
Classmate PC

Version 1.01



User's Manual

Preface

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While reasonable efforts have been made to ensure the accuracy of this manual, the manufacturer and distributor assume no liability resulting from errors or omissions in this manual, or from the use of the information contained herein.

Notices

Federal Communications Commission Radio Frequency Interference Statement

 **NOTE....** This equipment 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 equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment 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 equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected

Consult the dealer or an experienced radio TV technician for help.

This device 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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Notice:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Shielded interface cables and a non-shielded AC power cord must be used in order to comply with emission limits.

Table of Content

ATTENTION: TEACHERS, PARENTS AND ADULT SUPERVISORS	1
1. AGENCY REGULATORY NOTICES.....	3
MODIFICATIONS.....	4
CONNECTIONS TO PERIPHERAL DEVICES	4
EUROPEAN NOTICE	4
CANADIAN NOTICE.....	5
ATTACHMENT LIMITATIONS STATEMENT	5
POWER CORD REQUIREMENT	6
BATTERY PACK SAFETY.....	8
LITHIUM BATTERY WARNING / BRIDGE BATTERY WARNING	9
2. GETTING TO KNOW THE BASICS	11
TOP VIEW	11
SYSTEM & POWER STATUS INDICATORS.....	15
FUNCTION KEYS (QUICK KEYS).....	16
WINDOWS* KEYS.....	17
EMBEDDED NUMERIC KEYPAD	17
ABOUT THE DISPLAY SWITCHER UTILITY.....	18
ADJUSTING THE DISPLAY BRIGHTNESS	18
EXTENDING THE LIFE OF THE TFT DISPLAY DEVICE	19
OPENING AND CLOSING THE DISPLAY PANEL	19
ADJUSTING THE VOLUME MANUALLY	19
ADJUSTING THE AUDIO VOLUME IN OPERATING SYSTEM	19
VOICE RECORDING.....	19
CONNECTING TO THE NETWORK.....	20
CABLING RESTRICTION FOR NETWORKS	20
3. BATTERY POWER & POWER MANAGEMENT	21
LITHIUM-ION BATTERY	21
BATTERY LOW-POWER WARNING.....	21
CHARGING THE BATTERY AND CHARGING TIME.....	22
CHECKING THE BATTERY LEVEL	22
PROLONGING THE BATTERY'S LIFE AND USAGE CYCLES.....	22
STANDBY SUSPEND.....	23
HIBERNATE SUSPEND	23

4. BIOS SETUP AND SECURITY FEATURE.....	25
ENTERING THE BIOS SETUP SCREEN	25
BIOS ACTION KEYS	26
MAIN SETUP	27
ADVANCED SETUP.....	28
SECURITY SETUP	29
BOOT SETUP.....	30
EXIT SETUP	32
5. UPGRADING YOUR COMPUTER.....	33
6. TROUBLE SHOOTING	43
NO SPEAKER OUTPUT	44
SOUND CANNOT BE RECORDED	44
THE HARD DRIVE IS MAKING ABNORMAL WHINING NOISES	44
THE HARD DISK DRIVE HAS REACHED ITS CAPACITY	45
THE HARD DISK TAKES LONGER TO READ A FILE.....	45
THE DISPLAY PANEL IS BLANK WHEN THE SYSTEM IS TURNED ON	45
THE SCREEN IS DIFFICULT TO READ	45
THE SCREEN FLICKERS	45
THE BUILT-IN TOUCH PAD PERFORMS ERRATICALLY	45
THE BUILT-IN KEYBOARD ACCEPTS NO INPUT	45
THE CHARACTERS ON THE SCREEN REPEAT WHILE I TYPE.	46
THE POST DOES NOT SHOW AN INCREASED MEMORY CAPACITY WHEN YOU HAVE ALREADY INSTALLED ADDITIONAL MEMORY	46
THE O/S ISSUES AN INSUFFICIENT MEMORY ERROR MESSAGE DURING OPERATION	46
THE ETHERNET ADAPTER DOES NOT WORK.....	46
THE ETHERNET ADAPTER DOES NOT APPEAR TO OPERATE IN THE 100Mbps TRANSMISSION MODE	46
THE COMPUTER BECOMES HOT	47
THE PROGRAM APPEARS STOPPED OR RUNS VERY SLOWLY	47
THE USB DEVICE DOES NOT WORK	47
APPENDIX: SPECIFICATION.....	49

Attention: Teachers, Parents and Adult Supervisors

Please ensure that students understand the following:

- Emphasize to student that this device is an educational tool and not a toy. The computer, power supply, battery pack or power cord should not be dropped, crushed, stepped on or otherwise abused.
- This product is intended for school age children, ages 6 and up.
- Ensure students understand the safe and proper handling of power cord and power supply. Misuse could result in serious injury.
- Use caution when using this computer around younger children. Keep power cords away from younger children. Keep small accessories away from younger children. If computer is damaged, keep any resulting small parts (such as a keyboard key) away from younger children and report damage or loose parts to their teacher, parent or adult supervisor, immediately.
- The teacher, parent or adult supervisor should periodically inspect the computer, power supply and power cord for damage and replace, if necessary.
- Students should report any damage or loose parts to their teacher, parent or adult supervisor, immediately.
- Caution students to avoid using device in wet conditions and to protect the unit when carrying in wet conditions.
- When cleaning the unit, clean only with a slightly damp soft cloth. Do not pour liquid onto the unit. Do not clean while computer is "on" or plugged into wall socket.
- Do not leave PC plugged in or "on" when enclosed in a non-vented container, such as a school backpack, as overheating may occur.
- The most suitable time for students to use the PC on their lap not exceeding 30 minutes and take a 5 minutes break.

1. AGENCY REGULATORY NOTICES

Federal Communications Commission Notice

This equipment 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 equipment 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 equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment 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 equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.



WARNING.... This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 19cm between the radiator & your body

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by the Manufacture may void the user's authority to operate the equipment.

Connections to Peripheral Devices

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

Declaration of Conformity

This device complies with Part 15 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.

European Notice

Products with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) and R&TTE Directive (1999/5/EC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms:

- EN55022: 1998+A1: 2000+A2: 2003, CLASS B
- EN61000-3-2: 2000
- EN61000-3-3: 1995+A1: 2001
- EN55024: 1998+A1: 2001+A1: 2003
- IEC61000-4-2: 2001
- IEC61000-4-3: 2002+A1: 2002
- IEC61000-4-4: 1995+A1: 2000+A2:2001
- IEC61000-4-5: 2001
- IEC61000-4-6: 2001
- IEC61000-4-8: 2001
- IEC61000-4-11: 2001
- EN50082 (IEC801-2, IEC801-3, IEC801-4) Electro-magnetic Immunity

-
- EN 300 328-2, EN 300 328-1, EN 301 489-1, EN 301 489-17 (ETSI 300 328, ETSI 301 489) Electro-magnetic Compatibility and Radio Spectrum Matter.
 - TBR21 (ETSI TBR21) Terminal Equipment.
 - EN60950 (IEC60950) I.T.E. Product Safety

Canadian Notice

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

Attachment Limitations Statement

 **NOTICE....** This equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s).

This is confirmed by marking the equipment with the Industry Canada certification number. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company.

The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

 **CAUTION...** Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

Power Cord Requirement

The power cord supplied with the AC adapter should match the plug and voltage requirements for your local area. Regulatory approval for the AC adapter has been obtained using the power cord for the local area.

However, if you travel to a different area and need to connect to a different outlet or voltage, you should use one of the power cords listed below. To purchase a power cord (including one for a country not listed below) or a replacement AC adapter, contact your local dealer.

U.S. and Canada

- The cord set must be UL-Listed and CSA-Certified or C-UL Listed.
- The minimum specifications for the flexible cord are (1) No. 18 AWG, (2) Type SJ, and (3) 3-conductor.
- The cord set must have a rated current capacity of at least 10 A.
- The attachment plug must be an earth-grounding type with a NEMA 5-15P (15A, 125V) or NEMA 6-15P (15 A, 250V) configuration.

Japan

- All components of the cord set (cord, connector, and plug) must bear a "PSE" mark and registration number in accordance with the Japanese Dentori Law.
- The minimum specification for the flexible cord are: (1) 0.75 mm² conductors, (2) Type VCT or VCTF, and (3) 3-conductor.
- The cord set must have minimum rated current capacity of 7 A.

-
- The attachment plug must be a two-pole, grounded type with a Japanese Industrial Standard C8303 (15 A, 125 VAC) configuration.

Other Countries

- The cord set fittings must bear the certification mark of the agency responsible for evaluation in a specific country.
Acceptable agencies are:
 - BSI (UK)
 - OVE (Australia)
 - CEBEC (Belgium)
 - SEMKO (Sweden)
 - FIMKO (Finland)
 - DEMKO (Denmark)
 - NEMKO (Norway)
 - SETI (Finland)
 - EANSW (Australia)
 - SEV (Switzerland)
 - IMQ (Italy)
 - UTE (France)
 - CCC (China)
 - PSB (Singapore)
 - PSE (Japan)
 - BSMI (Taiwan)
 - B (Polish)
 - VDE (Germany)
 - SASO (Saudi Arabia)
- The flexible cord must be of a HAR (harmonized) type HO5VV-F 3-conductor cord with a minimum conductor size of 0.03 square inches.
- The minimum specification for the flexible cord for Class II product are: (1) 2X0.75 mm² conductors, (2) 2-conductor cord.
- The cord set must have a current capacity of at least 10 A and a nominal voltage rating of 125 / 250 VAC.



NOTE....

**MODEL E07E1x IS DESIGNED TO USE
WITH THE FOLLOWING AC ADAPTER MODEL ONLY
Manufacture: LI SHIN INTERNATIONAL ENTERPRISE CORP.
Model: 0335C2065 (65W), 0335A2065 (65W), 0225C2040 (40W)
Manufacture: HIPRO**

Model: HP-OK065E03 (65W), HP-OK065E13 (65W)

Battery Pack Safety

- The battery pack is intended to use only with this notebook.
- The battery pack is not replaceable by the end user. Only qualified service technicians should replace the battery pack.
- Do not disassemble the pack.
- Do not dispose of the battery pack in fire or water.
- To avoid risk of fire, burns, or damage to your battery pack, do not allow a metal object to touch the battery contacts.
- Handle a damaged or leaking battery with extreme care. If you come in contact with the electrolyte, wash the exposed area with soap and water. If it contacts the eye, flush the eye with water for 15 minutes and seek medical attention.
- Do not charge the battery pack if the ambient temperature exceeds 45°C (113°F).
- To obtain a replacement battery, contact your local dealer.
- Do not expose the battery pack to high storage temperatures (above 60°C, 140°F).
- When discarding a battery pack, contact your local waste disposal provider regarding local restrictions on the disposal or recycling of batteries.
- Use only supplied AC Adapter for charging.

 **CAUTION...** Danger of explosion if battery is incorrectly replaced. Only qualified service technicians should replace and discard the battery pack. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions or local laws.

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

Lithium battery warning / Bridge battery warning

This computer contains a lithium battery to power the clock and calendar circuitry.

 **CAUTION...** Danger of explosion if battery is replaced incorrectly. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

 **NOTE....** Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

 **VORSICHT...** Explosionsgefahr bei unsachgemäßem Austausch der Batterie. Ersatz nur durch denselben oder einen vom Hersteller empfohlenen ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

Der Arbeitsplatzbezogene Schalldruckpegel nach DIN 45 635 beträgt 70dB (A) oder weniger.

Zum Netzanschluss dieses Gerätes ist eine geprüfte Leitung zu verwenden. Für einen Nennstrom bis 6A und einem Gerätegewicht größer 3kg ist eine Leitung nicht leichter als (1)H05VV-F, 3G, 0.75mm² (2)2X0.75 mm² conductors einzusetzen.

Die Steckdose muß nahe dem Gerät angebracht und leicht zugänglich sein.

 **CAUTION...** This part is hot. Be careful.

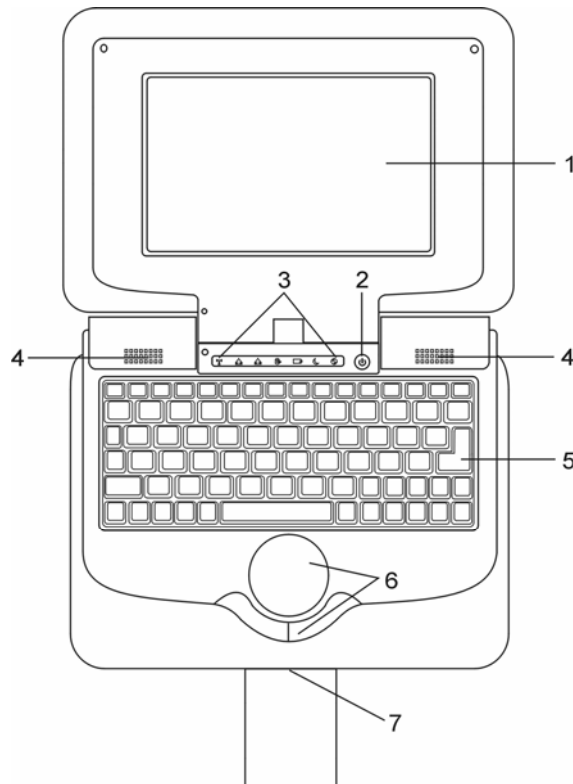
 **VORSICHT...** Diese Fläche wird sehr heiß.
When you see this symbol, be careful as this spot may be very hot.

When you see this symbol, be careful as this spot may be very hot. The heat is generated from the CPU.

2. GETTING TO KNOW THE BASICS

System At A Glance

Top View



1. LCD Display

The panel is where the system content is displayed.

2. Power / Suspend Button

The power/suspend button turns the notebook on and off and it also acts as a system suspend key.

Press momentarily to turn on the system.

Press and hold for at least four seconds to turn off the system.

Press the power/suspend button again to return from the suspend mode. (See Chapter 3 for more details on system suspend function.)

When the system is in Suspend Mode, the  LED status indicator shows green light.

3. LED Status Indicator

The LED Status indicators reveal the status of these functions: Numeric keypad, cap lock, WLAN module enabling and disabling and also the data activities. (See the LED Status Indicator Section for details.)

The LED Status indicators also reveal the status of the system power state and battery-charging state. See the LED Status Indicator Section for details.

4. Built-in Stereo Speakers

The built-in speakers output the sound in stereo.

5. Keyboard

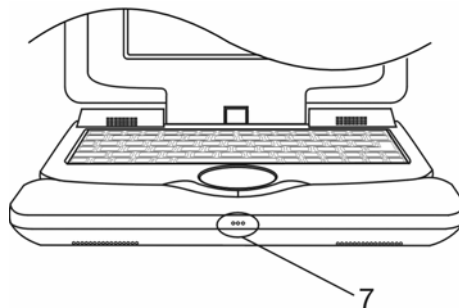
The keyboard is used to enter data. (See Keyboard Section for details.)

6. Touch Pad

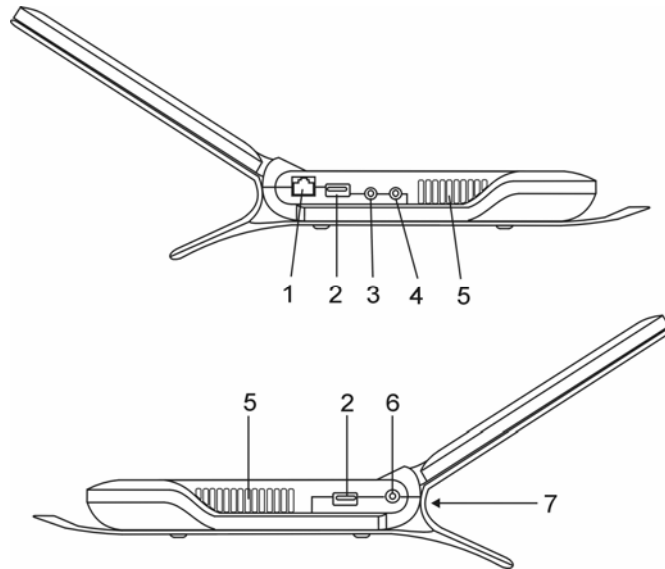
The touch pad is a built-in pointing device with functions similar to a mouse.

7. Built-in Microphone

The built-in microphone records sound.



Side Views



 **WARNING....** Do not place any heavy objects on the top of notebook. This may damage the display.

1. Ethernet / LAN Port

The port connects to a network hub via the RJ-45 cable and also conforms to 10/100Base-TX transmission protocol.

2. USB2.0 Port (x2)

The Universal Serial Bus (USB2.0-compliant) port allows you to connect a wide variety of devices to your computer at a rate of up to 480 Mbps. This port conforms to the latest USB2.0 plug-and-play standards.

3. Microphone Jack

The microphone jack (3.5 mm diameter) is where you connect a microphone.

4. Stereo Headphone Jack

The stereo headphone jack (3.5 mm diameter) is where you connect the headphones or external speakers.

5. Ventilation Grill

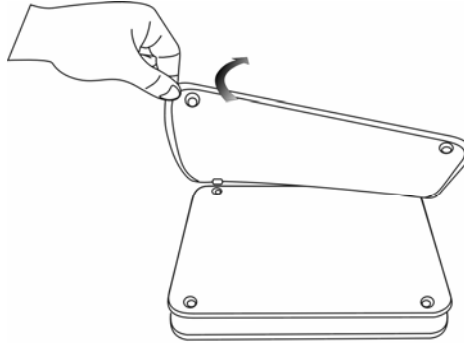
The fan grill is where air is exchanged to dissipate the internal heat. Do not completely block this airway.

6. Power Jack (DC-in)

The DC-out jack of the AC Adapter connects here and powers the computer.

7. 2-in-1 Card Reader

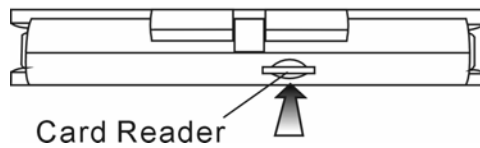
The 2-in-1 Card Reader supports SD Card and MMC Card. You need to remove the outer jacket to access the card reader slot on the rear side of the computer.



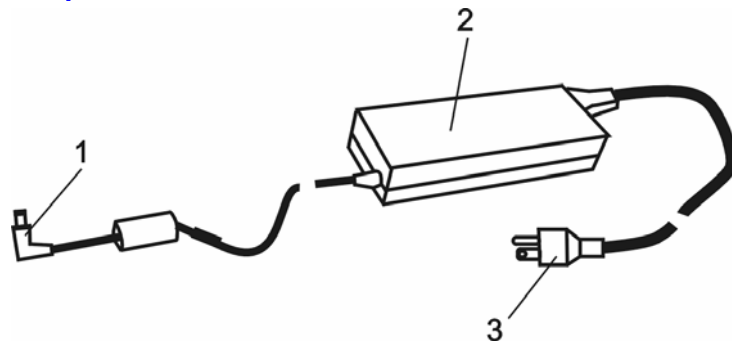
(Top View)

Flip open the jacket and the card reader slot is seen.

(Rear View)



AC Adapter



1. **DC-out Connector**
The DC-out connector docks to the power jack (DC-in) on the computer.
2. **Adapter**
The adapter converts alternating current into constant DC voltage for the computer.
3. **AC Plug**
The AC Plug plugs to the AC wall outlet.

LED Status Indicator

The LED Status Indicator displays the operating status of your notebook. When a certain function is enabled, an LED will light up. The following section describes the indication.

System & Power Status Indicators

LED Graphic Symbol	Indication
	Green light indicates the system is ON.
	Green light indicates the notebook is in the suspend mode.
	Orange light indicates the battery is being charged. Blinking Orange light indicates the battery power is low. Green light indicates the battery is Full and the AC Adapter is plugged in. No light indicates that the battery pack is removed. When the AC Adapter is plugged in, the alternating Green-and-Orange LED light indicates that the system stops charging the battery because the battery-pack's temperature is too high.
	Green light indicates the NAND Flash or the hard drive (optional) is being accessed.
	Green light indicates the cap-lock is activated.
	Green light indicates the numeric keypad is activated.
	Green light indicates the WLAN module is active.

Keyboard Features

Function Keys (Quick Keys)

The function keys allow you to quickly access certain controls, such as screen brightness, audio volume, suspend mode, etc.

Press and hold the Fn key and then press the various function key to activate the following controls.

Graphic Symbol	Action	System Control
	Fn + F1	Turns the WLAN module off or on. When the Wireless LAN function is enabled, the LED status indicator shows green light.
	Fn + F2	Enables or Disables the Card Reader function.
	Fn + F4	Enters the Suspend Mode. When the system is in Suspend Mode, the LED status indicator shows green light.
	Fn + F5	Decreases Display Brightness.
	Fn + F6	Increases Display Brightness.
	Fn + F9	Turns Speaker Volume down.
	Fn + F10	Turns Speaker Volume up.
	Fn+Num Lk	Enables the embedded keypad to work in numeric mode. The keys act like numeric keypads in a calculator. Use this mode when you need to do a lot of numeric data entry. An alternative would be to connect an external numeric keypad. When the numeric keypad is enabled, the LED status indicator shows green light.
	Caps Lock	Turns the character capitalization on or off. When the cap lock is enabled, the LED status indicator shows green light.
	Fn+Scr Lk	Press the Fn+Scroll Lock key and then press ↑ or ↓ to move one line up or down.

Windows* Keys

Your keyboard also has two Windows keys:



1. Start Key

This key allows you to pull up the Windows Start Menu at the bottom of the taskbar.



2. Application Menu Key

This key brings up the popup menu for the application, similar to a click of the right mouse button.

Embedded Numeric Keypad

Press Fn+Num Lk to enable the embedded numeric keypad. The numbers are printed in the upper right corner of a key, in a color different from the alphabets. This key pad is complete with arithmetic operators (+, -, *, /).

Press Fn+Num Lk to revert to normal character keys.

Touch Pad

The built-in touch pad, which is a PS/2-compatible pointing device, senses movement on its surface. As you move your fingertip on the surface of the pad, the cursor responds accordingly.

The following items teach you how to use the touch pad:

1. Move your finger across the touch pad to move the cursor.
2. Press buttons to select or execute functions.

These two buttons are similar to the left and right buttons on a mouse. Tapping on the touch pad twice produces is similar to clicking the left button of a mouse.

Function	Left Button	Right Button	Equivalent Tapping Action
Execution	Click twice quickly		Tap twice (at the same speed as double-clicking the mouse button)
Selection	Click once		Tap once
Drag	Click and hold to drag the cursor		Tap twice quickly and on the second tap hold finger to the touch pad to drag the cursor

Access Context Menu	Click once
Move One Page Up or Down	

Tips on Using the Touch Pad:

1. The double-click speed is timed. If you double-click too slowly, your notebook responds as if you single-clicked twice.
2. Keep your fingers dry and clean when using the touch pad. Also keep the surface of touch pad clean and dry to prolong its life.
3. The touch pad is sensitive to finger movements. Hence, the lighter the touch, the better the response. Heavy touch does not produce better response.

Graphic Subsystem

Your computer uses a high performance 7 inch active matrix TFT panel with high resolution and multi-million colors for comfortable viewing. The Intel Express integrated video graphics accelerator, which is Microsoft DirectX 9 compatible, performs graphic rendering at a lighting-fast speed.

About the Display Switcher Utility

A classmate PC has unique utility software called the Display Switcher that allows the user to choose between the different display modes quickly and easily.

The native display resolution for a classmate PC is 800x480, which is 16:9 in aspect ratio. The 16:9 LCD panel may cause some display problems because most applications are written for the typical 4:3 display-panel. The Display Switcher utility allows you to solve this problem.



NOTE.... Please refer to the Display Switcher Utility user's manual for detailed information.

Adjusting the Display Brightness

The notebook uses special key combinations, called hot keys, to control brightness.

- Press Fn + F6 to increase the brightness.
- Press Fn + F5 to decrease the brightness.

 **NOTE....** To maximize your battery operating time, set the brightness to the lowest comfortable setting, so that the internal backlight uses less power.

Extending the Life of the TFT Display Device

Observe the following guidelines to maximize the life of the backlight in the display.

1. Set the brightness to the lowest comfortable setting (Fn+F5).
2. Do not disable the suspend time-outs.
3. If you are using AC power, change to suspend mode when not in use.

Opening and Closing the Display Panel

To open the display, simply lift up the lid and then tilt it to a comfortable viewing position.

To close the display cover, fold it down gently.

 **WARNING....** To avoid damaging the display, do not slam it when closing. Do not place any object on top of the computer when the display is closed.

Audio Subsystem

Your computer's audio subsystem is Sound Blaster Pro-compatible.

Adjusting the Volume Manually

To increase the volume, press Fn + F10.

To decrease the volume, press Fn + F9.

Adjusting the Audio Volume in Operating System

1. Click the speaker symbol in the task tray in operating system.
2. Drag the volume control bar up or down to adjust the volume.
3. To temporarily silence the speaker without changing the volume setting, click Mute.

Voice Recording

A built-in microphone allows you to record sound. You will need to use audio processing software to enable the built-in microphone.

For example, you may use Microsoft Sound Recorder.

Ethernet

Your computer is equipped with a 10/100Base-TX Fast Ethernet network adapter. Connect the active LAN cable to the RJ-45 LAN port located on the left side of the computer. This allows you to access and transmit data in the local area network.

Connecting to the Network

Use Unshielded Twisted Pair (UTP) Ethernet cable only.

1. Insert one end of the UTP cable into the network connector until the connector snaps securely into the receptacle.
2. Either connect the other end of the cable to an RJ-45 jack wall outlet or to an RJ-45 port on a UTP concentrator or hub in the network.

Cabling Restriction for Networks

The following restrictions should be observed for 10/100BASE-TX networks:

- The maximum cable run length is 100 meters (m) (328 feet [ft]).

 **NOTE....** Consult Operating System manual for the software installation, configuration, and operation of the network.

3. BATTERY POWER & POWER MANAGEMENT

In this chapter, you will learn how to operate your notebook on battery power and learn about the system's power saving features. TFT display, central processor, hard disk drive (optional) are the major hardware subsystems that consume the most power. Power management deals how these key components should behave to conserve power. For example, you can have the system turn off its display after two minutes of inactivity to save power. Efficient power management can help you for work longer sessions before having to recharge the battery.

The Battery Pack

Lithium-Ion Battery

Your notebook uses a six-cell Lithium-Ion battery pack that provides power when you don't have access to an AC outlet.



NOTE.... You must charge the battery pack for at least six hours before using it for the first time.

In the Standby Suspend mode, a fully charged battery loses its power in roughly 1/2 day or less. When not being used, the battery's power will deplete in one to two months.

The battery pack in this system is not removable by the user.

Battery Low-Power Warning

1. Low Battery Warning

Low battery condition occurs when battery power is reduced to 6 percent. The red battery status LED indicator blinks and the system beeps once every 16 seconds or so.

2. Very Low Battery Warning

Very Low battery condition occurs at 3 percent power remaining. The red battery status LED indicator blinks and the system beeps at 4-second interval.

When the notebook warns you of its low battery condition, you will have about three to five minutes to save your current work.

 **WARNING....** Do not expose battery packs to temperatures below 0 degree Celsius (32 degree F) or above 60 degree C (140 degree F). This may adversely affect the battery pack.

Charging the Battery and Charging Time

To charge the battery, plug the AC adapter into the notebook and an electrical outlet.

For a totally discharged battery, it will take approximately two hours to charge to 90% capacity, and approximately three hours to 100% capacity while classmate PC is powered off. It will take about 5 hrs to charge the battery to 100% capacity while classmate PC is powered on.

When the battery is fully charged, the battery charge indicator becomes green.

 **NOTE....** If system runs at heavy loads or in a high temperature environment, the battery may not be fully charged. You need to continue to charge it with the AC adapter plugged in until the charging LED turns green.

 **NOTE....** System will not charge battery when temperature exceeds 45°C.

Checking the Battery Level

You can check the remaining battery power in Operating System battery status indicator.

Prolonging the Battery's Life and Usage Cycles

There are ways you can prolong the use of battery.

- Use the AC adapter wherever AC wall outlet is available. This will ensure uninterrupted computing.
- Store the battery pack in room temperature. Higher temperature tends to deplete the battery's power faster.
- Make good use of the power management function. Save To Disk (Hibernate) saves the most energy by storing current system contents in a hard disk space reserved for this function.

-
- The life expectancy of the battery is approximately 300 recharges.
 - See the notices section in the beginning of the user manual on how to care for the battery pack.
 - Use Function+F5 key to decrease the brightness of the screen.

To achieve optimal battery performance, you may need to do a battery calibration at a 3-month interval. To do this:

- Fully charge the battery.
- Then discharge the battery by entering the BIOS setup screen. (Press DEL key as soon as you turn on the computer. And let it remain at the setup screen until the battery runs out.
- Fully charge the battery again.

Using Power Options

Operating System Power Management provides basic power saving features. In the power configuration dialogue box, you may enter time-out values for display and hard disk drive. Operating System power manager saves power by turning off hard drive after 1 minute of inactivity, for example.



NOTE....

Also consult Operating System user guide for more information on how to use Operating System power management functions. Actual dialogue box shown above may appear slightly different.

Suspend Mode

Standby Suspend

The system automatically enters this mode after a period of inactivity, which is set in the Power Schemes dialog box. In Standby mode, hardware devices, such as display panel and hard disk, are turned off to conserve energy.

Hibernate Suspend

In this mode, all system data are saved in the hard disk before powering down. When this mode is activated, all system state and contents are saved to the hard disk drive after a period of inactivity defined by the user.

No power or very little power is drawn from the battery module under this mode.

However, depending on how much RAM that has been installed on your computer, the amount of time the system requires to restore all its previous contents can range from five to 20 seconds.

Power Button Action

A classmate PC's power button can be set to turn off the system or activate the suspend mode.

4. BIOS SETUP AND SECURITY FEATURE

The Setup Utility is a hardware configuration program built into your computer's BIOS (Basic Input/Output System). It runs and maintains a variety of hardware functions. It is menu-driven software, which allows you to easily configure and change the settings.

The BIOS contains manufacturer's default settings for the computer's standard operations. However, there are occasions when you may be required to modify the default settings in the BIOS.

The BIOS allows you to set up passwords to limit access to users. This is an important feature because a great deal of vital information is carried within the computer nowadays. Unauthorized access can be prevented. Later in this chapter, you will learn how to use this security feature.

 **NOTE....** The BIOS Setup Utility you see on your notebook may appear slightly different than what is shown in this manual, because your notebook may have newer BIOS version installed.

Entering the BIOS Setup Screen

First turn on the power. When the BIOS performs the POST (Power-On Self Test), press Del key quickly to activate the AMI BIOS Setup Utility.

 **NOTE....** You may need to press Del key fairly quickly. Once the system begins to load Operating System, you may have to retry by cycle-power on again.

Leaving the BIOS Setup Screen

When you have finished modifying the BIOS settings, exit the BIOS. It takes a few seconds to record changes in the CMOS.

BIOS Action Keys

Function Key	Command	Description
ESC	Exit	Leaves a sub-menu to return to the previous menu OR exits the BIOS setup while saving changes.
Enter	Go to Sub Screen	Shows the Sub Menu.
F1	General Help	Shows the Help Screen .
F9	Setup Defaults	Load default values.
F10	Save and Exit	Saves changes and reboots the computer.
<Tab>	Select a field	Selects the next field.
↑	Select an item	Selects the next upper item.
↓	Select an item	Selects the next lower item.
-	Lower value	Selects the next value within a field.
+	Higher value	Selects the next value within a field.

Modifying the BIOS Settings

The AMI BIOS setup main menu is subdivided into sub-menus. Each menu item is described in this section.

Main Setup

Under this menu, you may view BIOS Version and system memory capacity and also change system time and date.

BIOS SETUP UTILITY				
Main	Advanced	Security	Boot	Exit
BIOS Information BIOS Version: x.xx EC Version: x.xx System Memory Size: 248MB System Time: [12:12:00] System Date: [Thu 10/26/2006] Language: [English]			Use [+] or [-] to configure system Time. ↔ Select Screen ↑↓ Select Item -/+ Change Field Tab Select Field F1 General Help F10 Save and Exit ESC Exit	
(C) Copyright 1985-2004, American Megatrends, Inc.				

 **NOTE....** Due to various configurations on this model, your system may show different information.

- System Time: Type in the current time, in HH:MM:SS format.
- System Date: Type in the current date, in MM/DD/YY format.
- Language: See Below.

Item	Selections / Sub-menu	Description
Language	Spanish Portuguese English	This is the language selection for Intel's TPM function (the new hardware-based security protocol that authenticates the notebook PC.)

Advanced Setup

Under this menu, you may view CPU information, configure HDD (optional), and enable/disable wireless LAN and LAN port.

BIOS SETUP UTILITY				
Main	Advanced	Security	Boot	Exit
Advance Settings			Configure CPU.	
WARNING: Setting wrong values in below sections may cause system to malfunction.				
▶ CPU Configuration ▶ IDE Configuration ▶ Communication				
			←→ Select Screen	
			↑↓ Select Item	
			Enter Go to Sub Screen	
			F1 General Help	
			F10 Save and Exit	
			ESC Exit	
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Communication: See Below.

Item	Selections / Sub-menu	Description
Wireless LAN	Enable/Disable	Enable or disable the WLAN Module.
Card Reader	Enable/Disable	Enable or disable the Card Reader function.

Security Setup

BIOS SETUP UTILITY				
Main	Advanced	Security	Boot	Exit
Security Settings			Install or change the password. ←→ Select Screen ↑↓ Select Item Enter Change F1 General Help F10 Save and Exit ESC Exit	
Supervisor Password: Not Installed				
User Password: Not Installed				
Change Supervisor Password Change User Password				
(C) Copyright 1985-2004, American Megatrends, Inc.				

- Supervisor Password: Install or Change the Password.
- User Password: Install or Change the Password.

Using Password Protection

Two Levels of Password Protection are available. The BIOS provides both a Supervisor and a User password. If you try to activate both passwords, the Supervisor password must be set first.

The passwords activate two different levels of protection:

1. System always asks for password every time it is powered on.
2. System asks for password only when you attempt to enter BIOS utility.

The passwords are encrypted and stored in NVRAM. Make sure you write them down or memorize them. If you lose the passwords, the computer may need to be sent back to the factory or to an authorized service dealer to reset the passwords.

Boot Setup

BIOS SETUP UTILITY				
Main	Advanced	Security	Boot	Exit
Boot Settings			Install or change the password. ←→ Select Screen ↑↓ Select Item Enter Change F1 General Help F10 Save and Exit ESC Exit	
▶ Boot Settings Configuration				
▶ Boot Device Priority				
▶ Hard Disk Drives				
▶ Removable Drives				
(C) Copyright 1985-2004, American Megatrends, Inc.				

- Boot Settings Configuration: See Below.

Item	Selections / Sub-menu	Description
Quick Boot	Disabled Enabled	[Enabled]: The system skips certain tests while booting. This shortens the boot-up time. [Disabled]: The system performs full tests while booting.
Quiet Boot	Disabled Enabled	When Enabled, the system will display OEM logo instead of the POST messages. When Disabled, the system will display POST messages (i.e. devices information.)
PS/2 Mouse Support	Disabled Enabled Auto	Disable or Enable the built-in touchpad.

- Boot Device Priority: See Below.

Item	Selections / Sub-menu	Description
First Boot Device	USB: M-Sys uDiskOnChip USB: Generic STORAGE Network: Realtek Boot Agent	Set the type of device for the first drive BIOS attempts to boot from. If Realtek Boot Agent is selected, system will attempt to load boot sector from the Ethernet port.
Second Boot Device		Set the type of device for the second drive BIOS attempts to boot from.
Third Boot Device		



NOTE....

M-System uDiskOnChip is the system's built-in flash storage, where programs and data are stored. The Realtek Boot Agent allows you to boot from the Network.

When the BIOS performs POST, you may also press F11 Key to enable the Boot Device selection menu. You may choose "USB: M-Sys uDiskOnChip", "USB: Generic Storage Device", or "Network: Realtek Boot Agent" as the first storage device to boot from. If you have already connected a USB Floppy Disk Drive before powering up, it will appear as a USB FDC in the Boot Device selection menu.

Exit Setup

BIOS SETUP UTILITY				
Main	Advanced	Security	Boot	Exit
Exit Options			Exit system setup after saving the changes. F10 key can be used for this operation. ↔ Select Screen ↑↓ Select Item Enter Go to the Sub Screen F1 General Help F10 Save and Exit ESC Exit	
Save Changes & Exit				
Discard Changes & Exit				
Discard Changes				
Load Optimal Defaults				
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- Save Changes and Exit: After you have completed the BIOS settings, select this item to save all settings, exit BIOS Setup utility, and reboot. New system settings will take effect on next power-up. F10 key can be used for this operation.
- Discard Changes and Exit: Discards changes done so far to any of the setup questions and exit.
- Discard Changes: Discards changes done so far to any of the setup questions.
- Load Optimal Defaults: Load Optimal Default value for all the setup questions. F9 key can be used for this operation.

5. UPGRADING YOUR COMPUTER

This upgrade activity should only be performed by an adult.

Upgrading the System Memory Module

Many applications will generally run faster when the computer's dynamic memory capacity is increased. The computer has a DDR2 memory socket, which is located underneath the keyboard. You can increase the amount of memory by replacing the existing one with a dual inline memory module (commonly known as SO-DIMM) of a higher capacity. The SO-DIMM can be 256MB, 512MB, or 1024MB in capacity. The SO-DIMM is of type DDR2 SDRAM, has 200 pins and runs on 1.8V.



WARNING.... Memory upgrade is a delicate process. Please observe the following instructions carefully or have a qualified technician install it for you. Damages due to mishandling of this procedure are NOT covered by the manufacturer's warranty. Changing memory while your computer is in suspend or power-saving mode may cause permanent damage to the hardware. Make sure you turn off the power and unplug the AC cord before proceeding with a memory upgrade.

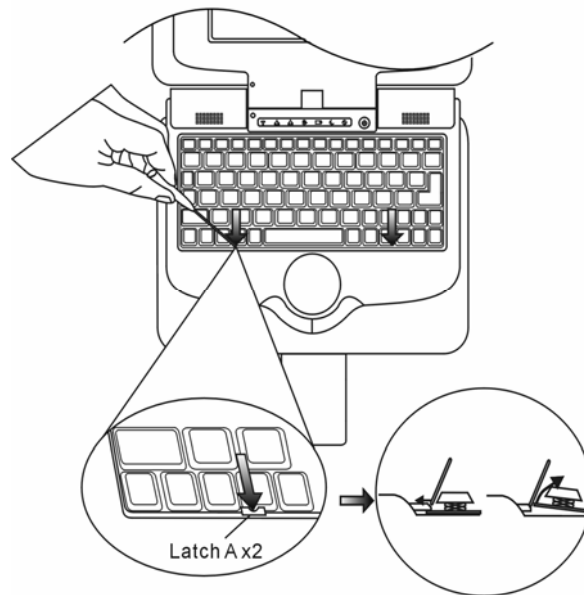
You should only use the DIMM module that is approved by the reseller or the manufacturer; otherwise the system may become unstable.

To install the DIMM under the keyboard, do the following:

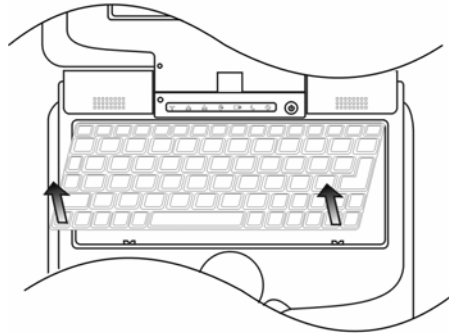
1. Power OFF the notebook. Unplug the AC cord and all cables/devices attached to the notebook.
2. Place your hand on a large metal object momentarily to discharge any static electricity. Place the notebook on a flat surface and fully open the LCD lid.
3. Find the keyboard latches near the bottom edge of the keyboard. The latch is spring-loaded. It will retract when pressed and revert back to its original position when released.

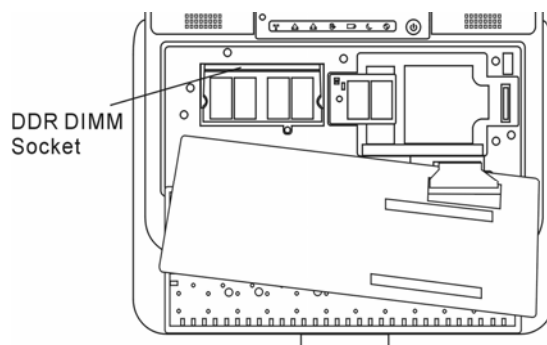
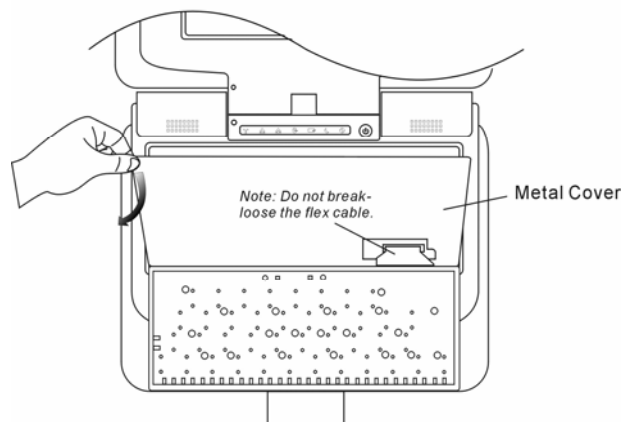
Use a small blade to press the latch inward. The keyboard tray should pop up slightly over the latch.

If the keyboard tray does not pop up, try to gently lift it up slightly above the latch. Repeat this step for the other keyboard latch.

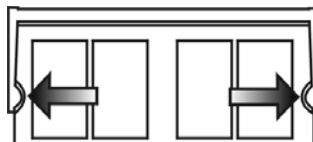


4. Carefully lift up the bottom edge and do not break-loose the flex-cable that connects to the keyboard. Turn the keyboard and the metal cover over, and then the DDR DIMM Socket is revealed.

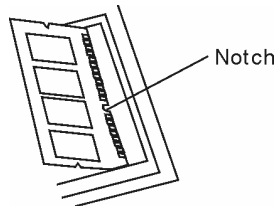




5. To remove an old DIMM from the socket, press out on the latches located on both edges of the socket at the same time. The DIMM should pop up to an angle of 30 degree (see diagram below). Pull the DIMM module out of the memory socket. Store the DIMM for the future use.



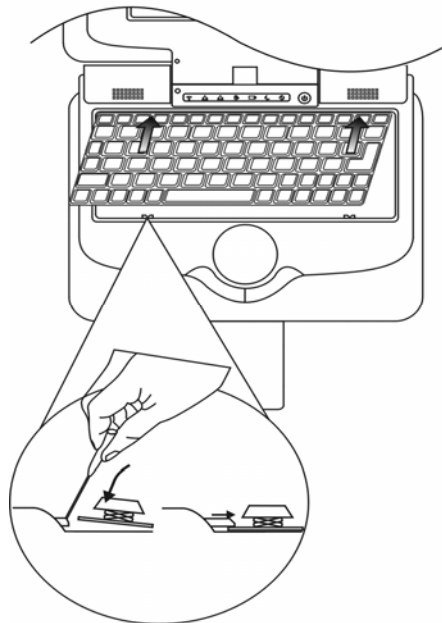
6. Install the new DIMM module into the memory socket. The DIMM will only fit in one orientation. Insert the DIMM at an angle of approximately 30 degrees into the empty memory socket. Then press it firmly so that the contact edge is driven into the receiving socket.



7. Pivot the DIMM until the latches on both sides of the socket snap into place.

NOTE.... Notice the notch on the DIMM. The notches should fit nicely with the socket.

8. Put the metal cover and the keyboard back to their original position. Make sure the bottom edge of the keyboard now resides under the spring-loaded latches. You may need to use a small pin to push in the latch first, otherwise the keyboard will not fit in.



Congratulations! You have just completed the memory upgrade. When you boot up the computer, you should expect to see an increase in DRAM capacity.

 **NOTE....** Your computer has been tested with a wide range of DIMM on the market. However, not all memory modules are compatible. Check with your system vendor for a list of compatible DIMM for your computer.

Upgrading the Mass-Data-Storage Device

To upgrade the mass-data-storage capacity, you can either replace the existing M-System flash storage module with one that has a higher capacity, or instead, replace it with the 1.8 inch P-ATA-type hard disk drive module. You need to obtain the optional upgrade kits from your dealer, as this type of module is not commonly available.

Be sure to make a backup copy of all your data before attempting this operation.

 **WARNING....** The upgrade is a delicate process. Please observe the following instructions carefully or have a qualified technician install it for you. Damages due to mishandling of this procedure are NOT covered by the manufacturer's warranty.

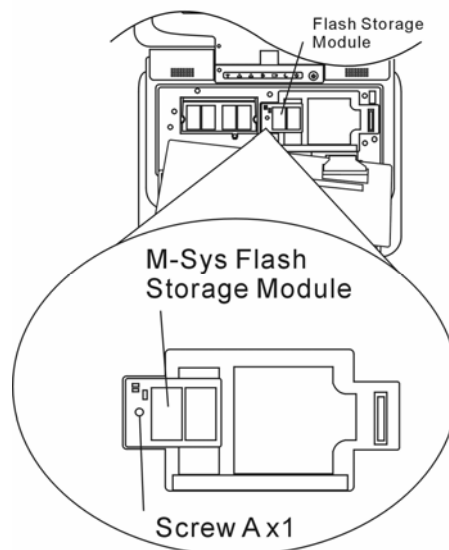
Apply care when handling the hard disk.

- Do not drop or apply any shock.
- Do not press on the cover.
- Do not touch the connector with your fingertips.
- Mishandling of the hard drive can result in permanent loss of data. Make a backup copy of the content within the drive before you remove it.

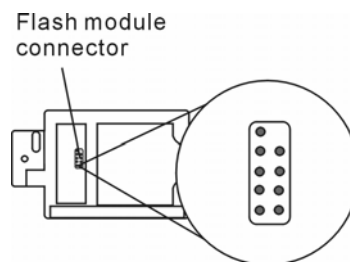
Upgrading the M-System Flash Storage Module

To upgrade the flash storage module, do the following:

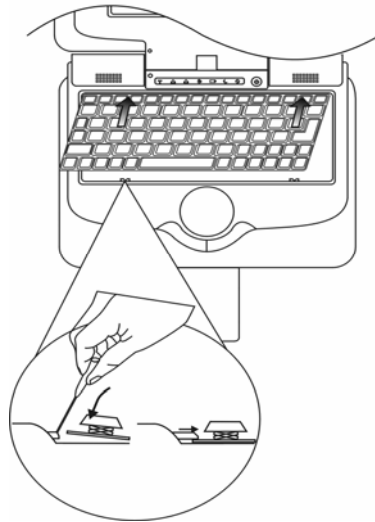
1. Follow the first four steps in the previous section, *Upgrading the System Memory Module*, to access the Flash Storage Module.
2. Locate and remove one Screw A.



3. Gently lift the old module and replace it with the new one. When you do this, be sure that the flash module connector is properly seated on the main-board, as the connector may be attached to the old flash module. The connector is what links the flash module to the system board.



4. Re-attach Screw A.
5. Put the metal cover and the keyboard back to their original position. Make sure the bottom edge of the keyboard now resides under the spring-loaded latches. You may need to use a small pin to push the latch in first, before you lower the keyboard.

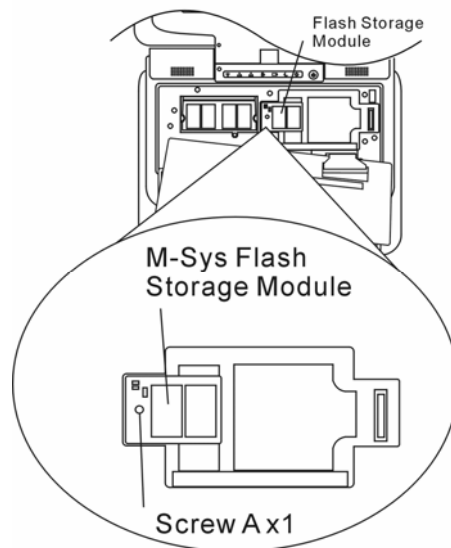


Congratulations! You have just completed the flash module upgrade. You may need to reformat the new flash storage module and re-install O/S, drivers, and all the necessary applications.

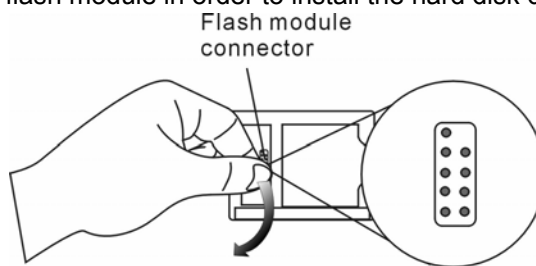
Installing the Optional Hard Disk Drive Module

To replace the flash storage module with the hard disk drive module, do the following:

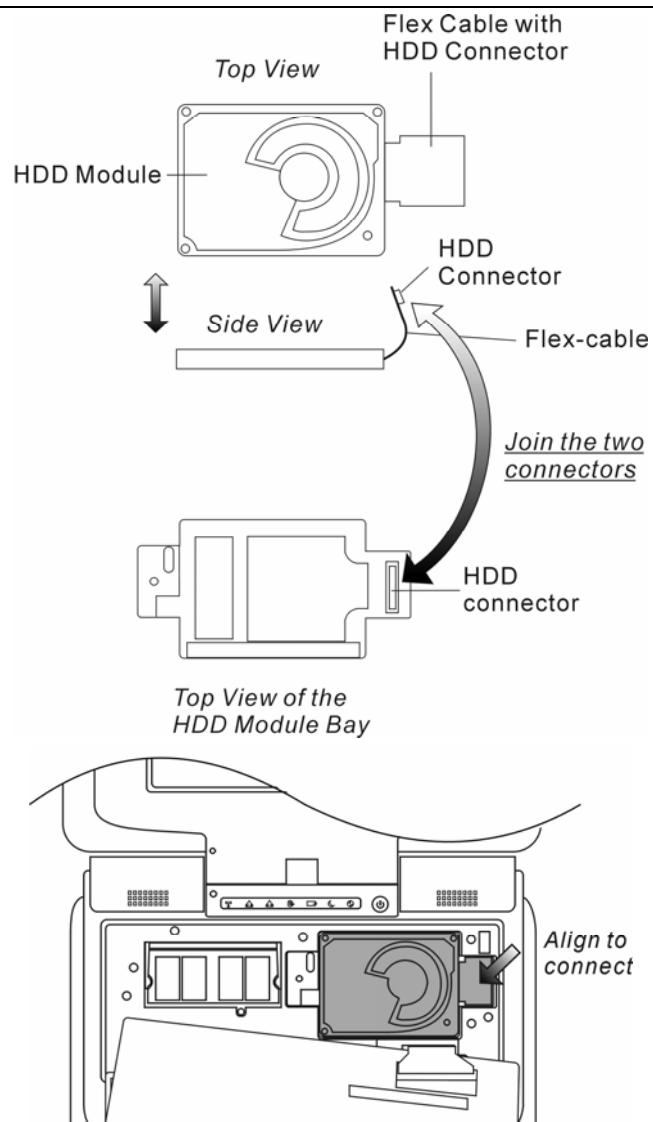
1. Follow the first four steps in the previous section, *Upgrading the System Memory Module*, to access the hard disk drive bay.
2. Locate and remove one Screw A.



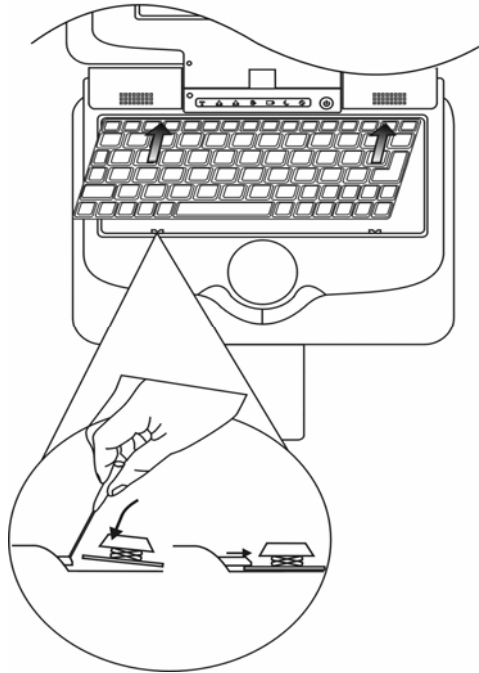
3. Gently lift the old module. Be sure that you remove the flash connector as well. You need to remove the existing flash module in order to install the hard disk drive module.



4. The HDD module comes with a metal casing and a flexible cable with HDD connector. Place the HDD module into the HDD module bay and join together the two HDD connectors as shown below.



5. Put the metal cover and the keyboard back to their original position. Make sure the bottom edge of the keyboard now resides under the spring-loaded latches. You may need to use a small pin to push the latch in first, before you lower the keyboard.



Congratulations! You have just completed the hard disk drive installation. You may need to reformat the new drive and re-install O/S, drivers, and all the necessary applications.

6. TROUBLE SHOOTING

The trouble shooting activity should only be performed by an adult.

Your computer has been fully tested and complies with the system specifications before shipping. However, incorrect operations and/or mishandling may cause problems.

This chapter provides a reference for identifying and correcting common hardware and software problems that you may encounter.

When you encounter a problem, you should first try to go through the recommendations in this chapter. Instead of returning the computer and waiting for repair, you may easily solve the problems by considering the following scenarios and possible solutions. If the error continues, contact your reseller for service information.

Before taking further actions, consider the following suggestions:

- Check to see if the problem persists when all the external devices are removed.
- Check to see if the power cord is properly plugged into the wall outlet and to the computer.
- Check to see the power indicator of the computer is on.
- Check to see if your keyboard is operational by pressing and holding any key.
- Check for any incorrect or loose cable connections. Make sure the latches on the connectors latch securely on to the receptor end.
- Be sure you have not performed an incorrect setting on the hardware devices in the BIOS Setup utility. A faulty setting may cause the system to malfunction. If you are not sure of the changes you made, try to restore all the settings to factory defaults.
- Be sure all the device drivers are installed properly. For example, without the audio driver properly installed, the speakers and microphone will not work.
- If external devices such as USB camera, scanner or printer do not function correctly when connected to the system, it is usually the device's own problem. Consult the device's manufacturer first.

-
- Some software programs, which have not gone through rigorous coding and testing, may cause problems during your routine use. Consult the software vendor for problem solving.
 - Be sure to go to BIOS SETUP and load DEFAULT SETTING after BIOS re-flash.

Audio Problems

No speaker output

- Software volume control is turned down in Operating System's Sound System or is muted. Double-click the speaker icon on the lower right corner of the taskbar to see if the speaker has been muted or turned down all the way.
- Most audio problems are software-related. If your computer worked before, chances are software may have been set incorrectly.

Sound cannot be recorded

- Double-click the speaker icon on the lower right corner of the taskbar to see if the microphone has been muted.
 1. Click Options and select Properties.
 2. Select Recording and click the OK button.
 3. After clicking the OK button, the recording volume control panel will appear.

Hard Disk (Optional) Problems

The hard disk drive does not work or is not recognizable:

- If you had just performed a hard disk upgrade, make sure the hard drive connector is not loose and the hard disk drive is also correctly seated. Remove it and reinsert it firmly, and restart your PC. (Refer to Chapter 5 for details.)
- The new HDD may need to be partitioned and reformatted. O/S and drivers will need to be re-installed as well.
- Check the hard disk indicator LED. When you access a file, the LED lamp should light up momentarily.
- The new HDD may be defective or is not compatible.
- If your computer has been subjected to static electricity or physical shock, you may have damaged the disk drive.

The hard drive is making abnormal whining noises

- You should back up your files as soon as possible.

-
- Make sure the source of noise is indeed from the hard drive and not the fan or other devices.

The hard disk drive has reached its capacity

- Archive files or programs that you had no longer used by moving them to an alternative storage medium (card reader, etc.) or uninstall programs that are no longer used.
- Many browsers store files in the hard drive as a cache to speed up the performance. Check the program's Online Help for instructions on decreasing the cache size or on removing temporary Internet files.

The hard disk takes longer to read a file

- Interrupt requests or problems with other hardware devices may have occupied the CPU and therefore slows down the system performance.

Display Problems

The display panel is blank when the system is turned on

- Make sure the computer is not in the Standby or Hibernate suspend modes. The display is turned off to conserve energy in these modes.

The screen is difficult to read

- The display resolution should at least be set to at least 800x480 for optimal viewing.

The screen flickers

- It is normal if the display flickers a few times during shutting down or powering up processes.

Keyboard and Touchpad Problems

The built-in touch pad performs erratically

- Make sure there is no excess perspiration or moisture on your hand when using the touch pad. Keep the surface of the touch pad clean and dry.
- Do not rest your palm or wrist on the surface of the touch pad while typing or using the touch pad.

The built-in keyboard accepts no input

- If you are connecting an external keyboard to the system, the built-in keyboard may not work.

-
- Try restarting the system.

The characters on the screen repeat while I type.

- You may be holding the keys down too long while you're typing.
- Keep the keyboard clean. Dust and dirt under the keys could cause them to stick.

Memory Problems

The POST does not show an increased memory capacity when you have already installed additional memory

- Certain brands of memory module may not be compatible with your system. You should ask your vendor for a list of compatible DIMM.
- The memory module may not be installed properly. Go back to Chapter 4 to review the details of this operation.
- The memory module may be defective.

The O/S issues an insufficient memory error message during operation

- This is often a software or Operating System-related problem. A program is draining the memory resources.
- Close the application programs you're not using and restart the system.
- You need to install additional memory module. For instructions, go to Chapter 4 *Upgrading Your Computer*.

Network Adapter / Ethernet Problems

The Ethernet adapter does not work

- Make sure the physical connections on both ends of the cable are good.
- The hub or concentrator may not be working properly. Check to see if other workstations connected to the same hub or concentrator is working.

The Ethernet adapter does not appear to operate in the 100Mbps transmission mode

- Make sure the hub you are using supports 100Mbps operation.
- Make sure that your RJ-45 cable meets the 100Base-TX requirements.

-
- Make sure the Ethernet cable is connected to the hub socket that supports 100Base-TX mode. The hub may have both 10Base-TX and 100Base-T sockets.

Performance Problems

The computer becomes hot

- In a 35°C environment, the certain areas of the computer's back case are expected to reach 50 degrees.
- Make sure the air vents are not blocked.
- If the fan does not seem to be working at high temperature (50 degrees Celsius and up), contact the service center.
- Certain programs that are processor-intensive may increase the computer temperature to a degree where the computer automatically slows down its CPU clock to protect itself from heat damage.

The program appears stopped or runs very slowly

- Restart the computer.
- This may be normal for Operating System when it is processing other CPU-intensive programs in the background or when the system is accessing slow-speed devices such the floppy disk drive.
- You may be running too many applications. Try to close some applications or increase system memory for higher performance.
- The processor may have been overheated due to the system's inability to regulate its internal temperature. Make sure the computer's ventilation grills are not blocked.

USB2.0 Problems

The USB device does not work

- Make sure the cable is fully connected.
- Make sure you have installed the necessary device drivers.
- Contact the device vendor for additional support.

Appendix: Specification

Processor and Core Logic

- Intel Celeron M, Ultra Low Voltage version

Core Logic

- Intel 915GMS+ICH6-M chipset with graphic, audio, and USB2.0 controllers integrated
- 400MHz Front Side Bus
- 400MHz DDR2 interface

System Memory

- DDR2 SDRAM 400
- 256 / 512MB
- One 200-pin DIMM socket

Display

- 7-inch 800x480 TFT LCD

VGA

- Intel Express Integrated Graphic Engine
- Hardware Motion Compensation and IDCT Supported for MPEG1/2 Playback
- DirectX compatible

Audio

- Intel ICH6-M integrated audio controller
- VIA VT1618
- DirectSound 3D, EAX 1.0 & 2.0 compatible
- A3D, I3DL2 compatible
- AC97 V2.3 compatible
- Two Stereo Speakers

Wireless LAN

- Billionton GUSBWLRGM Wireless Card
- USB Interface, IEEE802.11B&G

LAN / Ethernet

- Realtek RTL8100CL Ethernet function for 10/100Base-TX network standards

PnP Function

- Plug and Play compatible

Flow Control

- Automatic Jam and auto-negotiation for flow control
- Auto Negotiation and Parallel detection for automatic

Speed Selection

- Speed selection (IEEE 802.3u)
- High performance 32-bit PCI bus master architecture with integrated DMA controller for low CPU and bus utilization

Other Features

- Remote Wake-up Scheme supported
- Hot Insertion supported

Mass Data Storage

- NAND-type, 1GB / 2GB
- P-ATA 1.8-inch format hard disk drive

Keyboard & Touch pad

- 77-key QWERTY keyboard
- Built-in Touch Pad

Multiple Card Reader

- Multimedia Card (MMC) and Secure Digital Card (SD)

Ports and Connectors

- One Microphone jack
- One Headphone jack
- Two USB2.0-compliant connectors
- One standard network Ethernet connector (RJ-45)
- One DC-in connector
- One 2-in-1 Card Reader Slot

Battery Pack / AC Adapter

- Li-ion 4-Cell pack, 14.8 V x 2000 mAH or
- Li-ion 4-Cell pack, 14.4 V x 2200 mAH or
- Li-ion 6-Cell pack, 11.1V x 4000 mAH or
- Li-ion 6-Cell pack, 10.8V x 4400 mAH or
- Li-ion 6-Cell pack, 11.1V x 4400 mAH
- Low battery state with low battery warning beep

Adapter

- Autosensing AC-in 100~240V, DC-out 20V, 65W or 40W

BIOS

- AMI PnP BIOS
- Power On Self Test
- DRAM auto-detection, auto-sizing
- L2 Cache auto-detection
- Hard disk type auto-detection
- ACPI 2.0 (Advanced Configuration Power Interface)
- Two Level Password Protections
- 32bit access, Ultra DMA, PIO5 Mode support
- Multi-boot capability

Operating System

- Compatible with Microsoft Windows XP Pro
- Linux

Physical Specification

- 244 (W) x 191.2 (D) x 35.4 (H) mm
- 1.38KG / 3.04lbs (with 4-cell battery pack)

Temperature

- Operating Humidity: 20 to 80 percent RH (5°C to 40°C or 41°F to 104°F)
- Storage Temperature: -15°C to 60°C (-5°F to 140°F)