



Acer Altos 600
User's guide

Copyright © 2000 Acer Incorporated
All Rights Reserved.

Acer Altos 600
User's guide

Changes may be made periodically to the information in this publication without obligation to notify any person of such revision or changes. Such changes will be incorporated in new editions of this manual or supplementary documents and publications. This company makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims the implied warranties of merchantability or fitness for a particular purpose.

Record the model number, serial number, purchase date, and place of purchase information in the space provided below. The serial number and model number are recorded on the label affixed to your computer. All correspondence concerning your unit should include the serial number, model number, and purchase information.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopy, recording, or otherwise, without the prior written permission of Acer Incorporated.

Model Number : _____

Serial Number: _____

Purchase Date: _____

Place of Purchase: _____

Acer and the Acer Logo are registered trademarks of Acer Inc. Other company's product names or trademarks are used herein for identification purposes only and belong to their respective companies.

Notices

FCC notice

This device has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the device and receiver
- Connect the device into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/television technician for help

Notice: Shield cables

All connections to other computing devices must be made using shielded cables to maintain compliance with FCC regulations.

Notice: Peripheral devices

Only peripherals (input/output devices, terminals, printers, etc.) certified to comply with the Class B limits may be attached to this equipment. Operation with noncertified peripherals is likely to result in interference to radio and TV reception.



.....
Caution! Changes or modifications not expressly approved by the manufacturer could void the user's authority, which is granted by the Federal Communications Commission, to operate this computer.

Use conditions

This part complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Notice: Canadian users

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Remarque à l'intention des utilisateurs canadiens

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Important safety instructions

Read these instructions carefully. Save these instructions for future reference.

1. Follow all warnings and instructions marked on the product.
2. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
3. Do not use this product near water.
4. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
5. Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.
6. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.

7. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
8. If an extension cord is used with this product, make sure that the total ampere rating of the equipment plugged into the extension cord does not exceed the extension cord ampere rating. Also, make sure that the total rating of all products plugged into the wall outlet does not exceed the fuse rating.
9. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
10. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to qualified service personnel.
11. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - a. When the power cord or plug is damaged or frayed
 - b. If liquid has been spilled into the product
 - c. If the product has been exposed to rain or water
 - d. If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal condition.
 - e. If the product has been dropped or the cabinet has been damaged
 - f. If the product exhibits a distinct change in performance, indicating a need for service.
12. Replace the battery with the same type as the product's battery we recommend. Use of another battery may present a risk of fire or explosion. Refer battery replacement to a qualified serviceman.

13. Warning! Batteries may explode if not handled properly. Do not disassemble or dispose of them in fire. Keep them away from children and dispose of used batteries promptly.
14. Use only the proper type of power supply cord set (provided in your accessories box) for this unit. It should be a detachable type: UL listed/CSA certified, type SPT-2, rated 7A 125V minimum, VDE approved or its equivalent. Maximum length is 15 feet (4.6 meters).

Laser compliance statement

The CD-ROM drive in this computer is a laser product. The CD-ROM drive's classification label (shown below) is located on the drive.

CLASS 1 LASER PRODUCT

CAUTION: INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.

APPAREIL A LASER DE CLASSE 1 PRODUIT

LASERATTENTION: RADIATION DU FAISCEAU LASER INVISIBLE EN CAS D'OUVERTURE. EVITER TOUTE EXPOSITION AUX RAYONS.

LASER KLASSE 1

VORSICHT: UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET, NICHT DEM STRAHLL AUSSETZEN

PRODUCTO LÁSER DE LA CLASE I

ADVERTENCIA: RADIACIÓN LÁSER INVISIBLE AL SER ABIERTO. EVITE EXPONERSE A LOS RAYOS.

ADVARSEL: LASERSTRÅLING VEDÅBNING SE IKKE IND I STRÅLEN

VARO! LAVATTAESSA OLET ALTTINA LASERSÄTEILYLLE.

VARNING: LASERSTRÅLNING NÅR DENNA DEL ÅR ÖPPNAD ÅLÅ TUIJOTA SÄTEESEENSTIRRA EJ IN I STRÅLEN

VARNING: LASERSTRÅLNING NAR DENNA DEL ÅR ÖPPNADSTIRRA EJ IN I STRÅLEN

ADVARSEL: LASERSTRÅLING NAR DEKSEL ÅPNESSTIRR IKKE INN I STRÅLEN

Lithium battery statement

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with

the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

ADVARSEL!

Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Léver det brugte batteri tilbage til leverandøren.

ADVARSEL

Eksplosjonsfare ved feilaktig skifte av batteri. Benytt samme batteritype eller en tilsvarende type anbefalt av apparatfabrikanten. Brukte batterier kasseres i henhold til fabrikantens instruksjoner.

VARNING

Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion.

VAROITUS

Päristo voi räjähtää, jos se on virheellisesti asennettu. Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

VORSICHT!

Explosionsgefahr bei unsachgemäßen Austausch der Batterie Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.



1 Getting started	1
Overview	3
Processors	3
Memory	4
System chipsets	4
Apollo Pro 133A chipset	4
SCSI subsystem	4
LAN subsystem	5
Expansion slots	5
AGP bus	5
PCI bus	5
Hardware management support	6
Features summary	7
Preinstallation requirements	8
Selecting a site	8
Checking the package contents	8
Basic connections	9
Connecting the keyboard	9
Connecting the mouse	10
Connecting the VGA monitor	10
Connecting to the network	11
Connecting the power cable	11
System startup	12
Power-on problems	13
Connecting options	14
Printer	14
USB devices	14
2 System tour	17
External and internal structure	19
Front panel	19
Rear panel	20
Internal components	21
System board layout	23
BPL5M jumpers and connectors	26
Keyboard	28
Cursor keys	28
Lock keys	28
Windows keys	29
Mouse	30
Disk drives	31
3.5-inch floppy disk drive	31

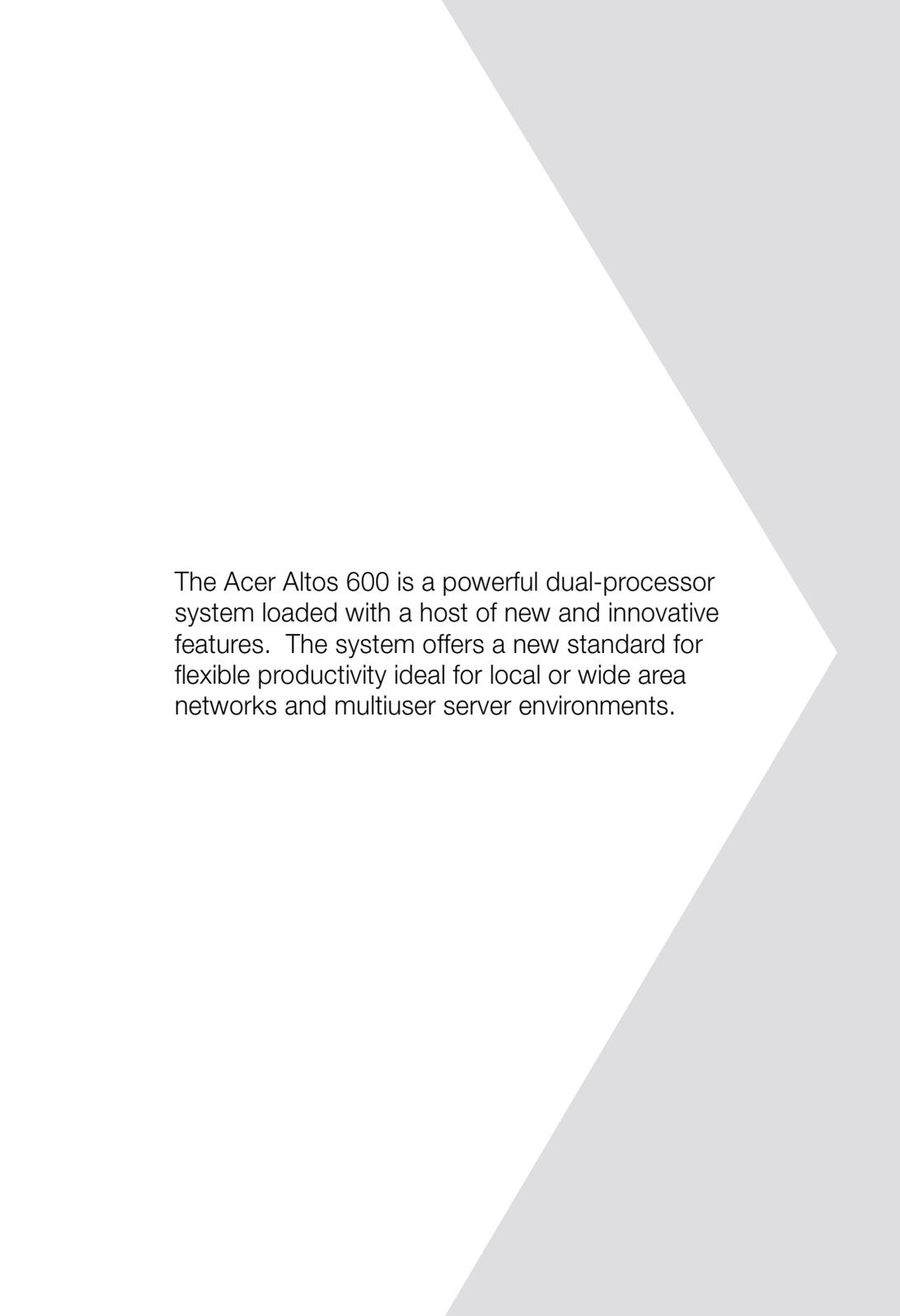
Contents

CD-ROM drive	31
To insert a CD into your system's CD-ROM drive:	32
To take care of your CDs:	32
3 Upgrading your system	33
Installation precautions	35
ESD precautions	35
Preinstallation instructions	35
Post-installation instructions	36
Opening your system	37
Opening the front panel door	37
Removing the front panel door	37
Opening the side panel	37
Installing and removing storage devices	39
Replacing a 3.5-inch storage device	39
Installing a BPL5M hot-swap cage	40
System board connector cable	42
Installing and removing a BPL5M hard disk drive tray	43
Replacing a 5.25-inch storage device (optional)	43
Installing and removing the CPU	46
Installing a CPU	46
Removing a CPU	47
Installing and removing memory modules	48
Reconfiguring the system	49
Installing expansion cards	50
Hot-swappable redundant power supply module (optional)	51
Installing an external redundant system fan (optional)	53
4 Setup utility	55
Introduction	57
Entering Setup	58
System information	60
Product information	62
Disk drives	63
IDE channel type	65
Onboard peripherals	68
Power management	71
Boot options	74
Date and time	77
System security	78
Supervisor password	80
Setting and changing the password	80

Removing a password	81
User Password	81
Setting and changing the password	81
Removing a Password	82
IPMI configuration	83
RDM configuration	85
Advanced options	89
Memory/Cache options	90
PnP/PCI options	91
Load default settings	94
Abort settings change	95
Exit Setup	96
Appendix A: ASM Pro quick installation guide	97
Installing ASM Pro	99
System requirements	99
ASM Console	99
ASM Server and Desktop agents	99
System setup	99
Installing ASM Console	100
Installing ASM Server Agent	100
Installing the Novell NetWare Server Agent	100
Installing the SCO OpenServer Agent	103
Installing the SCO UnixWare Server Agent	104
Installing the Microsoft Windows NT Server Agent	105
Installing RDM	107
System requirements	107
RDM server requirements	107
RDM Manager Station requirements	107
RDM server setup	108
Installing RDM module	108
Connecting communication peripherals	109
Installing RDM agent software	110
Installing AWM and Microsoft IIS	114
System requirements	114
Installing AWM	114
Setting up Microsoft IIS	114



1 Getting started



The Acer Altos 600 is a powerful dual-processor system loaded with a host of new and innovative features. The system offers a new standard for flexible productivity ideal for local or wide area networks and multiuser server environments.

Overview

The Acer Altos 600 is a PCI bus based dual-processor system board built on an extended ATX baseboard. It comes with a dual FC-PGA (Flip-Chip Pin-Grip Array) processor socket utilizing an Intel® Pentium® III processor integrated with the Apollo Pro 133A chipset. The system board also integrates the Intel® 82559 10/100 Mbps PCI Ethernet chipset that supports WOL (Wake on LAN) for better remote site management.

For expandability, the system board includes one AGP (Accelerated Graphics Port) bus, five PCI bus slots and three DIMM sockets that allow memory installation to a maximum of 1.5 GB using three 512-MB SDRAM (synchronous DRAM) DIMMs.

For connectivity, the system board supports two USB (Universal Serial Bus) connectors and other standard features such as two UART NS16C550 serial ports, one enhanced parallel port with Enhanced Parallel Port (EPP)/Extended Capabilities Port (ECP) support, a diskette drive interface, and two embedded hard disk interfaces.

The system is fully compatible with MS-DOS V6.X, Novell Netware, Novel SFT III, SCO UNIX Openserver, SCO Unixware, Red Hat Linux, Sun Solaris, Windows 95/98, Windows NT 4.0, and Windows 2000.

Processors

The Pentium III processor implements Dynamic Execution performance, a multi-transaction system bus, and Intel MMX media enhancement technology. Also, it offers Streaming SIMD (Single Instruction Multiple Data) Extensions - 70 new instructions enabling advanced imaging, 3D, streaming audio and video, and speech recognition applications. The Pentium III processor delivers higher performance than the previous Pentium processor while maintaining binary compatibility with all previous Intel Architecture processors.

This system board supports 100 or 133 MHz GTL+ host bus frequencies for one Pentium III processor running at 667 MHz, 733 MHz, 800 MHz, or 866 MHz, and future generation Pentium processors, too.

Memory

The three DIMM sockets on board allow memory upgrade to a maximum of 1.5 GB using three 512-MB SDRAM (synchronous DRAM) DIMMs. For data integrity, the default setting of the ECC (error-correcting code) function of the memory system in BIOS is enabled. See “Memory/Cache options” on page 90 for more on this BIOS setting.



Note: The SDRAM should work under 3.3 volts only; 5-volt memory devices are not supported.

The system board supports both 100 and 133 MHz SDRAMs; 66 MHz SDRAMs are not supported.

System chipsets

Apollo Pro 133A chipset

The Apollo Pro 133A chipset was specifically designed to meet the needs of high performance systems. It consists of two components: VT82C694X (north bridge) and VT82C686A (south bridge).

- VT82C694X (north bridge) provides the host interface, memory system control interface, PCI interface, and AGP interface to boost graphics performance.
- VT82C686A (south bridge) integrates super I/O functions like keyboard and mouse interface, floppy disk controller, advanced digital data separator, two compatible serial ports (UARTs), one parallel port, on-chip 12 mA AT bus drivers, one floppy direct drive support, and Intelligent Power Management support.

SCSI subsystem

The dual-channel AIC-7899 single-chip host adapter delivers Ultra160/m SCSI data transfer rates which double the Ultra-2 SCSI data transfer rate of up to 160 MByte/sec. With two channels, it delivers a total of 320 MByte/sec bandwidth. In addition, the AIC-7899 features a 66 MHz, 64-bit PCI interface that supports zero wait-state memory which also operates

on 33 MHz, 32-bit PCI buses. It supports up to 15 devices on a 12-meter cable (or 25 meters in a point-to-point configuration), making it ideal for both clustering and RAID configurations.

LAN subsystem

Another cost-effective feature for network solutions is the integration of Intel's 82559 10/100 Mbps Fast Ethernet controller which supports:

- Advanced Configuration and Power Interface (ACPI) 1.20A based power management
- wake on Magic Packet
- wake on interesting packet
- advanced System Management Bus (SMB) based manageability
- Wired for Management (WfM) 2.0 compliance
- IP checksum assist
- PCI 2.2 compliance
- PC 98 and PC 99 compliance

Expansion slots

AGP bus

AGP is solely developed for the purpose of supporting 3D graphic applications. It has a 32-bit wide channel that runs at 66 MHz, which translates into a total bandwidth of 266 MBps. This is twice the bandwidth of PCI buses (133 MBps). AGP also accesses the main memory directly allowing 3D textures to be stored in main memory rather than video memory.

PCI bus

The system board has five PCI buses that support 32-bit/33 MHz PCI devices. The PCI bus is the key interface that communicates between the north and the south bridge.

Hardware management support

The system board supports a power-management function that conforms to the power-saving standards of the U.S. Environmental Protection Agency (EPA) Energy Star program. It also offers Plug-and-Play which helps save users from configuration problems, thus making the system more user-friendly.

Additional features include hardware support for ASM Pro (Advanced System Manager Pro) and RDM (Remote Diagnostic Management). ASM detects problems in the CPU thermal condition, CPU working voltage detection ($\pm 12V/\pm 5V/3.3V/1.5V$), and PCI bus utilization calculation. It also detects if the CPU fan or the chassis fan malfunctions. Meanwhile, RDM allows execution of the RDM diagnostic program from a remote RDM station to fix detected problems or to reboot the system.

► Features summary

The main board has the following major components:

- Utilizes a FC-PGA (Flip-Chip Pin-Grip Array) dual socket that supports a Pentium III processor running at 667, 733, 800, or 866 MHz and future generations of Pentium CPUs
- Apollo Pro 133A chipset which includes the north and the south bridge
- Onboard 10/100 Mb/s Intel 82559 LAN chip that supports WOL
- Adaptec® AIC-7899 Dual Channel SCSI controller chipset supports:
 - Channel A - one 68-pin ULTRA 160/m SCSI connector
 - Channel B - one 68-pin ULTRA 160/m SCSI connector
- Three DIMM sockets that accept 64-, 128-, 256-, and 512-MB SDRAMs with a maximum memory upgrade of 1.5 GB
- One AGP bus and five PCI bus slots
- System clock/calendar with battery backup
- IDE disk drive interfaces
- Super I/O chipset
- Auxiliary power connector for 280-watts SPS and ATX power supply
- Advanced System Manager Pro (ASM Pro)
- External ports:
 - USB connector
 - PS/2-compatible keyboard port
 - PS/2-compatible mouse port
 - RJ-45 jack
 - Parallel port
 - Serial ports 1 and 2

Preinstallation requirements

Selecting a site

Before unpacking and installing the system, select a suitable site for the system for maximum efficiency. Consider the following factors when choosing a site for the system:

- Near a grounded power outlet
- Clean and dust-free
- Sturdy surface free from vibration
- Well-ventilated and away from sources of heat
- Secluded from electromagnetic fields produced by electrical devices such as air conditioners, radio and TV transmitters, etc.

Checking the package contents

Check the following items from the package:

- Acer Altos 600 system
- Acer Altos 600 user's guide (with system binder)
- CD-ROM driver kits
- System keys (hung inside the front panel door)

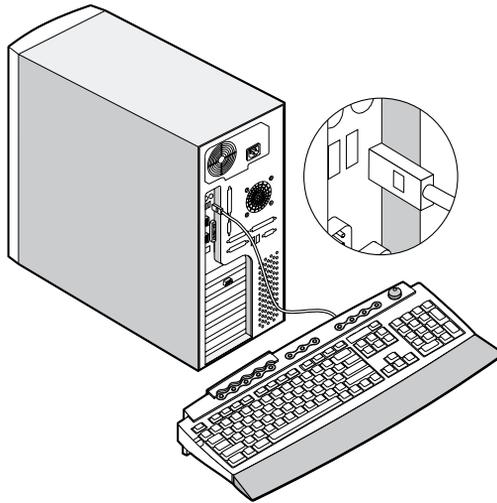
If any of the above items are damaged or missing, contact your dealer immediately.

Save the boxes and packing materials for future use.

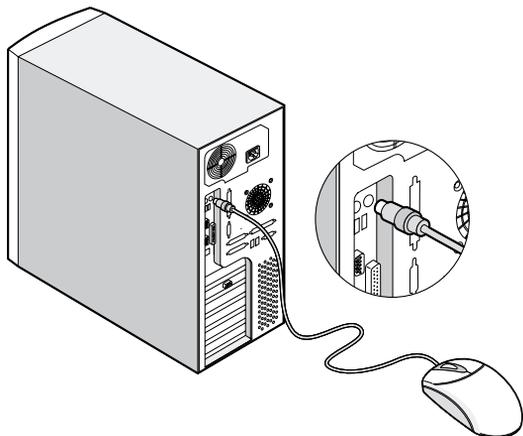
▶ Basic connections

The system unit, keyboard, mouse, and monitor constitute the basic system. Before connecting any other peripherals, connect these peripherals first to test if the system is running properly.

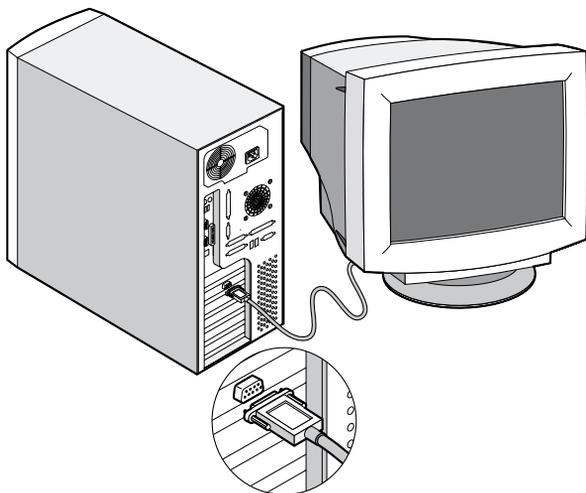
Connecting the keyboard



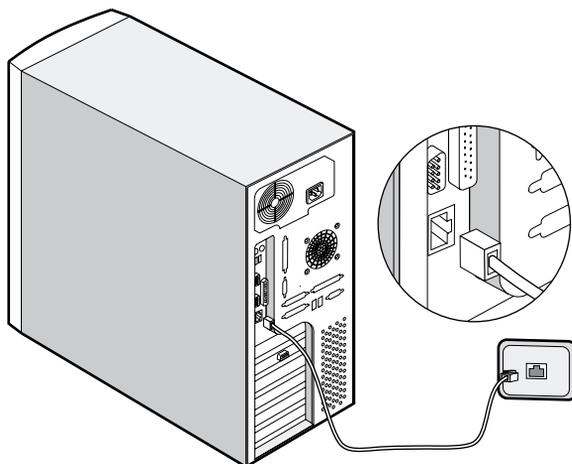
Connecting the mouse



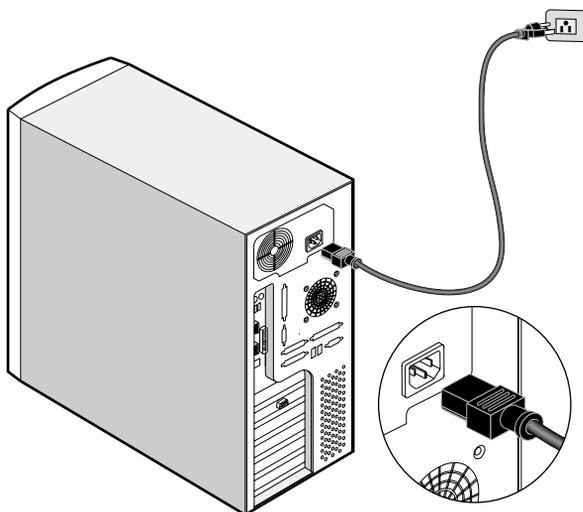
Connecting the VGA monitor



Connecting to the network



Connecting the power cable



▶ System startup

After making sure that you have set up the system properly and connected all the required cables, you may now apply power to the system.

To power on the system:

1. Turn on the power switch to activate the power supply.
2. Open the front panel door and press the On/Off button. The system starts up and displays a welcome message. After that, a series of power-on self-test (POST) messages appears. The POST messages indicate if the system is running well or not.



Note: If the system does not turn on or boot after pressing the On/Off button, go to the next section for the possible causes of the boot failure.

Aside from the self-test messages, you can determine if the system is in good condition by checking if the following occurred:

- Power indicator LED on the front bezel lights up (green)
- Power, Num Lock, and Caps Lock LED indicators on the keyboard light up
- Power supply power LED located at the back of the system lights up (green)

▶ Power-on problems

If the system does not boot after you have applied power, check the following factors that might have caused the boot failure.

- The external power cable may be loosely connected.

Check the power cable connection from the power source to the power socket on the rear panel. Make sure that the cable is properly connected to the power supply.

- No power comes from the grounded power outlet.

Have an electrician check your power outlet.

- Loose or improperly connected internal power cables.

Check the internal cable connections. If you are not confident to perform this step, ask a qualified technician to help you.



.....
Warning! Make sure all power cords are disconnected from the electrical outlet before performing this task.

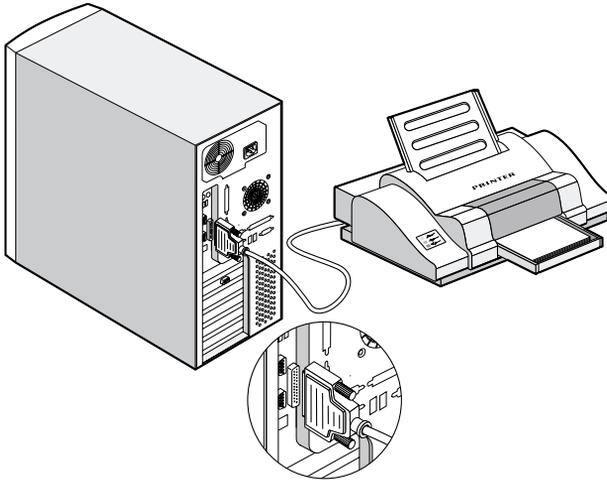


.....
Note: If you have gone through the preceding actions and the system still fails to boot, ask your dealer or a qualified technician for assistance.

▶ Connecting options

Printer

To connect a printer, plug the printer cable into the parallel port located on the rear panel of your system.

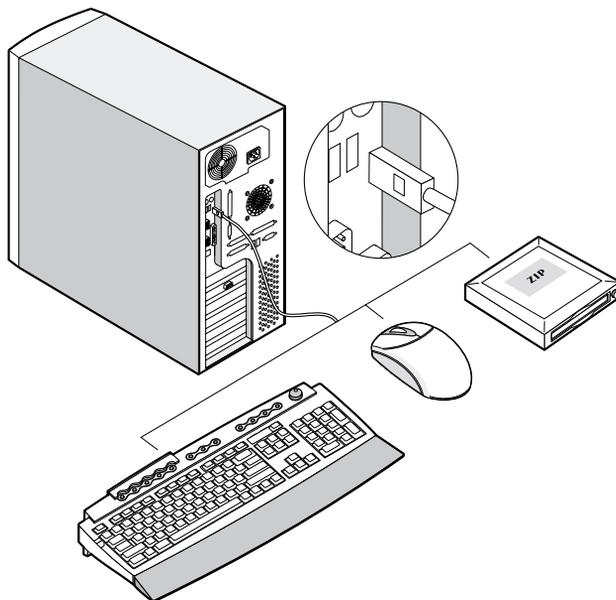


USB devices

Universal Serial Bus (USB) is a new serial bus design that is capable of cascading low-/medium-speed peripherals (less than 12 Mbps) such as a keyboard, mouse, joystick, scanner, printer and modem. With USB, complex cable connections can be eliminated.

Your system comes with two USB ports. These ports allow you to connect additional serial devices to your system without using up its system resources.

To connect a USB device, simply plug the device cable into any of the USB ports also located at the rear panel of your system.



Note: Most USB devices have a built-in USB port which allows you to daisy-chain other devices.

2 System tour



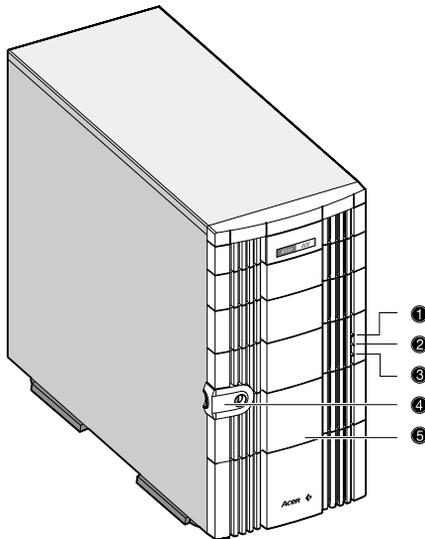
This chapter discusses the features and components of your computer.

► External and internal structure

Front panel

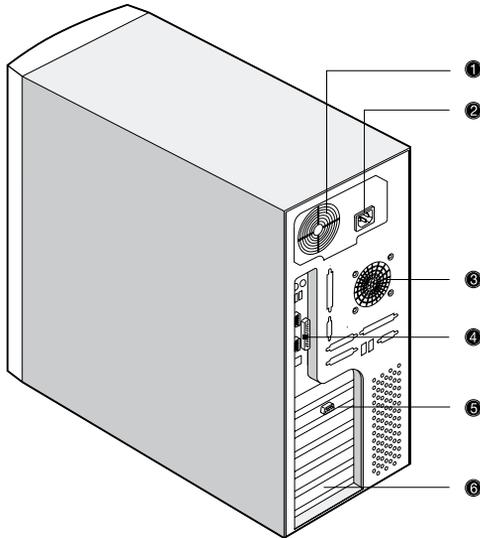


Note: One pair of system keys are hung inside the front panel door. Additional duplicate keys can be found at the back of the system.



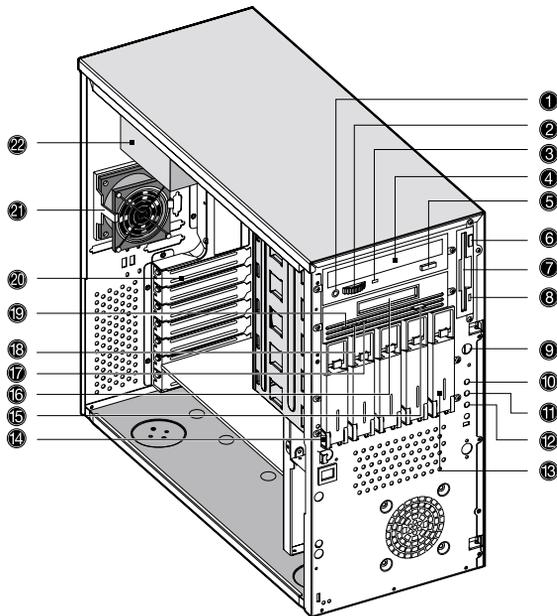
No.	Item
1	Power LED
2	Hard disk LED
3	System status LED
4	Keylock
5	Front panel

Rear panel



No.	Item
1	Power supply
2	Power cord connector
3	Housing fan
4	System board connectors (see page 23)
5	Video port
6	Expansion slots

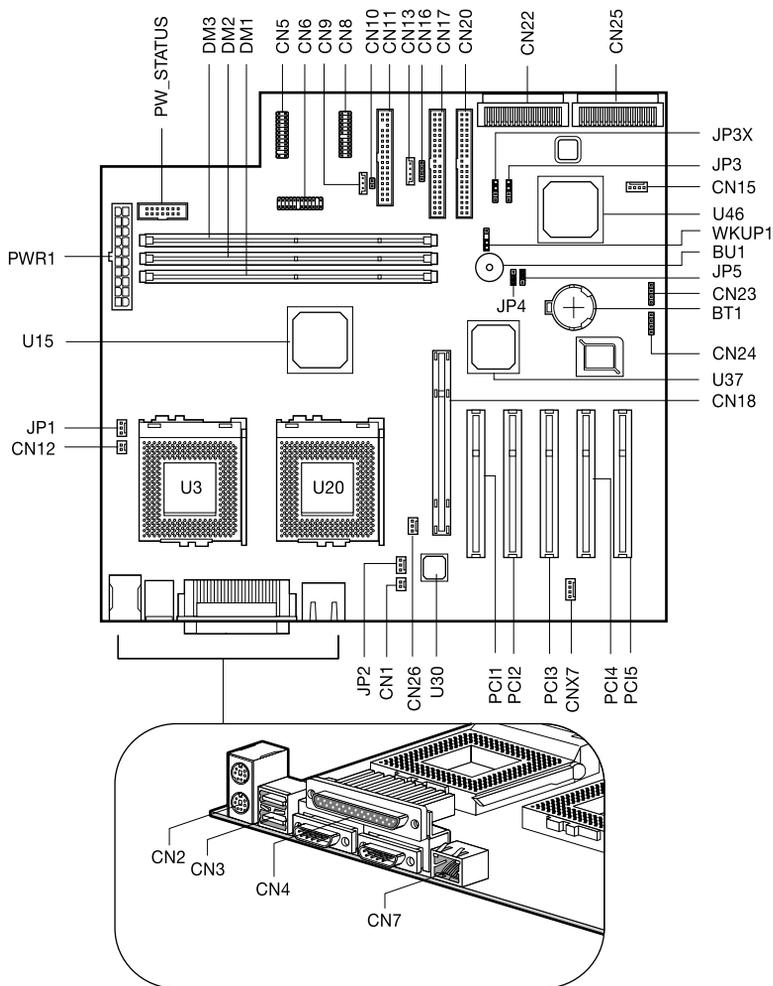
Internal components



No.	Item
1	CD-ROM Headphone/Earphone port
2	Volume tuner
3	CD-ROM LED
4	CD-ROM tray
5	Stop/Eject button
6	Floppy disk drive eject button
7	Floppy disk drive tray
8	Floppy disk drive LED
9	Power button
10	Power LED
11	Hard disk LED
12	System status LED
13	Removable hard disk drive trays

No.	Item
14	Keylock
15	Tape drive eject button
16	Tape drive tray
17	Drive LED (amber)
18	Media LED (green)
19	Clean LED (green)
20	Expansion slots
21	Housing fan
22	Power supply

System board layout

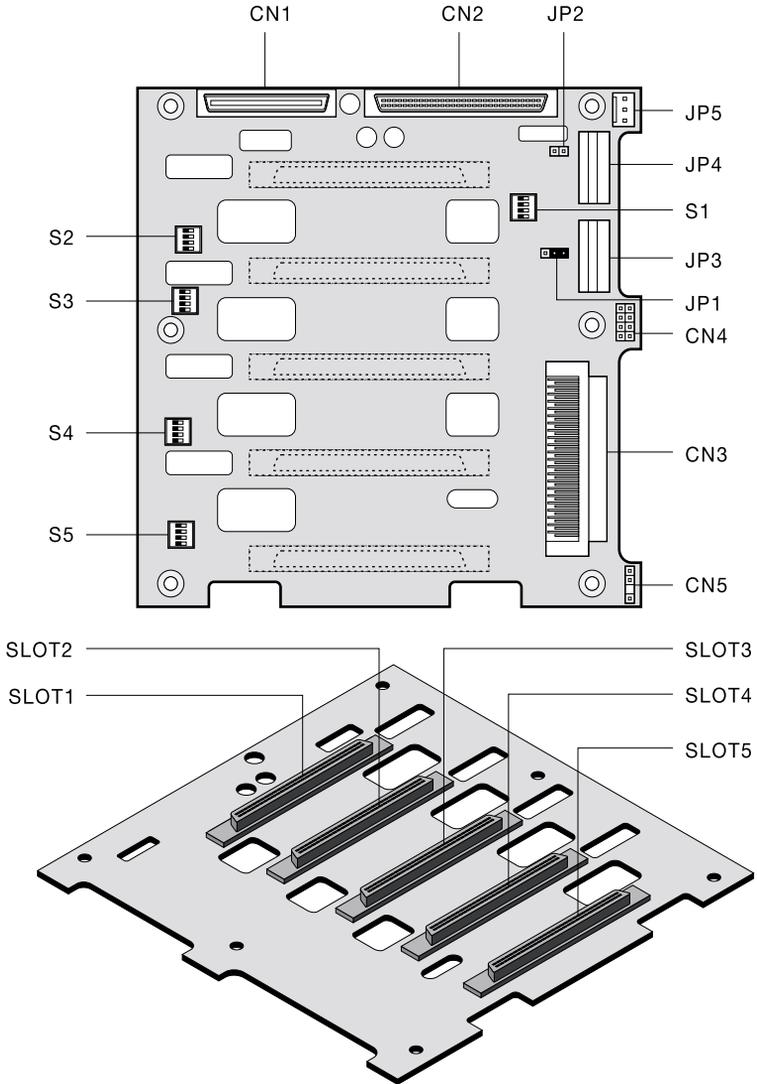


Item	Description
BU1	Internal Buzzer
BT1	Battery
CN1	CPU socket 1 thermal sensor connector

Item	Description
CN2	Above: PS/2 mouse port Below: PS/2 keyboard port
CN3	USB ports
CN4	Above: Parallel port Left: Serial port 1 Right: Serial port 2
CN5	BMC connector
CN6	Multi connector
CN7	LAN jack (RJ-45)
CN8	BMC connector
CN9	Wake on LAN connector
CN10	Event LED connector
CN11	FDD connector
CN12	CPU socket 2 thermal sensor connector
CN13	I2C connector
CN15	System fan connector
CN16	HDD backplane I2C connector
CN17	Primary IDE connector
CN18	AGP slot
CN20	Secondary IDE connector
CN22	SCSI channel B connector (68-pin) (Ultra 160/m)
CN23	SCSI LED connector
CN24	SCSI LED connector
CN25	SCSI channel A connector (68-pin) (Ultra 160/m)
CN26	System fan connector
CNX7	System fan connector
DM1-3	DIMM slots
JP1	CPU socket 2 fan connector
JP2	CPU socket 1 fan connector
JP3	SCSI channel A terminator 1-2 On 2-3 Off*
JP3X	SCSI channel B terminator 1-2 On* 2-3 Off
JP4	Onboard buzzer external speaker 1-2* Onboard buzzer 2-3 External speaker

Item	Description
JP5	BIOS selection 1-2 OEM 2-3 Acer*
PCI1-5	PCI slots
PWR_Status	Power status connector
PWR1	ATX power supply connector
U3	CPU socket 2
U15	Apollo Pro 133A chipset (north bridge)
U20	CPU socket 1
U30	Intel 82559 LAN chipset
U37	Apollo Pro 133A chipset (south bridge)
U46	Adaptec AIC-7899 chipset
WKUP1	Wake on Ring connector

► BPL5M jumpers and connectors



Jumper	Setting	Function
JP2	Short	Terminator Power Source both from backplane and host
	Open	Only from Host

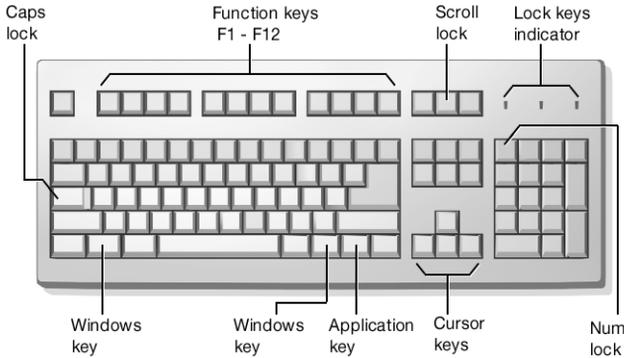
Connector	Description
CN1	For SAF-TE card use
CN2	SCSI 68-pin P connector - Out
CN3	SCSI 68-pin P connector - In
CN4	Front power LED connector
CN5	I2C Buffer connector
JP1	I2C buffer ID setting
JP3	Power connector ¹
JP4	Power connector
JP5	3-pin FAN connector
S1	Slot 1 ID switch ²
S2	Slot 2 ID switch
S3	Slot 3 ID switch
S4	Slot 4 ID switch
S5	Slot 5 ID switch
Slot1	SCSI slot 1 connector
Slot2	SCSI slot 2connector
Slot3	SCSI slot 3 connector
Slot4	SCSI slot 4 connector
Slot5	SCSI slot 5 connector

1 For the SCSI Backplane board's loading requirement, please insert an independent Power cable that doesn't connect to any other device to each power connector on the Backplane board.

2 When you use the LVD SCSI hot-swap cage to arrange your system hard drives, please remove all the jumpers on each SCSI hard drive and use the switches on the backplane board (S1~S5) to set the hard drive's ID.

Keyboard

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



Cursor keys

The cursor keys, also called the arrow keys, let you move the cursor around the screen. They serve the same function as the arrow keys on the numeric keypad when the Num Lock is toggled off.

Lock keys

The keyboard has three lock keys which you can toggle on and off to switch between two functions.

Lock Key	Description
Caps Lock	When activated, all alphabetic characters typed appear in uppercase (same function as pressing Shift + <letter>).
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 /).

Lock Key	Description
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.

Windows keys

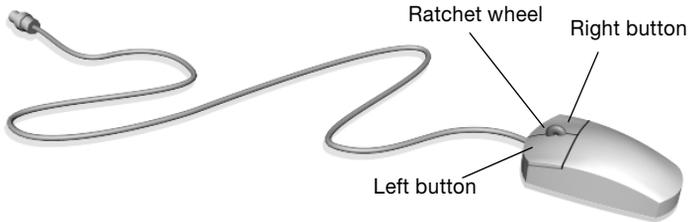
The keyboard has two keys that perform Windows-specific functions.

Key	Description
Windows logo key 	Start button. Combinations with this key perform special functions, such as: <ul style="list-style-type: none"> • Windows + Tab: Activate the next Taskbar button • Windows + E: Explore My Computer • Windows + F: Find Document • Windows + M: Minimize All • Shift + Windows + M: Undo Minimize All • Windows + R: Display Run dialog box
Application key 	Opens the applications context menu (same function as clicking the right button of the mouse).

▶ Mouse

Your mouse has one ratchet wheel and two buttons: a left button and a right button. Quickly pressing and releasing the buttons is called clicking. Sometimes, you will need to do a double-click (clicking the same button twice quickly) or a right-click (clicking the right button quickly).

The ratchet wheel in between the two buttons is added to provide easier scrolling capability. By simply moving the wheel with your index finger, you can quickly move through multiple pages, lines, or windows. The wheel may also function as a third button allowing you to quickly click or double-click an icon or a selected item.



Note: If you are left-handed, refer to your Windows manual for instructions on how to set up your mouse for left-handed use.

► Disk drives

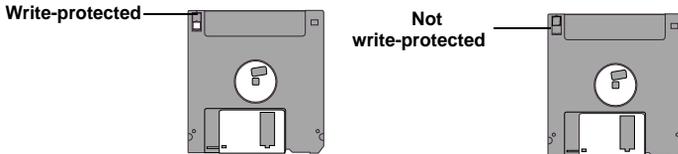
Your system comes with the following disk drives:

3.5-inch floppy disk drive

Your system's 3.5-inch floppy disk drive can handle 720-KB and 1.44-MB capacity diskettes.

The floppy diskettes are compact, lightweight, and easy to carry around. Here are some tips on how to take care of your diskettes:

- Always make backup copies of the diskettes that contain important data or program files.
- Keep diskettes away from magnetic fields and sources of heat.
- Avoid removing a diskette from a drive when the floppy drive activity light is on.
- Write-protect your diskettes to prevent accidental erasure. To do this, slide the write-protect tab to the write-protect position.



- When you put a label on a 3.5-inch diskette, make sure that the label is properly attached (flat on the surface) and within the labeling area (area with a slight surface depression) on the diskette. An improperly attached label may cause a diskette to get stuck in a drive when you are inserting or removing it.

CD-ROM drive

Your system comes with a CD-ROM drive. This drive is located on the front panel of your system. The CD-ROM drive allows you to play different types of compact discs (CDs) and video CDs. CDs, like diskettes, are also compact, lightweight, and easy to carry around. However, they are more delicate than diskettes and must be handled with extra care.

To insert a CD into your system's CD-ROM drive:

1. Gently push the eject button located on the front panel.
2. When the disc tray slides open insert the CD. Make sure that the label or title side of the disc is facing upward.

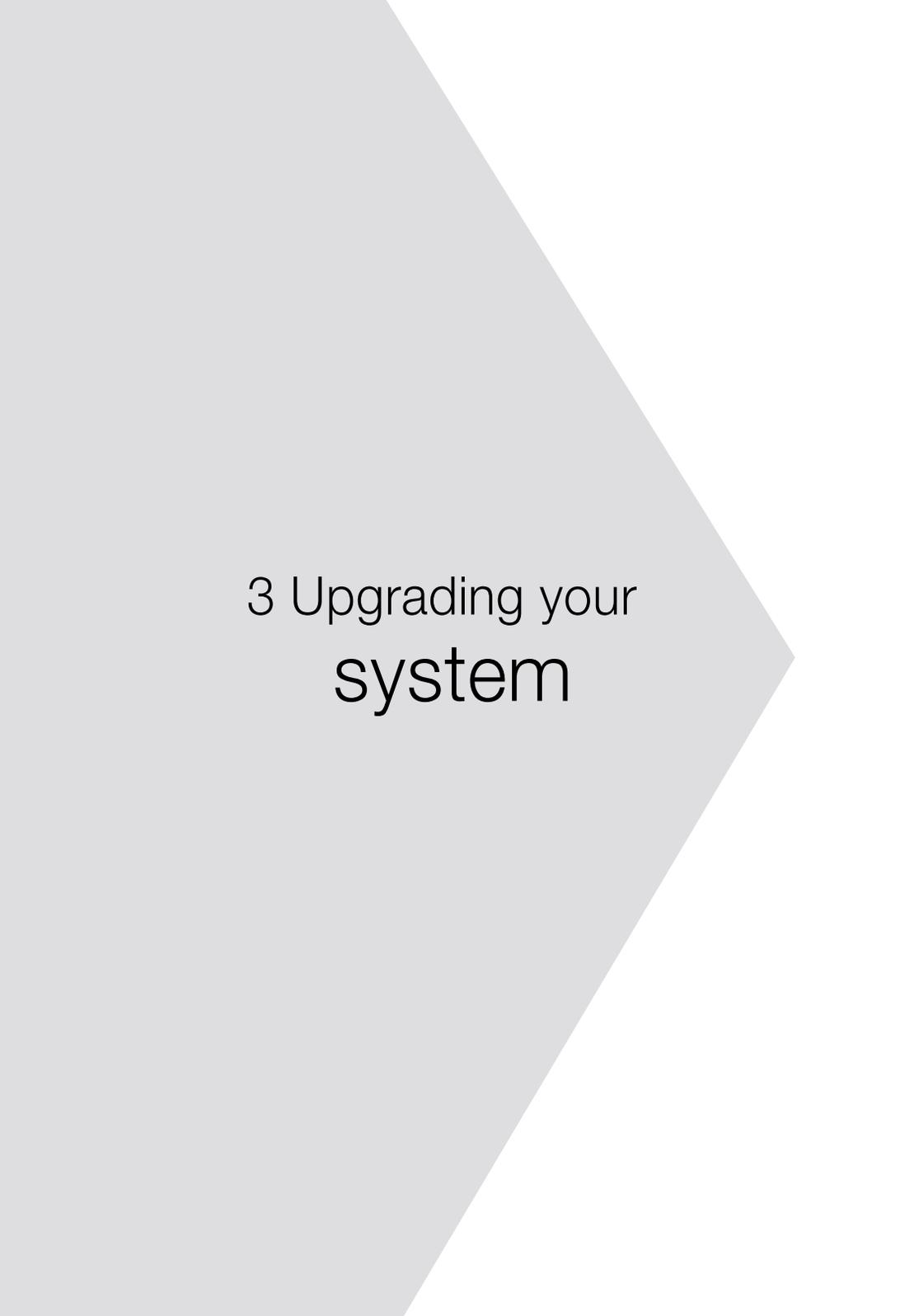


Caution! Hold the disc by the edges to avoid leaving smudges or fingerprints.

3. Push the eject button again to close the tray.

To take care of your CDs:

- Keep your discs in a disk case when not in use to avoid scratches or other damage. Any kind of dirt or damage can affect the data on the disc, impair the disc lens reader on the CD-ROM drive, or stop the system from successfully reading the disc.
- When handling discs, always hold them by the edges to avoid smudges or fingerprints.
- When cleaning discs, use a clean, dust-free cloth and wipe in a straight line from the center to the edge. Do not wipe in a circular motion.
- Clean your CD-ROM drive periodically. You may refer to the Cleaning Kit for instructions. Cleaning Kits can be purchased in any system or electronics shop.



3 Upgrading your system



This chapter contains instructions on how to upgrade your computer and basic information about your system boards that you will find helpful when performing the upgrade process.

► Installation precautions

Before you install any system component, we recommend that you read the following sections. These sections contain important ESD precautions along with preinstallation and post-installation instructions.

ESD precautions

Electrostatic discharge (ESD) can damage your processor, disk drives, expansion boards, and other components. Always observe the following precautions before you install a computer component:

1. Do not remove a component from its protective packaging until you are ready to install it.
2. Wear a wrist grounding strap and attach it to a metal part of the computer before handling components. If a wrist strap is not available, maintain contact with the computer throughout any procedure requiring ESD protection.

Preinstallation instructions

Always observe the following before you install any component:

1. Turn off your system and all the peripherals connected to it before opening it. Then unplug all cables from the power outlets.
2. Open your computer according to the instructions on page 37.
3. Follow the ESD precautions described above before handling a computer component.
4. Remove any expansion boards or peripherals that block access to the DIMM sockets or component connector.
5. See the following sections for specific instructions on the component you wish to install.



.....

Warning! Not turning off the computer properly before you start installing the components may cause serious damage. Do not attempt the procedures described in the following sections unless you are a qualified service technician.

Post-installation instructions

Observe the following after installing a computer component:

1. See to it that the components are installed according to the step-by-step instructions in their respective sections.
2. Replace any expansion boards or peripherals that you removed earlier.
3. Replace the computer cover.
4. Connect the necessary cables and turn on your computer.

► Opening your system



Caution: Before you proceed, make sure that you have turned off your computer and all peripherals connected to it. Read the “Preinstallation instructions” on page 35.

You need to open your computer before you can install additional components. See the following section for instructions.

Opening the front panel door

A security lock secures the front door to protect against unauthorized access.

To open the front door:

1. Insert the key into the lock and turn it clockwise until it points to the unlocked icon.
2. Pull open the front door.

Removing the front panel door

The doors are attached to the main housing by screwless hinges. Follow these steps to remove the door:

1. Unlock the door with the key (when necessary).
2. Open it to more than a 45° angle.
3. Lift it up a little, then move it away from the housing.

Opening the side panel

The system housing has one front door and one removable side panel. Always observe the following ESD (electrostatic discharge) precautions before installing any system component:

1. Do not remove any system component from its packaging unless you are ready to install it.

2. Wear a wrist grounding strap before handling electronic components. Wrist grounding straps are available at most electronic component stores.

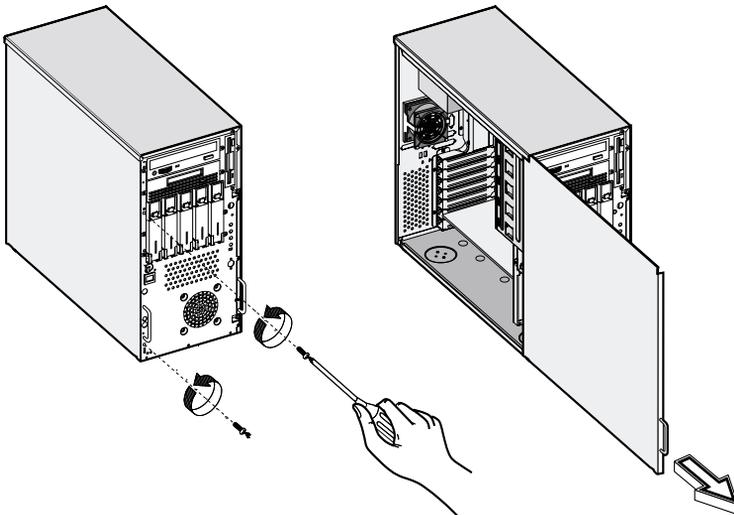


Danger! DO NOT attempt the procedures in the following sections unless you are confident of your capability to perform them. Otherwise, ask a service technician for assistance.

A microswitch is allocated on the side panel. It helps indicate whether the panel is removed or intact. Also, a security lock secures the front panel to protect against unauthorized access.

To remove the side panel:

1. Turn off the power to the system unit and unplug all cables.
2. Place the system unit on a flat, steady surface.
3. Use the key provided with the system to unlock and open the front panel door.
4. Remove the two front screws with a Phillips screwdriver. Keep them in a safe place for later use.



5. Pull out the panel handle.
6. Detach the side panel using the panel handle.

▶ Installing and removing storage devices

The housing supports one 3.5-inch and five 5.25-inch internal storage devices. The empty drive bays allow you to install additional drives such as a CD-ROM drive, digital audio tape (DAT) drive or another hard disk drive.

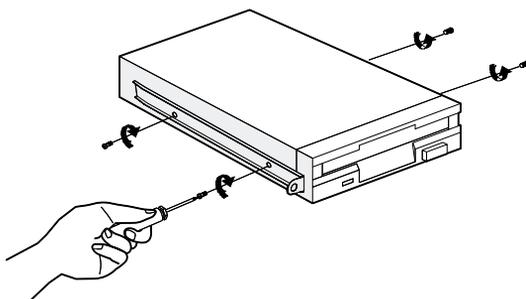


Note: Your basic system comes with a CD-ROM drive and a 3.5-inch diskette drive already installed.

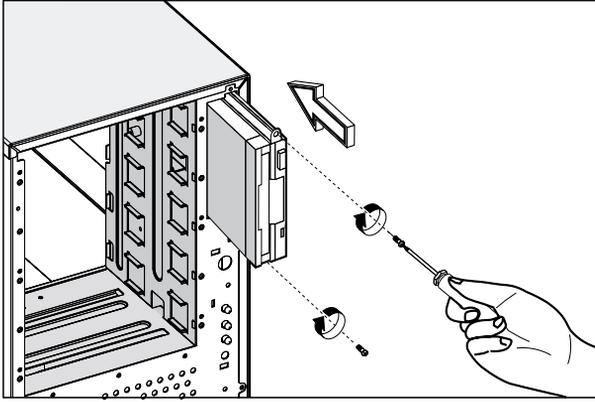
Replacing a 3.5-inch storage device

To replace a 3.5-inch storage device:

1. Open the front panel door and remove the left panel. See page 37 for more information on opening the housing panels.
2. Disconnect the power and signal cable from the old drive.
3. Detach the old 3.5-inch drive with the drive frame from the housing by removing two screws. Keep the screws for later use.
4. Remove the drive frames from the old drive.
5. Attach the drive frames to the new drive securing them with four screws as shown below.



6. Insert the new drive into the drive bay and secure it with the two screws removed in step 3.



7. Connect the power and signal cable to the drive.
8. Reinstall the side panel.

Installing a BPL5M hot-swap cage

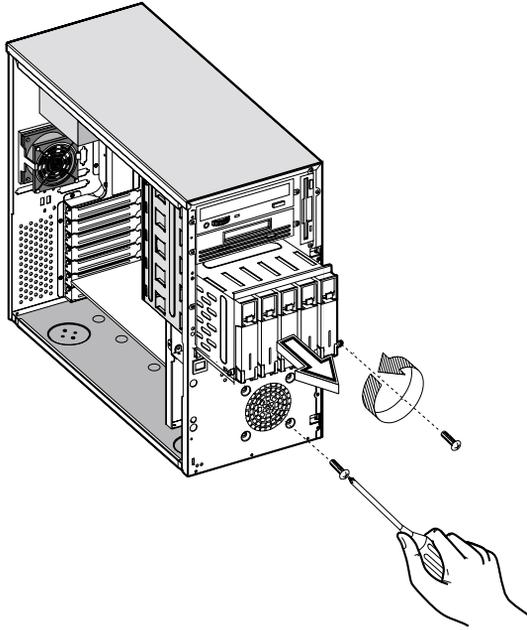
The BPL5M hot-swap cage box includes the following components:

- One hot-swap cage (with backplane board attached)
- Five hard disk drive trays
- One system board connector cable
- Two hard disk drive fault LED connector cables

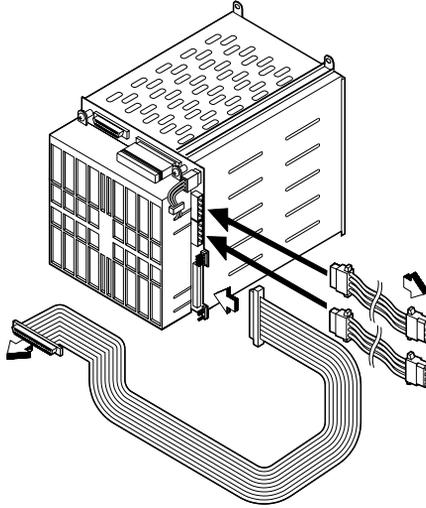
To install the hot-swap cage into the housing:

1. Open the front panel door and remove the side panel. See page 37 for more information.

2. Insert the hot-swap cage into the housing and secure the hot-swap cage with two screws. The BPL5M hot-swap cage occupies three 5.25-inch drive bays.

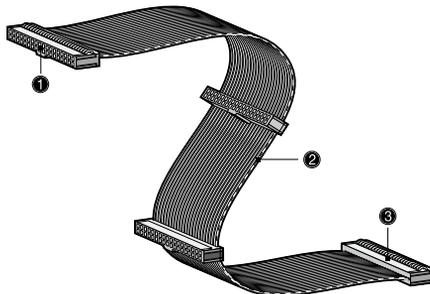


3. Attach the power cable, the SCSI terminator, the HDD fault LED cable, and the system board connector cable to the backplane board and attach the other end of the connector cable to the system board. For the location of the SCSI connector, please refer to page 23.



4. Reinstall the side panel.

System board connector cable

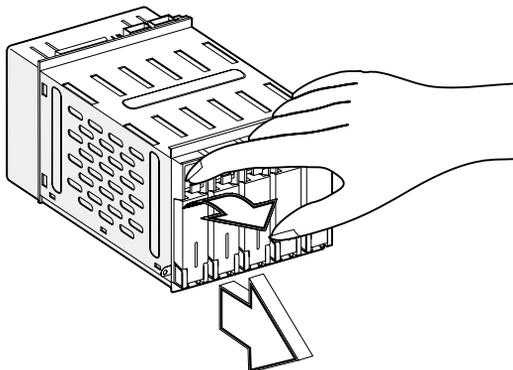


No.	Item
1	Connects to the system board
2	Red strip
3	Connects to the hot-swap cage

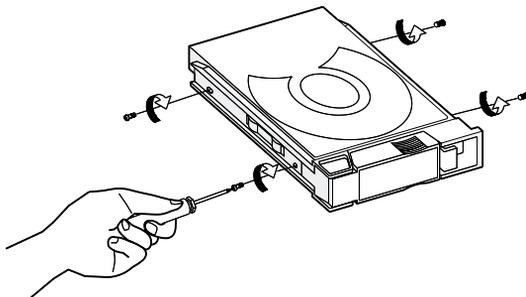
Installing and removing a BPL5M hard disk drive tray

To remove and install a BPL5M hard disk drive tray:

1. Use your finger to release the drive tray and then pull it out.



2. Place a hard disk on the tray. Secure it with four screws.



3. Insert the tray into the hot-swap cage with the lever still extended. Make sure that the drive is properly inserted before closing the lever.

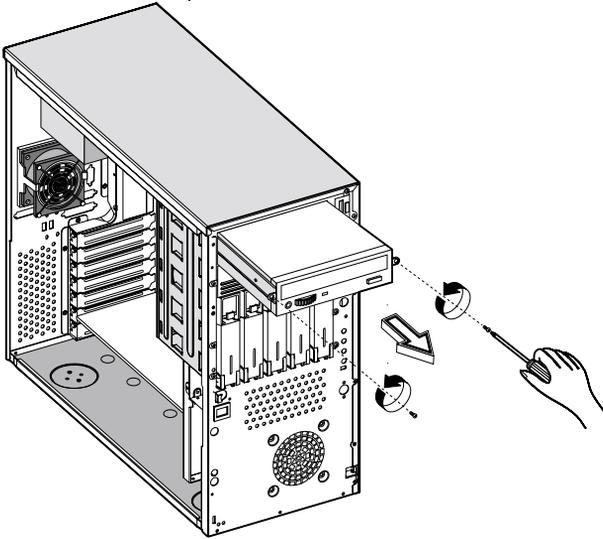
Replacing a 5.25-inch storage device (optional)



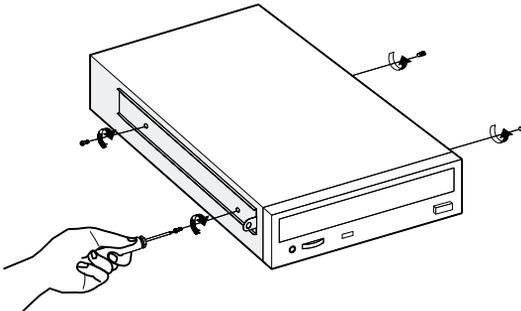
.....
Note: If you are installing a new drive in an empty drive bay, skip steps 2 to 4.

To replace a 5.25-inch storage device:

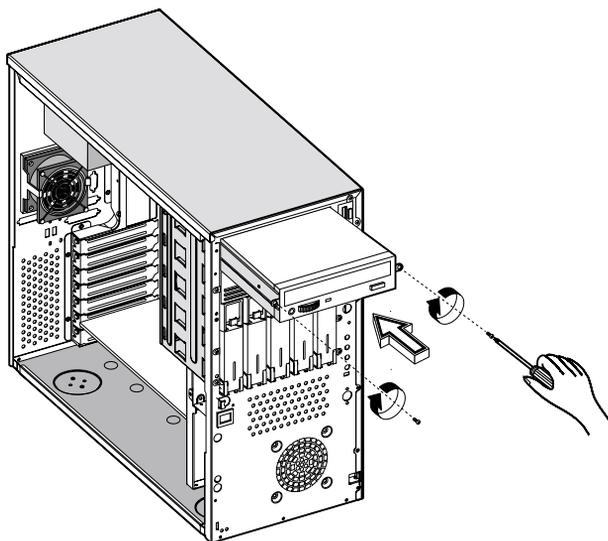
1. Open the front panel door and remove the left panel. See page 37 for more information on opening the housing panels.
2. Detach the power and signal cable from the drive.
3. Detach the 5.25-inch drive with the drive frame by removing two screws. Keep the screws for later use.



4. Remove the drive frames from the old drive by removing four screws. Keep the screws for later use.
5. Attached the drive frames to the new drive securing it with four screws.



6. Insert the new drive into the drive bay and secure it with two screws.



7. Connect the power and signal cable to the drive.
8. Reinstall the side panel.

▶ Installing and removing the CPU

The Pentium III comes in a FC-PGA (Flip-Chip Pin-Grid Array) 370-pin package. The FC-PGA package is designed for the new breed of sleek, high performance, small form factor PCs.

The system board supports a Pentium III processor running at 667, 733, 800, or 866 MHz, and future generations of Pentium CPUs on a 133 MHz system BUS.



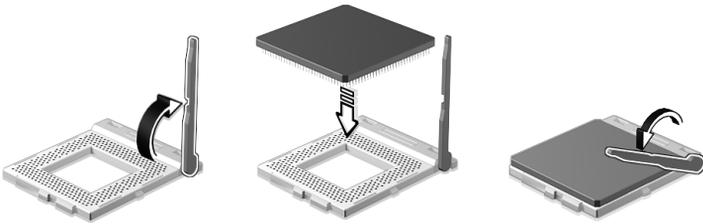
Caution: Always observe the ESD precautions when installing or removing a system component. Refer to page 35.

Installing a CPU

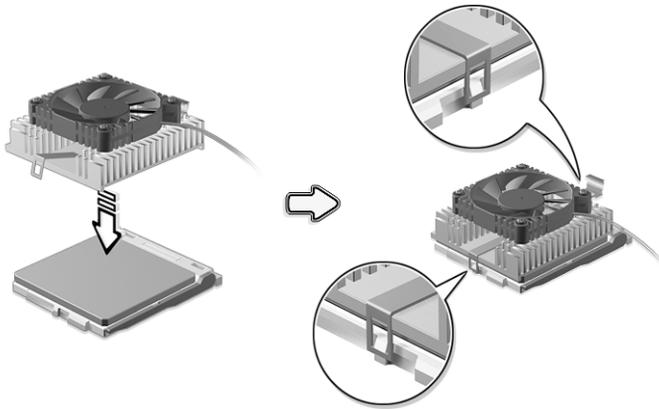
Follow these steps to install a CPU:

1. Remove the processor from its protective packaging.
2. Insert the new CPU into the CPU socket. Make sure that pin 1 (indicated by a notched corner) of the CPU connects to hole 1 of the socket.

Push down the socket lever to lock the new CPU into the socket.



3. Attach one side of the fan/heatsink metal bracket to the CPU socket and then gently push down the other side of the metal bracket until it locks in place.



4. Connect the 3-pin and 2-pin fan/heatsink cables to the system board. Refer to section “System board layout” on page 23 for the location of the fan/heatsink connectors.



.....

Caution: The heatsink becomes very hot when the system is on.
NEVER touch the heatsink with any metal or with your hands.

Removing a CPU

Follow these steps to remove a CPU:

1. Disconnect the 3-pin and 2-pin fan/heatsink cables from the system board.
2. Unhook one side of the fan/heatsink metal bracket and gently lift it before removing the other side.
3. Gently push the socket lever down to release the lever and then pull it up.
4. Remove the CPU.

▶ Installing and removing memory modules

The three 168-pin sockets onboard support SDRAM-type DIMMs. You may install 64-MB, 128-MB, 256-MB, or 512-MB (single and double density) DIMMs for a maximum of 1.5-GB system memory.



Note: The SDRAM should work under 3.3 volts only; 5-volt memory devices are not supported.

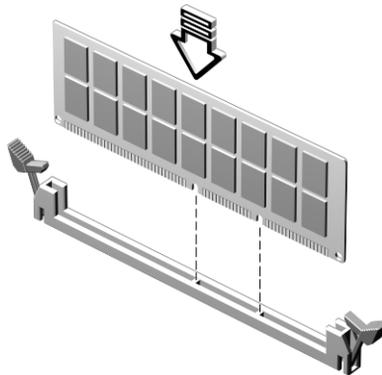
This system board supports 100 and 133 MHz SDRAM. However, they cannot be used at the same time in the system.



WARNING! Do not use both 100 MHz and 133 MHz SDRAM together. This might cause your system to malfunction. For a qualified DIMM vendor list, please contact your reseller.

Each of the DIMM sockets is independent from the others. This independence allows you to install DIMMs with different capacities to form different configurations.

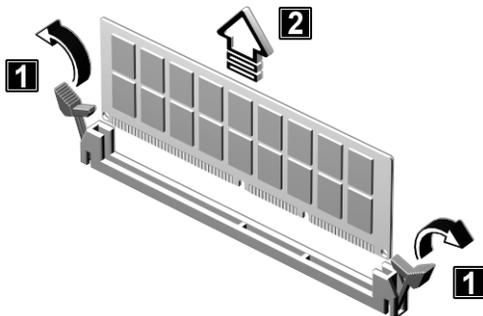
To install a DIMM, align it to an empty slot and press it in until the holding clips secure the DIMM in place.





Note: The DIMM socket is slotted to ensure proper installation. If you slip in a DIMM but it does not completely fit, you may have inserted it the wrong way. Reverse the orientation of the DIMM.

To remove a DIMM, press the holding clips on both sides of the socket outward to release the DIMM.



Note: Place your forefingers on the top of the DIMM before you press the holding clips to gently disengage the DIMM from the socket.

Reconfiguring the system

The system automatically detects the amount of memory installed. Run Setup to view the new value for total system memory and make a note of it.

▶ Installing expansion cards

There are two kinds of expansion slots available on this system board: PCI (Peripheral Component Interconnect) and AGP (Accelerated Graphics Port).

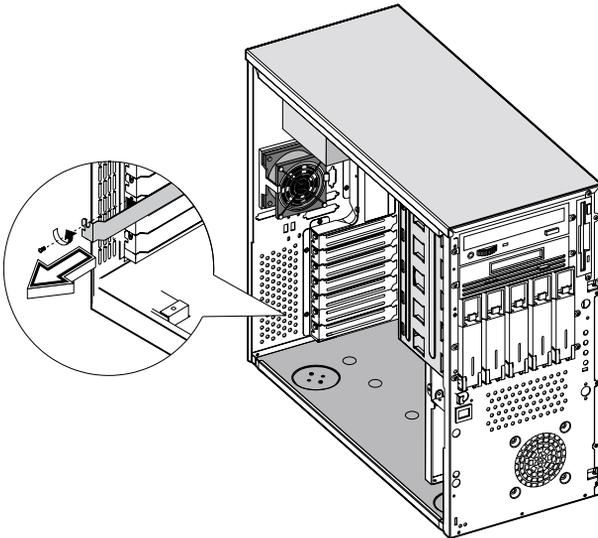
To install expansion cards:

1. Locate an empty expansion slot on the system board.
2. Remove the metal bracket located opposite the empty expansion slot using a Phillips screwdriver.
3. Insert an expansion card into the slot. Make sure that the card is properly seated.
4. Secure the card to the housing with a screw.

When you turn on the system, BIOS automatically detects and assigns resources to the new device.



.....
Note: BIOS detects and configures only PnP (Plug n Play) expansion cards.



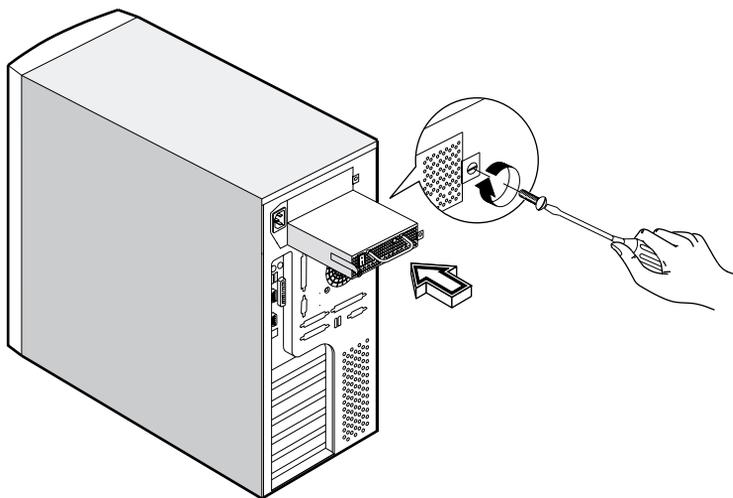
► Hot-swappable redundant power supply module (optional)

The power subsystem consists of two hot-swappable power supply module bays that allow the installation of either one 280-watt fixed power supply or two 337-watt hot-swappable redundant power supply modules. A redundant power configuration enables a fully-configured system to continue running even if one power supply fails.

The system you have comes with a 280-watt fixed power supply.

To install a 337-watts hot-swappable redundant power supply module:

1. Insert the power supply into the housing.



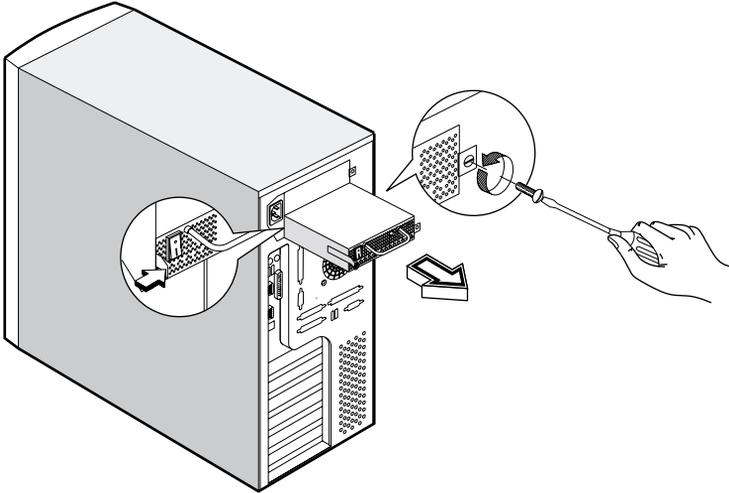
Make sure that the power supply is properly inserted.

2. Secure the power supply with a screw.

To remove a 337-watt hot-swappable redundant power supply:

1. Remove the screw using a flat-head screwdriver.

2. Lift up the metal handle with your right hand and push the lock with your thumb to release the power supply module.



3. Gently pull out the power supply module.



.....

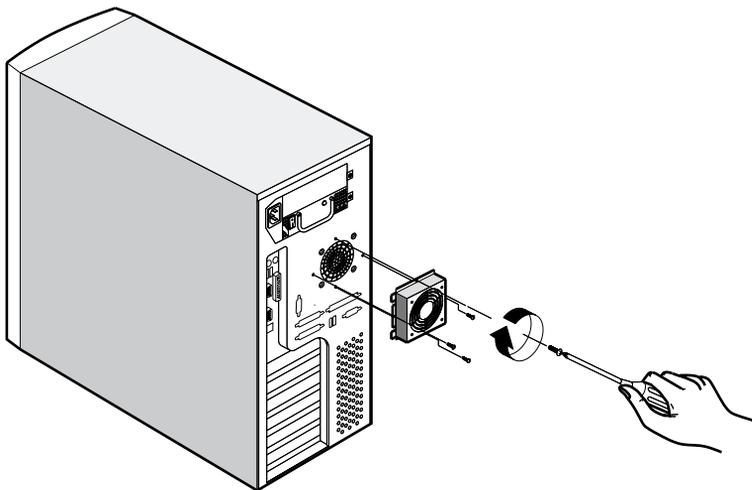
Note: The power supply subsystem should supply a minimum of 280-Watts to the whole system. If you only have one power supply or if you have two power supplies and are planning to remove both of them, remember to turn off the power first and disconnect the power cord from the electrical outlet.

▶ Installing an external redundant system fan (optional)

An additional external redundant fan can be installed behind the system housing. This allows the system to operate properly even though the internal housing fan failed.

To install an external redundant fan:

1. Open the front panel and remove the left panel of the housing. See page 37 for more information.
2. Use the screwdriver to push open the plastic peg located below the internal system fan module.
3. Insert the redundant fan into the fan cage and attach the fan cage to the system housing with four screws.
4. Insert the fan cable into the peg hole and attach the cable to the system board.



4 Setup utility



This chapter gives information about the system BIOS and tells how to configure the system by changing the settings of the BIOS parameters.

► Introduction

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. Ask a qualified technician for assistance.

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, simultaneously press the key combination Ctrl+Alt+Esc.



Note: You must press Ctrl+Alt+Esc while the system is booting. This key combination does not work during any other time.

The system supports two Setup Utility levels: Basic and Advanced.

If you are an advanced user, you may want to check the detailed configuration of your system. Detailed system configurations are contained in the Advanced Level. To view the Advanced Level, press F8 while viewing the main menu.

Use the Up and Down arrow keys to move around the Setup Utility screen.

Use the Left and Right arrow keys to move to the next page or to return to the previous page if the setup screen has more than one page available.

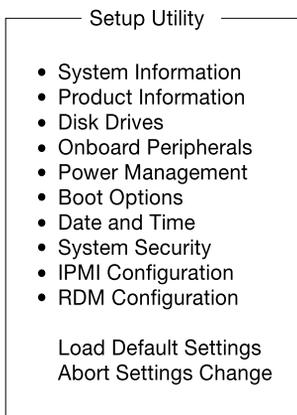
Use the Page Up, Page Down, +, or - keys to select the options if they are available.

Press Esc to return to the main menu.

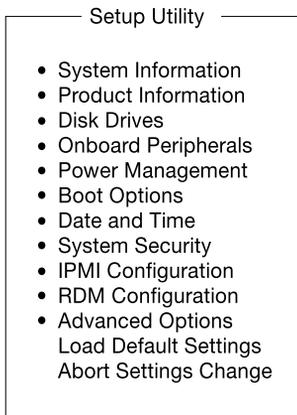


Note: A parameter with an asterisk (*) mark indicates that the parameter appears only when you are in the Advanced Level. Also, grayed items on the screens have fixed settings and are not user-configurable.

Basic Setup Utility main menu



Advanced Setup Utility main menu



i System information

The following screen appears if you select System Information from the main menu:

System Information	
Processor.....	Pentium III
Processor Speed.....	733 MHz
CPU/SDRAM Bus Frequency.....	133/133 MHz
Level 1 Cache.....	32 KB, Enabled
Level 2 Cache.....	256 KB, Enabled
Diskette Drive A.....	1.44 MB, 3.5-inch
Diskette Drive B.....	None
IDE Primary Channel Master.....	Hard Disk, 20404 MB
IDE Primary Channel Slave.....	IDE CD-ROM
IDE Secondary Channel Master.....	None
IDE Secondary Channel Slave.....	None
Total Memory.....	768 MB
1st Bank.....	Registered SDRAM, 256 MB
2nd Bank.....	Registered SDRAM, 256 MB
3rd Bank.....	Registered SDRAM, 256 MB
Serial Port 1.....	3F8h, IRQ 4
Serial Port 2.....	2F8h, IRQ 3
Parallel Port.....	378h, IRQ 7
PS/2 Mouse.....	Installed

Parameter	Description
Processor	Type of processor currently installed in your system
Processor speed	Clock speed of the processor currently installed in your system
CPU/SDRAM bus frequency	Specifies the value of FSB/memory bus frequency
Level 1 cache size	Total amount of first-level or the internal fast accessed memory size (i.e., the memory integrated into the CPU)

Parameter	Description
Level 2 cache size	Total amount of second-level cache memory size that comes with the CPU. The available cache sizes are 256 or 512 KB
Diskette drives A and B	System's current diskette drive A and drive B settings
IDE primary channel master	Current configuration of the IDE device connected to the master port of the primary IDE channel
IDE primary channel slave	Current configuration of the IDE device connected to the slave port of the primary IDE channel
IDE secondary channel master	Current configuration of the IDE device connected to the master port of the secondary IDE channel
IDE secondary channel slave	Current configuration of the IDE device connected to the slave port of the secondary IDE channel
Total memory	Total amount of onboard memory. The memory size is automatically detected by BIOS during the POST. If you install additional memory, the system automatically adjusts this parameter to display the new memory size
1st/2nd/3rd bank	Type and size of DRAM installed in DIMM sockets 1, 2, and 3 respectively. The None setting indicates that there is no DRAM installed
Serial port 1	Serial port 1 address and IRQ setting
Serial port 2	Serial port 2 address and IRQ setting
Parallel port	Parallel port address and IRQ setting
PS/2 mouse	Pointing device installation setting. Displays None if no pointing device is installed

▶ Product information

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

The following shows how the Product Information screen appears:

Product Information	
Product Name.....	Acer Altos 600
System S/N.....	N/A
Main Board ID.....	M25D
Main Board S/N.....	N/A
System BIOS Version.....	v4.0
SMBIOS Version.....	2.3

Parameter	Description
Product name	Official name of the system
System S/N	System's serial number
Main board ID	Mainboard's identification number
Main board S/N	Mainboard's serial number
System BIOS version	Version of the BIOS utility
SMBIOS version	Version of the SMBIOS

▶ Disk drives

Select Disk Drives to input configuration values for disk drives.

The following screen shows the Disk Drives menu:

Disk Drives

Diskette Drive A.....[1.44-MB, 3.5-inch]
 Diskette Drive B.....[None]

- IDE Primary Channel Master
- IDE Primary Channel Slave
- IDE Secondary Channel Master
- IDE Secondary Channel Slave

The following table describes the parameters in this screen.

Parameter	Description	Option
Diskette drive A and B	Selects the floppy disk drive type	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

Parameter	Description	Option
IDE primary channel master and slave	These items let you select the IDE hard disk parameters that your system supports. Auto enables BIOS to automatically detect the parameters of installed HDDs during the POST (power-on self-test). If you prefer to enter HDD parameters manually, select User. Select None if no HDD is connected to the system.	
IDE secondary channel master and slave	The IDE CD-ROM is always automatically detected	

IDE channel type

The following screens appear if you select the IDE drive parameters:

IDE Primary Channel Master/ IDE Secondary Channel Master	
Device Detection Mode.....	[Auto]
Device Type.....	Hard Disk
Cylinder.....	[xxxx]
Head.....	[xx]
Sector.....	[xx]
Size.....	[xxxx] MB
*Hard Disk LBA Mode.....	[Auto]
*Hard Disk Block Mode.....	[Auto]
*Hard Disk 32-bit Access.....	[Enabled]
*Advanced PIO Mode.....	[Auto]
*DMA Transfer Mode.....	[Auto]

IDE Primary Channel Slave/ IDE Secondary Channel Slave	
Device Detection Mode.....	[Auto]
Device Type.....	Hard Disk



Note: A parameter with an asterisk (*) mark indicates that the parameter appears only when you are in the Advanced Level. See "Entering Setup" on page 58 for how to view the advanced level.

Parameter	Description	Option
Device detection mode	Lets you specify the type of hard disk installed in your system. If you want BIOS to automatically configure your hard disk, select Auto. If you know your hard disk type, you can enter the setting manually	Auto User None
Device Type	Indicates a hard disk type device	
Cylinder	Specifies the number of cylinders of your hard disk, and is automatically set depending on your Type parameter setting	User Input
Head	Specifies the number of heads of your hard disk, and is automatically set depending on your Type parameter setting	User Input
Sector	Specifies the number of sectors of your hard disk, and is automatically set depending on your Type parameter setting	User Input
Size	Specifies the size of your hard disk, in MB	User Input
Hard Disk LBA Mode	When set to Auto, the BIOS utility automatically detects if the installed hard disk supports the function. If supported, it allows you to use a hard disk with a capacity of more than 528 MB. This is made possible through the Logical Block Address (LBA) mode translation. However, this enhanced IDE feature works only under DOS, Windows 3.x, Windows 95, Windows 98, Windows NT 3.5 and above, and Windows 2000. Other operating systems require this parameter to be set to Disabled.	Auto Disabled

Parameter	Description	Option
Hard Disk Block Mode	Enhances disk performance depending on the hard disk in use. If you set this parameter to Auto, the BIOS utility automatically detects if the installed hard disk drive supports the Block Mode function. If supported, it allows data transfer in blocks (multiple sectors) at a rate of 256 bytes per cycle.	Auto Disabled
Hard Disk 32-bit Access	Improves system performance by allowing the use of the 32-bit hard disk access. This enhanced IDE feature works only under DOS, Windows 3.x, Windows 95, Windows 98, Windows NT, Windows 2000, and Novell Netware. If your software or hard disk does not support this function, set this parameter to Disabled.	Enabled Disabled
Advanced PIO Mode	When set to Auto, the BIOS utility automatically detects if the installed hard disk supports the function. If supported, it allows for faster data recovery and read/write timing that reduces hard disk activity time. This results in better hard disk performance. To disregard the feature, change the setting to Disabled.	Auto Mode 0 Mode 1 Mode 2 Mode 3 Mode 4 Disabled
DMA transfer mode	The Ultra DMA and Multi-DMA modes enhance hard disk performance by increasing the transfer rate. However, besides enabling these features in the BIOS Setup, both the Ultra DMA and Multi-DMA modes require the DMA driver to be loaded.	Auto Multiword Mode 0, 1, 2 Disabled

▶ Onboard peripherals

Onboard Peripherals allows you to configure the onboard communication ports and the onboard devices. Selecting this option displays the following screen:

```

Onboard Peripherals
-----
Serial Port 1.....[Enabled]
  Base Address.....[3F8h]
  IRQ.....[ 4 ]

Serial Port 2.....[Disabled]
  Base Address.....[2F8h]
  IRQ.....[ 3 ]

Parallel Port.....[Enabled]
  Base Address.....[378h]
  IRQ.....[ 7 ]
  Operation Mode.....[Bi-directional]
  ECP DMA Channel.....[ - ]

Floppy Disk Controller.....[Enabled]
IDE Controller.....[Both]
PS/2 Mouse Controller.....[Enabled]
USB Host Controller.....[Enabled]
  USB Legacy Mode.....[Disabled]

Onboard SCSI.....[Enabled]
Onboard Ethernet Chip.....[Enabled]

```

The following table describes the parameters in this screen.

Parameter	Description	Option
Serial port 1	Enables or disables serial port 1	Enabled
		Disabled
Base address	Sets the I/O base address of serial port 1	3F8h
		2F8h
		3E8h
		2E8h
IRQ	Sets the IRQ (interrupt request) channel of serial port 1	4
		11

Parameter	Description	Option
Serial Port 2	Enables or disables serial port 2	Disabled Enabled
Base Address	Sets the serial port 2 I/O base address	2F8h 3E8h 2E8h
IRQ	Sets the IRQ channel of serial port 2	3 10
Parallel Port	Enables or disables the parallel port	Enabled Disabled
Base Address	Sets a logical base address for the parallel port. This parameter is configurable only if the Parallel Port parameter is enabled	378h 278h
IRQ	<p>Assigns an interrupt for the parallel port. This parameter is configurable only if the Parallel Port parameter is enabled.</p> <p>If you install an add-on card that has a parallel port whose address conflicts with the onboard parallel port, a warning appears on the screen. Check the parallel port address of the add-on card and change the address to one that does not conflict.</p>	7 5
Operation Mode	Sets your parallel port's operation mode. This parameter is configurable only if the Parallel Port parameter is enabled	Enhanced Parallel Port (EPP) Bi-directional Extended Capabilities Port (ECP) Standard Parallel Port
ECP DMA Channel	Assigns a DMA channel for the ECP parallel port function. This parameter is configurable only if you select the Extended Capabilities Port (ECP) as the operation mode	

Parameter	Description	Option
Floppy Disk Controller	Enables or disables the onboard floppy disk controller	Enabled Disabled
IDE Controller	Enables or disables the onboard primary, secondary or both IDE interfaces	Both Primary Secondary Disabled
PS/2 Mouse Controller	Enables or disables the onboard PS/2 mouse controller	Enabled Disabled
USB Host Controller	Enables or disables the onboard USB host controller	Enabled Disabled
USB Legacy Mode	Activates or deactivates the USB keyboard connected to your system. When activated, the USB keyboard functions in a DOS environment	Disabled Enabled
Onboard SCSI	Enables or disables the onboard SCSI controller	Enabled Disabled
Onboard Ethernet chip	Enables or disables the onboard Ethernet controller	Enabled Disabled

► Power management

The Power Management menu allows you to configure the system power-management feature.

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

Power Management	
Power Management Mode.....	[Enabled]
IDE Hard Disk Standby Timer.....	[Off]
System Sleep Timer.....	[Off]
Sleep Mode.....	[-----]
Power Switch <4 sec.	[Power Off]
System wake-up event	
Modem Ring Indicator.....	[Enabled]
PCI Power Management.....	[Enabled]
RTC Alarm.....	[Disabled]
Resume Day.....	[--]
Resume Time.....	[--:--:--]
Restart on AC/Power Failure.....	[Enabled]

The following table describes the parameters in this screen.

Parameter	Description	Option
Power management mode	Allows you to reduce power consumption. When this parameter is set to Enabled, you can configure the IDE hard disk and system timers. Setting it to Disabled deactivates the power-management feature and its timers	Enabled Disabled
IDE hard disk standby timer	Allows the hard disk to enter standby mode after inactivity of 1 to 15 minutes, depending on your setting. When you access the hard disk again, allow 3 to 5 seconds (depending on the hard disk) for the disk to return to normal speed. Set this parameter to OFF if your hard disk does not support this function	Off 1 minute 15 minutes

Parameter	Description	Option
System sleep timer	This parameter sets the system to the lowest power-saving mode after a specified period of inactivity. Any keyboard or mouse action or any activity detected from the IRQ channels resumes system operation	Off On
Sleep mode	Lets you specify the power-saving mode that the system will enter after a specified period of inactivity. This parameter becomes configurable only if the System Sleep Timer is on. Any keyboard or mouse action, or any enabled monitored activities occurring through the IRQ channels resume system operation	Standby Suspend
Power switch < 4 sec.	When set to Power Off, the system automatically turns off when the power switch is pressed for less than 4 seconds. When set to Suspend, the system enters the suspend mode when the power switch is pressed for less than 4 seconds	Power off Suspend
System wake-up event	The system wake-up event allows the system to resume operation when the modem ring indicator is enabled	
Modem ring indicator	When Enabled, any fax/modem activity wakes up the system from suspend mode	Enabled Disabled
PCI power management	Enables or disabled the PCI power management function	Enabled Disabled
RTC alarm	Allows you to set a certain time on a certain day to wake-up your system from suspend mode	Disabled Enabled
Resume day	If RTC alarm is enabled, the system will resume operation on the day indicated here	User input
Resume time	If RTC alarm is enabled, the system will resume operation at the time indicated here	User input

Parameter	Description	Option
Restart on AC/ Power failure	<p>When power failure occurs and this setting is enabled, the system will be turned on, when the power comes back, if the system was on.</p> <p>When power failure occurs and this setting is disabled, the system remains off when the power comes back, even the system was on before power failure occurs</p>	Enabled Disabled

► Boot options

This option allows you to specify your preferred settings for bootup.

The following screen appears if you select Boot Options from the main menu:

Boot Options	
Boot Sequence	
1st [Floppy Disk A:]	
2nd [Hard Disk C:]	
3rd [IDE CD-ROM]	
Fast Boot.....	[Auto]
Silent Boot.....	[Enabled]
Num Lock After Boot.....	[Enabled]
Memory Test.....	[Disabled]
Release All Blocked Memory.....	[Disabled]
*Configuration Table.....	[Enabled]
*POST Error Stop.....	[Enabled]
*Single Processor MP Table.....	[Enabled]
*MP Table Version.....	[v1.4]



.....

Note: A parameter with an asterisk (*) mark indicates that the parameter appears only when you are in the Advanced Level. See “Entering Setup” on page 58 for how to view the advanced level.

The following table describes the parameters in this screen. Settings in boldface are the default and suggested parameter settings.

Parameter	Description	Option
Boot Sequence	<p>This parameter allows you to specify the boot search sequence during POST.</p> <p>1st. The system checks this drive first.</p> <p>2nd. The system then checks this drive if it can not boot from the 1st specified drive.</p> <p>3rd. If the 1st and 2nd searches fail then it boots from this drive.</p> <p>BIOS will display an error message if the drive(s) specified is not bootable</p>	
Fast boot	Allows the system to boot faster by skipping some POST routines	Disabled Auto
Silent boot	<p>Enables or disables the Silent Boot function. When set to Enabled, BIOS is in graphical mode and displays only an identification logo during POST and while booting. After booting the screen displays the operating system prompt (such as DOS) or logo (such as Windows 95). If any error occurs while booting, the system automatically switches to the text mode.</p> <p>Even if your setting is Enabled, you may also switch to the text mode while booting by pressing the Delete key when you see the "Press DELETE key to enter setup" message on the screen.</p> <p>When set to Disabled, BIOS is in the conventional text mode where you see the system initialization details on the screen</p>	Enabled Disabled
Num lock after boot	Allows you to activate the Num Lock function upon booting	Enabled Disabled
Memory test	When set to Enabled, this parameter allows the system to perform a RAM test during the POST routine. When set to Disabled, the system detects only the memory size and bypasses the test routine	Enabled Disabled

Parameter	Description	Option
Release all blocked memory	When set to Enabled, this parameter allows the system to bypass testing the defective memory banks detected earlier	Disabled Enabled
Configuration table	Displays preboot system configuration table when enabled	Enabled Disabled
POST Error Stop	When enabled, if the POST finds an error, it will stop and the user has to press F1 to continue. If disabled, even when the POST finds an error, it will not stop	Enabled or Disabled
Single Processor MP Table	<p>Enabling this parameter allows BIOS to create a multiprocessor (MP) table for Windows NT use. In a single-processor system running Windows NT, you may disable this parameter to enhance system performance. If you install another processor for a dual (or multiprocessor) system, enable this parameter and then reinstall Windows NT.</p> <p>In cases when this parameter is enabled before installing Windows NT in a single-processor system, you may upgrade to a multiprocessor system without reinstalling Windows NT</p>	Enabled or Disabled
MP Table Version	This parameter shows the multiprocessor specification compliance version. The default setting is V1.4. If you install an older operating system, particularly SCO UNIX V3.2.x.x or earlier, set this parameter to V1.1	V1.4 or V1.1

► Date and time

The real-time clock keeps the system date and time. After setting the date and time, you do not need to enter them every time you turn on the system. As long as the internal battery remains good (approximately seven years) and connected, the clock continues to keep the date and time accurately even when the power is off.

Date and Time

Date.....[WWW MMM DD, YYYY]
 Time.....[HH:MM:SS]

Parameter	Description
Date	Set the date following the weekday-month-day-year format. Valid values for weekday, month, day, and year are: Weekday: Sun, Mon, Tue, Wed, Thu, Fri, Sat Month: Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec Day: 1 to 31 Year: 1980 to 2079
Time	Set the time following the hour-minute-second format. Valid values for hour, minute, and second are: Hour: 00 to 23 Minute: 00 to 59 Second: 00 to 59

► System security

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

The following screen appears if you select System Security from the main menu:

```

System Security
-----
Supervisor Password.....[None]
User Password.....[None]
Disk Drive Control
  Floppy Drive.....[Normal]
  Hard Disk Drive.....[Normal]

Processor Serial Number.....[Disabled]
  
```

Parameter	Description	Option
Supervisor Password	Prevents unauthorized access to the BIOS utility. The Preset setting allows you to set a Supervisor password	None Present
User Password	Secures your system against unauthorized use. Once you set this password, you have to type it whenever you boot the system. User password is available only when a supervisor password is set. The Preset settings allows you to set a user password	None Present

Parameter	Description	Option
Disk Drive Control	The disk drive control features enable or disable the read/write functions of disk drives. These features can also control the diskette drive boot function to prevent loading operating systems or other programs from a certain drive while the other drives remain operational	
Floppy Drive	Sets the control level of the floppy drive	Normal Write Protect All Sectors Write Protect Boot Sectors Disabled
Hard Disk Drive	Sets the controller of the IDE drive	Normal Write Protect All Sectors Write Protect Boot Sectors Disabled
Processor Serial Number	The Pentium III processor incorporates an individual serial number in each chip that can identify individual CPUs. When Enabled, CPUs can be identified by processor serial number. Disable this parameter to deactivate this feature.	Disabled Enabled

Supervisor password

Setting and changing the password

To set or change a supervisor password:

1. Enable the Supervisor Password parameter in the System Security menu by pressing the Up or Down arrow key to select Present. The Supervisor Password window appears:

Supervisor Password

Enter your new Supervisor Password twice. The Password may be up to 7 characters long.

Enter Password.....[xxxxxxx]
 Enter Password again.....[xxxxxxx]

Set or Change Password

2. Type a password. The password may consist of up to seven characters.



Note: Be very careful when typing your password because the actual characters do not appear on the screen.

3. Press the Enter key. Retype the password to verify your first entry then press Enter.
4. Highlight the “Set or Change Password” option and press the Enter key.
5. Press the Esc key to return to the System Security screen.
6. Press the Esc key to exit Setup. The Exit Setup screen appears.
7. Choose “Yes” to save your settings and exit Setup. Your password will be saved to CMOS.

Removing a password

To remove your supervisor password:

1. Disable the Supervisor Password parameter in the System Security menu by pressing the up or down arrow key to select None.
2. Press the Esc key to return to the System Security menu and then press the Esc key again to exit Setup. The Exit Setup screen appears:
3. Choose Yes to save your settings and exit Setup. Your previous password will be removed from CMOS.

User Password

Setting and changing the password

To set or change a user password:

1. Enable the User Password parameter in the System Security menu by pressing the Up or Down arrow key to select Present. The User Password window appears:

User Password

Enter your new User Password twice. The Password may be up to 7 characters long.

Enter Password.....[xxxxxxxx]

Enter Password again.....[xxxxxxxx]

Set or Change Password

2. Type a password. The password may consist of up to seven characters.
3. Press the Enter key. Retype the password to verify your first entry then press Enter.

4. Highlight the “Set or Change Password” option and press the Enter key.
5. Press the Esc key to return to the System Security screen.
6. Press the Esc key to exit Setup. The Exit Setup screen appears.
7. Choose “Yes” to save your settings and exit Setup. Your password will be saved to CMOS.

Removing a Password

To remove your user password:

1. Disable the User Password parameter in the System Security menu by pressing the Up or Down arrow key to select None.
2. Press the Esc key to return to the System Security menu and then press the Esc key again to exit Setup. The Exit Setup screen appears.
3. Choose Yes to save your settings and exit Setup. Your previous password will be removed from CMOS.

▶ IPMI configuration

Intelligent Platform Management Interface

The system event log enables you to record and monitor events that occur in your system like system temperature changes, fan stops, and others. This feature also allows you to specify the appropriate settings for your system's event handling.

IPMI Configuration

IPMI Specification Version.....1.0
 IPMI BIOS Version.....1.0 000608
 BMC Firmware Version.....0.22

System Event Logging.....[Enabled]
 Clear Event Log Area.....[Disabled]
 Existing Event Log Number.....1
 Remaining Event Log Number.....381

- View Event Logs

Event Control

BIOS POST.....[Enabled]
 Memory ECC.....[Enabled]
 PCI Devices.....[Enabled]

The following table describes the parameters in the IPMI configuration screen.

Parameter	Description	Option
IPMI specification version	Specifies the version of Intelligent Platform Management Interface (IPMI)	
IPMI BIOS version	Shows the version of IPMI BIOS	
BMC firmware version	Specifies the version of BaseBoard Management Controller (BMC) Firmware.	
System Event logging	Enables or disables the event logging function of your system	Enabled Disabled

Parameter	Description	Option
Clear event log area	Clears the event log whenever the event log area is full	Disabled Enabled
Existing event log number	Number of events currently located in the event log area	
Remaining event log number	Number of spaces that are still available for logging system events	
View event logs	Opens the system event log file for viewing logs	
Event control		
BIOS POST	BIOS checks the bad processors and memory modules during POST. When this parameter is Enabled, BIOS will stop POST operation whenever it finds a bad processor or memory. Otherwise, if Disabled the system will continue running.	Enabled Disabled
Memory ECC	ECC or error correcting code tests the accuracy of data as it passes in and out of memory. This parameter enables or disables the monitoring of this function.	Enabled Disabled
PCI devices	PCI or Peripheral Component Interconnect is a 32-bit bus that supports a 64-bit extension for new processors, such as the Pentium. It can run at clock speeds of 33 or 66 MHz. This parameter monitors the activity of this bus when set to enabled.	Enabled Disabled

► RDM configuration

```

RDM Configuration

RDM v4.3 BIOS Version.....000613
Console Redirection.....[Disabled]

Hidden Partition.....[Disabled]

Communication Protocol.....[N,8,1]
COM Port Baud Rate.....[57600]

Remote Console Phone No.....[      ]
Dial Out Retry Times.....[2]

Emergency Management
RDM Work Mode.....[Disabled]
Waiting Mode Password.....[      ]
Paging Times.....[1]
Paging No.:
  1. [      ]
  2. [      ]

```

The following table describes the parameters in the console redirection screen.

Parameter	Description	Option
RDM 4.3 BIOS version	Shows the version number of the RDM BIOS	

Parameter	Description	Option
Console redirection	This parameter lets you enable or disable the connection to the RDM manager station. If enabled and conditions are met, the RDM enabled server automatically dials the RDM manager station using the phone number specified in the Remote Console Phone No. parameter when the server reboots. Once the connection is established, both the RDM server and RDM manager station display the same screen which enables the RDM manager station to function the same as the server console. Setting this to Disabled deactivates the RDM manager station	Disabled Enabled
Hidden partition	If you want the hidden partition to become accessible, set this parameter to Enabled. When enabled, the server boots to the hidden partition	Disabled Enabled
Communication protocol	This parameter specifies the parity, stop bits, and data length for the COM port to be used for the RDM connection. This is fixed at N(none), 8, 1 setting and is non-configurable	N, 8, or 1
COM port baud rate	This parameter lets you set the transfer rate of the COM for the RDM connection. The parameter setting depends on your modem specification; therefore, before you change the setting of this parameter, check your modem user guide	9600 57600

Parameter	Description	Option
Remote console phone no.	<p>This parameter allows you to set the phone number of the RDM manager station that the RDM module must dial once RDM is activated and the Remote Console is enabled. To set, simply highlight the parameter and enter the Remote Console phone number.</p> <p>If the remote console phone number is using X) line, then you must enter six commas (,) after the phone number and before the extension number, if any. When entering the extension number, we recommend that you insert a comma after each number. the commas specify delay.</p> <p>If this parameter is left blank, the Remote Console calling function is disregarded.</p>	User input
Dial out retry times	<p>This parameter lets you specify the maximum number of times the RDM server must retry to connect to the RDM manager station once the server fails and RDM is activated. If the server has completed the specified number of tries and the connection still fails, the server bypasses RDM and goes into normal mode.</p>	<p>2 4 8 Infinite</p>
Emergency management		
RDM work mode	<p>When detecting system failure, the RDM module will take some actions according to the mode.</p> <ol style="list-style-type: none"> 1. Waiting: Page and wait for the RDM Station to call in 2. Reboot: Page, then reboot 3. Disabled: No action <p>Note: If Waiting is selected, the password must be set to at least three characters</p>	<p>Disabled Waiting Reboot</p>
Waiting mode password	Prevents unauthorized access to the server	User input
Paging times	Allows you to set the number of times that the RDM module must dial when the server fails or hangs	1, 2, 4, or 8

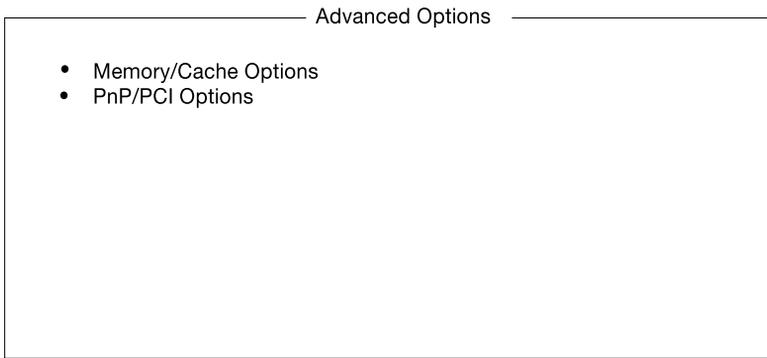
Parameter	Description	Option
Paging No.	Allows you to set the pager number that the RDM module must dial when the server fails or hangs	User input

▶ Advanced options



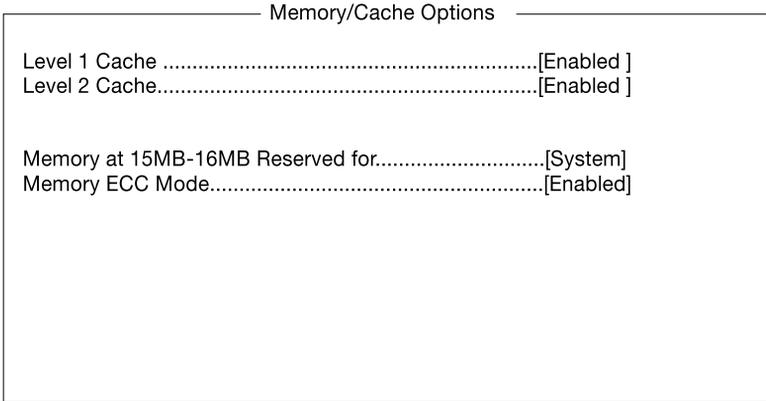
Note: Do not change any settings in the Advanced Options if you are not a qualified technician to avoid damaging the system.

The following screen shows the Advanced Options parameters:



Memory/Cache options

Memory/Cache Options allows you to configure the advanced system memory functions.



Parameter	Description	Option
Level 1 cache	Enables or disables the first-level or internal memory, that is, the memory integrated into the CPU	Enabled Disabled
Level 2 cache	Enables or disables the second-level cache memory which is incorporated in the CPU module	Enabled Disabled
Memory at 15MB-16MB reserved for	To prevent memory address conflicts between the system and expansion boards, reserve this memory range for the use of either the system or an expansion board	System Expansion board
Memory ECC mode	Enable or disable the ECC (error checking and correction) feature. The ECC feature enable BIOS to detect and correct data errors. Disable this parameter if you want to disregard the function.	Enabled or Disabled

PnP/PCI options

PnP/PCI Options allows you to specify the settings for your PCI devices. Selecting this option displays the following screen:

```

----- PnP/PCI Options -----
PCI IRQ Setting.....[ Auto ]
                                INTA  INTB  INTC  INTD
PCI Slot 1.....[--]  [--]  [--]  [--]
PCI Slot 2.....[--]  [--]  [--]  [--]
PCI Slot 3.....[--]  [--]  [--]  [--]
PCI Slot 4.....[--]  [--]  [--]  [--]
PCI Slot 5.....[--]  [--]  [--]  [--]
Onboard SCSI.....[--]  [--]
Onboard LAN.....[--]
AGP.....[--]

PCI IRQ Sharing.....[Yes ]
VGA Palette Snoop.....[Disabled]
Graphics Aperture Size.....[64] MB
Plug and Play OS.....[Yes]
Reset Resource Assignments.....[No]
  
```

Parameter	Description	Option
PCI IRQ setting	Select Auto to let BIOS automatically configure the plug-and-play (PnP) devices installed on your system; Otherwise, select Manual Note: Refer to your manual for technical information about the PCI card	Auto Manual
PCI slots 1 to 5	When you set the PCI IRQ Setting parameter to Auto, these parameters specify the auto-assigned interrupt for each of the PCI devices. If you set the PCI IRQ Setting parameter to Manual, you need to specify the interrupt that you want to assign for each PCI device installed in your system	User input

Parameter	Description	Option
Onboard SCSI	Allows you to manually assign the interrupt for the onboard SCSI when the PCI IRQ Setting parameter is set to Manual. This parameter is grayed and not user-configurable when the PCI IRQ Setting is set to Auto	User input
Onboard LAN	When you set the PCI IRQ Setting parameter to Auto, this parameter specifies the auto-assigned interrupt for the onboard LAN. If you set the PCI IRQ Setting parameter to Manual, you need to specify the interrupt that you want to assign for the onboard LAN installed in your system	User input
PCI IRQ sharing	Setting this parameter to Yes allows you to assign the same IRQ to two different devices. To disable the feature, select No. Note: If there are no IRQs available to assign for the remaining device function, we recommend that you enable this parameter	Yes No
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 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

Parameter	Description	Option
Plug and play OS	<p>When this parameter is set to Yes, BIOS initializes only PnP boot devices such as SCSI cards. When set to No, BIOS initializes all PnP boot and non-boot devices such as sound cards.</p> <p>Note: Set this parameter to Yes only if your operating system is Windows 95/98 or Windows 2000</p>	Yes No
Reset resource assignments	<p>Set this parameter to Yes to avoid IRQ conflicts when installing non-PnP or PnP ISA cards. This clears all resource assignments and allows BIOS to reassign resources to all installed PnP devices the next time the system boots. After clearing the resource data, the parameter resets to No</p>	No Yes

► Load default settings

Use this option to load the default settings for the optimized system configuration. When you load the default settings, some of the parameters are grayed-out with their fixed settings. These grayed parameters are not user-configurable.

The following dialog box appears when you select Load Default Settings from the main menu:

Do you want to load default settings?

[Yes] [No]

Select Yes to load the default settings.

Select No to ignore the message and return to the BIOS utility.

▶ Abort settings change

Use this option to disregard your changes to the BIOS and reload your previous settings.

The following dialog box appears when you select Abort Settings Change from the main menu:

<p>Do you want to abort settings change?</p> <p>[Yes] [No]</p>

Select Yes to disregard your changes and reload your previous settings. After reload, the main menu appears on the screen.

Select No to ignore the message and return to the BIOS utility.

▶ Exit Setup

Examine the system configuration values. When you are satisfied that all the values are correct, write them down. Store the recorded values in a safe place. In the future, if the battery loses power or the CMOS chip is damaged, you will know what values to enter when you rerun Setup.

Press the ESC key to leave Setup. The following dialog box appears:

Do you really want to exit SETUP?

[Yes] [No]

Use the arrow keys to select your response. Press the Enter key.

If you made any changes to the Setup utility, the dialog box below is displayed.

Settings have been changed.
Do you want to save to CMOS settings?

[Yes] [No]

Use the arrow keys to select your response. Select Yes to save the changes in CMOS. Select No to retain the previous configuration values. Press the Enter key to exit.



Appendix A: ASM Pro quick installation guide

This appendix shows you how to set up ASM Pro and its agent software.

► Installing ASM Pro

System requirements

ASM Console

- Intel Pentium or higher processor
- 64MB of RAM (128MB recommended)
- 20MB free hard disk space
- Microsoft Windows 95, Windows 98, Windows NT, or Windows 2000 operating system
- Ethernet card
- Modem

ASM Server and Desktop agents

- Intel Pentium or higher processor
- 64MB of RAM (128MB recommended)
- 20MB free hard disk space
- Novell NetWare, SCO OpenServer, SCO UnixWare, Linux RedHat, Microsoft Windows NT, or Windows 2000 operating system
- Ethernet card
- Modem (optional for RAS/OOB^{*})

System setup

Make sure that your computer meets the system requirements before proceeding. You may also want to change your screen to 800 x 600 resolution or higher for optimum viewing.

* RAS (Remote Access Services) and OOB (Out-of-Band)

Installing ASM Console

To install ASM Console:

1. Insert the Resource CD into the CD-ROM drive on your system.
2. Click on the Startup icon.
3. Click on Software Installer, and select ASM Console.
4. Follow the Installation Wizard.
5. Click Finish to complete the installation.



Note: Remember to remove all diskettes or CDs from the drives before rebooting the system.

Installing ASM Server Agent

ASM Server Agent can be installed on four different operating systems. The installation diskette contains the installation files for the following operating systems:

- Novell NetWare 5.x, 4.11
- SCO OpenServer 5.0
- SCO Unixware 7.x
- Microsoft Windows NT 4.0 Server
- Linux RedHat 6.2
- Microsoft Windows 2000 (Server and Advanced Server)

Installing the Novell NetWare Server Agent



Note: Make sure the SNMP (Simple Network Management Protocol) is configured properly.

ASM Server Agent requires SNMP.NLM running with *Control Community set to 'public'*; to allow ASM Console to communicate with ASM Server Agent.

ASMAGENT.NCF is the script file that loads all related modules of ASM Server Agent. To load the SNMP use the following command:

```
load snmp control=public
```

If you load SNMP.NLM before ASM Server Agent, make sure that the Control Community has been set up properly. For more information, please refer to related documents about the SNMP Agent for NetWare (NetWare SNMP).

Check AUTOEXEC.NCF to see if you have loaded SNMP. Notice that because of the auto loading feature of NLM, you can not directly find where SNMP is loaded. The most common module is TCPIP.NLM which auto loads SNMP.NLM. If you are using TCP/IP, load SNMP by using the command line *load snmp control=public* before loading TCPIP.

For NetWare 4.x and Netware 5.x users, if you are using INETCFG.NLM to configure the network, be sure to configure SNMP and make sure that the SNMP.NLM is running with *Control Community set to 'public'*.

To install the Novell NetWare Server Agent:

1. Use the diskette maker utility on the Startup Resource CD to create your NetWare installation diskette.
2. Insert the diskette into the NetWare server's drive.
3. At the NetWare server console, type:

```
Load A: setup
```

4. You are asked if you want to install the ASM Server Agent on your system. Select Yes to install.

The setup program detects the NetWare version and the model of the server. It copies related NLM files into the SYS: SYSTEM directory and C: of your NetWare server, and some needed command lines are added into AUTOEXEC.NCF in SYS: SYSTEM.

5. If the Mylex GAM driver and GAM service is installed in your NetWare system, the setup program asks you to install the Bbp agent.
6. Press any key to continue. The ASM Server Agent Configuration Utility is launched.
7. The Password option is highlighted. Set up a password, and exit the utility.



.....

Note: A password is required when using the ASM Console to remotely change or set any values for the agent, such as threshold values and any trap handling method. If the password is disabled, there is no security protection for the agent when the Console tries to change or set these values.

8. Reboot the system to activate the ASM drivers.



.....

Note: ASM Server Agent automatically starts after the server is restarted and running.

Installing the SCO OpenServer Agent



.....

Note: Make sure the SNMP (Simple Network Management Protocol) is configured properly.

ASM Server Agent requires SNMP running with *community set to 'public'*. The IP address of ASM Console should be in */etc/snmpd.trap* so that ASM Console can communicate with ASM Server Agent.

Follow these steps to install the SCO Server Agent:

If the ASM installation diskette is already available, go to Step 2. Otherwise, perform Steps 1 to make the ASM installation diskette from the diskette image file on the ASM package CD-ROM.

1. Use the Diskette Maker utility on the Startup Resource CD to create your SCO OpenServer installation diskette.
2. If you are in the desktop window, click on the Software Manager icon. If you are at the UNIX shell prompt, type "custom" and press Enter.
3. From Software Manager or the custom program, select Software and then Install New.
4. The "Begin Installation" screen appears. Follow the onscreen instructions. Click on Continue to accept the defaults.
5. When the Select Media screen appears, highlight Floppy Disk Drive 0 and select Continue.
6. At the Install Preferences menu, select Full. The *asmconfig* screen appears.



.....

Note: If the SCO Server Agent has been installed, the program asks if you want to preserve the existing config file. Choose Reinstall to overwrite the previously installed SCO Server Agent, or choose Upgrade if you know the existing password.

7. A password is required for a new installation. The system prompts you to enter a new password, and after you have entered it once, prompts you to reenter it.
8. After you set up the password, select the *SNMP_Config* option, and enter the IP address of the ASM Console system. (You can run *asmconfig* at a later time to add or change the ASM Console IP address. See the ASM Server Agent Utilities chapter in the ASM Pro manual for information about running *asmconfig*.)



Note: If the SCO Server Agent has been installed, target IP addresses appear on this screen.

The installation process adds the ASM agent driver to the SCO operating system, and the following message appears before the kernel relinks.

Adding device to system configuration files. . .

When the installation is complete, the following message appears:

Installation Complete.

9. Exit Software Manager or the custom program, and reboot the system.

Configuring ASM Server Agent for SCO OpenServer

You may disable the password if you are installing ASM Server Agent to use only UPS (Uninterruptible Power Supply) or RDM functions.

You can use the `asmconfig` utility to set up a password for the agent. A password is required when you are using ASM Console to remotely change or set any values for the agent.

Refer to the ASM Server Agent Utilities chapter in the ASM Pro manual for instructions on how to use the `asmconfig` utility.

Installing the SCO UnixWare Server Agent



Note: All of the following procedures require root permission.

To install the SCO UnixWare Server Agent:

1. Make the ASM installation diskette from the DD file on the ASM package CD-ROM.
2. Mount the CD-ROM drive. For example, mount the CD-ROM to `/mnt`.
3. Insert an empty 1.44MB diskette into your floppy drive and execute the command:

```
# dd if={PATH}/asmuw.dd of=/dev/rdisk/f03ht
```

Here, `{PATH}` denotes the directory where `asmuw.dd` is located. For example, `/mnt/UnixWare`.

4. Insert the ASM installation diskette into your floppy drive and, at the shell prompt, execute this command to begin ASM installation:

```
# pkgadd -d diskette1 asm
```

The installation process copies the ASM Server Agent package into the /usr/asm directory, and automatically makes changes to the following system configuration files:

```
/etc/netmgt/snmpd.comm
```

```
/etc/netmgt/snmpd.peers
```

```
/etc/inittab
```

After the installation is complete, ASM Server Agent can be manually started by executing the command:

```
# /usr/asm/asmsmuxd
```

or it will automatically be started on the next system reboot.



.....

Note: Before starting ASM SMUX Agent asmsmuxd, execute the ASM Agent Configuration Utility asmcfg to configure at least "SNMP", "ASM_Password" and other parameters. Refer to "Chapter 4 - ASM Server Agent Utilities" in the ASM Pro manual for detailed instructions on using the ASM Configuration Utility.

Installing the Microsoft Windows NT Server Agent



.....

Note: Before installing the ASM software, make sure that the TCP/IP and its related SNMP service are installed on the server.

Follow these steps to install the Windows NT agent:

1. Insert the installation CD-ROM into your drive after booting NT and logging in as the system administrator.
2. Click on the Start button and select Run. A dialog box appears that allows you to specify the setup program in the NT directory of the installation CD.
3. Verify the path and click OK. The Welcome screen appears.
4. Click Next. You are asked to stop SNMP service.
5. Click Yes. You are prompted to choose a destination directory. If you only want to install ASM SNMP agent and Remote Console, you can

choose Typical. If you want to choose more components, click Custom. There are five components in ASM agent:

- SNMP agent
- DMI

ASM Pro agent defines a proprietary ASM.MIF that supports the same items as the SNMP agent.

- Server Mif

The server.mif that defined by DMTF will be installed.

- Remote Console

The Remote Console Server is installed which can be remote control by Remote Console Client

- MMC

This component is only supported on Windows 2000. And it is integrated with Microsoft Management Console.

6. Click Next, for the default directory, or click on Browse to find your own destination directory. Check any components you want to install, and click OK.

The asmcfg utility launches automatically.

You may skip steps 7 through 11 if you are installing ASM Server Agent solely for the purpose of utilizing UPS and/or RDM functions.

7. Enter a password and click OK. A password is required when using the ASM Console to remotely change or set any value for the NT Agent. If the password is disabled, there is no security protection for the agent when the ASM Console tries to change or set these values.
8. Enter the IP address of the ASM Console system, then click ADD to add trap destinations. Click OK to end the asmcfg utility. This IP address tells the Agent where to report (trap).
9. Click Yes to save your changes. The view readme file dialog box appears.
10. Click Yes to view, No to continue.
11. Click Finish to exit setup.

► Installing RDM

This section gives step-by-step instructions on how to install the RDM module, the RDM function in agent side and console side of ASM Pro software.

System requirements

Before you begin the installation, make sure that you have the following:

RDM server requirements

Hardware

- External modem
- RDM module
- RDM LED indicator
- Pager

Software

- Novell NetWare v4.1 or later, and/or
- SCO OpenServer 5.0 or later, and/or
- Microsoft Windows NT 4.0 or later, and/or
- SCO UnixWare 7.0 or later
- ASM (Advanced System Manager) agent
- RDM v4.3 package

RDM Manager Station requirements

Hardware

- Pentium or faster PC
- At least 16-MB RAM
- At least 5-MB free hard disk space
- Modem

Software

- Microsoft Windows 95/98, Microsoft NT Workstation 4.0, or Windows 2000
- ASM Console 4.3 Console

RDM server setup

This section describes how to set up the RDM server.

Installing RDM module



.....

Note: The RDM module is installed at the Acer factory. The following RDM module instructions are provided in the event you need to reinstall the RDM module.

ESD precautions

Electrostatic discharge (ESD) can damage your processor, disk drives, expansion boards, and other components. Always observe the following precautions before you install a system component.

- Do not remove a component from its protective packaging until you are ready to install it.
- Wear a wrist grounding strap and attach it to a metal part of the system unit before handling components. If a wrist strap is not available, maintain contact with the system requiring ESD protection at all times.

Preinstallation instructions

Always observe the following before you install a system component:

- Turn off and unplug the system and all the peripherals connected to the unit before opening it.
- Open the system housing.
- Follow the ESD precautions listed above before handling a system component.
- Remove any expansion boards or peripherals that block access to the desired system board slot or connectors.

- See the following sections for specific instructions on the component you wish to install.

Installing the RDM module

1. Open the system housing.
2. Align the module connectors with their corresponding connectors on the system board.
3. Gently insert the module. Make sure not to bend the pins and that the module is properly seated.
4. Replace the housing cover.
5. Enter BIOS Setup to set the desired RDM Work Mode.

Connecting communication peripherals

Modem

The RDM server and the RDM manager station communicate via modem protocol. Therefore, you need to connect an external modem with a baud rate of not less than 9600 bps to both systems. To connect an external modem, connect the RS232C serial cable to the modem data port and the appropriate COM port of the system.



Note: The modem at the RDM server side must be connected to the COM2 port, while the modem at the RDM manager station side can be connected to either the COM1 or COM2 port. Use only modems that are purchased locally to ensure compatibility with your telephone system. The modem must have a transfer rate of at least 28.8K.

When the modem is turned ON, the CD/DCD (Carrier Detect/Data Carrier Detect) signal light on the front panel must be OFF for RDM to function properly. If this is not the case, refer to the modem's user's guide and check the section on DIP switches for information on how to adjust the CD/DCD light. If your modem does not have a DIP switch, then we recommend that you replace it with another model that supports such switches.

Telephone

To connect the modem to a telephone outlet, plug in the telephone connector to the telephone outlet. Then, insert the telephone line connector to the modem line port.

Pager

The pager is necessary for notification purposes only.

Post-installation instructions

Observe the following after installing a system component:

- Make sure that the components are installed according to the step-by-step instructions in their respective sections.
- Replace any expansion boards or peripherals that you removed earlier.
- Replace the system cover.
- Connect the necessary cables.
- Turn on the system and the peripherals connected to it.

Installing RDM agent software

You must do the following to ensure successful installation of the RDM agent software:

1. Create a hidden RDM partition.

The hidden RDM partition is a DOS partition on the hard disk that allows you to run preinstalled diagnostic tools when necessary, without using a diskette or a CD. It also allows you to access your system from a remote RDM manager station.

To create a hidden RDM partition, do the following:

- Prepare a "clean" hard disk, i.e., a hard disk without any operating system installed on it.
- Insert a DOS bootable floppy diskette into the diskette drive.
- After booting from the floppy diskette drive, use the DOS FDISK command to create a DOS partition. The minimum partition size is 33 MB.
- Activate the partition and exit FDISK; then reboot the system.
- Format the DOS partition. When formatting is completed, label the partition as RDM for easy identification.
- Install (or transfer) the DOS operating system to the partition.
- Run `\agent\install.bat*` to install the RDM driver and hide the RDM partition. These settings will take effect only after you reboot the system.

After you create the hidden partition, you can now install other operating systems on the same hard disk. But before doing so, make sure that the Hidden Partition parameter in the RDM BIOS is set to Disabled. For more information on RDM BIOS, refer to RDM BIOS chapter of the ASM Pro manual.



Important! If you are using an IDE hard disk with a capacity less than 540 MB, make sure that you disable the LBA mode. Otherwise, you will be required to use the LBA mode that you set for the other operating systems when you create the hidden RDM partition.



Note: When you boot the system to the hidden partition, you cannot use other utilities (e.g., FDISK.EXE) to change the hidden partition settings.

Deleting the hidden partition



Important! You cannot recreate the RDM hidden partition once you delete it. Before proceeding, make sure that you will not need to create a hidden partition in the future.

Follow these steps to delete the hidden partition:

- Insert a bootable diskette into the diskette drive.
 - Enter the BIOS Setup and set the Hidden Partition parameter in the RDM BIOS to Enabled.
 - After the system boots from the diskette drive, use FDISK to delete the RDM hidden partition. Do not delete other partitions or change or reformat the active partition.
 - Exit FDISK and reboot the system.
 - Enter the BIOS Setup and set the Hidden Partition parameter in the RDM BIOS to Disabled.
2. Install an operating system.

RDM supports the following operating systems:

- Novell NetWare
- Microsoft Windows NT and Windows 2000
- SCO OpenServer

- SCO UnixWare

You can install any or all of the operating systems. For the installation instructions, refer to the documentation that came with the OS package.

3. Install the RDM Agent Driver.



Note: Before you proceed, make sure that you have installed the necessary components and peripherals, for both the RDM server and RDM station.

The RDM agent driver or the server driver is contained in the Advanced System Manager Pro (ASM Pro) software package. Therefore, to install the RDM agent driver, you need to install the ASM agent software. For information on how to install the ASM software, refer to the documentation that comes with the ASM package.

4. Enable the driver.

After installing the ASM Agent driver, the system automatically enables the RDM driver. You do not need to enable the RDM driver manually unless you have previously disabled it for some reason.



Note: We strongly recommend that you do NOT disable the RDM driver. If you disable the RDM driver, RDM manager station will not be able to establish remote access to the server in the event of a system failure.

NetWare

To enable the RDM driver in a Netware environment, type:

```
# LOAD MAGENT
```

To disable the driver, type:

```
# UNLOAD MAGENT
```

Windows NT

To enable the RDM driver in a Windows NT environment, open a command prompt and type:

```
STARTRDM.EXE
```

To disable the RDM driver in a Windows NT environment, open a command prompt and type:

CANCEL.EXE

SCO OpenServer

To enable the RDM drivers in an SCO OpenServer environment, type:

```
#!/XSNMPD/RDMTESTTART
```

where #/XSNMPD is the directory that contains the RDM drivers.

To disable, type:

```
#!/XSNMPD/RDMTEST CANCEL
```

SCO UnixWare

To enable the RDM drivers in an SCO Unixware environment, type:

```
#!/USR/ASM/RDMTEST START
```

To disable, type:

```
#!/USR/ASM/RDMTEST CANCEL
```

► Installing AWM and Microsoft IIS

System requirements

- Intel 486 or higher processor
- 64MB of RAM
- 10MB free hard disk space
- Windows NT Server 4.0 or Windows 2000 with the following:
 - Microsoft Internet Information Server 2.0 or later (4.0 is recommended)
 - Microsoft Active Server Pages (ASP)
 - SNMP Service
- Ethernet card
- Modem

Installing AWM

To install AWM:

1. Insert the Resource CD into the CD-ROM drive on your system.
2. Click on the Startup icon.
3. Click on Software Installer, and select AWM.
4. Follow the Installation Wizard.
5. Click Finish to complete the installation.



.....

Note: For Windows NT 4.0, AWM will automatically install WbEM core or WbEM SNMP Provider if not installed. For Windows 2000, the WbEM core is built-in. AWM will only install the WbEM SNMP Provider if it is not yet installed. After installing either of these components, the system needs to reboot.

Setting up Microsoft IIS

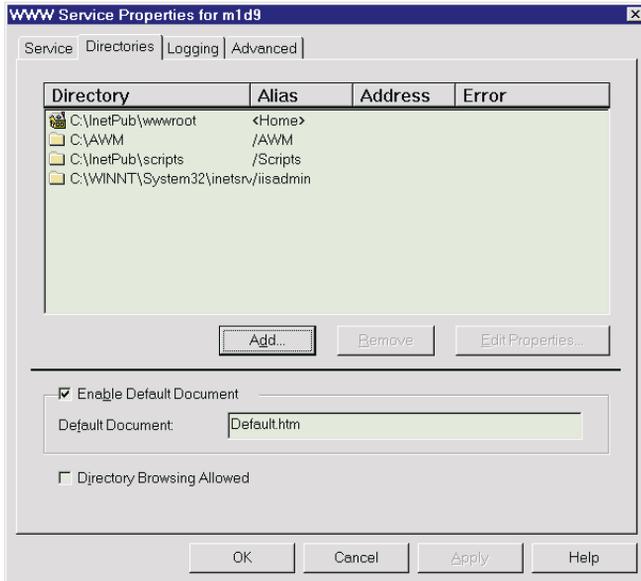


.....

Note: If you have IIS version 4.0 or later the directory is automatically added.

To set up Microsoft IIS:

1. Open your IIS configuration program and check the virtual directory setting.
2. Check the virtual directory. If there is no virtual directory for AWM, create one and name it AWM. Point it to the directory where the AWM main files are installed (e.g. C:/AWM).



3. After adding the virtual directory, click the Execute checkbox and then click OK to save changes and exit.

The image shows a 'Directory Properties' dialog box with the following fields and options:

- Directory:** C:\AWM (with a 'Browse...' button)
- Home Directory:** (with a folder icon)
- Virtual Directory:** (expanded section)
 - Alias:** /AWM
- Account Information:** (collapsed section)
 - User Name:** (empty text box)
 - Password:** (password masked text box)
- Virtual Server:** (unchecked checkbox)
 - Virtual Server IP Address:** (empty text box)
- Access:**
 - Read**
 - Execute**
 - Require secure SSL channel (Not Installed)**
 - Enable Client Certificates**
 - Require Client Certificates**

Buttons at the bottom: OK, Cancel, Help.