AAEON

ISO-9001/ISO-14001 Certified
Industrial Automation PCs

SBC-598
QE Compatibility Test Report

Release Date: May. 12, 2000

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Issue Stamp   **QA Manager**   **QE Manager**   **Test Engineer**

Contents

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.

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1. Software Compatibility

A. O.S. Compatibility

O.S. / Test Item	Install		Boot		Shutdown		Function		K/B Function	
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
MS-DOS 6.22	✓		✓		✓		✓		✓	
QNX 4.22 & Wins	✓		✓		✓		✓		✓	
NOVELL 4.11	✓		✓		✓		✓		✓	

B. Microsoft Windows & IBM OS/ 2 Compatibility

Wins / Test Item	Install		Boot		Shutdown		Function		Keyboard Function		Display Driver	
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail
Windows 3.1	✓		✓		✓		✓		✓		✓	
Windows 95	✓		✓		✓		✓		✓		✓	
Windows Nt 4.0 W/S	✓		✓		✓		✓		✓		✓	
Windows Nt 4.0 Server	✓		✓		✓		✓		✓		✓	
OS/2 Warp 4.0	✓		✓		✓		✓		✓		N/A	

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	
Telix 3.2x		Pass	
ET 3.53	16 * 15 Font Mode	Pass	
	24 * 24 Font Mode	Pass	
ET 2000 (For DOS)	16 * 15 Font Mode	Pass	
	24 * 24 Font Mode	Pass	

E. Diagnostics Software Testing

Test Item / Software	Qafe5.29 Result	Note	Qaplus5.5 Result	Note	Amidiag4.5 Result	Note	Amidiag5.11 Result	Note	Pccheck3.02 Result	Note	Checkit3.0 Result	Note
Main Component	Fail	Note1	Fail	Note2	Fail	Note3	Fail	Note4	Fail	Note5	Pass	
Memory	Pass		Pass		Pass		Pass		Pass		Pass	
Video Adapter	Pass		Pass		Pass		Pass		Pass		Pass	
Floppy Drive	Pass		Pass		Pass		Pass		Pass		Pass	
Hard Drive	Pass		Pass		Pass		Pass		Pass		Pass	
Keyboard	Pass		Pass		Pass		Pass		Pass		Pass	
Com Port	Pass		Pass		Pass		Pass		Pass		Pass	
Lpt Port	Pass		Pass		Pass		Pass		Pass		Pass	
Plug & play	Pass	Ver.1.0 Nodes= 14	Pass	Ver.1.0 Nodes= 14	-		-		-		-	

Note: 1-2. RTC Clock / Interrupt Ctrl Register/ Interval Timer Test --- N/A.
3-4. Timer Test/ Real Timer Clock Test---N/A.
5. Alarm / CMOS RAM --- N/A.

F. Windows NT 4.0 HCT (Hardware Compatibility Test)

Test Item / Test Result	Result	Note
Keyboard	Pass	
Mouse	Pass	
Parallel port	Pass	
Sound (PC speaker)	Pass	
Serial Port (COMx)	Pass	
Coprocessor	Pass	
Disk (FAT tile I/O)	Pass	
Disk (mapped I/O)	Pass	
Disk (NTFS file I/O)	Pass	
Floppy I/O	Pass	
Video (GDI w/poly.clip.)	Pass	
Video (VDM VGA)	Pass	
Virtual DOS mach	Pass	
Coproc. (stress)	Pass	
Disk (stress)	Pass	
System stress	Pass	

2. Hardware Compatibility

A. Component Compatibility- CPU
CPU Device List:

Brand	Device Model	Result	Note
Intel	Pentium-75	Pass	
Intel	Pentium-100	Pass	
Intel	Pentium-120	Pass	
Intel	Pentium-133	Pass	
Intel	Pentium-150	Pass	
Intel	Pentium-166	Pass	
Intel	Pentium-200	Pass	
Intel	Pentium-200　　MMX	Pass	
Intel	Pentium-233　　MMX	Pass	
Cyrix	6X86-110M	Pass	
Cyrix	6X86-120M	Pass	
Cyrix	6X86-133M	Pass	
Cyrix	6X86-166M	Pass	
Cyrix	6X86-200 M1	Pass	
Cyrix	6X86-200 M2	Pass	
AMD	5K86-75	Pass	
AMD	5K86-100	Pass	
AMD	K6-200	Pass	
AMD	K6-233	Pass	

B. Component Compatibility- DRAM SIMM Module
DRAM SIMM Module List:

Brand	Device Model	Result	Note
PANASONIC	MN4117400BSJ-06 32M FPM RAM	Pass	
MITSUBISH	M5M417400CT-7 16M FPM RAM	Pass	
HITACHI	HM5118165AJ6R 8M EDO RAM	Pass	
SAMSUNG	KM44C4000AK-6 16M FPM RAM	Pass	
SIEMENS	HYB5117405BJ-60 32M EDO RAM	Pass	
HYNDAI	HY5117400AJ-70 16M FPM RAM	Pass	
NPNX	NN514405J-60 8M EDO RAM	Pass	
VITELIC	V53C408HK45 8M EDO RAM	Pass	
SAMSUNG	KM41C16000BK-6 64M FPM RAM	Pass	
PANASONIC	PP716M66 16M W/PARITY	Pass	
NEC	NX716-6 16M EDO RAM	Pass	
SIEMENS	HYB5118165BSJ-60 8M EDO RAM	Pass	
SIEMENS	HYB5117405BSJ-60 8M EDO RAM	Pass	
PANASONIC	MN414400BSJ-07 8M FPM RAM	Pass	
LGS	GM71C17403CJ6 32M EDO RAM	Pass	
NEC	421865-60 8M EDO RAM	Pass	
NEC	4217400-60 32M EDO RAM	Fail	
MICON	MT4C4M4E8DJ-6 16M EDO RAM	Pass	
TI	TMS417409ADJ-6 16M EDO RAM	Pass	
MITSUBISHI	M5M418165CJ 8M EDO RAM	Pass	
LGS	GM71C17403CJ6 16M EDO RAM	Pass	
LGS	GM71C18163CJ6 8M EDO RAM	Pass	
HYNDAI	HY5118164B 8M EDO RAM	Pass	
HITACHI	HM5216805TT10H 16M SDRAM	Pass	
NEC	D42S18165LG-A60-7JF 16M SDRAM	Pass	
NEC	SDNX64M 64M SDRAM	Pass	
NEC	SDNX128M 128M SDRAM	Pass	

C. Adapter Compatibility- VGA
VGA Adapter List:

Brand	Device Model	Result	Note
PCI BUS			
CARDEX	ET-6000	Pass	
TopView	ET 4000 W32P	Pass	
TopView	ET4000 /AX	Pass	
TopView	S3 86C968	Pass	
TopView	S3 Trio64 V2	Pass	
TopView	S3 VERGE	Pass	
On_board	SIS5598	Pass	
ISA BUS			
ORCHID	KELVIN 64 ISA (CIRRUS 5429)	Pass	
TopView	ET 4000 ISA	Pass	

D. Adapter Compatibility- LAN
LAN Adapter List:

Brand	Device Model	Result	Note
PCI BUS			
D-Link	DE530	Pass	
3COM	3C905	Pass	
Intel	Ether Express PRO/100B S82557	Pass	
ISA BUS			
3COM	3C509B-C	Pass	
INTEL	ISA PILA 8560	Pass	
SVAC	ETHER 16	Pass	

E. Adapter Compatibility- SCSI CARD
SCSI Adapter List:

Brand	Device Model	Result	Note
PCI BUS			
AHA	2940UW PCI	Pass	
ISA BUS			
AHA	1520K ISA	Pass	

F. Adapter Compatibility- Other Card
Adapter Card List:

Brand	Device Model	Result	Note
MPEG Card			
LEMELMagic	MPEG Card MPG256V	Pass	
Sound Card			
Creative	AWE 32	Pass	
Creative	SB 16 Value PNP	Pass	

G. Adapter Compatibility- Industry Control Card
Industry Control Adapter List:

Brand	Device Model	Result	Note
ISA Card			
AAEON	RDM-1020N	Pass	
AAEON	RDM-1010A	Pass	
AAEON	RDM-211A	Pass	
AAEON	PCD-896	Pass	VCC MUST OVER +5.00V
AAEON	PCD-894A	Pass	
AAEON	PCD-895A	Pass	

H. Peripheral Compatibility-HDD Device
HDD List:

Brand	Device Model	Result	Note
Seagate	ST3123ON　SCSI	Pass	
Seagate	ST32132A	Pass	
Seagate	ST33232A	Pass	
Seagate	ST51270A	Pass	
WD	WDAC22100	Pass	
WD	WDAC33100	Pass	
Quantum	FIRE BALL TM1700A	Pass	
Quantum	ST3240AT	Pass	
MAXTOR	83240D2	Pass	
MAXTOR	85120A8	Pass	

I. Peripheral Compatibility- Storage Device
Device List:

Brand	Device Model	Result	Note
CD/ROM			
Creative	CD 820E	Pass	
Philips	PCA123CD	Pass	
VUGEO	624A-004	Pass	
Panasonic	CR-585-B	Pass	
Pioneer	DR-A24X	Pass	
FAX/Modem			
LEMEL	急速33.6 HIGH SPEED MODEM	Pass	
Printer			
HP	LaserJet III	Pass	

J. Peripheral Compatibility- Input Device
Input Device List:

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

3. Stability Testing

A. Burn-In Stability Testing
Test Condition: Room Temp. 48 hours

Test Software	Result	Note
AMIDIAG4.5	Pass	

B. Booting Stability Testing

Test Method		Actual	Successful	Fail Rate	Note
Power On/Off	1000 Times	1000	1000	0	
KB Reset	20 Times	20	20	0	
H/W Reset	1000 Times	1000	1000	0	

C. Continuous Burn-In Booting Stability Testing
Test Condition: Burn-In Under Temp. 60℃

Test Method		Actual	Successful	Fail Rate	Note
Power On/Off	1000 Times	1000	999	0.1%	
H/W Reset	1000 Times	1000	1000	0	

4. Performance Testing

System Information:

DRAM Type & Capacity	Panassonic 16MBX2	
VGA Card	OnBoard (SIS 5598)	
HDD Type	Segate ST51270A(Mode4)	
VGA Testing Mode	1024X768X256 colors	(For WinStone & WinBench)
O.S.	DOS V 6.22 & Windows 95	

Operating System Environment (DOS Only)

Config.sys	Autoexec.bat
Device=c:\dos\himem.sys dos=high files=35 Buffers=40	Prompt pg C:\dos\smartdrv.exe /x

Testing Software

Testing Utility	CPU Configuration								Unit
	Intel p 200	Intel P 200MMX	Intel P 233MMX	Cyrix M2-200	Cyrix M2-233	Cyrix M2-300	AMD K6-233	AMD K6-266	
LandMark Speed 2.0									
CPU	1150.54	1304.29	1521.68	2060.13	2325.95	2883.76	2349.15	2684.73	Mhz
FPU	3370.31	3467.09	4652.66	2313.16	2671.5	3335.70	3665.29	4279.24	Mhz
VIDEO	14456	14246	14456	6597	6597	6383	14456	8124	Chs/sec
Norton 8.0 SI	631.6	676.7	789.5	1127.3	1272.5	1228.3	1380.8	1578.1	ID
Power Meter 2.02	94.8	98.1	113.8	113.8	129.3	167.3	117.7	189.6	Mips
PcBench 9.0 CPUmark16	389.87	450.47	508.99	495.24	537.11	663.33	665.41	745.15	
WinStone 98	14.8	17.7	17.8	17.1	17.7	20.4	18.6	-	
WINBENCH 98									
High Graphic WinMark 98	72.5	94.8	100	110	114	122	112	105	MP/s
CPUmark 32	331	394	417	415	447	478	485	521	
CORETEST 3.02									
DTR (Buffered Read)	12896	12640	12560	11664	12976	12544	13488	12416	KB/sec
Performance ID	81.67	80.14	79.67	74.37	83.94	81.45	85.15	80.52	
Wintech 1.2	106.97	124.84	130.13	126.83	235.26	204.57	125.87	178.9	
Note									

System Information:

DRAM Type & Capacity	NEC D4564841G5-A10-9JF 64M
VGA Card	OnBoard (SIS 5598)
HDD Type	IBM DPTA-372050
VGA Testing Mode	1024X768X256 colors (For WinStone & WinBench)
O.S.	DOS V 6.22 & Windows 98 / Windows NT4.0

Operating System Environment (DOS Only)

Config.sys	Autoexec.bat
Device=c:\dos\himem.sys dos=high files=35 Buffers=40	Prompt pg C:\dos\smartdrv.exe /x

Testing Software

Testing Utility	CPU Configuration								Unit
	AMD K6-2 300								
LandMark Speed 2.0									
CPU	28641.1								Mhz
FPU	4567.57								Mhz
VIDEO	7801.00								Chs/sec
Norton 8.0 SI	1330.8								ID
Power Meter 2.02	167.3								Mips
PcBench 9.0 CPUmark16	863.1								
WinStone 99	10.6								
WINBENCH 99									
High Graphic WinMark 99	148								MP/s
CPUmark 32	355								
CORETEST 3.02									
DTR (Buffered Read)	10848								KB/sec
Performance ID	72.77								
Wintech 1.2	210.43								
Note									

5. Power Consumption

System Information:

DRAM Type & Capacity	NEC D4564841G5 –A80 –9JF
VGA Card	OnBoard SIS 5598
DiskOnChip	MD2200-D08
O.S.	DOS Mode

Operating System Environment (DOS Mode)

Config.sys	Autoexec.bat
Device=c:\dos\himem.sys dos=high,umb files=35 Buffers=40	Prompt pg c:\dos\smartdrv.exe /x

Test Software (DOS Mode):

Test Software	Landmark Speed V.2.0(Speed200.exe)

Test Result:

Mode Type	CPU Type									Unit
	Pentium 200	Pentium 200MMX	Pentium 233MMX	Cyrix M2-200	Cyrix M2-233	Cyrix M2-300	AMD K6-233	AMD K6-266	AMD K6-2 300	
Normal Mode(+5V)	3	4.6	5	7.2	8	9	9	3.8	10.2	amp/max
Suspend Mode(+5V)	1.6	2.2	2.1	1.9	1.8	1.8	2	1.6	2.1	amp/max

Note:

    1.Suspend Model all function off.

    2.Power supply voltage: +5V

    3.Normal Model is measured while run landmark speed Rev.2.0 in DOS

6. Margin Testing

A. Temperature Test (AMIDIAG 4.5)

Testing Condition	Result	Note
High Temperature Margin (Burn-In 2 Hours)	80℃	
Low Temperature Margin (Burn-In 2 Hours)	-40℃	

B. Temperature Test (BOOT UP)

Testing Condition	Result	Note
High Temperature Margin (Burn-In 2 Hours)	65℃	
Low Temperature Margin (Burn-In 2 Hours)	-20℃	The Fail Rate Is 4% In -25℃.

C. DC Voltage Test (AMIDIAG 4.5)

Testing Condition	Result	Note
Vdc High Voltage Margin (Burn-In 2 Hours)	5.25v	
Vdc Low Voltage Margin (Burn-In 2 Hours)	4.65v	

D. IDE Drive Capability
Test Equipment:
Primary IDE Port:

Master Device: IBM DHEA-34330
Slave Device: Panasonic 24X

Secondary IDE Port:

Master Device: IBM DHEA-34330
Slave Device: Panasonic 24X

Testing Condition	Result	Note
Primary IDE Port Flat-Cable Length Margin	65CM	
Secondary IDE Port Flat-Cable Length Margin	65CM	