

# AAEON

ISO-9001/ISO-14001 Certified  
Industrial Automation PCs

## **MB-568**

# **QE Compatibility Test Report**

**Release Date: Jun. 03, 1999**

---

**Issue Stamp**

---

**QA Manager**

---

**QE Manager**

---

**Test Engineer**

## Contents

|  |           |
|--|-----------|
| <b>1. Software compatibility</b> -----   | <b>3</b>  |
| Includes various OS and application software tests.                            |           |
| <b>2. Hardware compatibility</b> -----   | <b>6</b>  |
| Includes CPU, DRAM, adapter card and HDD compatibility tests.                  |           |
| <b>3. Stability</b> -----  | <b>9</b>  |
| Includes burn-in and booting tests.  |           |
| <b>4. Performance</b> -----  | <b>10</b> |
| Includes performance indexes using various performance test software programs. |           |
| <b>5. Power Consumption Data</b> -----   | <b>11</b> |
| Includes +5V current rate.   |           |
| <b>6. Margin</b> -----   | <b>12</b> |
| Includes temperature, DC voltage and IDE cable length tests.                   |           |

**There are 3 test results in this document; they are described as follows:**

**Pass:** It worked perfectly

**Fail:** Test failed, and to be modified in the next version

**N/A:** Outside of specifications or no test equipment

**The test report would be tested and updated after version changed.**

### **AAEON TECHNOLOGY INC.**

1F, No.6, Alley 6, Lane 45, Pao-Hsin Rd,

Shing-Tien City, Taipei, Taiwan, ROC

Tel: 886-29121234

Fax: 886-29130792

886-29130774

886-2-9130774

# 1. Software Compatibility

## A.O.S. Compatibility

| O.S. / Test Item | Install |      | Boot |      | Shutdown |      | Function |      | KB Function |      |
|------------------|---------|------|------|------|----------|------|----------|------|-------------|------|
|                  | Pass    | Fail | Pass | Fail | Pass     | Fail | Pass     | Fail | Pass        | Fail |
| MS-DOS 6.22      | ✓       |      | ✓    |      | ✓        |      | ✓        |      | ✓           |      |
|                  |         |      |      |      |          |      |          |      |             |      |

## B. Microsoft Windows Compatibility

| Wins / Test Item     | Install |      | Boot |      | Shutdown |      | Function |      | KB Function |      | Display Driver |      |
|----------------------|---------|------|------|------|----------|------|----------|------|-------------|------|----------------|------|
|                      | Pass    | Fail | Pass | Fail | Pass     | Fail | Pass     | Fail | Pass        | Fail | Pass           | Fail |
| Windows 95(E)        | ✓       |      | ✓    |      | ✓        |      | ✓        |      | ✓           |      | ✓              |      |
| Windows 98(E)        | ✓       |      | ✓    |      | ✓        |      | ✓        |      | ✓           |      | ✓              |      |
| Windows NT 4.0/ W(E) | ✓       |      | ✓    |      | ✓        |      | ✓        |      | ✓           |      | ✓              |      |
|                      |         |      |      |      |          |      |          |      |             |      |                |      |

## C. Windows Application

| Application / Test Item | Installation |      | Function Test |      |
|-------------------------|--------------|------|---------------|------|
|                         | Result       | Note | Result        | Note |
| AMI Pro 3.1             | Pass         |      | Pass          |      |
| MS Word 6.0c            | Pass         |      | Pass          |      |
| WordPerfect 6.1         | Pass         |      | Pass          |      |
| MS Works 3.0b           | Pass         |      | Pass          |      |
| Lotus 1-2-3 R5          | Pass         |      | Pass          |      |
| MS Excel 5.0c           | Pass         |      | Pass          |      |
| Quattro Pro 6.01        | Pass         |      | Pass          |      |
| PageMaker 5.0a          | Pass         |      | Pass          |      |
| CorelDraw 5.0E2         | Pass         |      | Pass          |      |
| PowerPoint 4.0c         | Pass         |      | Pass          |      |
| Dbase 5.0               | Pass         |      | Pass          |      |
| Paradox 5.0             | Pass         |      | Pass          |      |
| Access 2.0              | Pass         |      | Pass          |      |

## D.DOS Utility Compatibility Testing

| Application / Test Result | Result | Note |
|---------------------------|--------|------|
| Norton Utility 8.0        | Pass   |      |
| Norton Commander 5.0      | Pass   |      |
|                           |        |      |

**E. Diagnostics Software Testing**

| Test Item / Software | QAFE 5.4 |      | AMIDIAG 5.22 |      | Result | Fail |
|----------------------|----------|------|--------------|------|--------|------|
|                      | Result   | Fail | Result       | Fail |        |      |
| Main Component       | ✓        |      | ✓            |      |        |      |
| Memory               | ✓        |      |              | ✓    |        |      |
| Video Adapter        | ✓        |      |              | ✓    |        |      |
| Floppy Drive         | ✓        |      | ✓            |      |        |      |
| Hard Drive           | ✓        |      | ✓            |      |        |      |
| Keyboard             | ✓        |      | ✓            |      |        |      |
| COM Port             | ✓        |      |              | ✓    |        |      |
| LPT Port             | ✓        |      | ✓            |      |        |      |
| Plug & play          | ✓        |      | ✓            |      |        |      |

Note: 1. Memory refresh test error.  
 2.Video VESA monitor test error (DDC1 Protocol test Fail)  
 3.Misc serial port test COM4 error (Interrupt activation test failed at port 2ECH)

**F. N.O.S. & Application Software Compatibility (On\_Board Network)  
 System Information:**

|                                 |   |
|---------------------------------|---|
| DRAM Capacity & BRAND(SIMM Qty) | Brand:On board NEC D4564163G5-A10B-9JF <input type="checkbox"/> 16 <input checked="" type="checkbox"/> 32M<br>+NEC D4564163G5-A10B-9JF 128MB Qty: <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2    |
| SYSTEM BIOS Ver.                | <input checked="" type="checkbox"/> AWARD <input type="checkbox"/> AMI Ver: 4.51GP  |
| KB BIOS Version                 | <input type="checkbox"/> AMI- <input type="checkbox"/> VIA- <input checked="" type="checkbox"/> NS-PC97317  |
| BACKPLANE                       | <input type="checkbox"/> 05P2 <input type="checkbox"/> 08P3 <input type="checkbox"/> 14P3 <input type="checkbox"/> 03 <input type="checkbox"/> 08 <input type="checkbox"/> 14 <input checked="" type="checkbox"/> N/A |
| O.S. Environment                | <input type="checkbox"/> DOS5.0 <input type="checkbox"/> DOS6.0 <input checked="" type="checkbox"/> DOS6.22   |
| VGA Card & BIOS                 | <input checked="" type="checkbox"/> OnBoard Cyrix Gx BIOS: 2.08   |
| POWER SUPPLY                    | <input type="checkbox"/> MPU-250W <input checked="" type="checkbox"/> SSH-250G <input type="checkbox"/> SSH-350G <input type="checkbox"/> ST-250AF  |
| IDE HDD TYPE                    | <input type="checkbox"/> Max <input type="checkbox"/> Sea <input type="checkbox"/> Con <input checked="" type="checkbox"/> Qua <input type="checkbox"/> Fuj <input type="checkbox"/> IBM : 3240AT                     |
| SCSI HDD TYPE                   | <input type="checkbox"/> Max <input type="checkbox"/> Sea <input type="checkbox"/> Con <input type="checkbox"/> Qua <input type="checkbox"/> Fuj <input type="checkbox"/> IBM:  |
| LAN CARD                        | <input checked="" type="checkbox"/> OnBoard: RTL-8139   |
| CPU Type                        | Cyrix GXM 200MHz  |
| CD-ROM TYPE                     | <input type="checkbox"/> NEC <input type="checkbox"/> PANASONIC <input checked="" type="checkbox"/> PIONEER <input type="checkbox"/> CREATIVE : DR-A24X   |
| Driver or Utility               | <input checked="" type="checkbox"/> VGA <input type="checkbox"/> HDD <input checked="" type="checkbox"/> Others : RTL-8139  |

**Test Result:**

| SUBJECT                     | Workstation Application Function Testing |  |  |
|-----------------------------|--|--|--|
| Dos 6.22 for IPXODI         | ✓  |  |  |
| Dos 6.22 for package driver | ✓  |  |  |
| Windows 95 for IPX/SPX      | ✓  |  |  |
| Windows 95 for NetBEUI      | ✓  |  |  |
| Windows 95 for TCP/IP       | ✓  |  |  |
| Windows 98 for IPX/SPX      | ✓  |  |  |
| Windows 98 for NetBEUI      | ✓  |  |  |
| Windows 98 for TCP/IP       | ✓  |  |  |
| Windows NT 4.0 for IPX/SPX  | ✓  |  |  |
| Windows NT 4.0 for NetBEUI  | ✓  |  |  |
| Windows NT 4.0 for TCP/IP   | ✓  |  |  |

## G. Microsoft Windows 98(Hardware Compatibility Test)

### System Information:

|                                 |   |
|---------------------------------|---|
| CPU                             | Cyrix GXM 200MHz  |
| DRAM Capacity & BRAND(SIMM Qty) | On board NEC D4564163G5-A10B-9JF ----- <input type="checkbox"/> 16 <input checked="" type="checkbox"/> 32M<br>SDRAM NEC D4564841G5-A10-9JF 128MB --- <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 |
| KB BIOS Version                 | NS-PC97317  |
| Video Memory                    | 2560 shared memory  |
| VGA Card & BIOS                 | On Board : Cyrix GXM  |
| Keyboard TYPE                   | ACER 6511-TW1C/B  |
| IDE HDD TYPE                    | Seagate ST34520A  |
| FDD TYPE                        | TEAC FD-235HF   |
| Mouse                           | ACER 6511-TW1C/B  |
| LAN CARD                        | On Board : RTL-8139A  |
| CD-ROM TYPE                     | TEAC CD-532E-B  |

### Test Result:

| HCT 7.6 Features Test         | Pass | Fail | Remark                         |
|-------------------------------|------|------|--------------------------------|
| Virtual Dos Mach              | ✓    |      |                                |
| DMPS Test                     | ✓    |      |                                |
| Video Playback                | ✓    |      |                                |
| Extended BIOS Parameter Block | ✓    |      |                                |
| MCI CD Test                   | ✓    |      |                                |
| BCT API Test                  | ✓    |      |                                |
| INT 13 Extension              | ✓    |      |                                |
| Disk(Stress) Individual Drive | ✓    |      |                                |
| Disk -CD (Stress)             | ✓    |      |                                |
| Disk (Stress)                 | ✓    |      |                                |
| Coprocessor(Stress)           | ✓    |      |                                |
| Net Class Dynamic             | ✓    |      |                                |
| PCI I/O Space                 | ✓    |      |                                |
| PCI 2.1 (BIOS)                | ✓    |      |                                |
| PCI 2.1 (Card)                | N/A  |      |                                |
| Unreported I/O                |      | ✓    | Error messages showed as note. |
| Unreported Memory             | ✓    |      |                                |
| PnP BIOS                      | ✓    |      |                                |
| APM 1.2                       | ✓    |      |                                |
| Media Class Dynamic Config    | ✓    |      |                                |
| Wave Drift                    | ✓    |      |                                |

#### Note :

The test displays the I/O location read. The ISA base alias and the value found at that location.

If the read doesn't return 0xFF we have an error

### 3. Hardware Compatibility

#### A. Component Compatibility- CPU

##### CPU Device List:

| Brand | Device Model    | Result | Note |
|-------|-----------------|--------|------|
| Cyrix | Cyrix GXM 200GP | Pass   |      |
|       |                 |        |      |

#### B. Component Compatibility- DRAM SIMM Module

##### DRAM SIMM Module List:

| Brand   | Device Model                   | Result | Note |
|---------|--------------------------------|--------|------|
| NEC     | D4564841G5-A10-9JF 128MB SDRAM | Pass   |      |
| NEC     | D4564841G5-A10-9JF 64MB SDRAM  | Pass   |      |
| HYNDAI  | HY57V658020 TC-10 128MB SDRAM  | Pass   |      |
| HITACHI | HM5216805TT10H 16MB RAM        | Pass   |      |
| SIEMENS | HYB39S16800A1-10 32MB          | Pass   |      |
| MT      | 48LC2M8A1 TG-10S 128MB RAM     | Pass   |      |
|         |                                |        |      |

#### C. Adapter Compatibility- VGA

##### VGA Adapter List:

| Brand    | Device Model | Result | Note |
|----------|--------------|--------|------|
| PCI Bus  |              |        |      |
| On_board | Cyrix GXM    | Pass   |      |
|          |              |        |      |

#### D. Adapter Compatibility- LAN

##### LAN Adapter List:

| Brand    | Device Model | Result | Note |
|----------|--------------|--------|------|
| PCI Bus  |              |        |      |
| On-board | RTL8139      | Pass   |      |
|          |              |        |      |

## E. On\_Board Network Hardware (physical) Compatibility

### System Information:

|                                 |   |
|---------------------------------|---|
| DRAM Capacity & BRAND(SIMM Qty) | Brand: On board NEC D4564163G5-A10B-9JF <input type="checkbox"/> 16 <input checked="" type="checkbox"/> 32M<br>+ HY57V658020 TC-10 128MB SDRAM Qty: <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2  |
| SYSTEM BIOS Ver.                | <input checked="" type="checkbox"/> AWARD <input type="checkbox"/> AMI Ver: 4.51GP  |
| KB BIOS Version                 | <input type="checkbox"/> AMI- <input type="checkbox"/> VIA- <input checked="" type="checkbox"/> NS-PC97317  |
| BACKPLANE PCA-61xx              | <input type="checkbox"/> 05P2 <input type="checkbox"/> 08P3 <input type="checkbox"/> 14P3 <input type="checkbox"/> 03 <input type="checkbox"/> 08 <input type="checkbox"/> 14 <input checked="" type="checkbox"/> N/A |
| O.S. Environment                | <input type="checkbox"/> DOS5.0 <input type="checkbox"/> DOS6.0 <input checked="" type="checkbox"/> DOS6.22   |
| VGA Card & BIOS                 | <input checked="" type="checkbox"/> OnBoard Cyrix Gx <input type="checkbox"/> BIOS:2.08   |
| POWER SUPPLY                    | <input checked="" type="checkbox"/> MPU-250W <input type="checkbox"/> SSH-250G <input type="checkbox"/> SSH-350G <input type="checkbox"/> ST-250AF  |
| IDE HDD TYPE                    | <input checked="" type="checkbox"/> Max <input type="checkbox"/> Sea <input type="checkbox"/> Con <input type="checkbox"/> Qua <input type="checkbox"/> Fuj <input type="checkbox"/> IBM : 90648D3                    |
| SCSI HDD TYPE                   | <input type="checkbox"/> Max <input type="checkbox"/> Sea <input type="checkbox"/> Con <input type="checkbox"/> Qua <input type="checkbox"/> Fuj <input type="checkbox"/> IBM:  |
| LAN CARD                        | <input checked="" type="checkbox"/> OnBoard: RTL-8029   |
| CD-ROM TYPE                     | <input type="checkbox"/> NEC <input type="checkbox"/> PANASONIC <input checked="" type="checkbox"/> PIONEER <input type="checkbox"/> CREATIVE : DR-A24X   |
| Driver or Utility               | <input type="checkbox"/> VGA <input type="checkbox"/> HDD <input checked="" type="checkbox"/> Others : RTL-8139   |

### Test Result:

| Test Item                     | Pass                                     | Fail | Note |
|-------------------------------|--|------|------|
| <b>SUBJECT</b>                | <b>Network Hardware Function Testing</b> |      |      |
| Transceiver                   | ✓  |      |      |
| Receiver                      | ✓  |      |      |
| CRC error                     | N/A                                      |      |      |
| Collision back-off generation | N/A                                      |      |      |
| Auto-negotiation              | ✓  |      |      |
| 100M Base-TX full duplex      | ✓  |      |      |
| 100M Base-TX half duplex      | ✓  |      |      |
| 10M Base-T full duplex        | ✓  |      |      |
| 10M Base-T half duplex        | ✓  |      |      |

## F. Peripheral Compatibility-HDD Device

### HDD List:

| Brand   | Device Model    | Result | Note |
|---------|-----------------|--------|------|
| Seagate | ST312768        | Pass   |      |
| Seagate | ST33232A        | Pass   |      |
| Maxtor  | 90648D3         | Pass   |      |
| Quantum | 3240AT          | Pass   |      |
| Quantum | Big foot 4.0AT  | Pass   |      |
| Quantum | Big foot 4320AT | Pass   |      |

**G. Peripheral Compatibility- Storage Device****Device List:**

| Brand            | Device Model   | Result | Note |
|------------------|----------------|--------|------|
| <b>CD-ROM</b>    |                |        |      |
| <b>Creative</b>  | CD 820E        | Pass   |      |
| <b>TEAC</b>      | CD-532E-B      | Pass   |      |
| <b>VUGEO</b>     | 624A-004       | Pass   |      |
| <b>Panasonic</b> | CR-585-B       | Pass   |      |
| <b>Pioneer</b>   | DR-A24X        | Pass   |      |
| <b>FAX/Modem</b> |                |        |      |
| <b>LEMEL</b>     | 33.6 FAX/MODEM | Pass   |      |

**H. Peripheral Compatibility- Input Device****Input Device List:**

| Brand            | Device Model            | Result | Note |
|------------------|-------------------------|--------|------|
| <b>Keyboard</b>  |                         |        |      |
| <b>BTC</b>       | 5140                    | Pass   |      |
| <b>ACER</b>      | 6511                    | Pass   |      |
| <b>Mouse</b>     |                         |        |      |
| <b>Microsoft</b> | Serial Mouse            | Pass   |      |
| <b>IBM</b>       | PS/2 Mouse              | Pass   |      |
| <b>Logitech</b>  | First Mouse             | Pass   |      |
| <b>Logitech</b>  | Mouse Man (PS/2,Serial) | Pass   |      |

**I. Peripheral Compatibility- Input Device****USB Port Device List:**

| Brand  | Device Model               | Result | Note |
|--|----------------------------|--------|------|
| <b>USB Keyboard</b>  | BTC 7932                   | Pass   |      |
| <b>USB Mouse</b>   | DEXIN A2U800A              | Pass   |      |
| <b>USB Printer</b>   | EPSON STYLUS COLOR 740     | Pass   |      |
| <b>USB Camera</b>  | Tekom P35U                 | Pass   |      |
| <b>USB Camera</b>  | Cyber Link UW10TNC-1190VUE | Pass   |      |
| <b>USB Scanner</b>   | HP ScanJet 4100C           | Pass   |      |
| <b>Note: The system will halt on when USB Camera (Tekom P35U or Cyber Link UW10TNC-1190VUE ) and USB Scanner (HP ScanJet 4100C) used in the same time.</b> |                            |        |      |



### 3. Stability Testing

#### A. Burn-In Stability Testing (48 Hours)

Test Condition: Burn-In Under Temp.  $-10^{\circ}\text{C} \sim 70^{\circ}\text{C}$  (IEC-68-2-61)

| Test Software | Result | Note |
|---------------|--------|------|
| QAPlus 5.29   | Fail   |      |
|               |        |      |

#### B. Booting Stability Testing(24 Hours)

Test Condition: Burn-In Under Temp.  $-10^{\circ}\text{C} \sim 70^{\circ}\text{C}$  (IEC-68-2-30)

| Test Method             | Actual | Successful | Fail Rate | Note |
|-------------------------|--------|------------|-----------|------|
| Power On/Off 1000 Times | 1000   | 620        | 31%       |      |

Note: Project leader confirmed the case to customer that the temperature problem will be solved by chassis design.

## 4. Performance Testing

### System Information:

|                      |   |
|----------------------|---|
| DRAM Type & Capacity | OnBoard 32MB + NEC D4564841G5-A10-9JF 128MB   |
| VGA Card             | OnBoard (Cyrix Gx 2560 shared Memory)         |
| HDD TYPE             | Seagate ST34520A                              |
| VGA Testing Mode     | 1024X768X256 colors (For WinStone & WinBench) |
| O.S.                 | DOS V 6.22 & Windows 98                       |

### Operating System Environment (DOS Only)

|  |   |
|--|---|
| Config.sys   | Autoexec.bat                            |
| Device=c:\dos\himem.sys<br>dos=high<br>files=35 Buffers=40 | Prompt \$p\$g<br>c:\dos\smartdrv.exe /x |

### Testing Software

| Testing Utility           | CPU Configuration   |  |  |         |
|---------------------------|---------------------|--|--|---------|
|                           | Cyrix GXM<br>200MHz |  |  |         |
| <b>LandMark Speed 2.0</b> |                     |  |  |         |
| CPU                       | 555.13              |  |  | Mhz     |
| FPU                       | 1505.65             |  |  | Mhz     |
| VIDEO                     | 9637.00             |  |  | Chs/sec |
| Norton 8.0 SI             | 359.6               |  |  | ID      |
| Power Meter 2.02          |                     |  |  | Mips    |
| <b>WinStone 98</b>        |                     |  |  |         |
| Business Winstone         | 6.26                |  |  |         |
| <b>WinBench 98</b>        |                     |  |  |         |
| High-End Graphic WinMark  | 46.6                |  |  | MP/s    |
| Business Graphic WinMark  | 32.8                |  |  |         |
| CPUmark 32                | 198                 |  |  |         |
| <b>Coretest 3.02</b>      |                     |  |  |         |
| DTR (Buffered Read)       | 1872                |  |  | KB/sec  |
| Performance ID            | 17.76               |  |  |         |
| Note:                     |                     |  |  |         |

## 5. Power Consumption Data

### System Information:

|                      |   |
|----------------------|---|
| DRAM Type & Capacity | OnBoard 32MB + NEC D4564841G5-A10-9JF 128MB   |
| VGA Card             | OnBoard (Cyrix Gx 2560 shared Memory)         |
| HDD Type             | Quantum 3240AT                                |
| VGA Testing Mode     | 1024X768X256 colors (For WinStone & WinBench) |
| O.S.                 | DOS V 6.22 , Windows 98                       |

### Operating System Environment (DOS Only)

|   |   |
|---|---|
| Config.sys  | Autoexec.bat                            |
| Device=c:\dos\himem.sys<br>dos=high<br>files=35<br>Buffers=40 | Prompt \$p\$g<br>c:\dos\smartdrv.exe /x |

### Test Software (DOS Mode)

|               |                        |
|---------------|------------------------|
| Test Software | LandMark SPEED Ver.2.0 |
|---------------|------------------------|

### Test Result:

| Mode Type                          | Normal Mode | Doze Mode | Standby Mode | Suspend Mode | Unit |
|------------------------------------|-------------|-----------|--------------|--------------|------|
| Processor Type<br>Cyrix GXM 200MHz | 4.1         | 3.4       | 3            | 2.0          | A    |
|                                    |             |           |              |              |      |

#### Note:

1. Power supply voltage : +5V
2. Normal Model is measured while open system
3. Doze Model VGA controller is still enabled
4. Standby Model VGA controller is still enabled
5. Suspend Model all function off

## 6. Margin Testing

### A. Temperature Test (Software: QAPlus 5.29)

| Testing Condition                         | Result | Note |
|---|--------|------|
| High Temperature Margin (Burn-In 2 Hours) | N/A    |      |
| Low Temperature Margin (Burn-In 2 Hours)  | N/A    |      |

### B. DC Voltage Test (Software: QAPlus 5.29)

| Testing Condition                         | Result | Note             |
|---|--------|------------------|
| VDC High Voltage Margin (Burn-In 2 Hours) | 5.25V  | Cyrix GXM 200MHz |
| VDC Low Voltage Margin (Burn-In 2 Hours)  | 4.7V   | Cyrix GXM 200MHz |

### C. IDE Drive Capability

#### Test Equipment

#### Primary IDE Port:

Master Device: HD Seagate ST33232A

Slave Device: CD-ROM PIONEER DR-A24X

| Testing Condition                           | Result | Note |
|---|--------|------|
| Primary IDE Port Flat-Cable Length Margin   | 75CM   |      |
| Secondary IDE Port Flat-Cable Length Margin | N/A    |      |