



**AAEON Technology INC.**  
ISO-9001/ISO-14001 Certified  
Industrial Automation PCs

# QE Compatibility Test Plane

Release No : SBC-659-T-01

Product Model	<b>SBC-659</b>
Product Description	<b>FC/Socket 370 Half-size CPU Card with LCD,Dual Ethernet,Audio,AGP 2X Cpmpact Flash,&amp; USB Ports</b>
Test Reason	<input checked="" type="checkbox"/> New product <input checked="" type="checkbox"/> PCB : SBC-659 Rev:A0.2 <input checked="" type="checkbox"/> BIOS: SBC-659 BIOS Rev.A0.4 WDT & Digital I/O (03/02/2001)  <input type="checkbox"/> Renew product <input type="checkbox"/> PCB : <input type="checkbox"/> BIOS:  <input type="checkbox"/> Revision change <input type="checkbox"/> PCB : <input type="checkbox"/> BIOS: <input type="checkbox"/> Component:

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**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.**

# 1. Dynamic / Boot\_UP Burn\_In Test

## Platform Information:

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 850 / 100
Memory Type	Infineon HYB39S128800CT – 7.5 / PC-133 /SD-128M
Primary IDE Master	Quantum LM20A011-01-A 20.5AT
Primary IDE Slave	N/A
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
Compact FlashType	N/A
VGA Card & Driver Version	On Board Intel 815E
LAN Card & Driver Version	OnBoard Intel 82559 & Intel 82562
Audio Chipset & Driver Version	Arance AC'97

## A.Dynamic Burn-In Test:

### A-1.Diagnostics Software Burn\_In Test:

Test Point:

1. Test items includeing system, Memory, Display, Keyboard, LPTs W/ loopback, COMs W/ loopback.

**Test Condition: Under Temperature 0 °C ~ 60 °C(48 Hours)**

Test Program	Result		Note
	Pass	Fail	
Qaplusfe 5.6	✓		
AMIDIAG 5.21 [ Option ]			

### A-2.Audio Play For Sound Codec Chipset Burn-In Test

**Test Condition : Under Temperature 60 °C (2 Hours)**

Test Method	Software Program	Result		Note
		Pass	Fail	
Play MP3 Sound cycle Test	Winamp 2.6	✓		

**Test Condition : Under Temperature 0 °C (2 Hours)**

Test Method	Software Program	Result		Note
		Pass	Fail	
Play MP3 Sound cycle Test	Winamp 2.6	✓		

**A-3. LAN Chipset Burn-In Test****Switch HUB Type:****Test Condition : Under Temperature 60 °C (2 Hours)**

Test Method	Software Program	Result		Note
		Pass	Fail	
Play VCD	Media Player	✓		

**Test Condition : Under Temperature 0 °C (2 Hours)**

Test Method	Software Program	Result		Note
		Pass	Fail	
Play VCD	Media Player	✓		

**B. Boot\_Up Burn-In Test: Operating System Environment :DOS /Windows Mode.****B-1. Test Condition : Under Temperature 0°C~60°C (24Hours)**

Test Method	Actual	Successful	Failure rate	On time	Off Time	Note
Power On/Off (DOS Mode)	1390	1390	%_31__Sec	_31__Sec		Allow failure rate under 2/1000
Power On/Off (Windows Mode) [Option]			%_____Sec	_____Sec		Allow failure rate under 2/1000

**B-2. Test Condition : Under Room Temperature [ 25°C ].**

Test Method	Actual	Successful	Failure rate	On time	Off Time	Note
H/W Reset 300Times (DOS Mode)	1570	1570	0 %_46__Sec	_46__Sec		
KB Reset 20 Times (DOS Mode)	20	20	0 %_____Sec	_____Sec		
H/W Reset 300Times (Windows Mode) [Option]			%_____Sec	_____Sec		
KB Reset 20 Times (Windows Mode) [Option]			%_____Sec	_____Sec		

Note : System is halt on power on sometimes with cold reboot.

## 2. Timer Accuracy Test

### Platform Information:

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 850 / 100
Memory Type	Infineon HYB39S128800CT – 7.5 / PC-133 /SD-128M
Primary IDE Master	Seagate ST315320A 15.3GB
Primary IDE Slave	TEAC CD-540E
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
VGA Card & Driver Version	On Board Intel 815E

### A.System Clock & RTC Clock test

#### Test Points:

- 1.This test focuses on the system clock & RTC Clock accurately.
- 2.Setups verify: Verify the System Clock and RTC are marked number correctly during 24hrs at the screen.
- 3.Diagnostics: Setups BIOS RTC Timer to marked number 24hrs.  
Setups System Clock on MS-DOS 6.22 /Win 98 to marked number 24hrs.

#### A-1. Environment Setting: MS-DOS 6.22

#### The Result: Under Temperature 0 ~ 60 °C(Option)

Item Function	Test Times	Margin for error	Acturl	Result		Note
				Pass	Fail	
System Clock	24 hrs	+/-5 sec	Sec			
RTC Clock	24 hrs	+/-3 sec	Sec			

#### A-2. Environment Setting: Windows 98 SE

#### The Result: Under Temperature 0 ~ 60 °C(Option)

Item Function	Test Times	Margin for error	Acturl	Result		Note
				Pass	Fail	
System Clock	24 hrs	+/-5 sec	Sec			
RTC Clock	24 hrs	+/-3 sec	Sec			

#### A-3. Environment Setting: MS-DOS 6.22

#### The Result: Under Room Temperature 25 °C

Item Function	Test Times	Margin for error	Acturl	Result		Note
				Pass	Fail	
System Clock	24 hrs	+/-5 sec	+ 1 Sec	✓		
RTC Clock	Static	24 hrs	- 2 Sec	✓		
	Dynamic	24 hrs	+/-3 sec	+ 1 Sec	✓	

**B. Watchdog Timer test****Test Points:**

1. Setups BIOS Watchdog Timer every type Time-out interval.
2. Diagnostics: Can generate a system reset whether on setting time.
3. Attention --Watchdog-IRQ n .

**The Result: Under Room Temperature [ 25°C ] / DOS Mode .**

Time-out interval	IRQ	Margin for error	Acturl	Result		Note
				Pass	Fail	
10 sec		+/-1 sec	10 Sec	✓		
20 sec		+/-1 sec	20 Sec	✓		
30 sec		+/-1 sec	31 Sec	✓		
40 sec		+/-1 sec	41 Sec	✓		
1 min		+/-1 sec	1 min 0 Sec	✓		
2 min		+/-1 sec	1 min 59 Sec	✓		
3 min		+/-1 sec	Sec			N/A
4 min		+/-1 sec	3 min 59 Sec	✓		

## 3 . Power Consumption

### Platform Information:

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 850 / 100
Memory Type	Infineon HYB39S128800CT-75 /128MB/PC133
Backplane	N/A
DOC	N/A
Riser Card	N/A
Power Supply	SHARK TECHNOLOGY SPC5110-250ATX2 / 250W
VGA Card & Driver Version	On Board Intel 815E

### A. Operating System Environment :

DOS 6.22	Config.sys	Device=c:\dos\himem.sys dos=high,umb files=35 Buffers=40
	Autoexec.bat	Prompt \$p\$g c:\dos\smartdrv.exe /x

### Test Software (DOS Mode):

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

### Test Result:

Mode Type	CPU TYPE				Current
	Celeron 533	Celeron 766	PIII 850	PIII 1G	
Normal Mode(+5V)	3.7	3.6	3.5	4.9	Amp/Max
Suspend Mode(+5V)	0.9	0.8	0.7	1.2	Amp/Max
Normal Mode(+12V)	0.15	0.16	0.15	0.15	Amp/Max
Suspend Mode(+12V)	0.08	0.07	0.08	0.06	Amp/Max
Normal Mode(+3.3V)	0.97	1.03	1.05	1.07	Amp/Max
Suspend Mode(+3.3V)	1.02	1.02	1.04	1.07	Amp/Max

### B. Power Margin Test: Play VCD in Win 98 O.S.

Test Point:

1. Play VCD 10 Minutes.

#### Power Supply :

Voltage	Low/High Voltage 110 V / 220 V	Actual Voltage		Result				Note
		110 V	220 V	110V		220V		
				Pass	Fail	Pass	Fail	
5 V	4.75 V	4.88 V	4.82 V	✓		✓		
	5.25 V	5.31 V	5.31 V	✓		✓		
3.3V	3.135V	3.33 V	3.33 V	✓		✓		
	3.465V	3.33 V	3.33 V	✓		✓		
12 V	11.4 V	11.51 V	11.51 V	✓		✓		
	12.6 V	12.67 V	12.67 V	✓		✓		

## 4 . Hardware Compatibility

### A. Component Compatibility- CPU

#### Test Points:

- 1.This test focuses on the compatibility test of all supported processors in the system.
- 2.Setups verify: Verify the processor and L2 are reported correctly during POST at the top of the screen (Reboot 10 times).
- 3.Diagnostics: Run HCT SYSTEM STRESS in Windows NT4.0.

#### Platform Information:

PCB Model & Version	SBC-659 Rev.A0.2
Memory Type	Pentium III 850 / 100
O.S.	Windows NT 4.0 Workstation Ver.4.00.1381 with SP6
Primary IDE Master	Seagate ST315320A / UDMA66 / 15.3GB
Primary IDE Slave	TEAC CD-540E 40X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
VGA Card & Driver Version	On Board Intel 815E

#### Test Result:

OS	CPU Type	Host Bus CLK	Test Item	Result		Note
				Pass	Fail	
Windows NT 4.0	Pentium III 1G	133MHz	CPU CMOS Message	✓		
			HCT System Stress	✓		
	Pentium III 933	133MHz	CPU CMOS Message	✓		
			HCT System Stress	✓		
	Pentium III 850	100MHz	CPU CMOS Message	✓		
			HCT System Stress	✓		
	Celeron 750	100MHz	CPU CMOS Message			N/A
			HCT System Stress			N/A
	Celeron 766 [.18u]	66MHz	CPU CMOS Message	✓		
			HCT System Stress	✓		
	Celeron 633 [.18u]	66MHz	CPU CMOS Message			N/A
			HCT System Stress			N/A
	Celeron 533 [.25u]	66MHz	CPU CMOS Message	✓		
			HCT System Stress	✓		

## B. Component Compatibility- SDRAM DIMM Module

### Test Points:

- 1.Setups verify—Verify the memory size is reported correctly during POST at the top of the screen (Reboot 10 times).
- 2.Diagnostics—Run the HCT SYSTEM STRESS program for 8 Hrs each item.

### Platform Information:

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 850 / 100
O.S.	Windows NT 4.0 Workstation Ver.4.00.1381 with SP6
Primary IDE Master	Seagate ST315320A / UDMA66 / 15.3GB
Primary IDE Slave	TEAC CD-540E 40X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
VGA Card & Driver Version	On Board Intel 815E

### Memory List:

Item	Brand	DRAM TYPE	Total Size	
1	NEC – JAPAN	D45128163G51 / PC-133 / SD-64M	64	MB
2	Infineon	HYB39S128800CT – 7.5 / PC-133 / SD-128M	128	MB
3	NEC - SINGAPORE	D4564163G5-A10-9JF / PC-100/SD-32M	32	MB
4	NEC - SINGAPORE	D45128841G5 A75 – 9JF / PC-133/SD-128M	128	MB
5	TOSHIBA	TC59SM716FT - 80	128	MB
6	SIEMENS	HYB39S64160AT-8	64	MB
7	NANYA	NT56V6620C0T – 75 / PC-133/SD-64	64	MB
8				MB
9				MB
10				MB
11				MB
12				MB
13				MB
14				MB
15				MB
16				MB
17				MB
18				MB
19				MB
20				MB
21				MB
23				MB
24				MB

Environment Description: “DIMM 2(1)” means to insert DIMM item 1 in DIMM slot 2

### Test Result:

Environment Configuration Run HCT System stress	Result		Note
	Pass	Fail	
DIMM 1	✓		
DIMM 2	✓		
DIMM 3	✓		會卡鍵,但可以用
DIMM 4		✓	藍體白字
DIMM 5		✓	會卡鍵,不能用
DIMM 6		✓	會卡鍵,不能用
DIMM 7	✓		
DIMM 8			



## C.On Board Audio Function Test

### Test Points:

- 1.Installation Test—Verify the indicated board can be installed correctly.
- 2.Software Test—Run the test programs that is supplied with the sound drivers and verify all of the tests function correctly.

### Platform Information:

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 850 / 100
Memory Type	Infineon HYB39S64800CT-7.5/PC133 128MB
O.S.	Windows 98 SE 4.10.2222A
Primary IDE Master	Quantum LM20A011-01-A 20.5AT
Primary IDE Slave	CD-8500/A/ASUS/50X/G
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
VGA Card & Driver Version	On Board Intel 815E
Game Joystick	N/A

### The Result:

Function Test	Result		Note
	Pass	Fail	
System Sound	✓		
Play CD_IN	✓		
Play Sound Recorder	✓		
Line Out	✓		
Line In	✓		
Line In Sound Record	✓		
MIC Speaker	✓		
MIC Sound Recorder	✓		
Game Port	N/A		Fly Joystick (Avant Garde Rockfire K5MQF-606i)
Play VCD 30mins	✓		

Note1: 將 3D Depthu 開起,並調高 3D Depthu 音量,音質會變差

Note2: 在OS:Win95下安裝SOUND Driver時,Avance SB Emulation(Support application soft.)出現驚嘆號,  
RD(得生)說: 並不影響其效能,其IRQ,手動調整即 OK!  
PS. 廠商新版已不 Support Win95, 僅目前該版 Driver !

**D.PCI Function(PCI Adapter Card) Test ( N/A :RD Bankplane Not Reday)****Test Points:**

- 1.This test includes Multimedia Card, SCSI Controller Card, LAN Card and the other PCI Card.
- 2.Install drivers and utilities to verify all functions correct (Including installation, **un-installation, reboot, suspend and PnP**).
- 3.Run diagnostic test program to verify all kind of PCI Cards one by one then load stress.

**Platform Information:**

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 750/100
Memory Type	NEC D4564841G5-A10-9JF/(PC-100) 128MB
O.S.	Windows 98 SE 4.10.2222A
Primary IDE Master	Quantum K13600AT 13GB Fireball DMA/66
Primary IDE Slave	ASUS CD-S500/A 50X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
VGA Card & Driver Version	OnBoard Intel 82815
LAN Card & Driver Version	OnBoard Intel 82559 & Intel 82562

**The Result:**

Adapter Card VGA Card	Dual Display		Install Driver		Play VCD for least 10 Min		Note
	pass	fail	Pass	Fail	Pass	Fail	
ET-4000/W32P							PCI
ET-4000AX							ISA
3D Blaster Savage4							ISA
Adapter Card Sound Card			Install Driver		Play VCD for least 10 Min		Note
			Pass	Fail	Pass	Fail	
Creative SB16 PNP/CT2980							ISA
Creative AUDIO							PCI
Blaster Vibra 16XV							PCI
Lemel ESS ES1868F 3D/16 PnP							ISA
Adapter Card SCSI Card			Install Driver		Plav VCD for least 10 Min		Note
			Pass	Fail	Pass	Fail	
AHA-2940U2WK ULTRA-2-WIDE							PCI
AHA-1520B							
Adapter Card Modem Card			Install Driver		Connect to Internet		Note
			Pass	Fail	Pass	Fail	
GVC F2000 56K/V.90 DATA/FAX/MODEN							
LEMEL 33.6 FAX/MODEM							
Genuine GM56-AMI2019							
Cyber Lander 2000 56K							

Adapter Card LAN Card	Install Driver		Play VCD for least 10 Min		Note
	Pass	Fail	Pass	Fail	
<b>Switch HUB Type</b>	<b>Intel InBusiness 4-Port 10/100 Switch HUB</b>				
RTL8139 PCI(10/100MBPS)					PCI
D-Link DFE-540TX PCI(10/100Mbps)					PCI
RTL-8139B					PCI
3COM 3C905B-TX					ISA
D-Link DFE-530TX PCI(10/100Mbps)					PCI
Adapter Card Other Card	Install Driver		Play VCD for least 10 Min		Note
	Pass	Fail	Pass	Fail	
YUAN/聰泰 DVD MPEG-2 MPEG Card					
UPMOST 1394 CardBus + FireWire 3.5 HardDisk Enclosure					In O.S. WIN98 SE / 98ME /2000 Support

**E.Peripheral Compatibility-HDD / CDROM Device****Test Points:**

- 1.This test emphasizes on PCI IDE Devices compatibility test.
- 2.Autosense Test—Verify the HDDs reported correctly during POST after setup(EXP: Capacity up than 40GB).
2. Setup BIOS--AUTO, USER and Disable on IDE detect item then reboot 10 times.

**Platform Information:**

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 850 / 100
Memory Type	Infineon HYB39S64800CT-7.5/PC133 128MB
O.S.	Windows 98 SE 4.10.2222A
Primary IDE Master	Quantum K13600AT / 13GB / ATA-66
Primary IDE Slave	NEC C&C-BCD F561B / 52X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
VGA Card & Driver Version	OnBoard Intel 82815
LAN Card & Driver Version	OnBoard Intel 82559 & Intel 82562

**Peripheral Compatibility-HDD / CDROM Device:**

HDD Device	Dectect Message		Booting Up		Read/Write		Play VCD		Note
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	
IBM DTLA-307075 / 76.8GB / ATA-100	✓		✓		✓		✓		
IBM DTLA-307045 / 46.1GB / ATA-100	✓		✓		✓		✓		
IBM DHEA-34330 / 4.3GB / ATA-33									
Maxtor 54610H6 / 46.1GB / ATA-100									
Maxtor 54098U8 / 40.9GB / ATA-66	✓		✓		✓		✓		
Maxtor 51536U3 / 15.3GB / ATA-66	✓		✓		✓		✓		
Seagate ST315320A / 15.3GB / ATA-66	✓		✓		✓		✓		
Seagate ST34520 / 4.5GB / ATA-33									
Quantum LM20500AT / 20.5GB /ATA-66	✓		✓		✓		✓		
Quantum K13600AT / 13GB / ATA-66									
Fujitsu MPE 33072 / 30.7GB / ATA-100									
Fujitsu MPE 3136AH / 13.6GB / ATA-66									
W/D AC28400 / 8.4GB	✓		✓		✓		✓		
W/D AC26400 / 6.4GB									
Hitach DK226A-21U / 2.6GB									
Fujitsu MAH3091MP / 9.1GB / Ultra160 / LVD									
Seagate ST34520LW / 4.55GB / U2W-SCSI									
Seagate ST34520W / 4.55GB / UW-SCSI									
DVD/CD-ROM Device	Dectect Message		Booting Up		Read/Write		Play VCD		Note
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	
NEC C&C-BCD F561B / 52X									
ASUS CD-S500A / 50X	✓		✓		✓		✓		
TEAC CD-540E / 40X	✓		✓		✓		✓		
SONY CDU4811-81 / 48X	✓		✓		✓		✓		
CREATIVE CD5220E / 52X									
CREATIVE DVD1240E / 12X / DVD-ROM	✓		✓		✓		✓		
PIONEER ATAPI DVD-A03S / 6X / DVD-ROM									
Acer DVP1640A / 16X / DVD-ROM									
MITSUMI CRMC-FX4824T /48X									
AFREEY CD-2050E / 50X	✓		✓		✓		✓		
RICOH MP7060S / 24X / SCSI-CDROM									

Full 4 IDE HDD Device		Dectect Message		Booting Up		Read/Write		Play VCD		Note
		Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	
P1	IBM DTLA-307075 / 76.8GB / ATA-100	✓		✓		✓		✓		
P2	IBM DTLA-307045 / 46.1GB / ATA-100	✓		✓		✓		✓		
S1	IBM DHEA-34330 / 4.3GB / ATA-33									N/A
S2	Maxtor 54610H6 / 46.1GB /ATA-100									N/A

**E-1.Ultra ATA/66/100 Test ( N/A :RD Bankplane Not Reday)**

**Test Points:**

- 1.Compare the Performance between ATA/66 and ATA/100 HDD.
- 2.Test Software is WinBench 99 v1.1 .
- 3.Verify ATA RAID Function test.

**Platform Information:**

PCB Model & Version	
CPU Type & FSB	
Memory Type	
Primary IDE Master	
Primary IDE Slave	
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
VGA Card & Driver Version	

**Drivers Information:**

AGP Driver & Driver Version	
IDE Driver & Driver Version	Intel Ultra ATA Storage Driver Ver.6.0
LAN Driver & Driver Version	Intel 82559ER & Intel 82562ET
SCSI Driver & Driver Version	AdvanSys Wide Driver 3.2E
Audio Driver & Driver Version	CS4299 Sound Driver Ver.5.12.01.4026
VGA Driver & BIOS	Intel 82815 Ver.4.12.01.2656

**The Result:**

Test Item	Device Model	PROMISE Ultra 100		ABIT HotRod 100 Pro		Note
		ATA/66	ATA/100	ATA/66	ATA/100	
		Maxtor 4098U8 40GB	IBM DTLA- 307030 30.7GB	Maxtor 4098U8 40GB	IBM DTLA- 307030 30.7GB	
<b>WinBench 99 v1.1</b>						
Business Disk WinMark 99						
High-End Disk WinMark 99						
Disk Access Time (ms)						
Disk CPU Utilization (percent used)						
Disk Transfer Rate: Beginning (kB/s)						
Disk Transfer Rate: End (kB/s)						
Disk Playback/Bus Overall						
Disk Playback/HE Overall						
Avs/Express 3.4						
FrontPage 98						
MicroStation SE						
Photoshop 4.0						
Premiere 4.2						
Sound Forge 4.0						
Visual C++ 5.0						
Disk Playback/Removable Media						

**ATA RAID Test: ( N/A :RD Bankplane Not Reday )**

RAID Function	Result		Note
	Pass	Fail	
RAID 0(Striping)			ABIT HotRod™ 100 Pro
RAID 1(Mirror)			ABIT HotRod™ 100 Pro

**F .USB Function Test****Platform Information:**

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Celeron 766 / 66
Memory Type	Hyundai HY57V658020 TC-10 / PC-100
Primary IDE Master	Maxtor 94098U8 / 40GB / ATA-66
Primary IDE Slave	ASUS CD-S500A / 50X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
VGA Card & Driver Version	OnBoard Intel 82815 Ver.4.12.01.2656
LAN Card & Driver Version	OnBoard Intel 82559 & OnBoard Intel 82562

**Device Item:**

Item	Device Type	Brand	Model
1	Keyboard	LEMEL	7932
2	Mouse	Logitech	M-BB48
3	Scanner	HP	SJ4200C
4	Printer	HP	Photo Smart P1000
5	Camera	Tekcam	P35U
6	ZIP	IOMEGA	ZIP 100MB
7	Ethernet Adapter	D-Link	DU-E10
8	HUB	D-Link	DSB-H4/DU-H4

Environment Description: “USB2(1)” means to insert USB item 1 in USB Port 2

**Test Result:**

Test Item		Result		Note
		Pass	Fail	
<b>BIOS setup test</b>				
MS-DOS 6.22	USB Legacy Function Test	✓		Keyboard
Windows 98 SE 4.10.2222A	USB1(1)	✓		
	USB2(2)	✓		
	USB3(3)	✓		
	USB4(4)	✓		
	USB1(2)+ USB2(7)	✓		
	USB3(5)+ USB4(6)	✓		
	USB1(1)+ USB2(3)+ USB3(6)	✓		
	USB2(2)+ USB3(4)+ USB4(5)	✓		
	USB1(3)+ USB2(4)+ USB3(5)+ {USB4(8)+ USB(1)+ USB(2)+ USB(6)+ USB(7)}	✓		
	Enable/Disable USB Drive	✓		
OS Rebooting Test	✓			
Windows 2000 Professional 5.00.2195	USB1(1)	✓		
	USB2(2)	✓		
	USB3(8)	✓		

**G.Floppy Disk Controller****Test Result:**

Test Item		Result (1.44M)		Note
		Pass	Fail	
Copy and Compare file between C: and A/B	MS-DOS 6.22	✓		
	Windows 98 SE 4.10.2222A	✓		
Format A/B with system transfer and boot PC from floppy	MS-DOS 6.22	✓		
	Windows 98 SE 4.10.2222A	✓		
SWAP FDD	MS-DOS 6.22	✓		
	Windows 98 SE 4.10.2222A	✓		

**H. I/O Peripheral Test****Platform Information:**

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 850 / 100
Memory Type	NANYA NT56V6620C0T-75 / 64MB / PC133
Primary IDE Master	Quantum K13600AT / 13GB / ATA-66
Primary IDE Slave	TEAC CD-540E / 40X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
VGA Card & Driver Version	OnBoard Intel 82815 Ver.4.12.01.2656
LAN Card & Driver Version	OnBoard Intel 82559 & OnBoard Intel 82562

**Environment Setting:**

Operating System	Windows 98 SE 4.10.2222A MS-DOS 6.22
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**The Result:**

I/O	Pass	Fail	Not support	Note	Reference Page
FDD Driver A:	✓				17 Page
FDD Driver B:	✓				17 Page
Primary IDE Master	✓				35 Page
Primary IDE Slave	✓				35 Page
Secondary IDE Master	N/A				35 Page
Secondary IDE Slave	N/A				35 Page
COM 1	✓				35 Page
COM 2-232	✓				35 Page
COM 3	✓				35 Page
COM 4	✓				35 Page
COM 2-422	✓				35 Page
COM 2-485	✓				35 Page
PS/2 MOUSE	✓				35 Page
LPT 1	✓				35 Page
LPT 2	N/A				35 Page
SIR / 115Kbps	✓				35 Page
FIR / 4M bps	✓				35 Page
DIO	✓				19 Page
DOC	N/A				19 Page
Compact Flash	✓				19 Page
Function	Pass	Fail	Not support	Notes	Reference Page
H/W Reset	✓				35 Page
Speaker	✓				35 Page
Buzzer	✓				35 Page
Keyboard Lock	N/A				35 Page
HDD LED	✓				35 Page
Power LED	✓				35 Page
Ext. K/B Connector	N/A				35 Page
ATX Power button	✓				35 Page
CPU FAN Connector	✓				35 Page
Watchdog –Reset	✓				6 Page
Watchdog –IRQ n	N/A				6 Page
LAN LED	✓				35 Page

## I. Peripheral Compatibility- Storage Device Platform Information:

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Celeron 766 / 66
Memory Type	Hyndai HY57V1291620 LTC-10S / 64MB / PC100
O.S.	Windows 98 SE 4.10.2222A
Primary IDE Master	Quantum K13600AT / 13GB / ATA-66
Primary IDE Slave	TEAC CD-540E / 40X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
VGA Card & Driver Version	OnBoard Intel 82815 Ver.4.12.01.2656
LAN Card & Driver Version	OnBoard Intel 82559 & OnBoard Intel 82562

## Device List:

Device item	Booting		Format		Read/Write		Programming		Note
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	
ZIP 100 [IDE]	✓		✓		✓		✓		
LS 120 [IDE]	✓		✓		✓		✓		
DOC 2000 Model	2MB								N/A
	8MB								N/A
	16MB								N/A
	MB								N/A
	MB								N/A
DOC 2000 MB Memory Segment	CC00								N/A
	D000								N/A
	D400								N/A
	D800								N/A
	DC00								N/A
	Disable								N/A
Compact Flash	340MB	✓		✓		✓		✓	TYPE II
	32MB	✓		✓		✓		✓	TYPE I

**J. Adapter Compatibility- Industry Control Card / PC104 PLUS Modules****Platform Information:**

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Celeron 766 / 66
Memory Type	Hyndai HY57V1291620 LTC-10S / 64MB / PC100
O.S.	Windows 98 SE 4.10.2222A
Primary IDE Master	Quantum K13600AT / 13GB / ATA-66
Primary IDE Slave	TEAC CD-540E / 40X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
VGA Card & Driver Version	OnBoard Intel 82815 Ver.4.12.01.2656
LAN Card & Driver Version	OnBoard Intel 82559 & OnBoard Intel 82562

**Device List: PC/104 PLUS Module**

Device item	Booting/ Format		Read/Write		Programming		+/- 12V: +/- 5V		Note
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	
AAEON PCM-3430	✓		✓		✓		✓		Fast SCSI Modul

Note1: PCM-3430 Rev.A1 必須將卡上 PC104 Con 拿掉,才能使用

Note2: PCM-3430 Rev.A1 在 SBC-659 上只能在 DOS 下使用,若要在 OS:Win95/98/NT/2000 使用  
必須在 SBC-659 上跳線.

**K. On-Board SCSI Function Test (N/A)**

**Test Points:**

- 1.This test emphasizes on SCSI compatibility test.
- 2.Autosense Test—Verify the HDDs reported correctly during POST after setup(EXP: Capacity up than 40GB).
- 3.Setup BIOS--AUTO, USER and Disable on SCSI ID Address detect item then reboot 10 times.

**Platform Information:**

PCB Model & Version	SBC-659 Rev.A0.22
CPU Type & FSB	Pentium III 850 / 100
Memory Type	
O.S.	Windows 98 SE 4.10.2222A
Primary IDE Master	Quantum K13600AT / 13GB / ATA-66
Primary IDE Slave	NEC C&C-BCD F561B / 52X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
On-Board SCSI Module	N/A
Riser Card	N/A
VGA Card & Driver Version	
LAN Card & Driver Version	

**Device List:**

Device item	Booting		Format		Read / Write		Programming		Note
	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Fail	
RICOH MP7060S / 24X / SCSI-CDROM									
Seagate ST34520LW / 4.55GB / U2W-SCSI									
Seagate ST34520W / 4.55GB / UW-SCSI									
Fujitsu MAH3091MP / 9.1GB / Ultra160 / LVD									

**5 . System Integer Application Test**

**Test Points:**



**Platform Information:**

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 750/100
Memory Type	NEC D45128841G5-A10-9JF/(PC-100) 256MB
O.S.	Windows 98SE 4.10.2222A
Primary IDE Master	Fujitsu MPE 3136AH 13.6GB UDMA/66
Primary IDE Slave	ASUS CD-S500/A 50X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
VGA Card & Driver Version	OnBoard Intel 82815 Ver.4.12.01.2656
LAN Card & Driver Version	OnBoard Intel 82559 & OnBoard Intel 82562

**A. Y2K Test:**

Y2K Software Test	Result		Note
	Pass	Fail	
TEST2000.EXE	✓		
Y2KEYE.EXE (Option)			

**B. Standard CMOS Setup Test:**

Test Item	Setting		Function		Note
	Pass	Fail	Pass	Fail	
Data (mm:dd:yy)	✓		✓		
Time (hh:mm:ss)	✓		✓		
Primary Master	✓		✓		
Primary Slave	✓		✓		
Secondary Master					N/A
Secondary Slave					N/A
Floppy Disk A	✓		✓		
Floppy Disk B	✓		✓		

**C. Boot Sequence Test:**

Test Item	Result		Note
	Pass	Fail	
A:	✓		
LS-120	✓		
HDD-0:	✓		
SCSI			
CDROM	✓		
HDD-1:	✓		
HDD-2:			N/A
HDD-3:			N/A
ZIP	✓		
LAN [ Boot From LAN First ]			N/A

**D. Power Manager Test:****D-1.APM Power Manager Test:**

Test Item	Time	Result		Note
		Pass	Fail	
Suspend Mode	1 Min	✓		
HDD Power Down	1 Min	✓		
Power Button	Delay 4 Sec	✓		
Power Button	Instant-Off	✓		

**D-2.ACPI Power Manager Test:**

Test Item	Result		Note
	Pass	Fail	
Enabled	✓		
Disabled	✓		

Note:Supported only ATX Power.

**D-3.Power On Function Test:**

Test Item	Result		Note
	Pass	Fail	
Password	✓		
Hot KEY	✓		
MOUSE Move	✓		
MOUSE Click	✓		
Any KEY	✓		
BUTTON ONLY	✓		
Keyboard 98	✓		

**D-4.Wake Up Event Test:**

Test Item	Result		Note
	Pass	Fail	
Wake On RING	✓		
Wake On LAN	✓		
Wake On ALARNG	✓		

**E. CMOS Backup Test:**

CMOS Backup Test	Result		Note
	Pass	Fail	
	✓		

**F. Boot ROM Test:**

Boot ROM Test	Result		Note
	Pass	Fail	
Boot ROM to Novell 4.11	N/A		HP ProCurve Switch 2224 [ HP J4095A ] HUB
Boot ROM to NT Server 4.0	N/A		D-Link DES-1008 Switch HUB

**G. COM Address / IRQ Test:****Mouse: Logitech M-M35**

Test Item	BIOS Adjust		Function		Note
	Pass	Fail	Pass	Fail	
<b>COM 1</b>					
3F8 / IRQ4	✓		✓		
2F8 / IRQ3	✓		✓		
3E8 / IRQ4	✓		✓		
2E8 / IRQ3	✓		✓		
AUTO	✓		✓		
Disable	✓		✓		
<b>COM 2</b>					
3F8 / IRQ4	✓		✓		
2F8 / IRQ3	✓		✓		
3E8 / IRQ4	✓		✓		
2E8 / IRQ3	✓		✓		
AUTO	✓		✓		
Disable	✓		✓		
<b>COM 3</b>					
3E8 / IRQ10					N/A
2E8 / IRQ5					N/A
3F8 / IRQ10					N/A
2F8 / IRQ5					N/A
AUTO					N/A
Disable					N/A
<b>COM 4</b>					
3E8 / IRQ10					N/A
2E8 / IRQ5					N/A
3F8 / IRQ10					N/A
2F8 / IRQ5					N/A
AUTO					N/A
Disable					N/A

**H. LPT Address / IRQ Test:****Printer Type : Photo Smart P1000**

Test Item	BIOS Adjust		Function		Note
	Pass	Fail	Pass	Fail	
<b>LPT 1</b>					
378/IRQ7 ( ECP+EPP/DMA3 )	✓		✓		
278/IRQ5 ( ECP+EPP/DMA3 )	✓		✓		
3BC/IRQ7 ( ECP+EPP/DMA3 )	✓		✓		
Disabled	✓		✓		
<b>LPT1 Mode</b>					
ECP+EPP ( 378 / IRQ7 )	✓		✓		
SPP ( 378 / IRQ7 )	✓		✓		
EPP ( 278 / IRQ5 )	✓		✓		
ECP ( 3BC / IRQ7 )	✓		✓		
<b>LPT1 Port DMA Channel</b>					
DMA3 (ECP+EPP 378 / IRQ7 )	✓		✓		
DMA1 (ECP+EPP 378 / IRQ7 )	✓		✓		
<b>LPT2</b>					
278 /IRQ5(ECP+EPP/DMA3)					N/A
3BC/IRQ7(ECP+EPP/DMA3)					N/A
378 /IRQ7(ECP+EPP/DMA3)					N/A
Disable					N/A

LPT2 Mode					
ECP+EPP ( 278 / IRQ5 )					N/A
SPP ( 278 / IRQ5 )					N/A
EPP ( 278 / IRQ5 )					N/A
ECP ( 278 / IRQ5 )					N/A
LPT2 DMA Channel					
DMA3 ( ECP+EPP 278 / IRQ5 )					N/A
DMA1 ( ECP+EPP 278 / IRQ5 )					N/A

### I. Hardware Monitor Test:

Hardware Monitor Test	Result		Note
	Pass	Fail	
Voltage 0	✓		1.47V
Voltage 1	✓		2.01V
Voltage 2	✓		1.66V
Voltage 3	✓		5.02V
Voltage 4	✓		12.09V
Voltage 5	✓		(-)11.37V
Voltage 6	✓		(-)5.05V
Voltage 7	✓		4.78V
Voltage Battery	✓		3.88V
Temperature 1	✓		43° C
Fan 1 Speed	✓		5400 RPM

## 7 . Performance Test

### Platform Information:

PCB Model & Version	SBC-659 Rev.A0.2
Memory Type	D45128841G5-A75-9JF/PC-133 256MB
Primary IDE Master	Quantum K13600AT 13GB Fireball DMA/66
Primary IDE Slave	TEAC CD-540E 40X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
VGA Card & Driver Version	OnBoard Intel 82815 Ver.4.12.01.2656
LAN Card & Driver Version	OnBoard Intel 82559 & OnBoard Intel 82562

### Drivers Information:

AGP Driver	Intel(R) 82815 Graphics Controller
IDE Driver	Intel Ultra ATA Storage Driver Ver.6.0
LAN Driver	Intel 82559 & Intel 82562
SCSI Driver	AdvanSys Wide Driver 3.2E
Audio Driver	CS4299 Sound Driver Ver.5.12.01.4026
VGA Driver & BIOS	Intel 82815 Ver.4.12.01.2656

### A. Operating System Environment :

MS-DOS 6.22	Config.sys	Device=c:\dos\himem.sys dos=high,umb files=35 Buffers=40
	Autoexec.bat	Prompt \$p\$g c:\dos\smartdrv.exe /x

### Test Result:

CPU Type	Pentium III 1G/133	Pentium III 933/100	Pentium III 850/100	Celeron 766/66	Unit
<b>Testing Utility</b>					
<b>LandMark Speed 2.0</b>					
CPU	6501.95	6068.45	5526.55	4984.72	MHz
FPU	20910.00	20910.00	13510.50	12185.55	MHz
VIDEO	12288.00	12288.00	11170.00	8936.00	Chr/ms
<b>QAPLUS 5.4-PM</b>					
Data Transfer Rate	14073.9	14073.9	13688.3	7513.2	KB/Sec
<b>Coretest V3.02</b>					
Average Seek Time	6.0	5.9	5.9	5.8	ms
Track-Track Seek	1.4	1.4	1.4	1.4	ms
DTR (Buffered Read)	9504	9488	8400	7056	KB/Sec
Performance ID	65.73	65.79	59.32	51.48	

**B. Operating System Environment :**

Windows 98	SE 4.10.2222A
Resolution, Depth	1024x768x16bits

**Test Result:**

CPU Type Testing Utility	Pentium III 1G/133	Pentium III 933/100	Pentium III 850/100	Celeron 766/66	Unit
<b>WinBench 99 V1.1</b>					
H.E. Graphic WinMark 99	889	850	734	605	MP/s
Business Graphic WinMark 99	232	230	189	165	TB/s
FPUmark	5340	4990	4520	4090	
CPUmark 99	86.8	81.7	69.8	47.9	
<b>Final Reality V1.01—BenchMark Test</b>					
2D image	8.08	7.92	5.63	5.05	
3D	5.92	5.77	5.43	4.45	
Bus transfer	9.51	9.50	6.25	5.18	
Overall	7.10	6.97	5.61	4.74	
<b>3D Winbench 2000 V1.0(DirectX 7.0 1024X768X16bits) [ Least 120MB Memory In O.S. WIN98 &amp; 2K Support]</b>					
3D Winbench 2000 Processor Test	1.92	1.89	1.52	1.11	
<b>Content Creation Winstone 2000 V1.0</b>					
C.C. Winstone 2000	34	33.8	29.8	25.8	

**C. Operating System Environment :**

Windows NT4.0 Workstation	
Resolution, Depth	1024x768x16bits

**Test Result:**

CPU Type Testing Utility	Pentium III 1G/133	Pentium III 933/100	Pentium III 850/100	Celeron 766/66	Unit
<b>WinStone 99 V1.3</b>					
Business Winstone 99	41.9	41.1	39.6	30.9	

## 8 . O.S. Compatibility Test

### A. O.S. Compatibility -Linux RedHat7.0

#### Platform Information:

PCB Model & Version	SBC-659 Rev.A0.2
Kernel Version	
CPU Type & FSB	Intel Celeron 766
Memory Type	IBM 0312804CT3A 360
Primary IDE Master	IBM DARA-206000
Primary IDE Slave	ASUS CD-S500/A 50X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
VGA Card & Driver Version	OnBoard Intel 82815 Ver.4.12.01.2656
LAN Card & Driver Version	

#### Installation Software:

Installation	Result		Note
	Pass	Fail	
Linux 7.0	✓		
Linux 6.4 English		✓	The garbage is show on screen when installion setting the process mode.

#### Test Result:

Test Item	Pass	Fail	Note
<b>Installation to HDD</b>			
Install from CD-ROM	✓		
<b>Funtion Test</b>			
LILO Funtion	✓		
Ping IP Address	✓		
Telnet IP Address	✓		
<b>Base Funtion</b>			
Reboot	✓		
Shutdown	✓		
<b>Xf86config Setup</b>			
Mouse setup	✓		
VGA setup	✓		
Monitor resolution setup	✓		
<b>X Windows Application</b>			
Xclock	✓		

Note1 : Linux 6.4 English Lan Driver Not Reday

Note2 : Linux 6.4 English X-Windows : Fail VGA Driver not Roday

Note2 : Linux 6.4 English X-Windows : Fail

**B. O.S. Compatibility-Novell Network O.S./V 4.11****Platform Information:**

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 850 / 100
Memory Type	NEC D4564163G5-A10B-9JF / 64MB / PC100
Switch HUB Type	HP ProCurve Switch 2224 / HP J4095A
Primary IDE Master	Maxtor 51536U3 / 15.3GB / ATA-66
Primary IDE Slave	TEAC CD-540E / 40X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
VGA Card & Driver Version	OnBoard Intel 82815 Ver.4.12.01.2656
LAN Card & Driver Version	OnBoard Intel 82559 & Intel 82562

**The Result:**

Test Item	Pass	Fail	Note
<b>Server Function Testing</b>			
Install to IDE HDD	✓		
Boot File Server From HDD	✓		
Down & Exit	✓		
Data Transfer		✓	Lan Driver Not Reday
<b>Client Function Testing</b>			
Login	✓		
Logout	✓		
Data Transfer		✓	Lan Driver Not Reday
Client to Server		✓	Lan Driver Not Reday

### C. O.S. Compatibility & On\_Board Network Test -Novell Network O.S./V 5.0 Platform Information(Client Site):

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 850 / 100
Memory Type	NEC D4564163G5-A10B-9JF/(PC-100) 64MB
Primary IDE Master	Maxtor 51536U3 15.3GB UDMA/66
HP Switch HUB	HP ProCurve Switch 2224 / HP J4095A
Primary IDE Slave	TEAC CD-540E 40X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
VGA Card & Driver Version	OnBoard Intel 82815 Ver.4.12.01.2656
LAN Card & Driver Version	OnBoard Intel 82559 & Intel 82562

### Platform Information(Server Site):

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 850 / 100
Memory Type	NEC D45128841G5-A10-9JF/PC-100
O.S.	Novell V 5.0
Primary IDE Master	Maxtor 54610H6 46.1GB UDMA/100
Primary IDE Slave	ASUS CD-S500/A 50X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
VGA Card	OnBoard Intel 82815 Ver.4.12.01.2656
LAN Card	OnBoard Intel 82559 & Intel 82562

### The Result:

Test Item	Pass	Fail	Note
<b>Server Function Testing</b>			
Install to IDE HDD	✓		
Boot File Server From HDD	✓		
Down & Exit	✓		
Data Transfer	✓		
<b>Client Function Testing</b>			
Login	✓		
Logout	✓		
Data Transfer	✓		
<b>Network Function Testing</b>			
Test Item	Pass	Fail	Note
Transceiver	✓		
Receiver	✓		
CRC error	✓		
Collision back-off generation	✓		
<b>Network Operation System Function Testing</b>			
Test Item	Pass	Fail	Note
NetWare 5.0	✓		
<b>Network Performance Testing</b>			
Test Item	Pass	Fail	Note
NWTEST	✓		12 Hrs

<b>Client Application Function Testing</b>			
<b>Test Item</b>	<b>Pass</b>	<b>Fail</b>	<b>Note</b>
Dos 6.22 for IPXODI	✓		
Dos 6.22 for package driver	✓		
Transfer Data Between SRV And WK	✓		Multy Task 12 Hrs(NOTE 1.)

Note : 1.Multy Task is that transfers files(copy/verify/delet) and VCD in the same time

**D. O.S. Compatibility-Windows 95****Platform Information:**

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 850 / 100
Memory Type	NEC D4564163G5 – A10 – 9JF /PC100/32M
Primary IDE Master	Western Digital AC28400-00RT 8.4GB
Primary IDE Slave	TEAC CD-540E-002-0 40X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
Monitor Type	ViewSonic E70
VGA Card & Driver Version	OnBoard Intel 82815 Ver.4.12.01.2656
LAN Card & Driver Version	OnBoard Intel 82559 & Intel 82562

**Installation Software:**

Installation	Result		Note
	Pass	Fail	
WIN95 English	✓		
WIN95 Chinese(Optional)			

**VGA Driver Testing:**

Resolution	Color	SF	LF	Pass	Fail	Note
640X480	16	✓		✓		
	256	✓		✓		
	16bits	✓		✓		
	24bits	✓		✓		
	32bits					N/A
800X600	16					N/A
	256	✓	✓	✓		
	16bits	✓	✓	✓		
	24bits	✓	✓	✓		
	32bits					N/A
1024X768	16					N/A
	256	✓	✓	✓		
	16bits	✓	✓	✓		
	24bits	✓	✓	✓		
	32bits					N/A
1280X1024	16					N/A
	256	✓	✓	✓		
	16bits	✓	✓	✓		
	24bits					N/A
	32bits					N/A
1600X1200	16					N/A
	256					N/A
	16bits					N/A
	24bits					N/A
	32bits					N/A

**Test Results:**

Test Item	Pass	Fail	Note
<b>Installation From Storage Device</b>			
Install to IDE HDD	✓		
<b>DOC Device – Read / Write</b>			
DOC MB / Address			N/A
<b>Boot</b>			
Normal	✓		
Logged (\BOOTLOG.TXT)	✓		
Safe Mode	✓		
Safe Mode with network support	✓		
Previous version of MS-DOS	✓		
Step By Step Confirmation	✓		
Command Prompt Only	✓		
Safe Mode Command Prompt only	✓		
<b>Function Test</b>			
Serial Mouse	✓		
FDD Format/Copy/Read/Write	✓		
PS/2 Mouse	✓		
System Clock	✓		
<b>Keyboard Function Test</b>			
Alt+F4 Quit a Program	✓		
Ctrl+Esc Display the Start Menu	✓		
Alt+Tab Switch To Last Windows	✓		
Ctrl+Alt+Del Close Program	✓		
F8 Start up Boot Up Menu	✓		
F4 Boot Up from Previous	✓		
<b>Shutdown</b>			
Shutdown the Computer	✓		
Shutdown Restart	✓		
Shutdown to MS-DOS Mode	✓		
Close all Prog. & Login Other User	✓		

**E. O.S. Compatibility-Windows 98 SE****Platform Information:**

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 850/100
Memory Type	Lfnineon HYB39S128800CT-7.5/PC-133/SD128M
Primary IDE Master	Quantum LM20A011-01-A 20.5AT
Primary IDE Slave	TEAC CD-540E 40X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
Monitor Type	ViewSonic P775
VGA Card & Driver Version	OnBoard Intel 82815 Ver.4.12.01.2656
LAN Card & Driver Version	OnBoard Intel 82559 & Intel 82562

**Installation Software:**

Installation	Result		Note
	Pass	Fail	
WIN98 SE English	✓		
WIN98 SE Chinese(Optional)			

**VGA Driver Testing:**

Resolution	Color	SF	LF	Pass	Fail	Note
640X480	16	✓		✓		
	256	✓		✓		
	16bits	✓		✓		
	24bits	✓		✓		
	32bits					N/A
800X600	16					N/A
	256	✓	✓	✓		
	16bits	✓	✓	✓		
	24bits	✓	✓	✓		
	32bits					N/A
1024X768	16					N/A
	256	✓	✓	✓		
	16bits	✓	✓	✓		
	24bits	✓	✓	✓		
	32bits					N/A
1152X864	16					N/A
	256	✓	✓	✓		
	16bits	✓	✓	✓		
	24bits					N/A
	32bits					N/A
1152X864	16					N/A
	256	✓	✓	✓		
	16bits	✓	✓	✓		
	24bits					N/A
	32bits					N/A
1600X1200	16					N/A
	256	✓	✓	✓		
	16bits					N/A
	24bits					N/A
	32bits					N/A

**Test Results:**

Test Item	Pass	Fail	Note
<b>Installation From Storage Device</b>			
Install to IDE HDD	✓		
<b>DOC Device – Read / Write</b>			
<b>DOC MB / Address</b>			N/A
<b>Boot</b>			
Boot Normal	✓		
Boot Logged (\BOOTLOG.TXT)	✓		
Boot Safe Mode	✓		
Previous version of MS-DOS	✓		
Boot Step By Step Confirmation	✓		
Boot Command Prompt Only	✓		
Boot Safe Mode Command Prompt	✓		
<b>Function Test</b>			
Serial Mouse	✓		
FDD Format/Copy/Read/Write	✓		
PS/2 Mouse	✓		
USB Mouse/ Keyboard	✓		
IR Mode	✓		
System Clock	✓		
<b>Keyboard Function Test</b>			
Alt+F4 Quit a Program	✓		
Ctrl+Esc Display the Start Menu	✓		
Alt+Tab Switch To Last Windows	✓		
Ctrl+Alt+Del Close Program	✓		
F8 Start up Boot Up Menu	✓		
F4 Boot Up from Previous	✓		
<b>Shutdown</b>			
Stand by	✓		
Shut down	✓		
Restart	✓		
Restart in MS-DOS mode	✓		
Close all Prog. & Login Other User	✓		

**F. O.S. Compatibility-Windows 98 ME****Platform Information:**

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 850/100
Memory Type	IBM 0312804CT3A 360 09K0594 128MB PC100
Primary IDE Master	Maxtor 52049U4 DMA/66
Primary IDE Slave	TEAC CD-540E 40X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
Monitor Type	ViewSonic P775
VGA Card & Driver Version	OnBoard Intel 82815 Ver.4.12.01.2656
LAN Card & Driver Version	OnBoard Intel 82559 & Intel 82562

**Installation Software:**

Installation	Result		Note
	Pass	Fail	
WIN98 ME English	✓		
WIN98 ME Chinese(Optional)			

**VGA Driver Testing:**

Resolution	Color	SF	LF	Pass	Fail	Note
640X480	16	✓		✓		
	256	✓		✓		
	16bits	✓		✓		
	24bits	✓		✓		
	32bits					N/A
800X600	16					N/A
	256	✓	✓	✓		
	16bits	✓	✓	✓		
	24bits	✓	✓	✓		
	32bits					N/A
1024X768	16					N/A
	256	✓	✓	✓		
	16bits	✓	✓	✓		
	24bits	✓	✓	✓		
	32bits					N/A
1280X1024	16					N/A
	256					N/A
	16bits	✓	✓	✓		
	24bits	✓	✓	✓		
	32bits					N/A
1600X1200	16					N/A
	256	✓	✓	✓		
	16bits					N/A
	24bits					N/A
	32bits					N/A

**Test Results:**

Test Item	Pass	Fail	Note
<b>Installation From Storage Device</b>			
Install to IDE HDD	✓		
<b>DOC Device – Read / Write</b>			
<b>DOC</b> <b>MB /</b> <b>Address</b>			N/A
<b>Boot</b>			
Boot Normal	✓		
Boot Logged (\BOOTLOG.TXT)	✓		
Boot Safe Mode	✓		
Previous version of MS-DOS	✓		
Boot Step By Step Confirmation	✓		
Boot Command Prompt Only	✓		
Boot Safe Mode Command Prompt	✓		
<b>Function Test</b>			
Serial Mouse	✓		
FDD Format/Copy/Read/Write	✓		
PS/2 Mouse	✓		
USB Mouse/ Keyboard	✓		
IR Mode	✓		
System Clock	✓		
<b>Keyboard Function Test</b>			
Alt+F4 Quit a Program	✓		
Ctrl+Esc Display the Start Menu	✓		
Alt+Tab Switch To Last Windows	✓		
Ctrl+Alt+Del Close Program	✓		
F8 Start up Boot Up Menu	✓		
F4 Boot Up from Previous	✓		
<b>Shutdown</b>			
Shutdown the Computer	✓		
Shutdown Restart	✓		
Shutdown to MS-DOS Mode	✓		
Close all Prog. & Login Other User	✓		

**G. O.S. Compatibility & On\_Board Network Test-Windows NT 4.0****Platform Information(Client Site):**

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 850/100
Memory Type	Infineon HYB39S128800CT – 7.5 /PC-133 /SD-128M
O.S.	Windows 98 SE 4.10.2222A
Switch HUB Type	D-Link DES-1008 / 10/100 Fast Ethernet Switch HUB
Primary IDE Master	Maxtor 51536U3 / 15.3GB / ATA66
Primary IDE Slave	TEAC CD-540E / 40X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
Monitor Type	ViewSonic P775
VGA Card & Driver Version	OnBoard Intel 82815 Ver.4.12.01.2656
LAN Card & Driver Version	

**Platform Information(Server Site):**

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 850 / 100
Memory Type	NEC D45128841G5-A10-9JF / PC-100
O.S.	Windows NT Server 4.0
Primary IDE Master	Maxtor 54610H6 / 46.1GB / ATA-100
Primary IDE Slave	ASUS CD-S500/A / 50X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Monitor Type	ViewSonic P775
VGA Card & Driver Version	OnBoard Intel 82815 Ver.4.12.01.2656
LAN Card & Driver Version	OnBoard Intel 82559 & Intel 82562

**Installation Software:**

Installation(With SP6)	Result		Note
	Pass	Fail	
WINDOWS NT4.0 Workstation English	✓		
WINDOWS NT4.0 Server English	✓		
WINDOWS NT4.0 Workstation Chinese(Optional)			
WINDOWS NT4.0 Server Chinese(Optional)			

**VGA Driver Test:**

Resolution	Color	SF	LF	Pass	Fail	Note
640X480	16					N/A
	256	✓		✓		
	65536	✓		✓		
	16bits	✓		✓		
	32bits					N/A
800X600	16					N/A
	256	✓	✓	✓		
	65536	✓	✓	✓		
	16bits	✓	✓	✓		
	32bits					N/A
1024X768	16					N/A
	256	✓	✓	✓		
	65536	✓	✓	✓		
	16bits	✓	✓	✓		
	32bits					N/A

1280X1024	16					N/A
	256	✓	✓	✓		
	65536	✓	✓	✓		
	16bits	✓	✓	✓		
	32bits					N/A
1600X1200	16					N/A
	256	✓	✓	✓		
	65536					N/A
	16bits					N/A
	32bits					N/A

**Test Results:**

Test Item	Pass	Fail	Note
<b>Installation From CD/ROM</b>			
Install to IDE HDD	✓		
<b>DOC Device – Read / Write</b>			
DOC MB / Address			N/A
<b>Boot</b>			
Boot to Windows NT	✓		
Boot to MS-DOS	✓		
Last known good configuration	✓		
Original Configuration	✓		
Shutdown	✓		
Shutdown & Restart	✓		
<b>CPU/Memory/File System</b>			
Memory size less than 64MB	✓		
Memory size Larger than 64MB	✓		
Virtual memory	✓		
System tasking settings	✓		
FAT	✓		
NTFS	✓		
Network	✓		
System clock	✓		
Task switching	✓		
<b>Function Test</b>			
Serial Mouse	✓		
FDD Format/Copy/Read/Write	✓		
PS/2 Mouse	✓		
System Clock	✓		
<b>Keyboard Function Test</b>			
CapLock,NumLock,ScrLock	✓		
Ctrl+Alt+Del	✓		
Ctrl+Esc,Alt+Tab/Esc/Space	✓		
Alt+Tab,Alt+Esc,Alt+Space	✓		
<b>COM Port</b>			
Serial Mouse	✓		
<b>Security/Audit/Control</b>			
User manager	✓		
Server manager	✓		
Disk administrator	✓		
Performance monitor	✓		
User profile editor	✓		
Event Viewer	✓		
Windows NT Diagnostics	✓		

<b>Network Function Testing</b>			
Test Item	Pass	Fail	Note
Transceiver	✓		
Receiver	✓		
CRC error	✓		
Collision back-off generation	✓		
Auto-negotiation	✓		
<b>Network Operation System Function Testing</b>			
Test Item	Pass	Fail	Note
Windows NT 4.0	✓		
<b>Network Testing</b>			
Test Item	Pass	Fail	Note
Connect to Neighborhood	✓		
<b>Workstation Application Function Testing</b>			
Test Item	Pass	Fail	Note
Windows 98 for NetBEUI	✓		
Windows 98 for TCP/IP	✓		
Windows NT 4.0 for NetBEUI	✓		
Windows NT 4.0 for TCP/IP	✓		
Transfer Data Between SRV And WK	✓		Multy Task 12 Hrs(NOTE 1.)

Note : 1.Multy Task is that transfers files(copy/verify/delet) and VCD in the same time

**G-1.Microsoft Windows 98 Hardware Compatibility Test(HCT)****Platform Information:**

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 850/100
Memory Type	NEC D4564163G5 – A10 –9JF – 32MB /PC100
O.S.	4.10.2222A
Primary IDE Master	IBM DTLA-307445 46.1 7200RPM DMA/66
Primary IDE Slave	TEAC CD-540E 40X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
VGA Card & Driver Version	OnBoard Intel 82815 Ver.4.12.01.2656
LAN Card & Driver Version	OnBoard Intel 82559 & Intel 82562

**Test Result:**

HCT <input type="checkbox"/> 7.2 <input type="checkbox"/> 9.1 Features Test	Pass	Fail	Note
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)	✓		
Unreported I/O	✓		
Unreported Memory	✓		
PnP BIOS	✓		
APM 1.2	✓		
Media Class Dynamic Config	✓		
Wave Drift	✓		

**H. O.S. Compatibility-Windows 2000****Platform Information:**

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 933 /133
Memory Type	Infineon HYB39S128800CT – 7.5 /PC-133 /SD-128M
Primary IDE Master	Quantum LM20A011-01-A 20.5AT
Primary IDE Slave	TEAC CD-540E 40X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
Monitor Type	ViewSonic P775
VGA Card & Driver Version	OnBoard Intel 82815 Ver.4.12.01.2656
LAN Card & Driver Version	OnBoard Intel 82559 & Intel 82562

**Installation Software:**

Installation(With SP6)	Result		Note
	Pass	Fail	
WINDOWS 2000 Professional English	✓		
WINDOWS 2000 Server English	✓		
WINDOWS 2000 Professional Chinese(Optional)			
WINDOWS 2000 Server Chinese(Optional)			

**VGA Driver Testing:**

Resolution	Color	SF	LF	Pass	Fail	Note
640X480	16					N/A
	256	✓	✓	✓		
	16bits	✓	✓	✓		
	24bits	✓	✓	✓		
	32bits					N/A
800X600	16					N/A
	256	✓	✓	✓		
	16bits	✓	✓	✓		
	24bits	✓	✓	✓		
	32bits					N/A
1024X768	16					N/A
	256	✓	✓	✓		
	16bits	✓	✓	✓		
	24bits	✓	✓	✓		
	32bits					N/A
1152X864	16					N/A
	256	✓	✓	✓		
	16bits	✓	✓	✓		
	24bits	✓	✓	✓		
	32bits					N/A
1280X1024	16					N/A
	256	✓	✓	✓		
	16bits	✓	✓	✓		
	24bits	✓	✓	✓		
	32bits					N/A
1600 X1200	16					N/A
	256	✓	✓	✓		
	16bits					N/A
	24bits					N/A
	32bits					N/A

**Test Results:**

Test Item	Pass	Fail	Note
<b>Installation From Storage Device</b>			
Install to IDE HDD	✓		
<b>DOC Device – Read / Write</b>			
DOC MB / Addree			N/A
<b>Windows 2000 Advanced Options Menu</b>			
Safe Mode	✓		
Safe Mode with Networking	✓		
Safe Mode with Command Prompt	✓		
Enable Boot Logging	✓		
Enable VGA Mode	✓		
Last known Good Configuration	✓		
Directory Services Restore Mode (windows 2000 domain controllers only)	✓		
Debugging Mode	✓		
Boot Normally	✓		
Return to OS Choices Menu			N/A
<b>Function Test</b>			
Serial Mouse	✓		
FDD Format/Copy/Read/Write	✓		
PS/2 Mouse	✓		
USB Mouse/ Keyboard	✓		
IR Mode	✓		
System Clock	✓		
<b>Keyboard Function Test</b>			
Alt+F4 Quit a Program	✓		
Ctrl+Esc Display the Start Menu	✓		
Alt+Tab Switch To Last Windows	✓		
Alt+Esc Switch Windows	✓		
Ctrl+Alt+Del Windows Security Window	✓		
F8 Start up Windows 2000 Advanced Options Menu Menu	✓		
<b>Shutdown</b>			
Log off User	✓		
Shut down	✓		
Restart	✓		

## I. O.S. Compatibility-DOS and DOS Utility Compatibility Testing

### Platform Information:

PCB Model & Version	SBC-659 Rev.A0.2
CPU Type & FSB	Pentium III 933 /133
Memory Type	Infineon HYB39S128800CT – 7.5 /PC-133 /SD-128M
Primary IDE Master	Quantum LM20A011-01-A 20.5AT
Primary IDE Slave	TEAC CD-540E 40X
Secondary IDE Master	N/A
Secondary IDE Slave	N/A
Backplane	N/A
Riser Card	N/A
VGA Card & Driver Version	OnBoard Intel 82815 Ver.4.12.01.2656
LAN Card & Driver Version	OnBoard Intel 82559 & Intel 82562

### Test Results:

Test Item	Result		Note
	Pass	Fail	
<b>Installation MS-DOS6.22 From FDD</b>			
Install to IDE HDD	✓		
<b>DOC Device – Read / Write</b>			
<b>DOC</b> <b>MB /</b> <b>Address</b>			N/A
<b>DOS Commander</b>			
MSD.COM	✓		
EDIT.COM	✓		
EMM386.EXE	✓		
HIMEN.SYS	✓		