

# C H A P T E R ▼ F O U R

## UPGRADING YOUR COMPUTER

In this chapter, you will learn how to upgrade the DRAM, hard disk drive, and to install the optional wireless LAN miniPCI-E Card.



**Warning:** We strongly recommend that you return the notebook to the dealer or the shop for the hardware upgrade.

Before you perform the hardware upgrade, please turn off the system, unplug the AC adapter, remove the battery pack and also disconnect the LAN and Modem cables first for your safety.

When the hardware upgrade is completed, please be sure to fasten all the screws before turning on the notebook.

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## Upgrading the Hard Disk Drive

Replacing the original drive with one of larger capacity can increase the hard drive capacity of your computer. The computer uses a 9.5 mm (height), 2.5-inch Serial ATA type hard disk.

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



**Warning:** Hard drive 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 manufacture's warranty.

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**Warning:** 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 drive's content before you remove it.
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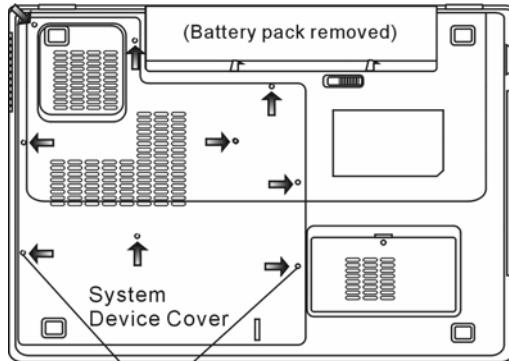
**Note:** Certain models that come with the IBM-brand hard drive emit a clattering sound when it is being rattled. This is a normal condition.

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## Upgrading the Hard Disk Drive

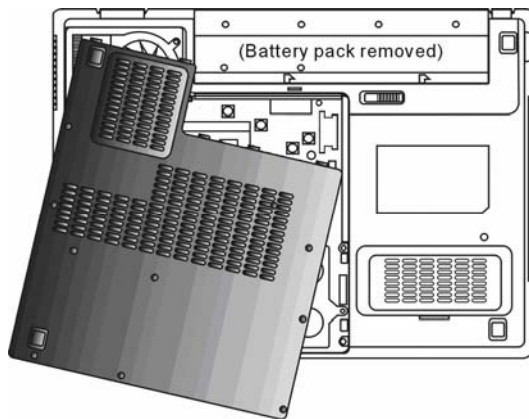
To replace the hard disk drive, do the following:

1. Turn OFF the computer. Unhook the AC cord and all cables/devices attached to the notebook. Remove the battery.
2. Place your hand on a large metal object momentarily to discharge any static electricity.
3. Locate and remove 9 Screw A's.

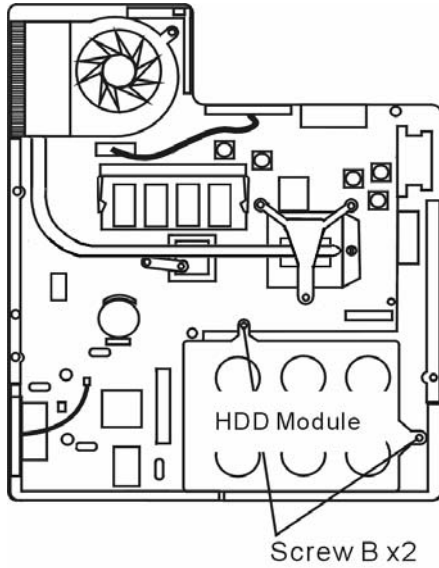


Screw A x9

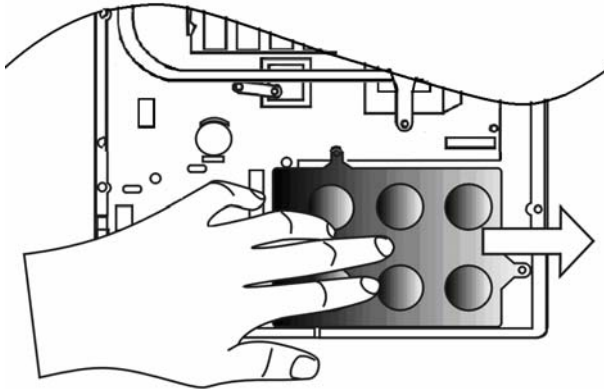
4. Remove the System Device Cover.



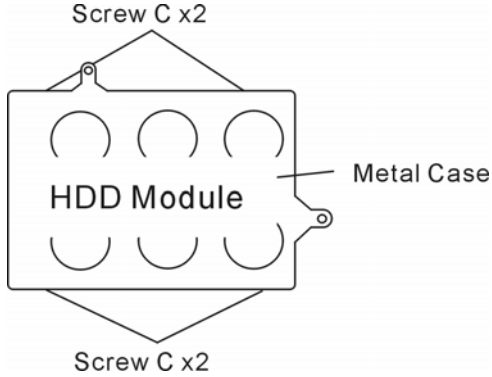
5. Locate and remove 2 Screw B's.



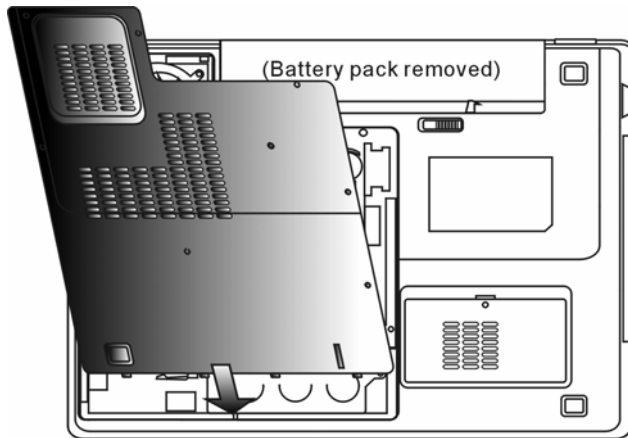
6. Push the HDD module to the right and separate it from the connector. Lift the module away from the bay.



7. Locate and remove 4 Screw C's from the HDD module. Remove the metal case.



8. Re-attach the metal cover to the new hard drive and tighten 4 Screw C's.
9. Re-attach the HDD module to the HDD connector. And re-attach 2 Screw B's.
10. Put the System Device Cover back and re-attach 9 Screw A's.



Congratulations! You have now completed the hard drive upgrade. When you boot up the PC, you may need to create a primary HDD partition and reformat the new drive and re-install O/S, drivers, and all the necessary applications.

## Upgrading the System Memory

Many applications will generally run faster when the computer's dynamic memory capacity is increased. The computer provides two DDR2 memory sockets. There is one located underneath the System Device Cover and another one 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 manufacture's warranty.



**Warning:** 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.



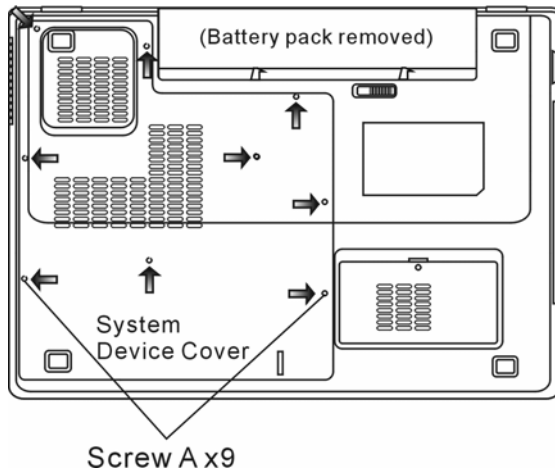
**Warning:** You should only use the DIMM module that is approved by the reseller or the manufacturer; otherwise the system may become unstable.

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## Installing a memory module (DIMM) into the system

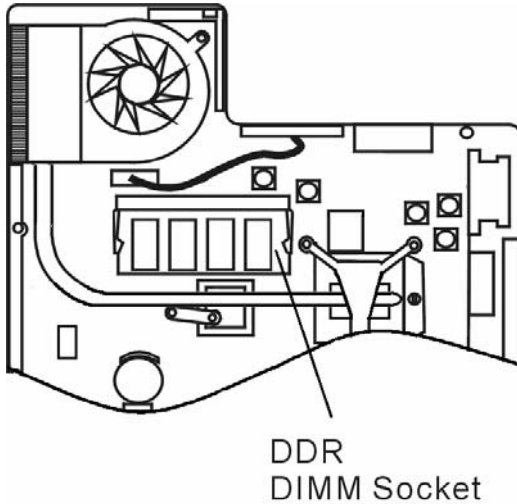
To install the DIMM under the System Device Cover, do the following:

1. Power OFF the notebook. Unplug the AC cord and all cables/devices attached to the notebook. Remove the battery.
2. Place your hand on a large metal object momentarily to discharge any static electricity. Place the notebook on a flat surface and fully close the LCD lid.
3. Locate and remove 9 Screw A's on the System Device Cover.

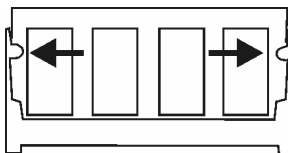


4. Remove the System Device Cover. The DIMM socket is now seen as shown below.

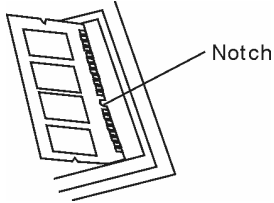




5. If you need to remove an old DIMM from the socket, press out on the latches located on both edges of the socket at the same time. The DIMM should pop up to an angle of 30 degree (see diagram below). Pull the DIMM module out of the memory socket. Store away the DIMM for the future use.



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.

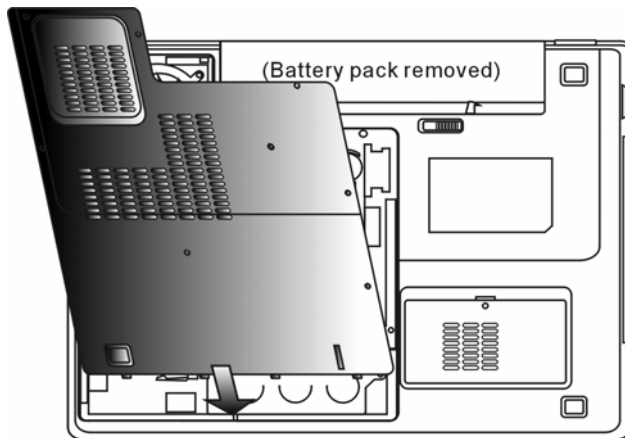


7. Pivot the DIMM until the latches on both sides of the socket snap into place.



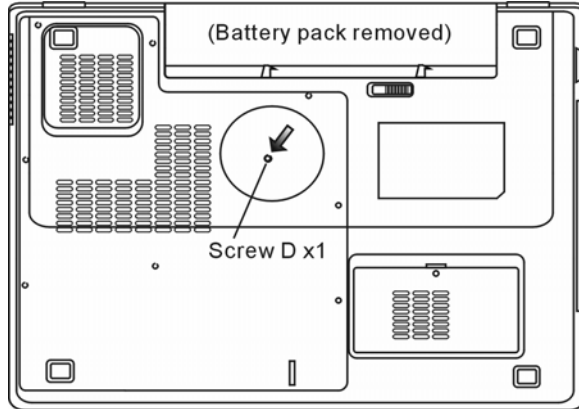
**Note:** Notice the notch on the DIMM. The notches should fit nicely with the socket.

8. Put the System Device Cover back and tighten 9 Screw A's.

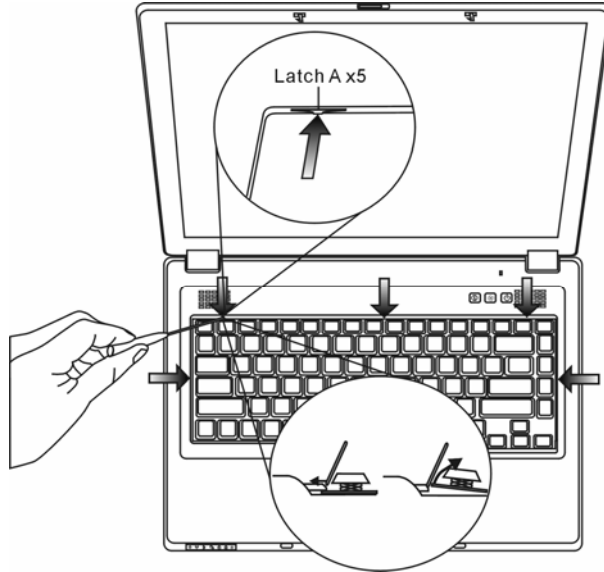


To install the DIMM under the keyboard, do the following:

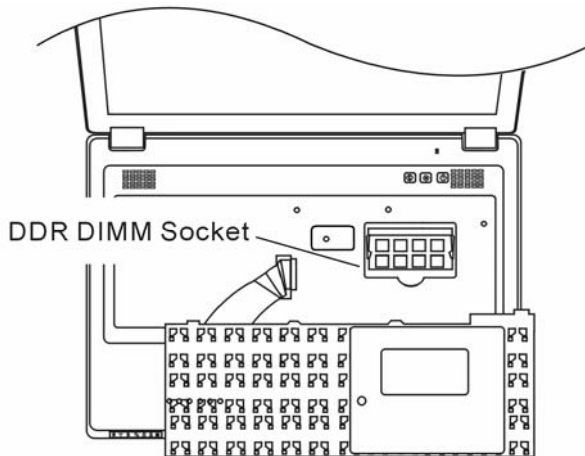
1. Remove Screw D.



2. Find the keyboard latches near the edges 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 latches.

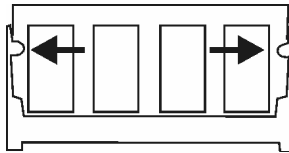


3. Carefully lift up the top edge and position the keyboard out of the way and the DDR DIMM Socket is revealed.

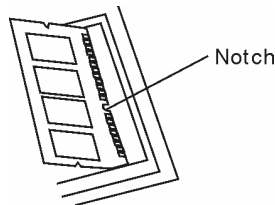


4. If you need to remove an old DIMM from the socket,

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 away the DIMM for the future use.



5. 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.

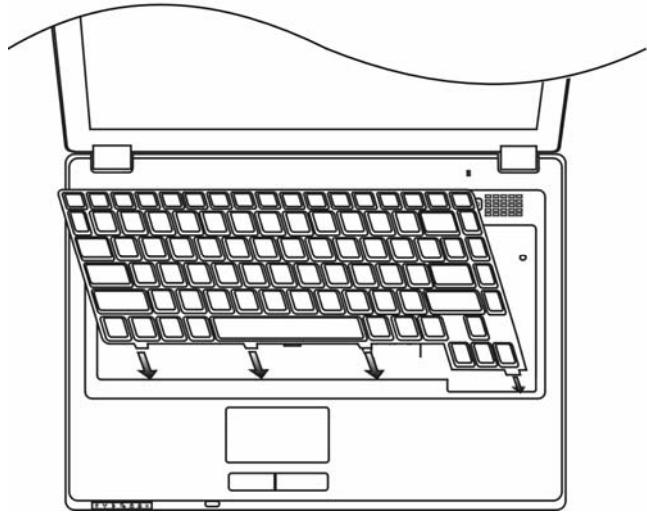


6. Pivot the DIMM until the latches on both sides of the socket snap into place.



**Note:** Notice the notch on the DIMM. The notches should fit nicely with the socket.

7. Put the keyboard back to its original position. Make sure the edge of the keyboard now resides under the spring-loaded latches.



9. Re-attached Screw D.

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.

## Adding a Mini-PCI-E Type Wireless LAN Card (Optional Device)

Your computer comes with a unique Mini PCI-E Card socket, which is located next to the DRAM socket and underneath the WLAN Module Cover. The socket allows the computer to add unique features such as wireless LAN (IEEE802.11x). Ask your dealer on the availability of the mini PCI-E card.



**Warning:** Installing a mini PCI-E card 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 manufacture's warranty.



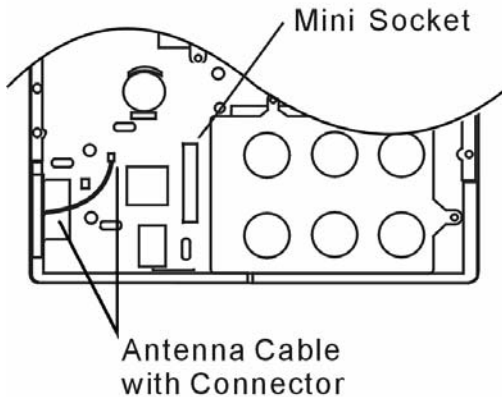
**Warning:** Installing the mini PCI-E card while your computer is in suspend or power-saving mode may cause permanent damage to the hardware. Make sure you turn off the power and unplug the AC cord before proceeding with a memory upgrade.

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## Installing a Mini PCI-E Card into the System

To install a new Mini PCI-E card, do the following:

1. Follow steps in the previous section, *Installing a memory module (DIMM) into the system*, to access the Mini PCI-E Socket.



2. The mini PCI-E card will only fit in one direction. Align the small notch in the module with the socket on the connector and insert the card at an angle of approximately 30 degrees into the empty socket. Then press it firmly so that the contact edge is driven into the receiving socket. Pivot the mini PCI-E card until the latches on both sides of the socket snap into place.

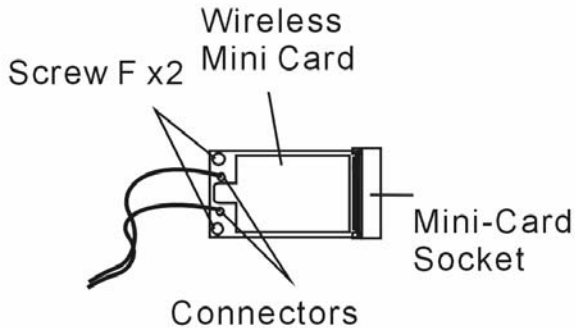


**Note:** If you want to remove a mini PCI-E card from the socket, press out on the latches located on both edges of the socket at the same time. The card should pop up to an angle of 30 degree.

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3. Locate the antenna cable with connector. Snap the cable onto the golden connector on the Mini PCI-E Wireless LAN card. *(Note: The connector is fairly small! This may take some maneuvering. You may want to connect the antenna cable before inserting the wireless card into the socket.)*



4. Put the System Device Cover back and tighten 9 Screw A's.

Congratulations! You have now completed the mini PCI-E card installation. During the next time the system boots to Windows, the system will prompt for driver location. Insert the Factory CD-ROM and point to the directory where the Wireless LAN driver can be found. In addition to installing the driver, you may also need to run a Setup.exe program to install the card's utility applications before it is fully operational.