

GR-NR145D PVT TEST REPORT

System Model : GR-NR145D

Motherboard : GA-8IKHXR

PCB Version : 1.0

Bios Version : Phoenix

Release On : Jun. 23 .2004

This Document has been released from:

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1. IDE RAID MODE TEST

Item	Status	Note
CPU	Intel(R) Celeron 2.8GHz	
Memory	KingMax MPXC22D-38KX3PAA DDR400 512MB x2	
VGA	Onboard ATI Rage XL	
Keyboard	G-MAX	
IDE HDD 1	HDS722580VLAT20	
IDE HDD 2	WD2000JB-32EVA	
IDE HDD 3	WD2500JB-00EVA0	
IDE HDD 4	WD2500JB-00EVA0	
FDD	N/A	
Power Supply	DELTA DPS-250PB-1A	
Mainboard Version	1.0	
BIOS Version	Phoenix BIOS E8	
O.S.	Windows 2003 Server + SAK 3.0	

1.1.Follow list HDD for test RAID MODE TEST

HDD Vendor	Product number	Size	Driver(HD Number)
Hitachi	HDS722580VLAT20		1
WD	WD2000JB-32EVA		1
WD	WD2500JB-00EVA0		1
WD	WD2500JB-00EVA0		1

1.2.Optimize **Stripe** RAID Mode

Item	Comment	Result
Menu-Set RAID Mode		PASS
Build Mirror Disk		PASS
Quick Erase Disk		PASS
RAID Mode Help		PASS
Card Information		PASS
Set Boot Disk		PASS
Channel		PASS
Vendor & Device Name		PASS
Assigned to		PASS
Array Mode		PASS
Status		PASS
Mode		PASS

Record NO:	9N04201	Rev:	1.0	Issue Date:	2004/6/23	Page:	2
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Disk Capacity		PASS
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1.3. Optimize **Mirror** RAID Mode

Item	Comment	Result
Menu-Set RAID Mode		PASS
Build Mirror Disk		PASS
Quick Erase Disk		PASS
RAID Mode Help		PASS
Card Information		PASS
Set Boot Disk		PASS
Channel		PASS
Vendor & Device Name		PASS
Assigned to		PASS
Array Mode		PASS
Status		PASS
Mode		PASS
Disk Capacity		PASS

1.4. Optimize **JBOD** RAID Mode

Item	Result		
Hard Drive	SATA1 Only	SATA2 Only	SATA1 & SATA2
Menu-Set RAID Mode			PASS
Build Mirror Disk	N/A	N/A	N/A
Quick Erase Disk			PASS
RAID Mode Help			PASS
Card Information			PASS
Set Boot Disk			PASS
Channel			PASS
Vendor & Device Name			PASS
Assigned to			PASS
Array Mode			PASS
Status			PASS
Mode			PASS
Disk Capacity			PASS

Record NO:	9N04201	Rev:	1.0	Issue Date:	2004/6/23	Page:	3
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1.5. Optimize **Normal(NON RAID)** RAID Mode

Item	Result		
Hard Drive	SATA1 Only	SATA2 Only	SATA1 & SATA2
Menu-Set RAID Mode			PASS
Build Mirror Disk	N/A	N/A	N/A
Quick Erase Disk			PASS
RAID Mode Help			PASS
Card Information			PASS
Set Boot Disk			PASS
Channel			PASS
Vendor & Device Name			PASS
Assigned to			PASS
Array Mode			PASS
Status			PASS
Mode			PASS
Disk Capacity			PASS

2. Basic Function tests

2.1 Switch and Jumpers Function Test

Switch and Jumpers Function Test		
Test Name	Note	Result
Power Switch		PASS
Reset Switch		PASS
NMI Button		PASS
Power LED		PASS
ID LED	+ ID Switch	PASS
HD LED		PASS
Status LED		PASS
LAN1 LED		PASS
LAN2 LED		PASS
USB 1 Connector		PASS
USB 2 Connector		PASS
USB 3 Connector		PASS
USB 4 Connector		PASS
COM 1 Connector		PASS
FAN 1 Connector		PASS
FAN 2 Connector		PASS
FAN 3 Connector		PASS
FAN 4 Connector		PASS
FAN 5 Connector		PASS
ATX Power Connector		PASS

Record NO:	9N04201	Rev:	1.0	Issue Date:	2004/6/23	Page:	4
------------	---------	------	-----	-------------	-----------	-------	---

ATX 12V		PASS
Floppy port		PASS
PS2 Keyboard/Mouse Connector		PASS
BUZZER		PASS
LPT Port		N/A
Sound & Joystick		N/A
Onboard LAN1 Connector		PASS
Onboard LAN2 Connector		PASS
Clear CMOS Jumper		PASS
Case Open		N/A
WOL / WOR Connector		N/A

2.2 Power Shut

Operation	Configuration	Times	Result
Power On/Off by AC power, then check the Bios keep the original state	Set to the ship configuration	10	PASS
Ctrl-Alt-Del	Set to the ship configuration	20	PASS
RTC On/Off		1000	PASS

2.3 Power On/Off by AC Power

Operation	Configuration	Times	Result
Using the Auto-Power On/Off device to check the motherboard still not hang on	Set to the ship configuration	90	PASS

2.4 Software Shutdown Testing

Operation	Configuration	Times	Result
Under DOS system Make a boot disk and copy reboot & count utility. Boot from disk and auto run batch file Check the system will hang or not	Same as the shipment configuration	1000	PASS
Under Windows System After install Windows 2003 Server + SAK 3.0, install auto-reboot utility.	Same as the shipment configuration	1000	PASS

2.5 ACPI Functions

ACPI Function	O.S	Result
S1	Windows	PASS
S4	Windows	PASS
S5	Windows	PASS

Record NO:	9N04201	Rev:	1.0	Issue Date:	2004/6/23	Page:	5
------------	---------	------	-----	-------------	-----------	-------	---

2.6 Wake on LAN/RING

Operation		Result
Wake on LAN 1	Wake on Windows 2000/2003 standby (S1)	PASS
	Wake on Windows 2000/2003 hibernate (S4)	PASS
	Wake on Windows 2000/2003 shutdown (S5)	PASS
	Wake on Windows 2000/2003 standby (S1)	PASS
Wake on LAN 2	Wake on Windows 2000/2003 hibernate (S4)	PASS
	Wake on Windows 2000/2003 shutdown (S5)	PASS
	Wake on Windows 2000/2003 standby (S1)	PASS
Wake on LAN Card (PCI-X Slot); (Riser Card version:0.3)	Wake on Windows 2000/2003 hibernate (S4)	PASS
	Wake on Windows 2000/2003 shutdown (S5)	PASS
	Wake on Windows 2000/2003 standby (S1)	PASS
Wake on RING with COM1	Wake on Windows 2000/2003 hibernate (S4)	PASS
	Wake on Windows 2000/2003 shutdown (S5)	PASS

2.7 Boot From LAN

Operation	Result
Boot From LAN 1	PASS
Boot From LAN 2	PASS
Boot From LAN card (PCI-X Slot)	PASS

2.8. Mechanical Compatibility

Mechanical Compatibility	Operation	Result
System Set-up	Set-up a full system	PASS
Indicator light & Switch Bottom		PASS
“Green” Indicator		PASS
“HDD Act.” Indicator		PASS
“System Rebuild” Indicator		PASS
“HDD Failed” Indicator		PASS
“Power ON” Indicator		PASS
“Fan Warning” Indicator		PASS
“ 10 LAN” Indicator		PASS
“ 100 LAN” Indicator		PASS
“1000 LAN” Indicator		PASS
“Event Log” Indicator		PASS

2.9. IDE CD-ROM

Vendor & Model	Bus	Channel	Result
Quanta SCR242 Slim CDROM	IDE	Primary Channel Slave	PASS
		Secondary Channel Slave	N/A
Quanta SDR083 Slim DVDROM	IDE	Primary Channel Slave	PASS
		Secondary Channel Slave	N/A

Record NO:	9N04201	Rev:	1.0	Issue Date:	2004/6/23	Page:	6
------------	---------	------	-----	-------------	-----------	-------	---

2.10. O.S Installation Test

Test Items	Note	Result
Windows 2003 Enterprise Server		PASS

2.11. SPbest Test (V12L02)

Test Item	Note	Result
MEMORY TEST		PASS
FILE TEST		PASS
FDD TEST		PASS
LAN TEST		N/A
NDP TEST		N/A
SERIAL TEST		PASS
GRAPHIC TEST		PASS
RAID TEST		PASS
CPU TEST		PASS
Multi CPU TEST		N/A

3. Performance Test

3.1 NetBench 7.03 Test

3.1.1 Network Configuration

We tested server in our labs by attaching it to a 32-client testbed and running NetBench 7.03
 Our testbed is illustrated in Figure 3.1.1
 The Testbed consisted of P4 1.7GMHz Intel Celeron based PCs running Windows 2000 Professional with service pack 3.

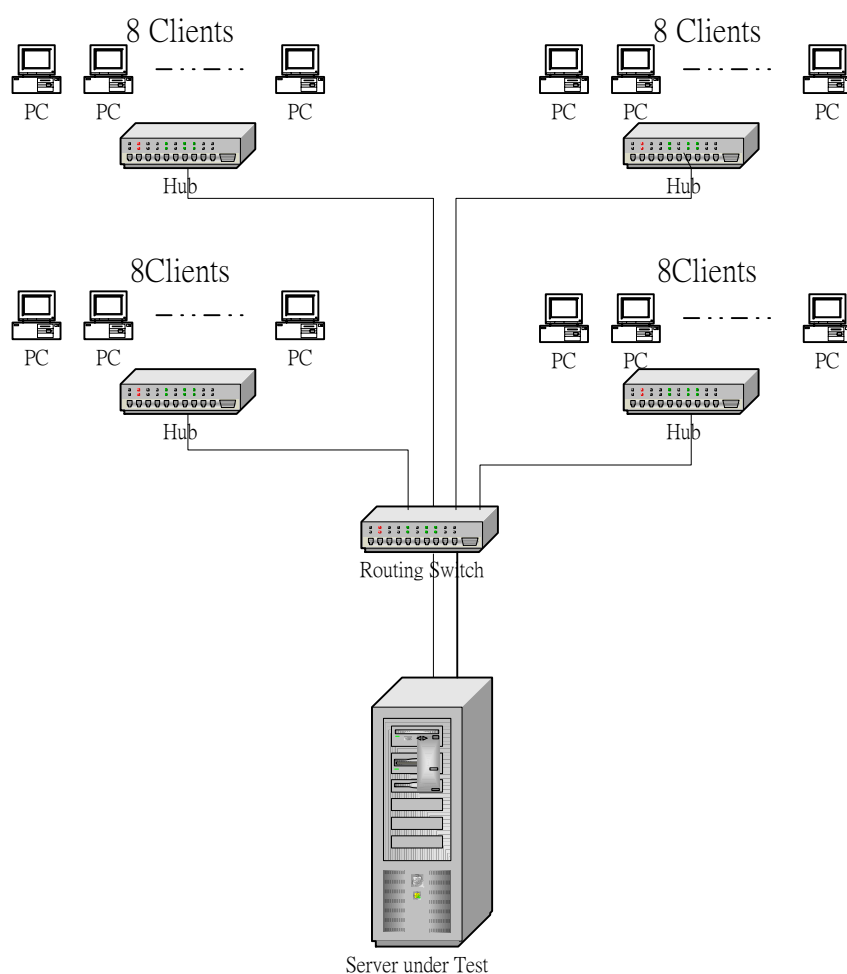


Figure 3.1.1 Testbed Configuration

Record NO:	9N04201	Rev:	1.0	Issue Date:	2004/6/23	Page:	8
------------	---------	------	-----	-------------	-----------	-------	---

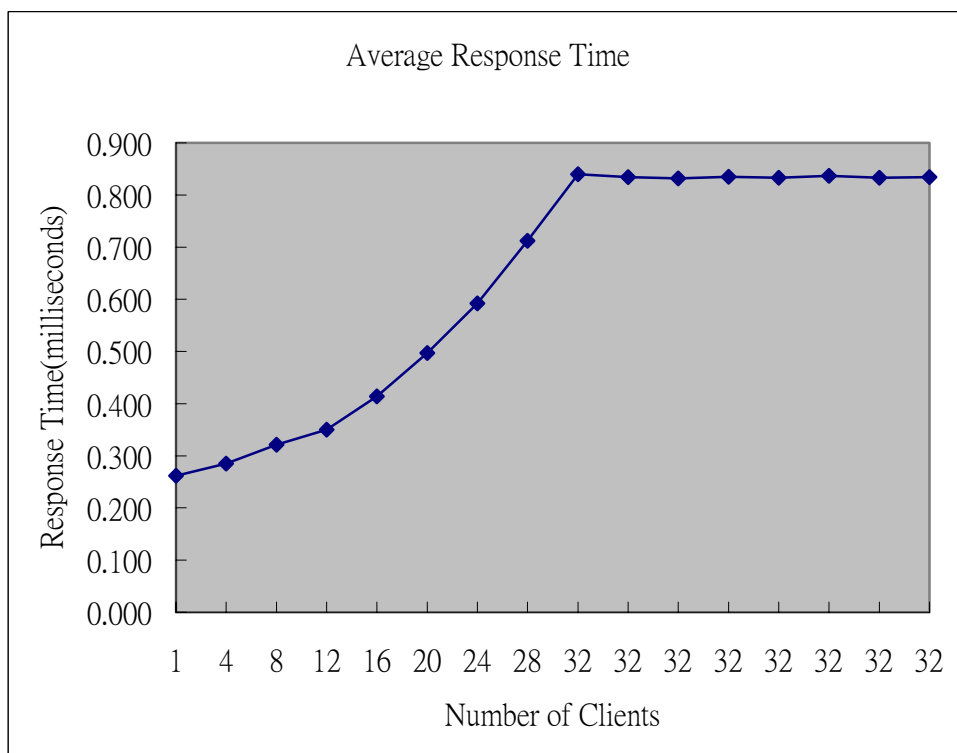
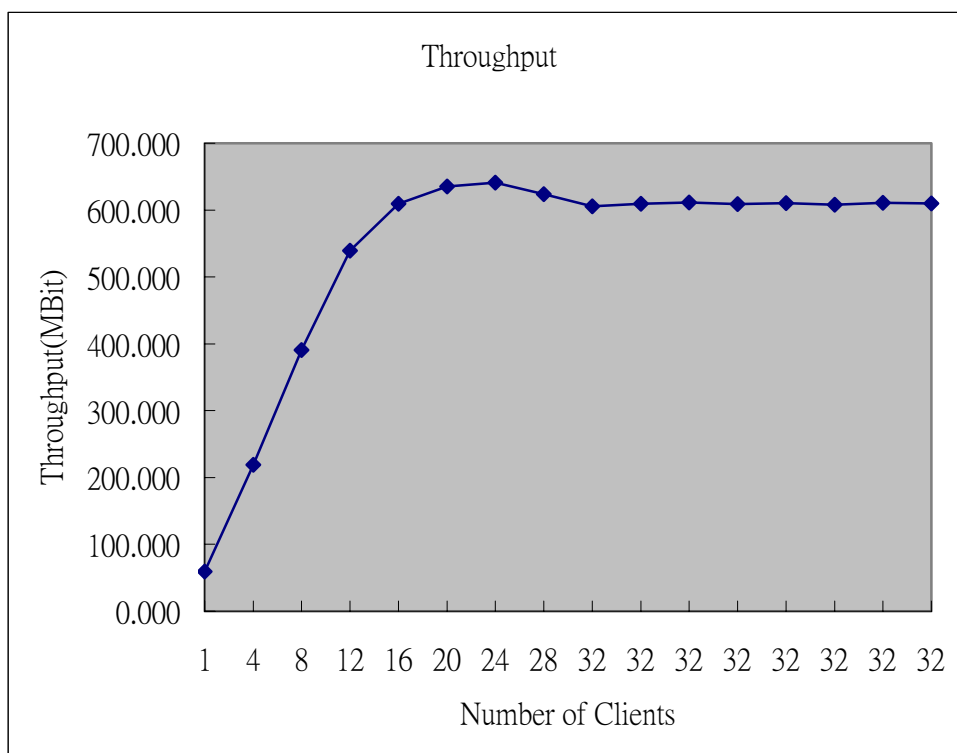
3.2. Server Configuration (System Build Stripe)

Item	Status	Note
CPU	Intel(R) Celeron 2.8GHz	
Memory	KingMax MPXC22D-38KX3PAA DDR400 512MB x2	
VGA	Onboard ATI Rage XL	
Keyboard	G-MAX	
IDE HDD 1	HDS722580VLAT20	
IDE HDD 2	WD2000JB-32EVA	
IDE HDD 3	WD2500JB-00EVA0	
IDE HDD 4	WD2500JB-00EVA0	
FDD	N/A	
Power Supply	DELTA DPS-250PB-1A	
Mainboard Version	1.0	
BIOS Version	Phoenix BIOS E8	
O.S.	Windows 2003 Server + SAK 3.0	

3.3. Test Result

Table 1: NetBench Summary				
C:\NetBench\Controller\Suites\NetBench\ent_dm.tst				
Mix Name	Engines Participating	Total Throughput (MBits/sec)	Average Response Time (milliseconds)	Test Information
dm_1_clients	1	59.559	0.262	Engine Types: file
dm_4_clients	4	218.999	0.285	NetBench 7.0.3
dm_8_clients	8	390.522	0.321	Start Suite: Tue May 20 12:02:05 2003
dm_12_clients	12	539.561	0.350	Finish Suite: Tue May 20 15:06:58 2003
dm_16_clients	16	609.423	0.414	Elapsed Time: 03:04:53
dm_20_clients	20	635.422	0.497	Status: Suite completed successfully
dm_24_clients	24	641.122	0.592	Comments:
dm_28_clients	28	623.949	0.712	
dm_32_clients	32	605.517	0.840	

Record NO:	9N04201	Rev:	1.0	Issue Date:	2004/6/23	Page:	9
------------	---------	------	-----	-------------	-----------	-------	---



4.Windows Base Server Function Test

4.1. Windows 2003 server

4.1.1 Test Configuration

Configuration		
Item	Status	Note
CPU	Intel® Coleron CPU 2.8 GHz	
Memory	KingMax MPXC22D-38KX3PAA DDR400 512MB x2	
VGA	Onboard ATI Rang XL	
LAN	Intel 82547EI & 82541EI GbE LAN	
Keyboard	Standard 101/102-key	
Mouse	Gigabyte PS/2 mouse	
IDE HDD 1	HDS722580VLAT20	
IDE HDD 2	WD2000JB-32EVA	
IDE HDD 3	WD2500JB-00EVA0	
IDE HDD 4	WD2500JB-00EVA0	
FDD	N/A	
Power Supply	DELTA DPS-250PB-1A	
Mainboard Version	1.0	
BIOS Version	Phoenix E8	
O.S.	Windows 2003 server + SAK 3.0	

4.2. Install Windows 2003 server

Install Windows 2003 server		
Item	Note	Result
Install Process		PASS
Boot O.S		PASS
Restart O.S		PASS
Shut Down O.S		PASS
Install Windows 2003 server		PASS

4.3. Install Drivers

Install Drivers				
Item	Driver Name	Provider	Driver Version	Result
Chip Set	Acard IDE Driver	Acard	1.0.2.7	PASS
Chip Set	Intel INF Update	Intel	5.1.0.1006	PASS
VGA	ATI Rage XL	ATI	5.10.2600.6014	PASS
LAN	Intel 82547EI & 82541EI GbE LAN	Intel	7.3.13.0	PASS

4.4. Network Test

Network Test					
Test Item	Test Procedure	Test Tool	Client Count	Test Time	Result
Ping Test		Ping Command	1 Client		PASS
Copy / Compare via Network		XCOPY batch file	1 Client	1 hours	PASS
File Copy / Compare	Onboard Lan as SA	Test Program:Winthrax	8 Clients	8 hours	PASS

4.5. Event Viewer Check

Event Viewer Check		
Test Item	Memo	Result
Event Viewer Error Check	No error	PASS

5.Environment Test

Test Item	Memo	Result
Temperature Operating	Standard voltage without humidity	PASS

6.GR-NR145D QVL

6.1.SCSI/RAID Card

SCSI Card Vendor & Model	Operation	Result
Adaptec 19160	Check POST message of SCSI information the driver no error under windows.	ME Issue
Adaptec 29160 LP	Check POST message of SCSI information the driver no error under windows.	PASS
Adaptec 39160	Check POST message of SCSI information the driver no error under windows.	ME Issue
Adaptec 39320	Check POST message of SCSI information the driver no error under windows.	PASS
Adaptec 2100S	Check POST message of SCSI information the driver no error under windows.	PASS
Adaptec 2200S	Check POST message of SCSI information the driver no error under windows.	PASS
Adaptec 3000S	Check POST message of SCSI information the driver no error under windows.	ME Issue
Adaptec 3200S	Check POST message of SCSI information the driver no error under windows.	ME Issue
Adaptec ASR-3410S	Check POST message of SCSI information the driver no error under windows.	ME Issue
AMI MegaRAID Express 500 (Series 475 Rev-B3)	Check POST message of SCSI information the driver no error under windows.	ME Issue
AMI MegaRAID Elite 1600 (Series 493 Rev-C1)	Check POST message of SCSI information the driver no error under windows.	ME Issue

Record NO:	9N04201	Rev:	1.0	Issue Date:	2004/6/23	Page:	12
------------	---------	------	-----	-------------	-----------	-------	----

Mylex(LSI) Accele-RAID352 (Ultra 160 SCSI RAID 2ch)	Check POST message of SCSI information the driver no error under windows.	ME Issue
Mylex(LSI) Accele-RAID170 (Ultra 160 SCSI RAID 1ch)	Check POST message of SCSI information the driver no error under windows.	ME Issue
Mylex(LSI) Accele-RAID160 (Ultra 160 SCSI RAID 1ch)	Check POST message of SCSI information the driver no error under windows.	PASS

6.2.Lan Card

Lan Card Vendor & Model	Operation	Result
PRO/100 Server Adapter	Check POST message of SCSI information the driver no error under windows.	PASS
PRO/100 S Dual Port Server Adapter	Check POST message of SCSI information the driver no error under windows.	PASS
PRO/1000 MT Server Adapter (32bit)	Check POST message of SCSI information the driver no error under windows.	PASS
PRO/1000 MT Server Adapter	Check POST message of SCSI information the driver no error under windows.	PASS
PRO/1000 MT Dual Port Server Adapter	Check POST message of SCSI information the driver no error under windows.	PASS
PRO/1000 XT Server Adapter	Check POST message of SCSI information the driver no error under windows.	PASS

6.3. IDE Hard Disk

Vender	Model	CAP.	IDE/SCSI	RPM	Result
WD	WD2000JB-32EVA	200GB	ATA100	7200	PASS
WD	WD2500JB-00EVA0	250GB	ATA100	7200	PASS
Hitachi	HDS722580VLAT20	80GB	ATA100	7200	PASS
Hitachi	HDS722512VLAT20	120GB	ATA100	7200	PASS
Maxtor	YAR41BW0 80G	60GB	ATA133	7200	PASS
Seagate	ST380011A	80GB	ATA100	7200	PASS

6.4. DDR RAM

Vender	Type	Size	Chips vender	Chip P/N	Result
Samsung	DDR400	128MB	Samsung	M381L1713ETM-CCC (x2)	PASS
Samsung	DDR400	256MB	Samsung	M381L3223ETM	PASS
Samsung	DDR400	512MB	Samsung	M381L6423ETM-CB3	PASS
Samsung	DDR400	512MB	Samsung	M381L6423ETM-CCC(x2)	PASS
Samsung	DDR400	1GB	Samsung	M381L2923BTM-CCC(x2)	PASS
Micron/MT	DDR400	128MB	MT	MT9VDDT1672AG-40BB5	PASS
Micron/MT	DDR400	256MB	MT	MT8VDDT3264AG-40BC4	PASS
Micron/MT	DDR400	512MB	MT	MT18VDDT6472AG-335C4	PASS
Infineon	DDR400	256MB	Infineon	HYB25D256800BT-5	PASS
Infineon	DDR400	512MB	Infineon	HYB25D512160BE-5	PASS
Kingston	DDR400	256MB	Winbond	KVR400X64C25/256(x2)	PASS
Kingston	DDR400	512MB	Winbond	KVR400X64C25/512	PASS
KingMAX	DDR400	128MB	KingMax	MPXA82D-68KX3	PASS
KingMAX	DDR400	256MB	KingMax	MPXB62D-68KX3(x2)	PASS

Record NO:	9N04201	Rev:	1.0	Issue Date:	2004/6/23	Page:	13
------------	---------	------	-----	-------------	-----------	-------	----

KingMAX	DDR400	512MB	KingMax	MPXC22D-38KX3	PASS
NANYA	DDR400	128MB	Nanya	NT128D64SH4B1G-5T	PASS
NANYA	DDR400	256MB	Nanya	NT256D64S88B1G-5T(x2)	PASS
NANYA	DDR400	256MB	Nanya	NT512D64S8HB1G-5T	PASS

6.5. CPU

Model	Stepping Code	Result
Celeron® 2.4G/400 FSB		PASS
Celeron® 2.8G/400 FSB		PASS