	Pass
DOC (Disk On Chip)	Pass
DOM (Disk On Module) - 40 Pin	Pass
COM 1	Pass
COM 2-232	Pass
COM 2-422	Pass
COM 2-485	Pass
COM 2-Ring /+5V /+12V	Pass
COM 3	Pass
COM 4	Pass
Clear CMOS	Pass
PS/2 Mouse & Keyboard (Internal)	Pass
PS/2 Mouse (External)	Pass
PS/2 Keyboard (External)	Pass
Audio Connector	Pass
VLCD Voltage (5V or 3.3V)	Pass
LPT 1	Pass
SIR / 115.2 Kbps	Pass
VGA Display	Pass
PC/104	Pass
LCD / TTL	Pass
LCD / LVDS / Channel 1	Pass

LCD / LVDS / Channel 2	Pass	
DIMM Slots	Pass	
Internal KB & Mouse	Pass	
Watchdog Software Control	Pass	
I/O Peripheral Function Test –Front Panel and Other connector	Result	
Power On Button	Pass	
IDE LED	Pass	
External Buzzer	Pass	
On Board Buzzer	Pass	
Power LED	Pass	
Reset Switch	Pass	
Keyboard Lock	Pass	
Internal K/B Connector	Pass	
I/O Peripheral Function Test – Power Connector & Function	Result	
ATX Power Connector	Pass	
Mini 4P Power Connector	Pass	
Option ATX Power Connector (PS-ON / +5VSB)	Pass	
I/O Peripheral Function Test – LAN Connector & Function	Result	
LAN Speed LED	LAN1	Pass
	LAN2	Pass
LAN Active LED	LAN1	Pass
	LAN2	Pass
LAN Link LED	LAN1	Pass
	LAN2	Pass
LAN 10/100 Ethernet	Pass	
LAN 1G Ethernet	Pass	

4. Power Consumption Test (Run Prime95 Program)

	ATX Power: AOpen / FSP300-60ATV / 300W		AT Power:			
	CPU: C3 533MHz	CPU:	CPU:	CPU:	CPU:	CPU:
Normal Mode (+5V)	2.79	A	A	A	A	A
Suspend Mode (+5V)	2.05	A	A	A	A	A
5VSB in Power Off Mode (ATX Mode)		A	A	-----	A	-----
5VSB in Power On Mode (ATX Mode)		A	A	-----	A	-----
Normal Mode (+12V)		A	A	A	A	A
Suspend Mode (+12V)		A	A	A	A	A
Normal Mode (+3.3V) (ATX Mode)		A	A	-----	A	-----
Suspend Mode (+3.3V) (ATX Mode)		A	A	-----	A	-----
Normal Mode (-12V)		A	A	A	A	A
Suspend Mode (-12V)		A	A	A	A	A
Normal Mode (-5V)		A	A	A	A	A
Suspend Mode (-5V)		A	A	A	A	A

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

Test Method	Result
ATX Connector - Power On/Off for 10 times in DOS	Pass
5V Only - Power On/Off for 10 times in DOS	Pass

6. Timer Accuracy Test

System Clock & RTC Clock Test		
Test Method	Margin for error	Result
System Clock in Power On Mode	±1 second during 24 hours	Pass
RTC Clock in Power On Mode	±1 second during 24 hours	Pass
RTC Clock in Power Off Mode	±1 second during 24 hours	Pass
Watchdog Timer Test		Result
Time-out Interval	10 sec	Pass
	60 sec	Pass
	255 sec	Pass

7. Network HUB / LAN Connection Test

Location		LED Type		Result
On Board LAN1 LED	Active LED		Pass	
	Link LED		Pass	
	Speed LED		Pass	
On Board LAN2 LED	Active LED		Pass	
	Link LED		Pass	
	Speed LED		Pass	
Location	Speed	HUB Type	HUB Speed	Result
LAN1	10/100 Mbps	HP J4095A 24 Ports	100 Mbps	Pass
		D-Link DGS-1008T	1Gbps	Pass
		Intel InBusiness 8 Ports	100 Mbps	Pass
		LEMEL LM-S5 5 Ports	100 Mbps	Pass
		Accton Desktop-3005	100 Mbps	Pass
		SVEC FD916H	10 Mbps	Pass
Location	Speed	Type	Speed	Result
LAN2	10/100 Mbps	HP J4095A 24 Ports	100 Mbps	Pass
		D-Link DGS-1008T	1Gbps	Pass
		Intel InBusiness 8 Ports	100 Mbps	Pass
		LEMEL LM-S5 5 Ports	100 Mbps	Pass
		Accton Desktop-3005	100 Mbps	Pass
		SVEC FD916H	10 Mbps	Pass
	1Gbps	D-Link DGS-1008T	1Gbps	Pass
		D-Link DGS-1008T	1Gbps	Pass

8. Hardware Compatibility

CPU Compatible Test				
Type	Clock Speed	FSB	Prime95 Version	Result
VIA C3 533MHz	133		V2414	Pass
Memory Compatibility Test				
Brand / Memory Size	Chipset	Frequency	MemTest86 Version	Result
HITACHI / 256 MB	HB52RF648DC-75B	PC133	V1.65	Pass
SAMSUNG / 256MB	K4S560832C-TC75	PC133		Pass
KINGMAX / 256MB	KSV684T4A2A-07L	PC133		Pass
ELPIDA / 512MB	HB52RF648DC-75B	PC133		Pass
HYNIX / 128MB	HY57V561620CT-H	PC133		Pass
Daughter Board Audio Function Test				
Audio Basic Function Test				Result
System Sound				Pass
CD_In				Pass
CD_In Sound Recorder				Pass
Play Sound Recorder				Pass
Line Out				Pass
Line In				Pass
Line In Sound Record				Pass
MIC Speaker		Dynamic		Pass
		Condenser		Pass
MIC Sound Recorder		Dynamic		Pass
		Condenser		Pass
On Board LCD Function Test				
TFT LCD	Type	Voltage	Result	
LVDS	AU B104SN02 / 10.4" / 800*600 / 18bit	3.3V	Pass	
	Hyundai HT12X11-200 / 12.1" / 1024*768 / 18bit	3.3V	Pass	
	Samsung LTM150XH-L04 / 1024*768 / 24bit	3.3V	Pass	
TTL	Toshiba LTM10C209A / 10.4" / 640*480 / 18bit	5V	Pass	
	Sharp LQ121S1DG11 / 12.1" / 800*600 / 18bit	3.3V	Pass	
	Samsung LTM150XS-T01 / 15" / 1024*768 / 36bit	3.3V	Pass	
HDD Compatibility Test				
Model				Result
Hitachi / HDS722525VLAT80 / 250GB / ATA-100				Pass
IBM / DTLA-307045 / 46.1GB / ATA-100				Pass
FUJITSU / MPE 3136AH / 13.6GB / ATA-66				Pass
Maxtor / 4G160J8 / 160GB / ATA-133				Pass
Quantum / Fireball Plug AS / 30GB / ATA-100				Pass

Seagate / ST310210A / 10.2GB / ATA-66	Pass	
Western / WD400BB-75DEA0 / 40GB / ATA-100	Pass	
CD/DVD-ROM Compatibility Test		
Model	Result	
Acer DVP1640A / 16X / DVD-ROM	Pass	
Creative DVD1240E / 12X / DVD-ROM	Pass	
IBM HL-DT-ST / GCR-8480B / 48X / CD-ROM	Pass	
Pioneer / DVD-121 / 16X / DVD-ROM	Pass	
PHILIPS CDD5301 / PBC03210G / 32X10X40 / 12X DVD / CD-RW / DVD-ROM	Pass	
SAMSUNG / SH-W08 / DVD+R 8X / DVD-R 8X / CD-R 32X	Pass	
NEC / ND-2500A / DVD R/RW / +R8X-R8X	Pass	
TEAC / CD-540E / 40X / CD-ROM	Pass	
IDE Cable Function test		
IDE Model	Result	
40 Pin Cable ATA33	Pass	
USB Function Test		
USB Basic Function Test (USB1/2 on USBRJ1 connector)	Result	
USB Controller	Pass	
USB Keyboard Support	Pass	
USB Mouse Support	Pass	
USB 1.1 Compatible Test	Result	
USB 1.1 Compatible Test	Pass	
USB Extension Devices Function Test		
Model	Type	Result
Cyber Link Power DVD XP4.0	Remote Control	Pass
BENQ 4824WI-ON2	CD-RW	Pass
PLEXTOR PX-S88TU	CD-RW	Pass
USB HDD IBM DARA-206000 6GB [ID-200401] (include USB2.0 2.5" External USB Box)	HDD+USB Box	Pass
IO-MEGA ZIP 100MB	ZIP	Pass
Mitsumi FL3.5D353GUE/FUE	Floppy	Pass
IO-Mega ZIP100	ZIP	Pass
Floppy Disk Controller Function Test		Result
Copy and compare file between C: and A / B:	Pass	
Change Floppy to None value	Pass	
Swap FDD	Pass	

Peripheral Compatibility-Storage Device			
Model		Interface	Result
IO-Mega zip 100 parallel port		Parallel	Pass
IO-Mega zip 100MB Internal ATAPI Drive		IDE	Pass
DOC2000 M-System / MD2200-D16			Pass
Adapter Compatibility- Industry Control Card PC/104, PC/104+, PCI-104 Modules			
Interface	Model	Type	Result
PC/104	AAEON PCM-5600	Modem Module	Pass
	AAEON PCM-3115B	PCMCIA Module	Pass
COM Port Send / Receive Test			Result
Use software program: COMTEST.exe			Pass
Use software program: LL5.exe			Pass
Disk On Module [DOM] Compatibility Test			
Model		Interface	Result
DOM-256-026P Rev: A1K20		IDE 40 Pin	Pass
COM/LPT Ports & RS-232/422/485 Function Test			Result
RS-422 for COM2			Pass
RS-485 for COM2			Pass
COM1			Pass
COM2			Pass
COM3			Pass
COM4			Pass
LPT1			Pass

9. O.S. Compatibility Test

Installation Operation System Compatibility Test	Result
Linux-Red-Hat 9.0 / Kernel 2.4.20-8	Pass
Windows XP Professional English Version V2002 Service Pack 2	Pass
Windows 2000 Professional English Version V5.00.2195 Service Pack 4	Pass
Windows 98SE English Version V4.10.2222A	Pass
Windows NT Workstation 4.0 English Version Service Pack6	Pass
DOS 6.22	Pass

Utility and Driver Test			
OS	Drivers Version		Result
Linux-Red-Hat 9.0 / Kernel 2.4.20-8	VGA	Default	Pass
	LAN	Default	Pass
	Audio	Default	Pass
Windows XP Professional English Version V2002 Service Pack 2	VGA	S3 Graphics Twister + S3 Hotkey Ver : 6.13.10.1100	Pass
	LAN1	Realtek RTL8139/810x Family fast Ethernet Ver .5.621.304.2005	Pass
	LAN2	Realtek RTL8139/8110 Family fast Ethernet Ver .5.621.304.2005	Pass
Windows 2000 Professional English Version V5.00.2195 Service Pack 4	VGA	S3 Graphics Twister + S3 Hotkey Ver : 6.13.10.1100	Pass
	LAN1	Realtek RTL8139/810x Family fast Ethernet Ver .5.621.304.2005	Pass
	LAN2	Realtek RTL8139/8110 Family fast Ethernet Ver .5.621.304.2005	Pass
Windows 98SE English Version V4.10.2222A	VGA	S3GraphicsTwister+S3HotkeyVer : 4.13.01.3049-13.00.49	Pass
	LAN1	Realtek RTL8139/810x Family fast Ethernet Ver .4.10.2222	Pass
	LAN2	Realtek RTL8139/8110 Family fast Ethernet Ver .4.10.2222	Pass
Windows NT Workstation 4.0 English Version Service Pack6	VGA	S3 Graphics Twister + S3 Hotkey Ver : 1.00.07-0115	Pass
	LAN1	Realtek RTL8139/8110 Family fast Ethernet Ver .4.10.22222	Pass
	LAN2	Realtek RTL8139/8110 Family fast Ethernet Ver .4.10.22222	Pass
DOS 6.22			Pass

10. BIOS Function Test

Test Item	Result
Standard CMOS Setup Test	Pass
Boot Sequence Test	Pass
Power Management Test	
APM Power Management Test	Pass
ACPI Power Management Test	Pass
Wake Up Event Test	Pass
Power On after Power Failure Test	Pass
CMOS Backup / Clear CMOS Test	Pass
Boot ROM Test (RPL/PXE)	Pass
Supervisor / User Password Test	Pass
CRT / LCD Function Test	Pass
Init Display First Function Test	Pass
PC Health Status	
Voltage Monitor Test	Pass
FAN Speed Monitor Test	Pass
Temperature Monitor Test	Pass
Swap Floppy Drive & Boot up Floppy Seek Function Test	Pass
USB Onboard Device Function Test	Pass
COM Address / IRQ Test	Pass
LPT Address / IRQ Test	Pass
BIOS AWDFLASH Program Test	Pass

11. Touch Screen LCD for Serial Ports Test

Port Number	Address	IRQ	Result
COM1	3F8	IRQ4	Pass
COM2	2F8	IRQ3	Pass
COM3	3E8	IRQ10	Pass
COM4	2E8	IRQ11	Pass

12. 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	6370	Thousand bytes/sec
High-End Disk WinMark99	22800	Thousand bytes/sec
Business Graphics WinMark99	144	
High-End Graphics WinMark99	318	
Final Reality V1.01—BenchMark Test (Reality Marks)		
2D Image	1.44	
3D	2.10	
Bus transfer	3.00	
Overall	2.04	Reality marks
ZD 3D Winbench 2000 V1.1		
3D WinMark 2000	123	Frames / sec
ZD Multimedia Content Creation Winstone 2004 V1.0.1		
Multimedia Content Creation Winstone 2004		20.5
3Dmark2001SE Pro (Demo version)		
3DMark2001SE Build 330_Benchmark mode		3885
English Windows XP Professional with SP2 V2002 + 1024x768x32bit / 60Hz + Direct 9.0		
Business Winstone 2004 v1.0.1		
Business Winstone2004		23.0

13. System Integrated Application Test

Test Method	Result
A. System Integrated Application Test (Burn-In 8 Hrs):	Pass