5-2.Reinstalling Sound Driver

You must install a sound driver to listen to music files and CDs on the computer. A sound driver basically comes out with the computer. If it has to be reinstalled, however, follow the process below.

1 Turn on the computer and the monitor.

2 Insert LG GILJABI CD in the CD-ROM driver. Select the sound driver to install from the list.

3 The driver installation process will start. Follow instructions on the screen.

5-3.Reinstalling Video Driver

The video driver displays on the monitor data stored on the computer. The video driver is included in basic specification of the computer. However, in the case that it is necessary to reinstall the video driver, carry out the following process.

1 Turn on the computer and the monitor.

2 Insert LG GILJABI CD in the CD-ROM driver. Select the video driver to install from the list.

3 The driver installation process will start. Follow instructions on the screen.

Note

- When the computer uses the Intel Onboard Video, some games and programs that does not support Screen Rotation may not be executed on the screen. When this happens, disable the Screen Rotation.

6.System Expansion

6-1. Opening the computer case

Always consult with your service representatives before opening the computer case.

Note the following when opening the computer cover.

- Quit all programs in use.
- Turn off the computer and the monitor before disconnecting the power.
- Keep magnetic tools (for example, drivers) away from the computer since parts inside the computer are electrically charged and sensitive to magnetic force.
- Install the computer in a clean, easily-accessible place.
- A small electric shock inside the computer may cause operational problems. Before touching the computer, put hands on an unpainted metallic surface for two or three seconds to remove static electricity before opening the cover.
- When disassembling the computer, wear gloves to protect internal parts of the computer and slot cards from damage.

Opening the computer cover

Remove 3 screws from the cover and then push the cover as the direction of the arrow.

Closing the computer cover

Push the cover in the direction of arrow as it aligns the groove of computer cover with body shown on the picture and fasten 3 screws.

Warning

Before assembling the computer cover, check if there is any metallic material left inside the main body. A metallic substance inside the main body can cause an electric shock or fire.

6-2. Main Board

The model name of the computer depends on the main board type. When extending the computer, check the model name on the label attached on the rear panel of the computer and the following. Before extending the computer, check the main board first

❶ **Expansion slot (PCI-E x1)**

❷ **Expansion slot (PCI)**

❸ **Expansion slot (PCI-E x16)**

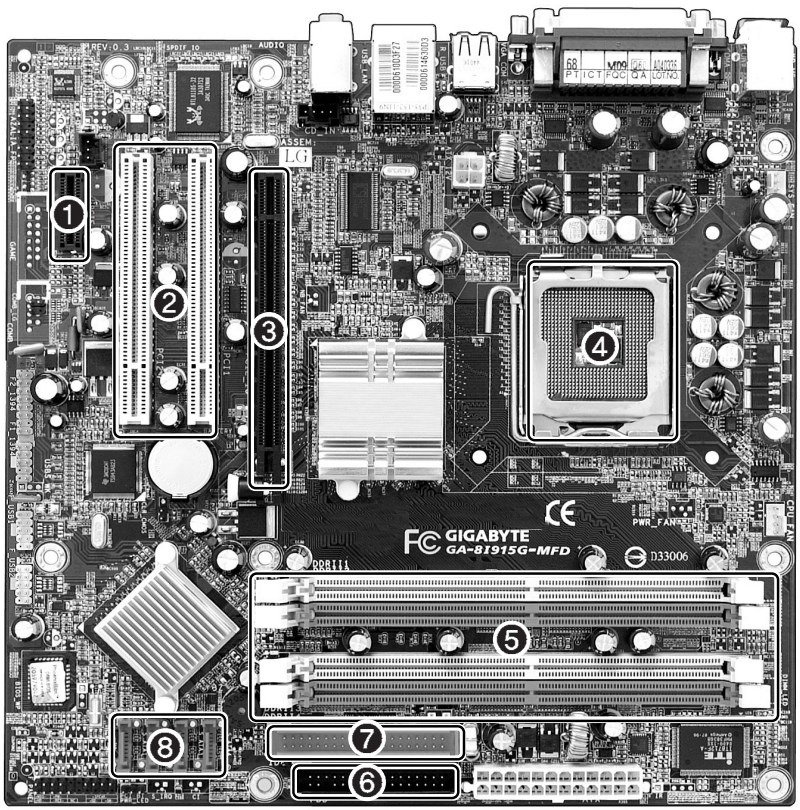
❹ **CPU socket (with Pentium4 × 16 LGA 775)**

❺ **Memory socket (DIMM)**

❻ **Floppy disk connector**

❼ **Hard disk/CD-ROM connector**

❽ **Serial ATA-type hard disk connector**

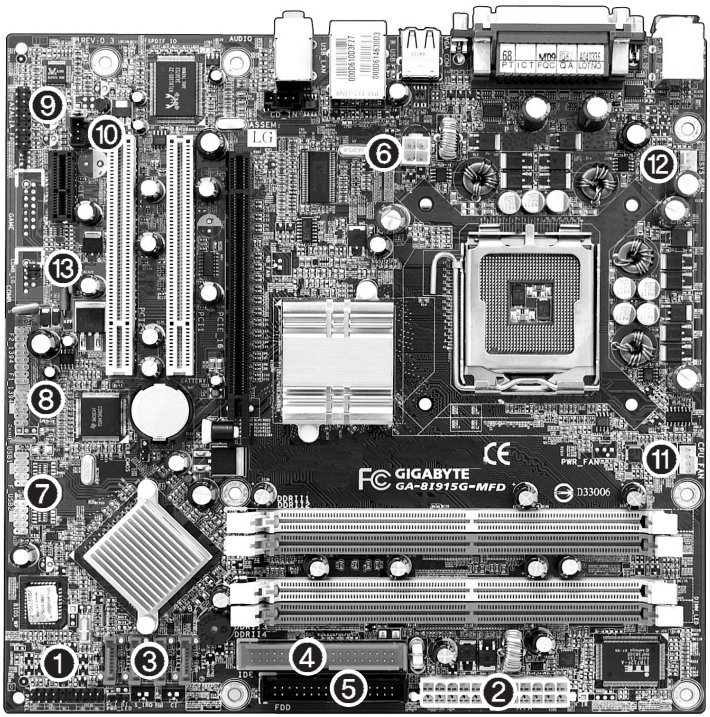


No

■ The main board in your computer may look different from the picture.

6-3. Internal Connectors

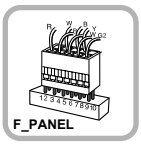
Connectors are configured in a certain way at the factory, and connectors show the connection status between the main board of the computer and peripherals. (Connector configuration depends on product models.)



Caution

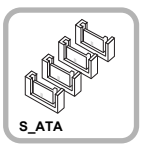
- Before separating the connector, check the connection state of the connectors and leave a record on the state.
- Link the floppy disk driver connector and the hard disk/CD-ROM connector in the correct direction.
- The Pin Number and the color of the connector cable must match. Otherwise, an error may occur in the computer.
- Risk of explosin if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.
- There is a risk of explosion if the backup(standby) RTC battery is replaced by an incorrect type. Dispose of used backup(stadby) RTC battery according to your local ordinances or regulation.

❶ **Power on/off and power/hard disk operation status indication lamp connector (F_PANEL)**



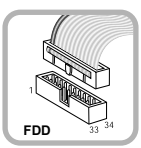
Connects the power on/off switch and the power/hard disk operation status indication lamp.

❸ **Hard disk connector (S_ATA1, S_ATA2, S_ATA3, S_ATA4: 7 pins)**



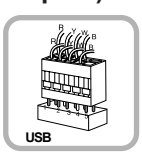
S_ATA connector is linked to the hard disk driver.

❺ **Floppy disk driver connector (FDD: 34 pins)**



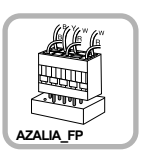
Connects the floppy disk driver.

❼ **USB connector (F_USB1, F_USB1: 10 pins)**



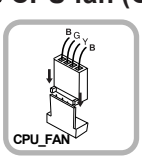
Connects the front USB.

❾ **Audio connector (AZALIA_FP: 10 pins)**



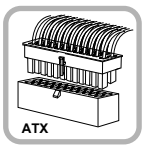
Connects a front ear-phone and microphone.

⓫ **CPU fan (CPU_FAN: 4 pins)**



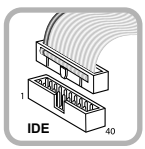
Provides power to the CPU fan.

❷ **Power connector (ATX: 24 pins)**



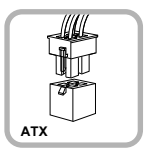
Connects the power supply unit.

❹ **Optic drive connector (IDE : 40 pins)**



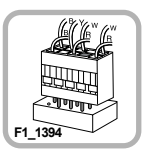
CDROM, hard disk driver.

❻ **Power connector (ATX_12V: 4 pins)**



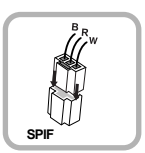
Connects the power supply unit.

❽ **1394 connector (F1_1394: 10 pins)**



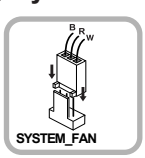
Connects camcorders supporting IEEE1394.

❿ **SPDIF connector (SPDIF_LG: 3 pins)**



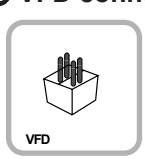
Connects the SPDIF port with optic output feature.

⓬ **System fan (SYSTEM_FAN: 3 pins)**



Installed at the bottom (rear panel) of the system, and connects the VFD.

⓭ **VFD connector**

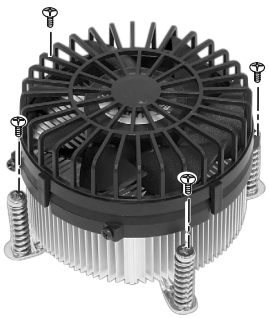


Connects the VFD.

6-4 Replacing the CPU

To upgrade the CPU for better performance of the computer, you need to replace the CPU first. Check the location and the type of the CPU in the main board, and do the following. (Shape of the CPU FAN and CPU replacement methods may differ by model.)

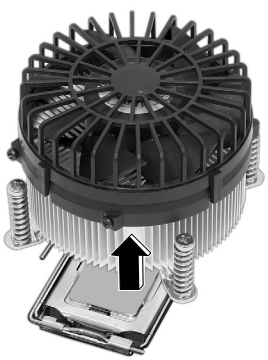
1 Remove four screws fixing the CPU fan as shown in the figure.



Caution

Align the groove to the right position, pins can easily be broken.

2 Remove the CPU fan as shown in the figure.

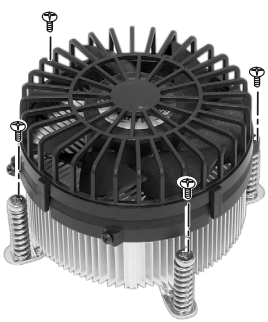


3 Turn the CPU socket handle as shown in the figure of Step ❶, and open the cover as shown in the figure of Step ❷.

4 Lift the CPU up carefully to remove it from the main board.

5 Insert the new CPU with caution in the CPU socket in the correct direction and put down the handle of the CPU socket ❶ and close the cover ❷.

6 Insert the CPU FAN as shown in the figure, and fix it with four screws.



Caution

Always wear gloves to avoid injuries.

6-5. Expanding the Computer Memory

You may expand the memory capacity, if needs be.

About Memory

This system uses a 240-pin memory module called Double Data Rate-2 (DDR-2), not the old 184-pin memory module called Double Data Rate (DDR). The main board can support maximum 2GB in memory.

Note

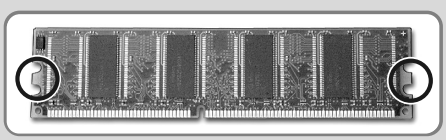
- Windows 95, 98SE, and ME support maximum 512MB. Installing a memory with higher capacity than 512MB may cause malfunctioning of the system.

Before Expanding the Memory

- When disassembling the computer, wear gloves to protect internal parts of the computer and slot cards from damage.
- As the memory is sensitive to static electricity, be careful with the static electricity when removing or installing a memory.
- Check the specifications of the current memory and the new memory before expanding the memory.
- Unlike SIMM, DIMM is of 64 bits. Therefore, single DIMM can function, and you can add DIMM by one.

Note

- When expanding the memory, add a memory with the same specification (DDR-2 SDRAM for 1.8V). (The shape of the memory may differ depending on the product model.)
- The DDR-2 memory provides greatly improved transmission rate than existing memories, and is differently shaped.



DDR

Caution

- This computer supports PC3200/4300, DDR-2 specification.
- When expanding the memory, use only unbuffered DDR SDRAM DMM
- When inserting two same memories in same-colored DIMM slots, the computer will operate in Dual Channel mode.

FSB Frequency	Usable Memory
400/533 MHz	PC3200/4300-DDR-2 SDRAM 400/533MHz

Preparing a Memory

Before purchasing memory, study the specifications and features of the current memory.

Specification : PC3200/4300 (240-pin DDR-2 SDRAM)
Rate : 400MHz (200MHz × 2), 533MHz (266MHz × 2)
Type : 256MB, 512MB

Composing the Memory

Refer to the following when expanding memory.

Total memory capacity	DIMM 1	DIMM 2	DIMM 3	DIMM 4	DUAL/SINGLE
256MB	256 (One out of four slots)				SINGLE
512MB	256MB		256MB		DUAL
		256MB		256MB	DUAL
	512 (One out of four slots)				SINGLE
1024MB	256MB	256MB	256MB	256MB	DUAL
	512MB		512MB		DUAL
		512MB		512MB	DUAL
2048MB	512MB	512MB	512MB	512MB	DUAL

Note

- The computer operates faster in Dual Channel mode.
- Use the same memory to operate the computer in Dual Channel mode.
- It is recommended to use Dual Channel mode.

Replacing the Memory

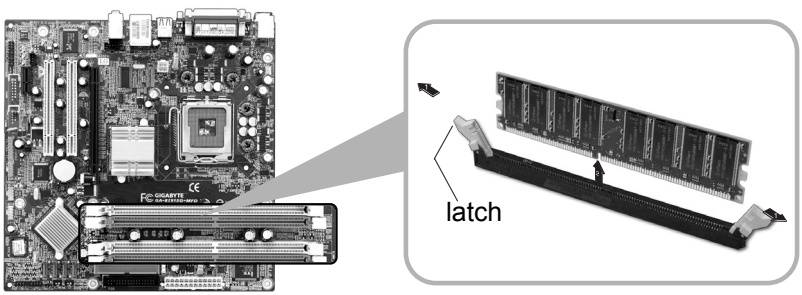
Main board configuration, memory socket and memory type may differ by model.

1 Loosen the screws on the rear panel of the computer, and remove the cover.

Note

■ Before opening the computer cover, turn off the power and all peripherals connected to the computer. Disconnect all power cables.

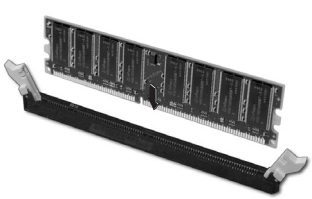
2 Release the latches from both flanks of the memory. The memory will be removed automatically.



Installing Memory

1 Lay the latches outwards from the memory socket.

2 Insert the memory (DIMM) vertically in the socket in line with the grooves as shown in the figure.



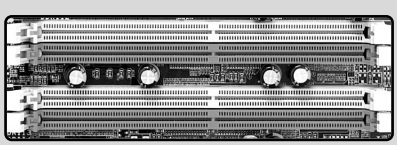
Note

■ When using a DDR memory, the memory must be installed in each channel for Dual Channel mode.

1-3 and 2-4 of dual Channels No. 1 ~ 4

The memory will be automatically installed even if not latched. However, it is recommended to fasten the latches until the memory is completely fixed.

❶
❷
❸
❹



The memory will be automatically installed even if not latched. However, it is recommended to fasten the latches until the memory is completely fixed

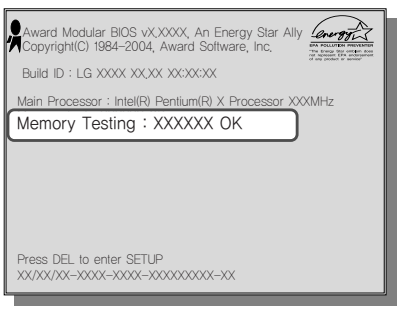
Checking the Expanded Memory

Turn on the power after installing the memory. Then, the computer will detect the memory so that you don't need to change the system setup. The capacity of the installed memory is checked as follows.

1 Connect the power cord and other cables, and turn on the computer and the monitor. Then, the initial screen to check the status of the computer will appear.

2 When the following screen appears, press **[Esc]** key. Then, **POST** screen will appear.

3 On the next screen, press **[Pause]** to freeze the screen temporarily and to check the **Memory Testing : XXXXXX OK** part.



Note

■ In the case that the logo screen is processed too fast to stop, press **[Delete]** key on the **LG logo** screen. Then, select **Advanced BIOS Features ▶ Full Screen Logo Show Selectable**, and change status from **Enabled** to **Disabled**.

4 After checking the memory, press the **[Esc]** key. Windows screen will proceed.

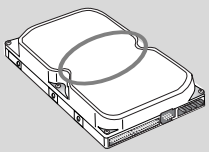
6-6. Adding a Hard Disk

This computer supports up to four serial ATA controllers, and you can add one hard disk drive.

Before Adding a Hard Disk

The following is when you purchase a hard disk and installs it, and describes the most common case when you add a hard disk to a computer that is already equipped with one hard disk

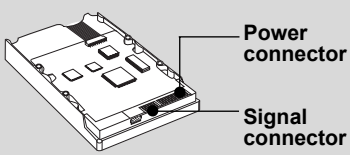
Note



■ Write down the capacity, the cylinder count, the numbers of heads and sectors of the hard disk marked on the upper part of the hard disk. They are necessary for system setup (depending on the product model.)

Adding a Hard Disk

Note



■ Prepare the hard disk to install.

■ The hard disk must be serial ATA type.

Caution

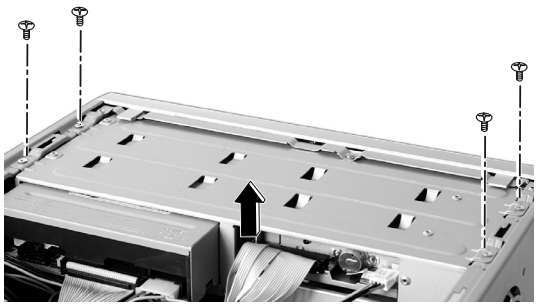
■ When disassembling the computer, wear gloves to protect internal parts of the computer and slot cards from damage.

■ Use screws compatible with specification when installing the hard disk in the main body. Otherwise, critical damage may be done to electronic parts. For stable use of the hard disk, fix the hard disk in the main body of the computer to prevent vibration.

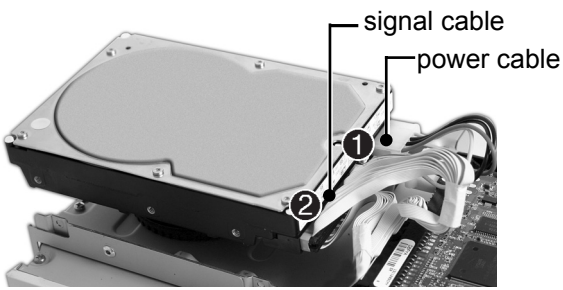
Adding a hard disk drive

1 Refer to Opening the computer case (page 66) to remove the computer case cover.

2 Remove 4 screws on the hard drive case and open the hard drive case as the direction of the arrow.



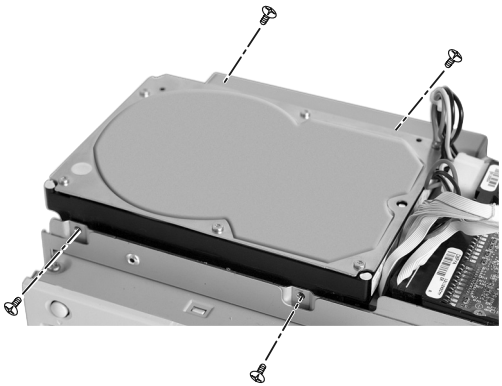
3 Connect the power cable connector as shown No1 and the signal cable connector as shown No 2 to the new hard disk you want to replace in the hard disk case.



Warning

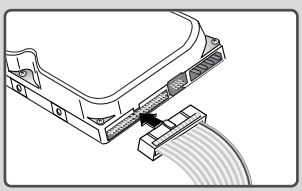
Incorrect connection of the signal and power cord may cause disfunction to the computer or electrical shock.

4 Install the hard disk drive case to the computer and fasten the 4 screws.

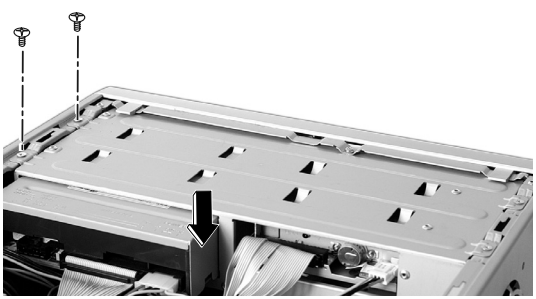


Note

■ Incorrect connection of the power and signal cables to a hard disk drive may damage the drive.



5 Fasten 4 screws after installing the hard disk drive as shown on the picture.



6 Refer to Closing the computer case (page 66) to close the computer case cover.

Note

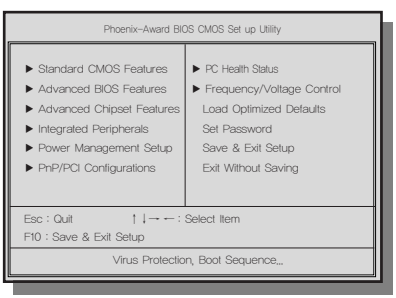
■ You should setup and format your computer after installing the hard disk. Refer to the Hard disk setup (page82).

Hard disk drive setup

1 Turn on the computer and the monitor.

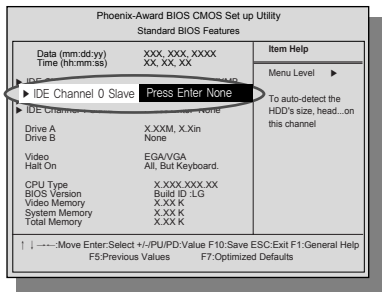
2 While the **LG logo** screen is on, press **[Delete]** key.

3 Then, the initial screen of System Setup menu will appear.

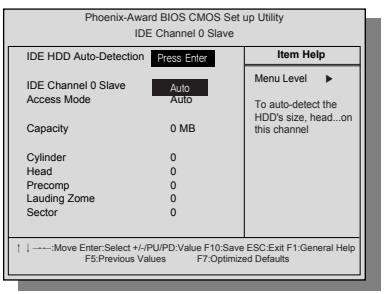


4 Execute the initial screen of the System Setup menu, and select **Standard CMOS Features** by pressing [↑],[↓],[←], and [→] keys. Then, press **[Enter]**.

5 When the following appears, select I**DE Channel 0 Salve** by pressing [↑],[↓],[←], and [→] keys and press **[Enter]** key.



6 Press **[Enter]** key on **IDE Channel 0 Slave** to set it as Auto, and press **[Enter]** key again on **IDE HDD Auto-Detection** to set it as Slave. Then, the additionally installed hard disk will be automatically detected.



7 To save changes in System Setup, press the **[F10]** key.

8 When the following message appears, press the **[Enter]** key to restart the computer.

SAVE to CMOS and EXIT(Y/N)? Y

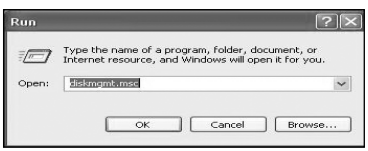
Configuring the Hard Disk (in Factory Setting Status)

Caution

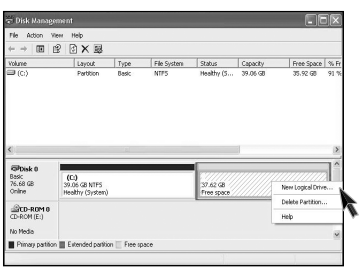
If you partition the hard disk using "diskmgmt.msc" existing data on the hard disk driver will be deleted. You must carefully partition the hard disk when there is data on the disk.

1 Select the **[Start]** button on the desk top, and click the **[Execute]**.

2 Input **diskmgmt.msc**, and click **[OK]**.

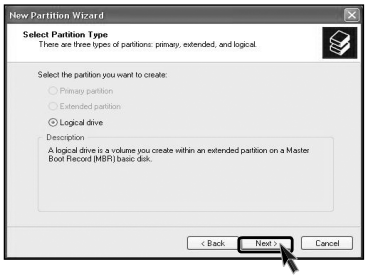


3 Select Added Disk 1 on Disk Management screen. Right-click and select **[New Loglcal Drive]**.

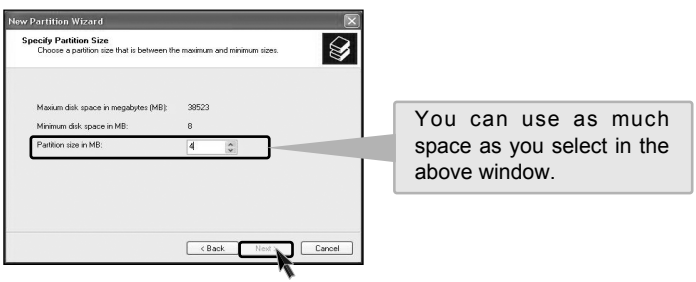


4 When New Partition Wizard screen appears, click the **[Next]** button.

5 When the partition type selection screen appears, select the main partition and click the **[Next]** button.

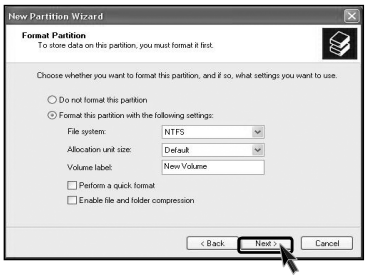


6 Select the maximum size, and click the **[Next]** button.



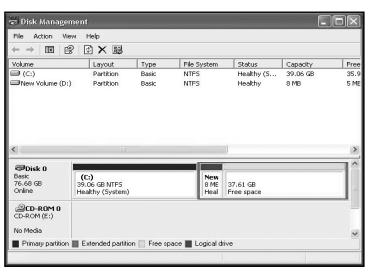
7 Select the Drive Letter and click the **[Next]** button.

8 When the partition format appears, set the file system, allocation unit, and volume label suitable for the User Environment and click the **[Next]** button.

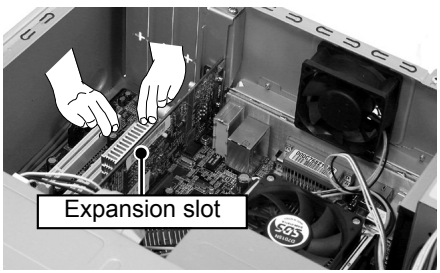


9 The Partition Wizard has been completed. Click the **[Finish]** button.

10 After the completion, the additional hard disk will normally function.



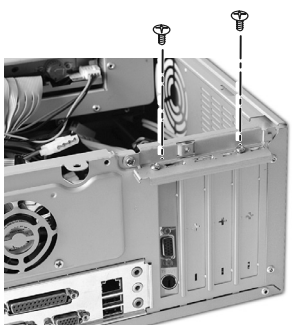
5 Hold the expansion card with both hands and align the expansion card and slot. Push down evenly to insert the card into the slot.



Caution

■ Incorrect installation of an expansion card may damage the main board and result in a computer malfunction.

6 Fasten 2 screws after installing the extension slot.



Warning

■ Using the computer without closing the case may result in fire, electric shock, injury, and/or damage to the computer.

7 Close the cap in the same position as you removed it.

8 Refer to Closing the computer case to close the case cover of the computer.

9 Install the driver program for the new expansion card.

memo

Product Specifications *CK/DK Model

※ **Specifications below differ depending on the models.**

CPU	Supports Pentium4/ LGA775 2.8/3.0/3.2/3.4/3.6 GHz or higher (FSB: 533/800MHz) /H.
System memory	128MB or higher. Differs depending on the model. (FK models allocate minimum 8MB or maximum 64MB as the local video memory [frame buffer] using a built-in VGA.)
Cache memory	256KB/512KB or 1024KB L2 cache is equipped in the CPU.
Hard disk drive	40 GB or higher (Serial ATA type).
Keyboard	PS/2 keyboard (104keys)
Mouse	PS/2 mouse or USB (ball / wheel)
Video	Equipped in PCI-E 16x video card (one 15-pin connector) or in the main board.
Sound	Equipped in the main board (MIC connector, speaker connector, line-in connector) and in the extension connector on the rear part of the system.
USB	Equipped in the main board (four) and in the front (two).
Serial I/O	Installed in the main board. (one 9-pin connector).
Front I/O	Two USB ports and audio ports (SPEAKER-OUT and MIC-IN)
Parallel I/O	One printer port (25pins)
Extension slot	One PCI-E 16x slot, One PCI-E 1x slot, Two PCI slots.
Product size	Width 136 x Height 354 x depth 378(mm)
Power spec	100~127 / 200~240VAC, 5A / 4A, 50/60Hz or 200~240VAC. 4A, 50/60Hz
Environmental requirement	Temperature:Average temperature:77℉(25℃) Operating temperature:41℉~95℉ (5~35℃) Storage temperature:-4℉~131℉(-25~55℃)/Humidity:Average humidity:60%(RH) Operating humidity:30%~80%(RH)/Storage humidity:30%~80%(RH)

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 pro-vide reasonable protection against harmful interference in a residential installa-tion. This equipment generates, uses and can radi-ate radio frequency energy and, if not in-stalled and used in accordance with the in-structions, may cause harmful interference to radio communications. However, there is no guarantee that interfer-ence will not occur in a particular installation. If this equip-ment 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 fol-lowing measures:

-. Reorient or relocate the receiving antenna.
-. Increase the separation between the equip-ment and receiver.
-. Connect the equipment into an outlet on a circuit different from that to which the re-ceiver is connected.
-. Consult the dealer or an experienced radio/TV technician for help.

Caution

Changes or modifications not expressly approved by the party responsible for com-pliance could void the user's authority to operate the equipment.