

## 5.6 Using the LAN Port

This notebook comes with an internal 10Base-T/100Base-TX LAN module that connects your computer to other computers/networks through a local area network (LAN) and supports data transfer rates at 10Mbps and can be up to 100Mbps. The 10Base-T standard also called Twisted Pair Ethernet is connected with RJ-45 connectors. The 100Base-TX is based on the older Ethernet standard. Because it is 10 times faster than Ethernet, it is often referred to as Fast Ethernet.

The built-in LAN module provides a standard RJ-45 connector.

To connect the twisted-pair cable to your LAN port:

1. Locate the twisted-pair cable in the accessories box in notebook shipping carton. Each end of the cable has a RJ-45 connector.
2. Connect one end of the cable into the network wall outlet or HUB.
3. Connect the other end of the cable into the computer RJ-45 LAN port.



## 5.7 Using the Wireless LAN

Wireless LAN is the major breakthrough in computer communication technology. It lets user connect to the LAN environment without using any wire to traditional RJ-45 jack. User can enjoy the wireless connection within the range of Access Point (AP) of LAN.

Access Point (AP) is the wireless transmission and receiving device, it generally connects to the server of a LAN environment or act as a LAN hub with wireless connection. Access point can be set in an office environment, airport, major railway station, etc. that depends on the construction of each country. In most case, you probably can use it at office, please consult with the network department of your company for more details.

This computer integrates built-in 802.11 b/g wireless LAN module. IEEE 802.11b standard supports 11 Mbps wireless connection speed. However, IEEE 802.11g supports 54Mbps wireless connection speed, and is backward compatible with the slower 802.11b. You can connect to the wireless LAN Access Point without insert extra wireless LAN card into the PCMCIA slot.

Wireless LAN module is similar to LAN module. You need to install software driver before using it. Please refer to chapter 2.5 on how to install the driver.

## 5.8 Using the Modem Port

This notebook comes equipped with a 56K internal fax/data modem that allows you to communicate with others via fax, email, or to connect to an online service or bulletin board.

The built-in fax/data modem provides on standard phone connector.

To connect the analog phone cable to your modem:

1. Locate the analog phone cable in the accessories box in notebook shipping carton. Each end of the cable has a RJ-11 connector.
2. Connect one end of the cable into a standard wall outlet.
3. Connect the other end of the cable into the computer modem port.



- + *The speed of data transmission is dependent on the quality of telephone lines. Digitally terminated lines improve the speed of data transmission. Contact your service provider for more information.*
- + *The analog phone cable is an industry standard cable. Longer cables are available at your local electronics store.*

## 6 Customizing Your Notebook



**Y**our computer uses the Phoenix BIOS Setup program that allows you to set several system configuration in changing the way your computer performs. This includes your system time and date, disk drive configuration and password setup. This information is then stored in the CMOS RAM and will remain permanent unless you change it again. This chapter discusses on how you will activate the BIOS Setup program and change the system configuration to suit your desired operation. You must be careful to set the configuration properly in order for your computer to run smoothly. If you are not sure of any settings, contact your dealer.

## 6.1 Running the BIOS Setup Program

Your computer is likely to have been properly setup and configured by your dealer prior to delivery. However, you may find it necessary to use the computer's BIOS (Basic Input-Output System) Setup program to change system configuration information, such as the current date and time, or your hard disk drive type. The Setup program can be accessed when you power on the system and pressing the <F2> function key.

The settings that you specify within the Setup program are recorded in a special area memory called the **CMOS RAM**. This memory is backed up by a battery so that it will not be erased when you turn off or reset the system.

Whenever you turn on the computer, the system will read the settings stored in the CMOS RAM and compare them to the equipment check conducted during the Power On Self Test (POST). If an error occurs, an error message will be displayed on the screen, and you will then be prompted to run the Setup Program.

As the POST (Power-On Self Test) executes during the boot up process, the screen will display the following message:

Press <F2> to Enter SETUP

Press the <F2> key to run the BIOS Setup program. The BIOS Setup program is organized into five menus which you can select using the <--> and <--> keys. To move from one option to another, you use the up and down arrow keys while using the <F5> and <F6>, or <+> and <-> keys to change the settings. On the right hand side of the screen are some brief help descriptions of each item you want to change.

On the BIOS Setup program, you will find the following parts on the screen:

- **Item Specific Help**  
The right side of the screen. This area describes each parameter and its available settings.
- **Menu Bar**  
The top line of the screen. Each of the five selections displays its own screen.
- **Parameters**  
The left side of the screen. This area lists the parameters and their current settings.
- **Key Status Bar**  
The bottom part of the screen. These lines display the keys available to move the cursor, select a particular function and so forth.

To exit the BIOS Setup program, simply press the <Esc> key and select from the Exit menu whether you want to Save changes and exit; Discard Changes and exit.

## 6.2 Using the Main Menu Setup

Phoenix BIOS Setup Utility					
Main	Info	Advanced	Security	Boot	Exit
					Item Specific Help
System Time: [08:20:32]					<Tab>, <Shift-Tab> or <Enter> selects field.
System Date: [09/04/2006]					
▶ SATA HARD Drive [FUJITSU MHV2060BH - (S1)]					
▶ CD/DVD ROM [HL-DT-ST DVD-RW GWA-4082N-]					
System Memory: 640 KB					
Extended Memory: 512 KB					
F1 Help	↑ ↓	Select Item	-/+	Change Values	F9 Setup Defaults
Esc Exit	← →	Select Menu	Enter	Select ▶ Sub-Menu	F10 Save and Exit

- System Time  
 Allows you to change the system time using the hour: minute: second format of the computer.  
 Enter the current time for each field and use the <Tab>, <Shift>+<Tab>, or <Enter> key to move from one field or back to another.  
 You can also change the system time from your operating system.

- **System Date**  
Allows you to set the system date using the month/date/year format. Enter the current time for each field and use the <Tab>, <Shift>+<Tab>, or <Enter> key to move from one field or back to another.  
You can also change the system time from your operating system.
- **SATA Hard Drive**  
This field is for information as the BIOS automatically detects the type for SATA Hard Drive.
- **CD/DVD ROM**  
This field is for information as the BIOS automatically detects the type of optical drive.
- **System Memory**  
This field reports the amount of base (or conventional) memory found by the BIOS during Power-On Self-Test (POST).
- **Extended Memory**  
This field reports the amount of extended memory found by the BIOS during Power-On Self-Test (POST).



## 6.2.1 SATA HARD DRIVE SUB-MENU

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Phoenix BIOS Setup Utility		
Main		
SATA Hard Drive [FUJITSU MHV2060BH – (S1)]		Item Specific Help
Maximum Capacity:	600012 MB	Information
Transfer Mode:	[FPIO 4 / DMA 2]	
Ultra DMA Mode:	[Mode 5]	
F1 Help	↑↓ Select Item	-/+ Change Values
F9 Setup Defaults	←→ Select Menu	Enter Select ▶ Sub-Menu
Esc Exit		F10 Save and Exit

This sub-menu shows you the SATA Hard Drive relative information. Press <Esc> to return to the Main Menu.

### 6.2.2 CD/DVD ROM SUB-MENU

Phoenix BIOS Setup Utility		
Main		
CD/DVD ROM: [HL-DT-ST DVD-RW GWA-4082N-(PM)]		Item Specific Help
Transfer Mode:	[FPIO 4 / DMA 2]	Information
Ultra DMA Mode:	[Mode 2]	
F1 Help    ↑↓ Select Item    +/- Change Values    F9 Setup Defaults Esc Exit    ←→ Select Menu    Enter Select ▶ Sub-Menu    F10 Save and Exit		

This sub-menu shows you the CD/DVD ROM relative information. Press <Esc> to return to the Main Menu.

## 6.3 Using the Info Menu Setup

Phoenix BIOS Setup Utility					
Main	Info	Advanced	Security	Boot	Exit
					Item Specific Help
BIOS Information					Information
BIOS Version		0.4G-2258-8A20			
Processor:					
CPU Type:		AMD Turion (tm) 64			
CPU Info:		X2 Mobile Technology TL-50			
Manufacturer: FUJITSU SIEMENS					
Product Name:		AMILO Pa 1538			
Notebook ID:		0123456789			
UUID:		0000000000000000- 0000000000000000			
F1 Help	↑ ↓	Select Item	-/+	Change Values	F9 Setup Defaults
Esc Exit	← →	Select Menu	Enter	Select ▶ Sub-Menu	F10 Save and Exit

- **BIOS Version**  
This field is for information only as the BIOS displays the BIOS version during the Power-On Self-Test (POST).
- **CPU Type**  
This field reports the CPU type information detected by the BIOS during Power-On Self-Test (POST).

- **Manufacturer:**  
This field is for information of the manufacturer name.
- **Product Name**  
This field is for information of the product name.
- **Notebook ID**  
This field is for information of the notebook ID.
- **UUID**  
This field is for information of Universal Unique ID number.

## 6.4 Using the Advanced CMOS Setup

Phoenix BIOS Setup Utility					
Main	Info	Advanced	Security	Boot	Exit
				Item Specific Help	
<p>Setup Warning</p> <p>Setting items on this menu to incorrect values may cause your system to malfunction.</p> <p>USB BIOS Legacy Support: <b>[Enabled]</b></p>				<p>Enables or Disables support for USB keyboards and mice. (Enable for use with a non-USB aware operating system such as DOS or UNIX)</p>	
F1 Help	↑ ↓	Select Item	-/+	Change Values	F9 Setup Defaults
Esc Exit	← →	Select Menu	Enter	Select ▶ Sub-Menu	F10 Save and Exit

- USB BIOS Legacy Support  
Enable or disable the USB Bus support when in connection with USB device in DOS or UNIX operating system.

## 6.5 Security Menu Setup

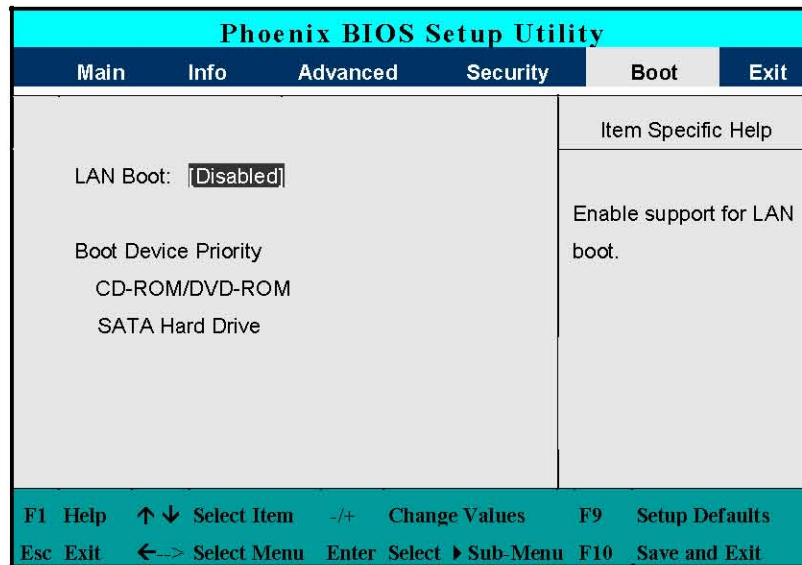
Phoenix BIOS Setup Utility					
Main	Info	Advanced	Security	Boot	Exit
				Item Specific Help	
Supervisor Password Is:		Clear		Supervisor Password controls access to the setup utility.	
User Password Is:		Clear			
Set Supervisor Password		[Enter]			
Set User Password		[Enter]			
Password on boot		[Disabled]			
F1 Help    ↑↓ Select Item    +/- Change Values    F9 Setup Defaults Esc Exit   ←→ Select Menu   Enter Select ▶ Sub-Menu   F10 Save and Exit					

- Supervisor Password Is  
Set/Clear selections show that the notebook is under controlled by Supervisor Password or not.
- User Password Is  
Set/Clear selections show that the notebook is under controlled by User Password or not.

- **Set Supervisor Password**  
Supervisor password gives you the authority in accessing the setup utility. You also need to enter this password in system booting and resuming from suspend mode. When you press <Enter> in this field, the Set Supervisor Password dialog box appears. Enter a new password with up to 8 alpha-numeric characters, and then re-enter it for confirmation.
- **Set User Password**  
This field is only available when Supervisor Password has set. Enter the user password when boot the system or resume from suspend mode. But if the Write Protect is set in the Fixed disk boot sector field, you should enter a supervisor password to access the fixed disk when boot the system or resume from suspend mode.
- **Password on Boot**  
If you set this field to Enabled, your computer will always ask for the password every time you boot your computer.

## 6.6 Using the Boot Setup

This item allows you to set the search drive sequence where the system will try to boot up first.

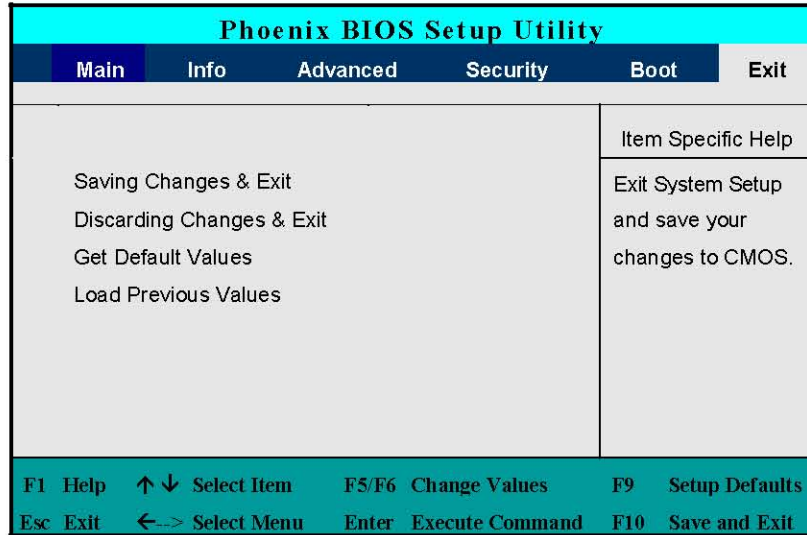


This page allows you to set the search drive sequence where the system will try to boot up first.

To select the boot device, you can setup “Enabled” or “Disabled” for booting from LAN, or you can search drive sequence by using the up or down arrow key, then press <+> to move up the device in the list or press <-> to move down the device in the list. To exit from this menu, press <Esc>.

## 6.7 How to Exit the Setup Program

There are two choices to escape from the Setup program.



- **Saving Changes & Exit**  
Saves all changes to CMOS while running the BIOS setup program and exit from the system setup program.
- **Discarding Changes & Exit**  
Allows you to discard all changes made while running the BIOS setup program and exit from the system setup program.
- **Get Default Values**  
Lets you load the default values for all setup items.
- **Load Previous Values**  
Reverts to previously selected settings.



## 6.8 How to Upgrade the BIOS

Your computer uses EPROM Flash BIOS chip that allows you to easily upgrade the BIOS program. When you update the BIOS, any customized settings you made are lost.

To upgrade the BIOS:

1. Put in the BIOS Update data into the USB device.
2. Power on the system with the USB device inserted in the USB port.
3. On the DOS prompt, type the following command.

```
A:\>Phlash XXXXXX.ROM (BIOS filename) or
```

```
A:\>XXXXXX.BAT (Batch file for BIOS file)
```

Press <Enter> to run this BIOS utility. After the system has been successfully run this program, a message similar to the following appears:

```
Flash memory has been successfully programmed,  
press any key to restart the system. If the  
system does not restart, turn it off, then turn  
on again.
```

4. Press any key to restart this system.

Contact your dealer for the latest BIOS update file.

## 7 Using Options



**T**his chapter describes the advanced features and expandable architecture in your notebook. You can upgrade your system for specific requirements.

## System Upgrade

This section provides some steps in doing system upgrade for your notebook computer. The upgrade procedures include the following:

### 7.1 Memory Upgrade

Your notebook computer offers 200-pin SODIMM (Small Outline Dual Inline Memory Module) at least 256MB DDRII-SDRAM. The memory compartment is located inside your computer. The table below lists the possible combinations of different memory module and memory size.

*+ Please contact dealer for changing or adding DDRII-SDRAM module. It is not available for users to change it by themselves.*

Based Memory	Installing Memory	Total
256 MB	0 MB	<b>256 MB</b>
256 MB	256 MB	<b>512 MB</b>
256 MB	512 MB	<b>768 MB</b>
256 MB	1024 MB	<b>1280 MB</b>
256 MB	2048MB	<b>2304 MB</b>
512 MB	0 MB	<b>512 MB</b>
512 MB	256 MB	<b>768 MB</b>
512 MB	512 MB	<b>1024 MB</b>
512 MB	1024MB	<b>1536 MB</b>
512 MB	2048MB	<b>2560 MB</b>
1024MB	0 MB	<b>1024 MB</b>
1024MB	256 MB	<b>1280 MB</b>

Based Memory	Installing Memory	Total
1024MB	512 MB	<b>1536 MB</b>
1024MB	1024MB	<b>2048 MB</b>
1024MB	2048MB	<b>3072 MB</b>
2048MB	0 MB	<b>2048 MB</b>
2048MB	256 MB	<b>2304 MB</b>
2048MB	512 MB	<b>2560 MB</b>
2048MB	1024MB	<b>3072 MB</b>
2048MB	2048MB	<b>4096 MB</b>

## **INSTALLING MEMORY MODULE**

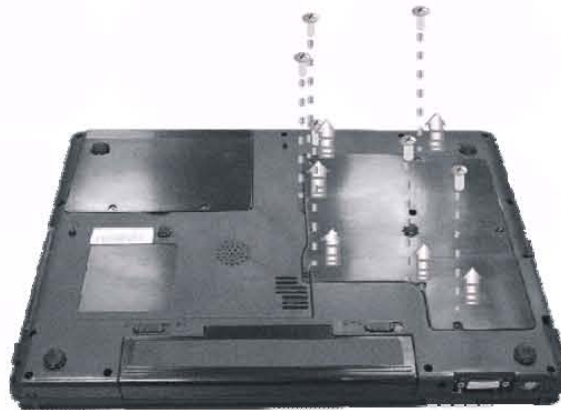
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Your computer comes with standard 256 MB, 512MB, 1024MB or 2048 MB of synchronous DDRII SDRAM. You can increase system memory to a maximum of 4096 MB in the system, by installing two small outline double inline memory modules (SO-DIMMs) with installed base memory in the system.

The 256MB, 512MB, 1024MB and 2048MB memory modules are available:

To install the memory module:

1. Make sure the system is powered off, the battery also is removed and that no peripheral devices are attached.
2. Turn the computer upside-down and locate the screws that secure the DIMM door at the underside of the notebook.



3. Remove the screws and open the DIMM cover by your finger.
4. Locate the memory module into the empty memory module sockets. (Your system comes with one memory module already installed in the socket.)

**+ *Avoid touching the exposed components inside the system. Doing so may damage the system.***

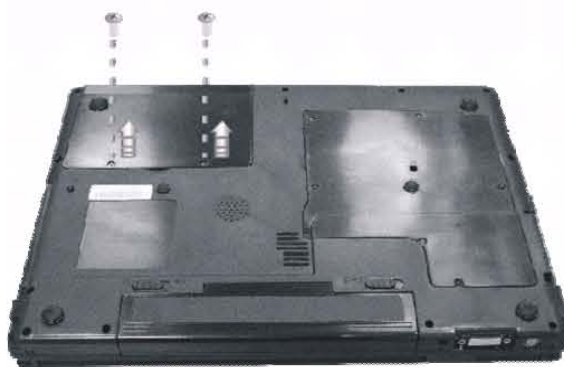
5. Insert the connector of the memory module into the socket. Make sure the notch of the memory module fits the nose of the socket.
  - Hold the memory module at a 30-degree angle and push its connector into the memory socket of the notebook.
  - Press down on the edge of the memory module until the locking tabs on both sides is locked.
6. Put the DIMM door back and secure the screw on the DIMM door.
7. Turn the system over.

To remove a memory module, push the locking tabs aside from the memory module until the module pops up. Then, remove the memory module.

## 7.2 Hard Disk Upgrade

Your notebook computer offers one 2.5" format, 9.5mm height hard disk. If the volume does not fit your need or it is crashed, you can upgrade it by replacing with new hard disk. Please do the following steps to change it.

1. Remove the screw and open the cover by lifting its upper side cover.



2. Take out the hard disk from the compartment by finger carefully
3. Remove the connector from the hard disk gently.
4. Remove the crane screws located at each side of the hard disk.
5. Rotate and tighten the crane screws to the new hard disk.
6. Attach the connector to the new hard disk precisely.
7. Place the hard disk back to the compartment.
8. Cover the lid, then rotate and tighten the screws.

9. Set the boot device as DVD/CD-RW Combo drive and Primary Master as Auto on BIOS setup menu. Please refer to Chapter 6 about the setting of BIOS setup menu. Then, boot the system by using WinXP CD-ROM and the system will detect the hard disk automatically and prompt you how to format the new disk.

+ *Please tighten the screws located at each side of the hard disk before operating the hard disk. Any vibration may cause damage for the running hard disk.*

+ *Please contact dealer or certified technician for changing the hard disk drive. The damage of changing HDD resulting from users may not be under warranty*

## 7.3 Wireless Module Installation

This computer uses mini card wireless LAN module at the bottom of this notebook for wireless connection.

+ *Please contact dealer for adding or changing this module. Any damage that caused by inappropriately adding or changing this module will not be under warranty*

## 8 Caring for Your Notebook



**Y**our Notebook PC is a fully compatible portable personal computer with the latest features in mobile computing and multimedia technology. Lightweight and compact, your Notebook PC runs on a whole wide range of general business, personal productivity, and professional applications, it is ideal for use in the office, at home, and on the road.

Your Notebook PC also allows you for several levels of customization and expansion that are previously available only on desktop PCs.



## 8.1 Important Safety Instructions

Portable computers take the most beating from end users. This section gives you detailed information about how to maintain a safe working environment while using the notebook computer. You can maintain its condition and performance by following these guidelines. Please read it carefully to ensure maximum safety.

- Before cleaning the notebook computer, make sure it is disconnected from any external power supplies (i.e. AC adapter, car adapter and so on).
- When cleaning, do not use liquid or sprayed detergent for cleaning. Instead, use moisture sheet or a cloth for cleaning.
- The socket-outlet shall be installed near the notebook computer and shall be easily accessible.
- Please keep the notebook computer from humidity.
- Lay the notebook computer on a reliable surface when installing. A drop or fall may cause injury.
- The openings on the enclosure are for air convection hence the notebook computer can be protected from overheating. DO NOT COVER THE OPENINGS.
- Be careful of using power supply. The notebook computer has specific power requirements.
- Use only a power adapter approved for use with this notebook computer.
- The power adapter may have a 2-prong plug. This is an important safety feature. A compatible outlet is required. If it is not available, find a qualified electrician to install one.

- While unplugging the power cord, disconnect it by the plug head, not by its wire.
- Make sure the socket and any extension cords you may use can support the total current load of all the connected devices.
- Though your AC adapter is suitable for universal international voltage, it still requires a stable and continual power supply. Make sure the voltage of the power source when connect the notebook computer to the power outlet. If your are unsure of your local power specifications, consult your dealer or local power company.
- Place the power cord in such a way that people can not step on it. Do not place anything over the power cord.
- All cautions and warnings on the notebook computer should be noted.
- If the notebook computer is not in use for a long time, disconnect it from mains to avoid possible damage by transient over-voltage.
- Never pour any liquid into openings as this may cause fire or electrical shock.
- Never open the body of notebook computer. For safety reason, the notebook computer should only be opened by qualified service personnel.
- If one of the following situations arises, have the notebook computer checked by service personnel:
  - ↓ The power cord or plug is damaged.
  - ↓ Liquid has penetrated into the notebook computer.
  - ↓ The notebook computer has been exposed to moisture.
  - ↓ The notebook computer has not worked well or you can not get it work according to user's manual.

- ⇓ The notebook computer has dropped and damaged.
- ⇓ The notebook computer has obvious sign of breakage.
- Do not leave this notebook computer in an environment unconditioned. Storage temperature above 60°C (140°F) may damage the notebook computer.
- An approved power cord has to be used for the notebook computer's power supply. For a rated current up to 6A and an equipment weight more than 3 kg, a power cord not lighter than H05VV-F, 2G, 0.75mm<sup>2</sup>, has to be used.
- To avoid any damage happened to the internal device, you should first disconnect the AC adapter and remove the battery pack from the notebook when replacing any internal device.

The sound pressure level at the operator's position according to IEC 60704-1 is equal or less than 70dB(A).

## 8.2 Cleaning Your Computer

When it is necessary to clean the plastic case and keyboard, use a soft, lint-free cloth, slightly dampened with a mild detergent solution or use the contents of any commercially available computer cleaning kit.

Never use alcohol, petroleum-based solvents, or harsh detergents to clean the notebook. Also never spray any liquids directly on the computer case, keyboard, or screen. If the liquid-crystal display (LCD) screen has become smeared or dusty, clean the screen by first applying a mild glass cleaner to a soft, clean, lint-free cloth, and gently wipe the glass. Never apply liquids directly on the screen surface. Moreover, do not use paper towels to clean the display screen. Paper can scratch the display screen matte.

## 8.3 Maintaining the LCD Quality

When it comes to screen problems, heat plays a big part. After a good working session, the typical routine is to shut the machine and close the cover. But the display surface - no matter what type it is - and the components inside the computer radiates heat; when you close the cover, you trap the heat against the screen. Leave the computer's cover open for about ten minutes while the heat disperses. Make this a habit.

You should also enable the power management of your computer to turn off the LCD power and display when the system is in inactivity for some time. Adding screen savers is also acceptable.

Follow the safety guidelines mentioned earlier and how to clean your computer.

## 8.4 Maintaining Your Hard Disk

Losing your data has the same consequences as a system break down. Users must make it a habit of doing hard disk maintenance every week or so. Here is some maintenance you could do:

- Always back up your data files from your hard disk.
- Install the virus detecting program to monitor virus that could tamper your files.
- Use SCANDISK once in a while to correct any errors found in the directory and File Allocation Table. This will also free up space from any unused sectors.
- Never move or raise the computer while the hard disk is being accessed, most especially don't jar the hard disk as this may cause a hard disk crash.

- Use hard disk maintenance programs like **Disk Defragmenter** of Windows. These reorganize your hard disk by eliminating fragmentation and improving your hard disk access time.
- Install a system password in your computer so others won't be able to use the hard disk.

## 8.5 Battery Care Guidelines

The battery pack furnished with the computer requires reasonable care and handling to ensure efficient operation and maximum life. There is a risk of fire and chemical burn if the battery pack is handled improperly.

To ensure that the battery pack endures normal life cycle, always observe the following precautions when handling the battery pack:

- Handle batteries carefully. Do not try to disassemble, crush, puncture, open, drop, mutilate, short external contacts, disposed of in water or fire, or expose it to temperatures higher than 60 C.
- Recharge batteries only as described in this manual and only in ventilated areas. Never use an external charger other than the one supplied with your computer.
- Do not leave batteries in hot locations for more than a day or two.
- Do not leave your battery in your computer for longer than 1 month without plugging in the power adapter.
- Do not leave battery in storage for more than 2 months without recharging it to prevent over discharge. Over discharge will hurt the battery
- Dispose dead battery properly to protect the environment. The batteries contain hazardous chemicals and should not be thrown out with household or office trash.

- You should always discharge your battery before recharging it on either of these two conditions: first, this is the first time you start to use your battery; second, you had not charge the battery for more than 2 months. To discharge the battery, please execute the "Battery Refresh" function in the BIOS Setup Utility.

## 8.6 When You Travel

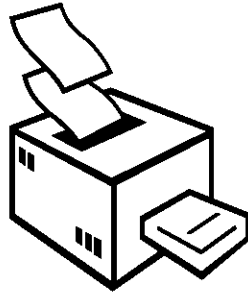
For safety and convenience when traveling, please follow these instructions:

- Back up all needed files on your hard disk before traveling.
- Recharge your battery overnight to ensure full battery power before you leave.
- Don't forget to bring along the AC adapter and extra battery pack.
- Try to bring backup software as well.
- Check the voltage rating and the outlet type of your destination. If the power cord of the adapter is different, then you need to purchase a suitable one. Consult your dealer.
- Carry your computer in its carrying case or in a briefcase. Never check-in the computer as a luggage.
- Remember to apply those power saving features and techniques to save battery power.



# APPENDIX A

## System Specification



**T**his appendix gives information on the technical and hardware specifications of your computer. Please note that the information mentioned here may not be exactly the same with your computer as specification is subject to change without notice or modifying this manual.

Designed with an advanced modular architecture, your Notebook PC also allows you for several levels of customization and expansion that are previously available only on desktop PCs.



## **PROCESSOR UNIT**

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- AMD Turion™ 64 x 2 Mobile Processor TL-50/TL-52 (31W)/ TL-56 (33W)/ TL-60 (35W); 25W Mobile AMD Sempron™ Processor 3200+/3400+/3500+ (Socket S1)
- 1M L2 Cache

## **SYSTEM MEMORY**

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- Two 200-pin memory slots
- User-upgradeable to maximum 4GB using 200-pin SODIMM 256MB, 512MB, 1024MB or 2048MB modules
- DDRII –533/667 SDRAM modules

## **LCD DISPLAY**

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- 17" WXGA+ Color TFT LCD, 1280x800
- Maximum 16M true colors on all LCD display

## **VGA SYSTEM**

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- Integrated Nvidia C51D graphic engine
- Simultaneous LCD and external monitor (CRT) display
- Maximum 16 million colors on LCD display at 1280x800 resolution for 17" LCD
- Maximum 16 million colors on external monitor or projector at 1280x1024 resolution (Non-Interlaced)

## **STORAGE**

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- 2.5" Format 9.5mm High SATA HDD Module; Bus Mastering, Ultra DMA ATA-150 Support for LBA Scheme
- Enhanced IDE bootable DVD/CD-RW Combo drive module
- Optional DVD Dual or DVD-Super Multi drive
- 4-in-1 (SD, MS, MMC, and MS\_Pro) card reader

## **AUDIO SYSTEM**

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- Compliant with Intel HD Audio (Azalia).
- H/W Audio Sound Blaster 16 compatible
- Built-in dual speakers
- Audio input jacks for microphone (MIC)
- Audio output jack for external speaker or headphone (Line-Out)
- Digitized audio SPDIF port for high quality signal transmission.

## **EXPRESSCARD**

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One 54mm, 26-pin ExpressCard slot

## **TOUCHPAD**

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Integrated touchpad (Serial/USB mouse) pointing device with 2 click buttons

## **KEYBOARD**

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- Full-sized 87-keys keyboard with Windows systems hot-keys, inverted T-cursor keys, 7 hot keys, 12 function keys, and embedded numeric keypad

- Provides international language keyboard

## **FLASH BIOS**

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512K Flash ROM BIOS for easy BIOS upgrade

## **I/O PORTS**

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- 1 x TV-Out Port (S-Video)
- 1 x DVI-I port
- 3 x Universal Serial Bus (USB 2.0)
- 1 x IEEE 1394 port (BTO)
- 1 x IR (Infrared) port
- 1 x 10Base-T/100Base-TX LAN port
- 1 x 56Kbps v.92 Data/Fax MDC Modem port

## **WIRELESS DEVICES**

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- IEEE 802.11b/g, Mini Card Wireless LAN Solution

## **AC/DC POWER SUPPLY ADAPTER**

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Universal auto-switching (100V~240V) 90W adapter, 20 Volt

## **BATTERY**

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- Rechargeable 6 Cells Li-ion battery pack with Smart Battery function
- Approximately 3 Hours (for Battery Mark) Battery Life

## **WEIGHT AND DIMENSION**

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- 399(W) x 299(D) x 33 ~ 39.5(H) mm
- Approximately 3.7 kg