

FIC VC37 PCI/AGP SYSTEM BOARD BOARD LEVEL COMPATIBILITY TEST REPORT

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Revision: **1.00**

Supervisor	Tester



Revision History

Document Release	Date	Change Item	ECN
Revision 1.00	3/24/2003	Initial Release.	



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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

Model Name : VC37 PCB Rev 2.0
Product Name : Intel 845GL Based Mainboard
System BIOS : Award BIOS Version IEZ41
PCI IDE : Internal PCI Mastre dual IDE
I/O : SMsC LPC47M192-NC

3. Mainboard CPU Supports:

Intel : (Celeron/L2 cache 128KB)

Intel Processors	FSB	Package
Celeron 1.7GHz	400	FC-PGA2
Celeron 1.8GHz	400	FC-PGA2
Celeron 1.9GHz	400	FC-PGA2
Celeron 2.0GHz	400	FC-PGA2
Celeron 2.1GHz	400	FC-PGA2
Celeron 2.2GHz	400	FC-PGA2
Celeron 2.4GHz	400	FC-PGA2

Intel : (Northwood/L2 cache 512KB)

Intel Processors	FSB	Package
Pentium 4 1.6GHz	400	FC-PGA2
Pentium 4 1.8GHz	400	FC-PGA2
Pentium 4 2.0GHz	400	FC-PGA2
Pentium 4 2.2GHz	400	FC-PGA2
Pentium 4 2.4GHz	400	FC-PGA2
Pentium 4 2.5GHz	400	FC-PGA2
Pentium 4 2.6GHz	400	FC-PGA2

4. System Specification for Hardware and Software Utilities

The mainboard hardware portion was configured as follows :

Item	Description
System Core Logic	Intel 845GL + ICH4
System Cache	128/512KB Pipeline Burst SRAM Built-in CPU
System Memory	DDR200/266 (PC1600/2100) Support
	Maximum : Total 2GB DDR DRAM
	2 DIMM slots for 184 pins DDR SDRAM Module
System Slots	3 PCI slots
VGA	Intel 845GL Graphics support AGP 4X mode
Audio	Realtek ALC202A AC'97 Audio codec support 2 Channel
LAN (Option)	Realtek RTL8100BL 10/100 LAN Chip Onboard
LPC	SMsC LPC47M192-NC Support Normal,EPP,ECP mode and IR interface

4.1 Main Functionality :

Num.	M/B function
1	ACPI Ready (support S0/S3/S4/S5)
2	Wake On LAN
3	RTC Alarm Function
4	H/W Monitoring (CPU TEMP, CPU/System FAN speed) in BIOS
5	Ultra ATA-33/66/100 Enhanced IDE Interface
6	Onboard Realtek ALC202A codec AC'97 Audio support 2 Channel
7	Onboard Realtek RTL8100BL 10/100 LAN
8	USB 1.1/2.0 Feature (Front/Rear)
9	Power Failure feature

4.2 Main Software Utilities :

Num.	Driver Description	Version
1	Intel Chipset Software Install Utility	4.30.1006
2	Intel 845GL Graphics driver for Win XP/2000	6.13.01.3413
3	Intel 845GL Graphics driver for Win 98 SE/ME	4.13.01.3413
4	Intel 845GL Graphics driver for Win NT 4.0	4.03.1381.3413
5	Realtek ALC202A codec driver for Win 9x/ME/2000/XP	5.10.5080
6	Realtek RTL8100BL 10/100 LAN driver	5.505.1004.2002
7	Award BIOS Flash ROM Utilities	8.23

5. Jumper Function Verification

Description	Jumper Name		Default Option
Speaker Connector	SPK		Open
Power LED (Single color)	JP1		Open
Power LED (Dual color)	F_PNL	PW_LED	Open
IDE LED Connector		HD_LED	Open
Reset Switch		RST	Open
Remote Power Switch		PW_SW	Open
CPU FAN Connector	CPU_FAN		Open
Chassis FAN Connector	SYS_FAN		Open
Clear CMOS	JP3		1-2
IR interface	IR		Open
CD_IN Connector (RGGL)	CD_IN		Open
AUX_IN Connector	AUX_IN		Open
Front Audio Connector	FNT_Audio		5-6,9-10
Front USB Connector	USB4/5		Open
Sony Philips Digital Interface	SPDIFOUT		Open

6. Hardware Compatibility Test Suite

6.1 Memory Module

Test Configuration:

OS Ver ☒ Win XP + SP1 Ver: 2002
CPU Intel Pentium 4 2.6GHz (FSB400)
HDD Maxtor 4K080H4 80GB IDE **ATA/66** ☒ **ATA/100**
Channel: ☒ **PM** ☐ **PS** ☐ **SM** ☐ **SS**
VGA Intel 845GL VGA **Onboard** ☒ **AGP 4X**
CD-ROM Aopen DVD-1648 16X DVD **Channel:** ☐ **PM** ☐ **PS** ☒ **SM** ☐ **SS**
Sound Realtek ALC202A AC'97 **PCI_Slot:** ☐ **On board**
LAN Realtek RTL8100BL **PCI_Slot:** ☐ **On board**
Mouse Microsoft IntelliMouse PS/2 Mouse **COM** ☒ **PS/2**

The following PC2100 DDR DRAM module test ZD CC Winstone 200 under Windows XP and run Memtest 3.0 with BIOS set up default value and set to the follow condition 1024 x 768 x 32bit colors, resolution refresh rate of 85Hz, small font.

6.1.1 DDR DRAM Module (DDR266/PC2100)

Vender	Chip vender	IC Part No.	Size	Side	Module No.
Apacer	Nayna	NT5DS32M8AT-7K	256MB	D	77.10603.542
	Mosel	V58C2256804SAT75	256MB	S	77.10604.562
	Infineon	HYB25D128800T-7	256MB	D	77.10203.110
	Infineon	HYB25D256800BT-7	512MB	D	77.10703.110
	Samsung	K4H280838B-TCB0	128MB	D	77.10304.460
Infineon	Infineon	HYB25D128800AT-7	128MB	D	HYS64D16000GU-7-A
	Infineon	HYB25D256800AT-7	256MB	D	HYS64D32000GU-7-A
	Infineon	HYB25D256800BT-7	512MB	D	HYS64D64020GU-7-B
Samsung	Samsung	K4H280838B-TCB0	256MB	D	M368L3313BT1-CB0
	Samsung	K4H560838B-TCB0	512MB	D	M368L6423BT1-CB0Q0
Buffalo	Samsung	K4H280838B-TCB0	128MB	S	PC266DD128N8C
Transcend	Mosel	V58C2128804SAT7	128MB	S	
	Mosel	V58C2128804SAT7	256MB	D	TS32MLD64V6D5
	Mosel	V58C2128804SAT75	256MB	D	TS32MLD64V6D5
	Nanya	NT5DS16M8AT-7K	128MB	S	TS16MLD64V6D5
	Nanya	NT5DS16M8AT-7K	256MB	D	TS32MLD64V6D5
	Micron	MT46V16M8-75A	128MB	S	TS16MLD64V6D5
	Winbond	W942508AH-75	512MB	D	
	Samsung	K4H280838C-TCB0	256MB	D	
elixir	elixir	N2DS25680AT-75B	256MB	S	M2U25664DS88AOG-75B
	elixir	N2DS12880AT-75B	256MB	D	M2U25664DS88AOG-75B
Crucial	Micron	MT46V16M8-75A	128MB	S	CT1672Z265.9T
	Micron	MT46V16M8-75A	256MB	D	CT3272Z265.18T
Micron	Micron	MT46V16M8-75A	128MB	S	MT8VDDT1664AG-265A1
	Micron	MT46V16M8-75A	256MB	D	MT16VDDT3264AG-265A1
	Micron	MT46V32M8-75	512MB	D	MT16VDDT6464AG-265B1
KingMax	KingMax	KDL684T4A2A-07A	128MB	S	MPDA82D-68KX2
	KingMax	KDL684T4A2A-07A	256MB	D	MPDB62D-68KX2

Hynix	Hyundai	HY5DU28822AT-H	256MB	D	HYMD132645 A8-H
PQI	PQI	PQ6D168S75-7	256MB	D	MD6456UPS
Kingston	Nanya	NT5DS16M8AT-7K	256MB	D	KVR266X64C25/256
	Winbond	W942508AH-75	256MB	S	KVR266X64C25/256
	Winbond	W942508AH-75	512MB	D	KVR266X64C25/512
SEITEC	SEITEC	DDR32M8AT-7	512MB	D	184DR512M638
TwinMOS	Hynix	HY5DU28822AT-K	256MB	D	

6.1.2 DDR DRAM Module (DDR333/PC2700)

Vender	Chip vender	IC Part No.	Size	Side	Module No.
Nanya	Nanya	NT5DS32M8AT-7K	256MB	S	NT256D64S88A0G-6
KingMax	KingMax	KDL684T4A2A-05	128MB	S	MPMA82D-68KX3
	KingMax	KDL684T4A2A-05	256MB	D	MPMB62D-68KX3
Pan	SEC	K4H560838C-TCB3	256MB	S	M368L3223CTL-CB3
KingSton	Winbond	W942508AH-6	512MB	D	KVR333X64C25/512
	Infineon	HYB25D256809AT-6	256MB	S	KVR333X64C25/256
	Nanya	NT5DS32M8AT-6	512MB	D	KVR333X64C25/512
Transcend	SEC	K4H560838C-TCB3	256MB	S	TS32MLD64V3F5
	SEC	K4H560838C-TCB3	512MB	D	TS64MLD64V3F5
	SEC	K4H280838D-TCB3	256MB	D	TS32MLD64V3D5
	Winbond	W942508BH-6	512MB	D	TS64MLD64V3F5
Apacer	SEC	K4H560838C-TCB3	512MB	D	77.10728.460
	SEC	K4H560838D-TCB3	256MB	S	77.10628.462
	SEC	K4H560838D-TCB3	512MB	D	77.10728.460
Infineon	Infineon	HYB25D256800BT-6	256MB	S	HYS64D32000GU-6-B
SEITEC	SEITEC	DDR32M8AT-7	256MB	S	184DR256M338
TwinMOS	TwinMOS	TMD7608F8E60B	256MB	S	M2G5108A1ATT5F0811DDT

** Intel 845GL North Bridge doesn't support DDR333, so these DDR333 DRAM run DDR266.*

6.2 Add-on Cards

6.2.1 PCI Display Adapter Products

Test Configuration:

OS Ver ☒ Win XP + SP1 Ver: 2002

CPU Intel Pentium 4 2.4GHz (FSB400)

HDD Seagate ST340824A 40GB IDE ☐ ATA/66 ☒ ATA/100

Channel: ☒ PM ☐ PS ☐ SM ☐ SS

Memory Samsung 256MB(Samsung)

Total: 512 MB ☐ PC1600 ☒ PC2100

CD-ROM EPO DVD-8216 16X IDE DVD

Channel: ☐ PM ☐ PS ☒ SM ☐ SS

Sound Realtek ALC202A AC'97

☐ PCI_Slot: ☒ On board

LAN Realtek RTL8100BL

☐ PCI_Slot: ☒ On board

Mouse Logitech MouseMan Mouse

☐ COM ☒ PS/2

The following PCI VGA cards test 3Dmark 2000/WinBench 99 v2.0 under Windows XP with Win XP default drivers installed and set to the follow itself Maximum resolution, resolution refresh rate of 75Hz, small font.

Vendor	VGA Chip	Product Description	Resolution
Creative	S3 Savage 4	3D Blaster Savage 4 PCI VGA	1152 x 864 x 32bit
3dfx	Voodoo3 3000	Voodoo3 3000 PCI VGA	1600 x 1024 x 32bit
Cardex	SiS 6326	Cardexpert 6326	640 x 480 x 16bit

6.2.2 SCSI Adapter Products

Test Configuration:

OS Ver ☒ Win XP + SP1 Ver: 2002
☒ Win 2000 + SP3 Ver: 5.00.2195
CPU Intel Pentium 4 2.4GHz (FSB400)
Memory Micron 256MB (Micron) **Total: 512 MB** ☐ PC1600 ☒ PC2100
VGA Intel 845GL VGA ☒ Onboard ☐ AGP 4X
HDD Seagate ST336706LW 36GB ☐ Ultra II SCSI ☒ Ultra 160
CD-ROM TEAC CD-W512S 32X SCSI ☒ Ultra SCSI ☐ Ultra Wide
Sound Realtek ALC202A AC'97 ☐ PCI_Slot: __. ☒ On board
LAN Realtek RTL8100BL ☐ PCI_Slot: __. ☒ On board
Mouse Logitech MouseMan Mouse ☐ COM ☒ PS/2

The following PCI SCSI cards run CC Winstone 2002/Large files copy(over 500MB) under Windows XP/2000 with their respective SCSI drivers installed and set to the follow condition 1024 x 768 x 32bit colors, resolution refresh rate of 85Hz, small font.

Vendor	Model Name	Product Description	Bus I/F
Adaptec	ASC-19160-PK	Adaptec 19160 Ultra 160 PCI SCSI card	PCI
	ASC-29160N	Adaptec ASC-29160N PCI SCSI card	PCI
	ASC-39160-PK	Adaptec 39160 Ultra 160 PCI SCSI card	PCI
Tekram	DC-390U2W	Tekram DC-390U2W PCI SCSI	PCI
	DC-390U3W	Tekram DC-390U3W PCI SCSI	PCI

6.2.3 PCI Audio Products

Test Configuration:

OS Ver ☒ Win XP + SP1 **Ver:** 2002
CPU Intel Pentium 4 2.4GHz (FSB400)
Memory KingSton 256MB(Winbond) **Total:** 512 MB ☐ PC1600 ☒ PC2100
VGA Intel 845GL VGA ☒ Onboard ☐ AGP 4X
HDD WD Caviar 800JB 80GB IDE ☒ ATA/100 ☐ ATA/133
Channel: ☒ PM ☐ PS ☐ SM ☐ SS
CD-ROM TEAC CD-552E 52X IDE CD-ROM **Channel:** ☐ PM ☐ PS ☒ SM ☐ SS
LAN Realtek RTL8100BL **PCI Slot:** ☒ On board
Mouse Microsoft IntelliMouse PS/2 Mouse **COM** ☒ PS/2

The following PCI sound cards test play WAV/MP3/Music CD and DVD under Windows XP with their respective sound drivers installed .

Vendor	Model Name	Product Description
Creative	CT-4750	Sound Blaster PCI128 Digital
	CT-4790	Sound Blaster PCI512 Digital
	CT-4860	Sound Blaster Live! Platinum
	SB-0090	Sound Blaster Audigy Platinum
Everdata	YAMAHA 754	Orpheua Digital PCI Sound Card
Terratec	Crystal CS4624-CQ	DMX Xfire Soundsystem PCI

* Test under onboard Audio be Disabled on BIOS.

6.2.4 PCI Modem Products

Test Configuration:

OS Ver ☒ Win XP + SP1 **Ver:** 2002
CPU Intel Pentium 4 2.4GHz (FSB400)
Memory PQI 256MB(PQI) **Total:** 512 MB ☐ PC1600 ☒ PC2100
VGA Intel 845GL VGA ☒ Onboard ☐ AGP 4X
HDD WD Caviar 800JB 80GB IDE ☒ ATA/100 ☐ ATA/133
Channel: ☒ PM ☐ PS ☐ SM ☐ SS
CD-ROM TEAC CD-552E 52X IDE CD-ROM **Channel:** ☐ PM ☐ PS ☒ SM ☐ SS
Sound Realtek ALC202A AC'97 **PCI Slot:** ☒ On board
LAN Realtek RTL8100BL **PCI Slot:** ☒ On board
Mouse Microsoft IntelliMouse PS/2 Mouse **COM** ☒ PS/2

The following PCI modem card test includes connecting to the internet,download files and test S1/S3/S4 under under Windows XP with their respective modem drivers installed .

Vendor	Product Description	Bus I/F
Askey	1456VQH75	PCI
3Com	5690 56K & V90 Modem	PCI

6.3 Storage

6.3.1 SCSI Peripheral Products

Test Configuration:

OS Ver ☒ Win XP + SP1 Ver: 2002
CPU Intel Pentium 4 2.4GHz(FSB400)
Memory Transcend 256MB (Nanya) **Total: 512 MB** ☐ PC1600 ☒ PC2100
VGA Intel 845GL VGA ☒ Onboard ☐ AGP 4X
SCSI Adaptec ASC-29160-PK Ultra160 ☐ ISA ☒ PCI_Solt: 2.
Sound Realtek ALC202A AC'97 ☐ PCI_Slot: . ☒ On board
LAN Realtek RTL8100BL ☐ PCI_Slot: . ☒ On board
Mouse Logitech First Mouse+ Mouse ☐ COM ☒ PS/2

The following SCSI devices run CC WinStone 2002 or copy large file(over 500MB) under Windows XP with their respective SCSI drivers installed and set to the follow condition 1024 x 768 x 32bit colors, resolution refresh rate of 85Hz, small font.

ITEM	Vendor	Model Name	Product Description
Hard Disk	IBM	IC35L018UWD210	Ultra160 18GB
	Seagate	ST318452LW	Cheetah Ultra160 Wide 18GB
		ST336706LW	Cheetah Ultra160 Wide 36GB
		ST336752LW	Cheetah Ultra160 Wide 36GB
CD-ROM / CD-RW	Plextor	PX-40Tsi	Ultra SCSI CD-ROM 40X
	TEAC	CD-W512S-B82	(32R12W10RW) CD-RW
	Afreedy	CD-2050S	Ultra SCSI CD-ROM 50X
	YAMAHA	CRW2100S	(40R16W10RW) CD-RW 40X
MO	Konica	GF-640	Super MO II External MO
	Fujitsu	MDG3064SS	DYNA MO 640 SF
ZIP	Iomage		SCSI ZIP 250 (External)

6.3.2 IDE Fixed Disk Drive Products

Test Configuration:

OS Ver ☒ Win XP + SP1 Ver: 2002

CPU Intel Celeron 2.2GHz(FSB400)

Memory KingSton 512MB (Winbond)

VGA Intel 845GL VGA

CD-ROM SONY DDU1621 16X IDE DVD

Sound Realtek ALC202A AC'97

LAN Realtek RTL8100BL

Mouse Logitech First Mouse+ Mouse

Total: 1000 MB ☐ PC1600 ☒ PC2100

☒ Onboard ☐ AGP 4X

Channel: ☐ PM ☐ PS ☒ SM ☐ SS

☐ PCI_Slot: ☒ On board

☐ PCI_Slot: ☒ On board

☐ COM ☒ PS/2

The following IDE devices test and WinStone 2001/CC Winstone 2002/WinBench 99/Copy large files(over 500MB)under Windows XP with Win XP default drivers installed and set to the follow condition 1024 x 768 x 32bit colors, resolution refresh rate of 85Hz, small font.

IDE ATA/100

Vendor	Model Name	Capacity
IBM	DTLA-307015	15.3GB
	DTLA-305020	20.5GB
	DTLA-307020	20.5GB
	DTLA-307030	30.7GB
	IC35L040AVER07-0	40GB
	DTLA-307045	46.1GB
	DTLA-307060	61.4GB
	IC35L060A	61.5GB
	DTLA-307075	76.8GB
	IC35L080AVVA07	82.3GB
	IC35L120AVVA07	120GB
Maxtor	51536H2	15.3GB
	52049H4	20.4GB
	53073H6	30.6GB
	34098H4	40.9GB
	54098H8	40.9GB
	4K040H2	40GB
	5T060H6	61GB
	98196H8	80GB
	4K080H4	80GB
	4W100H6	100GB
Seagate	ST330631A	30.6GB
	ST340016A	40GB
	ST340810A	40GB
	ST340824A	40GB
	ST380020A	80GB
	ST380021A	80GB
	ST3120023A	120GB
WD	Caviar WD300BB	30GB

	Caviar WD400BB	40GB
	Caviar WD600BB	60GB
	Caviar WD800BB	80GB
	Caviar WD800JB	80GB
	Caviar WD1000BB	100GB
	Caviar WD1200BB	120GB
	Caviar WD1200JB	120GB
Samsung	SV3063H	30.6GB
	SV4084H	40.8GB

IDE ATA/133

Vendor	Model Name	Capacity
Maxtor	6E020L0	20GB
	6E030L0	30GB
	6L040J2	40GB
	6L040L2	40GB
	6E040L0	40GB
	6L060J3	60GB
	6L060L3	60GB
	6Y060L0	60GB
	6L080J4	80GB
	6L080L4	80GB
	6Y080L0	80GB
	6Y120L0	120GB
	4G160JB	160GB
	6Y160P0	160GB
	6Y200P0	200GB

* Intel ICH4 South Bridge doesn't support ATA/133 transfer mode, so these ATA/133 HDD run ATA/100.

6.3.3 ATAPI CD-ROM /DVD-ROM Device Product

Test Configuration:

OS Ver ☒ Win XP + SP1 Ver: 2002

CPU Intel Celeron 2.0GHz(FSB400)

Memory Micron 256MB (Micron)

VGA Intel 845GL VGA

HDD IBM DTLA-307045 46.1GB IDE

Sound Realtek ALC202A AC'97

LAN Realtek RTL8100BL

Mouse Logitech TrackmanMarble Mouse

Total: 512 MB ☐ PC1600 ☒ PC2100

☒ Onboard ☐ AGP 4X

☐ ATA/66 ☒ ATA/100

Channel: ☒ PM ☐ PS ☐ SM ☐ SS

☐ PCI_Slot: ☒ On board

☐ PCI_Slot: ☒ On board

☐ COM ☒ PS/2

The following IDE devices test play VCD or DVD under windows XP with Win XP default drivers installed and set to the follow condition 1024 x 768 x 32bit colors, resolution refresh rate of 85Hz, small font.

6.3.3.1 ATAPI CD-ROM:

Vendor	Model Name	Product Description
LITE-ON	LTN-403L	ATAPI CD-ROM 40X UDMA33
	LTN-485S	ATAPI CD-ROM 48X UDMA33
Acer	650P	ATAPI CD-ROM 50X UDMA33
TEAC	CD-540E	ATAPI CD-ROM 40X Mode4
Creative	CD4833E	ATAPI CD-ROM 48X Mode4
YAMAHA	Audio Extractor	ATAPI CD-ROM 52X Mode4
ASUS	CD-S500/A	ATAPI CD-ROM 50X UDMA33
	CD-S520/A	ATAPI CD-ROM 52X UDMA33
Mitsumi	CRMC-FX4820T	ATAPI CD-ROM 48X Mode4
	FX5400W	ATAPI CD-ROM 54X Mode4
LG	CRD-8522B	ATAPI CD-ROM 52X Mode4
SONY	CDU4811	ATAPI CD-ROM 48X UDMA33
AOpen	CD-952E/AKH	ATAPI CD-ROM 52X UDMA33
Genuine	GC-952B	ATAPI CD-ROM 52X UDMA33
4KUS	CCD-52X6D	ATAPI CD-ROM 52X UDMA33

6.3.3.2 ATAPI DVD-ROM:

Vendor	Model Name	Product Description
ASUS	DVD-E616	ATAPI DVD-ROM 16X Mode4
Panasonic	SR-8587-B	ATAPI DVD-ROM 16X Mode4
SONY	DDU1621	ATAPI DVD-ROM 16X Mode4
Pioneer	DVD-106S/2	ATAPI DVD-ROM 16X UDMA66
	DVD-116/2	ATAPI DVD-ROM 16X UDMA66
	DVD-117RD	ATAPI DVD-ROM 16X UDMA66
NEC	DV-5700B	ATAPI DVD-ROM 12X UDMA33
	DV-5800A	ATAPI DVD-ROM 16X UDMA33
Acer	DVP1640A	ATAPI DVD-ROM 16X Mode4
BTC	BDV 316B	ATAPI DVD-ROM 16X UDMA33
BenQ	DVD1648A	ATAPI DVD-ROM 16X Mode4
LITE-ON	LTD-163	ATAPI DVD-ROM 16X Mode4
Actima	AD16H	ATAPI DVD-ROM 16X Mode4
AOpen	DVD1648	ATAPI DVD-ROM 16X UDMA66
EPO	DVD-8216	ATAPI DVD-ROM 16X UDMA33
4KUS	DVD-16X5H	ATAPI DVD-ROM 16X UDMA66

6.4 Peripherals

6.4.1 Parallel/Serial Port Products (Including IR)

Test Configuration:

OS Ver ☒ Win XP + SP1 Ver: 2002
CPU Intel Pentium 4 2.0GHz(FSB400)
Memory Infineon 256MB (Infineon) **Total: 512 MB** ☐ PC1600 ☒ PC2100
HDD Maxtor 6Y160P0 160GB IDE ☐ ATA/100 ☒ ATA/133
CD-ROM LG CRD-8522B 52X CD-ROM **Channel:** ☒ PM ☐ PS ☐ SM ☐ SS
VGA Intel 845GL VGA **Channel:** ☐ PM ☐ PS ☒ SM ☐ SS
Sound Realtek ALC202A AC'97 ☒ Onboard ☐ AGP 4X
LAN Realtek RTL8100BL ☐ PCI_Slot: ☒ On board
Mouse Logitech TrackMan Marble Mouse ☐ PCI_Slot: ☒ On board
☐ COM ☒ PS/2

The following Parallel/Serial/IR devices be tested under Windows XP with Win XP default drivers installed.

Vendor	Product Description	Bus I/F
Iomage	ZIP 250	LPT
HP	DeskJet 1220c	LPT
EPSON	Stylus Color 740	LPT
ELSA	MicroLink 56K Internet modem	COM
Kodak	DC210 InfraRed/Serial port Digital camera	COM/IR
ACTisys	ACT-IR210L Receiver/Transceiver	IR

6.4.2 USB Device Products

Test Configuration:

OS Ver ☒ Win XP + SP1 Ver: 2002
CPU Intel Pentium 4 2.4GHz(FSB400)
Memory Apacer 256MB(Mosel) **Total: 512 MB** ☐ PC1600 ☒ PC2100
HDD Maxtor 6L080L4 80GB IDE ☐ ATA/100 ☒ ATA/133
CD-ROM Genuine GC-952B 52X CD-ROM **Channel:** ☒ PM ☐ PS ☐ SM ☐ SS
VGA Intel 845GL VGA **Channel:** ☐ PM ☐ PS ☒ SM ☐ SS
Sound Realtek ALC202A AC'97 ☒ Onboard ☐ AGP 4X
LAN Realtek RTL8100BL **PCI_Slot:** ☐ ☒ On board
Mouse Logitech First Mouse+ Mouse **PCI_Slot:** ☐ ☒ On board
COM ☒ PS/2

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

6.4.2.1 USB 1.1 Devices

Type	Vendor	Description
Mouse	Logitech	USB Wheel Mouse (Optical) (M-BD58)
		MouseMan Dual Optical (M-BL63B)
		MX500 Optical Mouse (M-BP81A)
		MX700 Cordless Optical Mouse (M-RY81)
	Microsoft	IM Optical U/P Mouse (X05-48976)
		IM Optical U/P Mouse (X06-25122)
		IM Explorer 3.0 U/P Mouse (X06-25120)
		TrackBall Explorer U/P Mouse (X05-87473)
		Wireless Explorer USB Mouse (X08-12616)
	Genius	NetScroll+ NB Eye Optical
HUB	Belkin	Express Bus F5U001
	SOHOUSB	Unique Energy Saving (4-Port USB Hub)
Camera	Intel	YC72
	Logitech	QuickCam Web Camera
Keyboard	BTC	8113W
	Microsoft	Natural Keyboard Pro
Printer	HP	DeskJet 840c
		DeskJet 990cxi
		DeskJet 1220c
	EPSON	Stylus Color 740
		Stylus Color 900
Scanner	EPSON	GT-7000
	HP	ScanJet 4200C
Speaker	YAMAHA	YST-MS35D
MO	OLYMPUS	Turbo MO MINI (MOS3390S)
ZIP	iomega	ZIP 250
FDD		Generic USB FDD
GamePad	Logitech	WingMan Extreme USB GamePad
	Microsoft	SideWinder Strategic Commander
	Microsoft	SideWinder Game Voice

Joystick	Logitech	WingMan Formula Force joystick
	Microsoft	SideWinder Precision 2
Flash Driver	Transcend	JetFlash 128MB
		JetFlash 256MB
		JetFlash 512MB
		JetFlash 1GB

6.4.2.2 USB 2.0 Devices

Type	Vendor	Description
HUB	Hung	USB 2.0 Hi-Speed Hub
	ATEN	UH-204
Adaptec	Vipower	VP-8258 Mobile USB HDD Adapter
HDD	Fujitsu	DYNA DISQ 20GB (MMA2200VB)
CD-R/RW	Plextor	PX-S88TU (24R8W8RW)
		PX-W2410TU (40R24W10RW)
	YAMAHA	CRW-70 (24R12W8RW)
		CRW-F1ux (44R44W24RW)
Scanner	EPSON	Perfection 2450 Photo
MO	Fujitsu	DYNA MO 1300U2 (MDG3130UB)
Printer	HP	DeskJet 3820
ZIP	iomega	ZIP 750

6.5 Power Supply Products

Test Configuration:

OS Ver ☒ Win XP + SP1 Ver: 2002

CPU Intel Pentium 4 2.0GHz(FSB400)

Memory Transcend 512MB(Winbond)

HDD1 Maxtor 6Y160P0 160GB IDE

HDD2 IBM IC35L040 40GB IDE

CD-ROM LG CRD-8522B 52X IDE CD-ROM

CD-ROM Acer DVP1640A 16X IDE DVD-ROM

LAN1 3COM 3C905B 10/100

LAN2 Intel 82559 10/100

LAN3 Intel 82559 10/100

VGA Intel 845GL VGA

Sound Realtek ALC202A AC'97

LAN Realtek RTL8100BL

Mouse Logitech TrackMan Marble Mouse

Total: 1000 MB ☐ PC1600 ☒ PC2100

☐ ATA/100 ☒ ATA/133

Channel: ☒ PM ☐ PS ☐ SM ☐ SS

☐ ATA/66 ☒ ATA/100

Channel: ☐ PM ☒ PS ☐ SM ☐ SS

Channel: ☐ PM ☐ PS ☒ SM ☐ SS

Channel: ☐ PM ☐ PS ☐ SM ☒ SS

☒ PCI_Slot: 1 ☐ On board

☒ PCI_Slot: 2 ☐ On board

☒ PCI_Slot: 3 ☐ On board

☒ Onboard ☐ AGP 4X

☐ PCI_Slot: ☒ On board

☐ PCI_Slot: ☒ On board

☐ COM ☒ PS/2

The following Power supply devices test Cold/Warm boot and S1/S3/S4 under Windows XP, They based on system full loading and over 5 times.

Vendor	Product Description	Power	AC Input Voltage	Type
DELTA	DPS-250KB A Rev:00	300W	110/220	ATX
	DPS-350NB	350W	110/220	ATX
Seventeam	ST-250BLV	250W	110/220	ATX
	ST-300BLV	300W	110/220	ATX
	ST-350GL	350W	110/220	ATX
Enlight	HPC-340-101	340W	110/220	ATX
ENERMAX	EG265P-VE	250W	110/220	ATX
Seasonic	SS-250FS	250W	110/220	ATX
	SS-300FS	300W	110/220	ATX
ICute	P4-3000TC v2.03	300W	110/220	ATX
Green An	ATX-1125BTA	300W	110/220	ATX
	ENP-0735	350W	110/220	ATX
SD	SD-300W-12V	300W	110/220	ATX
HEC	HEC-250VR-T	250W	110/220	ATX
	HEC-300VD-T	300W	110/220	ATX
Century Star	ATX 350W	350W	110/220	ATX
Topower	TOP-350SSA	350W	110/220	ATX
Super Flower	SF-320TS	320W	110/220	ATX
PowerMax	T1 series	300W	110/220	ATX
HOPELY	ATX-250SE-P4	250W	220	ATX
	ATX-300SE-P4	300W	220	ATX
	ATX-300S	300W	220	ATX
Golden Field	ATX-320WB&P4	300W	220	ATX

7. Software Compatibility Test Suite

7.1 Base Operating System

7.1.1 Microsoft Windows 98 SE:

Test Configuration:

CPU Intel Pentium 4 2.2GHz(FSB400)

Memory KingMax 256MB(KingMax)

HDD WD Caviar 600BB 60GB IDE

VGA Intel 845GL VGA

CD-ROM NEC DV-5800A 16X IDE DVD

Sound Realtek ALC202A AC'97

LAN Realtek RTL8100BL

Mouse Microsoft IntelliMouse Mouse

Total: 512 MB ☐ PC1600 ☒ PC2100

☐ ATA/66 ☒ ATA/100

Channel: ☒ PM ☐ PS ☐ SM ☐ SS

☒ Onboard ☐ AGP 4X

Channel: ☐ PM ☐ PS ☒ SM ☐ SS

☐ PCI_Slot: ☒ On board

☐ PCI_Slot: ☒ On board

☐ COM ☒ PS/2

Test Item		Result	Remark
FDISK (FAT32)		PASS	
Format FDD		PASS	
FIC 1stUtilities all M/B drivers Install & Test		PASS	
FIC CD-Plus all Application Install & Test		PASS	
Large file Copy from DVD-ROM (Over 500MB)		PASS	
Device Management check (No Caution)		PASS	
VGA Resolution/Color change		PASS	
Install Office XP		PASS	
Auto Shutdown (system power off)		PASS	
DVD play (name: <i>Star War II</i>)		PASS	
S3 (Suspend To DRAM)	Power button	PASS	
	Keyboard Sleep Key (98keyboard)	PASS	
	Start → Stand By item	PASS	
	Time Out	PASS	
System Shutdown	Power button (Setting from PM)	PASS	
	Start → Shut down item	PASS	
WinStone 2001 v1.0.3		PASS	48.9
CC WinStone 2002 v1.0.1		PASS	28.9
3D Mark 2001 SE		PASS	1310

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 98 SE	4.10.2222A	English	Microsoft	Pass

7.1.2 Microsoft Windows ME:

Test Configuration:

CPU Intel Pentium 4 2.2GHz(FSB400)

Memory Infineon 256MB(Infineon)

HDD IBM IC35L080A 81GB IDE

VGA Intel 845GL VGA

CD-ROM SONY DDU1621 16X IDE DVD

Sound Realtek ALC202A AC'97

LAN Realtek RTL8100BL

Mouse Microsoft IntelliMouse Mouse

Total: 512 MB ☐ PC1600 ☒ PC2100

☐ PIO4 ☐ ATA/66 ☒ ATA/100

Channel: ☒ PM ☐ PS ☐ SM ☐ SS

☒ Onboard ☐ AGP 4X

Channel: ☐ PM ☐ PS ☒ SM ☐ SS

☐ PCI_Slot: __. ☒ On board

☐ PCI_Slot: __. ☒ On board

☐ COM ☒ PS/2

Test Item		Result	Remark
FDISK (FAT32)		PASS	
FIC 1stUtilities all M/B drivers Install & Test		PASS	
FIC CD-Plus all Application Install & Test		PASS	
Device Management check (No Caution)		PASS	
Large file Copy from DVD-ROM (Over 500MB)		PASS	
Install Office XP		PASS	
Defrag test		PASS	
DVD play (name: <i>STAR WAR II</i>)		PASS	
S3 (Suspend To DRAM)	Power button	PASS	
	Keyboard Sleep Key (98keyboard)	PASS	
	Start → Stand By item	PASS	
	Time Out	PASS	
Hibernate (Suspend To Disk)	Power button	PASS	
	Start → Hibernate item	PASS	
	Time Out	PASS	
System Shutdown	Power button	PASS	
	Start → Shut down item	PASS	
WinStone 2001 v1.0.3		PASS	51.1
CC WinStone 2002 v1.0.1		PASS	27.2
3D Mark 2001 SE		PASS	1290

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 ME	4.90.3000	English	Microsoft	Pass

7.1.3 Microsoft Windows XP/Home Edition + Service Pack 1:

Test Configuration:

CPU Intel Celeron 2.0GHz (FSB400)
Memory KingSton 512MB(Nanya) **Total: 1000 MB** ☐PC1600 ☒PC2100
HDD Maxtor 6L060J3 60GB IDE ☐ATA/66 ☐ATA/100 ☒ATA/133
VGA Intel 845GL VGA **Channel:** ☒PM ☐PS ☐SM ☐SS
CD-ROM Pioneer DVD-116/2 16X IDE DVD ☒Onboard ☐AGP 4X
Sound Realtek ALC202A AC'97 **Channel:** ☐PM ☐PS ☒SM ☐SS
LAN Realtek RTL8100BL ☐PCI_Slot:_. ☒On board
Mouse Microsoft IntelliMouse Mouse ☐PCI_Slot:_. ☒On board
☐COM ☒PS/2

Test Item		Result	Remark
Install Win XP with NTFS (boot from CD)		PASS	
FIC 1stUtilities all M/B drivers Install & Test		PASS	
Device Management check (No Caution)		PASS	
Large file Copy from DVD-ROM (Over 500MB)		PASS	
Defrag test		PASS	
DVD play (name: <i>STAR WAR II</i>)		PASS	
S3 (Suspend To Memory)	Power button	PASS	
	Keyboard Sleep Key (98keyboard)	PASS	
	Start → Stand By item	PASS	
	Time Out	PASS	
Hibernate (Suspend To Disk)	Power button	PASS	
	Start → Hibernate item	PASS	
	Time Out	PASS	
System Shutdown	Power button	PASS	
	Start → Shut down item	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 XP / Home Edition	2002	English	Microsoft	Pass
Windows XP Service Pack	1.0	English	Microsoft	Pass

7.1.4 Microsoft Windows 2000 + Service Pack 3:

Test Configuration:

CPU Intel Celeron 2.0GHz (FSB400)
Memory Transcend 512MB(Winbond) **Total: 1000 MB** ☐PC1600 ☒PC2100
HDD WD Caviar WD1200BB 120GB IDE ☐PIO4 ☐ATA/66 ☒ATA/100
Channel: ☒PM ☐PS ☐SM ☐SS
VGA Intel 845GL VGA ☒Onboard ☐AGP 4X
CD-ROM Panasonic SR-8587-B 16X IDE DVD **Channel:** ☐PM ☐PS ☒SM ☐SS
Sound Realtek ALC202A AC'97 ☐PCI_Slot:_. ☒On board
LAN Realtek RTL8100BL ☐PCI_Slot:_. ☒On board
Mouse Microsoft IntelliMouse Mouse ☐COM ☒PS/2

Test Item		Result	Remark
Install Win 2000 with NTFS (boot from CD)		PASS	
FIC 1stUtilities all M/B drivers Install & Test		PASS	
FIC CD-Plus all Application Install & Test		PASS	
Device Management check (No Caution)		PASS	
VGA Resolution/Color change		PASS	
Large file Copy from DVD-ROM (Over 500MB)		PASS	
Install Office XP		PASS	
DVD play (name: <i>A Fistful Of Dollars</i>)		PASS	
S3 (Suspend To Memory)	Power button	PASS	
	Keyboard Sleep Key (98keyboard)	PASS	
	Start → Stand By item	PASS	
	Time Out	PASS	
Hibernate (Suspend To Disk)	Power button	PASS	
	Start → Hibernate item	PASS	
	Time Out	PASS	
System Shutdown	Power button	PASS	
	Start → Shut down item	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 2000 Professional	5.00.2195	English	Microsoft	Pass
Windows 2000 Service Pack	3.0	English	Microsoft	Pass

7.1.5 Microsoft Windows NT 4.0 + Service Pack 6:

Test Configuration:

CPU Intel Celeron 2.0GHz(FSB400)

Memory KingStone 256MB(Infineon)

HDD IBM IC35L060A 60GB IDE

VGA Intel 845GL VGA

CD-ROM Lite-On LTD-163 16X DVD-ROM

Sound Realtek ALC202A AC'97

Mouse Logitech Mouse+ Mous

Total: 512 MB ☐PC1600 ☒PC2100

☐PIO4 ☐ATA/66 ☒ATA/100

Channel: ☒PM ☐PS ☐SM ☐SS

☒Onboard ☐AGP 4X

Channel: ☐PM ☐PS ☒SM ☐SS

☐PCI_Slot: __. ☒On board

☐COM ☒PS/2

Test Item	Result	Remark
Install Win NT with NTFS (boot from CD)	PASS	
Install Service Pack 6.0	PASS	
Format FDD	PASS	
Cool boot 2 times under every combination	PASS	
Reboot 2 times under every combination	PASS	
VGA Resolution/Color change	PASS	
Large file Copy (one file Over 500MB)	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 Workstation	4.0	English	Microsoft	Pass
Windows NT Workstation Service Pack	6.0	English	Microsoft	Pass

8. Onboard Function Test Suite

8.1 Realtek ALC202A AC'97 Codec Audio:

Test Configuration:

OS Ver ☒ Win XP + SP1 Ver: 2002
☒ Win 2000 + SP3 Ver: 5.00.2195

CPU Intel Pentium 4 2.5GHz(FSB400)

Memory Transcend 256MB(Samsung)

HDD WD Caviar 1000BB 100GB IDE

CD-ROM Actima AD16H 16X IDE DVD

VGA Intel 845GL VGA

LAN Realtek RTL8100BL

Mouse Logitech First Mouse+ Mouse

Total: 512 MB ☐ PC1600 ☒ PC2100

☐ ATA/66 ☒ ATA/100

Channel: ☒ PM ☐ PS ☐ SM ☐ SS

Channel: ☐ PM ☐ PS ☒ SM ☐ SS

☒ Onboard ☐ AGP 4X

☐ PCI_Slot: ☒ On board

☐ COM ☒ PS/2

Test Item		Result
Audio driver install		PASS
Audio play	WAV/MP3 files	PASS
	MIDI files	PASS
	Music CD	PASS
Sound adjust volume control		PASS
CD-IN connector		PASS
Rear Panel	Lin-Out	PASS
	Lin-In	PASS
	MIC	PASS
Record	CD-IN	PASS
	Lin-In	PASS
	MIC	PASS
ACPI Function	S1	PASS
	S3(STR)	PASS
	S4(STD) Hibernate	PASS
VCD play	2 CH audio output	PASS
DVD play	2 CH audio output	PASS
Audio Quality		PASS

8.2 Intel 845GL Graphics:

Test Configuration:

OS Ver ☒ Win XP + SP1 Ver: 2002
☒ Win 2000 + SP3 Ver: 5.00.2195

CPU Intel Pentium 4 2.4GHz(FSB400)

Memory KingMax 256MB(KingMax)

HDD Maxtor 6L040J2 40GB IDE

CD-ROM NEC DV-5800A 16X IDE DVD

Sound Realtek ALC202A AC'97

LAN Realtek RTL8100BL

Mouse Logitech First Mouse+ Mouse

Monitor Viewsonic PF790 19"

Total: 512 MB ☐ PC1600 ☒ PC2100

☐ ATA/100 ☒ ATA/133

Channel: ☒ PM ☐ PS ☐ SM ☐ SS

Channel: ☐ PM ☐ PS ☒ SM ☐ SS

☐ PCI_Slot: ☒ On board

☐ PCI_Slot: ☒ On board

☐ COM ☒ PS/2

☐ LCD ☒ CRT

Test Item		Result
Windows XP + SP1		
Graphics driver install		PASS
ACPI Function	S3(STR)	PASS
	S4(STD) Hibernate	PASS
VCD/DVD play		PASS
Frame Buffer Size 8MB (1024x768x32bit)	3D Mark 2001 SE	1355
	PC Mark 2002	PASS
Frame Buffer Size 1MB (1024x768x32bit)	3D Mark 2001 SE	1310
	PC Mark 2002	PASS
Display Resolution (Frame Buffer Size 8MB)	800x600x32bit / 60Hz	PASS
	800x600x32bit / 75Hz	PASS
	800x600x32bit / 85Hz	PASS
	1024x768x32bit / 60Hz	PASS
	1024x768x32bit / 75Hz	PASS
	1024x768x32bit / 85Hz	PASS
	1600x1200x16bit / 60Hz	PASS
	1600x1200x16bit / 75Hz	PASS
Windows 2000 + SP3		
Graphics Driver install		PASS
ACPI Function	S3(STR)	PASS
	S4(STD) Hibernate	PASS
VCD/DVD play		PASS
3D Mark 2001 SE (Frame Buffer Size 8MB)		1408
Display Quality (Frame Buffer Size 8MB)	800x600x32bit / 75Hz	PASS
	1024x768x32bit / 75Hz	PASS



Test Engineer:

BIOS: Benson Shen

OS: Kai Dane

I/O : Leon Liang

Audio: Lion Liou

CPU: Steven Huang

VGA: Jimmy Kao

Memory: MengFang

IDE Devices: Frando Tzeng

Power: RIC Lu

Check by: Lion Liou

Ownership: Benson Shen