

# ESPRIMO P5100 User's Manual

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## DECLARATION OF CONFORMITY According to FCC Part15

Responsible Party: Fujitsu Computer Systems Corporation  
Address: 1250 East Arques Avenue, Sunnyvale, CA94085  
Telephone Number: (408)746-6000

Product Name: Personal Computer  
Model Number: FPC-P5100

Conforms the following specifications:  
FCC Part15, Subpart B, Class B Digital Device

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

Website: [www.pc-ap.fujitsu.com](http://www.pc-ap.fujitsu.com)

# IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions carefully. Save these instructions for future reference.
2. Follow all warnings and instructions marked on the product.
3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this product near water.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.
7. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
8. This product is equipped with a 3-wire grounding-type plug, a plug having a third (grounding) pin. This will only plug into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the purpose of the grounding-type plug.
9. Do not allow anything to rest on the power cord. Do not place this product where the power cord can easily be stepped on.
10. If an extension cord is used with this product, make sure that the total ampere rating of the equipment plugged into the extension cord does not exceed the extension cord ampere rating. Also, make sure that the total rating of all products plugged into the wall outlet does not exceed 15 amperes.
11. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points that could result in a fire or electric shock. Never spill liquid of any kind on the product.
12. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to qualified service personnel.

13. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - a. When the power cord or plug is damaged or frayed.
  - b. If liquid has been spilled into the product.
  - c. If the product has been exposed to rain or water.
  - d. If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal condition.
  - e. If the product has been dropped or the cabinet has been damaged.
  - f. If the product exhibits a distinct change in performance, indicating a need for service.
14. Use only the proper type of power supply cord set (provided in your accessories box) for this unit. It should be a detachable type: UL listed/CSA certified, BS1363, ASTA, SS145 certified, rated 10A 250V minimum, VDE approved or its equivalent. Maximum length is 15 feet (4.6 meters).
15. If your computer includes a modem, the cable used with the modem should be manufactured with a minimum wire size of 26 American wire gauge (AWG).  
Please take extra precaution Modem cable; when connecting the LAN and do not connect the cables to the peripheral device 's connector, that might have excessive voltage.

#### 16. CAUTION.

- **If the CD/DVD drive is not operated correctly according to the instructions or procedures specified in the operating manual, it may emit a laser beam. Disassembling the CD/DVD drive may cause you to be exposed to a harmful laser beam. So never disassemble it. The CD/DVD drive may emit a Class 3A or Class 3B laser beam when its cover is detached.**
- **The CD/DVD drive may emit a Class 3A or Class 3B laser beam when its cover is detached. Do not look at the laser beam directly or through an optical device. Also, be careful not to be exposed to the laser beam.**

#### **Safety of Laser Products**

The CD/DVD drive installed on your computer uses a laser.

#### **Class 1 Laser Products**

The CD/DVD drive complies with the provisions pertinent to class 1 laser products, in Subchapter J of the Federal Regulation DHHS 21 CFR of the United States Department of Health and Human Services. Also, it complies with the international standard IEC 60825-1, the CENELEC standard EN 60825-1 and the Japanese standard JIS C6802, which govern Class 1 laser products.

#### 17. CAUTION.

**Do not touch the on-board battery. Risk of electric shock, burn and fire. Do not replace the on-board battery. Risk of explosion if battery is replaced by incorrect type. Please contact Fujitsu or the store where you purchased this products.**

# Before Reading this Manual

This section describes safety precautions and convention used in this manual. Be sure to read this.

## For Safe Operation

This manual contains important information for using the ESPRIMO personal computer. Read this manual thoroughly before using your PC. In particular, "Safety Precautions" in this manual must be read and understood.

Fujitsu, a participant in the U.S. Environmental Protection Agency's (EPA) Energy Start Program, warrants that the computer meets the Energy Start specifications.



## Using this Product for High-Safety Applications

This product is for office, personal, home, ordinary industry and other general use. It is not designed and manufactured for use in high-safety applications.

Do not use this product for such applications without taking measures to satisfy the high-safety requirements.

High-safety applications require extremely high level of safety, and involve serious hazards to life and health if the required safety is not assured. High-safety applications include the following.

- Nuclear reaction control in nuclear facilities, automatic aviation control, air traffic control, mass-transportation control, life-supporting medical equipment, and missile launch control.

The computer includes limited-life devices (such as a CRT, an LCD, and a hard disk), and if they are used continuously for an extended period of time, it may become necessary to replace them earlier than expected. The components come with one-year warranty (warranty periods may vary depending on the type of contract).

- Besides the useful life, the brightness of the LCD monitor decreases with the time for which it is used.

## Backing Up the Data

The customer is responsible for maintaining the integrity of data (including the basic and application software) stored or installed on the product. We do not warrant the integrity of data stored or installed on the personal computer the customer sent for repair. Take appropriate measures such as making a backup.

We assume no responsibility for loss of data and any direct or incidental damage due to any cause other than those specified in the warranty.

This computer is designed for use within the country. If you are using it abroad, please do so at your own responsibility.

This equipment may be adversely affected by the momentary drop of the supplied voltage due to lightning. Use of an uninterrupted AC power supply is recommended for measures against the momentary drop of the supplied voltage.

(This message is based on the Japan Electronics and Information Technology Industries Association's guidelines for measures against momentary voltage drop in PCs.)

Since this equipment contains special materials controlled by the Foreign Exchange and Foreign Trade Control Law. Authorization under the law may be required to export this equipment.

### **Microsoft Service Pack**

Microsoft Corp. offers Service Pack to provide the users of Microsoft® Windows® with more stable system operation (<http://www.microsoft.com/>).

The latest version of the Service Pack helps you configure the most stable system using Microsoft® Windows® provided at that time by Microsoft Corp.

We recommend you to use the latest version.

In some environments, however, the Service Pack may cause unexpected failure. Read Readme.txt for the Service Pack before use.

Again, we recommend you to make a system backup in case of failed installation.

Components of this product (motherboard, CD-ROM, hard disk, and floppy disk drive) contain traces of heavy metals (lead and chrome) and chemical (antimony).

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##### **3. Incorporating the Software into other software**

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Unless otherwise expressly stated in this user's guide or other documentation, you may not reproduce the software into which the Software has been incorporated for any purposes other than backup purposes.

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You may transfer the Software (including all media and documentation accompanying your computer, as well as its backup copy) to a third party, provided that you transfer the whole Software along with the computer on which the Software is installed. You may not, however, transfer any media included with your computer separately from the computer.

6. Modification and reverse engineering

You may not modify the Software or reverse engineer the Software by decompiling or disassembling.

shall the third party or developer warrant the Software.

7. High level of safety

The Software is designed for general use, i.e., for office use, personal use and home use, but not designed or manufactured for the use with a system that requires a high level of safety. You may not use the Software with any system that requires a high level of safety, without taking proper measures to secure safety for the system. The term “systems that require a high level of safety,” which include but not limited to the following, refers to systems that require an extremely high level of safety and may directly affect human lives and bodies if safety is not secured.

Nuclear energy control systems, flight control systems, air traffic control systems, mass transportation operation and control systems, life-support systems, and missile launchers in military facilities.

**Keep the accompanying CD-ROMs in a safe place.**

The CD-ROMs are needed to return the software installed on your computer to its initial state (state at the time of purchase).

**Temperature and humidity condition**

The computer should be used and stored under the following temperature and humidity conditions: 10 to 35°C/20 to 80 %RH (during operation) or -10 to 60°C/20 to 80 %RH (during storage) (no condensation during operation/storage).

# Conventions Used in this Manual

## Introduction

This manual tells you how to put your PC into operation and how to operate it in daily use. Depending on the configuration level chosen some of the hardware components described may not be available on your PC. Please observe the notes on your operating system.



You can incorporate operable drives (for example DAT drive) as well as other boards.

Depending on the configuration selected, the operating system is preinstalled on your hard disk (e.g. Windows XP).

Your PC has a number of security features to ensure that no unauthorised persons can access your data, for example, you can activate a screen saver with password protection. The security functions in the BIOS Setup also allow you to protect your data by means of passwords.

## Notational conventions

The meanings of the symbols and fonts used in this manual are as follows:

 <b>CAUTION</b>	Indicates information which is important for your health or for preventing physical damage.
	Indicates important information which is required to use the system properly.

- Text which follows this symbol describes activities that must be performed in the order shown.

Text in this typeface indicates screen outputs.

"Quotation marks" indicate names of chapters or terms.

## Important Notes

In this chapter you will find information regarding safety which is essential to take note of when working with your PC. The manufacturer's notes contain helpful information on your PC.

### □ Safety

#### CAUTION

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During installation and before operating the device, please observe the instructions on environmental conditions in the chapter entitled "Technical data" as well as the instructions in the chapter "Preparing for Use".

Please check whether the device is correctly set for the local power supply (see "Preparing for Use" chapter).

The main switch and the ON/OFF switch do not disconnect the system unit from the mains voltage. To completely disconnect the mains voltage, remove the power plug from the grounded mains outlet.

Caution: components in the system can get very hot.

### □ Manufacturer's notes

Keep this operating manual together with your device. If you pass on the device to third parties, you should include this manual.

### □ Energy saving

When the PC is delivered, some energy-saving functions are already set

- If you are not using your PC, switch it off.
- In the BIOS Setup you may set further energy-saving functions for the PC.
- Depending on the operating system, you can set additional power-management features.

#### **Energy saving under Windows XP**

The Screen Saver tab allows you to set energy-saving functions for your screen. Select the following item in the menu: Start → Settings → Control Panel → Display → Display Properties → Screen Saver → Energy saving features of monitor.

With the default setting Control Panel → Power Options → Advanced additional power management features of Windows XP are available.



## □ **FCC Class B Compliance Statement**

The following statement applies to the products covered in this manual, unless otherwise specified herein. The statement for other products will appear in the accompanying documentation.

### **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 and meets all requirements of the Canadian Interference-Causing Equipment Regulations. 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 strict 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 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/TV technician for help.

Fujitsu is not responsible for any radio or television interference caused by unauthorised modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by Fujitsu. The correction of interference caused by such unauthorised modification, substitution or attachment will be the responsibility of the user.

The use of shielded I/O cables is required when connecting this equipment to any and all optional peripheral or host devices. Failure to do so may violate FCC rules.

## ❑ **Transporting the PC**



### **CAUTION**

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Transport all parts separately in their original packaging or in a packaging which protects them from knocks and jolts, to the new site. Do not unpack them until all transportation manoeuvres are completed.

Never drop the monitor!

## ❑ **Cleaning the PC**



### **CAUTION**

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Turn off all power and equipment switches and remove the power plug from the mains supply.

Do not clean any interior parts yourself, leave this job to a service technician.

Do not use any cleaning agents that contain abrasives or may corrode plastic.

Ensure that no liquid enters the system.

Ensure that the ventilation areas of the system unit and the monitor are free.

#### **Cleaning the system unit and the monitor**

Wipe the system unit and monitor casing with a dry cloth. If particularly dirty, use a cloth that has been moistened in mild domestic detergent and then carefully wrung out.

## ❑ Disposal and recycling

### Disposal of the PC unit

Disposal of the PC unit (including accessories except the LCD unit) is controlled by the Waste Disposal and Public Cleaning Law.

#### To institutional and corporate customers

Personal computers must be disposed off as industrial waste. Institutional and corporate customers are obliged to entrust an authorized industrial-waste disposer.

#### To individual customers

Personal computers should be disposed off as general waste. Individual customers are advised to follow the disposal rules and regulations set forth by the local municipality.

### Disposal of the LCD unit

The fluorescent tubes in the LCD contain mercury.

Disposal of the LCD unit is controlled by the Waste Disposal and Public Cleaning Law.

#### To institutional and corporate customers

LCD units must be disposed off as industrial waste. Institutional and corporate customers are obliged to entrust an authorized industrial-waste disposer.

#### To individual customers

LCD units should be disposed off as general waste. Individual customers are advised to follow the disposal rules and regulations set forth by the local municipality.

### Disposal of batteries

The wireless keyboard and mouse use dry batteries. These batteries may explode when inflamed.

Disposal of the batteries is controlled by the Waste Disposal and Public Cleaning Law.

#### To institutional and corporate customers

Dry batteries must be disposed off as industrial waste. Institutional and corporate customers are advised to entrust an authorized industrial-waste disposer.

#### To individual customers

Dry batteries should be disposed off as general waste. Individual customers are advised to follow the disposal rules and regulations set forth by the local municipality.

## ❑ Reference to products

In this manual, the product names are referred to as follows:

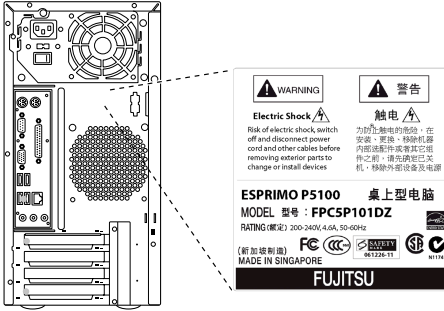
This manual includes information on other operating systems.

Product name	Description used in the manual		
Microsoft® Windows® XP Professional Edition	Windows XP Professional	Windows XP	Windows*
Microsoft® Windows® XP Home Edition	Windows XP Home Edition		

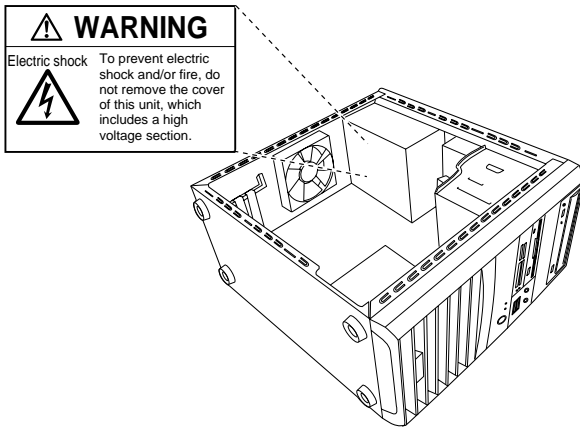
# Warning and Caution Labels

Your PC bears the warning and caution labels as shown below.  
The warning and caution labels must not be removed or damaged.

## Top of the PC main unit



## Inside the PC main unit



## WARNING

Electric shock



- Before mounting or dismantling an optional unit in/from your PC, switch off the PC and all connected units and unplug all power cords from respective outlets to prevent electric shock. Unplug all power cords and LAN/modem cables.

# Organization of This Manual

## Before Reading This Manual

### **Chapter 1**    **Preparing for Use**

This chapter provides the names and functions of individual parts.

### **Chapter 2**    **Operation**

This section describes the location of installation and installation of the computer.

### **Chapter 3**    **Troubleshooting and Tips**

This chapter provides the basic information on the PC and operation.

### **Chapter 4**    **System Expansion**

This chapter provides basic information on how to handle the peripherals installed (or can be installed) on the PC.

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# Chapter 1 - Preparing for Use



## CAUTION

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Please take note of the safety information in the "Important notes" chapter.

## ■ Unpacking and Checking the Delivery

It is recommended not to throw away the original packaging material! It may be required for reshipment at some later date.

- Unpack all the individual parts.
- Check the delivery for damage incurred during transportation.
- Check whether the delivery agrees with the details in the delivery note.

Should you discover that the delivery does not correspond to the delivery note, notify your local sales outlet immediately.

## ■ Steps for Initial Setup

First-time setup includes the connection of the monitor, mouse and keyboard to the system unit and the setup of the supplied software.



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### ● External devices

If you have received other devices in addition to your PC (e.g. a printer or a modem), do not connect these until after the initial installation.

### ● Drives and boards

If you have received drives or boards with your PC, please do not install them until after first-time setup. How to install drives and boards is described in the chapter "System expansions".

Perform the following steps in the prescribed order:

1. Decide where you are going to use the PC, and then set it up.
2. Connect the monitor, mouse and keyboard to the PC.
3. Check the rated voltage of the PC and connect it to the mains.
4. Switch on the PC and follow the instructions on the screen.

## ■ Setting Up the PC

### CAUTION

When installing your PC, give consideration to the recommendations and safety notes.

Set up the PC only in its correct orientation. The points to observe are illustrated on the following pages.

Do not expose the PC to extreme environmental conditions and protect it from dust, humidity and heat.

When installing the PC, provide sufficient clearance around the PC, as indicated in the “Technical data” chapter to ensure adequate ventilation. In order to avoid overheating, do not cover the ventilation area of the monitor or the PC.

Do not place several system units one above the other.

The PC can be used either horizontally or vertically. We recommend that you place your equipment on a surface with good anti-slip qualities. In view of the multitude of different finishes and varnishes used on furniture, it is possible that the rubber / plastic feet of the devices will mark the surface they stand on.

## ■ Connect the Monitor, Mouse and Keyboard

The ports for monitor, mouse and keyboard are on the rear and on the front of the system unit.



PS/2 keyboard port / purple



PS/2 mouse port / green



Monitor port / blue




USB port / black

### Connecting the keyboard

#### Connecting standard keyboard

Use the supplied keyboard cable only.


- Plug the round keyboard cable connector into the port marked with this symbol on the  system unit.

### Connecting the mouse

Connecting a PS/2 mouse

- Connect the PS/2 mouse to the PS/2 mouse port  on the system unit.

Connecting USB mouse

- Connect the USB mouse to the USB port  on the system unit.



## ■ Initial Switch-on: Software will be Installed

If the PC is connected to a network, the network protocol is required as well as the user and server details. Contact your network administrator if you have any questions about these settings.

When you switch on your PC for the first time, the supplied software is installed and configured. You should plan some time for this, as this process must not be interrupted.

### CAUTION

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Once the installation has been started the PC must not be switched off!

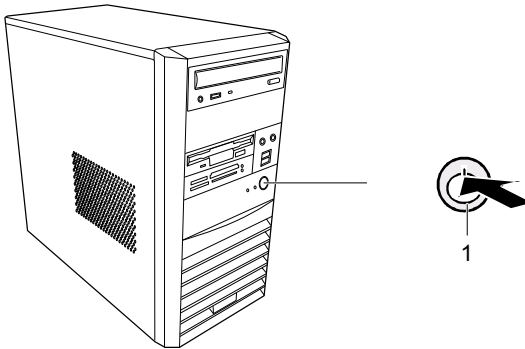
During installation the PC may only be rebooted when you are requested to do so!

Otherwise the installation will be not be performed correctly. If a fault occurs during the installation, the contents of the hard disk must be completely restored.

#### Switching on monitor and PC

- Switch the monitor on.
- Switch the PC on. To do this, follow the instructions below.

#### Switching on PC with devices with main power switch



#### 1 ON/OFF switch

- Press the ON/OFF switch on the front of the PC.  
The power-on indicator lights green and the PC is started.

#### Installing the software

- During installation, follow the instructions on screen.

Consult the operating system manual if there is anything unclear about the requested input data.



You will find further information about the drivers on the "Composite/Software Drivers" CD.

## ■ Connecting External Devices

### CAUTION

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Do not connect or disconnect cables during a thunderstorm.

Always take hold of the actual plug. Never unplug a cable by pulling the cable itself.

Connect and disconnect the cables in the order described below.

With the exception of USB devices, always remove all power plugs before connecting external devices!

Read the documentation on the external device before connecting it.

#### **Connecting cables**

- Turn off all power and equipment switches.
- Pull all power plugs out of grounded mains outlets.
- Connect all cables at the system unit and peripherals. You must observe the information provided in the chapter “Important notes”.
- Plug all data communication cables into the utility sockets.
- Plug all power cables into the grounded mains outlets.

#### **Disconnecting cables**

- Turn off all power and equipment switches.
- Pull all power plugs out of grounded mains outlets.
- Unplug all data communication cables from the utility sockets.
- Disconnect all cables from the system unit and peripherals.



USB devices are hot-pluggable. This allows cables from USB devices to be connected and disconnected with the system switched on.

Additional information can be found in the documentation for the USB devices.

## ❑ Connections on the system unit

The ports for external devices are on the rear and on the front of the system unit. The ports available on your PC depend on the configuration level you have selected. The standard ports are marked with the symbols shown below (or similar).



Keyboard port / purple



PS/2 mouse port / green



Serial interface 1 / turquoise



Monitor port / blue



Parallel interface / Printer / burgundy



Microphone jack (mono) / pink



Audio output (Line out) / lime green



Audio input (Line in) / light blue



USB - Universal Serial Bus / black

LAN



LAN connector



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Some of the devices that you connect require special drivers (see the operating system and device documentation).

## ❑ Connecting external devices to the serial port

External devices can be connected to the serial port (e.g. a modem).

- Connect the data cable to the external device.
- Connect the data cable to the serial port (□□□).

For an exact description of how to connect external devices to the serial port, please refer to the device documentation.



---

### ● Settings of the serial port

If you need to change the settings of the serial port (e.g. address, interrupt), you can do so in the BIOS Setup.

### ● Device drivers

The devices connected to the serial port require drivers. Your operating system already includes many drivers. Nevertheless, if the driver you need is not on the hard disk, please install it from the data carrier supplied with the device or with the application programme.

## ❑ Connecting external devices to the parallel port

External devices can be connected to the parallel port (e.g. a printer).

- Connect the data cable to the external device.
- Connect the data cable to the parallel port (□□□).

For an exact description of how to connect external devices to the parallel port, please see the device documentation.



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### ● Settings of the parallel port

If you need to change the settings of the parallel port (e.g. address, interrupt), you can do so in the BIOS Setup.

### ● Device drivers

The devices connected to the parallel port require drivers. Your operating system already includes many drivers. Nevertheless, if the driver you need is not on the hard disk, please install it from the data carrier supplied with the device or with the application programme.

# Chapter 2 - Operation

## ■ Switching On the PC

- Switch the monitor on (see the operating manual for the monitor).
- Switch the PC on with the main power switch on the rear of the PC.
- Press the ON/OFF switch on the front of the PC.

The power-on indicator lights green and the PC is started.

## ■ Switching Off the PC

- Shut down the operating system properly. For Windows: select Shut Down from the Start menu.
- If the operating system does not automatically switch the PC off, turn the PC to ready-to-operate when requested to do so by pressing the ON/OFF switch.

If the PC is ready-to-operate, the PC consumes very little power.

Switch off the PC at the power switch. The PC no longer uses any power.

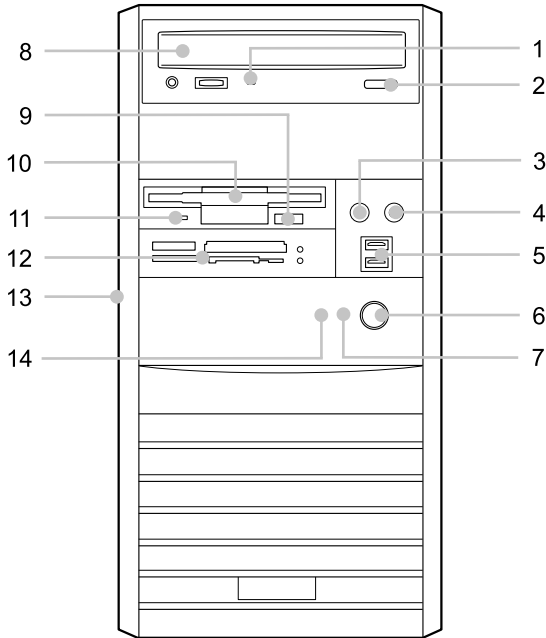


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The main power switch and the power button do not disconnect the PC from the mains voltage. To completely disconnect the mains voltage, remove the power plug from the socket.

- Switch the monitor off (see the operating manual for the monitor).

## ■ Front Panels of the Main Unit of the Personal Computer



### 1 CD access indicator

Lights up when data is being read from CD-ROM, DVD disc and when audio CDs are played.

### 2 CD eject button

Press this button to eject the tray to insert a CD-ROM or audio CDs or DVD. Can be used when the main unit of the personal computer is powered on.

Do not press this button when access indicator lights up.

### 3 Headphone jack (🎧)

Connection jack for headphone.

While a headphone is being connected, sound does not come out from the line-out jack of the main unit of the personal computer or internal speakers.

### 4 Microphone jack (🎤)

Connection jack for condenser microphone.

### 5 USB ports

Used to connect USB peripherals to your computer. The ports are USB 2.0 compliant.

## **6 Power supply button**

Pressed in the following cases.

- When the main unit of the personal computer is powered on
- When the personal computer is in standby status (power saving status)
- When the personal computer is resumed from standby status

## **7 Power indicator**

Shows the status of the power to the main unit of the personal computer.

Lit in green when the computer is powered.

Lit in orange when the computer is in standby mode (power saving status)

## **8 Optical drive**

The optical drive allows users to play music CDs, DVD Videos and CD-ROMs.

Users can also write data on various DVD and CD rewritable medias.

### **Note:**

Writing capability of the optical drive will depend on the optical drive that is bundled with the desktop.

## **9 Floppy disk eject button**

Pressed to eject a floppy disk.

Do not press this button when the floppy disk access indicator lights up.

## **10 Floppy disk drive (optional)**

Used to write data to a floppy disk or to read data from a floppy disk.

## **11 Floppy disk access indicator**

Lights up when data is being written to a floppy disk or when data is read from a floppy disk.

## **12 Built-in 11 in 1 card reader/writer**

The card reader/writer allows users to copy data to and from the following memory card formats: MS, MS PRO, SD, MMC, CF, SM and Micro Drive.

## **13 Vent**

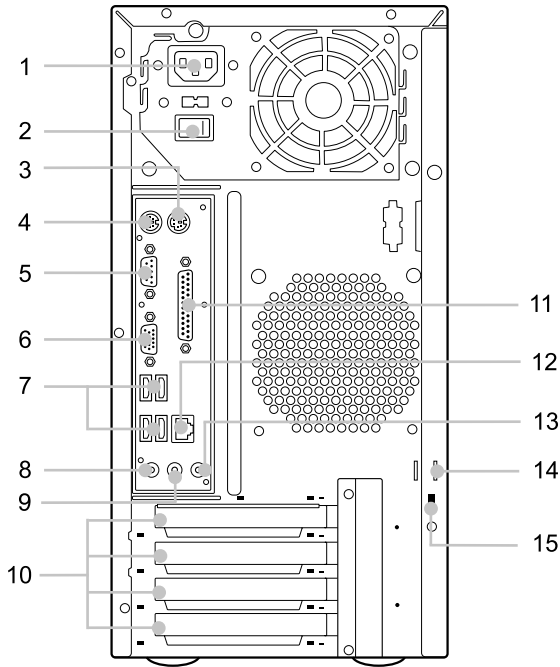
On the top of the computer there is an opening through which heat is forcibly discharged from the computer. Note that the vent must not be blocked by objects.

When placed horizontally, position the computer at a location where the vent is more than 20 cm away from the wall.

## **14 Disc access indicator**

Lights up when data is being written to the hard disk, or when data are read from the hard disk/Optical drive or when an audio CD is played. Some optical drives may light up when access is made to the a CD.

## ■ Back Panel of the Main Unit of the Personal Computer



### 1 Power inlet

Used to connect the power cable.

### 2 Main switch

Turn "Off" when completely turning off the power to the main unit of the computer. The "I" side is "On" and the "O" side is "Off".

If it is set to "Off", the main unit of the personal computer is not powered on even when pressing the power supply button.

However, if you do not use the computer for a long time, set it to "Off".

### 3 Mouse port ( )

Used to connect the mouse to the computer.

### 4 Keyboard port ( )

Used to connect the keyboard to the computer.



**5 Monitor port**

Used to connect the monitor to the computer. Analog RGB monitor cables can be used.

**6 Serial port (  )**

Used to connect RS-232C support devices.

**7 USB ports**

Used to connect USB peripheral devices to your computer. Complies with USB 2.0.

**8 Microphone jack**

It allows you to connect a Ø3.5mm mono microphone to it.

**9 Line-out jack (  )**

It is a sound output jack. Used to connect to the input jack of audio devices.

When connecting to a speaker, use a terminal jack with the amplifier function built in it.

When the headphone is connected to the headphone jack, sound does not come out from the line-out jack of the main unit of the personal computer.

**10 Expansion card slot**

Insert the expansion card to expand the functions of the personal computer. Expansion cards that support PCI can be used.

**11 Parallel port (  )**

Used to connect to a printer or scanner.

**12 LAN port**

Used to connect the LAN cable.

**13 Line-in jack (  )**

It is a sound input jack. Used to connect to the output jack of audio devices.

**14 Key hole for a padlock**

Install a commercially available key.

**15 Antitheft lock**

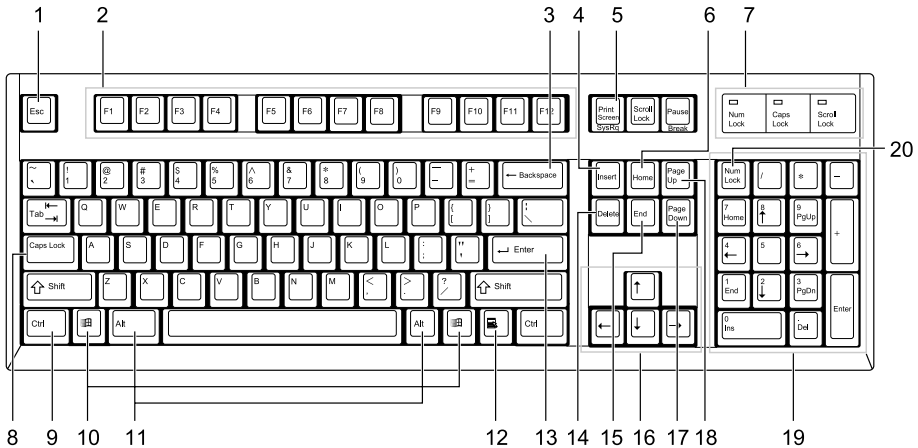
Used to connect a commercially available antitheft cable.

**◎ POINT**

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- The antitheft lock supports Kensington Micro Saver Security System.

# ■ Keyboard



## 1 Esc key

Pressing this key cancels the operation the application program is executing.

## 2 F keys

These F keys are assigned specific functions for each application.

## 3 Back space key

Press the Back Space key to move the cursor to the left while deleting characters.

## 4 Insert key

Press the Insert key to switch between character insert mode and overwrite mode.

## 5 Print Screen key

Pressing this button copies the screenshot to the clipboard.

## 6 Home key

Press the Home key to move the cursor all at once to the beginning of the current line or text.

## 7 Indicators

The indicator lights when you press [Num Lock], [Shift] + [Caps Lock], or [Scroll Lock], indicating that it is enabled. When the key is pressed again, the indicator turns off and the key function is disabled.

## 8 Caps Lock key

Use the Caps Lock key to type alphabetical characters.

Press [Shift] + [Caps Lock] to switch between uppercase and lowercase.

**9 Ctrl key**

Use the Ctrl key in combination with another key. Its function varies with each application.

**10 Windows key**

Press the Windows key to display the Start menu.

**11 Alt key**

Use the Ctrl key in combination with another key. Its function varies with each application.

**12 Application key**

This key has the same function as clicking the right mouse button.

Press this key to display the shortcut menu of the selected item.

**13 Enter key**

The Enter key is also referred to as the Return key.

Press this key to perform line feed or execute a command.

**14 Delete key**

Press the Delete key to delete a character. Press this key together with [Ctrl] and [Alt] to reset the computer.

**15 End key**

Press the End key to move the cursor all at once to the end of the current line or text.

**16 Cursor keys**

Press each of these keys to move the cursor in the desired direction.

**17 Page Down key**

Scrolls down the on-screen page when pressed.

**18 Page Up key**

Scrolls up the on-screen page when pressed.

**19 Numeric keypad**

Enables you to enter numerals when the [Num Lock] indicator is on.

The function described in the lower part of the numeric key is enabled when the [Num Lock] indicator is off.

**20 Num Lock key**

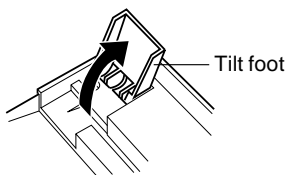
Press the Num Lock key to change the Ten-key pad functions.

**⦿ Point**

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To tilt the keyboard, pull up the tilt foot on the both sides of the underside of the keyboard.

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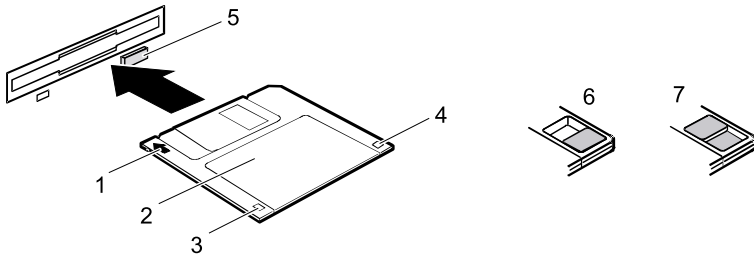
## ■ Floppy Disks

### □ Working with Floppy Disks



Follow the instructions supplied by the vendor of the floppy disks.

Never clean the floppy disk drives with cleaning disks. Any attempt would destroy the read/write head in the disk drive within 20 seconds.



**1 Insertion direction**

**2 Label area**

**3 Write protection switch for a 720 KB or a 1.44 MB floppy disk**

**4 Identification of a 1.44 MB floppy disk or write protect switch on a 120 MB floppy disk**

**5 Eject button for inserted floppy disks**

**6 Disk is write-protected**

**7 Disk is not write-protected**

- To insert a floppy disk, push it into the drive in the insertion direction until it engages. The label should be facing upward.
- To remove the floppy disk, press the eject button (5).  
The write-protect switch enables you to protect the data on the floppy disk from inadvertent overwriting or deletion.
- To protect the data on the floppy disk from being overwritten, push the write-protect switch to position (6). The hole is now visible.
- To remove write protection, push the switch to position (7). The hole is now covered.

## ■ Settings in BIOS Setup

The BIOS Setup menu allows you to set your hardware configuration and system functions. When the PC is delivered, the default entries are valid. You may customise these settings to your requirements in the BIOS Setup.

## ■ Property and Data Protection

Software functions and mechanical locking offer a broad range of functions for protecting your PC and your personal data from unauthorised access. You can also combine these functions.

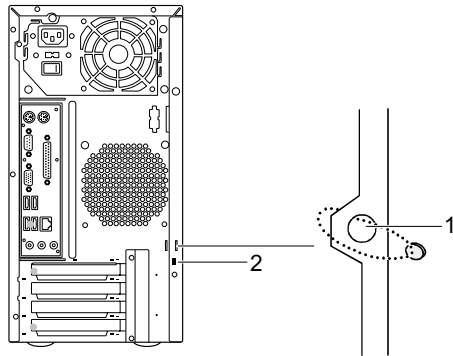
### □ Anti-theft protection

There are two ways to protect your PC from theft:

- with a chain and the eyelet (1)
- with the Kensington Lock device (2) and with a Kensington MicroSaver

To prevent unauthorised persons from opening the casing, the casing can be sealed. To do this, use the eye on the top cover (1) and the eye on the back of the casing (2).

You can also attach a padlock to the eye (1) to prevent unauthorised opening of the casing.



**Kensington Lock**

## ■ Access Protection Under Windows

Under MS-Windows you can activate a screen saver and protect it with a password. Only those users who know the password can deactivate the screen saver and access any open files. Detailed information on screen savers is provided by the associated help function.

## ■ BIOS Setup Security Functions

The Security menu in BIOS Setup offers you various options for protecting your personal data against unauthorised access, e.g.:

- Preventing unauthorised BIOS Setup entry
- Preventing unauthorised system access
- Preventing unauthorised access to the settings of boards with their own BIOS
- Preventing system booting from the diskette drive
- Preventing unauthorised writing of diskettes
- Protecting BIOS from being overwritten

You can also combine these functions.

# Chapter 3 - Troubleshooting and Tips

## CAUTION

Take note of the safety notes and in the "Preparing for use" chapter, when you connect or disconnect cables.

If a fault occurs, try to correct it as described in the following sections:

- in this chapter
- in the documentation of the connected devices
- in the help systems of the software used
- in the documentation of your operating system

If you fail to correct the problem, proceed as follows:

- Switch the PC off.
- Make a note of the steps and the circumstances that led to the fault.
- Make a note of any error messages displayed.
- Contact your sales outlet or our customer service centre.

## ■ Installing New Software

When installing programs or drivers, important files may be overwritten and modified. To be able to access the original data in the event of any problems following installation, you should backup your hard disk prior to installation.

## ■ Power-on Indicator Remains Unlit after you have Switched on your Device

This may be due to the following:

### **The mains voltage supply is faulty**

- Check that the power cable is plugged properly into the system unit and grounded mains outlet.
- Switch on the PC.

### **Internal power supply overloaded**

- Remove the PC's power plug from the grounded mains outlet.
- Wait for a moment.
- Plug the power cable into the grounded mains outlet again.
- Switch on the PC.

## ❑ **The screen stays blank**

If your screen remains blank this may be due to the following:

### **Monitor is switched off**

- Switch your monitor on.

### **Power saving has been activated (screen is blank)**

- Press any key on the keyboard.

or

- Deactivate the screen saver. Enter the appropriate password.

### **Brightness control is set to dark**

- Adjust the brightness control. For detailed information, please refer to the operating manual supplied with your monitor.

### **Power cable not connected**

- Switch off the monitor and the PC.
- Check that the monitor power cable of the monitor is properly connected to the monitor and, depending on the connector, to the PC or to the grounded mains outlet.
- Check that the PC power cable is properly plugged into the PC and grounded mains outlet.
- Switch on the monitor and the PC.

### **Monitor cable not connected**

- Switch off the monitor and PC.
- Check that the monitor cable is properly connected to the PC and monitor.
- Switch on the monitor and the PC.

### **Wrong monitor has been set under Window XP**

- Restart the PC.
- Press [F8] while the system is booting.

Either the Windows Advanced Start Options menu or the menu for selecting the operating system appears.


- If the menu for selecting the operating system appears, press [F8].
- Select Safe Mode or Safe Mode with Network.
- Set the correct values for the attached monitor as described in the operating manual of the monitor by selecting Start → Settings → Control Panel → Display and then the Appearance, Themes, Settings tabs.

### **The wrong RAM modules have been inserted**

See the technical manual for the mainboard for information on which memory modules can be used.

## **■ No Mouse Pointer Displayed on the Screen**

- Shut down the operating system properly.
- Switch the PC off.
- Check that the mouse cable is properly connected to the system unit.  
If you use an adapter or extension lead with the mouse cable, check the connections.
- Make sure that only one mouse is connected.
- Switch the PC on.

The mouse controller must be enabled if you use a PS/2 mouse .

- Check in the BIOS Setup that the mouse controller is Enabled.
- Check that the mouse driver is properly installed and is present when the application programs is started. Detailed information can be found in the user guide for the mouse and application programme.

## **■ The Floppy Disk Cannot be Read or Written**

- Check that the write protection of the floppy disk drive is deactivated.
- Check the entry for Diskette A: in the Main menu of the BIOS Setup.
- Check that the floppy disk drive controller is enabled.
- Check that the cables of the floppy disk drive are properly connected.



## ■ Time and/or Date is not Correct

You can set the time and date in the BIOS Setup or in the operating system.

- Set the time and date.



If the time and date are repeatedly wrong when you switch on your PC, the on-board battery is flat. But do not replace the battery.

Do not touch the on-board battery. Risk of electric shock, burn and fire. Do not replace the on-board battery.

Risk of explosion if battery is replaced by incorrect type.

Please contact Fujitsu or the store where you purchased this products.

## ■ Error Messages on the Screen

**Error messages and their explanation are contained:**

- In the technical manual for the mainboard
- In the "BIOS Setup" manual
- In the documentation for the programmes used

## ■ Restoring the Hard Disk Contents

Should you need to restore your hard disk, the instructions are provided with the "Recovery CD" (delivered with your system).

## ■ Tips

**The PC cannot be switched off with the ON/OFF switch**

Cause: The PC was not switched on with the ON/OFF switch.

- Press the ON/OFF switch again.

Cause: System crash

- Press and hold the ON/OFF switch for at least four seconds until the PC switches off.

**Out of system resources**

If you have too many applications running at once, you may experience problems due to a lack of system resources. In this case you should:

- close unnecessary applications

or

- run the applications in a different order

# Chapter 4 - System Expansion

## CAUTION

It may be necessary to update the BIOS when carrying out a system expansion or hardware upgrade.

When installing components that heats up easily, make sure that the maximum permissible temperatures of the individual components are not exceeded.

The PC must be switched off when installing/removing the system expansions and may not be in the energy-saving mode.

This chapter describes all the activities required to modify your PC hardware (e.g. installing boards or drives).

Read the supplied documentation before installing new drives and/or boards.

Refer to the technical manual for the mainboard before making any extensions to the mainboard.

## ■ Information about Boards

Take care with the locking mechanisms (catches and centring pins) when you are replacing board or components on board.

To prevent damage to the board or the components and conductors on it, please take care when you insert or remove boards. Make sure expansion boards are inserted straightly.

Never use sharp objects (screwdrivers) for leverage.



Boards with electrostatic sensitive devices (ESD) are identifiable by the label shown.

When you handle boards fitted with ESDs, you must, under all circumstances, observe the following points:

- You must statically discharge yourself before working with boards (e.g. by touching a grounded object).
- The equipment and tools you use must be free of static charges.
- Pull out the power plug before inserting or removing boards.
- Always hold boards with ESDs by their edges.
- Never touch pins or conductors on boards fitted with ESDs.

## ■ Before Connecting Peripheral Devices

Your computer can be expanded by connecting or incorporating various peripheral devices.

### WARNING

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ELECTRIC SHOCK



- When connecting peripheral devices to your computer, do not connect devices other than Fujitsu recommended products.  
Doing so could result in an electronic shock, fire, or failure.

### CAUTION

---

FAILURE



- When installing or removing peripheral devices, do not remove screws other than those specified in the manual.  
Removing the screws other than those specified may cause injuries to persons and damage to the devices.

FAILURE



- Follow the instructions in this manual to connect the cables.  
Connecting the cables incorrectly could result in damage to your computer or peripheral devices.

## □ Precautions

Take the following precautions when installing peripheral devices.

- **It is recommended to use Fujitsu's products when installing peripheral devices.**

Note that the warranty does not cover abnormal performance or failures of the computer caused by installing CD or DVD other than Fujitsu's products.

For devices that are not prepared by Fujitsu, inquire the manufacture of peripheral devices you use about whether your computer supports these devices.

Your computer supports performances of Fujitsu's products only.

- **Install one peripheral device only at one time**

Installing two or more peripheral devices at one time may cause failures of normal installation of drivers, etc. Complete the installation of one peripheral device before installing another peripheral device.

- **Turning off the power to the computer and the devices connected**

For safety, be sure to unplug the computer. Currents still flow inside the computer even after turning off your computer.

Do not work on the computer immediately after turning off the computer.

- **Do not work on the computer immediately after turning off the computer.**

Internal devices of the computer become hot immediately after the computer has been turned off.

Turn off the power to unplug the computer, and wait 10 minutes or so before start working.

- **Do not disassemble the power unit.**

The power unit is a box-shaped device located at the rear of the internal main unit of the personal computer.

- **Precautions on handling internal cables or devices**

Do not scratch or machine internal cables or devices.

- **Taking precautions to static electricity**

The printed board and electronic devices in the internal peripheral devices are not protected by cases or other materials. They may be damaged due to static electricity generated in your body. Before handling them, always touch an appropriate metal object to discharge static from your body.

- **Do not touch the printed board surface, soldered areas, or port areas.**

Hold metal areas or the edges of the printed board.

- **Power to peripheral devices**

The power to peripheral devices is generally turned on before powering on the main unit of the personal computer, however, there are some peripheral devices that will be powered on after powering on the main unit of the personal computer. Read the manual for peripheral devices.

- **Use ACPI support peripheral devices.**

This personal computer supports ACPI (one of the power control standards regarding energy-saving).

If your computer uses the operating system that supports ACPI, and when it uses peripheral devices, inquire the manufactures of peripheral devices about whether these devices support ACPI. The use of a peripheral device that does not support ACPI might cause malfunction of the personal computer and peripheral devices.

- **Preparing screwdrivers**

Phillips-head screwdrivers may be required for installing or removing peripheral devices.

To avoid damage to the head of the screw, use a screwdriver of an appropriate size.

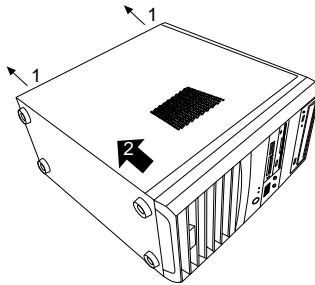
## ■ Opening the Casing

- Switch the PC off. Unplug the computer.

### CAUTION

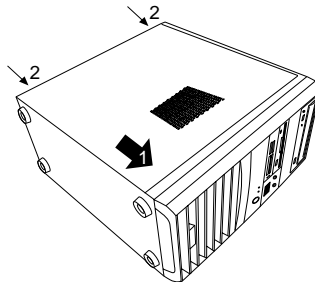
Please take note of the safety information in the “Important notes” chapter.  
Pull the power plug out of the mains outlet!

- If any cables connected to the PC are in the way, disconnect them from the PC
- Place the system unit in a convenient working position.
- Remove two screws (1) securing top cover.
- Push the top cover in the direction of the arrow (2).



## ■ Closing the casing

- Push the top cover down in the direction of the arrow (1) until it engages.
- Install the two screws (2) to secure the top cover.
- Return the PC to its original position.
- If you have disconnected cables, reconnect them to the connectors on the rear panel.



## ■ Installing the Expansion Card

### ⦿ POINT

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- Shut off your computer after the initial Windows setup before proceeding to installing expansion card.

### ⚠ WARNING

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#### ELECTRIC SHOCK



- Before installing or removing expansion cards, turn off the computer and connected devices, and unplug the computer. Otherwise, you might get an electric shock.

#### HIGH TEMPERATURE



- Before installing or removing expansion cards, allow for sufficient times after turning off and unplugging the computer. Otherwise, you might get burned.

#### ELECTRIC SHOCK



- When installing expansion cards, use Fujitsu's products. Otherwise, it might cause an electronic shock, fire, or failure.

### ⚠ CAUTION

---

#### FAILURE



- When installing or removing expansion cards, do not remove screws other than those specified. Removing the screws other than specified might cause injuries. Doing so might also cause damage to your computer.

#### INJURY



- Do not touch the printed board other than areas specified. Touching might cause injuries. Doing so might also cause damage to your computer.

#### INJURY



- Do not touch the metal fitting on the back side of the main unit of the personal computer of the mother board. Touching might cause injuries. Doing so might also cause damage to your computer.

## ■ Installing and removing an Expansion Card

### ⚠ CAUTION

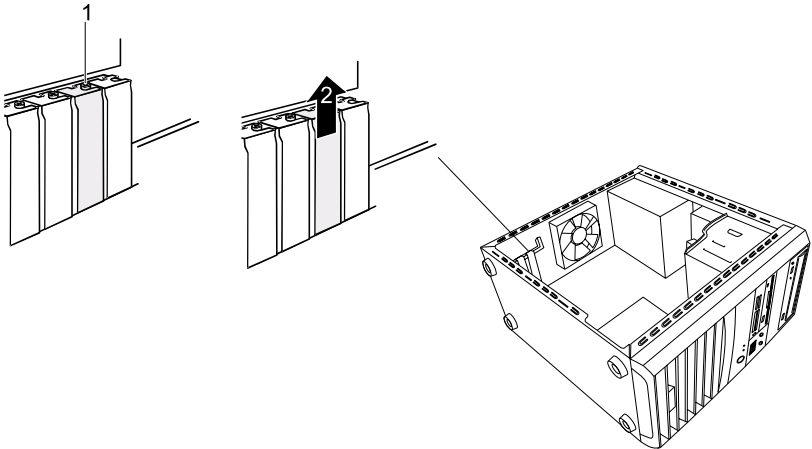
Please take note of the “Information about boards” chapter.

In the upper three slots you can install expansion cards with a length of up to 230 mm, and in the lower slot expansion cards with a length of up to 315 mm.

The number, position and arrangement of the expansion card slots on the mainboard can be found in the technical manual for the mainboard. Expansion cards may already be installed when the device is shipped.

#### □ Installing an expansion card

- 1 Open the casing (see “Opening the casing”).



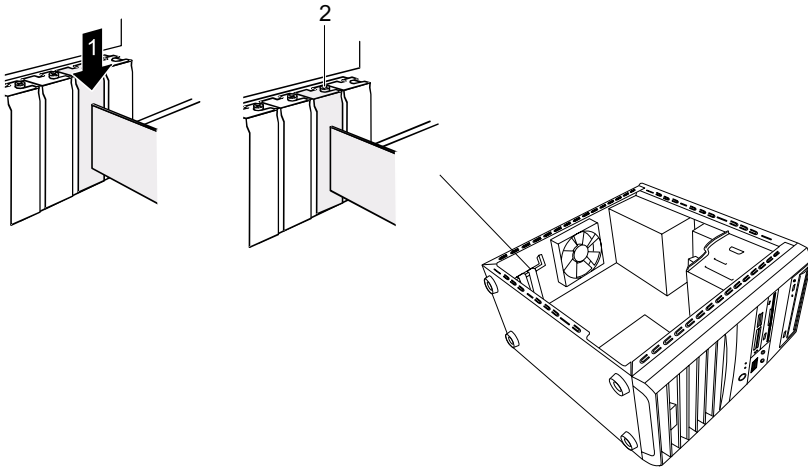
- 2 Remove the screw (1).
- 3 Remove the rear slot cover plate from the slot (2).



Do not dispose of the cover plate. For cooling, protection against fire and in order to comply with EMC regulations, you must refit the cover plate if you remove the expansion card. The top and the lowest slot are suitable for low-profile cards with an adapter.

- 4 Take the new expansion card out of its packaging.

**5 Make the required settings for the expansion card.**



**6 Push the board up to its slot (1).**

Ensure that the end of a long expansion card without angle bracket fits into the corresponding guide of the casing.

**7 Press the expansion card into the slot so that it engages.**

**8 Fasten the expansion card into place with the screw (2).**

**9 If necessary, connect the cables.**

**10 Close the casing (see “Closing the casing”).**



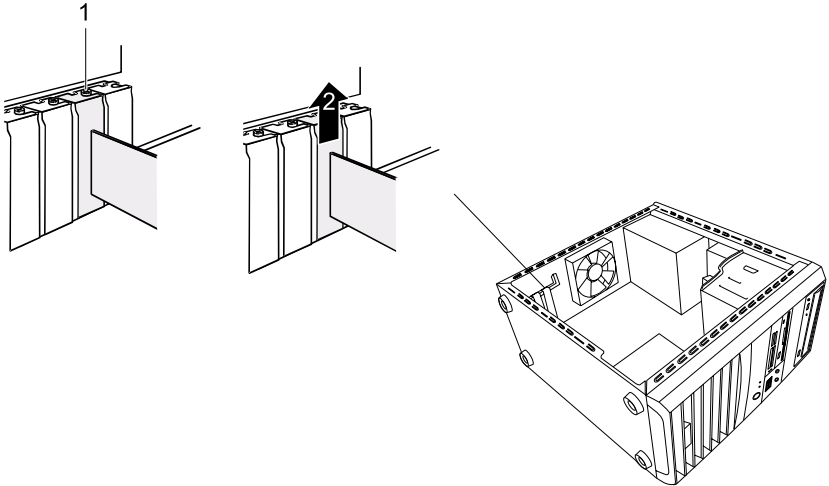
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If you have installed or removed a PCI card, please check the relevant PCI slot settings in the BIOS Setup. If necessary, change the settings. Further information is provided in the PCI card documentation.



❑ **Removing an expansion card**

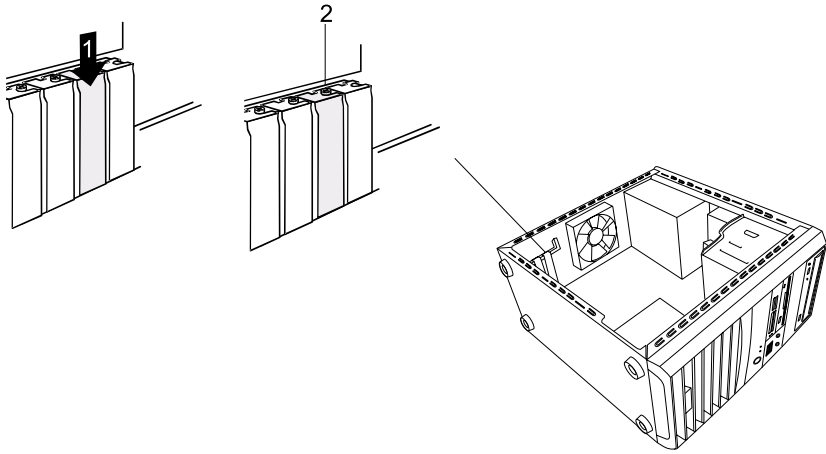
- 1 **Open the system unit (see “Opening the system unit”).**
- 2 **Disconnect the cables connected to the expansion card.**



- 3 **Remove the screw (1).**
- 4 **Remove the expansion card from the system unit (2).**
- 5 **Place the expansion card into appropriate packaging.**

**⚠ CAUTION**

To ensure proper cooling, fire protection and observation of the relevant EMC (electromagnetic compatibility) regulations, you must mount a rear slot cover plate.



- 6 Push the rear slot cover plate into the slot (1).
- 7 Fasten the rear slot cover plate with the screw (2).
- 8 Close the casing (see “Closing the casing”).

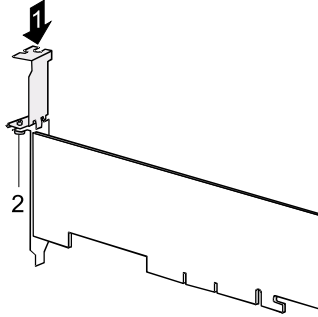
## CAUTION

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If you have installed or removed a PCI card, please check the relevant PCI slot settings in the BIOS Setup. If necessary, change the settings. Further information is provided in the PCI card documentation.

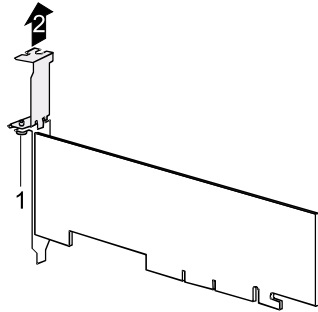
## ■ Low-Profile Expansion Cards

For units with a particularly low overall height, there are so-called low-profile expansion cards with a slot cover with a lower overall height to match the low-profile units. To also install these low-profile expansion cards in normal expansion card slots, you must mount a corresponding slot adapter beforehand.



### □ Mounting slot adapter

- Fit the slot adapter on the slot cover of the low-profile expansion card (1) and screw it on (2). Now you can install the low-profile board in a suitable slot like a normal expansion card (see the chapter “Installing expansion card”).



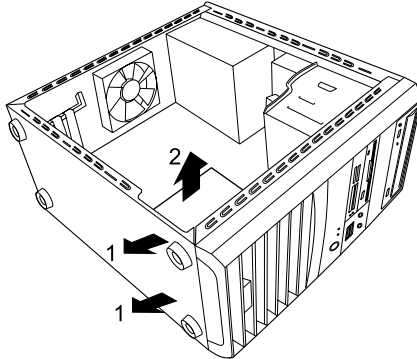
### □ Removing slot adapter

- Unscrew the screw (1) and remove the slot adapter (2).

## ■ Installing and Removing the Hard Disk Drives

- Open the casing (see “Opening the casing”).

### □ Removing a hard disk drive



- 1 Disconnect all cables connected to the drive (data cable, power supply cable).
- 2 Unscrew the two screws holding the hard disk on bottom casing in the direction of arrow (1) and pull the hard disk out of the case in the direction of the arrow (2).

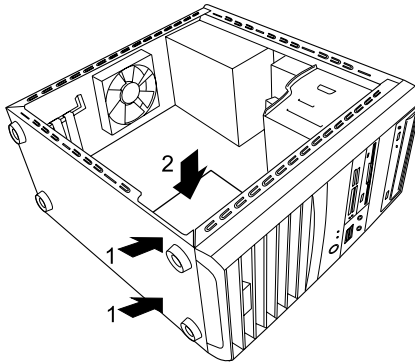


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It may be necessary to modify the entry for the drive in the BIOS Setup.

## □ Installing a hard disk drive

- 1 Take the new hard disk drive out of its packaging.
- 2 Make the required jumper settings (e.g. master/slave, cable select) on the drives. Please refer to the hard disk guide provided with the hard disk.
- 3 Slide the hard disk into the case in the direction of the arrow (2).
- 4 Secure the hard disk to the casing by fastening two screws from the bottom of the case in the direction of the arrow (1).
- 5 Connect the power and data cables to the hard disk drive.
- 6 Close the casing (see “Closing the casing”).



It may be necessary to modify the entry for the drive in the BIOS Setup.

# Electrical Data

	<b>ESPRIMO P5100</b>
Rated voltage range: (selectable)	200 V - 240 V
Frequency:	50 Hz - 60 Hz
Max. rated current • Casing	200 V - 240 V/ 4.6A
Dimensions Width/ depth/ height:	180 mm/ 370 mm/ 365 mm
Weight with the basic configuration	8.3kg in basic configuration
Environmental conditions Environment class 3K2 Environment class 2K2	DINIEC 721 part 3-3 DINIEC 721 part 3-2
Temperature: • Operating (3K2) • Transport (2K2)	10°C .... 35°C -10°C .... 60°C
Condensation in operating must be avoided.  Clearance required to ensure adequate ventilation: • left • front • rear	         min.200 mm min.200 mm min.200 mm

- \*1 : Some application may show the other name of this processor.
- \*2 : The capacity of the disk provided in this manual is calculated by that 1 MB=1000 x 1000 bytes and 1 GB=1000 x 1000 x 1000 bytes.  
With the calculation that 1 MB=1024 x 1024 bytes and 1 GB=1024 x 1024 x 1024 bytes, the capacity actually displayed on Windows becomes less than the disk capacity described in this manual.
- \*3 : There is no guarantee that your adapter can carry out communication normally with any other USB support peripheral devices.  
When USB 1.1 compliance peripheral devices are connected, they can be used by specifications for USB 1.1.  
The max rating of USB devices is 500mA per port. Please see the manual with the USB devices.
- \*4 : To reduce energy consumption when powering-off, switch the main switch to the "o" side, or unplug the power plug from the AC cable.
- \*5 : The power consumption is for system only, not including outlet devices.
- \*6 : Values differ depending on the device configuration you use.
- \*7 : Service Pack2 is applied at shipment.

## ◎ POINT

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- Note that, for improvement, specifications for this personal computer are subject to change without notice.

