

# **FIC KZ-6000-V PCI/AGP SYSTEM BOARD BOARD LEVEL COMPATIBILITY TEST REPORT**

**Document Number:** *MB-418*

**Product Version:** *V 1.1*

**BIOS Version:** *QG411*

| <b>Supervisor</b> | <b>Tester</b> |
|-------------------|---------------|
|                   |               |

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CAD  
Database  
Graphics  
Presentation  
Program  
Diagnostic Program  
Tools  
Time Management  
Scan  
Internet  
CD Title Game  
CD Title Multimedia  
CD Title



## 1. Introduction

FIC's motherboards undergo a comprehensive suite of stringent software and hardware compatibility tests to ensure that they can not only run a complete range of operating systems and software packages, but that they can also be installed with a full selection of add-on cards and peripheral devices, such as AGP, VGA, SCSI, and network adapters as well as HDDs, FDDs, CD-ROM Drives and Fax/Modems. A board is deemed to have passed the compatibility testing suite when it has met the following criteria:

- All application software available for IBM compatible products works properly.
- All common internal and external hardware available to the IBM AT-Bus and PCI compatible systems functions properly.
- All hardware and software can be installed according to the instructions provided to the user.
- All legal configurations (IRQ , I/O addresses, DMA levels ) function properly.
- All applications have been tested with and without drivers provided on the support disk.
- All operating systems have been installed and tested with each processor, with and without the most critical mode selected by setup.



## 2. Mainboard Features

|                     |   |                                     |
|---------------------|---|-------------------------------------|
| <b>Model Name</b>   | : | KZ-6000-V PCB Rev 1.1               |
| <b>Product Name</b> | : | VIA Apollo pro plus Based Mainboard |
| <b>System BIOS</b>  | : | Award BIOS Version QG411            |
| <b>PCI IDE</b>      | : | Internal PCI Mastre dual IDE        |
| <b>I/O</b>          | : | Winbond W83977EF-AW                 |

## 3. Mainboard CPU Supports:

| Intel Processors    | Bus | Status |
|---------------------|-----|--------|
| Celeron PPGA 366MHz | 66  | Pass   |
| Celeron PPGA 400MHz | 66  | Pass   |
| Celeron PPGA 433MHz | 66  | Pass   |

## 4 System Specification for Hardware and Software Utilities

The mainboard hardware portion was configured as follows :

| Item              | Description  |
|-------------------|--|
| System Core Logic | VIA Apollo pro plus  |
| System Cache      | 128K Pipeline Burst SRAM Built-in CPU card                                     |
| System Memory     | Maximum : 768MB<br>168 pins single RAS and Double RAS DIMM RAM Module<br>SDRAM |
| PCI Bus Clock     | Synchronous mode (depended on CPU Clock divide by 2)                           |
| System Slots      | 1 AGP and 4 PCI and 1 ISA slots  |
| IO Corelogic      | Winbond W83977EF-AW Support Normal,EPP,ECP mode and IR interface               |
| PCI IDE           | VIA 82C596A internal Bus Master PCI IDE.                                       |

### 4.1 Main Functionality Test:

| Num. | M/B function                            | Result |
|------|---|--------|
| 1    | ACPI Ready (under Win 98/Win NT 5.0)    | PASS   |
| 2    | APM 1.2                                 | PASS   |
| 3    | Wake On LAN                             | PASS   |
| 4    | Wake On Ring                            | PASS   |
| 5    | RTC Alarm Function                      | PASS   |
| 6    | H/W Monitoring (+/-12V,+/-5V,Vccp,+5VR) | PASS   |
| 7    | SB_LINK Connector support               | PASS   |
| 8    | Thermal Management                      | PASS   |
| 9    | USB Function                            | PASS   |
| 10   | Keyboard/PS2 mouse Power On             | PASS   |
| 11   | Year 2000 Compliance                    | PASS   |



#### 4.2 Main Software Utilities Test:

| Num. | M/B function                                    | Version   | Result |
|------|---|-----------|--------|
| 1    | High-Point IDE Bus Master for Win 95/98         | 1.2       | PASS   |
| 2    | VIA IDE Bus Master for Win NT                   | 2.1.32    | PASS   |
| 3    | VIA 596 INF Patch file for Win 95/98            | 1.1       | PASS   |
| 4    | VIA AGP VxD Utilities for Win 95/98             | 2.9       | PASS   |
| 5    | Onboard Creative 1373 Sound driver for Win95/98 | 4.05.1131 | PASS   |
| 6    | Onboard Creative 1373 Sound driver for Win NT   | 4.10.16   | PASS   |
| 7    | LanDesk Client Manager(LDCM) for Win 95/98/NT   | 3.3       | PASS   |
| 8    | Award BIOS Flash ROM Utilities                  | 6.25      | PASS   |
| 9    | Award DMICFG Utilities for DOS                  | 2.1Cu     | PASS   |

#### 5. Jumper Function Verification

| Description                | Jumper Name | Default Option | Status |
|----------------------------|-------------|----------------|--------|
| Speaker Connector          | SPEAKER     | Open           | Pass   |
| Power LED                  | PW_LED      | Open           | Pass   |
| Suspended Switch           | SP_SW       | Open           | Pass   |
| IDE LED Connector          | HDDLED      | Open           | Pass   |
| Reset Switch               | RST_SW      | Open           | Pass   |
| Remote Power Switch        | RPW_SW      | Open           | Pass   |
| Message LED                | MSG_LED     | Open           | Pass   |
| CPU FAN Connector          | CPU_FAN     | Open           | Pass   |
| Chassis FAN Connector      | CHS_FAN     | Open           | Pass   |
| Power Supply FAN Connector | PWR_FAN     | Open           | Pass   |
| Onboard Audio Select       | AUD_DIS     | 1-2            | Pass   |
| Clear CMOS                 | SW1-5       | Open           | Pass   |
| Clear Password             | SW1-6       | Open           | Pass   |
| Chassis                    | CHASSIS     | Open           | Pass   |
| Sound Blaster_Link         | SB_LINK     | Open           | Pass   |
| Keyboard Power-On Select   | KB_PWN      | 2-3            | Pass   |
| IR interface               | IR          | Open           | Pass   |
| BIOS Boot Block Select     | EP1 / EP2   | 1-2 / 2-3      | Pass   |
| LAN Wake Up                | WOL         | Open           | Pass   |



## 6. Stability Test

### 6.1 Worst Case Test :

| System Configuration                   |  |
|--|--|
| <b>CPU</b> : Celeron PPGA 433          | <b>CD ROM</b> : TEAC CD-532EA 32X CD-ROM         |
| <b>Cache Memory</b> : 128 K            | <b>Mouse</b> : Microsoft PS/2 mouse              |
| <b>On Board Memory</b> : SDRAM 128MB   | <b>O.S. Environment:</b> WIN 95, WinNT, SCO Unix |
| <b>HDD</b> : Quantum Fireball EX 6.4GB | <b>Chamber</b> : KATO SE-47CRT                   |
| <b>FDD</b> : Mitsumi D353F3 1.44MB     |  |

#### 1. Temperature Strife Margin Test : ( 1.5 days)

DC voltage: 3.3V and 5V fixed

Temperature range: -30 ~ 90C ° (Out side)

Frequency test on 66MHz frequency

Diagnostic Program: AMIDdiag program will be ran at each different temperature ranges.

| NO. | Test Engineer | Test Result | Remark |
|-----|---------------|-------------|--------|
| 1.  | Jason Chen    | PASS        |        |

#### 2. Full Loading Test : ( 1 days)

Full loading test condition:

a. All memory banks loaded.

b. All available slots occupied.

c. Both IDE channels are used.

DC voltage: 3.3V and 5V fixed.

Temperature range: Ambient Temperature (about 25°C)

Frequency tested are on 66MHz, 68MHz with a  $\pm 10\%$  frequency variation.

Diagnostic Program: Win NT HCT Stress test and SCO UNIX burn in.

| NO. | Test Engineer | Test Result | Remark |
|-----|---------------|-------------|--------|
| 1.  | Jason Chen    | PASS        |        |

#### 3. Power Cycling test (Power On/Off Test): (1days)

DC voltage: change power voltage 3.0V/5.0 V  $\pm 0.5\%$  (Vcc)

Power on and off test using both 110V/230V input .

Temperature range: -30°C to 90°C

Power On/Off ten times in each condition

Diagnostic Program: Win 95/98

| NO. | Test Engineer | Test Result | Remark |
|-----|---------------|-------------|--------|
| 1.  | Jason Chen    | PASS        |        |

**6.2 Field (Stress) Test: Dynamic Burn-in Tests**

| <b>Software Name</b>  | <b>Duration</b>  | <b>Result</b> |
|---|--|---------------|
| BAPCO for Windows NT  | 24 hr.   | <i>Pass</i>   |
| Test Configurations for NT                                    | Intel Celeron 433MHz<br>Diamond Stealth G460 8MB SGRAM AGP VGA<br>128MB SDRAM Memory<br>Adaptec AHA 2940U2W<br>Quantum Atlas III Ultra Wide SCSI 9.1GB SCSI HDD  |               |
| Novell Server version 4.11                                    | 48 hr.   | <i>Pass</i>   |
| Test Configurations for Novell                                | Intel Celeron 400MHz<br>Adaptec AHA 3940<br>Quantum Fireball SE 8.4GB SCSI HDD (SE8400S)<br>3COM 3C905B-TX PnP PCI 100Mbps Netware card<br>(Connect to 4-6 workstation)<br>SEC 64MB SDRAM Memory<br>ELSA ERAZOR II 16MB SDRAM AGP VGA<br>Test Program : Netware 4.11 |               |
| SCO UNIX Open Desktop 5.04                                    | 24 hr.   | <i>Pass</i>   |
| Test Configurations for SCO                                   | Intel Celeron 433MHz<br>Adaptec AHA-2940UW<br>SONY CDU-625 24X SCSI CD-ROM<br>Seagate ST-34555N 4.5GB Ultra SCSI Disk<br>128MB Memory<br>ATI Rage pro 8MB SGRAM AGP VGA<br>Test Program : Create a batch file  |               |
| Winstone 99 Under WIN95                                       | 24 hr.   | <i>Pass</i>   |
| Test Configurations for Win 95                                | Intel Celeron 433MHz<br>Maxtor Diamond 88400D8 Ultra DMA 8.4GB HDD<br>Leadtek Winfast 3D S350ZX 8MB SGRAM AGP VGA<br>Fujitsu 64MB SDRAM Memory<br>Test program : Create Batch file   |               |
| Winstone 99 Under WIN98                                       | 24hr.  | <i>Pass</i>   |
| Test Configurations for Win 98                                | Intel Celeron 433MHz<br>Quantum Fireball EX Ultra DMA 6.4GB HDD<br>Apacer 128MB SDRAM Memory.<br>Diamond Viper V550 16MB SDRAM AGP VGA   |               |
| BAPCO for Windows NT 4.0                                      | 24hr.  | <i>Pass</i>   |
| Test Configurations for<br>SYSmark 32 under Windows<br>NT 4.0 | Intel Celeron 433MHz<br>IBM DTTA-371010 Ultra DMA 10.2GB IDE HDD<br>Apacer 128MB SDRAM Memory.<br>Matrox Millennium G200 8MB SGRAM AGP VGA   |               |



**7. Base Operating Systems HCT Tests For PC98**

| <b>Operating System</b>      | <b>Company</b>   | <b>HCT Name</b>        | <b>Result</b> |
|------------------------------|--|------------------------|---------------|
| Windows NT Version 4.0       | Microsoft  | Microsoft WHQL HCT 8.0 | <i>Pass</i>   |
| Test Configurations          | Intel Celeron 433MHz<br>64MB Memory.<br>ATI Rage pro 4MB SGRAM AGP VGA |                        |               |
| Windows NT Version 5.0 Beta2 | Microsoft  | Microsoft WHQL HCT 8.0 | <i>Pass</i>   |
| Test Configurations          | Intel Celeron 433MHz<br>64MB Memory.<br>ATI Rage pro 4MB SGRAM AGP VGA |                        |               |
| Windows 95                   | Microsoft  | Microsoft WHQL HCT 8.0 | <i>Pass</i>   |
| Test Configurations          | Intel Celeron 433MHz<br>64MB Memory.<br>ATI Rage pro 4MB SGRAM AGP VGA |                        |               |
| Windows 98 with APM          | Microsoft  | Microsoft WHQL HCT 8.0 | <i>Pass</i>   |
| Test Configurations          | Intel Celeron 433MHz<br>64MB Memory.<br>ATI Rage pro 4MB SGRAM AGP VGA |                        |               |
| Windows 98 with ACPI         | Microsoft  | Microsoft WHQL HCT 8.0 | <i>Pass</i>   |
| Test Configurations          | Intel Celeron 433MHz<br>64MB Memory.<br>ATI Rage pro 4MB SGRAM AGP VGA |                        |               |



**8.1.2 SDRAM DIMM Module (PC100)**

| Vender     | IC Part No.         | ECC | Size  | Side | Module No.             |
|------------|---------------------|-----|-------|------|------------------------|
| LGS        | GN72V661641CT7J     | No  | 32MB  | S    | AAL8134                |
|            | GM72V661641CT7J     | No  | 64MB  | D    | ABL8141                |
| NEC        | D4516821AG5-A10-7JF | Yes | 32MB  | D    | M04B032M2EE72208-C3100 |
| Fujitsu    | 81F16822D-102LFN    | Yes | 32MB  | D    | M04B032M2EE72208-C2100 |
|            | 81F64842B-103FN     | Yes | 64MB  | S    | M04B064MIHE72224-C3100 |
| Mitsubishi | M5M4V64S30ATP-8     | Yes | 64MB  | S    | M04B064M1HE72224-C3100 |
| Toshiba    | TC59S6408FTL-80H    | Yes | 64MB  | S    | MO4B064M1HE72224-C2100 |
| Advantage  | TC59S6408FTL-80H    | Yes | 64MB  | S    |                        |
|            | TC59S6408FTL-80H    | Yes | 128MB | D    |                        |
| SIEMENS    | HYB39S64160AT-8     | No  | 32MB  | S    | HYS64V4200GU-8         |
|            | HYB39S64800AT-8     | No  | 64MB  | S    | HYS64V8200GU-8         |
|            | HYB39S64800AT-8     | Yes | 128MB | D    | HYS72V16220GU-8        |
| SEC        | KM48S2020CT-GH      | Yes | 32MB  | D    | BUFFALO VSJ-D32M       |
|            | KM48S8030BT-GH      | Yes | 64MB  | S    | BUFFALO VSJ-ES64M2     |
|            | KM48S8030BT-GH      | No  | 128MB | D    | BUFFALO VSJ-D128M2     |
|            | KM48S16030T-GL      | Yes | 256MB | D    |                        |
| Apacer     | AM2V168A1T8         | No  | 32MB  | D    | 7P.G1346.P00           |
|            | GM72V661641CT7J     | No  | 32MB  | S    | 7B.G2426.A01 (LGS)     |
|            | GM72V66841CT7J      | No  | 64MB  | D    | 7B.G3336.A4J (LGS)     |
|            | GM72V66841CT7J      | No  | 128MB | D    | 7B.G3346.A4J (LGS)     |

**8.2 Add-on Cards****8.2.1 Display Adapter Products****Test Configuration:**OS Ver  Win 98 Ver: 4.10.1998

CPU Intel Celeron 433MHz

 Intel

Memory Fujitsu 64MB (81F16822D-102LFN)

Total: **64 MB**  PC66  PC100

HDD Maxtor Diamond 86480D6 8.4GB IDE

 PIO4  UDMA/33Channel:  PM  PS  SM  SS

CD-ROM TEAC CD-532EA 32X IDE

Channel:  PM  PS  SM  SS

Sound Onboard Creative 1373

 ISA\_Slot:      Onboard PCI

Mouse Logitech MouseMan Mouse

 COM  PS/2

The following PCI/AGP VGA cards test WinBench 99/ 3D WinBench 99 under Windows 98 with their respective VGA drivers installed and set to the follow condition 1024 x 768 x 16bit colors, resolution refresh rate of 85Hz, small font.

**8.2.1.1 AGP Display Adapter Products**

| Vendor      | Model Name           | Product Description                |
|-------------|----------------------|------------------------------------|
| ATI         | Rage pro             | XPERT@Play 98                      |
|             | Rage pro Turbo       | XPERT 98                           |
|             | Rage IIC             | ATI Rage IIC                       |
| ASUS        | Riva 128             | AGP-V3000                          |
|             | Riva 128ZX           | AGP-V3000ZXTV                      |
|             | S3 Savage 3D         | AGP-V3100                          |
|             | 3Dfx Voodoo Banshee  | AGP-V3200                          |
| Number #9   | Number Nine 9730     | Revolution 3D                      |
| UPMOST      | S3 Virge/GX2         | UP385TV                            |
| Cardex      | 3DLabs Permedia II   | Power 3D II                        |
| Matrox      | G100                 |                                    |
|             | MGA-G200             | Millennium G200                    |
| Compro      | SiS 6326             | Daytona 3D                         |
|             | Riva 128             | Best 3D Extreme                    |
| Diamond     | 3DLabs Permedia II   | Fire GL1000 pro                    |
|             | Riva 128             | Viper V330                         |
|             | Riva TNT             | Viper V550                         |
|             | Intel i740           | Stealth II G460                    |
|             | 3Dfx Voodoo Banshee  | Monster Fusion                     |
| ELSA        | 3DLabs Permedia II   | Gloria Synergy                     |
|             | Riva TNT             | ERAZOR II                          |
|             | 3Dfx Voodoo Banshee  | Victory II                         |
| Creative    | Riva TNT             | Graphics Blaster Riva TNT (CT6710) |
| Trident     | Trident 3Dimage 9750 |                                    |
| Leadtek     | Riva TNT             | Winfast 3D S320                    |
|             | Riva 128ZX           | Winfast 3D S3500ZX                 |
| Expertcolor | S3 Trio3D            | 3DVenus (DSV5366)                  |
| PowerColor  | S3 Savage 3D         | Savage 3D                          |
| Hercules    | S3 Savage 3D         | Hercules Terminator BEAST          |

**8.2.1.2 PCI Display Adapter Products**

| Vendor    | VGA Chip    | Product Description        |
|-----------|-------------|----------------------------|
| ATI       | ATI Mach64  | ATI Mach64 VT              |
|           | ATI Rage II | ATI Rage II 3D             |
| Diamond   | S3 968      | Stealth 4MB VRAM           |
| ELSA      | S3 Virge/VX | Winner 2000AVI/3D          |
|           | S3 Virge/VX | Winner 3000L 3D            |
| Number #9 | LSI 128     | Image 128                  |
| Matrox    | MGA-1064SG  | Mystique 4MB SGRAM         |
|           | MGA-2164WP  | Millennium II 8MB SGRAM    |
| Canopus   | S3 Trio64V+ | Power Windows              |
| Creative  | Voodoo2     | 3D Blaster Voodoo2 8MB EDO |



## 8.2.2 SCSI Adapter Products

### Test Configuration:

**OS Ver**  Win 98 Ver: 4.10.1998  
 Win NT Ver: 4.0  
**CPU** Intel Celeron 400MHz  Intel  
**Memory** SEC 64MB (KM48S8030BT-GH) **Total: 128 MB**  PC66  PC100  
**VGA** ELSA ERAZOR II AGP VGA  PCI\_Slot:\_\_\_\_  AGP  
**HDD** IBM DCAS34330 4.5GB SCSI HDD  Ultra SCSI  Ultra Wide  
Viking II 4.5GB SCSI HDD  Ultra SCSI  Ultra Wide  
**CD-ROM** Plextor PX-32Tsi 32X SCSI  Ultra SCSI  Ultra Wide  
**Sound** Onboard Creative 1373  ISA\_Slot:\_\_\_\_  Onboard PCI  
**Mouse** Logitech MouseMan Mouse  COM  PS/2

The following ISA/PCI SCSI cards test HCT Stress under Windows 98/NT with their respective SCSI drivers installed and set to the follow condition 1024 x 768 x 16bit colors, resolution refresh rate of 85Hz, small font.

| Vendor   | Model Name    | Product Description                     | Bus I/F |
|----------|---------------|---|---------|
| Adaptec  | AHA-1530P     | Adaptec AHA-1530P ISA PnP SCSI          | ISA PnP |
|          | AHA-1542CS/CP | Adaptec AHA-1542C ISA PnP SCSI          | ISA PnP |
|          | AHA-2940AU    | Adaptec AHA-2940AU PCI SCSI card        | PCI     |
|          | AHA-2940UW    | Adaptec AHA-2940UW PCI SCSI card        | PCI     |
|          | AHA-2940U2W   | Adaptec AHA-2940U2W PCI SCSI card       | PCI     |
|          | AHA-3940      | Adaptec AHA-3940 PCI to PCI Bridge card | PCI     |
|          | AHA-1520/22B  | Adaptec AHA-1520/22 ISA PnP SCSI        | ISA PnP |
|          | AHA-2920      | Adaptec AHA-2920 PCI SCSI               | PCI     |
|          | AHA-2940      | Adaptec AHA-2940 PCI SCSI               | PCI     |
|          | AHA-1540CF    | Adaptec AHA-1540CF ISA SCSI             | ISA     |
| BusLogic | BT-946        | Buslogic BT-946 SCSI                    | PCI     |
|          | FlashPoint LT | Buslogic BA81C15 PCI SCSI               | PCI     |
|          | BT-948CD      | Buslogic BT-948CD PCI FWD SCSI          | PCI     |
|          | KT-958        | Buslogic KT-958 Narrow SCSI             | PCI     |
| Initio   | INI-9100HA/W  | Initio INI-9100HA/W PCI SCSI            | PCI     |
| Tekram   | DC-390        | Tekram DC-390 PCI SCSI                  | PCI     |
|          | DC-390U2W     | Tekram DC-390U2W PCI SCSI               | PCI     |
| Symbios  | SYM875-1SP    | Symbios Logic 53C875J                   | PCI     |



### 8.2.3 Sound Adapter Products

#### Test Configuration:

**OS Ver**  Win 95 Ver: SR2 2.5 .  
 Win 98 Ver: 4.10.1998 .  
**CPU** Intel Celeron 400MHz  Intel  
**Memory** Apacer 32MB (AM2V168A1T8) **Total: 64 MB**  PC66  PC100  
**VGA** Number Nine 9730 Revolution 3D  PCI\_Slot:\_\_\_\_.  AGP  
**HDD** Quantum Fireball EL 5.1GB IDE  PIO4  UDMA/33  
**CD-ROM** BTC BCD 40XH 40X IDE **Channel:**  PM  PS  SM  SS  
**Mouse** Microsoft IntelliMouse PS/2 Mouse **Channel:**  PM  PS  SM  SS  
 COM  PS/2

The following PCI sound cards test play WAV/MIDI/CD audio and test HCT 8.0 under Windows 95/98 with their respective sound drivers installed .

| Vendor   | Model Name  | Product Description            | Interface |
|----------|-------------|--------------------------------|-----------|
| Creative | ES1371      | Creative ES1371 PCI Sound Card | PCI       |
|          | PCI64       | Creative ES1370 PCI Sound Card | PCI       |
|          | CT-4620     | Sound Blaster Live!            | PCI       |
|          | CT-4700     | Sound Blaster PCI 128          | PCI       |
| Formosa  | SC-970      | ESS 1948F PCI Sound Card       | PCI       |
|          | SC-972      | ENSONIQ ES1370 PCI Sound Card  | PCI       |
| Mediatek | SY-PI       | Avortex AU8820                 | PCI       |
| S3       | Sonic Vibes | S3 Sonic Vibes PCI Sound Card  | PCI       |

# Onboard CREATIVE 1373 Sound be disabled in BIOS.

### 8.2.4 Network Card Products

#### Test Configuration:

**OS Ver**  Novell Netware Ver: 4.11 .  
 Win NT Server Ver: 4.0 .  
**CPU** Intel Celeron 400MHz  Intel  
**Memory** Toshiba 64MB (TC59S6408FTL-80H) **Total: 192 MB**  PC66  PC100  
**VGA** ATI Rage pro 4MB SGRAM  PCI\_Slot:\_\_\_\_.  AGP  
**HDD** Fujitsu M1623TAU 1.7GB IDE  PIO4  UDMA/33  
**CD-ROM** Mitsumi CRMC-FX162T4 16X IDE **Channel:**  PM  PS  SM  SS  
**Mouse** Logitech MouseMan Mouse **Channel:**  PM  PS  SM  SS  
 COM  PS/2



The following ISA/PCI LAN cards test Nwtest under Novell Netware and tset NetBench 5.01 under Windows NT Server with their respective LAN drivers installed .

| Vender | Model      | Specification      | Bus |
|--------|------------|--------------------|-----|
| 3COM   | 3C595      | ETHERNET 10/100 MB | PCI |
|        | 3C590      | ETHERNET 10 MB     | PCI |
|        | 3C905      | ETHERNET 10/100 MB | PCI |
|        | 3C509B     | ETHERNET PnP 10MB  | ISA |
|        | 3C339      | PnP Token-Ring     | PCI |
| ACCTON | EN1203     | ETHERNET 10 MB     | PCI |
|        | EN1207     | ETHERNET 100 MB    | PCI |
| EVEREX | EV2064     | ETHERNET PnP 10MB  | ISA |
| IBM    | TR900      | PnP TOKEN RING     | PCI |
|        | EN237      | ETHERNET 10MB      | PCI |
|        | EN374      | ETHERNET 100 MB    | PCI |
| INTEL  | PRO10+     | ETHERNET 10MB      | PCI |
|        | PCLA 8220B | ISA PnP TOKEN RING | ISA |
|        | E100B      | ETHERNET 100 MB    | PCI |
| OLICOM | OC-2183    | ETHERNET 10MB      | PCI |
|        | OC-2185    | ETHERNET 10MB      | PCI |
|        | OC-2325    | ETHERNET 100MB     | PCI |
|        | OC-3136    | TOKEN RING 4/16MB  | PCI |
| THOMAS | TC4048     | TOKEN RING         | PCI |
| D-Link | EZ2000P    | ETHERNET 10MB      | ISA |

### 8.2.5 FAX / Modem Products

#### Test Configuration:

**OS Ver**  Win 98 Ver: 4.10.1998  
**CPU** Intel Celeron 366MHz  Intel  
**Memory** Toshiba 64MB (TC59S6408FTL-80H) **Total: 64 MB**  PC66  PC100  
**VGA** Matrox Millennium G200 8MB SGRAM  PCI\_Slot:\_\_\_\_  AGP  
**HDD** Fujitsu MPA3043AT 4.3GB IDE  PIO4  UDMA/33  
**Channel:**  PM  PS  SM  SS  
**CD-ROM** Hitachi CDR-8430 32X IDE **Channel:**  PM  PS  SM  SS  
**Sound** Onboard Creative 1373  ISA\_Slot:\_\_\_  Onboard PCI  
**Mouse** Logitech MouseMan Mouse  COM  PS/2

The following External modem test includes connecting to the internet and download files under under Windows 98 with their respective modem drivers installed .

| Vendor   | Product Description    | Bus I/F  |
|----------|------------------------|----------|
| ADI      | CommuPack 56K SVD      | External |
| USR      | Sportster 56K Faxmodem | External |
| Motorola | VoiceSURFR 56K         | External |
| GVC      | 56K/K56 FLEX ASVD      | External |







### 8.3.2 IDE Fixed Disk Drive Products

#### Test Configuration:

**OS Ver**  Win 98 Ver: 4.10.1998 .  
 Win NT Ver: 4.0 .  
**CPU** Intel Celeron 433MHz  Intel  
**Memory** SEC 64MB (KM48S8030BT-GH) **Total: 128 MB**  PC66  PC100  
**CD-ROM** Panasonic CDR-587D 32X IDE **Channel:  PM  PS  SM  SS**  
**VGA** Diamond Viper V550 16MB SDRAM  PCI\_Slot: \_\_\_\_  AGP  
**Sound** Onboard Creative 1373  ISA\_Slot: \_\_\_\_  Onboard PCI  
**Mouse** Logitech First Mouse+ Mouse  COM  PS/2

The following IDE devices test HCT Stress and WinStone 99 under Windows 98/NT with High-Point IDE Bus Master drivers installed and set to the follow condition 1024 x 768 x 16bit colors, resolution refresh rate of 85Hz, small font.

| Vendor  | Model Name              | Mode         | Capacity |
|---------|-------------------------|--------------|----------|
| Maxtor  | Diamond 88400D8         | Ultra DMA 33 | 8.4GB    |
|         | Diamond 86480D6         | Ultra DMA 33 | 6.4GB    |
|         | Diamond 84320D4         | Ultra DMA 33 | 4.3GB    |
|         | Diamond 91000D8         | Ultra DMA 33 | 10.0GB   |
| Fujitsu | MPA3052AT               | Ultra DMA 33 | 5.2GB    |
|         | MPA3043AT               | Ultra DMA 33 | 4.3GB    |
|         | MPB3064AT               | Ultra DMA 33 | 6.4GB    |
|         | MPB3032AT               | Ultra DMA 33 | 3.2GB    |
|         | MPC3064AT               | Ultra DMA 33 | 6.4GB    |
|         | MPC3102AT               | Ultra DMA 33 | 10.2GB   |
| Quantum | Fireball SE             | Ultra DMA 33 | 4.3GB    |
|         | Fireball EL             | Ultra DMA 33 | 5.1GB    |
|         | Fireball EX             | Ultra DMA 33 | 6.4GB    |
|         | Fireball EX             | Ultra DMA 33 | 12.7GB   |
|         | Bigboot TX              | Ultra DMA 33 | 4.0GB    |
|         | Bigboot TX              | Ultra DMA 33 | 12.0GB   |
| Seagate | Medialist pro ST-34342A | Ultra DMA 33 | 4.3GB    |
|         | Medialist pro ST-39140A | Ultra DMA 33 | 9.1GB    |
|         | Medialist pro ST-36530A | Ultra DMA 33 | 6.5GB    |
| WD      | Caviar AC36400          | Ultra DMA 33 | 6.4GB    |
|         | Caviar AC38400          | Ultra DMA 33 | 8.4GB    |
| IBM     | DTTA-371010             | Ultra DMA 33 | 10.1GB   |



### 8.3.3 Floppy Disk Drive Products

#### Test Configuration:

**OS Ver**  Win 98 Ver: 4.10.1998 .  
 Win NT Ver: 4.0 .  
**CPU** Intel Celeron 366MHz  Intel  
**Memory** Toshiba 64MB (TC59S6408FTL-80H) Total: 64 MB  PC66  PC100  
**VGA** Diamond Stealth II G460 8MB SDRAM  PCI\_Slot:\_\_\_\_.  AGP  
**HDD** Quantum Bigfoot TX 4300A 4.3GB IDE  PIO4  UDMA/33  
Channel:  PM  PS  SM  SS  
**CD-ROM** Pioneer DR-502S 24X IDE Channel:  PM  PS  SM  SS  
**Sound** Onboard Creative 1373  ISA\_Slot:\_\_\_\_.  Onboard PCI  
**Mouse** Logitech MouseMan Mouse  COM  PS/2

The following Floppy devices were tested by format disk, boot and read/write file under under Windows 98/NT with High-Point IDE Bus Master drivers installed .

| Vendor    | Model Name | Product Description       |
|-----------|------------|---------------------------|
| Mitsumi   | D359T3     | 1.44MB Floppy Disk Drive  |
| Panasonic | JU-257     | 1.44 MB Floppy Disk Drive |
| TEAC      | FD-235HG   | 1.44 MB Floppy Disk Drive |

### 8.3.4 ATAPI CD-ROM /DVD-ROM Device Product

#### Test Configuration:

**OS Ver**  Win 95 Ver: SR2 2.5 .  
 Win 98 Ver: 4.10.1998 .  
**CPU** Intel Celeron 433MHz  Intel  
**Memory** Mitsubishi 32MB (M5M4V16S30DTP) Total: 64 MB  PC66  PC100  
**HDD** Fujitsu MPC3064AT 6.4GB IDE  PIO4  UDMA/33  
Channel:  PM  PS  SM  SS  
**VGA** ASU AGP-V3000ZXTV 8MB SDRAM  PCI\_Slot:\_\_\_\_.  AGP  
**Sound** Onboard Creative 1373  ISA\_Slot:\_\_\_\_.  Onboard PCI  
**Mouse** Logitech First Mouse+ Mouse  COM  PS/2

The following IDE devices test HCT Stress and play VCD over night under Windows 95/98 with High-Point IDE Bus Master drivers installed and set to the follow condition 1024 x 768 x 16bit colors, resolution refresh rate of 85Hz, small font.



| Vendor     | Model Name  | Product Description     |
|------------|-------------|-------------------------|
| Panasonic  | CR-587-D    | ATAPI CD-ROM 32X Mode4  |
|            | SR-8582-B   | ATAPI DVD-ROM 2X        |
| Mitsumi    | CRMC-FX240S | ATAPI CD-ROM 24X Mode4  |
|            | CRMC-FX320S | ATAPI CD-ROM 32X Mode4  |
| NEC        | CDR-1800A   | ATAPI CD-ROM 24X Mode4  |
|            | CDR-1900A   | ATAPI CD-ROM 32X Mode4  |
| Torisan    | CDR-S112    | ATAPI CD-ROM 12X        |
|            | CDR-S240    | ATAPI CD-ROM 24X Mode3  |
| Wearnes    | CDS-32X     | ATAPI CD-ROM 32X Mode4  |
| Toshiba    | SD-M1002    | ATAPI DVD-ROM 2X        |
| Acer       | 632A        | ATAPI CD-ROM 32X UDMA2  |
| LITE-ON    | LTN-301     | ATAPI CD-ROM 32X UDMA2  |
|            | LTN-302     | ATAPI CD-ROM 32X UDMA2  |
| Hitachi    | CDR-8430    | ATAPI CD-ROM 32X Mode4  |
| Cyberdrive | 120D        | ATAPI CD-ROM 12X Mode3  |
| Philips    | PCA323CD    | ATAPI CD-ROM 32X UDMA2  |
| Creative   | CD2421E     | ATAPI CD-ROM 24X Mode4  |
|            | SR-8581-B   | ATAPI DVD-ROM 2X        |
| Vuego      | 624A-304    | ATAPI CD-ROM 24X Mode4  |
| TEAC       | CD-524EA    | ATAPI CD-ROM 24X Mode3  |
|            | CD-532EA    | ATAPI CD-ROM 32X Mode3  |
| Pioneer    | DR-502S     | ATAPI CD-ROM 24X Mode4  |
|            | DVD-102     | ATAPI DVD-ROM 2.6X      |
| BTC        | BCD 32X     | ATAPI CD-ROM 32X UDMA2  |
|            | BCD 40XH    | ATAPI CD-ROM 40X UDMAc4 |

### 8.3.5 ATAPI Disk Drive (IDE Interface)

#### Test Configuration:

OS Ver  MS-DOS Ver: 6.22  
 Win 98 Ver: 4.10.1998

CPU Intel Celeron 400MHz  Intel

Memory SIEMENS 64MB (HYB39S64800AT-8) Total: **64 MB**  PC66  PC100

VGA SiS 6326 Daytona 3D 4MB SGRAM  PCI Slot:       AGP

HDD WD Caviar AC38400 8.4GB IDE  PIO4  UDMA/33

Channel:  PM  PS  SM  SS

CD-ROM TEAC CD-532EA 32X IDE

Channel:  PM  PS  SM  SS



**Sound** Onboard Creative 1373       ISA\_Slot:\_\_\_  Onboard PCI  
**Mouse** Logitech First Mouse+ Mouse       COM  PS/2

The following Floppy devices were tested by format disk, boot and read/write file (large file) under DOS 6.22/Windows 98 with High-Point IDE Bus Master drivers installed .

| Vendor     | Product Description           |
|------------|-------------------------------|
| Mitsubishi | MF357G-111MA LSA-120          |
| Panasonic  | LKM-F434-105 LS-120           |
| Zip        | Z100 Zip IDE DRIVE 29ms 100MB |

## 8.4 Peripherals

### 8.4.1 Parallel/Serial Port Products (Including IR)

#### Test Configuration:

**OS Ver**  Win 95 Ver: SR2 2.5 .  
 Win 98 Ver: 4.10.1998 .

**CPU** Intel Celeron 433MHz       Intel

**Memory** Fujitsu 32MB (81F16822D-102LFN)      Total: 64 MB  PC66  PC100

**HDD** Quantum Fireball ST 6.4AT 6.4GB IDE       PIO4  UDMA/33  
Channel:  PM  PS  SM  SS

**CD-ROM** NEC CDR-1900A 32X IDE      Channel:  PM  PS  SM  SS

**VGA** UPMOST UP385TV 4MB SGRAM       PCI\_Slot:\_\_\_  AGP

**Sound** Onboard Creative 1373       ISA\_Slot:\_\_\_  Onboard PCI

**Mouse** Logitech TrackMan Marble Mouse       COM  PS/2

The following Parallel/Serial devices be tested under Windows 95/98 with High-Point IDE Bus Master drivers installed.

| Vendor      | Model Name      | Product Description                  | Bus I/F |
|-------------|-----------------|--------------------------------------|---------|
| HP          | LaserJet III    | HP LaserJet III                      | LPT     |
|             | LaserJet 6P     | HP LaserJet 6P support IR Interface  | LPT     |
| Mustek      | 1200CP          | Mustek 1200CP Scanner                | LPT     |
| Parallel    | Universal Cable | DirectParallel universal cable       | LPT     |
| Road Runner | Express T305    | External Parallel Port Tape Backup   | LPT     |
|             | Express FD144   | External Parallel Port Floppy Drive  | LPT     |
|             | Express CD-4X   | External Parallel Port CD-ROM Driver | LPT     |
|             | Express XD      | External Parallel Port Hard Driver   | LPT     |
| Actisys     | ACT-IR210L      | InfraRed Computer Link               | COM(IR) |



|       |       |                                     |         |
|-------|-------|-------------------------------------|---------|
| Kodak | DC210 | InfraRed/Serial port Digital camera | COM(IR) |
|-------|-------|-------------------------------------|---------|

#### 8.4.2 Mouse Products

##### Test Configuration:

**OS Ver**  Win 95 Ver: SR2 2.5 .  
 Win 98 Ver: 4.10.1998 .  
**CPU** Intel Celeron 366MHz  Intel  
**Memory** Apacer 32MB (AM2V168A1T8) **Total: 64 MB**  PC66  PC100  
**HDD** Seagate ST-36530A 6.5GB IDE  PIO4  UDMA/33  
**CD-ROM** NEC CDR-1900A 32X IDE **Channel:  PM  PS  SM  SS**  
**VGA** ATI Rage pro Turbo 8MB SGRAM **Channel:  PM  PS  SM  SS**  
**Sound** Onboard Creative 1373  **PCI\_Slot:\_\_\_\_.  AGP**  
 ISA\_Slot:\_\_\_\_.  Onboard PCI

The following Mouse devices test Office 97 and Game under Windows 95/98 with Mouse drivers installed.

| Vendor    | Model Name      | Product Description                          | Bus I/F     |
|-----------|-----------------|--|-------------|
| Microsoft | Microsoft Mouse | Microsoft IntelliMouse Serial - PS/2 Mouse   | Serial/ PS2 |
| Logitech  | MouseMan        | Logitech MouseMan Serial - PS/2 Mouse        | Serial/ PS2 |
|           | First Mouse+    | Logitech First Mouse+ Serial - PS/2 Mouse    | Serial/ PS2 |
|           | TrackMan Marble | Logitech TrackMan Marble Serial - PS/2 Mouse | Serial/ PS2 |
| Qtronix   | Lynx-25P        | PS/2 Compatible Mouse                        | PS/2        |
|           | Lynx-25S        | Serial Mouse                                 | Serial      |

#### 8.4.3 USB Device Products

##### Test Configuration:

**OS Ver**  Win 98 Ver: 4.10.1998 .  
**CPU** Intel Celeron 400MHz  Intel  
**Memory** Mitsubishi 32MB (M5M4V16S30DTP) **Total: 64 MB**  PC66  PC100  
**HDD** Seagate ST-34342A 4.3GB IDE  PIO4  UDMA/33  
**CD-ROM** TEAC CD-532EA 32X IDE **Channel:  PM  PS  SM  SS**  
**VGA** ATI Rage pro 4MB SGRAM **Channel:  PM  PS  SM  SS**  
 PCI\_Slot:\_\_\_\_.  AGP



**Sound** Onboard Creative 1373       ISA\_Slot:\_\_\_\_  Onboard PCI  
**Mouse** Microsoft IntelliMouse Mouse       COM  PS/2

The following USB devices be tested under Windows 98 with Win 98 default driver installed.

| Type     | Vendor       | Description        |
|----------|--------------|--------------------|
| Mouse    | Logitech     | M-UA35             |
|          | DEXIN        | MA2R               |
|          | Cypress      | 7-895 Mouse        |
|          | Genius       |                    |
| HUB      | Belkin       | Express Bus F5U001 |
| Camera   | Kodak        | DVC323             |
|          | AXIS         | PCAM-QU            |
| Faxmodem | USRobotics   | 56K Voice Faxmodem |
| Keyboard | Silitek      |                    |
|          | Chicony      | KU-8933            |
| Printer  | EPSON        | Stylus Color 740   |
| Ethernet | CATC         | USB Ethernet Link  |
| Speaker  | Philips      | MAGNAVOX DSS350    |
| Joystick | Genius       | Flight2000 F-22X   |
|          | Thrustmaster | TOP Gun            |

#### 8.4.4 Joystick & Game Pad

##### Test Configuration:

**OS Ver**  Win 98 Ver: 4.10.1998  
**CPU** Intel Celeron 366MHz       Intel  
**Memory** SIEMENS 32MB (HYB39S64160AT-8) **Total: 64 MB**  PC66  PC100  
**HDD** Maxtor 86480D6 6.4GB IDE       PIO4  UDMA/33  
**CD-ROM** Vuego 624A-304 24X IDE      Channel:  PM  PS  SM  SS  
**VGA** ELSA ERAZOR II 16MB SDRAM      Channel:  PM  PS  SM  SS  
**Sound** Onboard Creative 1373       PCI\_Slot:\_\_\_\_  AGP  
**Mouse** Microsoft IntelliMouse Mouse       ISA\_Slot:\_\_\_\_  Onboard PCI  
 COM  PS/2

The following Joystick & Game Pad devices test Game under Windows 98 with themselves default driver installed.

| Vendor    | Product Description                    |
|-----------|--|
| Microsoft | SideWinder 3D Pro joystick             |
|           | SideWinder force feedback pro joystick |



|            |   |
|------------|---|
| Gravis     | Game Pad Pro                                  |
| Logitech   | Wing Man Extreme digital joystick             |
|            | CyberMan 2 Game Pad                           |
| PHAZER PAD | Advanced Digital Gamepad for DOS & Windows 95 |

### 8.5 Power Supply Products

The following Power Supply devices test power On/Off 10 times in the Chamber .

| Vendor    | Model Name  | Product Description          |
|-----------|-------------|------------------------------|
| HIPRO     | HP-200NLXAG | 200W ATX Remote Power Supply |
|           | HP-200NLXAA | 200W ATX Remote Power Supply |
|           | HP-200ATXAG | 200W ATX Remote Power Supply |
| Leadman   | LP-6100ATX  | 250W ATX Remote Power Supply |
| Sea Sonic | SSG-200GTX  | 200W ATX Remote Power Supply |
| Tiger     | TG-2006-B   | 200W ATX Remote Power Supply |
|           | TG-2007-B   | 200W ATX Remote Power Supply |
| YHI       | YS-6200DJ   | 200W ATX Remote Power Supply |

### 8.6 DVD DEVICE Products

#### Test Configuration:

OS Ver  Win 95 Ver: SR 2.5  
 Win 98 Ver: 4.10.1998

CPU Intel Celeron 400MHz  Intel

Memory Mitsubishi 32MB (M5M4V16S30DTP) Total: 64 MB  PC66  PC100

HDD IBM DTTA-371010 10.0GB  PIO4  UDMA/33  
Channel:  PM  PS  SM  SS

VGA ATI Rage pro Turbo 8MB SGRAM  PCI\_Slot:       AGP

Sound Onboard Creative 1373  ISA\_Slot:       Onboard PCI

Mouse Microsoft IntelliMouse Mouse  COM  PS/2

The following DVD Kit play DVD over night under Windows 95/98 with their respective DVD drivers installed and set to the follow condition 1024 x 768 x 16bit colors, resolution refresh rate of 85Hz, small font.

| Vendor   | Model Name  | Product Description   | Interface |
|----------|-------------|---|-----------|
| Creative | MK5000      | Creative PC-DVD Kit<br>Include MATSUSHITA SR-8581-B DVD-ROM and LK-MAEP391A1 MPEG-2/Dolby Digital Decoder Board | PCI       |
| Toshiba  | Toshiba DVD | Toshiba PC-DVD Kit<br>Include Toshiba SD-M1002 DVD-ROM and CINEMASTER MPEG-2/Dolby Digital DVD Board            | PCI       |



## 9. Software Compatibility Test Suite

### 9.1 Base Operating System

#### 9.1.1 *Microsoft MS-DOS/Win 3.1:*

##### Test Configuration:

**CPU** Intel Celeron 366MHz  
**Memory** Apacer 64MB (GM72V66841CT7J)  
**HDD** Quantum Fireball EX 6.4GB IDE  
  
**VGA** ATI Rage pro 8MB SGDRAM  
**Sound** Onboard Creative 1373  
**CD-ROM** TEAC CD-524EA 24X IDE  
**Mouse** Logitech TrackMan Marble Mouse

Intel  
**Total: 128 MB**  PC66  PC100  
 PIO4  UDMA/33  
**Channel:**  PM  PS  SM  SS  
 PCI\_Slot:\_\_\_\_  AGP  
 ISA\_Slot:\_\_\_\_  Onboard PCI  
**Channel:**  PM  PS  SM  SS  
 COM  PS/2

| Test Item   | Result | Remark |
|---|--------|--------|
| <b>FDISK (FAT16)</b>                                | PASS   |        |
| <b>Install DOS</b>                                  | PASS   |        |
| <b>Format FDD</b>                                   | PASS   |        |
| <b>Format HDD</b>                                   | PASS   |        |
| <b>Boot from FDD</b>                                | PASS   |        |
| <b>Boot from HDD</b>                                | PASS   |        |
| <b>HIMEM</b>  | PASS   |        |
| <b>EMM386</b>                                       | PASS   |        |
| <b>XCOPY</b>  | PASS   |        |
| <b>Diskcopy</b>                                     | PASS   |        |
| <b>Power.exe</b>                                    | PASS   |        |
| <b>USB Keyboard working (Only)</b>                  | PASS   |        |
| <b>Install Windows 3.1</b>                          | PASS   |        |
| <b>Qaplus 5.52 for DOS</b>                          | PASS   |        |
| <b>Check It 5.01 for DOS</b>                        | PASS   |        |
| <b>Norton Utility 8.0 for DOS/Win 3.1 (Sysinfo)</b> | PASS   |        |
| <b>AMIDdiag 5.42a</b>                               | PASS   |        |
| <b>Speedcom</b>                                     | PASS   |        |
| <b>Speedy for Win 3.1</b>                           | PASS   |        |
| <b>ICU 1.43 test</b>                                | PASS   |        |
| <b>NSTL Y2K tools test</b>                          | PASS   |        |
| <b>PM function (H/W &amp; BIOS)</b>                 | PASS   |        |





|   |      |  |
|---|------|--|
| <b>LS-120/ZIP install &amp; working</b>             | PASS |  |
| <b>GAME play (name: Mech Warrior 2 Mercenaries)</b> | PASS |  |

The board is tested to ensure that it runs a complete a range of Operating Systems and thus operate in all network environments The board Power Management and Remote functions are also tested.

| Operating System       | Version | Language | Company   | Status |
|------------------------|---------|----------|-----------|--------|
| MS DOS                 | 6.22    | English  | Microsoft | Pass   |
| Windows for Workgroups | 3.11    | English  | Microsoft | Pass   |

**9.1.2 Microsoft Windows 95/98:**

**Test Configuration:**

**CPU** Intel Celeron 433MHz  Intel  
**Memory** Fujitsu 64MB (81F64842B-103FN) **Total: 128 MB**  PC66  PC100  
**HDD** Maxtor Diamond 86480D6 6.4GB IDE  PIO4  UDMA/33  
**VGA** Diamond Viper V550 16MB SDRAM **Channel:**  PM  PS  SM  SS  
 PCI\_Slot:\_\_\_\_.  AGP  
**Sound** Onboard Creative 1373  ISA\_Slot:\_\_\_\_.  Onboard PCI  
**CD-ROM** Pioneer DR-502S 24X IDE **Channel:**  PM  PS  SM  SS  
**Mouse** Microsoft IntelliMouse Mouse  COM  PS/2

| Test Item  | Result | Remark |
|--|--------|--------|
| <b>FDISK (FAT32)</b>                                       | PASS   |        |
| <b>Install Win 98</b>                                      | PASS   |        |
| <b>Format FDD</b>  | PASS   |        |
| <b>Diskcopy</b>  | PASS   |        |
| <b>Large file Copy</b>                                     | PASS   |        |
| <b>USB device test</b>                                     | PASS   |        |
| <b>Trend Anti-Virus Install &amp; Test</b>                 | PASS   |        |
| <b>LDCM Install &amp; Test (LDCM Ver: <u>3.30</u> )</b>    | PASS   |        |
| <b>Device Management check (No Caution)</b>                | PASS   |        |
| <b>Sound/VGA/LAN IRQ change (PnP function)</b>             | PASS   |        |
| <b>VGA Resolution/Color change</b>                         | PASS   |        |
| <b>Install Office 97</b>                                   | PASS   |        |
| <b>Auto Shutdown (system power off)</b>                    | PASS   |        |
| <b>Defrag test</b>   | PASS   |        |
| <b>LS-120/ZIP install &amp; working</b>                    | PASS   |        |
| <b>Norton Utility 3.0</b>                                  | PASS   |        |
| <b>CheckIt 98</b>  | PASS   |        |
| <b>Qaplus 7.1 for Win 98</b>                               | PASS   |        |
| <b>Year 2000 test</b>                                      | PASS   |        |
| <b>DVD Video CD play (name: <b>BATMAN &amp; ROBIN</b>)</b> | PASS   |        |
| <b>Video CD play (name: <u>TOP GUN</u> )</b>               | PASS   |        |



|  |      |  |
|--|------|--|
| ACPI test (HCT 8.0)                      | PASS |  |
| Drive Converter (FAT32)                  | PASS |  |
| PM function by WIN98 (H/W )              | PASS |  |
| GAME play (name: <u>TOMB RAIDER II</u> ) | PASS |  |
| WinStone 98/99                           | PASS |  |
| WinBench 98/99                           | PASS |  |
| 3D Winbench 98/99                        | PASS |  |

The board is tested to ensure that it runs a complete a range of Operating Systems and thus operate in all network environments The board Power Management and Remote functions are also tested.

| Operating System     | Version | Language      | Company   | Status |
|----------------------|---------|---------------|-----------|--------|
| MS Windows 95 OSR2.5 | 950C    | English       | Microsoft | Pass   |
|                      | 4.0a    | Japanese      | Microsoft | Pass   |
|                      | 950C    | German        | Microsoft | Pass   |
|                      | 950C    | French        | Microsoft | Pass   |
|                      | 950C    | Chinese       | Microsoft | Pass   |
| MS Windows 98        | 1998    | English       | Microsoft | Pass   |
| MS Windows 98 OEM    | 1998    | German        | Microsoft | Pass   |
|                      | 1998    | Japanese      | Microsoft | Pass   |
|                      | 1998    | French        | Microsoft | Pass   |
|                      | 1998    | Chinese(trad) | Microsoft | Pass   |
|                      | 1998    | Chinese(simp) | Microsoft | Pass   |

**9.1.3 Microsoft Windows NT 4.0:**

**Test Configuration:**

**CPU** Intel Celeron 433MHz  Intel  
**Memory** SEC 32MB (KM48S8030BT-GH) **Total: 64 MB**  PC66  PC100  
**HDD** Seagate ST-36530A 6.5GB IDE  PIO4  UDMA/33  
**VGA** Matrox Millennium G200 8MB SGRAM  PCI\_Slot:\_\_\_\_  AGP  
**Sound** Onboard Creative 1373  ISA\_Slot:\_\_\_\_  Onboard PCI  
**CD-ROM** Mitsumi CRMC-FX320S 32X IDE **Channel:**  PM  PS  SM  SS  
**Mouse** Logitech Mouse+ Mouse  COM  PS/2

| Test Item                    | Result | Remark |
|------------------------------|--------|--------|
| Install Win NT (NTFS/FAT)    | PASS   |        |
| Format FDD                   | PASS   |        |
| Diskcopy                     | PASS   |        |
| IDE Bus Master install       | PASS   |        |
| VGA Resolution/Color change  | PASS   |        |
| Shutdown                     | PASS   |        |
| Shutdown & Restart           | PASS   |        |
| LS-120/ZIP install & working | PASS   |        |
| Year 2000 test               | PASS   |        |



|                                  |      |  |
|----------------------------------|------|--|
| WinStone 98                      | PASS |  |
| WinBench 98                      | PASS |  |
| BAPCO for Win NT 4.0 (SYSmark32) | PASS |  |
| HCT 8.0 Stress test              | PASS |  |
| PM function (H/W & BIOS)         | PASS |  |

The board is tested to ensure that it runs a complete a range of Operating Systems and thus operate in all network environments The board Power Management and Remote functions are also tested.

| Operating System                    | Version | Language | Company   | Status |
|-------------------------------------|---------|----------|-----------|--------|
| Windows NT Advance Server           | 3.51    | English  | Microsoft | Pass   |
| Windows NT Workstation              | 3.51    | English  | Microsoft | Pass   |
| Windows NT Workstation              | 4.0     | English  | Microsoft | Pass   |
|                                     | 4.0     | Japanese | Microsoft | Pass   |
|                                     | 4.0     | German   | Microsoft | Pass   |
|                                     | 4.0     | French   | Microsoft | Pass   |
|                                     | 4.0     | Chinese  | Microsoft | Pass   |
| Windows NT Server                   | 4.0     | English  | Microsoft | Pass   |
|                                     | 4.0     | Japanese | Microsoft | Pass   |
|                                     | 4.0     | Chinese  | Microsoft | Pass   |
| Windows NT Workstation Service Pack | 3.0     | English  | Microsoft | Pass   |

**9.1.4 IBM OS/2 3.0/4.0:**

**Test Configuration:**

|               |                                 |  |
|---------------|---------------------------------|--|
| <b>CPU</b>    | Intel Celeron 400MHz            | <input checked="" type="checkbox"/> Intel  |
| <b>Memory</b> | Toshiba 64MB (TC59S6408FTL-80H) | <b>Total: 64 MB</b> <input type="checkbox"/> PC66 <input checked="" type="checkbox"/> PC100  |
| <b>HDD</b>    | WD Caviar AC38400 8.4GB IDE     | <input type="checkbox"/> PIO4 <input checked="" type="checkbox"/> UDMA/33  |
| <b>VGA</b>    | ATI Rage pro Turbo 8MB SGRAM    | <b>Channel:</b> <input checked="" type="checkbox"/> PM <input type="checkbox"/> PS <input type="checkbox"/> SM <input type="checkbox"/> SS |
| <b>Sound</b>  | Onboard Creative 1373           | <input type="checkbox"/> PCI_Slot:____. <input checked="" type="checkbox"/> AGP  |
| <b>CD-ROM</b> | Philips PCA323CD 32X IDE        | <input type="checkbox"/> ISA_Slot:____. <input checked="" type="checkbox"/> Onboard PCI  |
| <b>Mouse</b>  | Logitech Mouse+ Mouse           | <b>Channel:</b> <input type="checkbox"/> PM <input type="checkbox"/> PS <input checked="" type="checkbox"/> SM <input type="checkbox"/> SS |
|               |                                 | <input type="checkbox"/> COM <input checked="" type="checkbox"/> PS/2  |

| Test Item                   | Result | Remark |
|-----------------------------|--------|--------|
| Install OS/2 (HPFS)         | PASS   |        |
| Format FDD                  | PASS   |        |
| XCOPY                       | PASS   |        |
| Diskcopy                    | PASS   |        |
| VGA Resolution/Color change | PASS   |        |
| DOS Windows                 | PASS   |        |



|                                     |      |  |
|-------------------------------------|------|--|
| <b>OS/2 Windows</b>                 | PASS |  |
| <b>Boot from A: feature ready</b>   | PASS |  |
| <b>Stress test</b>                  | PASS |  |
| <b>PM function (H/W &amp; BIOS)</b> | PASS |  |

The board is tested to ensure that it runs a complete a range of Operating Systems and thus operate in all network environments The board Power Management and Remote functions are also tested.

| <b>Operating System</b> | <b>Version</b> | <b>Language</b> | <b>Company</b> | <b>Status</b> |
|-------------------------|----------------|-----------------|----------------|---------------|
| IBM OS/2 Warp           | 4.0            | English         | IBM            | Pass          |
|                         | 3.0            | English         | IBM            | Pass          |

## 9.2 Software Applications

| <b>Item</b>   | <b>Descriptions</b>        | <b>Version</b> | <b>O.S.</b> | <b>Language</b> | <b>Status</b> |
|---------------|----------------------------|----------------|-------------|-----------------|---------------|
| Suites        | Lotus SMART Suites 96      | 1.0            | Windows 95  | English         | Pass          |
|               | MS Work for Windows        | 3.0            | Windows     | English         | Pass          |
|               | MS Work for Windows95      | 4.0            | Windows 95  | English         | Pass          |
|               | MS Office for Windows      | 4.3            | Windows     | English         | Pass          |
|               | MS Office for Windows      | 4.3            | Windows     | Chinese         | Pass          |
|               | MS Office 97 for Windows95 | 7.0            | Windows 95  | English         | Pass          |
| WordProcessor | AMI Pro for Windows        | 3.1            | Windows     | English         | Pass          |
|               | Word Pro for Windows96     |                | Windows     | Chinese         | Pass          |
|               | MS Word for Windows        | 6.0            | Windows     | English         | Pass          |
|               | MS Word for Windows        | 6.0            | Windows     | Chinese         | Pass          |
|               | Word Prefect for Windows   | 6.0            | Windows     | English         | Pass          |
|               | WordPerfect                | 6.0            | Windows     | English         | Pass          |
|               | MS Office 97               | 7.0            | Windows     | English         | Pass          |
| Communication | cc: Mail/Add-on            |                | Windows     | English         | Pass          |
|               | BITWare                    | 3.30           | Windows 95  | English         | Pass          |
|               | Delrina CommSuite          | 1.0            | Windows 95  | English         | Pass          |
|               | WinFAX Pro for Win 95      | 4.0            | Windows 95  | English         | Pass          |
|               | LapLink                    | 7.0A           | Windows 95  | English         | Pass          |
|               | Norton Anywhere            | 1.0            | Windows     | English         | Pass          |
| CAD           | 3D Disign Plus             | 2.0            | Windows     | English         | Pass          |
|               | AutoCAD                    | R13            | Windows 95  | English         | Pass          |
|               | 3D Studio                  | 4.0            | DOS         | English         | Pass          |
|               | Micro Station              | 5.0            | Windows     | English         | Pass          |
| Database      | Approach 96                | 1.0            | Windows 95  | English         | Pass          |
|               | Lotus Notes                | 4.0            | Windows 95  | English         | Pass          |
|               | Borland Visual Dbase       | 5.5            | Windows 95  | English         | Pass          |
|               | Visual Foxpro              | 3.0A           | Windows 95  | English         | Pass          |
|               | Visual dBASE Compiler      | 5.5            | Windows 95  | English         | Pass          |



|                      |                              |       |               |         |      |
|----------------------|------------------------------|-------|---------------|---------|------|
|                      | FoxBase Microsoft            | 2.1   | Windows       | English | Pass |
|                      | FoxPro Microsoft             | 6.0   | Windows       | English | Pass |
| Graphics             | Corel Draw                   | 6.0   | Windows 95    | English | Pass |
|                      | Fractul Design Painter       | 4.0   | Windows 95    | English | Pass |
|                      | Windows Draw                 | 3.0   | Windows       | English | Pass |
|                      | MS PowerPoint                | 4.0   | Windows       | English | Pass |
|                      | Pagemaker                    | 6.5   | Windows 95    | English | Pass |
|                      | Visio HOME                   | 4.0   | Windows 95    | English | Pass |
|                      | Photo Shop Pro               | 3.05  | Windows 95    | English | Pass |
| Presentation Program | MS PowerPoint                | 7.0   | Windows 95    | English | Pass |
|                      | MS Visual Basic              | 4.0   | Windows 95    | English | Pass |
|                      | MS Visual C++                | 4.0   | Windows 95    | English | Pass |
|                      | Borland C++                  | 4.0   | Windows       | English | Pass |
|                      | Borland C++                  | 5.0   | Windows 95    | English | Pass |
|                      | Turbo C++                    | 3.1   | Windows       | English | Pass |
|                      | Borland Delphi               | 2.0   | Windows 95    | English | Pass |
| Diagnostic Program   | Bapco95 for Win NT           | 4.0   | Windows NT    | English | Pass |
|                      | ZD 3D Winbench 98/99         | 1.0   | Windows 95/98 | English | Pass |
|                      | PC Magazine Winstone 98/99   | 1.0   | Windows 95/98 | English | Pass |
|                      | Speed for Win95              | 3.0   | Windows       | English | Pass |
|                      | QAPLUS                       | 5.52  | DOS           | English | Pass |
|                      | QAPLUS                       | 7.01  | Windows 95/98 | English | Pass |
|                      | Landmark(Speedcom)           | 2.0   | DOS           | English | Pass |
|                      | Check IT Pro                 | 5.01  | Windows 95/98 | English | Pass |
|                      | CheckIt 98                   |       | Windows 95/98 | English | Pass |
|                      | Intel LANDesk Client Manager | 3.0   | Win95/Win NT  | English | Pass |
| Tools                | AfterDark for Win95          | 3.0   | Windows 95    | English | Pass |
|                      | Xing Soft MPEG Player        | 3.2   | Windows 95    | English | Pass |
|                      | Norton Commander             | 5.04  | DOS           | English | Pass |
|                      | Norton Desktop               | 3.0   | Windows       | English | Pass |
|                      | Norton Utility               | 3.0   | Windows 95    | English | Pass |
|                      | QEMM386                      | 8.00  | Windows 95    | English | Pass |
| TimeManagement       | MS Project                   | 4.1   | Windows 95    | English | Pass |
|                      | Organizer                    | 2.1T  | Windows       | Chinese | Pass |
| Scan                 | PC-cillin 97                 | 3.0   | Windows 95    | English | Pass |
|                      | PC-cillin 98                 | 4.021 | Windows 95/98 | English | Pass |
|                      | Norton Antivirus             | 5.0   | Windows 95/98 | English | Pass |
| Internet             | Winsock                      | 1.0   | Windows 95    | English | Pass |
|                      | Netscape                     | 3.01  | Windows 95    | English | Pass |
|                      | Internet Explore             | 4.0   | Windows 95    | English | Pass |
| CD Title Game        | 3D Ultra Pin Ball            | 1.0   | Windows 95    | English | Pass |
|                      | Duke Nukem 3D                | 1.0   | DOS           | English | Pass |
|                      | Toy Story                    | 1.0   | Windows       | English | Pass |
|                      | Mech Warrior2                | 1.0   | Windows 95    | English | Pass |
|                      | AH-64D longbow               | 1.0   | DOS           | English | Pass |



|  |                       |               |         |      |
|--|-----------------------|---------------|---------|------|
| NFL Football Trivia Challenge          | 1.0                   | DOS           | English | Pass |
| Wing Commander III                     | 4.0                   | DOS           | English | Pass |
| MYST                                   | 1.0                   | Windows 95    | English | Pass |
| Indy Car II Racing                     | 1.0                   | DOS           | English | Pass |
| International Tennis Open              | 1.0                   | DOS           | English | Pass |
| Escape from Cyber City                 | 1.0                   | DOS           | English | Pass |
| HAVOC                                  | 1.0                   | Window 95     | English | Pass |
| Flight Unlimited                       | 1.0                   | DOS (CD)      | Chinese | Pass |
| Poker Cowboy Casino MPEG Version       | 1.0                   | Window 95     | English | Pass |
| MDK (Exclusive North American Version) | 1.0                   | Window 95     | English | Pass |
| Master of Orion II Battle at Antares   | 1.0                   | Window 95     | English | Pass |
| The Lion King                          | 1.0                   | Window 95     | English | Pass |
| DIABLO BLIZZARD (CD)                   |                       | Win95 / NT4.0 | English | Pass |
| WARCRAFT II TIDES OF DARKNESS          |                       | DOS/WIN95     | English | Pass |
| DOOM II                                | 1.0                   | Window 95     | English | Pass |
| Command & Conquer Red Alert            |                       |               | English | Pass |
| Command & Conquer                      |                       |               | English | Pass |
| Broken & Word                          |                       |               | English | Pass |
| War Wind                               |                       | WIN95         | English | Pass |
| Magic 2 Carpet                         |                       |               | English | Pass |
| YAMARAJA                               |                       | Window 95     | English | Pass |
| TOMB RAIDER II                         |                       | Window 95     | English | Pass |
| Lands of Lore II                       |                       | Window 95     | English | Pass |
| The Magic School Bus                   |                       |               | English | Pass |
| Flight Simulator 98                    |                       | Window 95     | English | Pass |
| Dagger fall                            |                       | Window 95     | English | Pass |
| Sky NET                                |                       | Window 95     | English | Pass |
| THE NEED FOR SPEED SE                  |                       |               | English | Pass |
| Quake II                               |                       | Window 95     | English | Pass |
| Test Drive 4                           |                       | Window 95     | English | Pass |
| AGE of EMPIRES                         |                       | Window 95     | English | Pass |
| Mech Warrior 2 Mercenaries             |                       |               | English | Pass |
| Blood & Magic                          |                       | DOS/WIN95     | English | Pass |
| Wing Commander III                     |                       | DOS/WIN95     | English | Pass |
| Wing Commander IV                      |                       | Window 95     | English | Pass |
| Descent II                             |                       |               | English | Pass |
| TOMB Raider III                        |                       | Window 95/98  | English | Pass |
| AGE of EMPIRES(Expansion)              |                       | Window 95/98  | English | Pass |
| Moto Racer 2                           |                       | Window 95/98  | English | Pass |
| Need for Speed III                     |                       | Window 95/98  | English | Pass |
| Klingon Honor Gurd                     |                       | Window 95/98  | English | Pass |
| CD Title Multimedia                    | Cinderella            | Windows       | English | Pass |
|  | LivingBook GrandMa&Me | Windows       | English | Pass |
|  | Top Gun               | Windows       | English | Pass |
|  | Multimedia SuperPack  | Windows       | English | Pass |



|  |                                    |  |         |         |      |
|--|------------------------------------|--|---------|---------|------|
|  | Compton's Interactive Encyclopedia |  | Windows | English | Pass |
|  | Adams Family                       |  | Windows | English | Pass |
|  | Blank Rain                         |  | Windows | English | Pass |