Veriton 3500/5500/7500
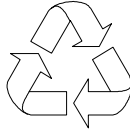## Service Guide

Service guide files and updates are available on the AIPG/CSD web; for more information, please refer to http://csd.acer.com.tw

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PART NO.:

Revision History

Please refer to the table below for the updates made on Veriton 3500/5500/7500 service guide.

Date	Chapter	Updates

Disclaimer

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Conventions

The following conventions are used in this manual:

`Screen messages`	Denotes actual messages that appear on screen.
NOTE	Gives bits and pieces of additional information related to the current topic.
WARNING	Alerts you to any damage that might result from doing or not doing specific actions.
CAUTION	Gives precautionary measures to avoid possible hardware or software problems.
IMPORTANT	Reminds you to do specific actions relevant to the accomplishment of procedures.

Preface

Before using this information and the product it supports, please read the following general information.

1. This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.

2. Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

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Table of Contents

System Specifications

Overview

The Veriton 3500, 5500, 7500 supports Intel® Pentium IV (Willamette 478/Northwood) Flip Chip-Pin Grid Array 2 processor (FC-PGA2) based Micro ATX, IBM PC/AT compatible system with PCI bus.

The Veriton 3500G, 5500G, 7500G supports Intel® Pentium IV (Willamette 478/Northwood) Flip Chip-Pin Grid Array 2 processor (FC-PGA2) based Micro ATX, IBM PC/AT compatible system with PCI/ AGPbus.

Features

Performance

❏ Intel Pentium® IV processor with Intel NetBurst™ micro-architecture and integrated 256KB/ 512KB embedded L2 cache memory in Flip Chip 2 (FC)-mPGA 478 socket form factor, with supporting CPU clock up to 2.4GHz+.

❏ System Front Side bus speed:400/533 MHz for Brookdale G and 400MHz for Brookdale GL.

❏ Supports 2 DIMM sockets up to 2GB using DDR (Double Data Rate) SDRAM DIMM modules.

❏ Integrated LAN Controller (ICH4+PLC82562ET).

❏ 3.5-inch and 5.25-inch floppy disk drives.

❏ CD-ROM, DVD-ROM or CD-RW drive

❏ 1.5 V AGP interface with 4X SBA/ Data Transfer and 2X/ 4X Fast Write capability (no AGP slot for Veriton 3500, 5500 and 7500).

❏ High capacity, Enhanced-IDE hard disk

❏ Power management features

❏ CPU SMM (System Management Mode), STOP clock control

❏ On-board PCI master enhanced local bus IDE (Embedded in 82801DB chipset).

    ❏ PIO mode 4

    ❏ Multiword DMA Mode 2

    ❏ Ultra DMA/33, Ultra DMA/66 & Ultra DMA/100 modes

❏ Plug-and-Play (PnP) feature

❏ ACPI 1.0 b Compliant Power management and Configuration Support

❏ Software shutdown for Windows 95/98SE/ME/2000/XP

❏ Hardware monitor function

❏ On-board DC-to-DC converter (VRM 9.0 spec)

❏ Supports USB 2.0 high-performance peripherals

Multimedia

❏ 128-bit graphics accelerator installed in the AGP Pro card slot (AGP slot: not available for Veriton 3500, 5500 and 7500)

❏ Cathode-ray tube (CRT) support

❏ Liquid crystal display (LCD) support (optional)

❏ An additional AGP card 1.5V slot, supports 1X, 2X and 4X

❏ 3-D quality audio system via onboard audio controller

❏ Audio-in/Line-in, Audio-out/Line-out, Headphone-out, Microphone-in, and Game/MIDI interface

NOTE: The system has two microphone-in jacks (front and rear). However, you can not use both of them at the same time. By default, your system enables the microphone-in jack in front and disables the one at the back.

Connectivity

❏ One AGP and three PCI slots (AGP slot for Veriton 3500G, 5500G and 7500G only)

❏ USB and PS/2 compatible mouse and keyboard interfaces

❏ Two high-speed NS 16C550-compatible serial ports

❏ One multi-mode parallel port

❏ Six USB ports (2 available on front panel and 4 on rear panel) with Plug and Play function

- ❏ High-speed 56K V9.0 fax/data/voice PCI modem (optional)
- ❏ One RJ45 connector supports IEEE 802.3./802.3u 10Base-T/100Base-TX-compatible network with remote wake-up function (WfM 2.0 Complaint)

Expansion

- ❏ 3 PCI slots + 2 DIMM slots+ 1 AGP slot (no AGP slot for Veriton 3500, 5500 and 7500)
- ❏ Upgradeable memory and hard disk

Human-centric design and ergonomics

- ❏ Mini-tower form factor
- ❏ Separate computer stand and rubber stands for quick and easy positioning
- ❏ Space-saver solution
- ❏ Accessible I/O ports
- ❏ Smooth and stylish design
- ❏ Low emission and low radiation

Front Panel-Veriton 3500/3500G

The computer's front panel consists of the following:
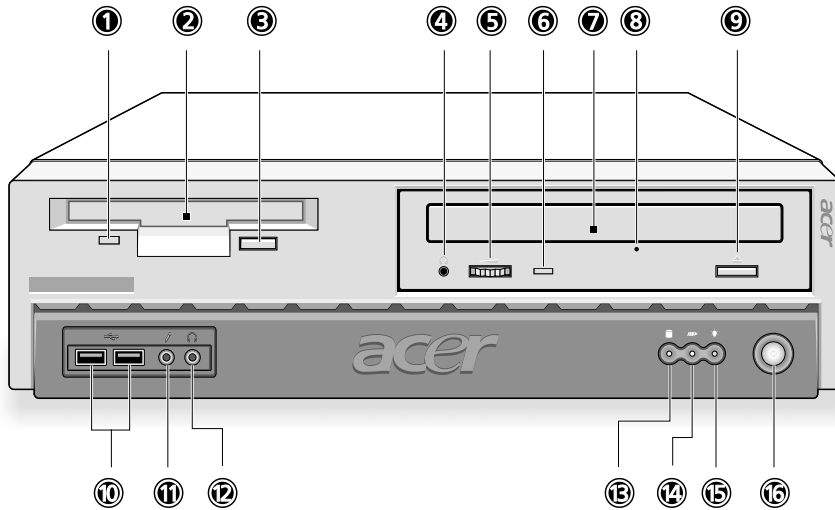
Label	Icon	Description
1		Floppy drive light-emitting diode (LED
2		3.5-inch floppy drive
3		Floppy drive eject button
4	Ω	CD-ROM/DVD-ROM/CD-RW Headphone/Earphone port
5		Volume control tune
6		CD-ROM/DVD-ROM/CD-RW LED
7		CD-ROM/DVD-ROM/CD-RW tray
8		CD-ROM/DVD-ROM/CD-RW emergency eject hole
9	▲	Stop/Eject button
10		USB ports
11		Microphone-in port (front)*
12	Ω	Headphone-out port
13		Hard disk drive activity LED

Label	Icon	Description
14		LAN Activity LED
15		Power LED
16		Power button

NOTE: *The system has two microphone-in ports (front and rear). However, you cannot use both of them at the same time. The default setting for your system enables the microphone-in port in front and disables the one at the back.

Rear Panel-Veriton 3500/3500G
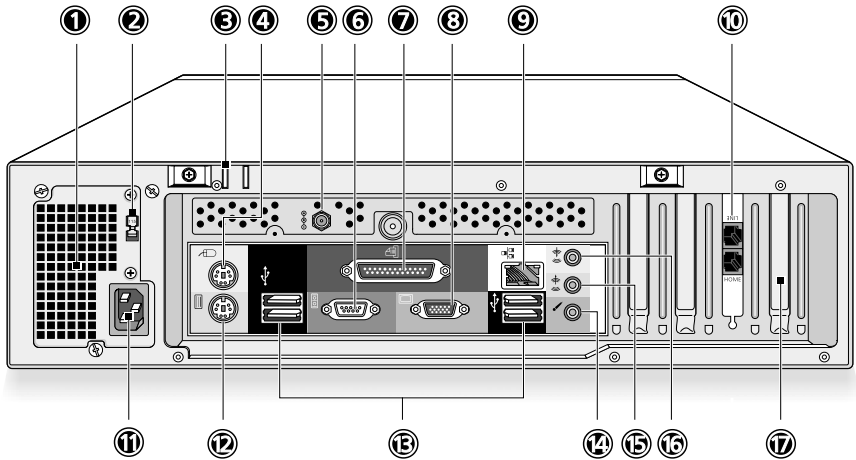
Label	Icon	Color	Description
1			Power supply
2			Voltage selector switch
3			Keyhol
4		Green	PS/2 mouse port
5			Power Jack (for external speakers)
6		Teal or Turquoise	Serial port
7		Burgundy	Parallel/Printer port
8		Blue	CRT/LCD monitor port*
9		White	Network port
10		Black	Modem line and Telephone port
11			Power cord socket

Label	Icon	Color	Description
12		Purple	PS/2 keyboard port
13		Black	USB ports
14		Pink	Microphone-in port (rear)**
15		Lime	Audio-out/Line-out jack
16		Light blue	Audio-in/Line-in jack
17			Expansion slots

NOTE: * The CRT monitor port is automatically disabled when an add-on AGP VGA card is installed into the system. Connect the monitor to the VGA port instead. (Available for S88M/ G)

NOTE: ** The system has two microphone-in ports (front and rear). However, you can not use both of them at the same time. The default setting for your system enables the microphone-in port in front and disables the one at the back.

Front Panel-Veriron 5500/5500G

The computer's front panel consists of the following:
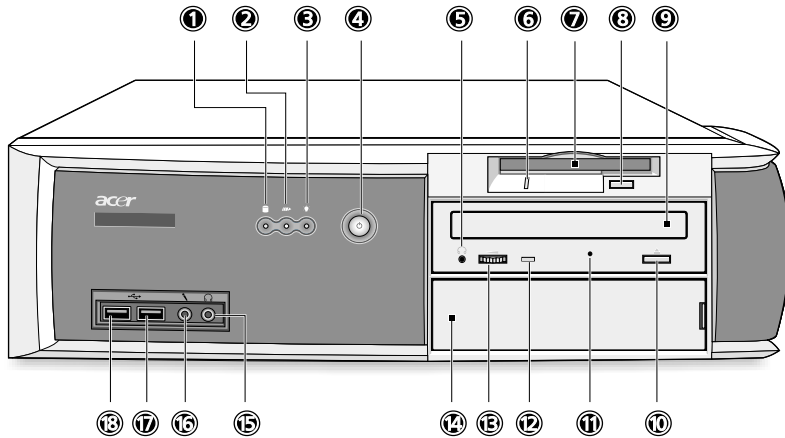
Label	Icon	Description
1	🛢	Hard disk drive activity light-emitting diode (LED)
2	▰▰▰▶	LAN activity LED
3	💡	Power LED
4	⏻	Power button
5	🎧	CD-ROM/DVD-ROM Headphone/Earphone port
6		Floppy drive light-emitting diode (LED)
7		3.5-inch floppy disk drive
8		Floppy drive eject button
9		CD-ROM/DVD-ROM tray
10	⏏	Stop/Eject button
11		CD-ROM/DVD-ROM/CD-RW emergency eject hole
12		CD-ROM/DVD-ROM LED
13	◁	Volume control tune
14		5.25 drive inch bay

Label	Icon	Description
15	Ω	Headphone/ earphone port
16		Microphone-in port (front)*
17		USB ports
18		USB ports

NOTE: * The system has two microphone-in ports (front and rear). However, you can not use both of them at the same time. The default setting for your system enables the microphone-in port in front and disables the one at the back.

Rear Panel-Veriton 5500/5500G
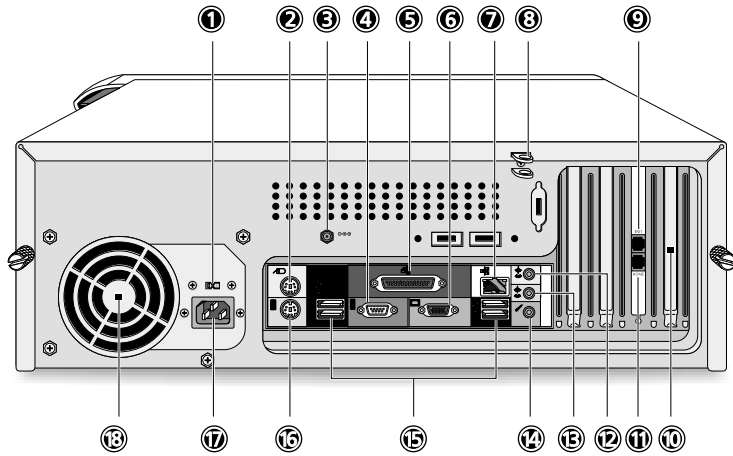
Label	Icon	Color	escription
1			Voltage selector switch
2		Green	PS/2 mouse port
3			Power jack (for external speakers)
4		Teal or Turquoise	Serial port
5		Burgundy	Parallel/printer port
6		Blue	monitor port*
7		White	Network port
8			Keyhol
9		Black	Modem line port
10			Expansion slots

Label	Icon	Color	escription
11	☎	Black	Telephone line port
12	((•)))	Light blue	Audio-in/Line-in jack
13	((•)))	Lime	Audio-out/Line-out jack
14	🎤	Pink	Microphone-in port (rear)**
15	•⟻	Black	USB ports
16	⌨	Purple	PS/2 keyboard port
17			Power cord socket
18			Power supply

NOTE: * The CRT monitor port is automatically disabled when an add-on AGP VGA card is installed into the system. Connect the monitor to the VGA port instead. (Available for S88M/ G)

NOTE: ** The system has two microphone-in ports (front and rear). However, you can not use both of them at the same time. The default setting for your system enables the microphone-in port in front and disables the one at the back.

Front Panel-Veriton 7500/7500G

The computer's front panel consists of the following:
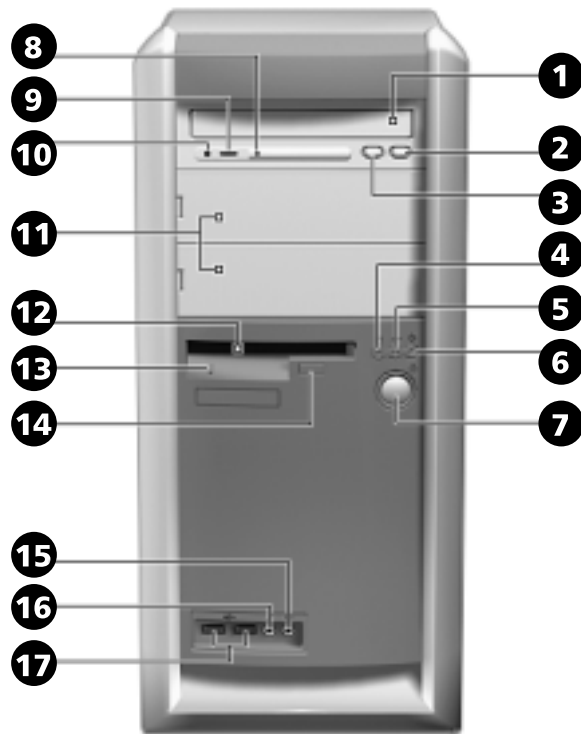
Label	Icon	Description
1		CD-ROM/DVD-ROM tray
2	⏏	Stop/Eject Butto
3		Skip/Forward Button
4		Hard disk drive activity light-emitting diode (LED)
5	///▶	LAN activity LE
6		Power LED
7	⏻	Power button
8		CD-ROM/DVD-ROM/CD-RW LED

Label	Icon	Description
9		Volume Control Tuner
10	⌒	Headphone/earphone port
11		5.25-inch drive bays
12		3.5-inch floppy disk drive
13		Floppy drive LED
14		Floppy drive eject button
15	⌒	Speaker-out/Line-out port
16		Microphone-in port (front)*
17		USB ports

NOTE: * The system has two microphone-in ports (front and rear). However, you can not use both of them at the same time. The default setting for your system enables the microphone-in port in front and disables the one at the back.

Rear Panel-Veriton 7500/7500G
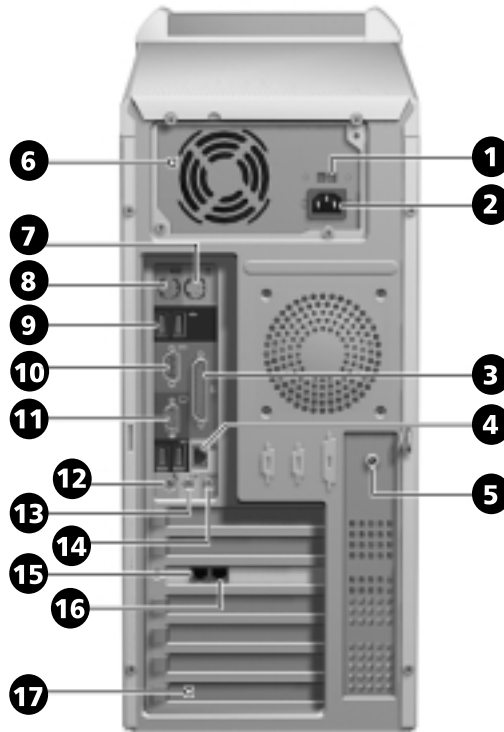
Label	Icon	Color	Description
1			Voltage Selector Switch
2			Power cord socket
3		Burgundy	Parallel/printer port
4		White	Network port
5			Power jack (for external speakers)
6			Power supply
7		Green	PS/2 mouse port
8		Purple	PS/2 keyboard port

Label	Icon	Color	Description
9		Black	USB ports
10		Teal or Turquoise	Serial port
11			CRT/LCD monitor port*
12		Pink	Microphone-in port (rear)**
13		Lime	Audio-out/Line-out jack
14		Light blue	Audio-in/Line-in jack
15		Black	Telephone port (optional)
16		Black	Modem line port
17			Expansion Slots

NOTE: * The CRT monitor port is automatically disabled when an add-on AGP VGA card is installed into the system. Connect the monitor to the VGA port instead. (Available for S88M/ G)

NOTE: * *The system has two microphone-in ports (front and rear). However, you can not use both of them at the same time. The default setting for your system enables the microphone-in port in front and disables the one at the back.

System Block Diagram (Veriton 3500/ 5500/ 7500)

Willamette/ Northwood Processor

Scaleable Bus 3.2GB/s

Brookdale-GL GMCH

VGA

DDR-266/ 200

2.12GB/s

266MB/s   8-Bit Hub Interface

ICH4

6 USB 2.0 ports

2 ATA 100 IDE Channels

LAN Connect

AC97' Audio CODEC

SIO

FWH

PCI Slot
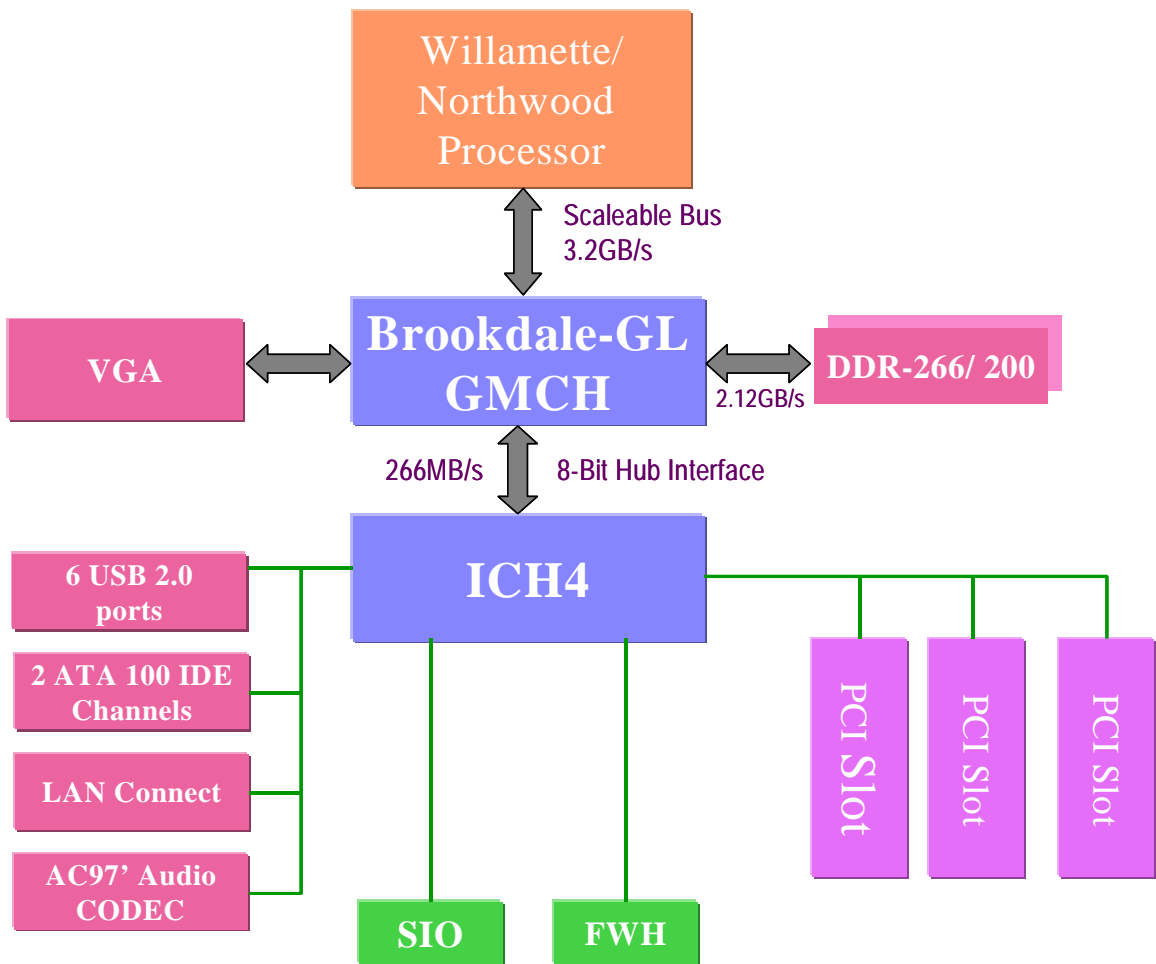
PCI Slot

PCI Slot

System Block Diagram (Veriton 3500G/ 5500G/ 7500G)
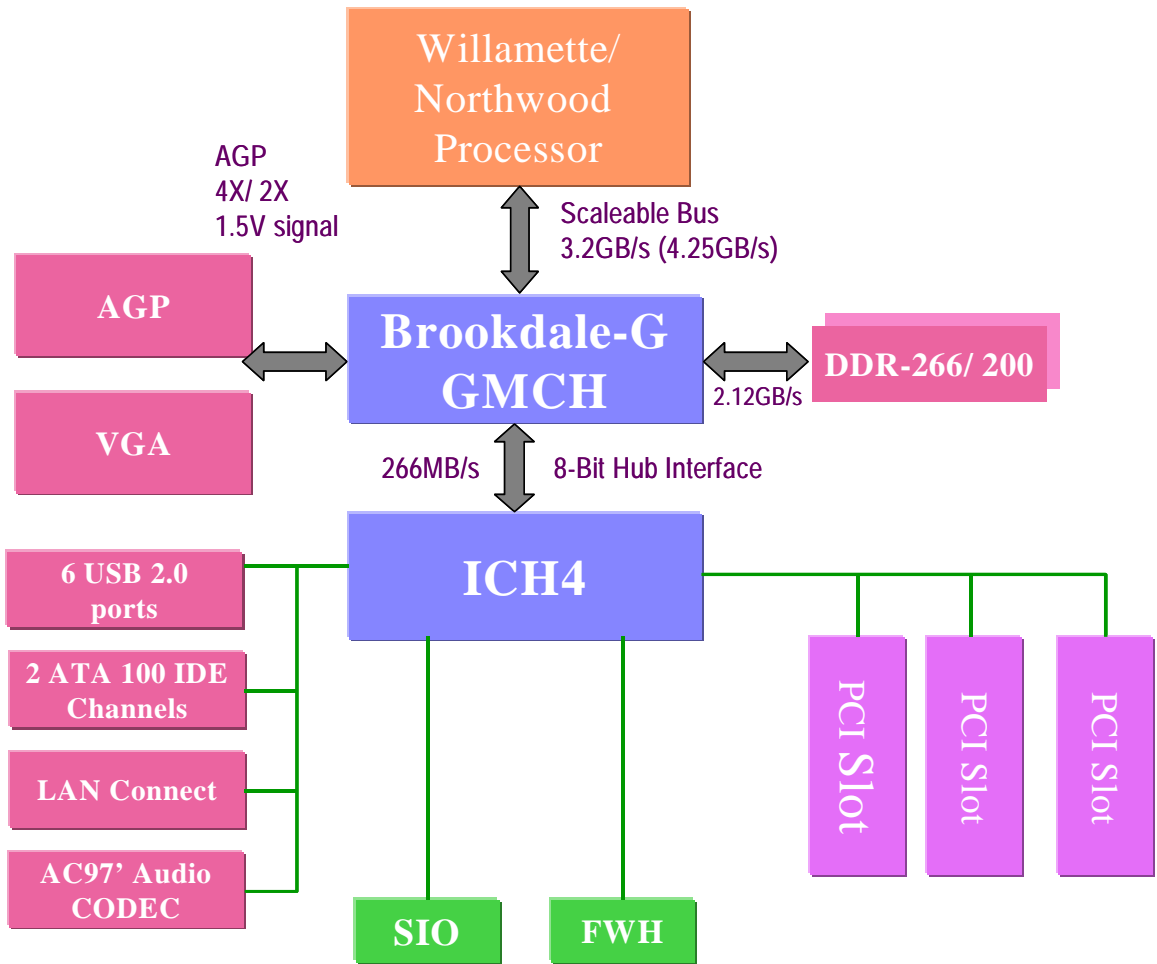
Main Board Layout (Veriton 3500/ 5500/ 7500) (S88M/ GL)
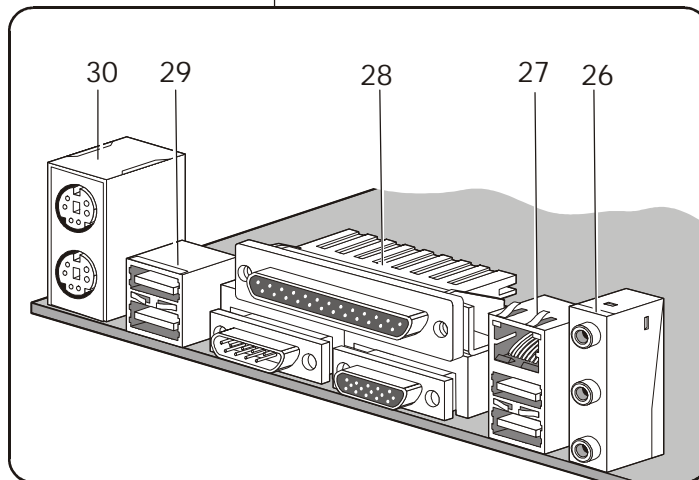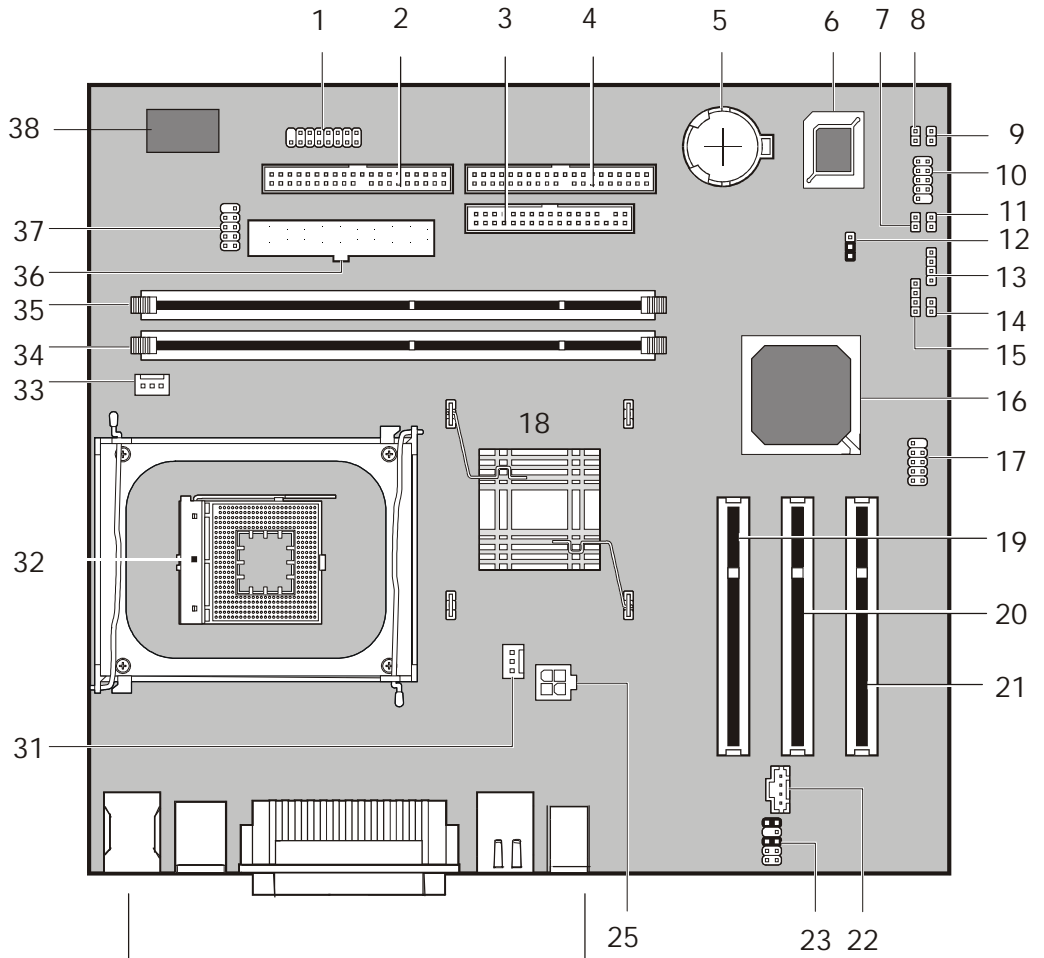
Main Board Layout (Veriton 3500G/5500G/7500G) (S88M/ G)
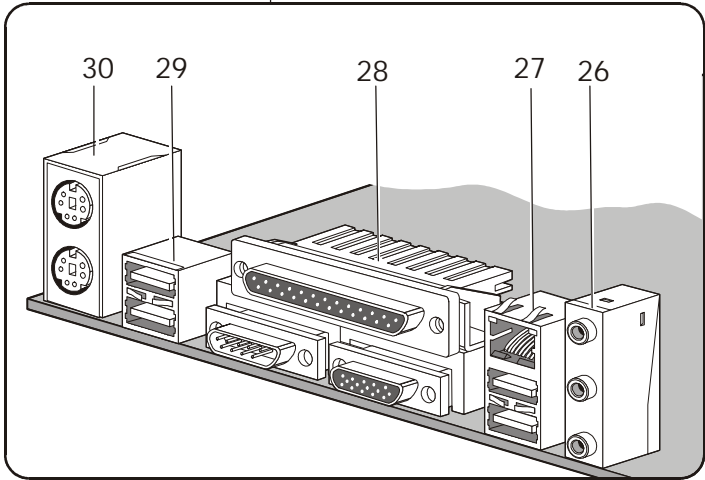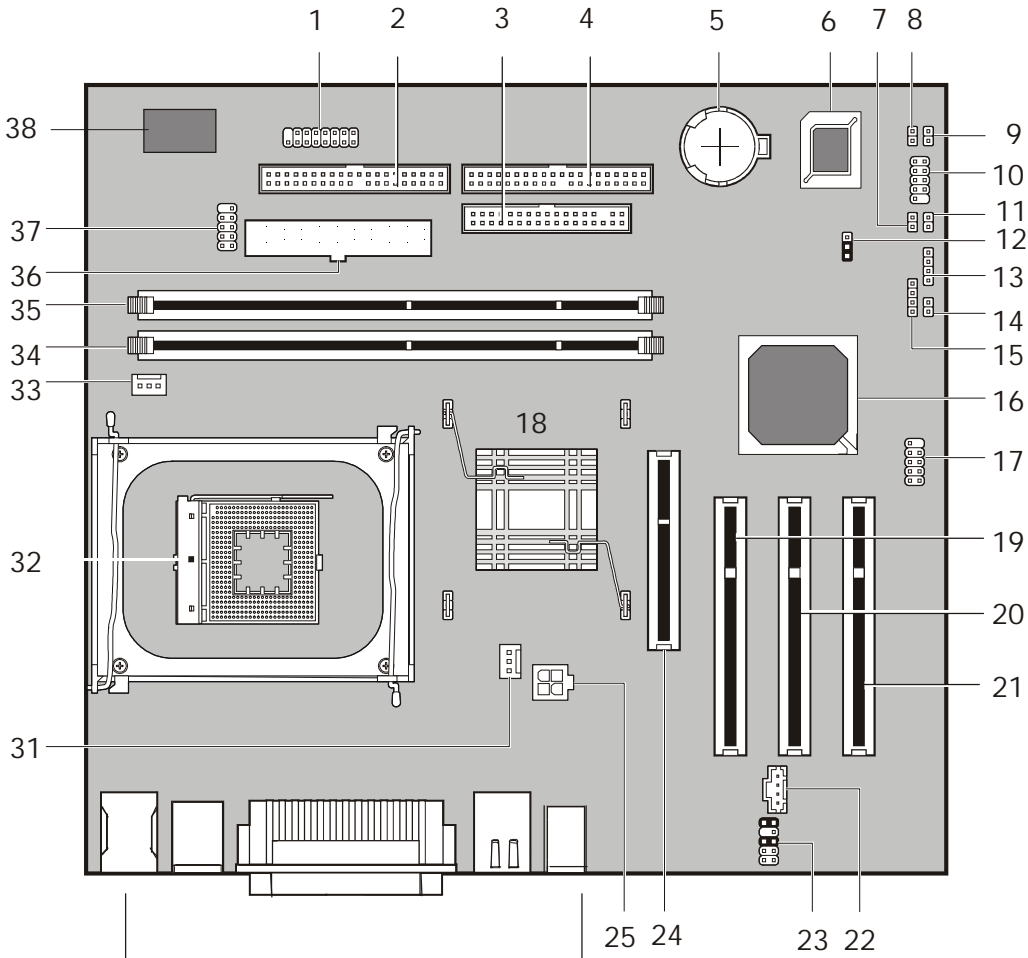
Label	Component	Label	Component
1	Game Port	20	PCI Slot 2
2	FDD Connector	21	PCI Slot 3
3	IDE 2 Connector	22	CD-in Connecto
4	IDE 1 Connector	23	Audio for Daughter Board
5	Battery	24	AGP Slot***(for Brookdale G only)
6	FWH	25	Power Connector (+12V
7	Serial IRQ	26	Line-in (upper), Line-out(middle), Mic-in (lower)
8	Power LED	27	Network (upper) and USB (lower) Ports
9	Power Button	28	Parallel port (upper) and Serial Ports (lower)
10	Audio FPIO Connector	29	Serial Ports
11	LAN Activity LED	30	PS2 Keyboard
12	1-2: Normal* 2-3: Clear CMOS	31	3-pin Fan SYS Connector
13	HDD LED Connector	32	CPU Socket
14	Intrusion Connector	33	3-pin Fan CPU Connector
15	Suspend Power LED	34	Memory Slot 1
16	Intel ICH4 Chipset	35	Memory Slot 2
17	Front USB Connector	36	Power Connector
18	Intel 845GL/G**	37	COM
19	PCI Slot 1	38	SMSC LPC47M192

NOTE: *: default setting

NOTE: **: Intel 845 GL (Veriton 3500/ 5500/ 7500); Intel 845G (Veriton 3500G/ 5500G/ 7500G)

NOTE: ***: not for Brookdale-GL

Keyboard (3500/ 3500G, 5500/ 5500G, 7500/ 7500G)

The keyboard has full-sized keys that include separate cursor keys, two Windows keys, and twelve function keys.

Icon	Component	Description
1	Function keys	Access most of the computer's controls like screen brightness, volume output and the BIOS utility.
2	Caps lock **[CAPS LOCK]**	When activated, all alphabetic characters typed appear in uppercase (same function as pressing **[SHIFT]** + <letter>).
3	Windows logo key	**Start** button. Combinations with this key perform special functions, such as: • **Windows + Tab**: Activates the next Taskbar button • **Windows + E**: Explore My Computer • **Windows + F:** Find Document • **Windows +** : Minimize All • **[SHIFT]** + **Windows + M**: Undo Minimize All • **Windows + R**: Displays Run dialog box
4	Application key	Opens the applications context menu (same function as clicking the right button of the mouse).
5	Cursor keys	Also called arrow keys, let you move the cursor around the screen. They serve the same function as the arrow keys on the numeric pad when the **[NUM LOCK]** is toggled off.
6	Palm rest	
7	Num Lock Key **[NUM LOCK]**	When activated, the keypad is set to numeric mode, i.e., the keys function as a calculator (complete with arithmetic operators such as +, -, * and /).
8	Scroll Lock Key **[SCROLL LOCK]**	When activated, the screen moves one line up or down when you press the up arrow or down arrow respectively. Take note that **[SCROLL LOCK]** may not work with some applications.

Icon	Component	Description
9	Volume control/Mute knob	Controls the speaker volume. Turn it clockwise or counterclockwise to adjust the volume. Press it to toggle between mute and sound.
10	Multimedia keys	Allow you to do the following: • **Play/Pause** button : press to start playing the audio track or video file. Press again to pause. • Stop Button : press to stop playing the audio track or video file. • **Forward** Button : press to skip forward to the next track or file and start playing. • **Backward** button : press to skip backward to the previous track or file and start playing.
11	Internet/Suspend keys	Consist of three buttons: • **Email** : launches the email application that came bundled with your system. • **Web brows** : **er** launches the browser application that came bundled with your system. • **Suspen** : **d** puts the system to sleep when pressed this button.
12	Programmable keys	Help you directly access a URL (Web site) or launch any programs, files, or applications in your system. The fifth key is set to launch the Windows media player. To configure the settings of each key, right click on the Magic Keyboard icon located on your desktop.

Hardware Specifications and Configurations

Processor

Item	Specification
Type	Intel® Pentium IV FC-PGA2 processors with mPGA478 package
Slot	Socket mPGA478
Speed	Internal: 1.4~2.4GHz+ External: 400/533MHz Data Bus Frequency for Brookdale-G and 400 MHz for Brookdale-GL.
Minimum operating speed	0 MHz (If **Stop CPU Clock in Sleep State the BIOS Setup** is set to **Enabled**.)
Voltage	Processor voltage can be detected by the system without setting any jumper.

BIOS

Item	Specification
BIOS code programmer	Award
BIOS version	V6.0
BIOS ROM type	Intel FWH SST 49LF004-33-4C-NH
BIOS ROM size	4MB
Support protocol	PCI 2.1, APM1.2, DMI 2.00.1, E-IDE, ACPI 1.0, ESCD 1.03, ANSI ATA 3.0, PnP 1a, Bootable CD-ROM 1.0, ATAPI
Boot from CD-ROM feature	Yes
Support to LS-120 drive	No
Support to BIOS boot block feature	Yes

NOTE: The BIOS can be overwritten/upgraded using the FLASH utility (AWDFLASH.EXE).

BIOS Hotkey List

Hotkey	Function	Description
DEL	Enter BIOS Setup Utility	Press while the system is booting to enter BIOS Setup Utility.
ALT + F4	Enable hidden page of BIOS Setup Utility	Press in BIOS Setup Utility main menu screen, the Advanced Options menu then appears. The items on the Advanced Options menu are: Memory/Cache Options PnP/PCI Options Chips Options

This section has two table lists, system memory specification and the possible combinations of memory module.

System Memory

Item	Specification
Memory socket numbe	2 sockets (4 rows)
Support memory size per socket	64/128/256/512MB
Support maximum memory size	2GB
Support memory type	DDR DRAM PC1600/2100
Support memory speed	DDR 266/ DDR 20
Support memory voltage	2.5V
Support memory module package	184 -pin DIMM
Support to parity check feature	Yes
Support to Error Correction Code (ECC feature.	Yes
Memory module combinations	You can install memory modules in any combination as long as they match the Memory Combination specifications.

Memory Combinations

DIMM 1	DIMM 2	TOTAL
X*	Y*	2GB
0M	64M	64M
0M	128M	128M
0M	256M	256M
0M	512M	512M
64M	0M	64M
128M	0M	128M
256M	0M	256M
512M	0M	512M
64M	64M	128M
128M	64M	192M
256M	64M	320M
512M	64M	576M
64M	128M	192M
128M	128M	256M
256M	128M	384M
512M	128M	640M
64M	256M	320M
128M	256M	384M
256M	256M	512M
512M	256M	768M
64M	512M	576M
128M	512M	640M
256M	512M	768M
512M	512M	1024M

*X, Y, Z: 0~2GB

Cache Memory

Item	Specification
First-Level Cache Configurations	
Cache function control	Enable/Disable by BIOS Setup (Advanced options)
Second-Level Cache Configurations: Below information is only applicable to system with installed Pentium 4 processor.	
L2 Cache RAM size	Pentium IV processor: 512 KB for Northwood and 256KB for Willamette
L2 Cache RAM speed	The same with the processor core clock frequency
L2 Cache function control	Enable/Disable by BIOS Setup

Video Interface

Item	Specification
Video controller resident bus	AGP bus
Video interface support	1x / 2x / 4x AGP Data Transfer and 2x / 4x Fast Write Capability
	The AGP buffers operate only 1.5V mod

NOTE: S88M/ GL for Veriton 3500/ 5500/ 7500 doesn't have AGP VGA slot.

Audio Interface

Item	Specification
Audio controller	Embedded in Intel 82801DB ICH 4
Audio controller resident bus	AC'97 link
Audio function control	Enable/disable by BIOS Setup
Mono or stere	Stereo
Resolution	20 bits
Compatibility	AC'97 2.1 compliant Sound Blaster Pro compatible Mixed digital and analog high performance chip Enhanced stereo full duplex operation High performance PCI audio accelerator High-Quality ESFM music synthesize MPU-401(UART mode) interface for wavetable synthesizers and MIDI devices Integrated game port Meets PC 97/PC98 and WHQL specifications
Music synthesizer	Yes
Sampling rate	44.1 KHz
MPU-401 UART support	Yes
Microphone jack	Supported On audio-I/O board (Front Panel Access)
Headphone jack	Supported On audio-I/O board (Front Panel Access)
Package	QFP64
Line-in/Line-out/speaker-out	Supported On audio-I/O board (connects via CN14)

IDE Interface

Item	Specification
IDE controller	Embedded in Intel 82801DB ICH 4
IDE controller resident bus	PCI bus
Number of IDE channel	2 on-board: 40-pin hard disk drive connector,
Support IDE interface	E-IDE (up to PIO mode 4 and Ultra DMA/33, Ultra DMA/66 and Ultra DMA/100) ANSIS ATA rev3.0/ ATAPI specification
Support bootable CD-ROM	Yes

Floppy disk drive Interface

Item	Specification
Vendor & Model Name	Panasonic JU-256A047P
Floppy Disk Specifications	
Media Recognition	1.44 MB
Cylinders	80
Tracks	160
Rotational speed (RPM)	300
Read/write heads	2
Encoding method	MFM/FM
Power requirement (max)	5V
Startup (peak	290mA
Maximum Seeking (RMS)	710mA
Voltage tolerance (V	+5V +/- 10%

Floppy disk drive Interface

MTBF (Mean Time Between Failure)	30,000
Floppy disk drive controller	Embedded in SMSC LPC47M192
Floppy disk drive controller resident bus	LPC
Support FDD format	360KB, 720KB, 1.2MB, 1.44MB, 2.88MB; 3-mode

Hard Disk Drive Interface

Item	Specification	
Vendor & Model Name	Seagate U Series 40810 ST340810A	
Capacit	40GB	
Bytes per sector	512	
Average seek time (ms)	8.9	
Data Heads	2	
Drive Format		
Disks	1	
Spindle speed (RPM	5400	
Performance specifications		
Buffer size (Kbyte)	512	
Cache buffer	2	
Interface	Altra ATA/ 100	
Internal data transfer rate (Mbytes/s) max.	436	
I/O Data transfer rate (Mbytes/s) max.	100 MB/sec. Ultra ATA Mod	
ATA data transfer modes supported	PIO Modes 0-4 Multiword DMA Modes 0-2 Ultra DMA Modes	
DC Power Requirements (max)	5V	12V
Startup (peak	1.5A	2A
Maximum seeking (RMS)	1.5A	2A
Voltage tolerance	5V(DC) +/- 5%	12V(DC) +/- 10
MTBF (Mean Time Between Failure)	625,000	
S.M.A.R.T. function	supported	

DVD-ROM Interface

Item	Specification	
Vendor & Model Name	Pioneer DVD-117RD	
Performance Specification	With CD Diskette	With DVD Diskette
Transfer rate (KB/sec)	Sustained: Max 3.6 MB/s	Sustained: Max8.31MB/s
Average access time	120ms	180m
Data Buffer Capacity	512 KBytes	
Interface	IDE/ATAPI	
Applicable disc format	DVD-ROM(DVD-5, DVD-9, DVD-10, DVD-17), DVD-R, CD-ROM (mode 1 an mode 2), CD-ROM XA (mode 2, Form 1 and Form 2), Photo-CD (single and multiple sessions), CD Extra, CD-I FMV, Video CD,CD Text, CD-R/W and CD-DA disc format	
loading mechanism	Soft eject (with emergency eject hole)	

DVD-ROM Interface

Item	Specification	
Power Requirement	+5V	+12V
Voltage tolerance	+/-5%	+/-5%
Standby (Sleep)	150mA	2mA
Avtiv	500mA	1.2A

CD-R/W Interface

Item	Specification	
Vendor & Model Name	AOpen CRW3248	
Transfer rate (KB/sec)	Sustained: Max 6000 KB/sec	
Average access time	100ms	
Data Buffer Capacity	8MB/ 2MB	
Interface	E-IDE/ATAPI	
Applicable disc format	CD-ROM (mode 1 and mode 2), CD-ROM XA (mode 2, Form 1 and Form 2), Photo-CD (single and multiple sessions), CD Extra, CD-I FMV, Video CD, CD Text, CD-R/W and CD-DA disc format.	
loading mechanism	Soft eject (with emergency eject hole), eject button must be upside	
Power Requirement	+5V	+12V
Voltage tolerance	+/-10%	+/-10%
Standby (Sleep)	20mA	2mA
Avtiv	1.5A max.	1A max.

Parallel Port

Item	Specification
Parallel port controller	Embedded in SMSC LPC47M192
Parallel port controller resident bus	LPC
Number of parallel ports	1
SupportSPP,ECP, EPP	SPP/ECP / EPP 1.7 & 1.9
Connector type	25-pin D-type female connector
Parallel port function control	Enable/disable by BIOS Setup
Optional ECP DMA channel (in BIOS Setup)	DMA channel 1 DMA channel 3
Optional parallel port I/O address (via BIOS Setup)	378-37F 278-27F 778-77A
Optional parallel port IRQ (via BIOS Setup)	IRQ5 IRQ7

Serial Port

Item	Specification
Serial port controlle	Embedded in SMSC LPC47M192
Serial port controller resident bus	LPC
Number of serial port	2
Serial ports location	COM1, COM 2(Reserve for header)
16C550 UART support	Yes
Connector type	15-pin connector (1 with pin reserve)

Serial Port

Optional serial port I/O address (via BIOS Setup)	2F8-2FF
	3F8-3FF
Optional serial port IRQ (via BIOS Setup)	4, 3

Modem

Item	Specification
Fax modem data baud rate (bps)	14.4K bps
Data modem data baud rate (bps)	56K bps
Voice modem	Yes
Modem connector type	RJ11
Full duplex	Yes

USB Port

Items	Specifications
Universal UHCI	USB 1.1
Universal EHCI	USB 2.0
USB Clas	Support legacy keyboard for legacy mode

Memory Address Map

Address	Size	Function
000000 - 07FFFF	512KByte	Host Memory
080000 - 09FFFF	128KByte	Host/PCI Memory
0A0000 - 0BFFFF	128KByte	PCI/ISA Video Buffer Memory
0C0000 - 0C7FFF	32KByte	Video BIOS Memory
0C8000 - 0DFFFF	96KByte	ISA Card BIOS & Buffer Memory
0E0000 - 0EFFFF	64KByte	BIOS Extension Memory Setup and Post Memory PCI Development BIOS
0F0000 - 0FFFFF	64KByte	System BIOS Memory
100000 - UPPER LIMIT		Main Memory
UPPER LIMIT - 4GBytes		PCI Memory

Note : UPPER LIMIT means the maximum size of installed memory.

The Main Memory Maximum size are 768M Bytes.

Onboard Device ID & IRQ Map

Device	AD#	IDSEL	Route Reg.	Mask
Intel 845G MCH	AD11	00h		
P2P	AD30	13h		
(Func.0) ICH4 (LPC)	AD31	14h		
(Func.1) ICH4 (IDE)	AD31	14h		
(Func.2) ICH4(USB)	AD31	14h	68h	FFh
(Func.3) ICH4 (SMBUS	AD31	14h		
(Func.5) ICH4 (AC97 Audio)	AD31	14h	61h	FFh
PCI Slot 1	AD16	05h	60h	FFh
PCI Slot 2	AD17	06h	61h	FFh
PCI Slot 3	AD21	07h	62h	FFh

PCI Slot IRQ Routing Map

PCI INTX#	INT	INTB	INTC	INTD
PCI 1	Route 1	Route 2	Route 3	Route 4
PCI 2	Route 4	Route 1	Route 2	Route 3
PCI 3	Route 3	Route 4	Route 1	Route 2

I/O Address Map

Hex Range	Devices
000-00F	DMA Controller-1
020-021	Interrupt Controller-1
040-043	System Timer
060-060	Keyboard Controller 8742
061-061	System Speaker
070-071	CMOS RAM Address and Real Time Clock
081-08F	DMA Controller-2
0A0-0A1	Interrupt Controller-2
0C0-0DF	DMA Controller-2
0F0-0FF	Math Co-Processor
170-177	Secondary IDE
1F0-1F7	Primary IDE
278-27F	Parallel Printer Port 2
2F8-2FF	Serial Asynchronous Port 2
378-37F	Parallel Printer Port 1
3F0-3F5	Floppy Disk Controller
3F6-3F6	Secondary IDE
3F7-3F7	Primary IDE
3F8-3FF	Serial Asynchronous Port 1
0CF8	Configuration Address Register
0CFC	Configuration Data Registe
778-77A	Parallel Printer Port 1

IRQx Assignment Map

IRQx	System Devices	Add-On-Card Devices
IRQ0	Timer	N (Notes)
IRQ1	Keyboard	N
IRQ2	Cascade Interrupt Control	N
IRQ3	Serial Alternate	Reserved
IRQ4	Serial Primary	Reserved
IRQ5	Parallel Port (Alternate)	Reserved
IRQ6	Floppy Diskette	Reserved
IRQ7	Parallel Port	Reserved
IRQ8	Real Time Clock	N
IRQ9	N	Reserved
IRQ10	N	Reserved
IRQ11	N	Reserved
IRQ12	PS/2 Mouse	Reserved
IRQ13	Math Co-processor Exception	N
IRQ14	Fix Diskette	Reserved
IRQ15	Fix Diskette	Reserved

NOTE: N - Not be used.

DRQx Assignment Map

DRQx	System Devices	Add-On-Card Devices
DRQ0	N (Notes)	Reserved
DRQ1	N	Reserved
DRQ2	Floppy Diskette	N
DRQ3	N	Reserved
DRQ4	Cascade	N
DRQ5	N	Reserved
DRQ6	N	Reserved
DRQ7	N	Reserved

NOTE: N - Not to be used.

Main Board Major Chips

Item	Controller
North Bridge	Intel BROOKDALE-G/GL
South Bridge	Intel 82801DB ICH 4
Super I/O controller	SMSC LPC47M192-NC
Audio Codec	STAC9750 Sigmatel
LAN controlle	Intel 82562ET
HDD controller	Built-in Intel 82801DB ICH 4
Keyboard controller	Built-in Intel 82801DB ICH 4
RTC	Built-in Intel 82801DB ICH 4

Environmental Requirements

Item	Specifications
Temperature	
Operating	+10 to +35°C
Non-operating	-10 to +60°C
Non-operating	-20 to +60°C (Storage package)
Humidity	
Operating	20% to 80% RH, non-condensing
Non-operating	20% to 80% RH, non-condensing (Unpacked
Non-operating	20% to 80% RH, non-condensing (Storage package)
Vibration	
Operating: Sweep rate: Direction: Test cycles:	5~16.2 Hz 0.38mm (peak to peak) 16.2~250 Hz 0.2G 1 octave/minute X, Y, Z axis 2 cycles per axis
Non-operating: (Packed) Sweep rate: Direction: Test cycles:	5~27.1 Hz 0.6G 27.1~50 Hz 0.4mm (peak to peak 50~500 Hz 2.0G 0.5 coactive/minut X, Y, Z axis 4 cycles per axis

Mechanical Specifications

Item	Specification
Dimensions	244(L)X 244(W)x18mm(H)
Weight One 3.5 FDD and one 3.5 HDD (without packing	Depends on local configuration

Switching Power Supply

A-1 Input frequency

Normal Frequenc	Frequency Variation Range
50Hz	47Hz to 53Hz
60Hz	57Hz to 63Hz

A-2 Input voltage

Nominal Voltage	Variation Range
100 - 120 VRMS	90-132 VRMS
200 - 240 VRMS	180-264 VRMS

A-3 Input current

Input Current	Measuring Range
4A	90 -132 VRMS
3A	180 - 264 VRMS

(This is 145W power supply)

❑ This "4A" includes the outlet supply current: 2A

❑ Measure at line input 90 VRMS and maximum load condition.

Output Requirements	Regulation	Current Rating (Max)
+5V	+5%	8A
+12V	+5%	10A
-12V	+10	0.3A
+3.3V	+5%	10A
+5Vaux	+5%	3A

NOTE: 1. +5V & +3.3V total power is 80W max .

Power Management Functions

Device Standby Mode

❑ Independent power management timer for hard disk drive devices (0-15 minutes, time step=1 minute).

❑ Hard disk drive goes into Standby mode (for ATA standard interface).

❑ Disable V-sync to control the VESA DPMS monitor.

❑ Resume method: device activated (Keyboard for DOS, keyboard & mouse for Windows).

❑ Resume recovery time: 3-5 sec.

Global Standby Mode

❑ Global power management timer (2-120 minutes, time step=10 minutes).

❑ Hard disk drive goes into Standby mode (for ATA standard interface).

❑ Disable H-sync and V-sync signals to control the VESA DPMS monitor.

Suspend Mode

❑ Independent power management timer (2-120 minutes, time step=10 minutes) or pushing external switch button

❑ CPU goes into SMM.

❑ CPU asserts STPCLK# and goes into the Stop Grant State.

❑ LED on the panel turns amber color.

❑ Hard disk drive goes into SLEEP mode (for ATA standard interface).

❑ Disable H-sync and V-sync signals to control the VESA DPMS monitor.

❑ Return to original state by pushing external switch button.

❑ S1, S3, S4

Suspend to RAM

❑ The system context is maintained in system memory

❑ Power is shut to non-critical circuits.

❑ Memory is retained, and refreshes continues.

❑ All clocks shut except RTC.

❑ Return to original state by pushing external switch button & "PME" events at ACPI mode.

System Utilities

Most systems are already configured by the manufacturer or the dealer. There is no need to run Setup when starting the computer unless you get a Run Setup message.

The Setup program loads configuration values into the battery-backed nonvolatile memory called CMOS RAM. This memory area is not part of the system RAM.

NOTE: If you repeatedly receive Run Setup messages, the battery may be bad. In this case, the system cannot retain configuration values in CMOS.

Before you run Setup, make sure that you have saved all open files. The system reboots immediately after you exit Setup.

Entering Setup

To enter Setup, press the key ⌈DEL⌉ during the POST (Power-on self-test).

NOTE: You must press ⌈DEL⌉ simultaneously while the system is booting.

The Setup Utility main menu then appears:

```
            Phoenix - AwardBIOS CMOS Setup Utility

  ► Product Information          ► PC Health Status

  ► Standard CMOS Features       ► Frequency Control

  ► Advanced BIOS Features         Load Default Settings

  ► Advanced Chipset Features      Set Supervisor Password

  ► Integrated Peripherals       x Set User Password

  ► Power Management Setup         Save & Exit Setup

  ► PnP/PCI Configurations         Exit Without Saving

  Esc : Quit                     ↑ ↓ → ←   : Select Item
  F10 : Save & Exit Setup

               Product name, System S/N ...
```

The above screen is the BIOS Utility Basic Level screen. It allows you to view and change only the basic configuration of your system.

The command line at the bottom of the menu tells you how to move within a screen and from one screen to another.

❑ To select an option, move the highlight bar by pressing ⌈↑⌉, ⌈↓⌉ , ⌈←⌉, or ⌈→⌉ ,then press ⌈ENTER⌉

❑ To change a parameter setting, press ⌈PG UP⌉ or ⌈PG DN⌉ until the desired setting is found, or press ⌈ENTER⌉ to pop out the screen with available items for selection.

❑ Press ⌈ESC⌉ to return to the main menu. If you are already in the main menu, press ⌈ESC⌉ again to exit Setup.

The parameters on the screens show default values. These values may not be the same as those in your system.

The grayed items on the screens have fixed settings and are not user-configurable.

Product Information

The screen below appears if you select Product Information from the main menu:

The Product Information menu contains general data about the system, such as the product name, serial number, BIOS version, etc. These information is necessary for troubleshooting (maybe required when asking for technical support).

```
           Phoenix - AwardBIOS CMOS Setup Utility
                      Product Information

    Product Name            Veriton 7500           │    Item Help
    System S/N              000000000000000000000  │
    Main Board ID           S88M                   │  Menu Level   ▶
    Main Board S/N          000000000000000000000  │
    System BIOS Version     V6.0                   │
    SMBIOS Version                                 │



    ESC:Exit
```

The following table describes the parameters found in this menu:

Parameter	Description
Product Name	Displays the model name of your system.
System S/N	Displays your system's serial number.
Main Board ID	Displays the main board's identification number.
Main Board S/N	Displays your main board's serial number.
System BIOS Version	Specifies the main version of your BIOS utility.
SMBIOS version	The System Management Interface (SM) BIOS allows you to check your syste hardware components without actually opening your system. Hardware checking is done via software during start up. This parameter specifies the version of the SMBIOS utility installed in your system. The BIOS Version here is **V2.3**.

Standard CMOS Features

Select "Standard CMOS Features" from the main menu to configure the drives installed in your system.

The following screen shows the Disk Drives menu:

```
            Phoenix - AwardBIOS CMOS Setup Utility
                    Standard CMOS Features

    Date (mm:dd:yy)          Thu, Mar 21 2002          Item Help
    Time (hh:mm:ss)          11 : 42 :  7
                                                 Menu Level   ►
  ► IDE Primary Master       [ None]
  ► IDE Primary Slave        [ None]              Change the day, month,
  ► IDE Secondary Master     [ None]              year and century
  ► IDE Secondary Slave      [ None]

    Drive A                  [1.44M, 3.5 in.]
    Drive B                  [None]

    Video                    [EGA/VGA]
    Halt On                  [All , But Keyboard]

    Base Memory                     640K
    Extended Memory               64512K
    Total Memory                  65536K


 ↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help
           F5:Previous Values               F7: Default Settings
```

The following table describes the parameters found in this menu.

Parameter	Description	Options
Date	Lets you set the date following the weekday-month-day-year format	**Weekday**: Sun, Mon....Sat **Month**: Jan, Feb...Dec **Day**: 1 to 31 **Year** 1980 to 2079
Time	Lets you set the time following the hour-minute-second format	**Hour:** 0 to 23 **Minute**: 0 to 59 **Second**: 0 to 59
IDE Primary Master	Lets you configure the hard disk drive connected to the master port of IDE channel 1. To enter the IDE Primary Master setup, press ENTER . The IDE CD-ROM is always automatically detected.	(Show the Status:) None HDD or CD-ROM Number
IDE Primary Slave	Lets you configure the hard disk drive connected to the slave port of IDE channel 1. To enter the IDE Primary Slave setup, press ENTER . The IDE CD-ROM is always automatically detected.	(Show the Status:) None HDD or CD-ROM Number
IDE Secondary Master	Lets you configure the hard disk drive connected to the master port of IDE channel 2. To enter the IDE Secondary Master setup, press ENTER . The IDE CD-ROM is always automatically detected.	(Show the Status:) None HDD or CD-ROM Number
IDE Secondary Slave	Lets you configure the hard disk drive connected to the slave port of IDE channel 2. To enter the IDE Secondary Slave setup, press ENTER . The IDE CD-ROM is always automatically detected.	(Show the Status:) None HDD or CD-ROM Number

Parameter	Description	Options
Drive A	Allows you to configure your floppy drive A.	**1.44 MB, 3.5-inch** None 360 KB, 5.25-inch 1.2 MB, 5.25-inch 720 KB, 3.5-inch 2.88 MB, 3.5-inch
Drive B	Allows you to configure your floppy drive B.	**None** 360 KB, 5.25-inch 1.2 MB, 5.25-inch 720 KB, 3.5-inch 1.44 MB, 3.5-inch 2.88 MB, 3.5-inch
Video	This item specifies the type of video card in use. The default setting is VGA/EGA. Since current PCs use VGA only, this function is almost useless and may be disregarded in the future.	**EGA/VGA** CGA40 CGA80 Mono
Halt On	This parameter enables you to control the system stops in case of Power-on self-test (POST) errors.	**All, But Keyboard** All Errors No Error All, But Diskette All, But Disk/Key
Base Memory	Refers to the portion of memory that is available to standard DOS programs. DOS systems have an address space of 1 MB, but the top 384 KB (called high memory) is reserved for system use. This leaves 640 KB of conventional memory. Everything above 1 MB is either extended or expanded memory.	
Extended Memory	Memory above and beyond the standard 1 MB (megabyte) of base memory that DOS supports. Extended memory is only available in PCs with an Intel 80286 or later microprocessor. Extended memory is not configured in any special manner and is therefore unavailable to most DOS programs. However, MS Windows and OS/2 can use extended memory.	
Total Memory	Total base, and extended memory, and I/O ROM 384KB available to the system.	

IDE Primary Master/Slave and IDE Secondary Master/Slave Setup

The following screen appears if you select any of the IDE drive parameters:

The following table describes the parameters found in this menu.
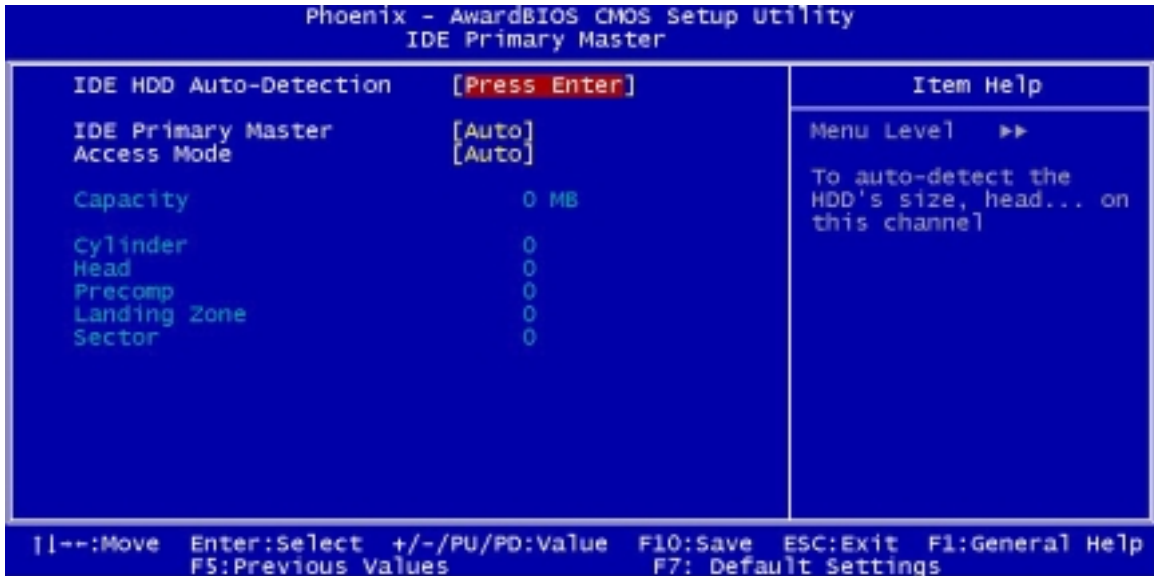
Parameter	Description	Options
IDE HDD Auto-Detection	Auto-detects your hard disk drive.	**Press Enter**
IDE Primary Master	Displays the device type	**Auto** None Manual
Access Mode	Selects the HDD access mode	**Auto** Large LBA CHS
Capacit	Shows the size of your hard disk in MB.	xxxxx MB
Cylinder	Shows your hard disk's number of cylinders.	0 to 65535
Head	Shows your hard disk's number of heads	0 to 255
Precomp	Selects the Precomp number for old HDD parking	0 to 65535
Landing Zone	Selects the Landing Zone number for old HDD parking	0 to 65535
Sector	Shows your hard disk's number of sectors	0 to 255

Advanced BIOS Features

The following screen shows the Advanced BIOS Features.


```
                 Phoenix - AwardBIOS CMOS Setup Utility
                        Advanced BIOS Features

   Virus Warning                [Disabled]              ▲        Item Help
   Quick Power On Self Test      [Enabled]
   Slient Boot                   [Enabled]                   Menu Level    ▶
   Configuration Table           [Disabled]
 ▶ Hard Disk Boot Priority       [Press Enter]               Allows you to choose
   First Boot Device             [CDROM]                      the VIRUS warning
   Second Boot Device            [Floppy]                     feature for IDE Hard
   Third Boot Device             [Hard Disk]                  Disk boot sector
   Boot Other Device             [Enabled]                    protection. If this
   Security Option               [Setup]                      function is enabled
                                                              and someone attempt to
                                                              write data into this
                                                              area , BIOS will show
                                                              a warning message on
                                                              screen and alarm beep
                                                          ▼

 ↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help
           F5:Previous Values              F7: Default Settings
```

The following table describes each Advanced BIOS Features parameter. Settings in boldface are the default and suggested settings.

Parameter	Description	Options
Virus Warning	Allows you to choose the Virus warning feature fo the IDE hard disk boot sector protection. If this function is enabled and someone attempts to write data into this area, BIOS will show a warning message on screen and alarm beep.	**Disabled** Enabled
Quick Power On Self Test	This parameter speeds up POST by skipping some items that are normally checked.	**Enabled** Disabled
Silent Boot	This item is used to decide if the system logo displays when the system boots up.	**Enabled** Disabled
Configuration Table	Displays preboot system configuration table when enabled.	**Disabled** Enabled
Hard Disk Boot Priority	Select Hard Disk Boot Device Priority	**Press Enter** Show Hard Disk Name 1/2/3/4/5
First Boot Device	This parameter allows you to specify the syste boot up search sequence.	**CD-ROM,** Floppy, LS120, Hard Disk, ZIP100, LAN (on board LAN-- Boot from LAN), Disabled
Second Boot Device	This parameter allows you to specify the syste boot up search sequence.	**Flopp** , LS120, Hard Disk, CD-ROM, ZIP100, LAN (on board LAN-- Boot from LAN), Disabled
Third Boot Device	This parameter allows you to specify the syste boot up search sequence.	**Hard Disk,** Floppy, LS120, CD-ROM, ZIP100, LAN (on board LAN-- Boot from LAN), Disabled

Parameter	Description	Options
Boot Other Device	This parameter allows you to specify the syste boot up search sequence.	**Enabled** Disabled
Security Option	The **Setup** option limits access only to BIOS setup. To disable the security option, select Password Setting from the main menu, don't type anything and just press `ENTER` . The **System** option limits access to both the System boot and BIOS setup. A prompt asking you to enter your password appears on the screen every time you boot the system.	**Setup** System

Advanced Chipset Features

The following screen shows the Advanced Chipset Features.

```
                Phoenix - AwardBIOS CMOS Setup Utility
                       Advanced Chipset Features

    Memory Hole At 15M-16M      [Disabled]              Item Help
    AGP Aperture Size (MB)      [64]
                                                   Menu Level    ►





    ↑↓←→:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help
              F5:Previous Values                  F7: Default Settings
```
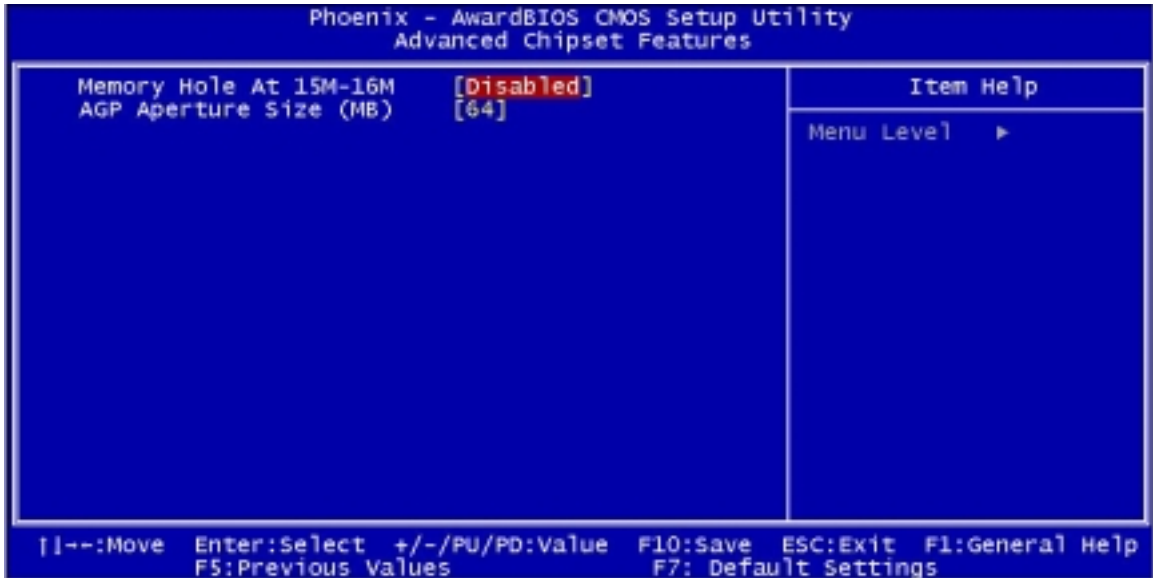
The following table describes each Advanced Chipset Features parameter. Settings in boldface are the default and suggested settings.

Parameter	Description	Options
Memory Hole at 15M-16	This option lets you reserve system memory area for special ISA cards. The chipset accesses code/data of these areas from the ISA bus directly. Normally, these areas are reserved for memory mapped I/O cards.	**Disabled** Enabled
AGP Aperture Size (MB)	This item lets you determine the effective size of the AGP Graphic Aperture.	**64**, 4, 8, 16, 32, 128 and 256

Integrated Peripherals
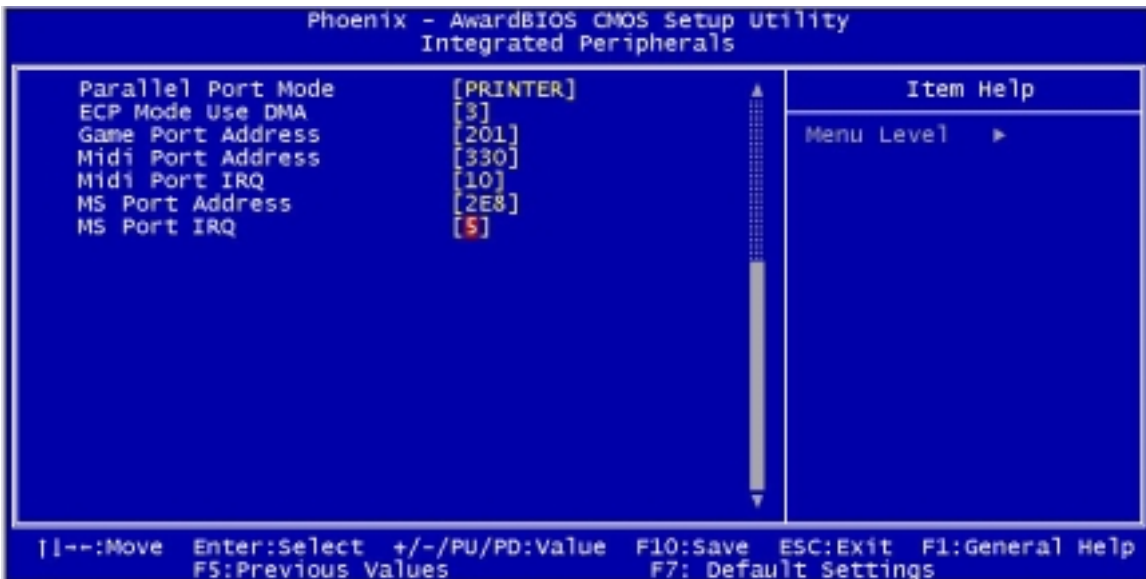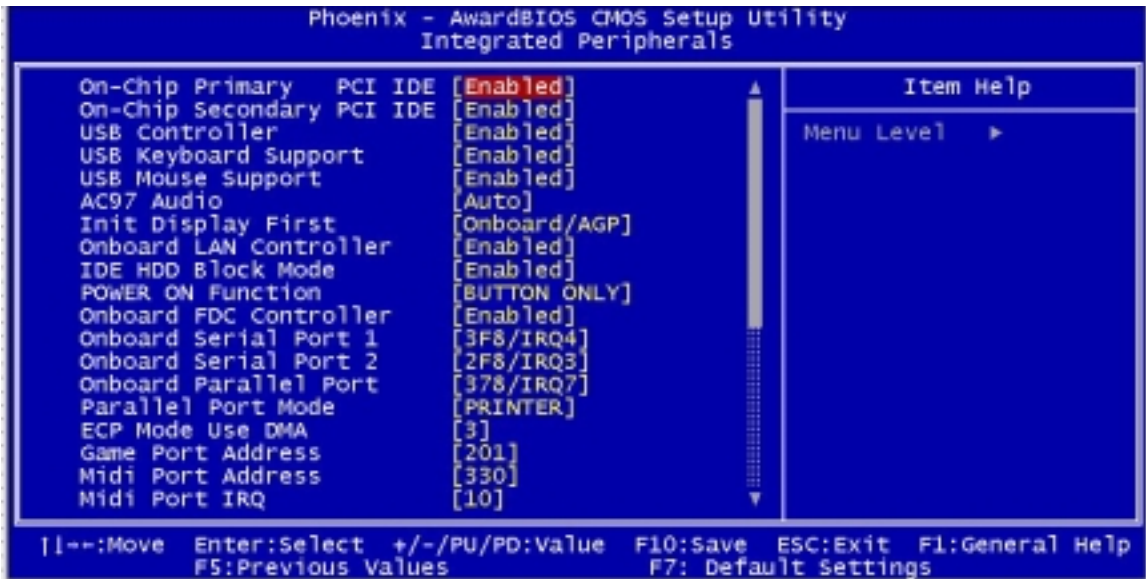
The following table describes each Integrated Peripherals parameter. Settings in boldface are the default and suggested settings.

Parameter	Description	Options
On-Chip Primary PCI IDE On-Chip Secondary PCI IDE	These parameters let you enable or disable the IDE devices connected to the primary and secondary IDE connectors.	**Enabled** Disabled

Parameter	Description	Options
IDE Primary Master PIO IDE Primary Slave PIO IDE Secondary Master PIO IDE Secondary Slave PIO	Setting these items to Auto activates the HDD speed auto-detect function. The PIO mode specifies the data transfer rate of the HDD. For example, mode 0 data transfer rate is 3.3 MB/s, mode 1 is 5.2 MB/s, mode 2 is 8.3 MB/s, mode 3 is 11.1 MB/s and mode 4 is 16.6 MB/s. If your hard disk performance becomes unstable, you may manually try the slower mode. **Caution:** It is recommended that you connect the first IDE device of each channel to the endmost connector of the IDE cable.	**Auto** Model 0 Mode 1 Mode 2 Mode 3 Mode 4
IDE Primary Master UDMA IDE Primary Slave UDMA IDE Secondary Master UDMA IDE Secondary Slave UDMA	These items allow you to set the Ultra DMA/33/66/100 mode supported by the hard disk drive connected to your primary and secondary IDE connectors.	**Auto** Disabled
USB controller	This item is used to enable or disable the On-chip USB.	**Enabled** Disabled
USB Keyboard Support	This item lets you enable or disable the USB keyboard driver within the onboard BIOS. The keyboard driver simulates legacy keyboard command and lets you use a USB keyboard during POST or after boot if you don't have a USB driver in the operating system.	**Enabled** Disabled
USB Mouse Support	This item lets you enable or disable the USB mouse driver within the onboard BIOS. The mouse driver simulates legacy mouse command and lets you use a USB mouse during POST or after boot if you don't have a USB driver in the operating system.	**Enabled** Disabled
AC97 Audio	Enabling the on-die AC97 Audio if no add-on PCI Audio device.	**Auto** Disabled
Onboard LAN Controller	ICH4 On-die LAN	**Enabled** Disabled
Init Display First	If you installed a PCI VGA card and an AGP card at the same time, this item lets you decide which one is the initial display card.	**Onboard/ AGP** PCI Slot
IDE HDD Block Mode	This feature enhances disk performance by allowing multisector data transfers and eliminates the interrupt handling time for each sector. Most IDE drives, except with old designs, can support this feature.	**Enabled** Disabled
Power on Function	The options to switch on the system. Button only (press the power button only) Any Key (press any key on the PS2 keyboard or press the power button) Keyboard 98 (press key on the PS2 keyboard or press the power button)	**Button Only** Any Key Keyboard 98
Onboard FDC Controller	Setting this parameter to Enabled allows you to connect your floppy disk drives to the onboard floppy disk connector instead of a separate controller card. Change the setting to Disabled if you want to use a separate controller card.	**Enabled** Disabled
Onboard Serial Port 1	This item allows you to assign an address and interrupt for the board serial port.	**3F8/ IRQ4** Auto 2F8/ IRQ3 3E8/ IRQ4 2E8/ IRQ3 Disabled

Parameter	Description	Options
Onboard Serial Port 2	This item allows you to assign an address and interrupt for the board serial port.	**2F8/ IRQ3** Auto 3F8/ IRQ4 3E8/ IRQ4 2E8/ IRQ3 Disabled
Onboard Parallel Port	This item controls the onboard parallel port address an interrupt. **NOTE:** If you are using an I/O card with a parallel port, make sure that the addresses and IRQs do not have conflict.	**378/ IRQ7** 3BC/ IRQ7 278/ IRQ5 Disabled
Parallel Port Mode	IBM PC/AT and PS/2 compatible bi-directional parallel port. (SPP) Enhanced Parallel Port (EPP)-compatible with EPP1.7 and EPP 1.9. Extended Capabilities Port (ECP) Specification by Microsoft andHP. IEEE 1284 compliant	**Printer** SPP ECP EPP1.7+ECP EPP1.7+SPP EPP1.9+SPP EPP1.9+ECP
ECP Mode Use DMA	Selects the ECP Mode DMA Channel.	**3** 1
Game Port Address	Selects the Game Port Address.	**201** 209 Disabled
Midi Port Address	Selects the Midi Port Address.	**330** 300 290 Disabled
Midi Port IRQ	Selects the Midi Port IRQ.	**10** 5

Power Management Setup

The Power Management menu lets you configure the system power-management feature. It works only in APM mode.

IMPORTANT: If an ACPI-aware operating system such as Windows 98 or Windows 2000 is installed in ACPI mode, the operating system will use the ACPI interfaces. Then the settings in Power Management page is non-effective.

The following screen shows the Power Management parameters and their default settings:

```
            Phoenix - AwardBIOS CMOS Setup Utility
                      Power Management Setup

   Run VGABIOS if S3 Resume    [Auto]              ▲          Item Help
   Power Management            [Min Saving]
   Suspend Mode                1 Hour                    Menu Level   ►
   HDD Power Down              15 Min
   Soft-Off by PwR-BTTN        [Delay 4 Sec.]
   PWRON After PwR-Fail        [Former-Sts]
   Wake-Up by PCI card         [Enabled]
   Power On by Ring            [Disabled]
   USB KB Wake-Up From S3      [Enabled]
   Resume by Alarm             [Disabled]
 x  Date(of Month) Alarm        0
 x  Time(hh:mm:ss) Alarm        0 :  0 :  0
                                                  ▼

 ↑↓←→:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help
           F5:Previous Values              F7: Default Settings
```

The following table describes the parameters found in this menu.

Parameter	Description	Options
Run VGABIOS if S3 Resume	Auto:BIOS decides whether the VGA BIOS should initiate or not. If the default is set to "Yes", then the VGA BIOS initiates automatically. If it is set to "No", the VGA BIOS will not initiate automatically.	**Auto** Yes No
Power Management (Function Enabled in APM Mode)	This function allows you to set the default parameters for power-saving modes. Set it to Disable to turn off the power management function. Set it to User Define to choose you own parameters. See the Power Management Mode Table.	**Min Saving** User Define Max Saving
Suspend Mode (Function Enabled in APM Mode)	This item lets you set the period of time after which the system enters into Suspend mode. The Suspend mode can be Power On Suspend or Suspend to Hard Drive, and it is selected in the "Suspend Mode Option".	**Disabled**, 1 min., 2 min., 4 min., 8 min., 12 min., 20 min., 30 min., 40 min., and 1 Hou
HDD Power Down (Function Enabled in APM Mode)	This option lets you specify the IDE HDD idle time before the device enters the power down state. This item is independent from the power states previously described in this section (Standby and Suspend).	**Disabled** 1 min 15 min
Soft-Off by PWR-BTTN (Function Enabled in ACPI and APM Mode)	This is a specification of ACPI and supported by hardware. When Delay 4 sec. is selected, the soft power switch on the front panel can be used to control power On, Suspend and Off. If the switch is pressed less than 4 sec. during power On, the system will go into Suspend mode. If the switch is pressed longer than 4 sec, the system will be turned Off. The other setting is Instant-Off, where the soft power switch is only used to control On and Off, there is no need to press 4 sec, and there is no Suspend.	**Delay 4 sec**. Instant-Off
PWRON After PWR-Fail (Function Enabled in ACPI and APM Mode)	Use this option to determine the manner by which the system will power on after a power failure. Former Sts (former status) - System would return to its former running state prior to th power failure. On - System would be on full on state upo resuming from power failure. Off - System would remain off.	**Former-Sts** On Off
Wake-Up by PCI Card (Function Enabled in ACPI and APM Mode)	Use PCI PME# Wake-Up system . PCI must meet PCI 2.2 specification.	**Enabled** Disabled
Power-On by Ring (Function Enabled in ACPI and APM Mode)	When Enabled, any fax/ modem activity wakes up the system from suspend mode.	**Disabled** Enabled
USB KB Wake-up from S3 (Function Enabled in ACPI mode)	When enabled, any USB keyboard activity wakes up the system from S3 (STR, Suspend to RAM) mode.	**Enabled** Disabled

Parameter	Description	Options
Resume by Alarm (Function Enabled in ACPI and APM Mode)	Use this option to set the date and time for you computer to boot up. Date (of month) Alarm* - Indicate month when system will boot up. Set it to 0 if you want to boot everyday. Time (hh:mm:ss) Alarm* - Indicate the hour, minute and second when system will boot up.	**Disabled** Enabled * Set Resume by Alarm to Enabled, then press ⌈ENTER⌉ to show the range of Date and Time Alarm.

NOTE: In ACPI mode: Valid-S5 and S4. In APM mode: Valid- shutdown

Power Management Mode Table

Mode	Doze	Standby	Suspend	HDD Power Down
Max Saving	1 hou	1 hour	1 hou	15 mi
Min Saving	1 min	1 min	1 min	1 min

PnP/PCI Configurations
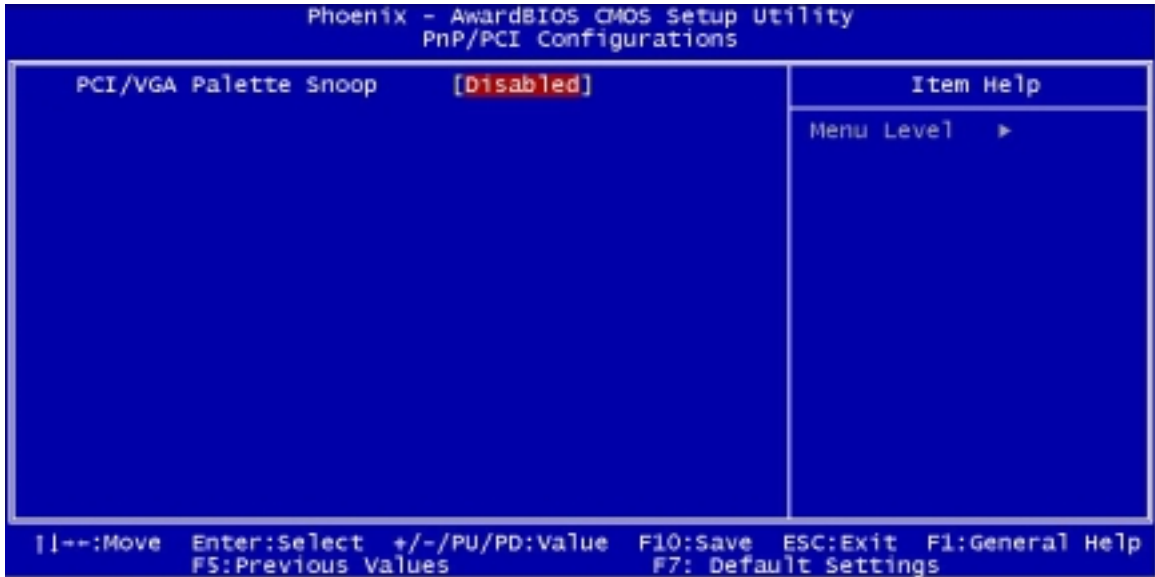
The table below describes each PnP/PCI configuration parameter. Settings in boldface are the default and suggested settings.

Parameter	Description	Options
Reset Configuration Dat	Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system configuration has caused such a serious conflict that the OS cannot boot.	**Disabled** Enabled
Resources Controlled By	Setting this option to Manual allows you to individually assign the IRQs and DMAs to the ISA and PCI devices. Set this to Auto to enable the auto-configuration function.	**Auto (ESCD)** Manual
IRQ Resources IRQ 3 (COM2) IRQ 4 (COM1) IRQ 5 (Network/Sound or Others IRQ 7 (Printer or Others) IRQ 9 (Video or Others) IRQ 10 (SCSI or Others) IRQ 11 (SCSI or Others) IRQ 12 (PS/2 Mouse) IRQ 14 (IDE1) IRQ15 (IDE2)	Set " Resources Controlled By" to Manual to show the IRQ Resources. If your ISA card is not PnP compatible and requires a special IRQ to support its function, set the selected IRQ to Legacy ISA. This setting informs the PnP BIOS to reserve the selected IRQ for the installed legacy ISA card. The default is PCI/ISA PnP. Take note that PCI cards are always PnP compatible (except old PCI IDE cards).	**PCI/ISA PnP** Legacy ISA

Parameter	Description	Options
PCI/VGA Palette Snoop	This parameter permits you to use the palette snooping feature if you installed more than one VGA card in the system. The PVI/VGA palette snoop function allows the control palette register (CPR) to manage and update the VGA RAMDAC (Digital Analog Converter, a color data storage) of each VGA card installed in the system. The snooping process lets the CPR send a signal to all the VGA cards so that they can update their individual RAMDACs. The signal goes through the cards continuously until all RAMDAC data has been updated. This allows the display of multiple images on the screen. **NOTE:** Some VGA cards have required settings for this feature. Check your VGA card manual before setting this parameter.	**Disabled** Enabled

PC Health Status

```
          Phoenix - AwardBIOS CMOS Setup Utility
                    PC Health Status

   CPU Shutdown Temperature    [90°C /194°F]        Item Help
   CPU Warning Temperature     [85°C /185°F]
   System Shutdown Temperatur[60°C /140°F]      Menu Level    ►
   System Warning Temperature[55°C /131°F]
   CPU Temperature
   System Temperature
   VCore (From VID)
   VCore (Physical)
   +3.3V
   +5V
   +12V
   3.3V StandBy
   +1.5V
   +1.8V
   Current CPU FAN1 Speed



 ↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help
         F5:Previous Values              F7: Default Settings
```

Parameter	Description	Options
CPU Shutdown Temperature (Function Enabled in ACPI Mode)	When the temperature of the CPU reaches th default value, the system will shut down by initiating beep sounds.	**90 degree C/ 194 degree F** 60 degree C/ 140 degree F 70 degree C/ 158 degree F 80 degree C/ 186 degree F Disabled 100 degree C/ 212 degree F 110 degree C/ 230 degree F 120 degree C/ 248 degree F
CPU Warning Temperature(Function Enabled in ACPI Mode	When the temperature of the CPU reaches th default value, the system will give warning by initiating beep sounds.	**85 degree C/ 185 degree F** 55degree C/ 131 degree F 65 degree C/ 149 degree F 75 degree C/ 167 degree F Disabled 95 degree C/ 203 degree F 105 degree C/ 221 degree F 115 degree C/ 239 degree F
System Shutdown Temperature(Function Enabled in ACPI Mode	When the temperature of the system reaches the default value, the system will shut down by initiating beep sounds.	**60 degree C/ 140 degree F** 30degree C/ 86 degree F 40 degree C/ 104 degree F 50 degree C/ 122 degree F Disabled 70degree C/ 158 degree F 80 degree C/ 186 degree F 90 degree C/ 194 degree F

Parameter	Description	Options
System Warning Temperature(Function Enabled in ACPI Mode	When the temperature of the system reaches the default value, the system will give warning by initiating beep sounds.	**55 degree C/ 131 degree F** 25degree C/ 77 degree F 35 degree C/ 95 degree F 45 degree C/ 113 degree F Disabled 65degree C/ 149 degree F 75 degree C/ 167 degree F 85 degree C/ 185 degree F

Frequency Control
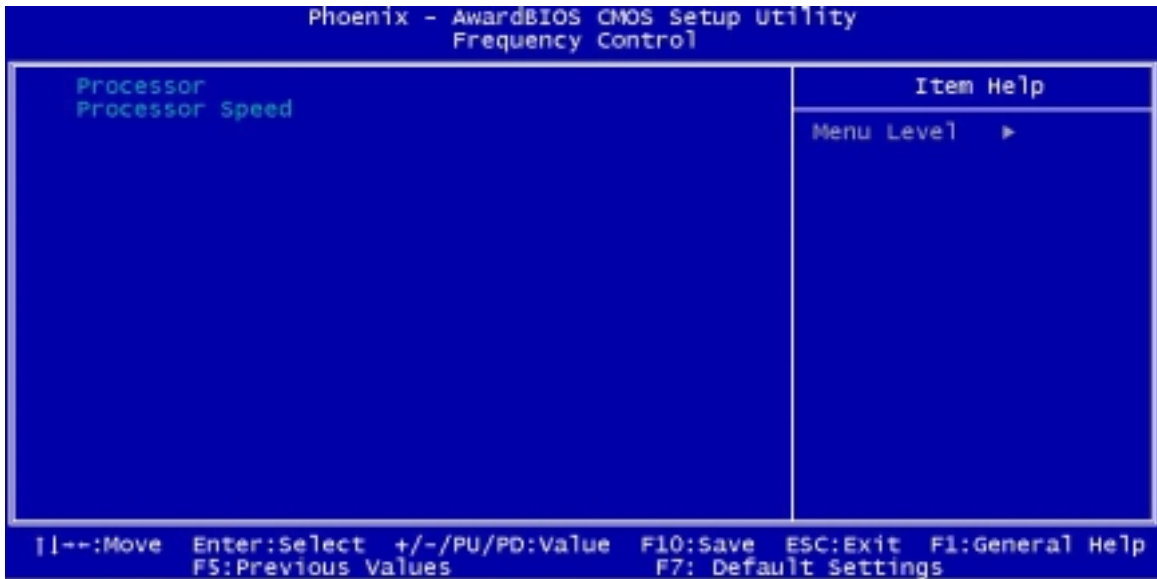
```
                  Phoenix - AwardBIOS CMOS Setup Utility
                             Frequency Control
 ┌─────────────────────────────────────────────┬──────────────────────────┐
 │  Processor                                   │       Item Help          │
 │  Processor Speed                             ├──────────────────────────┤
 │                                              │  Menu Level    ►         │
 │                                              │                          │
 │                                              │                          │
 │                                              │                          │
 │                                              │                          │
 │                                              │                          │
 │                                              │                          │
 │                                              │                          │
 │                                              │                          │
 │                                              │                          │
 └─────────────────────────────────────────────┴──────────────────────────┘
 ↑↓→←:Move   Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help
             F5:Previous Values              F7: Default Settings
```

The following table describes the parameters found in this menu.

Parameter	Description
Processor	Indicates the type of processor installed in your computer.
Processor Spee	Indicates the processor speed.

System Security

The Setup program has a number of security features to prevent unauthorized access to the system and its data.

Supervisor Password

To set a password:

1. At the prompt, type your password. Your password can be up to 8 alphanumeric characters. When you type the characters, they appear as asterisks on the password screen box.

2. After typing the password, press **ENTER** .

3. At the next prompt, re-type your password and press **ENTER** again to confirm the new password. After the password entry, the screen automatically reverts to the main screen.

```
             Phoenix - AwardBIOS CMOS Setup Utility

   ▶ Product Information          ▶ PC Health Status

   ▶ Standard CMOS Features       ▶ Frequency Control

   ▶ Advanced BIOS Features         Load Default Settings

   ▶ Advanced Chipset Features      Set Supervisor Password

   ▶ Integrated Peripherals       x Set User Password

   ▶ Power Management Se ┌──────────────────────┐ t Setup
                         │ Enter Password:      │
   ▶ PnP/PCI Configurati └──────────────────────┘ ut Saving


   Esc : Quit                     ↑ ↓ → ←   : Select Item
   F10 : Save & Exit Setup

                Change/Set/Disable Password
```

To disable the password, press **ENTER** when prompted to enter the password. The screen displays a message confirming that the password has been disabled.

```
                    Phoenix - AwardBIOS CMOS Setup Utility

    ▶ Product Information              ▶ PC Health Status

    ▶ Standard CMOS Features           ▶ Frequency Control

    ▶ Advanced BIOS Features             Load Default Settings

    ▶ Advanced Chipset Features          Set Supervisor Password

    ▶ Integrated Peripherals           x Set User Password

    ▶ Power Management Se   PASSWORD DISABLED !!!       t Setup
                           Press any key to continue...
    ▶ PnP/PCI Configurati                               ut Saving

    Esc : Quit                         ↑ ↓ → ←   : Select Item
    F10 : Save & Exit Setup

                      Change/Set/Disable Password
```

User Password

IMPORTANT: To show the "Set User Password":

1. Choose "Set Superviser Password" and press `ENTER`.
2. Type the password and then press `ENTER`.
3. Confirm the password, and then press `ENTER`.
4. The screen as below with "Set User Password" enabled will be shown.
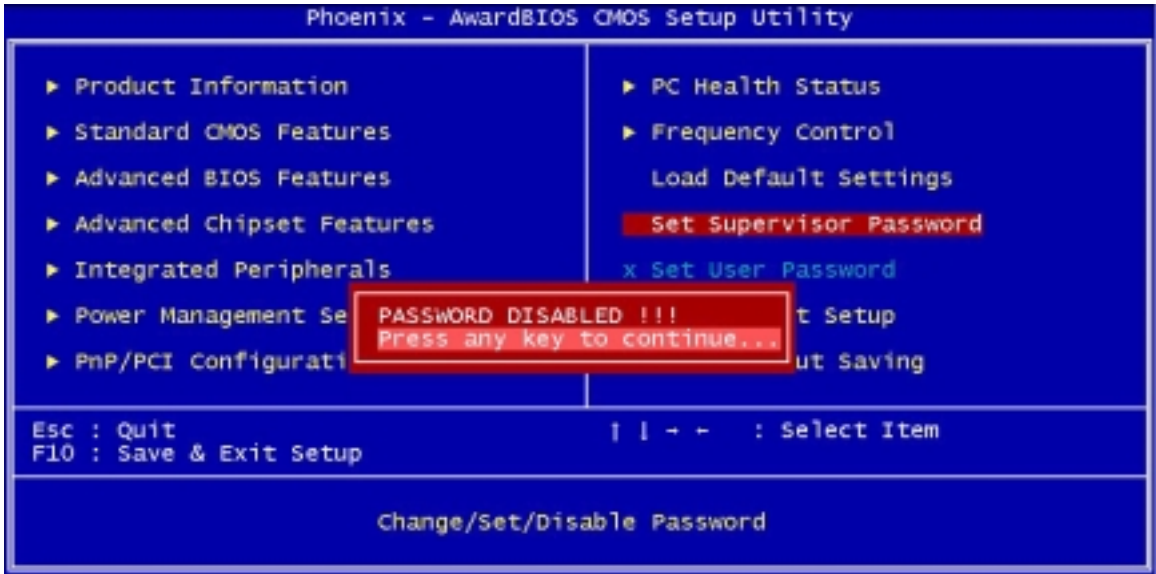
To set a password:

1. At the prompt, type your password. Your password can be up to 8 alphanumeric characters. When you type the characters, they appear as asterisks on the password screen box.
2. After typing the password, press `ENTER`.
3. At the next prompt, re-type your password and press `ENTER` again to confirm the new password. After the password entry, the screen automatically reverts to the main screen.

```
              Phoenix - AwardBIOS CMOS Setup Utility

   ► Product Information              ► PC Health Status

   ► Standard CMOS Features           ► Frequency Control

   ► Advanced BIOS Features             Load Default Settings

   ► Advanced Chipset Features          Set Supervisor Password

   ► Integrated Peripherals             Set User Password

   ► Power Management Se                           t Setup
                        Enter Password:
   ► PnP/PCI Configurati                           ut Saving

   Esc : Quit                ↑ ↓ → ←   : Select Item
   F10 : Save & Exit Setup

                  Change/Set/Disable Password
```

To disable the password, press `ENTER` when prompted to enter the password. The screen displays a message confirming that the password has been disabled.

```
                    Phoenix - AwardBIOS CMOS Setup Utility

    ▶ Product Information            ▶ PC Health Status

    ▶ Standard CMOS Features         ▶ Frequency Control

    ▶ Advanced BIOS Features           Load Default Settings

    ▶ Advanced Chipset Features        Set Supervisor Password

    ▶ Integrated Peripherals           Set User Password

    ▶ Power Management Se  PASSWORD DISABLED !!!        t Setup
                          Press any key to continue...
    ▶ PnP/PCI Configurati                              ut Saving


    Esc : Quit                       ↑ ↓ → ←   : Select Item
    F10 : Save & Exit Setup

                    Change/Set/Disable Password
```

Bypassing the Password

If you forgot your password, you can bypass the password security feature thru hardware configuration.

RTC Battery

Follow these steps to bypass the password:

1. Turn off and unplug the system.

2. Open the system housing. Take off battery and short it.

3. Place on RTC battery, reboot the system and enter setup menu, to load default setting.

Clear CMOS

Follow these steps to bypass the password:

1. Reset CMOS, by adjusting JP2 to **2-3**

2. Reboot the system.

3. Adjust the JP2 back to **1-2**

NOTE: Please refer to the following

JP2: Clear CMOS

JP2	CMOS Check
1-2	Normal
2-3	Clear CMOS

Load Default Settings

You need to reload the BIOS default settings every time you make changes to your system hardware configuration (such as memory size, CPU type, hard disk type, etc.); otherwise, BIOS will keep the previous CMOS settings. Selecting this option displays the following dialog box:
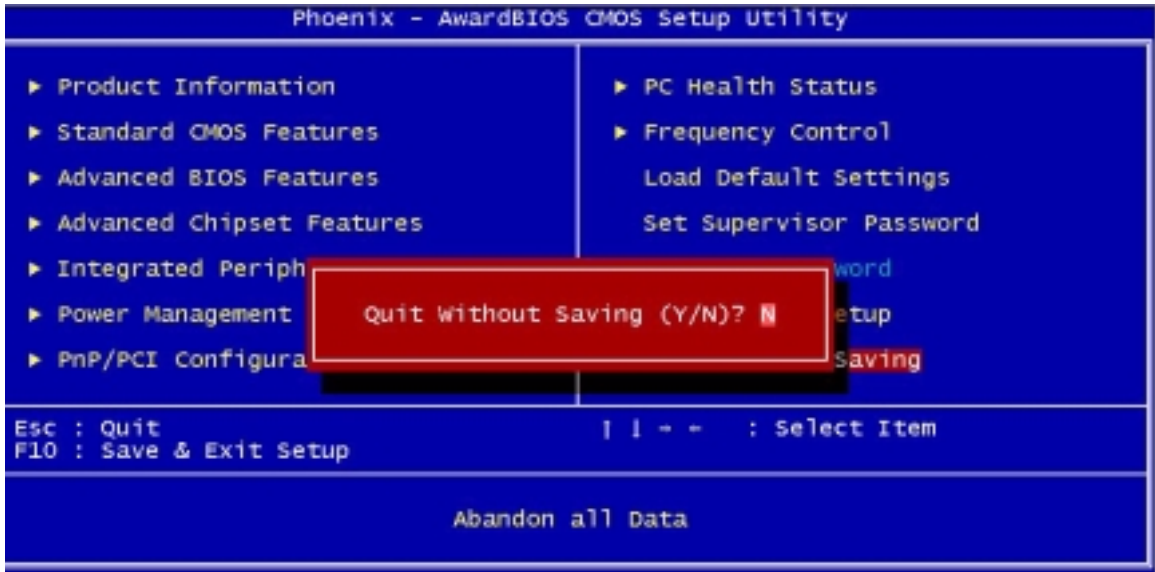
```
              Phoenix - AwardBIOS CMOS Setup Utility
┌──────────────────────────────────┬──────────────────────────────┐
│  ▶ Product Information            │  ▶ PC Health Status           │
│                                   │                               │
│  ▶ Standard CMOS Features         │  ▶ Frequency Control          │
│                                   │                               │
│  ▶ Advanced BIOS Features         │    Load Default Settings      │
│                                   │                               │
│  ▶ Advanced Chipset Features      │    Set Supervisor Password    │
│                                   │                               │
│  ▶ Integrated Periph┌─────────────────────────────┐word          │
│                     │                             │              │
│  ▶ Power Management  │ Load Default Settings  (Y/N)? N│etup          │
│                     │                             │              │
│  ▶ PnP/PCI Configura└─────────────────────────────┘aving         │
├──────────────────────────────────┼──────────────────────────────┤
│  Esc : Quit                       │  ↑ ↓ → ←   : Select Item      │
│  F10 : Save & Exit Setup          │                               │
├──────────────────────────────────┴──────────────────────────────┤
│                    Load Default Settings                          │
└──────────────────────────────────────────────────────────────────┘
```

Choosing **Yes** enables BIOS to automatically detect the hardware changes that you have made in your system. This option also allows you to restore the default settings.

Choosing **No** returns you to the main menu without loading the default settings.

Exiting Setup

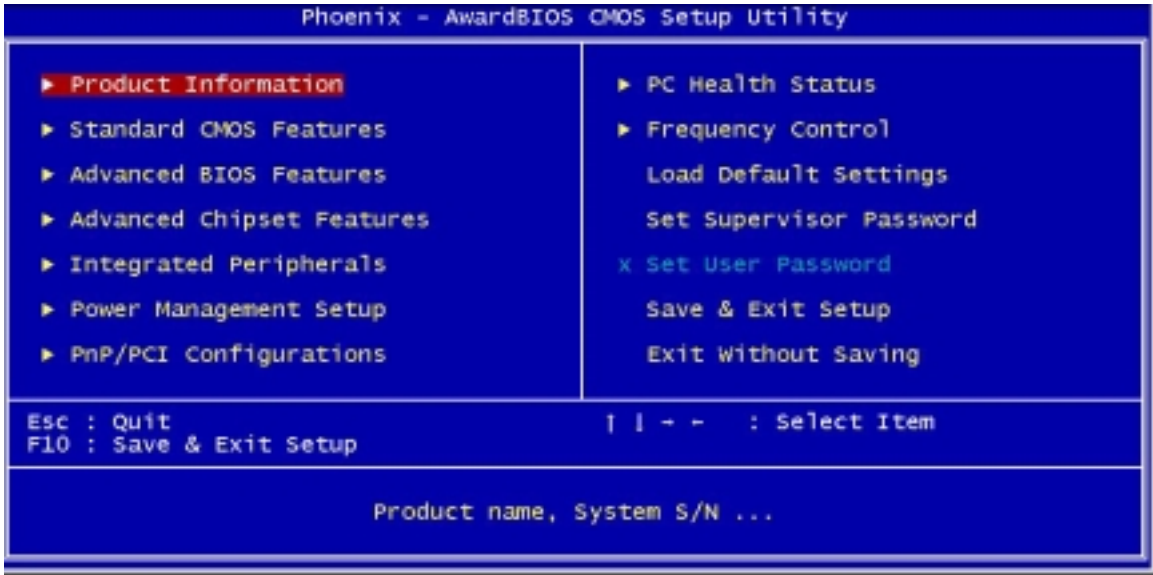To exit the BIOS utility, simply press <kbd>ESC</kbd>. The following dialog box appears:

```
          Phoenix - AwardBIOS CMOS Setup Utility

  ▶ Product Information           ▶ PC Health Status

  ▶ Standard CMOS Features        ▶ Frequency Control

  ▶ Advanced BIOS Features          Load Default Settings

  ▶ Advanced Chipset Features       Set Supervisor Password

  ▶ Integrated Periph ┌─────────────────────────────┐ word

  ▶ Power Management   │  Quit Without Saving (Y/N)? N │ etup

  ▶ PnP/PCI Configura └─────────────────────────────┘ Saving

  Esc : Quit                      ↑ ↓ → ←  : Select Item
  F10 : Save & Exit Setup

                    Abandon all Data
```

Select **Yes** to exit Setup. Select **No** to return to the main menu.

If you have made changes in the parameter settings, you will be asked if you want to keep the changes made to the BIOS. Select **Yes** to save your changes before you exit Setup. Select **No** to discard all changes and exit Setup.

Advanced Options

NOTE: The Advanced Options menu is available only when you press [ALT] + [F4] in the main menu.

The "Advanced Options" menu allows you to configure the system memory and PCI device settings.

The following screen shows the Advanced Options parameter:

```
           Phoenix - AwardBIOS CMOS Setup Utility

   ► Product Information              ► PC Health Status

   ► Standard CMOS Features           ► Frequency Control

   ► Advanced BIOS Features             Load Default Settings

   ► Advanced Chipset Features          Set Supervisor Password

   ► Integrated Peripherals           x Set User Password

   ► Power Management Setup             Save & Exit Setup

   ► PnP/PCI Configurations            Exit Without Saving

   Esc : Quit                         ↑ ↓ → ←   : Select Item
   F10 : Save & Exit Setup

                 Product name, System S/N ...
```

CAUTION: Do not change any settings in the Advanced Options menu if you are not a qualified technician to avoid damaging the system.

Product Information

Selecting "Product Information" from the Advanced Options menu displays the following screen:

This menu lets you configure the system memory.

```
           Phoenix - AwardBIOS CMOS Setup Utility
                    Product Information

   Product Name          Veriton 7500         │      Item Help
   System S/N            0000000000000000000  │
   Main Board ID         S88M                 │   Menu Level   ►
   Main Board S/N        0000000000000000000  │
   System BIOS Version   V6.0                 │
   SMBIOS Version                             │
   System BIOS ID        R01-A3               │
   BIOS Release Date     MMM DD, YYYY         │



   ESC:Exit
```
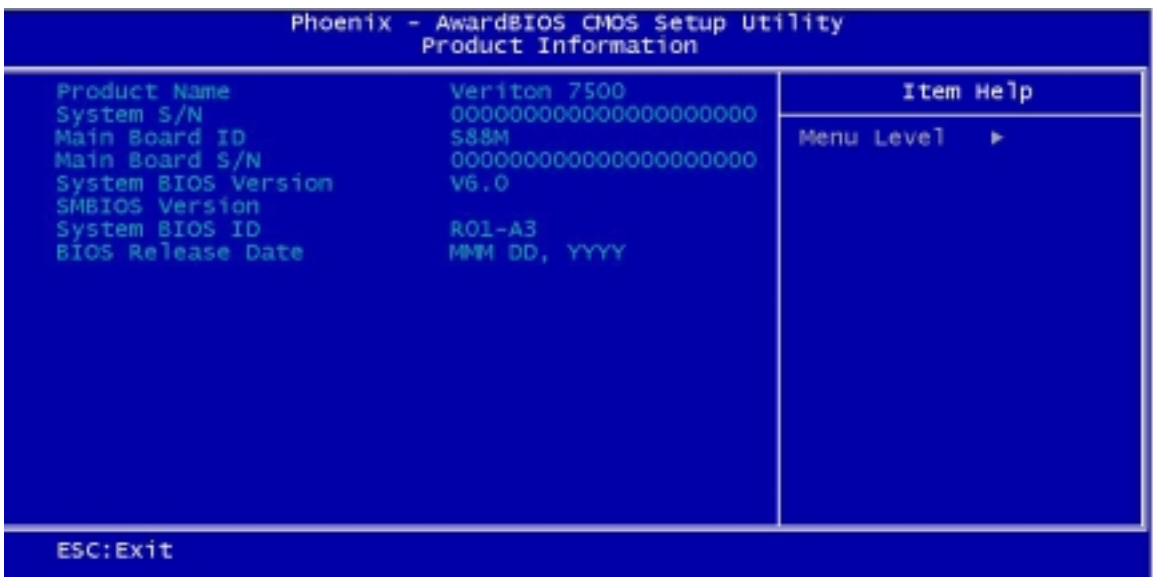
The following table describes the parameters found in this sub-menu.

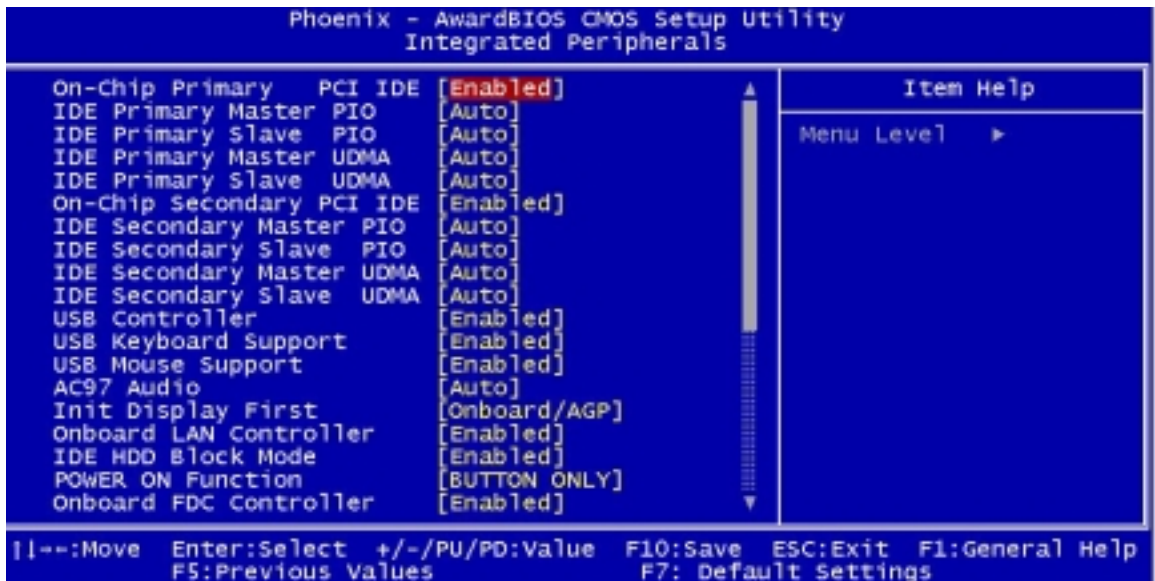| Parameter	Description
System BIOS ID	R01-A3. BIOS real versio
BIOS release date	BIOS release date

Advanced BIOS Features

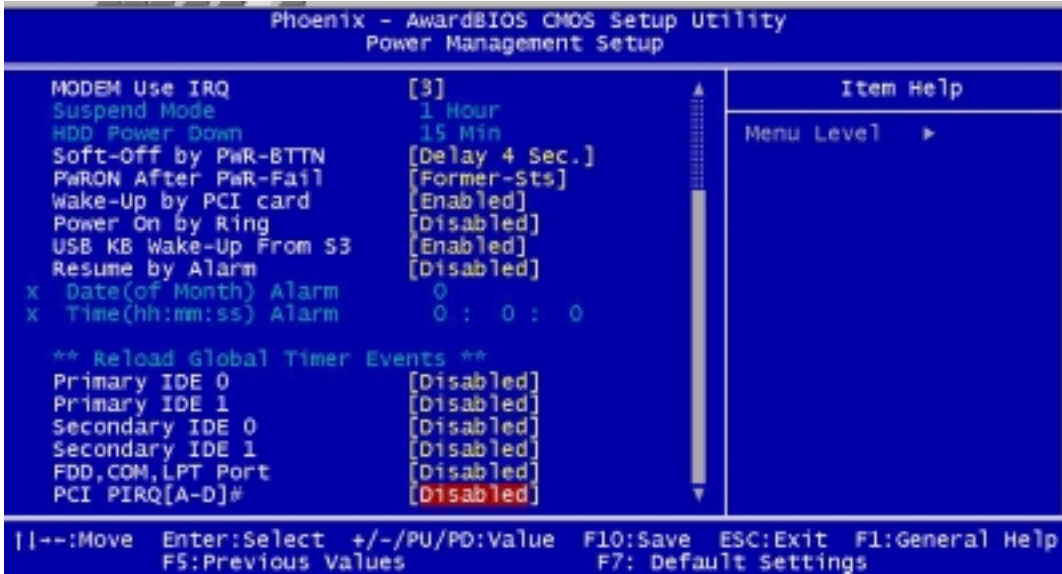Selecting "Advanced BIOS Features" from the Advanced Options menu displays the following screen:
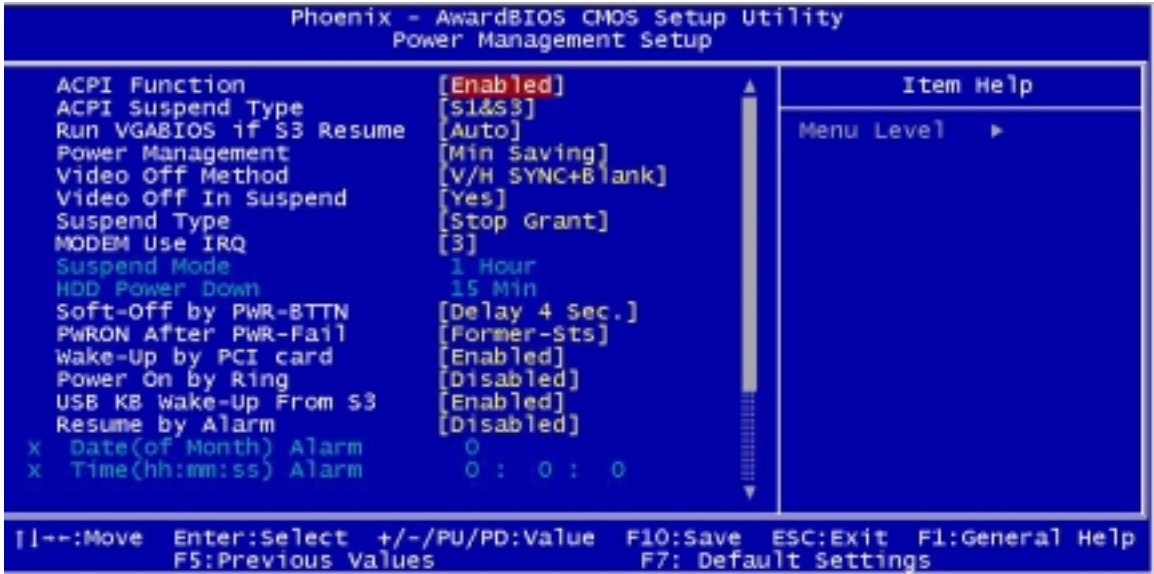

The following table describes the parameters found in the sub- menu. Settings in boldface are the default and suggested settings.
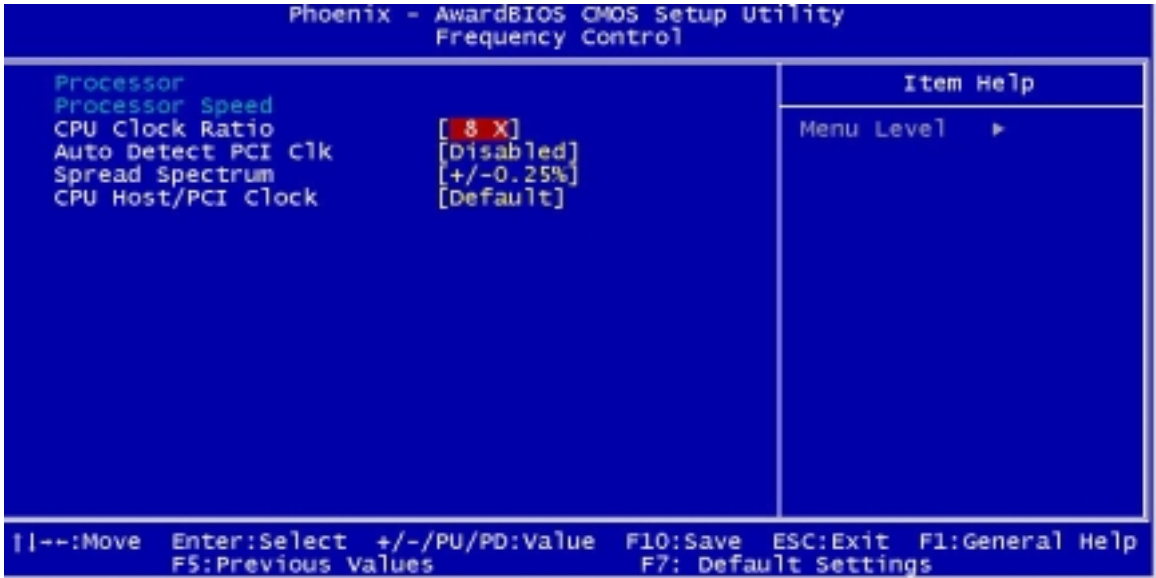
.
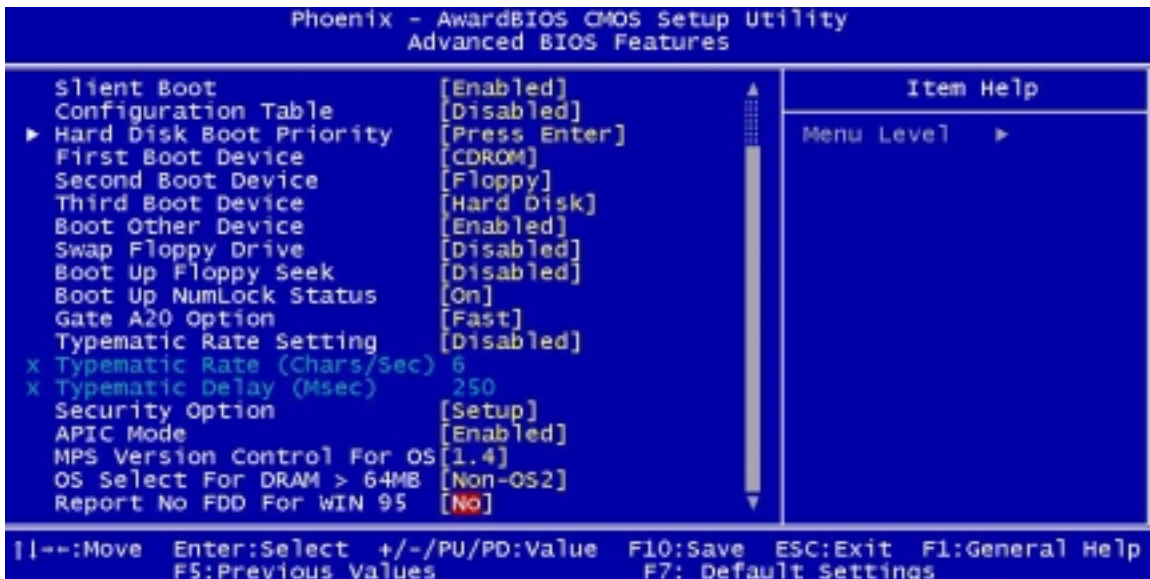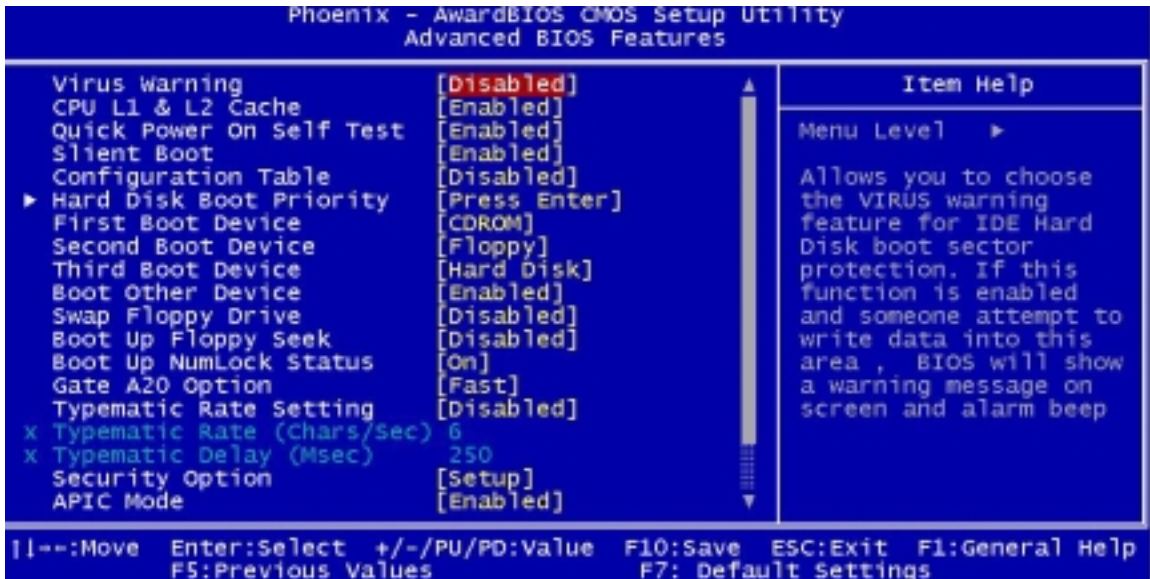
Parameter	Description	Options
CPU L1 & L2 Cache	CPU L1 & L2 cache enabled	**Enabled**/ Disabled
Swap Floppy Drive	If the system has two floppy drives, choose enabled to assign physical drive B to logical drive A and vice versa.	**Disabled**/Enabled
Boot Up Floppy Seek	If the item is enabled, BIOS will test floppy drives to determine whether they have 40 or 80 tracks.	**Disabled**/Enabled
Boot Up NumLock Status	Selects power on state for NumLock.	**On**/ Off
Gate A20 Option	Fast: Lets chipset control Gate A20 Normal: A pin in the keyboard controller, controls Gate 20. Default is fast.	**Fas** /Normal
Typematic Rate Setting	Keystrokes repeat at a rate determined by the keyboard controller-- when enabled, the typematic rate and typematic delay can be selected. *Typematic Rate (Chars/Sec) 6 *Typematic Delay (MSec) 250	**Disabled**/Enabled
APIC Mode	Advanced Interrupt Controller. The I/O APIC handles interrupts very differently than the 8259. (Refer to ICH4 EDS Rev 1.0 P6-39, 6.8)	**Enabled** Disabled
MPS Version Control For OS	Multi CPU for NT. system	**1.4**/ 1.1
OS Select For DRAM > 64MB	Select OS2 only if you are running OS/2 operating syste with greater than 64MB of RAM on the system.	**Non-OS2** OS2
Report No FDD for WIN 95	Fow WIN 95	**No** Yes

Advanced Chipset Features

Selecting "Advanced BIOS Features" from the Advanced Options menu displays the following screen.


```
            Phoenix - AwardBIOS CMOS Setup Utility
                  Advanced Chipset Features

 DRAM Timing Selectable    [By SPD]              Item Help
 CAS Latency Time          [1.5]
 Active to Precharge Delay [7]            Menu Level    ▶
 DRAM RAS# to CAS# Delay   [3]
 DRAM RAS# Precharge       [3]
 Memory Frequency For      [Auto]
 System BIOS Cacheable     [Enabled]
 Video  BIOS Cacheable     [Enabled]
 Video RAM Cacheable       [Disabled]
 Memory Hole At 15M-16M    [Disabled]
 Delayed Transaction       [Enabled]
 Delay Prior to Thermal    [16 Min]
 AGP Aperture Size (MB)    [64]
 On-Chip Video Window Size [128MB]
 On-Chip Frame Buffer Size [8MB]



↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help
         F5:Previous Values            F7: Default Settings
```

The following table describes the parameters found in the sub-menu. Settings in boldface are the default and suggested settings.

Parameter	Description	Option
DRAM Timing Selectable	SDRAM Timing	**By SPD** Manual
CAS Latency Time	The default setting by your DRAM's SPD.	**1.5**/2/2.5/3
Active to Precharge Delay	The default setting by your DRAM's SPD.	**7**/6/5
DRAM RAS #to CAS# Delay	The default setting by your DRAM's SPD.	**3**/2
DRAM RAS# Precharge	The default setting by your DRAM's SPD.	**3**/2
Memory Frequency fo	Memory frequency default setup.	**Auto**/ DDR200/DDR266
System BIOS Cacheable	E.F segment shadow RAM cacheable.	**Enabled**/Disabled
Video BIOS Cacheable	C segment shadow RAM cacheable.	**Enabled**/Disabled
Video RAM Cacheable	A.B segment shadow RAM cacheable.	**Disabled/**Enabled
Memory Hole at 15M-16	The system will reserve 15-16 MB address for the add-on card.	**Disabled/**Enabled
Delayed Transaction	ICH4 enables delayed transactions for internal register, FWH, and LPC I/F accesses.	**Enabled**/Disabled
Delay Prior to Thermal	Enables Pentium 4 thermal function - 16 miuntes after POST.(only for ACPI OS	**16/**4/8/32 minutes
AGP Aperture Size (MB)	Aperture size: the size of the system memory for AGP card. Options to decide how many size for AGP card.	**64**/4/8/16/32/128/256
On-Chip Video Window size	Aperture size for on-board CPU.	**128MB**/64MB/Disabled
On-Chip Frame Buffer size	Frame buffer size for on-chip VGA.	**8MB**/1MB/512MB

Integrated Peripherals

```
           Phoenix - AwardBIOS CMOS Setup Utility
                    Integrated Peripherals

 Init Display First         [Onboard/AGP]    ▲        Item Help
 Onboard LAN Controller     [Enabled]
 IDE HDD Block Mode         [Enabled]            Menu Level    ►
 POWER ON Function          [BUTTON ONLY]
 Onboard FDC Controller     [Enabled]
 Onboard Serial Port 1      [3F8/IRQ4]
 Onboard Serial Port 2      [2F8/IRQ3]
 UART Mode Select           [Normal]
 UR2 Duplex Mode            [Half]
 TxD, RxD Polarity Active   [Lo, Hi]
 Use IR Pins                [IR-Rx2Tx2]
 Onboard Parallel Port      [378/IRQ7]
 Parallel Port Mode         [PRINTER]
 ECP Mode Use DMA           [3]
 Game Port Address          [201]
 Midi Port Address          [330]
 Midi Port IRQ              [10]
 MS Port Address            [2E8]
 MS Port IRQ                [5]          ▼

↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help
           F5:Previous Values              F7: Default Settings
```

The following table describes the parameters found in the sub-menu. Settings in boldface are the default and suggested settings.

Parameter	Description	Option
UART Mode Select	Selects the UART as Serial Port (Normal) or IRDA or ASKIR.	**Normal** IrDA ASKI
UR2 Duplex Mode	Selects the speed of UR2 Duplex Mode.	**Half** Full
TxD, RxD Polarity Active	Selects the speed of TxD, RxD Polarity Active.	**Lo, Hi** Lo, Lo Hi, L Hi, H
Use IR Pins	Use IR Pins as IR-Rx2Tx2 or RxD2, TxD2	**IR-Rx2Tx2** RxD2, TxD2

Power Management Setup

Selecting "Power Management Setup" from the Advanced Options menu displays the following screen:

```
          Phoenix - AwardBIOS CMOS Setup Utility
                  Power Management Setup

   ACPI Function              [Enabled]       ▲        Item Help
   ACPI Suspend Type          [S1&S3]
   Run VGABIOS if S3 Resume   [Auto]              Menu Level   ▶
   Power Management           [Min Saving]
   Video Off Method           [V/H SYNC+Blank]
   Video Off In Suspend       [Yes]
   Suspend Type               [Stop Grant]
   MODEM Use IRQ              [3]
   Suspend Mode                1 Hour
   HDD Power Down              15 Min
   Soft-Off by PWR-BTTN       [Delay 4 Sec.]
   PWRON After PWR-Fail       [Former-Sts]
   Wake-Up by PCI card        [Enabled]
   Power On by Ring           [Disabled]
   USB KB Wake-Up From S3     [Enabled]
   Resume by Alarm            [Disabled]
 x  Date(of Month) Alarm         0
 x  Time(hh:mm:ss) Alarm       0 :  0 :  0     ▼

 ↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help
              F5:Previous Values              F7: Default Settings
```

```
          Phoenix - AwardBIOS CMOS Setup Utility
                  Power Management Setup

   MODEM Use IRQ              [3]              ▲        Item Help
   Suspend Mode                1 Hour
   HDD Power Down              15 Min               Menu Level   ▶
   Soft-Off by PWR-BTTN       [Delay 4 Sec.]
   PWRON After PWR-Fail       [Former-Sts]
   Wake-Up by PCI card        [Enabled]
   Power On by Ring           [Disabled]
   USB KB Wake-Up From S3     [Enabled]
   Resume by Alarm            [Disabled]
 x  Date(of Month) Alarm         0
 x  Time(hh:mm:ss) Alarm       0 :  0 :  0

   ** Reload Global Timer Events **
   Primary IDE 0              [Disabled]
   Primary IDE 1              [Disabled]
   Secondary IDE 0            [Disabled]
   Secondary IDE 1            [Disabled]
   FDD,COM,LPT Port           [Disabled]
   PCI PIRQ[A-D]#             [Disabled]     ▼

 ↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help
              F5:Previous Values              F7: Default Settings
```

The following table describes the parameters found in the sub-menu. Settings in boldface are the default and suggested settings.

Parameter	Description	Option
ACPI Functiont	ACPI power management	**Enabled** Disabled
ACPI Suspend Type	Selects the ACPI Suspend Type as S1&S3, S3 (STR, Suspend to RAM) or S1 (POS, Power On Suspend	**S1&S3** S3 (STR) S1 (POS)
Video Off Method	Turn off the video by DPMS or Blank Screen or V/H SYNC + Blank Screen	**V/H SYNC+BLANK** Blank Screen DPMS
Video Off In Suspend	Turn off the video when entering the Suspend mode.	**Yes** No
Suspend Type	When entering the Suspend mode, Stop Grant won't stop CPU Clock, PwrOn (Power On) Suspend will.	**Stop Grant** PwrOn Suspend
MODEM Use IRQ	This item lets you set an IRQ for the modem.	**3**, 4, 5, 7, 9, 10, 11, and N/A
Primary IDE 0*	To enable or disable the detection of Primary IDE 0 (HDD) activities for power down state transition.	**Disabled** Enabled
Primary IDE 1*	To enable or disable the detection of Primary IDE 1 (HDD) activities for power down state transition.	**Disabled** Enabled
Secondary IDE 0*	To enable or disable the detection of Secondary IDE 0 (HDD) activities for power down state transition.	**Disabled** Enabled
Secondary IDE 1*	To enable or disable the detection of Secondary IDE 1 (HDD) activities for power down state transition.	**Disabled** Enabled
FDD, COM, LPT port*	To enable or disable the detection of FDD, COM port, and LPT port activities for power down state transition.	**Disabled** Enabled
PCI PIRQ [A-D]#*	To enable or disable the detection of PCI PIRQ [A-D]# activities for power down state transition.	**Disabled** Enabled

NOTE: These are global timer events.

The following table describes the parameters found in the sub-menu.

Frequency Control

Selecting " Frequency Control" from the Advanced Options menu displays the following screen:

```
                  Phoenix - AwardBIOS CMOS Setup Utility
                              Frequency Control

    Processor                                              Item Help
    Processor Speed
    CPU Clock Ratio           [ 8 X]               Menu Level    ►
    Auto Detect PCI Clk       [Disabled]
    Spread Spectrum           [+/-0.25%]
    CPU Host/PCI Clock        [Default]




||←→:Move   Enter:Select  +/-/PU/PD:Value   F10:Save   ESC:Exit   F1:General Help
           F5:Previous Values                F7: Default Settings
```

The following table describes the parameters found in the sub-menu.

Parameter	Description	Option
CPU Clock Ratio	Core Clock Frequency to System Bus Ratio (RO)	The option items vary depending on your BIOS. Min=10 Max=24 Key in a DEC number
Auto Detect PCI CLK	Detect PCI card. If the default is set to Disabled, then the PCI slot clock will be turned off and vice versa.	**Disabled**/Enabled
Spread Spectru	This parameter let you enable or disable the spread spectrum.	**+/-0.25%** Disabled -0.5% +/-0.5% +/-0.38
CPU Host/PCI Clock	Front side bus frequency/PCI clock.	**Default** 100/33 Mhz 105/35 Mhz 108/36 Mhz 114/38Mhz 120/40Mhz 123/41Mhz 126/36Mhz

Machine Disassembly and Replacement

This chapter contains step-by-step procedures on how to disassemble the Veriton 3500/ 5500/ 7500 and the Veriton 3500G/ 5500G/ 7500G desktop computer for maintenance and troubleshooting.

To disassemble the computer, you need the following tools:

- q   Wrist grounding strap and conductive mat for preventing electrostatic discharge
- q   Flat-bladed screwdriver
- q   Phillips screwdriver
- q   Hexagonal screwdriver
- q   Plastic stick

NOTE: The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatches when putting back the components.

General Information

Before You Begin

Before proceeding with the disassembly procedure, make sure that you do the following:

1. Turn off the power to the system and all peripherals.
2. Unplug the AC adapter and all power and signal cables from the system.

Veriton 3500/ 3500G Disassembly Flow Chart
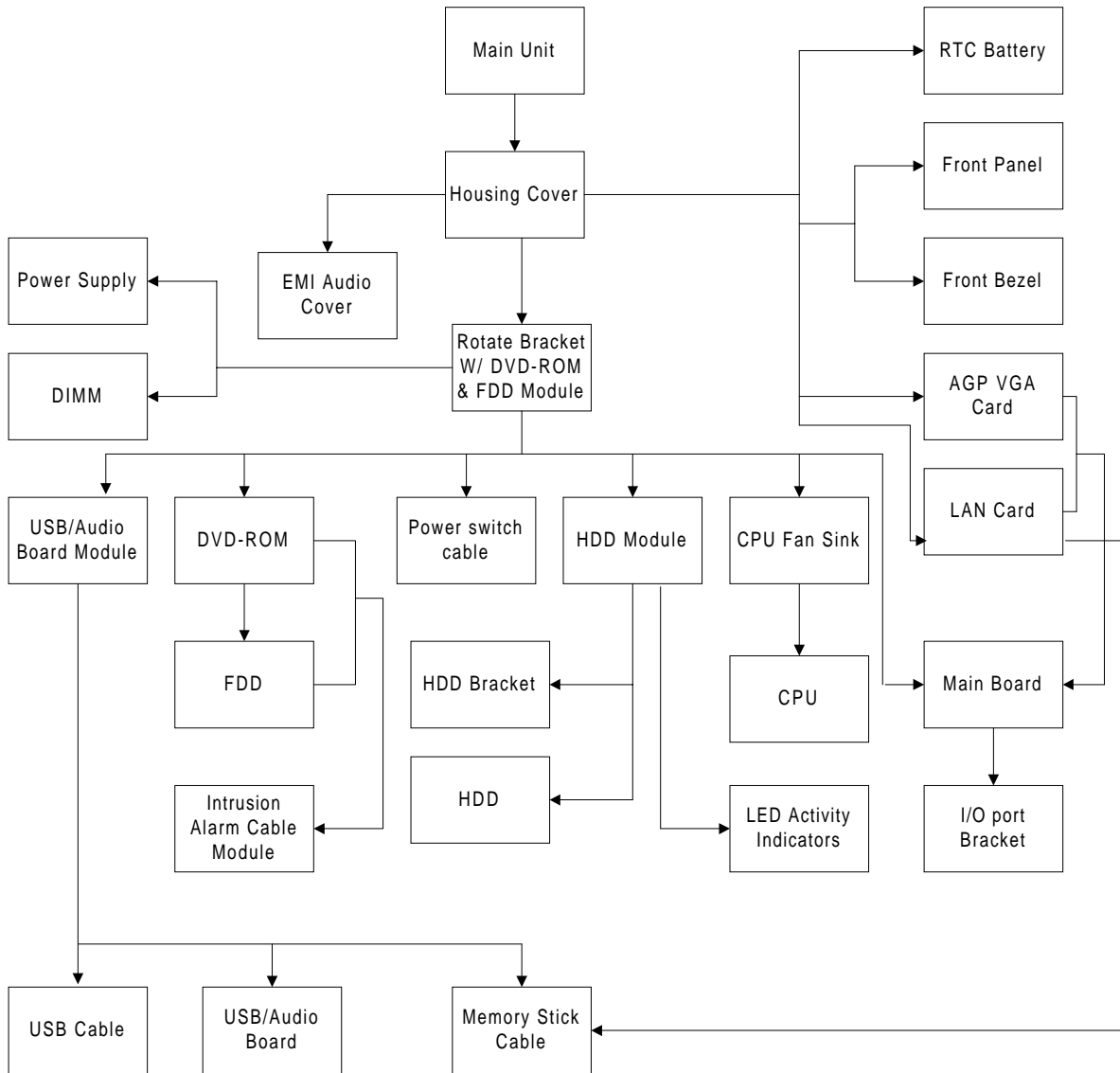
NOTE: There is no AGP VGA slot for Veriton 3500.

Disassembling the Veriton 3500/ 3500G

Opening the Housing

This section tells you how to open the housing cover when you need to install additional components inside the system unit.

CAUTION: Before you proceed, make sure that you have turned off the system and all peripherals connected to it.

Removing the Housing Cover

1. Place the system unit on a flat, steady surface.

2. Turn the housing back.

3. Slide the upper case back out about an inch and then gently pull it outward to detach it from the housing.

Removing the Front Panel

1. See "Removing the Housing Cover" on page 73

2. Remove the four screws as shown here.
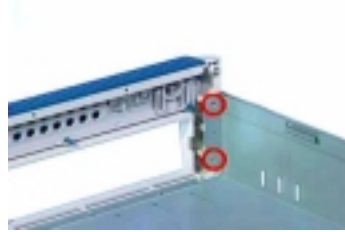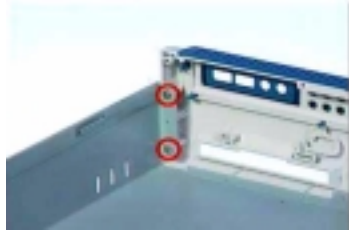
3. Detach the front bezel from the front panel gently in the way as shown here.
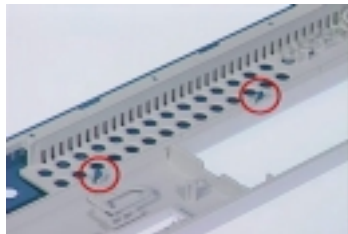
Removing the AGP VGA Card

1. See "Removing the Housing Cover" on page 73

2. Remove the screw as shown here and then remove the AGP VGA card from the slot.

NOTE: There is no AGP VGA slot for Veriton 3500.

NOTE: When you turn on the system, BIOS automatically detects and assigns resources to the PCI or AGP devices.

Removing the LAN Card

1. See "Removing the Housing Cover" on page 73

2. Remove the screw as shown below and then remove the modem card from the slot.

Removing the EMI Audio Cover

1. See "Removing the Housing Cover" on page 73

2. Press and then remove the EMI audio cover from the lower case.

Removing the FDD and DVD Frame

1. See "Removing the Housing Cover" on page 73

2. Push the two latches of both sides then lift up the FDD and DVD frame

.

3. Disconnect the floppy disk drive cable and floppy disk drive power connector from the floppy disk drive.

4. Disconnect the DVD-ROM power cable, DVD-ROM IDE cable, and audio cable from the DVD-ROM drive.

5. Disconnect the intrusion alarm cable from the main board and then pull the FDD and DVD frame from the lower case
.

6. Remove the floppy disk drive cable and optical drive IDE cable from the main board.
.
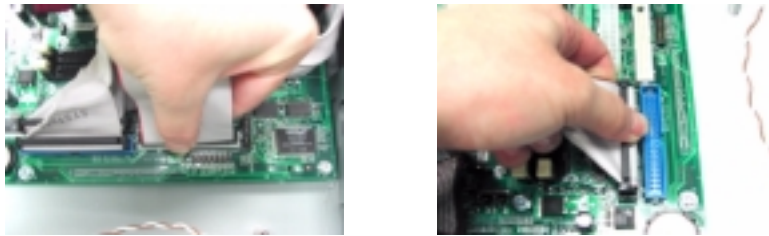
7. Remove the four screws as shown here then detach the DVD-ROM drive from the frame.
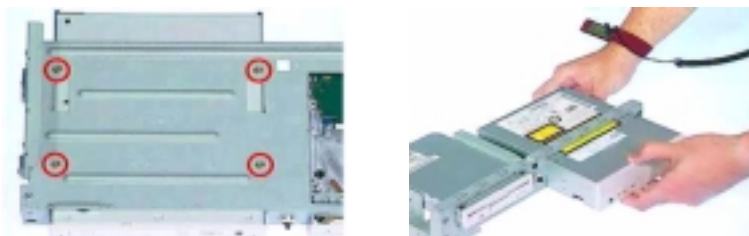
8. Remove the four screws as shown here then detach the floppy disk drive from the frame.
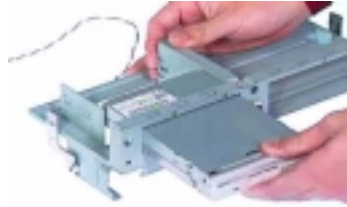
Removing the Intrusion Alarm Cable Module

1. See "Removing the Housing Cover" on page 73
2. See "Removing the FDD and DVD Frame" on page 75
3. Disconnect the cable from the main board , use the flat screwdriver to release the latches and then detach the intrusion alarm cable module from the FDD and DVD frame.

Removing the DIMM

1. See "Removing the Housing Cover" on page 73
2. See "Removing the FDD and DVD Frame" on page 75"
3. Press the levers on both sides of the DIMM socket outward to release the DIMM, and then gently pull the DIMM out to remove it.
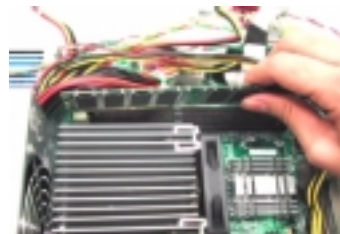
4. Put the levers back to the original position.

Removing and Installing the RTC Battery

1. See "Removing the Housing Cover" on page 73

2. Press the latch to release the RTC battery, lift up the RTC battery. To install the RTC battery, put it back and press it into the correct position to secure it well.Press the latch to release the RTC battery, lift up the RTC battery. To install the RTC battery, put it back and press it into the correct position to secure it well.

.
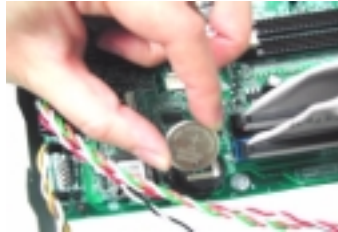
Removing the Power Switch Cable

1. See "Removing the Housing Cover" on page 73

2. See "Removing the FDD and DVD Frame" on page 75"

3. Disconnect the power switch cable from the main board, release the latches by using a flat screwdriver an dthen detach the power switch cable from the FDD and DVD Frame.
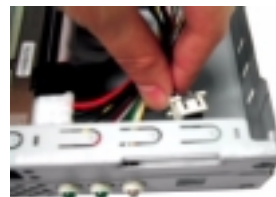
Removing the USB/ Audio Board

1. See "Removing the Housing Cover" on page 73
2. See "Removing the FDD and DVD Frame" on page 75
3. See "Removing the LAN Card" on page 75
4. Disconnect the memory stick cable and USB cable from the main board.

.

5. Disconnect the memory stick cable and USB cable from the USB/ audio board.
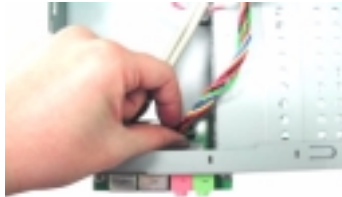
6. Remove the two screws as shown here and then detach the USB/ audio board from the lower case.
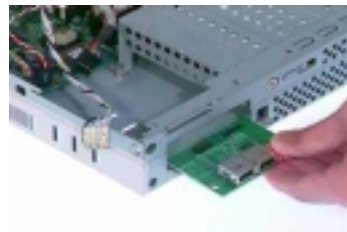
Removing the Hard Disk Drive

1. See "Removing the Housing Cover" on page 73

2. See "Removing the FDD and DVD Frame" on page 75

3. Disconnect the hard disk drive IDE from the main board. Detach the hard disk drive power connector and hard disk drive IDE cable from the hard disk drive.

4. Remove the two screws as shown here and then hold the hard disk drive frame.

5. Slide the hard disk drive frame to the right and then gently move it inward to detach it from
   the lower case. Remove the four screws as shown and then detach the hard disk drive from the frame.

Removing the LED Activity Indicators

1. See "Removing the Housing Cover" on page 73.

2. See "Removing the FDD and DVD Frame" on page 75"

3. See "Removing the Hard Disk Drive" on page 80

4. Disconnect the power LED, hard disk drive activity LED and network activity cables from the main board.

.
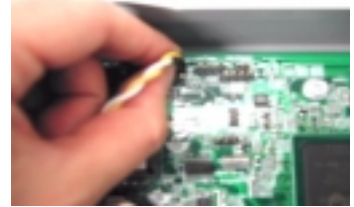
5. Detach the network activity cable, power LED and hard disk drive activity LED cables from the housing.

.

Removing the Power Supply

1. See "Removing the Housing Cover" on page 73.

2. Disconnect the FDD power connector from the FDD drive and the DVD-ROM power connector from the DVD-ROM drive.

3. Remove the hard disk drive power connector from the hard disk drive.

4. Disconnect the main power connector and 12 Volt. power connector from the main board. Remove the three screws that hold the power supply to the housing and detach the power supply from the housing
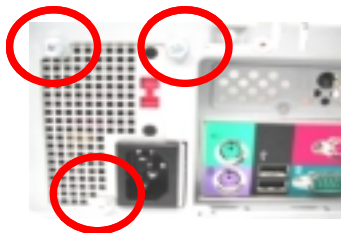
Removing the CPU Fan Sink

1. See "Removing the Housing Cover" on page 73

2. See "Removing the FDD and DVD Frame" on page 75"

3. Disconnect the fan sink cable from the main board, and then release the two levers on both sides of the fan sink.

.
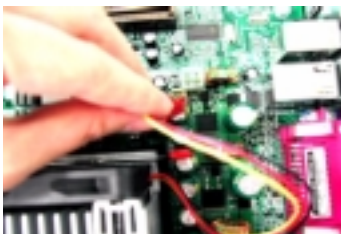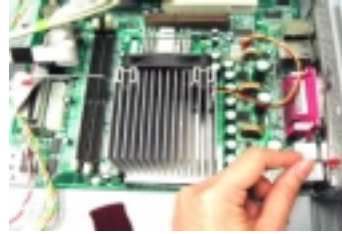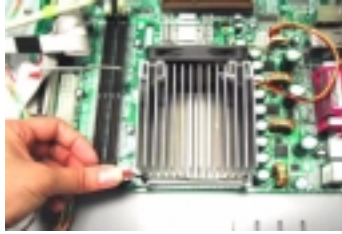
4. Remove the CPU fan sink from the main board and then put the levers back to their original positions.
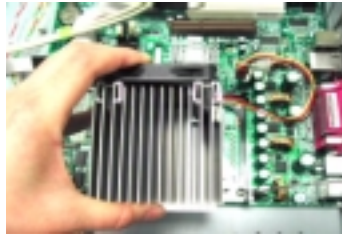
WARNING:The heatsink becomes very hot when the system is On. Never touch the heatsink with any metal or with your hands.

Removing and Installing the Processor

1. See "Removing the Housing Cover" on page 73

2. See "Removing the FDD and DVD Frame" on page 75"

3. See "Removing the CPU Fan Sink" on page 82

Pull the socket lever up to release the processor pins from the socket holes an pull out the processor from the socket.

4. Before putting back the processor back to its correct position, please note that the side with the triangle mark on the processor should align with the one on the socket. After putting the processor back to the socket, put the socket lever back to its original position to scure the processor.

.

Removing the System Main board

1. See "Removing the Housing Cover" on page 73
2. See "Removing the FDD and DVD Frame" on page 75
3. See "Removing the AGP VGA Card" on page 74
4. See "Removing the LAN Card" on page 75
5. Before you remove the system main board, make sure that all cables connected to the main board are removed.
6. Remove the eight screws as shown here then detach the main board from the lower case.
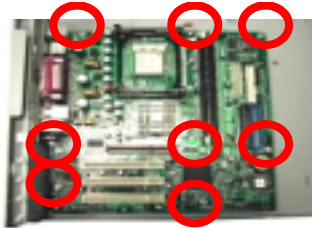
Removing the I/O Port Bracket

1. See "Removing the Housing Cover" on page 73
2. See "Removing the FDD and DVD Frame" on page 75
3. See "Removing the AGP VGA Card" on page 74
4. See "Removing the LAN Card" on page 75
5. See "Removing the System Main board" on page 84
6. Release the I/O port bracket from the housing and then detach it from the housing..

Veriton 5500/ 5500G Disassembly Procedure Flowchart

```
                                    ┌──────────────┐
                                    │  Main Unit   │
                                    └──────┬───────┘
                                           │
  ┌──────────────┐                         ▼
  │ LED Activity │                  ┌──────────────┐     ┌──────────────┐        ┌──────────────┐
  │ Indicators   │◄────────┐        │   Housing    │────►│ Front Panel W/│───────►│ Front Panel  │
  └──────────────┘         │        │    Cover     │     │ Empty Cover   │        └──────────────┘
                           ├───────►└──────────────┘     └──────┬────────┘
  ┌──────────────┐         │                                    │                 ┌──────────────┐
  │  Intrusion   │         │                                    ▼                 │ Empter Cover │
  │ Alarm Cable  │◄────────┘                             ┌──────────────┐        └──────────────┘
  │   Module     │                                       │ Power Switch │
  └──────────────┘                                       │    Cable     │
                                                         └──────────────┘
```

```
┌──────────────┐    ┌──────────────┐   ┌──────────────┐   ┌──────────────┐    ┌──────────────┐
│ Dummy Link   │    │  AGP VGA     │   │  Modem Card  │   │ USB/Audio    │    │ RTC Battery  │
│    Bar       │    │   Card       │   │              │   │ Board Module │    └──────────────┘
└──────────────┘    └──────────────┘   └──────────────┘   └──────────────┘
                                                                              ┌──────────────┐
┌──────────────┐    ┌──────────────┐                                         │  USB Cable   │
│ CPU Fan Sink │    │    DIMM      │    ┌──────────────┐   ┌──────────────┐   └──────────────┘
└──────────────┘    └──────────────┘   │  Main Board  │   │ Memory Stick │
                                       └──────────────┘   │    Cable     │
┌──────────────┐                                          └──────────────┘
│    CPU       │    ┌──────────────┐   ┌──────────────┐   ┌──────────────┐
└──────────────┘    │   Link Bar   │   │ I/O Port     │   │ USB/ Audio   │
                    └──────────────┘   │  Bracket     │   │   Board      │
                                       └──────────────┘   └──────────────┘
```

```
┌──────────────┐    ┌──────────────┐   ┌──────────────┐   ┌──────────────┐    ┌──────────────┐
│    HDD       │    │    FDD       │   │ Power Supply │   │   CD-ROM     │    │   DVD-ROM    │
└──────────────┘    └──────────────┘   └──────────────┘   └──────────────┘    └──────────────┘
```
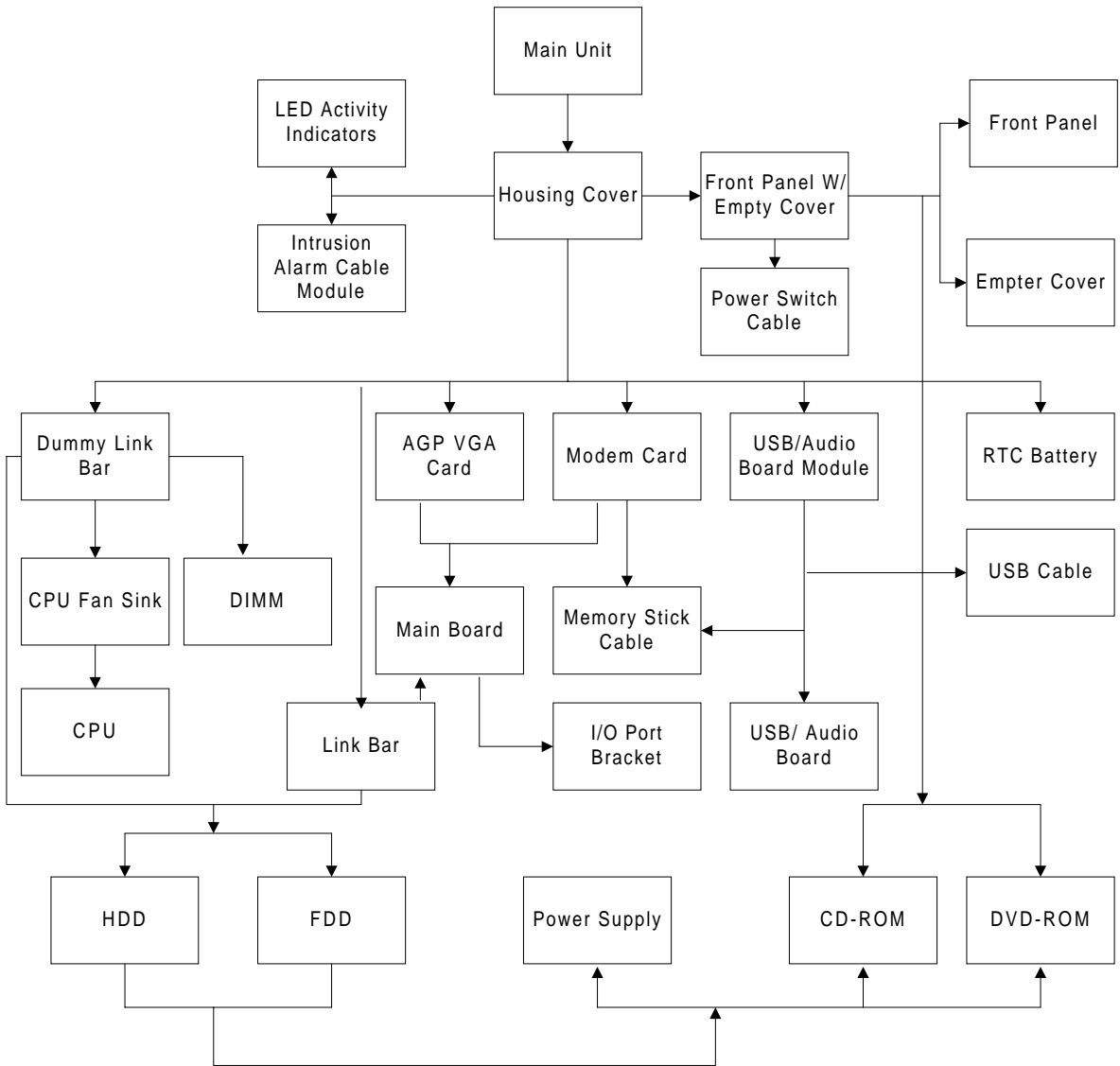
NOTE: There is no AGP slot for Veriton 5500.

Disassembling the Veriton 5500/ 5500G

Open the Housing Cover

This section tells you how to open the housing cover when you need to install additional components inside the system unit.

CAUTION: Before you proceed, make sure that you have turned off the system and all peripherals connected to it.

Removing the Housing Cover

1. Turn off the system power and unplug all cables.

2. Place the system unit on a flat, steady surface.

3. Turn the two thumbscrews counterclockwise to remove the cover. Set the screws aside. You will need them when replacing the housing cover.

4. Hold the sides of the cover with both hands. Slide it back about an inch and then gently pull it outward to detach it

.

Removing the Front Panel

1. See "Removing the Housing Cover" on page 86

2. Release the latches as shown here and then detach the front bezel from the front panel gently in the way as shown here.
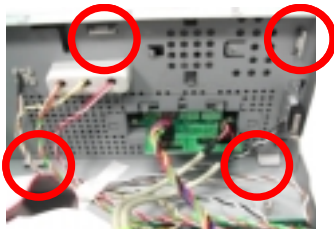
Removing the Empty Cover

1. See "Removing the Housing Cover" on page 86

2. See "Removing the Front Panel" on page 86

3. Release the latches as shown here and then detach the empty cover from the front panel

.

Removing a Dummy Link Bar

4. See "Removing the Housing Cover" on page 86

5. To remove a link bar, remove the one screw that secures the link bar to the housing. Slide the dummy link bar in the direction as shown here and then lift it up.

.
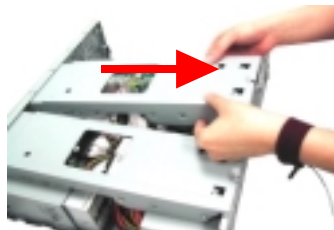
Removing a Link Bar

1. See "Removing the Housing Cover" on page 86

2. To remove a link bar, remove the screw that secures it to the housing. Slide the dummy link bar in the direction as shown here and then lift it up.
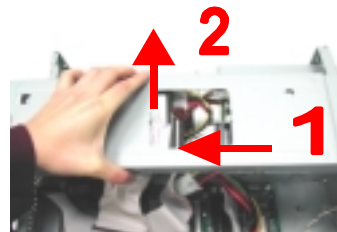
NOTE: Before detaching the link bar from the housing, make sure that the cables connected to HDD and FDD are detached.

Removing the AGP VGA Card

1. See "Removing the Housing Cover" on page 86
2. Remove the screw on the bracket of the AGP card. Set the screw aside, you will need it when inserting the AGP card.
3. Gently pull out the AGP card to remove it from the AGP slot

.

NOTE: There is no AGP slot for Veriton 5500.

NOTE: When you turn on the system, BIOS automatically detects and assigns resources to the PCI or AGP devices.

Removing the Modem Card

1. See "Removing the Housing Cover" on page 86
2. Remove the one screw as shown below and then remove the modem card from the PCI slot

.

NOTE: When you turn on the system, BIOS automatically detects and assigns resources to the PCI orAGP.

Removing the USB/ Audio Board Module

1. See "Removing the Housing Cover" on page 86
2. See "Removing the Modem Card" on page 88
3. Disconnect the USB cable and the memory stick cable from the main board

.

4. Remove the two screws as shown here and then detach the USB/ Audio board

.
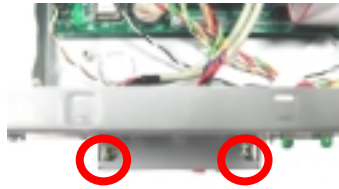
5. Disconnect the USB cable and memory stick cable from the USB/ Audio board consecutively.
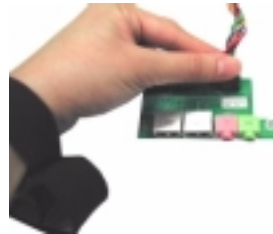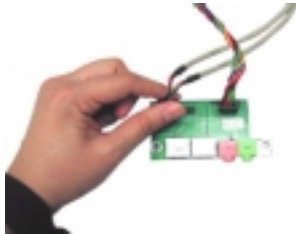
Removing a DIMM

1. See "Removing the Housing Cover" on page 86

2. See "Removing a Dummy Link Bar" on page 87

3. Press the levers on both sides of the DIMM socket outward to release the DIMM, and then gently pull the DIMM out to remove it.
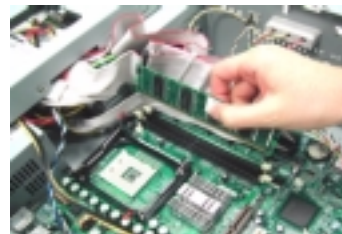
4. Put the levers back to the original position.

Removing the CPU Fan Sink

1. See "Removing the Housing Cover" on page 86

2. See "Removing a Dummy Link Bar" on page 87

3. Detach the fan/heatsink cable connector and release the two CPU fan sink levers from the CPU fan sink socket carefully, and then lift the fan/heatsink from the processor.
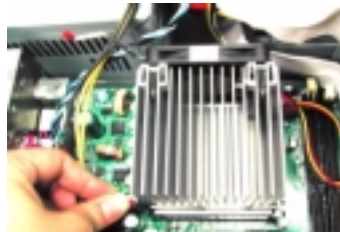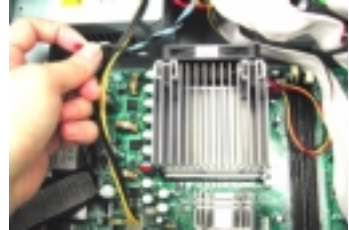
4. Press down the levers back to their original position
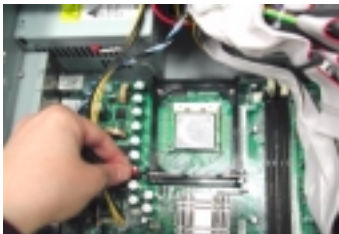
.

WARNING:The heatsink becomes very hot when the system is On. Never touch the heatsink with any metal or with your hands.
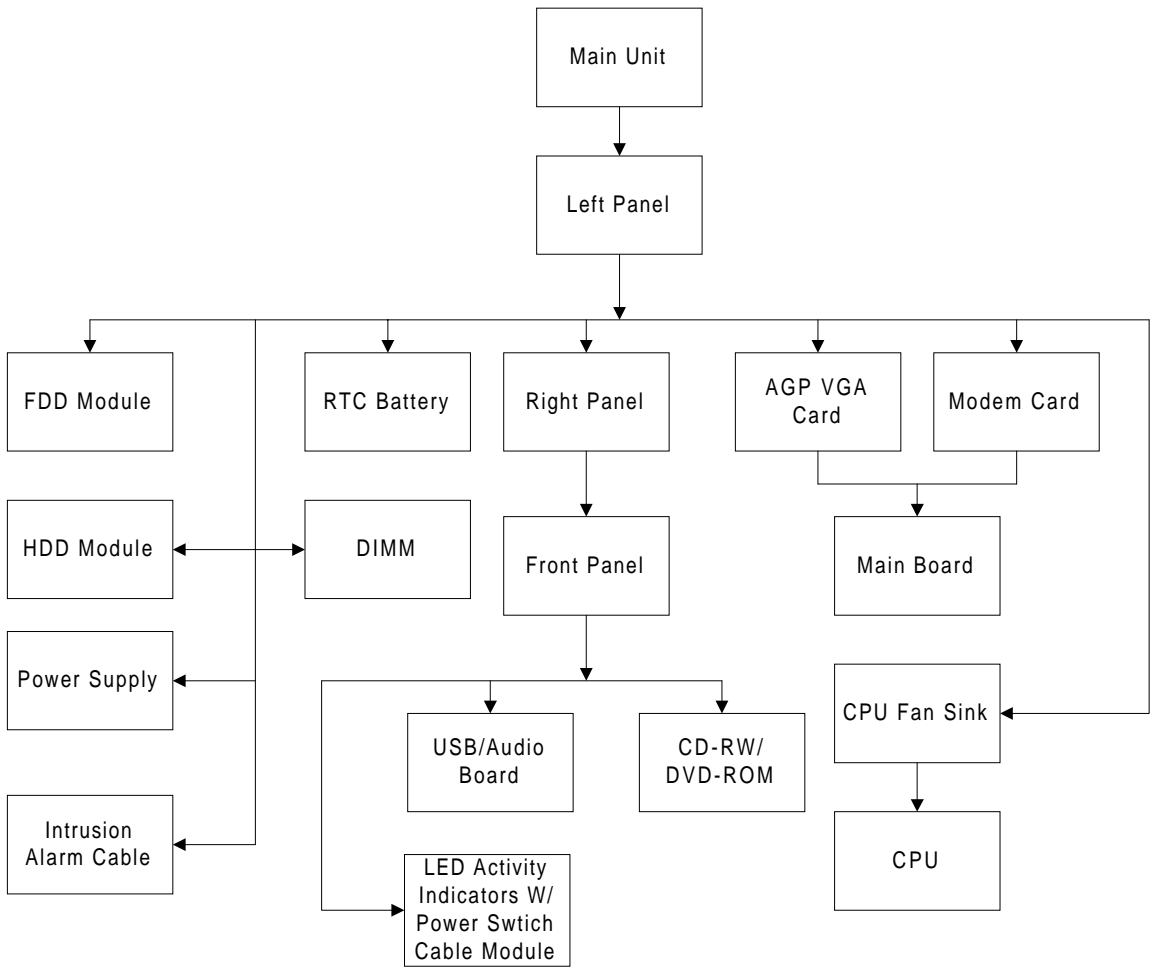
Removing and Installing the Processor

1. See "Removing the Housing Cover" on page 86

2. See "Removing a Dummy Link Bar" on page 87

3. See "Removing the CPU Fan Sink" on page 90

4. Pull the socket lever up to release the processor pins from the socket holes an pull out the processor from the socket..

5. Before putting back the processor back to its correct position, please note that the side with the triangle mark on the processor should align with the one on the socket. After putting the processor back to the socket, put the socket lever back to its original position to scure the processor.

.
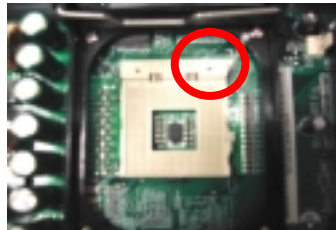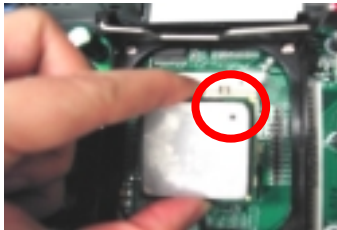
Removing and Installing the RTC Battery

1. See "Removing the Housing Cover" on page 86

2. Press the latch to release the RTC battery, lift up the RTC battery. To install the RTC battery, put it back and press it into the correct position to secure it well

..

Removing the Hard Diskette Drive and Floppy Diskette Drive

1. See "Removing the Housing Cover" on page 86

2. See "Removing a Dummy Link Bar" on page 87

3. See "Removing a Link Bar" on page 87

4. Turn the link bar over, and then detach the hard disk drive power connector and hard disk drive IDE cable from the hard disk drive

.
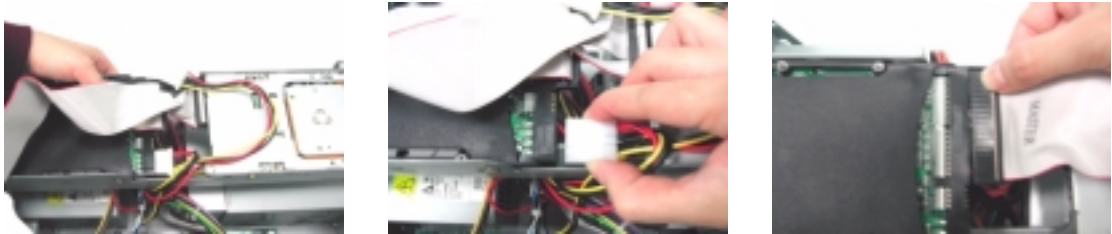
5. Detach the floppy disk drive power connector and floppy disk drive cable from the floppy disk drive.
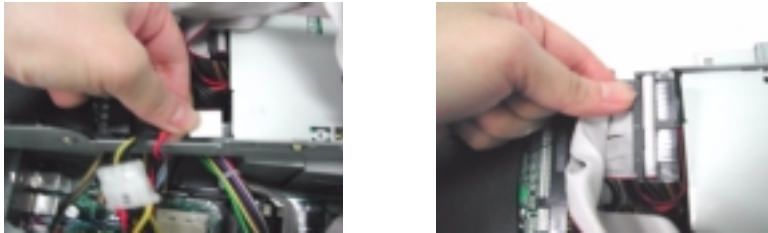
6. Detach the floppy disk drive cable and hard disk drive IDE cable from the main board.

7. Remove the four screws as shown here and then detach the hard disk drive module from the link bar.

.

8. Remove the four screws as shown here and then detach the floppy disk drive module from the link bar.
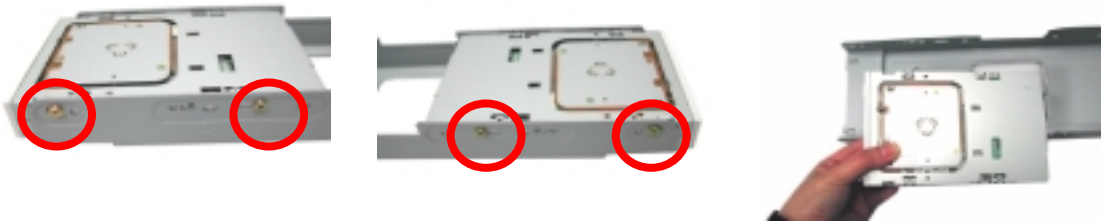
Removing the CD-RW & DVD-ROM Drive

1. See "Removing the Housing Cover" on page 86.
2. See "Removing the Front Panel" on page 86
3. See "Removing a Dummy Link Bar" on page 87
4. See "Removing a Link Bar" on page 87
5. See "Removing the Hard Diskette Drive and Floppy Diskette Drive" on page 92
6. Disconnect the optical drive IDE cable from the main board. Remove the four screws that hold the CD-RW drive to the bracket frame.

7. Disconnect the CD-RW power cable, audio cable , and CD-RW IDE cable from the CD-RW drive, and then pull the CD-RW drive out carefully.

8. Remove the two screws that hold the DVD-RW driver to the bracket frame.
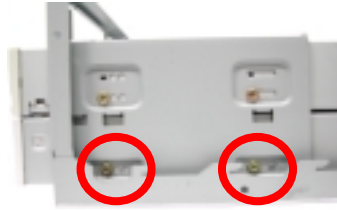
9. Disconnect the DVD-ROM power cable, DVD-ROM IDE cable, and audio cable from the DVD-ROM drive, and pull out the DVD-ROM drive.
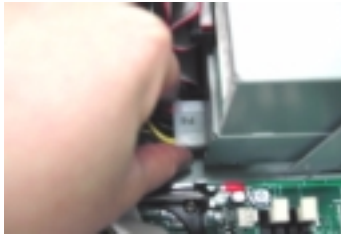
10. Detach the CD-ROM module and DVD-ROM module from the housing.

.

Removing the Power Supply

1. See "Removing the Housing Cover" on page 86
2. See "Removing a Dummy Link Bar" on page 87
3. See "Removing a Link Bar" on page 87
4. Disconnect the FDD power connector from the FDD drive and the HDD power connector from the HDD..
5. Disconnect the CD-RW power connector from CD-RW drive and DVD-ROM power connector from DVD-ROM drive.
6. Disconnect the main power connector and 12 Volt. power connector from the main board. Remove the four screws that hold the power supply to the housing and detach the power supply from the housing.
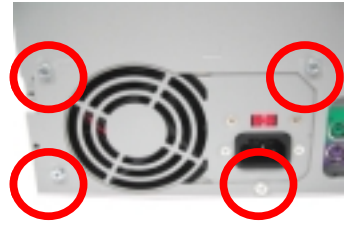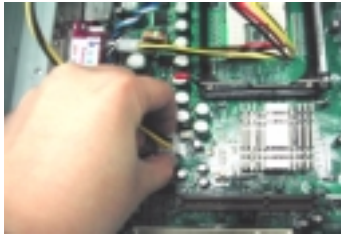
Removing the Intrusion Alarm Cable Module

1. See "Removing the Housing Cover" on page 86
2. Disconnect the cable as shown here, remove the one screw here, and then detach the intrusion alarm cable module from the housing.
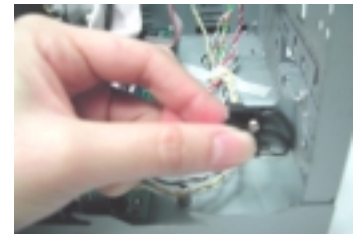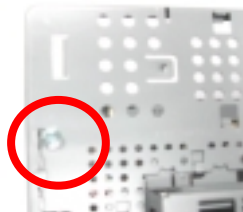
Removing the LED Activity Indicators Module

1. See "Removing the Housing Cover" on page 86
2. Press the LED activity indicators module to release the latches in the direction as shown here, and then detach the module from the housing.
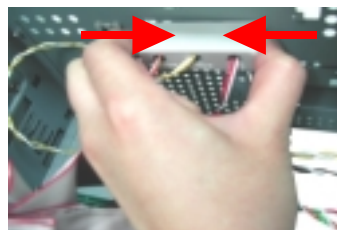
3. Disconnect the power LED, hard disk drive activity LED and network activity cables from the main board.

Removing Power Switch Cable

1. See "Removing the Housing Cover" on page 86

2. See "Removing the Front Panel" on page 86

3. Remove the power switch cable from the main board and release the latches by using a flat screwdriver.
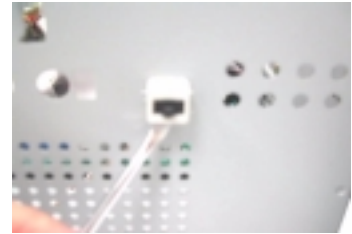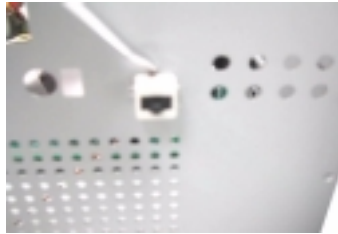
4. Press the power switch cable and then detach it from the housing

.

Removing the System Main Board

1. See "Removing the Housing Cover" on page 86
2. See "Removing a Dummy Link Bar" on page 87
3. See "Removing the AGP VGA Card" on page 88
4. See "Removing the Modem Card" on page 88
5. Before you remove the system main board, make sure that all cables connected to the main board are removed.
6. Remove the eight screws as shown here and then detach the main board from the housing
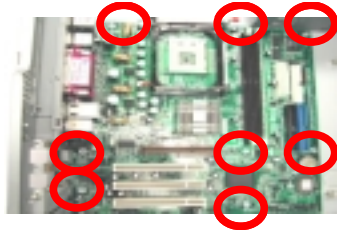
.

Removing the I/O Port Bracket

1. See "Removing the Housing Cover" on page 86
2. See "Removing a Dummy Link Bar" on page 87
3. See "Removing the AGP VGA Card" on page 88
4. See "Removing the Modem Card" on page 88
5. See "Removing the System Main Board" on page 97
6. Slide the bracket and then lift it up in the direction as shown.
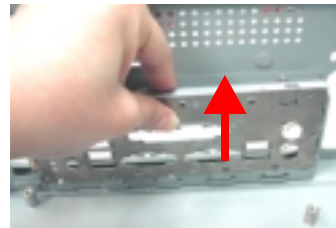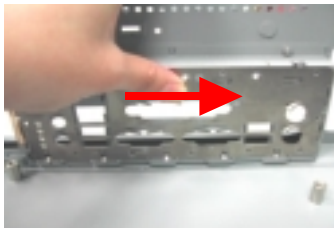
Veriton 7500/ 7500G Disassembly Procedure Flowchart

The flowchart on the succeeding page gives you a graphical representation on the entire disassembly sequence and instructs you on the components that need to be removed during servicing.

```
                          ┌──────────────┐
                          │  Main Unit   │
                          └──────┬───────┘
                                 │
                          ┌──────▼───────┐
                          │  Left Panel  │
                          └──────┬───────┘
```

FDD Module		RTC Battery	Right Panel	AGP VGA Card	Modem Card
HDD Module		DIMM	Front Panel	Main Board	
Power Supply					
Intrusion Alarm Cable		USB/Audio Board	CD-RW/ DVD-ROM	CPU Fan Sink	
		LED Activity Indicators W/ Power Swtich Cable Module		CPU	

NOTE: There is no AGP VGA Slot for Veriton 7500.

Disassembling the Veriton 7500/ 7500G

Opening the Housing

This section tells you how to open the housing cover when you need to install additional components inside the system unit.

CAUTION: Before you proceed, make sure that you have turned off the system and all peripherals connected to it.

Removing the Housing

1. Turn off the system power and unplug all cables.

2. Place the system unit on a flat, steady surface.

3. Remove the four screws of the right panel and left panel using a screwdriver. Set the screws aside, you will need them when replacing the panel of the unit.

4. Slide the right panel out and then gently pull it outward to detach it from the housing. Do the same thing to the left panel.

.

Removing the Front Panel

1. See "Removing the Housing" on page 99

2. Release the 6 latches as shown below that holds the front panel and then remove it from the housing

.

Removing the Modem Card

1. See "Removing the Housing" on page 99. (Remove the left panel only)

2. Remove the screw on the bracket of the modem card. Set the screw aside, you will need it when reinserting the modem card

.

Removing the AGP VGA Card

1. See "Removing the Housing" on page 99. (Remove the left panel only)

2. Remove the screw on the bracket of the AGP card. Set the screw aside, you will need it when reinserting the AGP card.

3. Gently pull out the AGP card to remove it from the AGP slot.

.
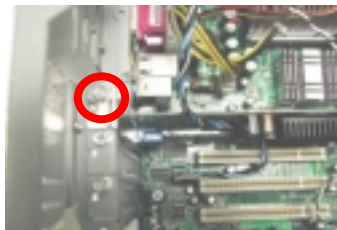
4. Gently pull out the modem card to remove it from the PCI slot.

NOTE: There is no AGP VGA slot for Veriton 7500.

NOTE: When you turn on the system, BIOS automatically detects and assigns resources to the PCI or AGP devices.

Removing the USB/ Audio Board

1. See "Removing the Housing" on page 99
2. See "Removing the Front Panel" on page 99
3. See "Removing the Modem Card" on page 100
4. Disconnect the memory stick cable and USB cable from the main board
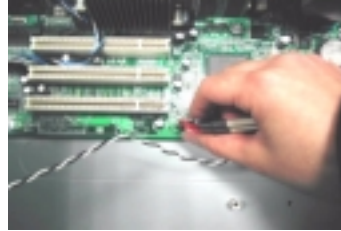
5. Disconnect the memory stick cable and the USB cable from the audio board.
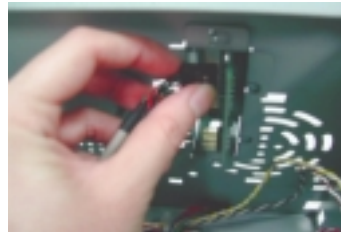
6. Remove the two screws that hold the audio board, then remove it from the housing.

Removing the DVD-ROM and CD-RW Drive

1. See "Removing the Housing" on page 99.
2. See "Removing the Front Panel" on page 99
3. Disconnect the optical drive IDE cable and audio cable from the main board..

4. Remove the four screws holding the CD-RW drive to the housing

.
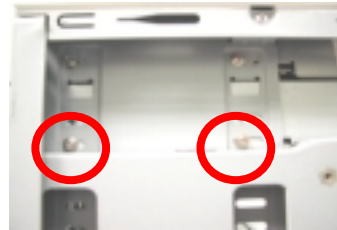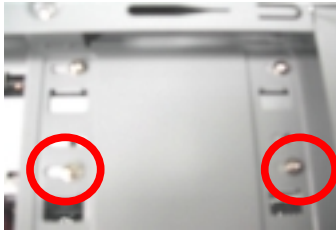
5. Disconnect the CD-RW power cable, CD-RW IDE cable, and audio cable from the CD-RW, then remove the CD-ROM drive from the housing.

6. Remove the four screws holding DVD-ROM to the housing

.
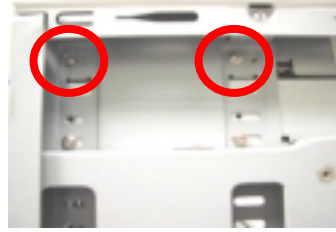
7. Disconnect the DVD-ROM power cable, DVD-ROM IDE cable, and audio cable from the DVD-ROM, then remove the DVD-ROM drive from the housing

.

Removing the Floppy Disk Drive

1. See "Removing the Housing" on page 99. (Remove the left panel only)

2. Disconnect the floppy disk drive cable from the main board and then remove the four screws holding the diskette drive.
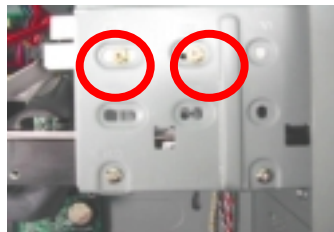
3. Disconnect the floppy disk drive cable and the floppy disk drive power connector, then remove the diskette drive from the housing
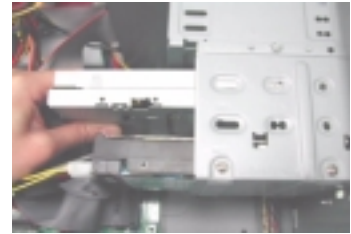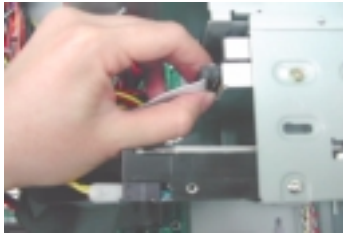
.

Removing the Hard Disk Drive

1. See "Removing the Housing" on page 99. (Remove the left panel only)

2. Disconnect the hard disk drive IDE cable from the main board and then remove the four screws that hold the hard disk drive to the disk frame. Set the screws aside.

.
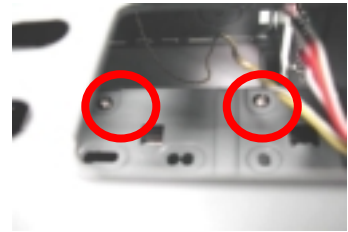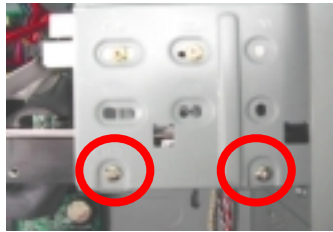
3. Detach the hard disk drive power connector and hard disk drive IDE cable from the hard disk drive, then detach the disk drive from the drive frame

.

Removing the Intrusion Alarm Cable Module

1. See "Removing the Housing" on page 99. (Remove the left panel only)

2. Disconnect the cable as shown here, remove the one screw here, and then detach the intrusion alarm cable module from the housing.
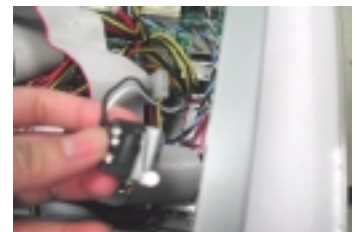
Removing a DIMM

1. See "Removing the Housing" on page 99. (Remove the left panel only)

2. Press the levers on both sides of the DIMM socket outward to release the DIMM, and then gently pull the DIMM out to remove it

.
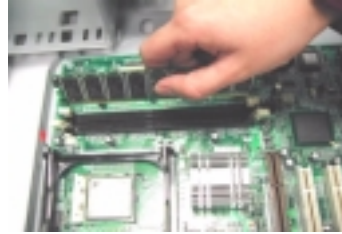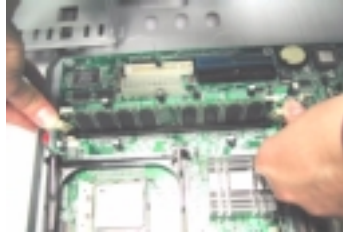
Removing the CPU Fan Sink

1. See "Removing the Housing" on page 99. (Remove the left panel only)

2. Detach the fan/heatsink cable connector and release the two CPU fan sink levers from the CPU fan sink socket carefully, and then lift the fan/heatsink from the processor

.
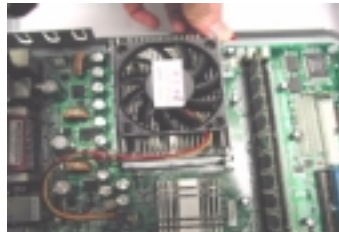
3. Press down the levers back to their original position.

WARNING:The heatsink becomes very hot when the system is On. Never touch the heatsink with any metal or with your hands.

Removing and Installing the Processor

1. See "Removing the Housing" on page 99. (Remove the left panel only)

2. See "Removing the CPU Fan Sink" on page 105.

3. Pull the socket lever up to release the processor pins from the socket holes an pull out the processor from the socket..

4. Before putting back the processor back to its correct position, please note that the side with the triangle mark on the processor should align with the one on the socket. After putting the processor back to the socket, put the socket lever back to its original position to scure the processor.

.

Removing and Installing the RTC Battery

1. See "Removing the Housing" on page 99. (Remove the left panel only)

2. Put the housing to lying position with the open area facing upward.

3. Press the latch to release the RTC battery, lift up the RTC battery. To install the RTC battery, put it back and press it into the correct position to secure it well.

.

Removing the Power Supply

1. See "Removing the Housing" on page 99. (Remove the left panel only)

2. Disconnect the FDD power connector from the FDD drive and the HDD power connector from the HDD.

3. Disconnect the CD-RW power connector from the CD-RW drive and DVD-ROM power connector from the DVD-ROM drive.

4. Disconnect the main power connector and 12 Volt. power connector from the main board. Remove the four screws that hold the power supply to the housing and detach the power supply from the housing

..

Removing the LED Activity Indicators With Power Switch Cable Module

1. See "Removing the Housing" on page 99

2. See "Removing the Front Panel" on page 99

3. Release the latches as shown here and then press the LED activity indicators with power switch cable module and then detach the whole module from the housing .
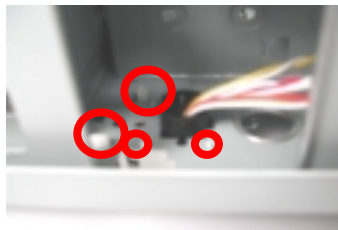
4. Disconnect the power LED, hard disk drive activity LED , network activity and power swtich cables from the main board.

Removing the Main Board

1. See "Removing the Housing" on page 99. (Remove the left panel only)
2. Put the housing to lying position with the open area facing upward.
3. See "Removing the AGP VGA Card" on page 100
4. See "Removing the Modem Card" on page 100
5. Before you remove the system main board, make sure that all cables connected to the main board are removed.
6. Remove the eight screws holding the main board and then remove the main board from the housing.
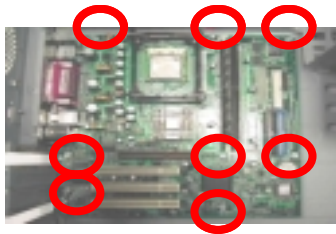
Removing the I/O Port Bracket

1. See "Removing the Housing" on page 99. (Remove the left panel only)
2. Put the housing to lying position with the open area facing upward.
3. See "Removing the AGP VGA Card" on page 100
4. See "Removing the Modem Card" on page 100
5. See "Removing the Main Board" on page 108
6. Slide the bracket and then lift it up in the direction as shown

.

Troubleshooting

This chapter provides troubleshooting information for the Veriton 3500/5500/7500, and the Veriton 3500G/5500G/7500G

❏   Power-On Self-Test (POST)

❏   Index of Error Message

❏   Index of Error Symptoms

❏   Undetermined Problems

Power-On Self-Test (POST)

Each time you turn on the system, the Power-on Self Test (POST) is initiated. Several items are tested during POST, but is for the most part transparent to the user.

The Power-On SelfTest (POST) is a BIOS procedure that boots the system, initializes and diagnoses the system components, and controls the operation of the power-on password option. If POST discovers errors in system operations at power-on, it displays error messages on screen, generates a check point code at port 80h or even halts the system if the error is fatal.

The main components on the main board that must be diagnosed and/or initialized by POST to ensure system functionality are as follows:

- ❏ Microprocessor with built-in numeric co-processor and cache memory subsystem
- ❏ Direct Memory Access (DMA) controller (8237 module)
- ❏ Interrupt system (8259 module)
- ❏ Three programmable timers (system timer and 8254 module)
- ❏ ROM subsystem
- ❏ RAM subsystem
- ❏ CMOS RAM subsystem and real time clock/calendar with battery backup
- ❏ Onboard parallel interface controller
- ❏ Embedded hard disk interface and one diskette drive interface
- ❏ Keyboard and auxiliary device controllers
- ❏ 1.44M floppy controller
- ❏ I/O ports
    - ❏ One parallel port
    - ❏ One PS/2-compatible mouse port
    - ❏ OnePS/2-compatible keyboard port

NOTE: When Post executes a task, it uses a series of preset numbers called check points to be latched at

port 80h, indicating the stages it is currently running. This latch can be read and shown on a debug board.

The following table describes the BIOS common tasks carried out by POST. Each task is denoted by an unique check point number. For other unique check point numbers that are not listed in the table, refer to the corresponding product service guide.

Post Checkpoints List: The list may vary accordingly depending on your BIOS

.

Checkpoin	Description
CFh	Test CMOS R/W functionality
C0h	Early chipset initialization: -Disable shadow RAM -Disable L2 cache (socket 7 or below) -Program basic chipset registers
C1h	Detect memory -Auto-detection of DRAM size, type and ECC. -Auto-detection of L2 cache (socket 7 or below)
C3h	Expand compressed BIOS code to DRAM
C5h	Call chipset hook to copy BIOS back to E000 & F000 shadow RAM.
01h	Expand the Xgroup codes locating in physical address 1000:0
02h	Reserved
03h	Initial Superio_Early _Init switch

Checkpoin	Description
04h	Reserved
05h	1. Blank out screen 2. Clear CMOS error flag
06h	Reserved
07h	1. Clear 8042 interfac 2. Initialize 8042 self-test
08h	1. Test special keyboard controller for Winbond 977 series Super I/O chips. 2. Enable keyboard interface.
09h	Reserved
0Ah	1. Disable PS/2 mouse interface (optional) 2. Auto detect ports for keyboard & mouse followed by a port & interface swap (optional). 3. Reset keyboard for Winbond 977 series Super I/Q chips.
0Bh	Reserved
0Ch	Reserved
0Dh	Reserved
0Eh	Test F000h segment shadow to see whether it is R/W-able or not. If test fails, keep beeping the speaker.
0Fh	Reserved
10h	Auto detect flash type to load appropriate flash R/W codes into the run time area in F000 for ESCD & DMI support.
11h	Reserved
12h	Use walking 1's algorithm to check out interface in CMOS circuitry. Also set real-time clock power status, and then check for override.
13h	Reserved
14h	Program chipset default values into chipset. Chipset default values are MODBINable by OEM customers.
15h	Reserved
16h	Initial Early_Init_Onboard_Generator switch.
17h	Reserved
18h	Detect CPU information including brand, SMI type (Cyrix or Intel) and CPU level (586 or 686)
19h	Reserved
1Ah	Reserved
1Bh	Initial interrupts vector table. If no special specified, all H/W interrupts are directed to SPURIOUS_INT_HDLR & S/W interrupts to SPURIOUS_soft_HDLR.
1Ch	Reserved
1Dh	Initial Early_PM_INIT switch.
1Eh	Reserved
1Fh	Load keyboard matrix (notebook platform)
20h	Reserved
21h	HPM initialization (notebook platform
22h	Reserved

Checkpoin	Description

23h	1. Check validity of RTC value:
	   e.g. a value of 5Ah is an invalid value for RTC minute.
	2. Load CMOS settings into BIOS stack. If CMOS checksum fails, use default value instead.
	3. Prepare BIOS resource map for PCI & PnP use. If ESCD is valid, take into consideration of the ESCD's legacy information.
	4. Onboard clock generator initialization. Disable respective clock resource to empty PCI & DIMM slots.
	5. Early PCI initialization
	    -Enumerate PCI bus number
	    -Assign memory & I/O resourc
	    -Search for a valid VGA device and VGA BIOS, and put it into C000:0

24h	Reserved
25h	Reserved
26h	Reserved
27h	Initialize INT 09 buffer
28h	Reserved
29h	1. Program CPU internal MTRR (P6 & PII) for 0-640K memory address. 2. Initialize the APIC for Pentium class CPU. 3. Program early chipset according to CMOS setup. Example: onboard IDE controller. 4. Measure CPU speed. 5. Invoke video BIOS.
2Ah	Reserved
2Bh	Reserved
2Ch	Reserved
2Dh	1. Initialize multi-language 2. Put information on screen display, including Award title, CPU type, CPU speed...
2Eh	Reserved
2Fh	Reserved
30h	Reserved
31h	Reserved
32h	Reserved
33h	Reset keyboard except Winbond 977 series Super I/O chips.
34h	Reserved
35h	Reserved
36h	Reserved
37h	Reserved
38h	Reserved
39h	Reserved
3Ah	Reserved
3Bh	Reserved
3Ch	Test 8254.
3Dh	Reserved
3Eh	Test 8259 interrupt mask bits for channel 1
3Fh	Reserved
40h	Test 8259 interrupt mask bits for channel 2.
41h	Reserved
42h	Reserved

Checkpoin	Description
43h	Test 8259 functionality
44h	Reserved
45h	Reserved
46h	Reserved
47h	Initialize EISA slot
48h	Reserved
49h	1. Calculate total memory by testing the last double word of each 64K page. 2. Program writes allocation for AMD K5 CPU
4Ah	Reserved
4Bh	Reserved
4Ch	Reserved
4Dh	Reserved
4Eh	1. Program MTRR of M1 CPU. 2. Initialize L2 cache for P6 class CPU & program CPU with proper cacheable range. 3. Initialize the APIC for P6 class CPU. 4. On MP platform, adjust the cacheable range to smaller one in case the cacheable ranges between each CPU are not identical.
4Fh	Reserved
50h	Initialize USB
51h	Reserved
52h	Test all memory (clear all extended memory to 0)
53h	Reserved
54h	Reserved
55h	Display number of processors (multi-processor platform)
56h	Reserved
57h	1. Display PnP logo 2. Early ISA PnP initialization -Assign CSN to every ISA PnP device.
58h	Reserved
59h	Initialize the combined Trend Anti-Virus code.
5Ah	Reserved
5Bh	(Optional Feature) Show message for entering AWDFLASH.EXE from FDD (optional)
5Ch	Reserved
5Dh	1. Initialize Init_Onboard_Super_IO switch. 2. Initialize Init_Onboard_AUDIO switch.
5Eh	Reserved
5Fh	Reserved
60h	Okay to enter Setup utility; i.e. not until this POST stage can users enter the CMOS setup utility
61h	Reserved
62h	Reserved
63h	Reserved
64h	Reserved
65h	Initialize PS/2 Mouse
66h	Reserved

Checkpoin	Description
67h	Prepare memory size information for function call: INT 15h ax=E820h
68h	Reserved
69h	Turn on L2 cach
6Ah	Reserved
6Bh	Program chipset registers according to items described in Setup& Auto-configuration table.
6Ch	Reserved
6Dh	1. Assign resources to all ISA PnP devices. 2. Auto assign ports to onboard COM ports if the corresponding item in Setup is set to "AUTO"
6Eh	Reserved
6Fh	1. Initialize floppy controller 2. Set up floppy related fields in 40: hardware.
70h	Reserved
71h	Reserved
72h	Reserved

73h	(Optional Feature)
	 Enter AWDFLASH.EXE if:
	     -AWDFLASH is found in floppy driv
	      -ALT+F2 is pressed

74h	Reserved
75h	Detect & install all IDE devices: HDD, LS120, ZIP,CDROM.....
76h	Reserved
77h	Detect serial ports & parallel ports
78h	Reserved
79h	Reserved
7Ah	Detect & install co-processor
7Bh	Reserved
7Ch	Reserved
7Dh	Reserved
7Eh	Reserved

7Fh	1. Switch back to text mode if full screen logo is supported.
	   -If errors occur, report errors & wait for keys
	   -If no errors occur or F1 key is pressed to continue:
	   Clear EPA or customization logo.

80h	Reserved
81h	Reserved
82h	1. Call chipset power management hook. 2. Recover the text fond used by EPA logo (not for full screen logo 3. If password is set, ask for password.
83h	Save all data in stack back to CMOS.
84h	Initialize ISA PnP boot devices.

.

Checkpoin	Description
85h	1. USB final Initialization 2. NET PC: Build SYSID structure 3. Switch screen back to text mode. 4. Set up ACPI table at top of memory. 5. Invoke ISA adapter ROMs. 6. Assign IRQs to PCI devices 7. Initialize APM 8. Clear noise of IRQs/
86h	Reserved
87h	Reserved
88h	Reserved
89h	Reserved
90h	Reserved
91h	Reserved
92h	Reserved
93h	Read HDD boot sector information for Trend Anti-Virus code
94h	1. Enable L2 cache 2. Program boot up speed 3. Chipset final initialization 4. Power management final initialization 5. Clear screen & display summary tabl 6. Program K6 write allocation 7 Program P6 class write combining .
95h	1. Program daylight saving 2. Update keyboard LED & typematic rate
96h	1. Build MP table 2. Build & update ESC 3. Set CMOS century to 20h or 19h 4. Load CMOS time into DOS timer tick 5. Build MSIRQ routing table
FFh	Boot attempt (INT 19h)

POST Error Messages List

If you cannot run the diagnostics program tests but did receive a POST error message, use "POST Error Messages List" to diagnose system problems. If you did not receive any error message, look for a description of your error symptoms in "Error Symptoms List" on page 119 .

NOTE: When you have deemed it necessary to replace an FRU, and have done so, you must run a total system check to ensure that no other activity has been affected by the change. This system check can be done through the diagnostics program.

NOTE: Check all power supply voltages, switch, and jumper settings before you replace the main board. Also check the power supply voltages if you have a "system no-power" condition.

If you are unable to correct the problem by using the "BIOS Messages List" table and "Error Symptoms List" table, go to "Undetermined Problems" on page 123.

To diagnose a problem, first find the BIOS error messages in the left column. If directed to a check procedure, replace the FRU indicated in the check procedure. If no check procedure is indicated, the first Action/FRU listed in right column is the most likely cause.

BIOS Messages	Action/FRU
BIOS ROM checksum error - System halted	The checksum of the BIOS code in the BIOS chip is incorrect, indicating the BIOS code may have become corrupt. Contact your system dealer to replace the BIOS.
CMOS Battery Failed	The CMOS battery is no longer functional. Contact your system dealer for a replacement the BIOS.
CMOS Checksum Error- defaults loaded	Checksum of CMOS is incorrect, so the system loads the default equipment configuration. A checksum error may indicate that CMOS has become corrupt. A weak battery may have caused this error. Check the battery and replace if necessary.
CPU at nnnn	Displays the running speed of CPU.
Display switch is set incorrectly	The display switch on the motherboard can be set to eithe monochrome or color. This message indicates the switch is set to a different setting than indicated in Setup. Determine which setting is correct, and then either turn off the syste and change the jumper, or enter Setup and change the Video selection.
Press ESC to skip memory test	The user may press Esc to skip the full memory test.
Floppy disk(s) fail	Cannot find or initialize the floppy drive controller or the drive. Make sure the controller is installed correctly, if no floppy drives are installed, be sure the Diskette Drive selection in Setup is set to NONE or AUTO.
HARD DISK initializing - Please wait a moment	Some hard drives require extra time to initialize.
HARD DISK INSTALL FAILURE	Cannot find or initialize the hard drive controller or the drive. Make sure the controller is installed correctly. If no hard drives are installed, be sure the Hard Drive Selection in Setup is set to NONE.
Hard disk(s) diagnosis fail	The system may run specific disk diagnostic routines. This message appears if one or more hard disks return an error when the diagnostics run.
Keyboard Error Or No Keyboard Present	Cannot initialize the keyboard. Make sure the keyboard is attached correctly and no keys are pressed during POST. To purposely configure the system without a keyboard, set the error halt condition in Setup to HALT ON ALL, BUT KEYBOARD. The BIOS then ignores the missing keyboard during POST.
Keyboard is locked out - Unlock the key	This message usually indicates that one or more keys hav been pressed during the keyboard tests. Be sure n objects are resting on the keyboard.

BIOS Messages	Action/FRU
Memory Test:	This message displays during a full memory test, counting down the memory areas being tested.
Memory test fail	If POST detects an error during memory testing, additional information appears giving specifics about the type and location of the memory error.
Override enabled - Defaults loaded	If the system cannot boot using the current CMOS configuration, the BIOS can override the current configuration with a set of BIOS defaults designed for the most stable, minimal-performance system operations.
Press TAB to show POST screen	System OEMs may replace the Phœnix Technologies Award BIOS POST display with their own proprietary display. Including this message in the OEM display permits the operator to switch between the OEM display and the default POST display.
Primary master hard disk fail	POST detects an error in the primary master IDE hard drive.
Primary slave hard disk fail	POST detects an error in the secondary master IDE hard drive.
Secondary master hard disk fail	POST detects an error in the primary slave IDE hard drive.
Secondary slave hard disk fail	POST detects an error in the secondary slave IDE hard drive.

Error Symptoms List

NOTE: To diagnose a problem, first find the error symptom in the left column. If directed to a check procedure, replace the FRU indicated in the check procedure. If no check procedure is indicated, the first Action/ FRU listed in right column is the most likely cause.

Error Symptom	Action/FRU
Processor / Processor Fan	
NOTE: Normally, the processor fan should be operative, and the processor clock setting should be exactly set to match its speed requirement before diagnosing any processor problems.	
Processor fan does not run but power supply fan runs.	1. Ensure the system is not in power saving mode. See "Power Management" in chapter 2. 2. With the system power on, measure the voltage of processor fa connector. Its reading should be +12Vdc. Its reading should be +12Vdc. If the reading shows normal, but the fan still does not work, then replace a good fan. 3. Main board.
Processor test failed.	1. Processor 2. Main board.
Main board and Memor	
NOTE: Ensure the memory modules are installed properly and the contact leads are clean before diagnosing any system problems.	
Memory test failed.	1. See "Memory" 2. Main board
Incorrect memory size shown or repeated during POST.	1. Insert the memory modules in the DIMM sockets properly, then reboot the system. 2. Memory module. 3. Main board.
System works but fails to enter power saving mode when th `Power Management Mode` is set to `Enabled`.	1. Enter BIOS Setup and load default settings. In Windows Systems, check settings in Power Management Property of Control Panel. 2. Reload software from Recovery CD.
Blinking cursor only; system does not work.	1. Diskette/IDE drive connection/cables 2. Diskette/IDE disk drives 3. See "Undetermined Problems". 4. Main board
Diskette Driv	
NOTE: Ensure the diskette drive is auto-setting in BIOS Setup and its read/write head is clean before diagnosing any diskette drive problems.(If only one drive is installed, please make sure the drive is connected to master connector or the drive is set to master.)	
Media and drive are mismatched.	1. Ensure the diskette drive is configured correctly in the Disk Drives of BIOS Setup. 2. Ensure the diskette drive is correctly formatted. 3. Diskette drive connection/cable 4. Diskette drive 5. Main board
Diskette drive does not work.	1. Ensure the diskette drive is not set to `None` in the Disk Drives of BIOS Setup. 2. Diskette drive power 3. Diskette drive connection/cable 4. Diskette drive 5. Main board
Diskette drive read/write error.	1. Diskette. 2. Diskette drive cable. 3. Diskette drive. 4. Main board.

Error Symptom	Action/FRU
Diskette drive LED comes on for more than 2 minutes when reading data.	1. Diskette 2. Diskette drive connection/cable 3. Diskette drive 4. Main board
Diskette drive LED fails to light, and the drive is unable to access for more than 2 minutes.	1. Diskette 2. Diskette drive power 3. Diskette drive connection/cable 4. Diskette drive 5. Main board
Diskette drive test failed.	1. Diskette 2. Diskette drive 3. Diskette drive cable 4. Main board
Hard Disk Drive	
NOTE: Ensure hard disk drive is configured correctly in BIOS Setup, cable/jumper are set correctly before diagnosing any hard disk drive problems. (If only one drive is installed, please make sure the drive is connected to master connector or the drive is set to master.)	
Hard disk drive test failed.	1. Enter BIOS Setup and Load default settings. 2. Hard disk drive cable. 3. Hard disk drive. 4. Main board.
Hard disk drive cannot format completely.	1. Enter BIOS Setup and Load default settings. 2. Hard disk drive cable. 3. Hard disk drive. 4. Main board.
Hard disk drive has write error.	1. Enter BIOS Setup and Load default settings. 2. Hard disk drive.
Hard disk drive LED fails to light, but system operates normally.	1. With the system power on, measure the voltage of hard disk LED connector. 2. Hard drive LED cable.
CD/DVD-ROM Drive	
NOTE: Ensure CD/DVD-ROM drive is configured correctly in BIOS Setup, cable/jumper are set correctly and its laser beam is clean before diagnosing any CD/DVD-ROM drive problems.	
CD/DVD-ROM drive LED doesn't come on but works normally.	1. CD/DVD-ROM drive
CD/DVD-ROM drive LED flashes for more than 30 seconds before LED shutting off. Software asks to reinstall disc. Software displays a reading CD/DVD error.	1. CD/DVD-ROM may have dirt or foreign material on it. Check with a known good disc. 2. CD/DVD-ROM is not inserted properly. 3. CD/DVD-ROM is damaged.
CD/DVD-ROM drive cannot load or eject when the system is turned on and its eject button is pressed and held.	1. Disconnect all cables from CD/DVD-ROM drive except power cable, then press eject button to try to unload the disk. 2. CD/DVD-ROM drive power. 3. CD/DVD-ROM drive
CD/DVD-ROM drive does not read and there are no messages are displayed.	1. CD may have dirt or foreign material on it. Check with a known good disc. 2. Ensure the CD/DVD-ROM driver is installed properly. 3. CD/DVD-ROM drive.
CD/DVD-ROM drive can play audio CD but no sound output.	1. Ensure the headphone jack of the CD/DVD-ROM has an output. 2. Turn up the sound volume. 3. Speaker power/connection/cable. 4. CD/DVD-ROM drive.
Real-Time Clock	
Real-time clock is inaccurate.	1. Ensure the information in the `Standard CMOS Feature` of BIOS Setup is set correctly. 2. RTC battery. 3. Main board

Error Symptom	Action/FRU
Audio	
Audio software program invokes but no sound comes from speakers.	1. Speaker power/connection/cable.
Modem	
Modem ring cannot wake up system from suspend mode.	1. For the External Modem, make sure Power on By Ring in BIOS Setup or Power Management is set to Enabled. For the PCI modem, make sure Wake up by PCI card is set to Enabled. 2. If PCI modem card is used, reinsert the modem card to PCI slot firmly or replace the modem card. 3. In Win 98, ensure the telephone application is configured correctly for your modem and set to receive messages and/or fax.
Data/fax modem software program invokes but cannot receive/send data/fax	1. Ensure the modem card is installed properly.
Fax/voice modem software program invokes but has no sound output. (Data files ar received normally; voice from modem cannot be produced, but system sound feature works normally.)	1. Ensure the modem voice-in cable from modem adapter card to main board
Video and Monitor	
Video memory test failed. Video adapter failed.	1. Remove all non-factory-installed cards. 2. Load default settings (if screen is readable). 3. Main board
Display problem: - Incorrect colors No high intensity Missing, broken, or incorrect characters Blank monitor (dark Blank monitor (bright Distorted image Unreadable monitor Other monitor problems	1. Monitor signal connection/cable. 2. Monitor 3. Video adapter card 4. Main board
Display changing colors.	1. Monitor signal connection/cable 2. Monitor 3. Main board
Display problem not listed above (including blank or illegible monitor).	1. "Monitor". 2. Load default settings (if screen is readable). 3. Main board

Error Symptom	Action/FRU
Parallel/Serial Ports	
Execute "Load BIOS Default Settings" in BIOS Setup to confirm ports presence before diagnosing any parallel/serial ports problems.	
Serial or parallel port loop-back test failed.	1. Make sure that the LPT# or COM# you test is the same as the setting in BIOS Setup. 2. Loop-back. 3. Main board.
Printing failed.	1. Ensure the printer driver is properly installed. Refer to the printer service manual. 2. Printer. 3. Printer cable. 4. Main board.
Printer problems.	1. Refer to the service manual for the printer.
Keyboard	
Some or all keys on keyboard do not work.	1. Keyboard
Power Supply	
Pressing power switch does not turn off system. (Only unplugging the power cord from electrical outlet can turn off the system.)	1. Ensure the `Soft-off by PWR-BTTN.` in BIOS Setup of `Power Management` is not set to Instant-off. 2. Power switch cable assembly
Pressing power switch does not turn on the system.	1. Ensure the power override switch (situated at the back of the machine, just above the connector for the power cable) is not set to OFF. 2. Power switch cable assembly.
Executing software shutdown from Windows98 Start menu does not turn off the system. (Only pressing power switch can turn off the system).	1. Load default settings. 2. Reload software from Recovery CD.
No system power, or power supply fan is not running.	1. Power Supply 2. Main board
Other Problems	
Any other problems.	1. Undetermined Problems

Undetermined Problems

If an error message is present, go to "POST Error Messages List" on page 117. If you did not receive any messages, if the symptom is listed in "or "Error Symptoms List" on page 119 . If you still cannot solve the problem, continue with this check:

1. Check the power supply voltages. If the voltages are correct continue with the following steps:

2. Power off the system unit.

3. Perform the following checks, one by one, until you have isolated the problem FRU.

4. Load default settings in setup.

5. Check all main board jumper positions and switch settings.

6. Check all adapter card jumper positions.

7. Check all device jumper positions.

8. Check all cables and connectors for proper installation.

9. If the jumpers, switches and voltage settings are correct, remove or disconnect the following, one at a time:

10. Non-Acer devices

   ❏ External devices

   ❏ Any adapter card (modem card, LAN card or video card, if installed)

   ❏ CD/DVD-ROM drive

   ❏ Diskette drive

   ❏ Hard disk drive

   ❏ DIMM

   ❏ Processor

   ❏ Main board

11. Power on the system unit.

12. Repeat steps 2 through 5 until you find the failing device or adapter.

Jumper and Connector Information

Jumpers and Connectors

Refer to the following figure for the location of the jumpers and connectors on the main board:

Main board (3500/ 5500/ 7500)(S88M/GL)
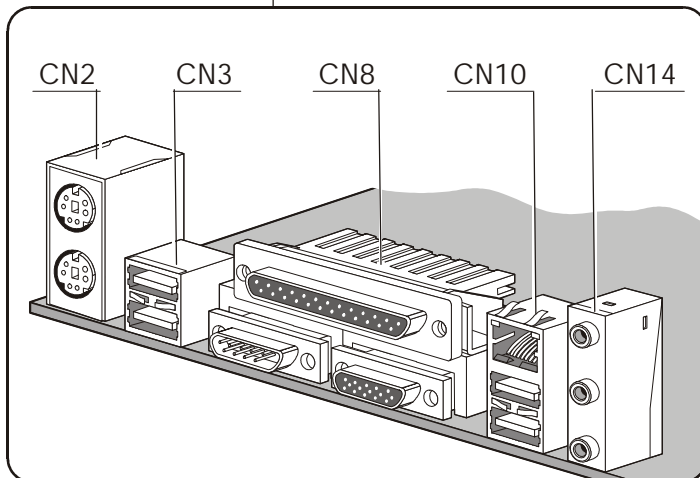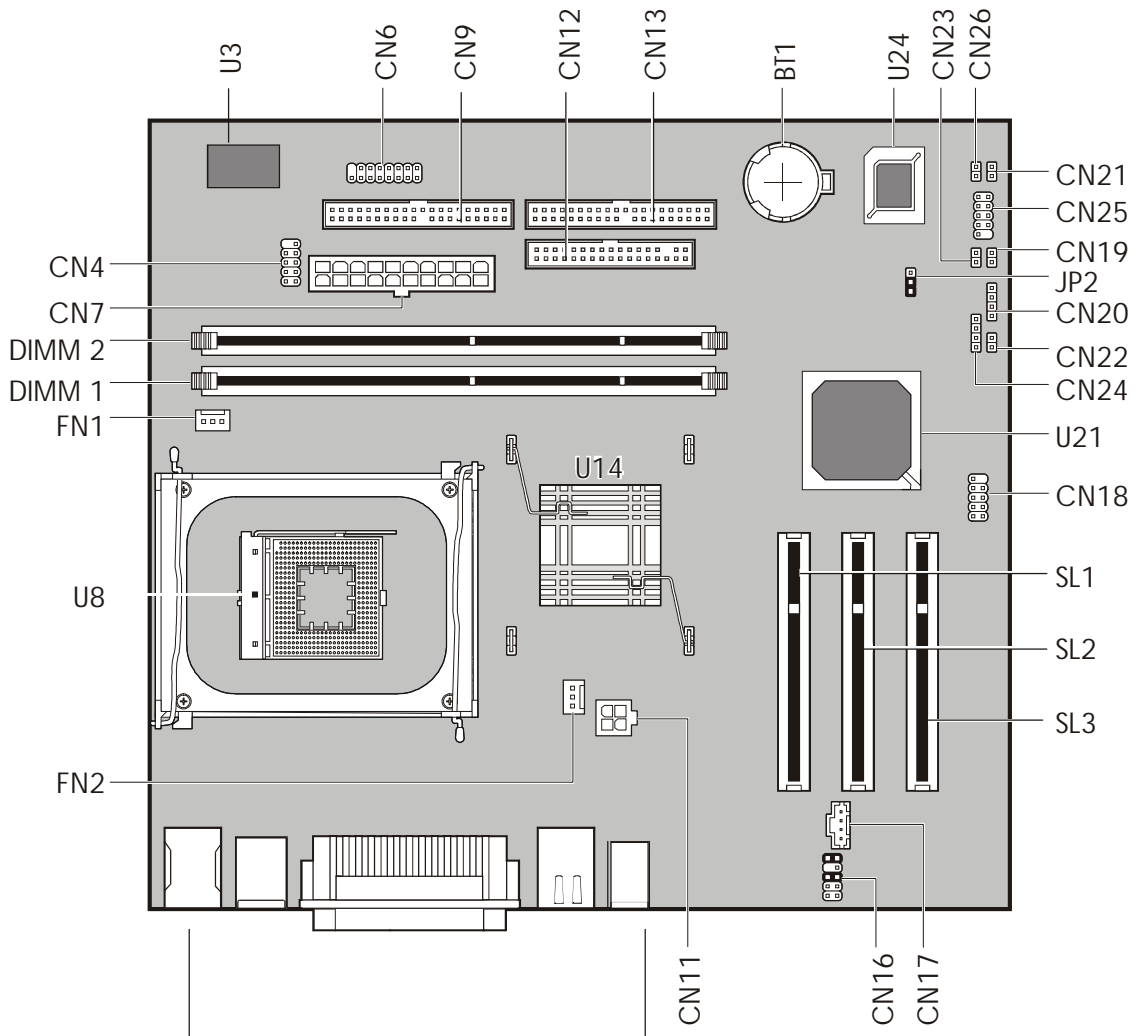
Main board (3500G/ 5500G/ 7500G)(S88M/G)
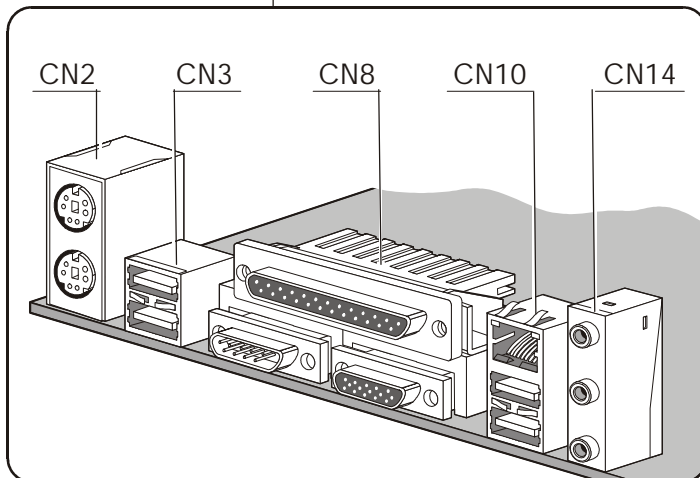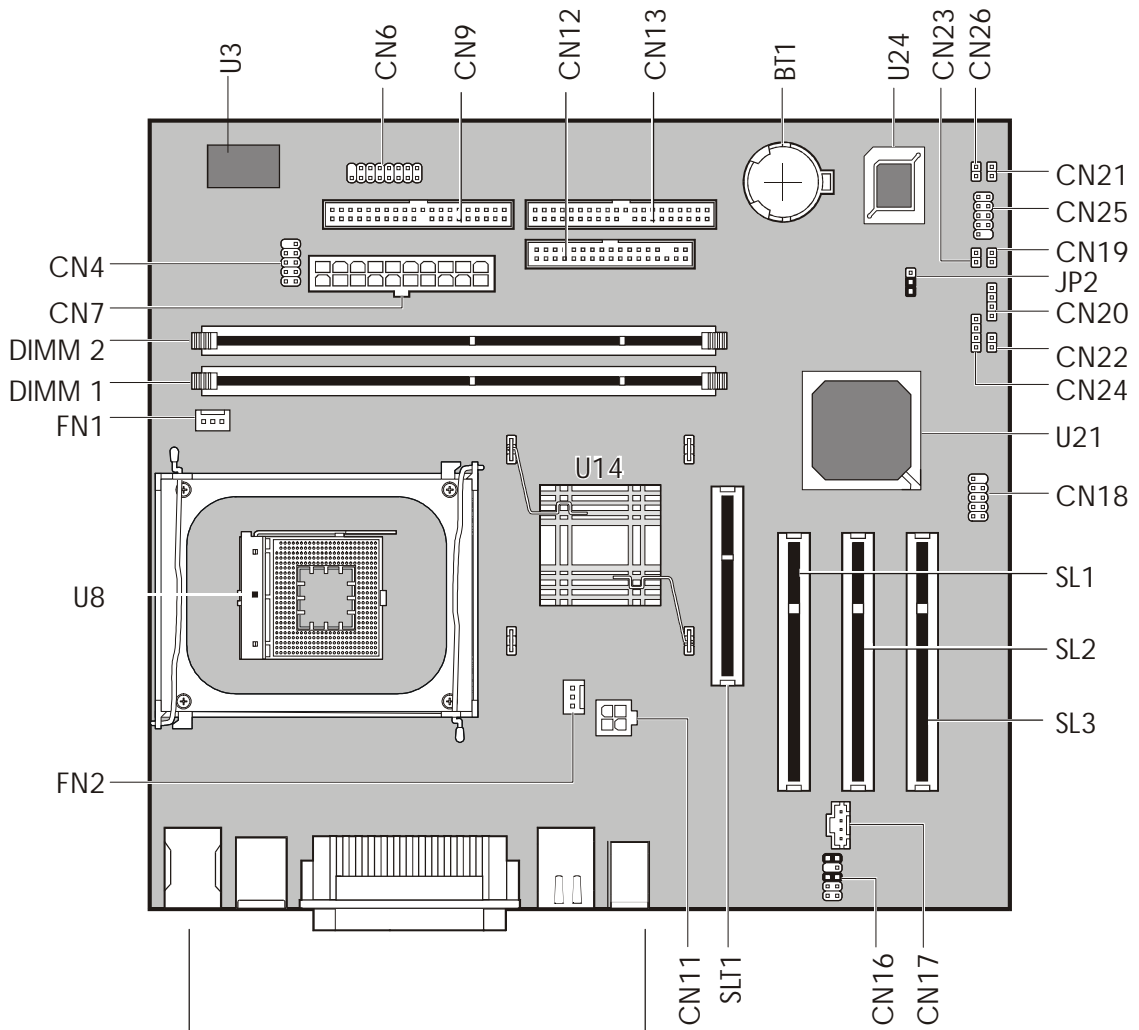
Connector Description

Label	Component	Label	Component
CN6	Game Port	SL2	PCI Slot 2
CN9	FDD Connector	SL3	PCI Slot 3
CN12	IDE 2 Connector	CN17	CD-in Connecto
CN13	IDE 1 Connector	CN16	Audio for Daughter Board
BT1	Battery	SLT1	AGP Slot
U24	FWH	CN11	Power Connector (12V)
CN23	Serial IRQ	CN14	Line-in (upper), Line-out(middle), Mic-in (lower)
CN26	Power LED	CN10	Network (upper) and USB (lower) Ports
CN21	Power Button	CN8	Parallel port (upper) and Serial Ports (lower)
CN25	Audio FPIO Connector	CN3	Serial Ports
CN19	LAN Activity LED	CN2	PS2 Keyboard
JP2	1-2: Normal 2-3: Clear CMOS	FN2	3-pin Fan SYS Connector
CN20	HDD LED Connector	U8	CPU Socket
CN22	Intrusion Connector	FN1	3-pin Fan CPU Connector
CN24	Suspend Power LED	DIMM1	Memory Slot 1
U21	Intel ICH4 Chipset	DIMM2	Memory Slot 2
CN18	Front USB Connector	CN7	Power Connector
U14	Intel 845G/GL*	CN4	COM
SL1	PCI Slot 1	U3	SMSC

NOTE: There is no AGP VGA slot for S88M/GL.

NOTE: *: Intel 845 GL (Veriton 3500/ 5500/ 7500); Intel 845G (Veriton 3500G/ 5500G/ 7500G)

Jumper Setting

Jumper	Function and settings
JP2	1-2 Normal* 2-3 Clear CMOS

NOTE: *: Default Settings.

FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of Veriton 3500/ 3500G, 5500/ 5500G, 7500/ 7500G. Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

IMPORTANT: Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. For whatever reasons a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the local FRU list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

IMPORTANT:Please note that Acer Corporation sells only the parts listed in the following table. Please be reminded that though some parts are disassembled in Chapter 3 for demonstration purpose, Acer Corporation does not provide these parts.

NOTE: To scrap or to return the defective parts, you should follow the local government ordinance or regulations on how best to dispose it, or follow the rules set by your regional Acer office on how to return it.

NOTE: The number indicates the location shown on exploded diagram or "NS" indicates "Not shown" on it.

Veriton 3500/ 3500G Exploded Diagram

MODEL NO.: XXXXXX
P/N: XXXXXXXXX
MFG DATE: XXXXXX
CLASS: XX
H VER.: X   PL VER.: X
MADE IN XXXXX

MCS-002

F BEZEL & EMP CVR
MCS-002
ABS(94HB)

PWR KNOB: MCS-D708
ABS(94HB)

NAME BEZEL: ACS-D501
ABS(94HB)

2P(2WIRES)   BROWN
WHITE

3P(3WIRES)
POWER, BI-COLOR
READY, GREEN LED
SUSPEND, ORANGE LED
ORANGE
WHITE
GREEN

H.34

TAPE

FOOT: ACS-D501
ABS(94HB)
RUBBER: MCS-002

RED
WHITE
4P(2WIRES)
HDD, GREEN LED

YELLOW
WHITE
2P(2WIRES)
TURBO, GREEN LED

WHITE
BLACK

Picture	No.	Part Name	Description
Floppy Disk Drive			
	3	FDD 1.44M MITSUMI/D353M3D	FDD 1.44MB 1"H MITSUMI/D353M3
Battery			

Picture	No.	Part Name	Description
	NS	RTC BATTERY LI 3V 200MAH	BATTERY LI 3V CR2032 200MAH
Cable			
	NS	IDE CABLE 40PIN 2C 300M	C.A.40P 2C 300MM HDD H34
	8	FDD CABLE 34/34PIN 280MM H34	C.A.34/34P FDD 280MM H34
	1-10	HDD LED CABLE 4PIN 500MM LX-45	W.A 4P/HDD LED 500MM LX-45
	1-12	POWER LED CABLE 3PIN 500MM LX-45	W.A 3P/PWR LED 500MM LX-45
	NS	CDR CABLE 40/40PIN 300MM H3	C.A.40/40P CDR 300MM H34

Picture	No.	Part Name	Description
	1-8	MICRO SWITCH CABLE 2PIN 500MM H34	C.A.2P MICRO SW 500MM H34
	NS	AUDIO CABLE 4PIN 2CONNECTOR 520M	W.A 4P 2C AUDIO 520MM H61
	1-9	POWER SWITCH CABLE 2PIN 500M LX-45	W.A 2P/PWR SW 500MM LX-45
	1-11	TURBO LED CABLE 2PIN 500MM LX-45	W.A 2P/TURBO LED 500MM LX-45
	NS	AUDIO BOARD CABLE 10PIN 385MM	W.A 2C 10P AUDIO BD 385MM S88M
	NS	USB CABLE 2CONNECTOR 10PIN 300M	C.A 2CONN USB/10P 300MM S88M
Main board			
	NS	MAINBOARD/S88M GL	S88M GL MB

Picture	No.	Part Name	Description
Board			
	NS	AUDIO/USB BOARD	S88M DAUGHTER BOARD
Power Supply			
	NS	POWER SUPPLY 160W AOPEN FSP160-60SAV V.1	SPS 160WNOPFC FSP160-60SAV V.1
Case/Cover/Bracket Assembly			
	1-6	UPPER CASE SECC H34A	ASSEMBLY UPPER CASE SECC H34A
	NS	LOWER CASE W/O LED CABLE,SWICH CABLE,MICRO SWITCH CABLE	ASSEMBLY LOWER CASE SECC H34A
	1-4	ROTATE BRACKET H34A	ASSEMBLY ROTATE BRACKET H34A
	1-1	HDD BRACKET	BRACKET HDD SECC H34
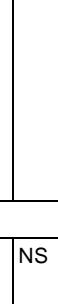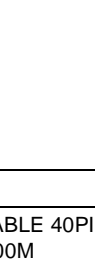
Picture	No.	Part Name	Description
	1-5	I/O PPORT BRACKET W/ LABEL	ASSY. I/O BRACKET
Miscellaneous			
	7	FOOT STAND	ASSY FOOT STAND ABS 501 H34
	NS	I/O PORT LABEL	Label I/O PORT 40.7x155 H34A-S88M
Screws			
	NS	SCREW	SCREW HDD FLAT 6#32 L9.8M H34
	NS	SCREW	SCREW MACH BDG #6-32*L8 NI
	5 1-3	SCREW	SCRW TAP HEX ZINC M3*.5*5
	4 1-2	SCREW	SCRW TAP HEX ZN #6*3/16"
	NS	SCREW	SCREW TAP HEX ZNIC #6-32*4/16"

Picture	No.	Part Name	Description
	NS	SCREW	SCRW TAP PAN M3*8L 2LEAD

Veriton 5500/ 5500G Exploded Diagram
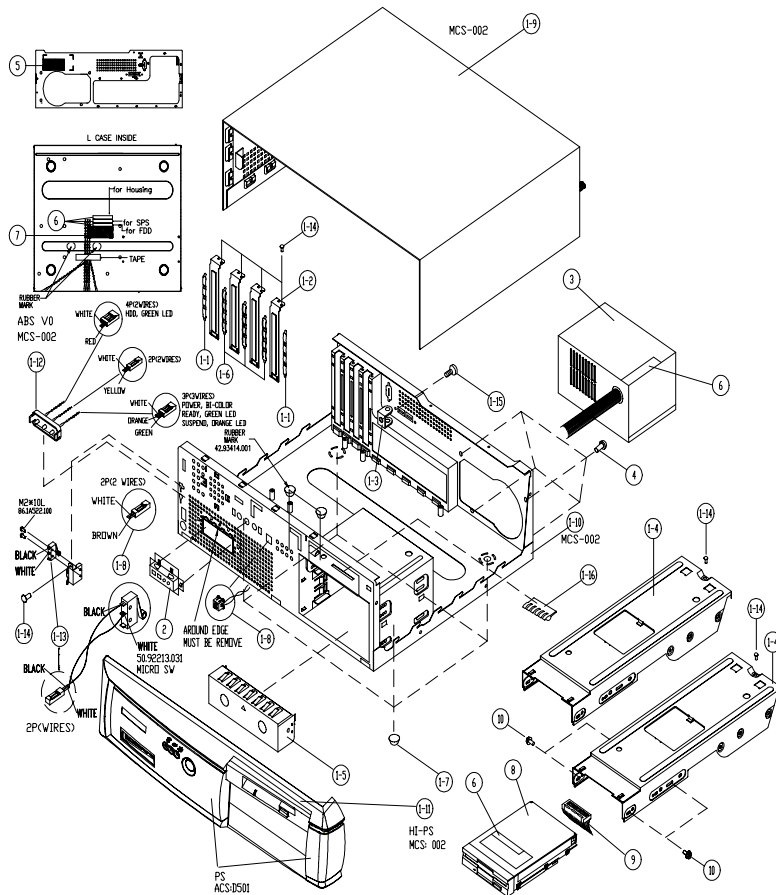
Picture	No.	Part Name	Description
Floppy Disk Drive			
	8	FDD 1.44M MITSUMI/D353M3D	FDD 1.44MB 1"H MITSUMI/D353M3
Battery			

Picture	No.	Part Name	Description
	NS	RTC BATTERY LI 3V 200MAH	BATTERY LI 3V CR2032 200MAH
Cable			
	NS	IDE CABLE 40PIN 3CONNECTOR 150+300M	C.A 40P 3C 150+300MM IDE H61
	9	FDD CABLE 34PIN 2CONNECTOR 450M	C.A 34P 2C 450MM FDD H61
	NS	IDE CABLE 40PIN 3CONNECTOR 150+300MM ATA66	C.A 40P 3C 150+300MM ATA66 H61
	NS	AUDIO CABLE 4PIN 3CONNECTOR 520M	W.A 4P 3C(Y)520MM AUDIO(COMAX)
	1-8	POWER SWITCH CABLE 2PIN 300M W/HOLDER	W.A 2P/PWR SW 300MM H61 W/HOL

Picture	No.	Part Name	Description
	1-13	INTRUSION ALERT MICRO SWITCH CABLE	ASSY MICRO/SW CABLE H4 VT5100
	1-12	LED CABLE MODULE TURBO/HDD/POWER	ASSEMBLY LED CABLE (A) H40
	NS	AUDIO BOARD CABLE 2CONNECTOR 10PIN 380MM	W.A 2C 10P AUDIO BD 385MM S88M
	NS	USB CABLE 2CONNECTOR 10PIN 300M	C.A 2CONN USB/10P 300MM S88M
Main board			
	NS	MAINBOARD/S88	S88M MAIN BOARD
Board			
	NS	AUDIO BOARD	S88M DAUGHTER BOARD

Picture	No.	Part Name	Description
Power Supply			
	3	POWER SUPPLY 200W DELTA DPS-200PB-112A 01	SPS 200W PFC DPS-200PB-112A 01
Case/Cover/Bracket Assembly			
	1-9	UPPER CASE	ASSY UPPER CASE H40
	1-10	LOWER CASE W/O LED CABLE,SWITCH CABLE,MICRO SWITCH CABLE	ASSY L CASE H40
	1-5	EMPTY COVER 5.25"	5.25" EMPTY COVER H40 VERITON
	1-4	LINK BAR	BAR LINK SECC T-.8 H40
	1-11	FRONT PANEL W/POWER KNOB W/O LOGO	ASSY F PNL VER H40 PRINT ACER

Picture	No.	Part Name	Description
	NS	I/O PORT BRACKET W/O LABEL	ASSY PORT BRACKET(S88M) H80
Miscellaneous			
	NS	NAME PLATE VT550	LBL NAME PLT49.6*9.6VT5500 H40
	NS	I/O PORT LABEL	LBL I/O PORT 40.7X155 H34A-S88M
Screws			
	1-14	SCREW	SCREW TAP HEX ZNIC #6-32*4/16"
	NS	SCREW	SCREW MACH BDG #6-32*L8 NI
	NS	SCREW	SCRW MACH BDG #6-32*3/16" NI
	10	SCREW	SCRW TAP HEX ZINC M3*.5*5
	NS	SCREW	SCRW THUMB #6-32 NI

Picture	No.	Part Name	Description
	4 1-14	SCREW	SCREW TAP HEX ZNIC #6-32*4/16"
	1-15	SCREW	SCRW MACH FLAT M3*0.5P*8L NI

Veriton 7500/ 7500G Exploded Diagram
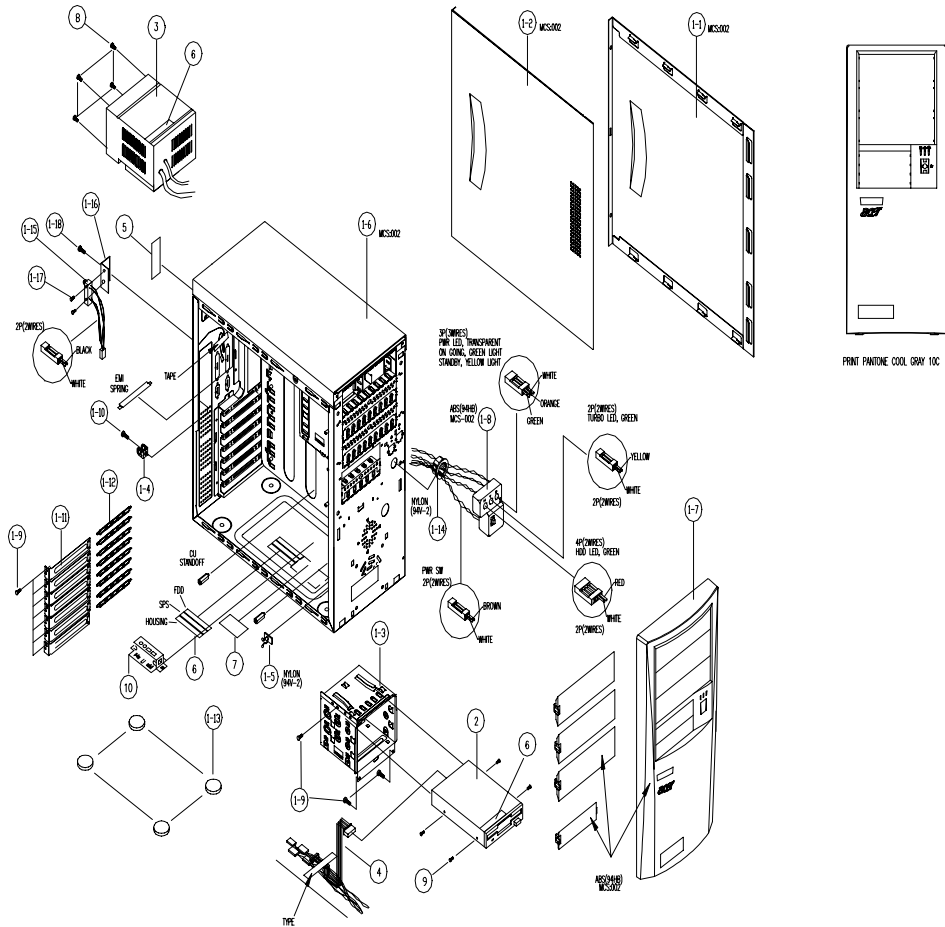
Picture	No.	Part Name	Description
Floppy Disk Drive			
	2	FDD 1.44M MITSUMI/D353M3D	FDD 1.44MB 1"H MITSUMI/D353M3
Battery			

Picture	No.	Part Name	Description
	NS	RTC BATTERY 3V 200MAH	BATTERY LI 3V CR2032 200MAH
Cable			
	NS	IDE CABLE 40PIN 3CONNECTOR 150+300M	C.A 40P 3C 150+300MM IDE H61
	4	FDD CABLE 34PIN 2CONNECTOR 350M	C.A 34P 2C 350MM FDD M19A/FU
	NS	IDE CABLE 40PIN 3CONNECTOR 150+300MM ATA66	C.A 40P 3C 150+300MM ATA66 H61
	NS	AUDIO CABLE 4PIN 2CONNECTOR 520M	W.A 4P 2C AUDIO 520MM H61
	NS	POWER CABLE 160/330M	CABLE PWR/DC 160/330MM

Picture	No.	Part Name	Description
	1-15	INTRUSION ALERT MICRO SWITCH CABLE 2PIN 500MM	W.A. 2P ALARM SW 500MM CABLE 2
	1-8	LED CABLE MODULE POWER LED/ TURBO LED/HDD LED/POWER SWITCH	ASSY HLD LX45
	NS	AUDIO BOARD CABLE 10PIN 385MM	W.A 2C 10P AUDIO BD 385MM S88M
	NS	USB CABLE 2CONNECTOR 10PIN 300M	C.A 2CONN USB/10P 300MM S88M
Main board			
	NS	MAINBOARD/S88M GL	S88M GL MB
Board			
	NS	DAUGHTER BOARD	S88M DAUGHTER BOARD

Picture	No.	Part Name	Description
Power Supply			
	NS	POWER SUPPLY 200W DELTA DPS-200PB-112B 01	SPS 200W PFC DPS-200PB-112B 01
Case/Cover/Bracket Assembly			
	1-1	RIGHT DOOR	CVR R SECC T-.8 LX45
	1-2	LEFT COVER	CVR L SECC T-.8 H80
	1-7	FRONT BEZEL	ASSY BZL VERTION NEW LOGO H80
	1-6	LOWER CASE W/TOP COVER,MAINBOARD TRAY,USB HOLDER	ASSY L-CASE W/USB HOLE H80
	NS	I/O PORT BRACKET	ASSY PORT BRACKET(S88M) H80
Miscellaneous			

Picture	No.	Part Name	Description
	NS	NAME PLATE VT750	LBL NAME PLT49.6*9.6VT7500 H80
	NS	RUBBER FOOT	RUBBER FOOT T-6.8 IDB
	NS	I/O PORT LABEL	LBL I/O Port 40.7x155 H34a-88M
Screws			
	NS	SCREW	SCRW HEX I#4-40/O#4-40 L7.5 NI
	1-17	SCREW	SCRW MACH PAN M2*10L
	NS	SCREW	SCRW MACH BDG #6-32*3/16" NI
	1-10	SCREW	SCRW MACH FLAT M3*0.5P*8L NI

Picture	No.	Part Name	Description
	9 1-18	SCREW	SCRW TAP HEX ZINC M3*.5*5
	8 1-9	SCREW	SCREWTAP HEX ZNIC #6-32*4/16"

Model Definition and Configuration

Veriton 3500/5500/7500

1. **Brand No: S88M/ GL MB**

2. **Project Name/ Code: S88M / 91.31V01.301(Veriton 3500)**

   S88M/ 91.31V01.201(Veriton 5500)

   S88M/ 91.31V01.101(Veriton 7500)

3. **Description**

S88M/GL is positioned to be the first Main Board product that supports the latest INTEL Chipset Brookdale-GL technology with DDR DIMM module. As a technology leader in the PC market, S88M/GL stands for not only the image of the best performance product for Intel's next generation mainstream platform but also a real time to market product for all customers' demand to win the market entrance advantage.

S88M /GL Main Board, using INTEL Pentium 4 Processor in the 478 Pin package, delivers a mainstream desktop platform solution.

With INTEL chipsets Brookdale-GL GMCH and ICH4, S88M/ GL provides the processor interface, DDR (Double Data rate) interface, and HUB interface. The CPU interface supports the INTEL Pentium 4 processor subset of the Extended Mode of Scalable Bus Protocol. INTEL Brookdale-GL is optimized for the INTEL Pentium 4 processor and INTEL Northwood processor. It supports double data rate DRAM at 266MHz/ 200MHz and front side bus 400. The GMCH contains advanced power management logic.

Veriton 3500G/5500G/7500G

1.   **Brand No: S88M/ G MB**

2.   **Project Name/ Code: S88M 91.31V01.301(Veriton 3500G)**

     S88M 91.31V01.201(Veriton 5500G)

     S88M 91.31V01.101(Veriton 7500G)

3.   **Description**

S88M/ G is positioned to be the first Main Board product that supports the latest INTEL Chipset Brookdale- G technology with DDR DIMM module. As a technology leader in the PC market,S88M/ G stands for not only the image of the best performance product for Intel's next generation mainstream platform but also a real time to market product for all customers' demand to win the market entrance advantage.

S88M/ G Main Board, using INTEL Pentium 4 Processor in the 478 Pin package, delivers a mainstream desktop platform solution.

With INTEL chipsets Brookdale-G GMCH and ICH4, S88M/ G provides the processor interface, DDR (Double Data rate) interface, AGP interface and HUB interface. The CPU interface supports the INTEL Pentium 4 processor subset of the Extended Mode of Scalable Bus Protocol. INTEL Brookdale-G is optimized for the INTEL Pentium 4 processor and INTEL Northwood processor. It supports double data rate DRAM at 266MHz./ 200 MHz and front side bus 400/ 533. The GMCH contains advanced power management logic.

Main Features

❏ Single Intel Pentium 4/ Northwood processor configurations at 400/ 533MHz for S88M/ G and at 400MHz for S88M/ GL.

❏ AGTL+ host bus with integrated termination supporting 32 bit host addressing

❏ Up to 2 GB (W/ 512Mb technology) of DDR (Double Data rate) DIMM module at 266MHz/ 200MHz.

❏ 1.5v AGP interface with 4 x SBA/ Data Transfer and 2x / 4x Fast Write capability (AGP interface for S88M/ G only)

❏ 8 bit, 66MHz 4x hub interface for highly concurrent operation

❏ 2 * 184 pin DIMM sockets (64M/ 128M/ 256M/ 512Mb DRAMs)

❏ ACPI 1.0b Power management compliant

❏ CPU clock throttling and clock stop control for complete ACPI S0 to S5 state support

❏ ACPI compliance BIOS

❏ ATA compliance hard disk power saving feature support Ultra DMA 100/ 66/ 33

❏ on-board PCI master enhanced local bus IDE

    ❏ PIO mode 4

    ❏ Multiword DMA Mode 4

    ❏ Ultra DMA/ 33/ 66/ 100

❏ on-board serial ports - 2 high speed NS16C550 compatible UARTs with 16 byte FIFOs

❏ on-board parallel port -SPP, EPP and ECP (IEEE 1284 compliant)

❏ on-board FDD interface - 1.2MB/ 1.44MB/ 2.88MB & 3 mode FDD

❏ PS/2 keyboard

❏ PS/2 mouse

❏ Plug-and-Play (PnP) feature

❏ Six USB connectors (Two available on front panel and four on rear panel)

❏ On board AC 97 Codec. (AD1885)

❏ On board RJ45 connector with Kinnereth PHY Chip for 10/100 Ethernet (Optional)

❏ 1 AGP 4x Slot (For S88M/ G only)

❏ 3 PCI slots

❏ Software shutdown for Windows 95, 98SE, XP, 2000, ME

Test Compatible Component

This computer's compatibility is a test plan released by Acer Internal Testing Department. Once the final report is available, this chapter will be revised accordingly.

Microsoft Windows XP Professional Environment Test

Item	Specifications
Processor	Intel Willamette 1.7G/1.8G/1.9G/2.0 Socket 478
	Intel Northwood 2.0G/2.2G/2.4G
Memory	Micron DDR 266, 128MB, 0.18u 16Mx8x8 CL2.5
	Micron DDR 266, 256MB, 0.18u 16Mx8x16 CL2.5
	Infineon DDR 266 128MB 0.17u, 16Mx8x8 CL2
	Infineon DDR 266 256MB 0.17u, 32Mx8x8 CL2
	Infineon DDR 266 512MB 0.17u, 16Mx16 CL2
	Nanya DDR 266 128MB CL2
	Nanya DDR 266 256MB CL2
	Apacer DDR 266 128MB
	Apacer DDR 266 256MB
CPU Fan Sink	Cooler Master Standard Fansink
	Cooler Master Standard Blow Fansink
	Acer Retention Module
FDD	Panasonic 3 mode JU256A046P
	Mitsumi FDD 1.44MB 1"H
HDD (IDE)	Seagate U6 20G 5400rpm
	Seagate U6 40G 5400rpm
	Seagate U6 60G 5400rpm
	Seagate Snowmass 40G 7200rp
	Seagate Snowmass 60G 7200rp
	Seagate Snowmass 80G 7200rp
	Maxtor Athena 20G 5400rp
	Maxtor Romulus 40G 5400rpm
HDD (SCSI)	Seagate Cheetah 18G 10000rpm
IDE Cable	Ultra DMA 66/200+250 For H80/H40/H63
	Ultra DMA 66/300 for H34a
	Ultra DMA 33/200+250 For H80/H40/H63
	Ultra DMA 33/300 For H34a
FDD Cable	For H80/H63 350 mm
	For H40 450m
	For H34a 450m
Audio Cable	Clone Standard
	Clone Y Cable
USB Cable	C.A. BKT 4/10 USB/MB 300MM
CD-ROM	BenQ 52X
	AOpen 52X
CD-RW	AOpen 32X12X48
	Liteon 40X12X48
DVD-ROM	Pioneer 16X/40X
Mouse	Logitech Mouse USB Wheel Standard U69
	Logitech Mouse PS2 Wheel Standard
	Logitech USB Wheel Optical
Keyboard	Darfon 52UV(New) US version, 104 keys, gift box packing
	Darfon 52UV(old) US version, 104 keys
	Darfon 62C US version, 104 keys, gift box packing, with palm rest

Item	Specifications
VGA Adapter	LEADTEK Geforce 2 MX-400 64M LP
	Prolink Geforce 2 MX-400 64M LP
	ECS SiS 315E
	ECS SiS 315E LB
Speake	Charming Standard V-1
	Charming Speake 2.1 channel
	Philips A201S
LAN Adapter	3Com LAN Card, 10/100 Mbps
	LAN card, 10/100 Mbps LB
Wireless LAN Adapter	Zcom PCI 802.11 card
Fax/Modem Adapter	Ambit V92, 56K, HSFI
	V92, 6K, HSFI, LB
	Askey V92, 56K, HSFI
	Askey V92, 56K, HSFI, LB
Power Supply	Delta 200W PFC
	Delta 200W non PFC
	Delta 180W non PFC
	FSP 180W non PFC
	FSP 160W PFC
	FSP 160W non PFC
	API 200W PFC
	API 200W non PFC
Housing	Acer Genesis H80F
	Genesis H80 200W PFC (Delta)
	Genesis H80 200W non PFC (Delta, Hi-Power)
	Genesis H80 180W non PFC
	Genesis H40 200W PFC (Delta 200W only)
	Genesis H40 200W non PFC (Delta/Hi-Power 200W)
	Genesis H34a 160W PFC
	Genesis H34a 160W non PFC

Microsoft Windows ME Professional Environment Test

Item	Specification
Processor	Intel Willamette 1.7G/1.8G/1.9G/2.0 Socket 478
	Intel Northwood 2.0G/2.2G/2.4G/2.53G Socket 47
	Intel Pentium IV Celeron 1.8G
Memory	Micron DDR 266, 128MB, 0.18u 16Mx8x8 CL2.5
	Micron DDR 266, 256MB, 0.18u 16Mx8x16 CL2.
	Infineon DDR 266 128MB 0.17u, 16Mx8x8 CL2
	Infineon DDR 266 256MB 0.17u, 32Mx8x8 CL2
	Infineon DDR 266 512MB 0.17u, 16Mx16 CL2
	Nanya DDR 266 128MB CL2
	Nanya DDR 266 256MB CL2
	Nanya DDR 266 512MB CL2
CPU Fan Sink	Cooler Master Standard Fansink
	Cooler Master Standard Blow Fansink
	Acer Retention Module
FDD	Panasonic 3 mode JU256A046P
	Mitsumi FDD 1.44MB 1"H
HDD (IDE)	Seagate U6 20G 5400rp
	Seagate U6 40G 5400rp
	Seagate Snowmass 40G 7200rp
	Seagate Snowmass 60G 7200rp
	Seagate Snowmass 80G 7200rp
	Maxtor Athena 20G 5400rpm
	Maxtor Romulus 40G 5400rp
	Maxtor Viper 40G 7200rpm
HDD (SCSI)	Seagate Cheetah 18G 10000rp
IDE Cable	Ultra DMA 66/200+250 For H80/H40/H63
	Ultra DMA 66/300 for H34a
	Ultra DMA 33/200+250 For H80/H40/H63
	Ultra DMA 33/300 For H34a
FDD Cable	For H80/H63 350 m
	For H40 450mm
	For H34a 450mm
Audio Cable	Clone Standard
	Clone Y Cable
USB Cable	C.A. BKT 4/10 USB/MB 300M
CD-ROM	BenQ 52X
DVD-ROM	Pioneer 16X/40X
Mouse	Logitech Mouse USB Wheel Standard U69
	Logitech Mouse PS2 Wheel Standard
	Logitech USB Wheel Optical
Keyboard	Darfon 52UV(New) US version, 104 keys, gift box packing
	Darfon 52UV(old) US version, 104 keys
	Darfon 62C US version, 104 keys, gift box packing, with palm rest
VGA Adapter	LEADTEK Geforce 2 MX-400 64M LP
	Prolink Geforce 2 MX-400 64M LP
	ECS SiS 315E
	ECS SiS 315E LB

Item	Specification
Speake	Charming Standard V-1
	Charming Speake 2.1 channel
LAN Adapter	3Com LAN Card, 10/100 Mbps
	LAN card, 10/100 Mbps LB
Fax/Modem Adapter	Ambit V92, 56K, HSFI
	V92, 6K, HSFI, LB
	Askey V92, 56K, HSFI
	Askey V92, 56K, HSFI, LB
Power Supply	Delta 200W PFC
	Delta 200W non PF
	Delta 180W non PF
	FSP 180W non PFC
	FSP 160W PFC
	FSP 160W non PFC
Housing	Acer Genesis H80F
	Genesis H80 200W PFC (Delta)
	Genesis H80 200W non PFC (Delta, Hi-Power
	Genesis H80 180W non PFC
	Genesis H40 200W PFC (Delta 200W only)
	Genesis H40 200W non PFC (Delta/Hi-Power 200W
	Genesis H34a 160W PFC
	Genesis H34a 160W non PFC

Microsoft Windows 2000 Professional Environment Test

Item	Specifications
Processor	Intel Willamette 1.7G/1.8G/1.9G/2.0 Socket 478
	Intel Northwood 2.0G/2.2G/2.4G/2.53G Socket 478
	Intel Pentium IV Celeron 1.8G
Memory	Micron DDR 266, 128MB, 0.18u 16Mx8x8 CL2.5
	Micron DDR 266, 256MB, 0.18u 16Mx8x16 CL2.5
	Infineon DDR 266 128MB 0.17u, 16Mx8x8 CL2
	Infineon DDR 266 256MB 0.17u, 32Mx8x8 CL2
	Infineon DDR 266 512MB 0.17u, 16Mx16 CL2
	Nanya DDR 266 128MB CL2
	Nanya DDR 266 256MB CL2
	Nanya DDR 266 512MB CL2
CPU Fan Sink	Cooler Master Standard Fansink
	Cooler Master Standard Blow Fansink
	Acer Retention Module
FDD	Panasonic 3 mode JU256A046P
	Mitsumi FDD 1.44MB 1"H
HDD (IDE)	Seagate U6 20G 5400rpm
	Seagate U6 40G 5400rpm
	Seagate Snowmass 40G 7200rp
	Seagate Snowmass 60G 7200rp
	Seagate Snowmass 80G 7200rp
	Maxtor Athena 20G 5400rp
	Maxtor Romulus 40G 5400rpm
	Maxtor Viper 40G 7200rp
HDD (SCSI)	Seagate Cheetah 18G 10000rpm
IDE Cable	Ultra DMA 66/200+250 For H80/H40/H63
	Ultra DMA 66/300 for H34a
	Ultra DMA 33/200+250 For H80/H40/H63
	Ultra DMA 33/300 For H34a
FDD Cable	For H80/H63 350 mm
	For H40 450m
	For H34a 450m
Audio Cable	Clone Standard
	Clone Y Cable
USB Cable	C.A. BKT 4/10 USB/MB 300MM
CD-ROM	BenQ 52X
DVD-ROM	Pioneer 16X/40X
Mouse	Logitech Mouse USB Wheel Standard U69
	Logitech Mouse PS2 Wheel Standard
	Logitech USB Wheel Optical
Keyboard	Darfon 52UV(New) US version, 104 keys, gift box packing
	Darfon 52UV(old) US version, 104 keys
	Darfon 62C US version, 104 keys, gift box packing, with palm rest
VGA Adapter	LEADTEK Geforce 2 MX-400 64M LP
	Prolink Geforce 2 MX-400 64M LP
	ECS SiS 315E
	ECS SiS 315E LB

Item	Specifications
Speake	Charming Standard V-1
	Charming Speake 2.1 channel
LAN Adapter	3Com LAN Card, 10/100 Mbps
	LAN card, 10/100 Mbps LB
Fax/Modem Adapter	Ambit V92, 56K, HSFI
	V92, 6K, HSFI, LB
	Askey V92, 56K, HSFI
	Askey V92, 56K, HSFI, LB
Power Supply	Delta 200W PFC
	Delta 200W non PFC
	Delta 180W non PFC
	FSP 180W non PFC
	FSP 160W PFC
	FSP 160W non PFC
Housing	Acer Genesis H80F
	Genesis H80 200W PFC (Delta)
	Genesis H80 200W non PFC (Delta, Hi-Power)
	Genesis H80 180W non PFC
	Genesis H40 200W PFC (Delta 200W only)
	Genesis H40 200W non PFC (Delta/Hi-Power 200W)
	Genesis H34a 160W PFC
	Genesis H34a 160W non PFC

Linux Red Hat Environment Test

Item	Specifications
Processor	Intel Willamette 1.7G/1.8G/1.9G/2.0 Socket 478
	Intel Northwood 2.0G/2.2G/2.4G/2.53G Socket 478
	Intel Pentium IV Celeron 1.8G
Memory	Micron DDR 266, 128MB, 0.18u 16Mx8x8 CL2.5
	Micron DDR 266, 256MB, 0.18u 16Mx8x16 CL2.5
	Infineon DDR 266 128MB 0.17u, 16Mx8x8 CL2
	Infineon DDR 266 256MB 0.17u, 32Mx8x8 CL2
	Infineon DDR 266 512MB 0.17u, 16Mx16 CL2
	Nanya DDR 266 128MB CL2
	Nanya DDR 266 256MB CL2
	Nanya DDR 266 512MB CL2
CPU Fan Sink	Cooler Master Standard Fansink
	Cooler Master Standard Blow Fansink
	Acer Retention Module
FDD	Panasonic 3 mode JU256A046P
	Mitsumi FDD 1.44MB 1"H
HDD (IDE)	Seagate U6 20G 5400rpm
	Seagate U6 40G 5400rpm
	Seagate Snowmass 40G 7200rp
	Seagate Snowmass 60G 7200rp
	Seagate Snowmass 80G 7200rp
	Maxtor Athena 20G 5400rp
	Maxtor Romulus 40G 5400rpm
	Maxtor Viper 40G 7200rp
HDD (SCSI)	Seagate Cheetah 18G 10000rpm
IDE Cable	Ultra DMA 66/200+250 For H80/H40/H63
	Ultra DMA 66/300 for H34a
	Ultra DMA 33/200+250 For H80/H40/H63
	Ultra DMA 33/300 For H34a
FDD Cable	For H80/H63 350 mm
	For H40 450m
	For H34a 450m
Audio Cable	Clone Standard
	Clone Y Cable
USB Cable	C.A. BKT 4/10 USB/MB 300MM
CD-ROM	BenQ 52X
DVD-ROM	Pioneer 16X/40X
Mouse	Logitech Mouse USB Wheel Standard U69
	Logitech Mouse PS2 Wheel Standard
	Logitech USB Wheel Optical
Keyboard	Darfon 52UV(New) US version, 104 keys, gift box packing
	Darfon 52UV(old) US version, 104 keys
	Darfon 62C US version, 104 keys, gift box packing, with palm rest
VGA Adapter	LEADTEK Geforce 2 MX-400 64M LP
	Prolink Geforce 2 MX-400 64M LP
	ECS SiS 315E
	ECS SiS 315E LB

Item	Specifications
Speake	Charming Standard V-1
	Charming Speake 2.1 channel
LAN Adapter	3Com LAN Card, 10/100 Mbps
	LAN card, 10/100 Mbps LB
Fax/Modem Adapter	Ambit V92, 56K, HSFI
	V92, 6K, HSFI, LB
	Askey V92, 56K, HSFI
	Askey V92, 56K, HSFI, LB
Power Supply	Delta 200W PFC
	Delta 200W non PFC
	Delta 180W non PFC
	FSP 180W non PFC
	FSP 160W PFC
	FSP 160W non PFC
Housing	Acer Genesis H80F
	Genesis H80 200W PFC (Delta)
	Genesis H80 200W non PFC (Delta, Hi-Power)
	Genesis H80 180W non PFC
	Genesis H40 200W PFC (Delta 200W only)
	Genesis H40 200W non PFC (Delta/Hi-Power 200W)
	Genesis H34a 160W PFC
	Genesis H34a 160W non PFC

Online Support Information

This section describes online technical support services available to help you repair your Acer Systems.

If you are a distributor, dealer, ASP or TPM, please refer your technical queries to your local Acer branch office. Acer Branch Offices and Regional Business Units may access our website. However some information sources will require a user i.d. and password. These can be obtained directly from Acer CSD Taiwan.

Acer's Website offers you convenient and valuable support resources whenever you need them.

In the Technical Information section you can download information on all of Acer's Notebook, Desktop and Server models including:

❑ Service guides

❑ User's manuals

❑ Training materials

❑ Main manuals

❑ Bios updates

❑ Software utilities

❑ Spare parts lists

❑ Chips

❑ TABs (Technical Announcement Bulletin)

For these purposes, we have included an Acrobat File to facilitate the problem-free downloading of our technical material.

Also contained on this website are:

❑ Detailed information on Acer's International Traveller's Warranty (ITW)

❑ Returned material authorization procedures

❑ An overview of all the support services we offer, accompanied by a list of telephone, fax and email contacts for all your technical queries.

We are always looking for ways to optimize and improve our services, so if you have any suggestions or comments, please do not hesitate to communicate these to us.