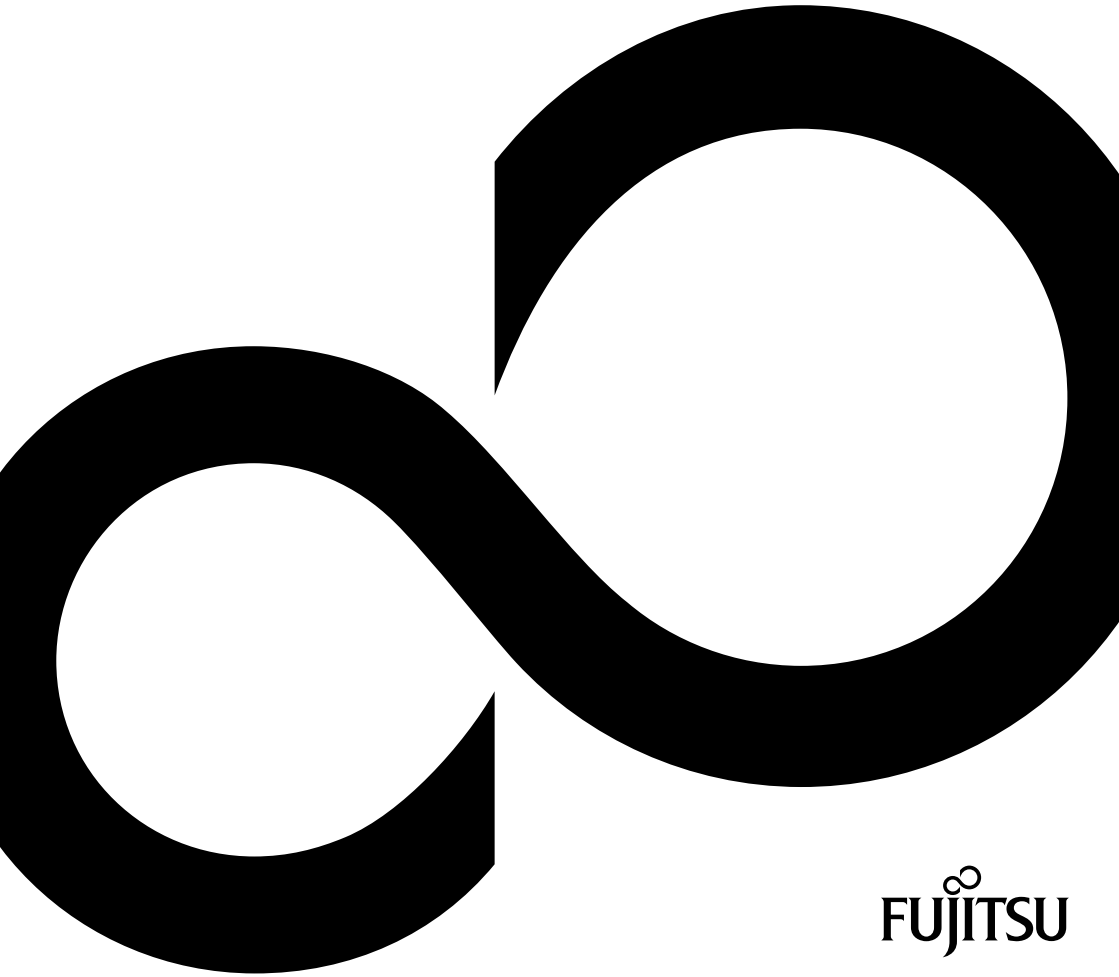
CELSIUS W380
CELSIUS W480



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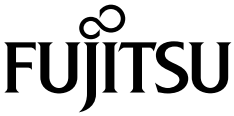

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CELSIUS W380
CELSIUS W480

Operating Manual

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Your CELSIUS ...

... is available with various configuration levels with different hardware and software. You can incorporate operable drives (for example DVD drive) as well as other boards.

This manual tells you how to put your device into operation and how to operate it in daily use. This manual applies for all configuration levels. 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.

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

Your device has a number of security features to ensure that no unauthorised persons can access your data. The security functions in the *BIOS Setup* also allow you to protect your data by means of passwords. In addition, systems with a SmartCard reader offer additional protection.

Under certain operating systems, *DeskUpdate* allows you to quickly and easily install the latest drivers and operating system upgrades with just a few mouse clicks. *DeskUpdate* is contained on the "Drivers & Utilities" CD/DVD.

Further information on this device is provided:

- in the poster "Getting Started"
- in the "Safety" manual
- in the "Warranty" manual
- in the operating manual for the monitor
- in the manual for the mainboard
- in your operating system documentation
- in the information files (e.g. **.PDF*, **.HTML*, **.DOC*, **.CHM*, **.TXT*, **.HLP*)

Some of the manuals listed can be found in electronic format on the "Drivers & Utilities" CD/DVD.

You can access and view the required information using the *Acrobat Reader* program, which is also on the CD/DVD. If necessary, you can also make a print version of the manual.

Notational conventions

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

This symbol indicates information which is important for your health or for preventing material damage.

This symbol indicates important information which is required to use the system properly.

► Texts which follow this symbol describe steps that must be performed in the order shown.

`This font` indicates screen outputs.

This font indicates programme names, commands, or menu items.

"Quotation marks" indicate names of chapters, data carriers, and terms that are being emphasised.

Important notes

In this chapter you will find information regarding safety which it is essential to take note of when working with your device.

Safety notes

Pay attention to the information provided in the "Safety" manual and in the following safety notes.

During installing and operating the device, please observe the instructions on environmental conditions in the "Technical data" chapter as well as the instructions in the "Preparing for use" chapter.

You may only operate the device, if the rated voltage for the device is set to the local mains voltage. Check the rated voltage set for this device (see "Preparing for use").

The main switch and the ON/OFF switch do not disconnect the device from the mains voltage. To completely disconnect the mains voltage, remove the power plug from the power socket.

Replace the lithium battery on the mainboard in accordance with the instructions in the "Replacing the lithium battery" chapter.

Transporting the device

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.

Cleaning the device

Turn off all power and equipment switches and disconnect the power plug from the mains outlet.

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.

Wipe the casing with a dry cloth. If particularly dirty, use a cloth that has been moistened in mild domestic detergent and then carefully wrung out. Use disinfectant wipes to clean the keyboard and the mouse.

Energy saving, disposal and recycling

Further information can be found on the "User Documentation" or "Drivers & Utilities" CD/DVD provided with your computer.

CE marking

The shipped version of this device complies with the requirements of the EC Guidelines 2004/108/EC "Electromagnetic compatibility" and 2006/95/EC "Low voltage directive".

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 Standard ICES-003 for digital apparatus. 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 Technology Solutions GmbH is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by Fujitsu Technology Solutions GmbH. The correction of interferences caused by such unauthorized 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 and ICES rules.

Preparing for use

Please observe 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

Only a few steps are necessary to put your new device into operation for the first time:

- – Select a location for device and set up device
- – Connect the monitor, mouse and keyboard
- – Check the voltage at the mains outlet and connect the device to an electrical outlet
- – Switch the device on

You will learn more about the individual steps in the following sections.

External devices

If you have received other devices in addition to your device (e.g. a printer or a modem), do not connect these until after the initial installation. The following sections contain a description of how to connect these external devices.

Drives and boards

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

Setting up the device

When installing your device, please read the recommendations and safety notes in the "Safety" manual.

Set up the device only in its correct orientation (vertical position).

We recommend that you place your device 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 feet will mark the surface they stand on.

Do not expose the device to extreme environmental conditions (see "Technical data"). Protect the device from dust, humidity, and heat.

Make sure that the device is adequately ventilated. In order to avoid overheating, do not cover the ventilation area of the monitor or the device.

Do not stack several devices on top of each other.

Depending on the location of your device, bothersome vibrations and noises may occur. To prevent this, a distance of at least 10 mm should be maintained from other devices on casing sides without ventilation surfaces. In addition, we recommend placing the device on support feet, as these buffer vibrations.

External devices, connecting

Read the documentation on the external device before connecting it.

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

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.

Connecting cables

- Turn off all power and equipment switches.
- Remove all power plugs from the mains outlets.
- Plug all cables into the device and peripherals. Please observe the safety notes provided in "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.
- Remove all power plugs from the mains outlets.
- Unplug all data communication cables from the utility sockets.
- Unplug all cables from the device and peripherals.

USB devices are hot-pluggable. This means you can connect and disconnect devices while your operating system is running.

Additional information can be found in the "Connecting external devices to the USB ports" section and in the documentation for the USB devices.

Ports

The connections are located on the front and back of the device. The ports available on your device depend on the configuration level you have selected. The standard ports are marked with the symbols shown below (or similar). Detailed information on the location of the connections is provided in the manual for the mainboard.

Keyboard port, purple

Serial port 1, teal or turquoise

Monitor port, blue

Headphones port, orange or light green

Audio output (Line out), light green

USB - Universal Serial Bus, black

PS/2 mouse port, green

DisplayPort

Parallel port/Printer, burgundy

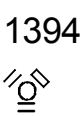
Serial port 2, teal or turquoise

Microphone jack (mono), pink

Audio input (Line in), light blue

SCSI connection

LAN port



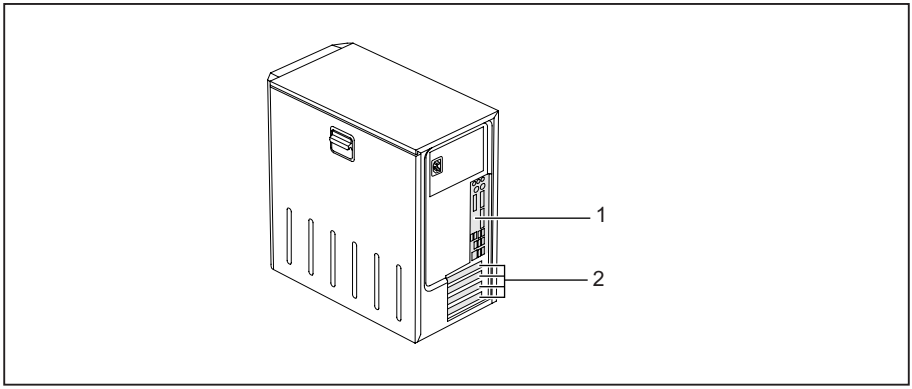
FireWire™, grey

DVI-I port

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

Connecting the monitor

Depending on the device configuration level, the monitor ports of the mainboard (1) may be covered and without function. In this case, only use the external monitor ports of the display adapter in one of the module slots (2).



1 = Monitor ports of the mainboard

2 = External monitor ports of the display adapter

► Follow the instructions contained in the monitor manual to prepare the monitor for operation (e.g. connecting cables).

► Connect the data cable to a suitable monitor port of the device (VGA, DVI-I, DisplayPort).

Connecting the mouse

Depending on the equipment level selected, your device will be supplied with a USB mouse or a PS/2 mouse.

Connecting a USB mouse

► Connect the USB mouse to one of the USB ports on the device.

Connecting a PS/2 mouse

► Connect the PS/2 mouse to the PS/2 mouse port of the device.

i If you do not attach a mouse at the PS/2 mouse port, you can disable the mouse controller in the *BIOS Setup* in order to free the IRQ12 for a different application.

Connecting the keyboard

Depending on the equipment level selected, your device will be supplied with a USB keyboard or a PS/2 keyboard.

Connecting a USB keyboard

Use the supplied keyboard cable only.

► Plug the rectangular connector of the keyboard cable into the rectangular socket on the underside of the keyboard.

► Insert the flat rectangular USB plug of the keyboard cable into a USB port of the device.

Connecting a PS/2 keyboard

Use the supplied keyboard cable only.

► Plug the rectangular connector of the keyboard cable into the rectangular socket on the underside of the keyboard.

► Plug the round plug of the keyboard cable into the keyboard port on the device.

Connecting external devices to the parallel or serial port

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

► Connect the data cable to the external device.

► Depending on the device, connect the data cable to the parallel port or the serial port.

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

Port settings

i You can change the port settings (e.g. address, interrupt) in the *BIOS Setup* (refer to the Mainboard manual or the "BIOS Setup" manual.

Device drivers

i The devices connected to the parallel or serial port require drivers. Your operating system already includes many drivers. If the required drive is missing, install it. Current drivers are usually available on the Internet or will be supplied on a data carrier.

Connecting external devices to the USB ports

You can connect a wide range of external devices to the USB ports (e.g. printer, scanner, modem or keyboard).

i USB devices are hot-pluggable. This means you can connect and disconnect devices while your operating system is running.

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

► Connect the data cable to the external device.

► Connect the data cable to a USB port.

► Read the documentation for the USB device to obtain full information about the installation of the device.

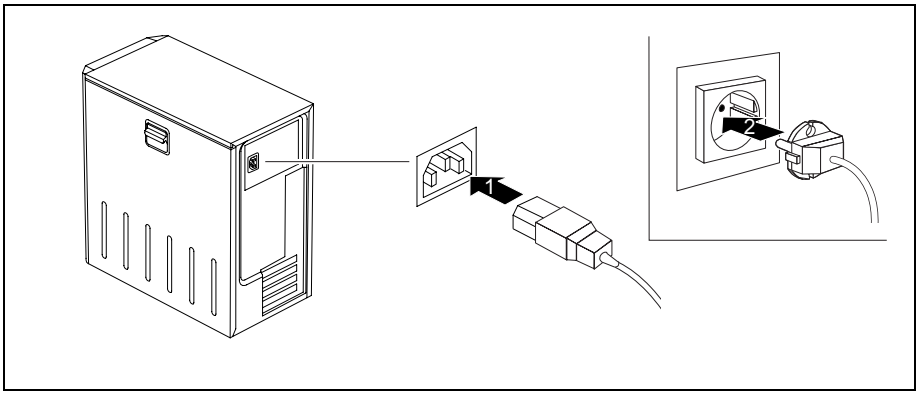
Device drivers

i The devices you connect to the USB ports usually require no driver of their own, as the required software is already included in the operating system. However, if the USB device requires its own software, please install it from the data carrier provided with the USB device.

To ensure USB 2.0, only a 3 m long cable may be used from the front USB port to the USB peripheral device.

Connecting the device to the mains voltage

The power supply automatically adjusts to the correct mains voltage.



- ► Connect the power cable to the device (1).
- ► Plug the power plug into a grounded mains outlet (2).

Switching on for the first time: installing the software

If the device is integrated into a network, the user and server details as well as the network protocol are required during the software installation. Contact your network administrator if you have any questions about these settings.

When you switch on the device for the first time, the supplied software is installed and configured. Plan a reasonable amount of time for this, as this process must not be interrupted.

Once the installation has been started the device must not be switched off, unless the installation has been completed.

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

The installation will otherwise not be carried out correctly and the contents of the hard disk must be completely restored.

You may need the licence number for Windows during the installation. The licence number is located on a sticker on your device.

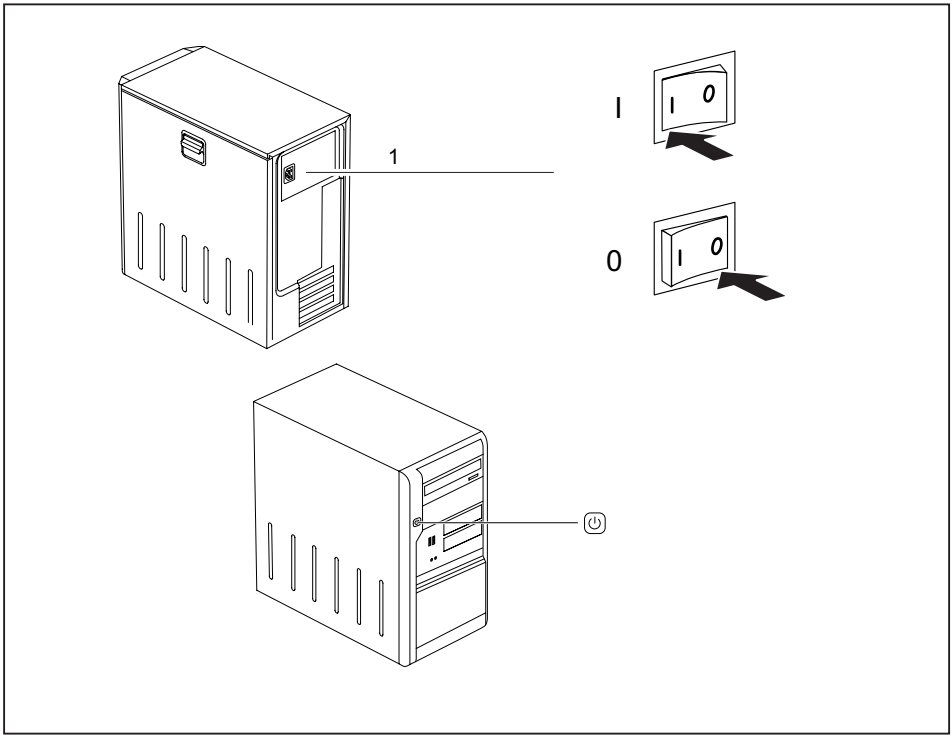
Switching on monitor and device

- ► Switch the monitor on (see the operating manual for the monitor).
- ► Switch the device on. To do this, follow the instructions below.

i

Depending on the version, the device may be equipped with a main power switch on the back of the device in addition to the ON/OFF button on the right hand side. As a result, there are different ways to switch on the two variants.

Switching on the device (with main power switch)



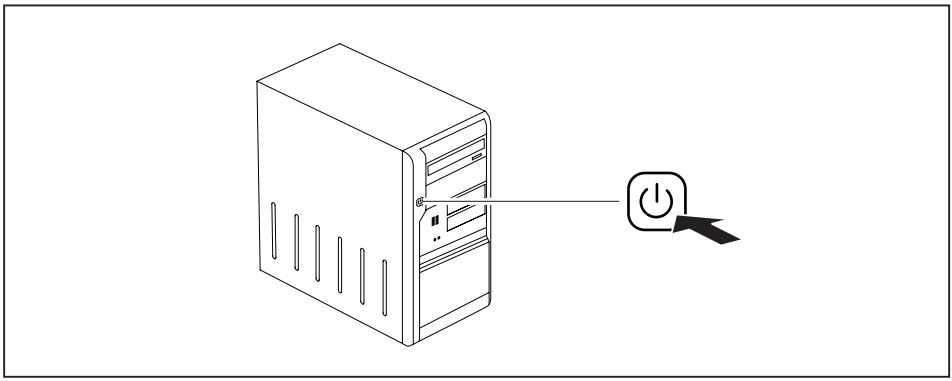
0 = Device is off

I = Device is ready-to-operate

- ► Switch the device on with the main power switch (1) on the back of the device.
- ► Press the ON/OFF switch (2) on the right hand side of the device.

The device starts.

Switching on the device (without main power switch)



► Press the ON/OFF switch on the right hand side of the device.

The device starts.

Installing the software

► During installation, follow the on-screen instructions.

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

i You will find further information about the system, drivers, utilities, and updates on the "Drivers & Utilities" CD/DVD supplied.

Operation

Switch the device on

► If necessary, switch the monitor on (see the operating manual for the monitor).

► Switch on the device with the main power switch located on the rear of the device (if present).

► Press the ON/OFF switch on the right hand side of the device.

The device starts.

Switching off the device

► Shut down the operating system properly. In Windows: via the *Start* menu and the *Exit function*.

► If the operating system does not automatically switch the device into energy-saving mode or switch it off, press the ON/OFF switch.

If the device is ready-to-use, the device consumes a minimum of energy.

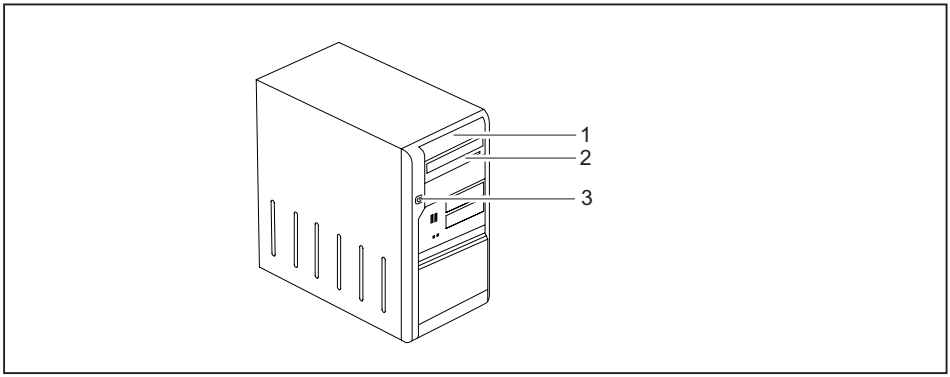
► Switch the device off at the main switch (if present). The device no longer uses any power.

The main switch and the ON/OFF switch do not disconnect the device from the mains voltage. To completely disconnect the mains voltage, remove the power plug from the socket.

► If necessary, switch the monitor off (see the operating manual for the monitor).

Indicators provided by the device

The indicators are on the front of the casing. Which indicators are available on your device depends on the configuration level you have selected.



1 = LCD
2 = Drive indicator, e.g. DVD
3 = Power-on indicator

LCD

The LCD lights up as soon as the workstation is switched on. Up to seven symbols are displayed, depending on the operating state.

Power on
appears on the LCD as soon as the workstation is switched on.

Standby/ Energy saving mode
appears on the LCD as soon as the workstation is in energy saving mode. The workstation can be switched on with the ON/OFF switch.

Hard disk
appears on the LCD as soon as the hard disk is accessed.

Error
appears on the LCD if there is a hardware error in the workstation or if a critical hardware state is reached (e.g. fan failure, high temperature). You can use *DeskView* to get detailed information on the problem that occurred. If in any doubt, consult your administrator.

LAN connection
appears on the LCD as soon as the workstation is connected to a LAN.

LAN access
appears on the LCD as soon as the workstation sends or receives data over the LAN.

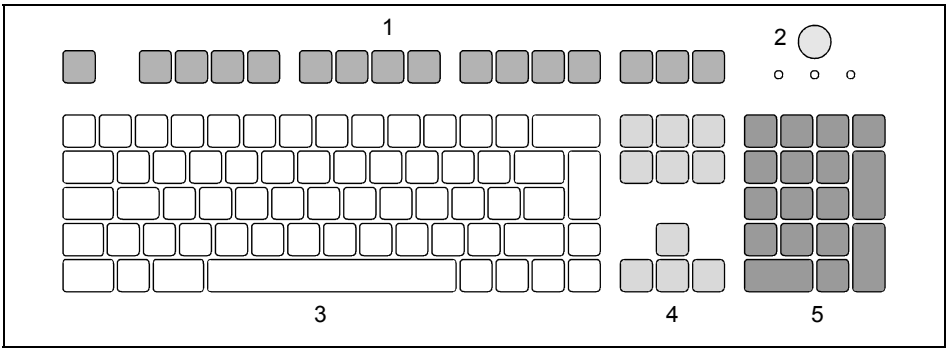
Message
when software that supports this function is used, the appearance of this symbol on the display indicates that an incoming message (mail, fax) is waiting.

Appears on the LCD when an incoming message (mail, fax) is waiting. This symbol only appears if you use software that supports this function.

Drive indicator, e.g. DVD

The indicator lights up when the CD-ROM or DVD drive is accessed. You may only remove the CD/DVD when the indicator is dark.

Keyboard



1 = Function keys
2 = Power button (optional)
3 = Alphanumeric keypad
4 = Cursor keys
5 = Numeric keypad (calculator keypad)

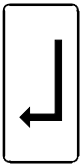
The illustrated keyboard is an example and may differ from the model you use.

Important keys and key combinations

The description of the following keys and key combinations applies to Microsoft operating systems. Details of other keys and key combinations can be found in the documentation of the relevant application programme.

ON/OFF switch (optional)
Depending on the setting in the *BIOS Setup*, the system can be switched on, off, or on and off with this button. Some operating systems allow you to configure additional functions of the ON/OFF switch in the Control Panel (e.g. standby mode, rest mode).

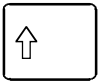
With some keyboards the ON/OFF switch can only be used with an ACPI (Advanced Configuration and Power Management Interface). Otherwise the key is inoperative. The mainboard must support this function.



Enter key
confirms the marked selection. The enter key is also referred to as the "Return" key.

Start key
calls up the Windows *Start* menu.

Menu key
invokes the menu for the marked item (Windows).



Shift key
enables upper-case letters and the upper key symbols to be used.

Alt Gr (e.g. German keyboard)
produces a character shown on the right-hand side of a key (e.g. the character @ on the key **Q**).

Num key
Switches the numeric key pad between number mode ("Num" indicator lights up) and editing mode ("Num" indicator does not light up).
When the Num Lock indicator is lit the digit and comma keys are active.
When the Num Lock indicator is not lit the cursor control functions are active in the Numeric keypad.

Ctrl key
starts key combination actions. The **Ctrl** key is also called "Control" or "Control key".

Windows security / Task Manager
This key combination starts the Windows security / Task Manager window.

Settings in BIOS Setup

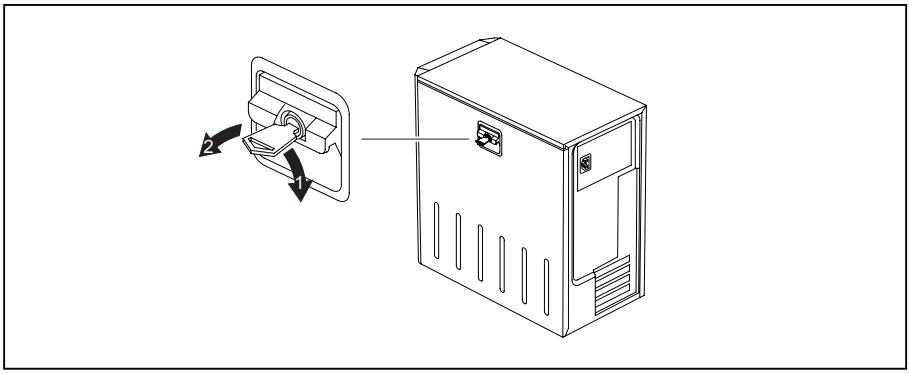
In *BIOS Setup* you can set the system functions and the hardware configuration of the device. When the PC is delivered, the default entries are valid (see "BIOS Setup" manual or manual for the mainboard). You can customise these settings to your requirements in the *BIOS Setup*.

Property and data protection

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

Mechanical casing lock (optional)

With the casing lock you can mechanically lock the casing to prohibit unauthorised persons from opening it. The keys can be found on the rear panel of your device.



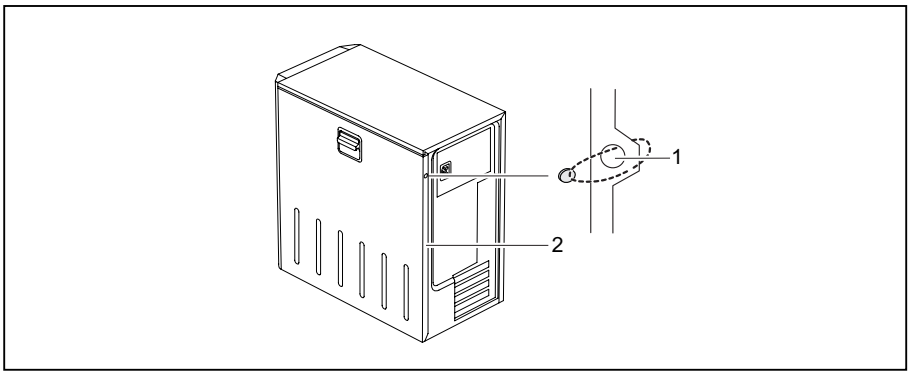
Locking the casing

► Turn the key in the direction of the arrow (1).

Unlocking the casing

► Turn the key in the direction of the arrow (2).

Anti-theft protection and lead-sealing



1 = Holes for padlock

2 = Device for "Kensington Lock"

Anti-theft protection

You can protect your device from theft.

- with the Kensington Lock device (2) and with a Kensington MicroSaver. Consult the manual for your Kensington Lock.
- with the holes (1), a padlock and a chain, which you have connected to a fixed object beforehand.

Lead-sealing

To prevent unauthorised persons from opening the casing, the casing can be sealed. To do this, feed the sealing chain through the holes (1) and seal the chain with the lead seal.

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 access to the *BIOS Setup.*
- Preventing unauthorised system access
- Preventing unauthorised access to the settings of boards with their own BIOS
- Preventing system booting from the diskette drive
- Virus warnings, activating
- Diskettes, preventing unauthorised writing of
- BIOS: Protecting BIOS from overwriting
- Protecting the device from being switched on by an external device

You can also combine these functions.

You will find a detailed description of the *Security* menus and how to assign passwords in the manual for the mainboard or in the "BIOS Setup" manual.

Access authorization via SmartCard

In systems equipped with a SmartCard reader, access can be restricted to those users who have a corresponding SmartCard.

Access protection with SystemLock

With *SystemLock* you can protect your system from unauthorised booting. Then a system can only be booted when the user inserts a valid SmartCard in the SmartCard reader and enters his/her personal code number (PIN). To use *SystemLock* you require the following components:

- External or internal SmartCard reader
- *SystemLock* installed (see "BIOS Setup" manual)
- SmartCard

SystemLock controls access to your device. When a SmartCard is initialised, permissions are assigned for system access (system, setup, system+setup, admin). You can configure several SmartCards for one system and initialise them with different permissions. In addition you can protect access to your hard disk.

In this way users can be divided into user groups. Users of a user group use SmartCards with the same permissions.

More information on SystemLock

If you also want to use other security software in addition to *SystemLock* (e.g. *SMARTY*), please read the documentation on your security software beforehand.

SystemLock permissions

You can initialise a SmartCard with one of the following permissions:

System	The system starts following entry of the user PIN. You can change the user PIN.
Setup	You can open and change the *BIOS Setup* and change the user PIN.
System+Setup	The system starts following entry of the user PIN. You can open and change the *BIOS Setup* and change the user PIN.
Admin	The system starts following entry of the user PIN. You can change the user PIN an the administrator PIN, unlock locked SmartCards, open and change the *BIOS Setup* and generate additional SmartCards for this system.

For instructions on how to install and operate SystemLock, and how to initialise SmartCards, see the "BIOS Setup" manual.

SmartCard reader: operating

► Connect the external SmartCard reader to your system as described in the instructions for the SmartCard reader.

► After the device is switched on, you will be prompted to insert your SmartCard.

Troubleshooting and tips

Refer to the safety notes in the "Safety" manual and in the "Preparing for use" chapter when connecting or disconnecting cables.

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

- 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 device off.

► Make a note of the steps and the circumstances that led to the fault.

► Make a note of any error messages displayed.

► Note the ID number of your device. The ID number can be found on the type rating plate on the back of the casing.

► Contact your sales outlet or our customer service centre.

Help if problems occur

Should you ever have a problem with your computer that you cannot solve yourself, in many cases you can solve it quickly using the *SystemDiagnostics* program pre-installed on your computer.

► To start the *SystemDiagnostics* program, click *Start* - *Programs* - *Fujitsu* - *SystemDiagnostics*.

► If a problem is detected during the test run, the *SystemDiagnostics* program outputs a code (e.g. DIFS code YXXX123456789123).

► Take a note of this DIFS code and the ID number of your device. The ID number can be found on the type rating plate on the back of the casing.

► If you still need assistance resolving the problem, contact the relevant Service Desk for your country (see the Service Desk List or go to *http://ts.fujitsu.com/support*). Have the ID/serial No. of your system and the DIFS code ready.

Troubleshooting

The device cannot be switched off with the ON/OFF switch.

Cause	Troubleshooting
The device has not been switched on with the ON/OFF switch.	► Press the ON/OFF switch again.
System crash	► Press the ON/OFF switch for at least 4 seconds, until the device switches off. The operating system is not shut-down properly in the process. Error messages are therefore possible the next time the system is booted.

Monitor remains blank

Cause	Troubleshooting
Monitor is switched off.	► Switch your monitor on.
Power saving has been activated (monitor is blank).	► Press any key on the keyboard. or ► Deactivate the screen saver. If necessary, enter the appropriate password.
Brightness controls set to dark.	► Adjust the brightness control. For detailed information, please refer to the operating manual supplied with your monitor.
Power cable is not connected.	► Switch off the monitor and the device. ► Check that the monitor power cable is properly connected to the monitor and to a grounded mains outlet or to the monitor socket of the device. ► Check that the device power cable is properly plugged into the device and a grounded mains outlet. ► Switch on the monitor and the device.
Monitor cable is not connected.	► Switch off the monitor and the device. ► Check that the monitor cable is properly connected to the device and monitor. ► Switch on the monitor and the device.

Cause	Troubleshooting
Wrong monitor has been set under Windows 2000	► Restart the device. ► If the message *Starting Windows* appears, press function key **F8** The *Windows 2000 Advanced Options Menu* appears. ► 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 - Settings*.
Wrong monitor has been set under Window XP	► Restart the device. ► 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 connected monitor as described in the operating manual of the monitor by selecting *Start - Settings - Control Panel - Display* and then the *Appearance*, *Themes*, *Settings* tabs.
Wrong monitor has been set under Window 7	► Restart the device. ► 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*. ► Select *Start - Control Panel - Appearance and Themes - Display* to set the correct values for the connected monitor, as explained in the monitor instructions.
The wrong RAM memory modules have been inserted.	► See the manual for the mainboard for information on which memory modules can be used.

No mouse pointer displayed on the screen

Cause	Troubleshooting
The mouse is not correctly connected.	► Shut down the operating system properly. ► Switch the device 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 device on.
The mouse controller is not enabled.	The mouse controller must be enabled if you use a PS/2 mouse on the PS/2 mouse port . ► 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 programme 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

Cause	Troubleshooting
The write protection of the floppy disk or the floppy disk drive is activated.	► Check that the write protection of the floppy disk or the floppy disk drive is activated (refer to the "BIOS Setup" manual and if necessary to the manual for the mainboard).
The floppy disk drive controller is not enabled.	► Check the relevant entries for floppy disk drive in the *Main* menu of the *BIOS Setup*. ► Check that the floppy disk drive controller is enabled (refer also to the manual for the mainboard or in the "BIOS Setup" manual).
The floppy disk drive is not connected.	► Check that the cables of the floppy disk drive are properly connected (see "Installing and removing the floppy disk drive").

Time and/or date is not correct

Cause	Troubleshooting
Time and date are incorrect.	► Set the correct time and date within the operating system you are using. or ► Set the correct time and/or date in the *BIOS Setup*.
The on-board backup battery in the device is flat.	► If the time and date are repeatedly wrong when you switch on your device, replace the lithium battery (see "Replacing the lithium battery").

Error messages on the screen

Error messages and their explanation are contained:

- in the manual for the mainboard
- in the documentation for the programmes used

Installing new software

When installing programmes or drivers, important files may be overwritten and modified. You should backup your hard disk prior to installation so that you can still access the original data in the event of any problems following installation.

Hard disk contents, restoring

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

Tips

Topic	Tip
Out of system resources	If you have too many applications running at once, you may experience problems due to a lack of system resources. ► Close unnecessary applications. or ► Run the applications in a different order.
Other manuals	Other manuals are provided as PDF files on the "Drivers & Utilities" CD/DVD.

System upgrades

As the device has to be shut down in order to install/deinstall system hardware components, it is a good idea to print out the relevant sections of this chapter.

It may be necessary to update the BIOS when carrying out a system expansion or hardware upgrade. Additional information is contained in the "BIOS Setup" manual or possibly in the manual for the mainboard.

When installing components that become very hot, make sure that the maximum permissible temperature is not exceeded.

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

Remove the power plug before opening the device.

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

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

Refer to the 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 boards or components on boards.

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 straight.

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 always discharge static build up (e.g. by touching a grounded object) before working.
- The equipment and tools you use must be free of static charges.
- Always hold boards with ESDs by their edges.
- Never touch pins or conductors on boards fitted with ESDs.

Opening the casing

► Switch the device off. The device must not be in the energy-saving mode!

Please observe the safety information in the "Important notes" chapter.

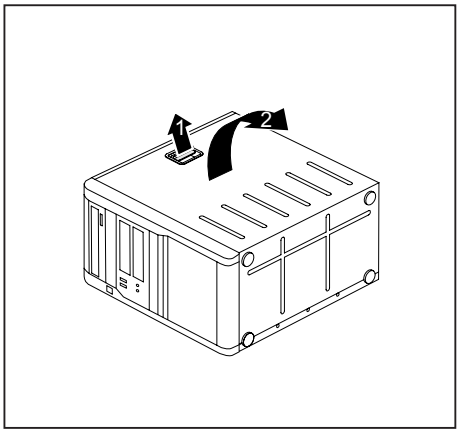
Disconnect the mains plug from the mains outlet.

Only insert the power plug after you have closed the casing.

► On devices with a casing lock: Unlock the casing.

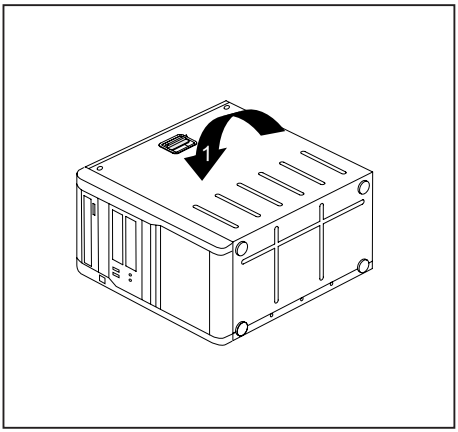
► Remove any plugged-in wires which are in the way.

► Lay the device on its side.



► Pull the locking device (1) and swivel the side part in the direction of the arrow (2).

Closing the casing



► Insert the side part in the guide rail on the lower part of the casing.

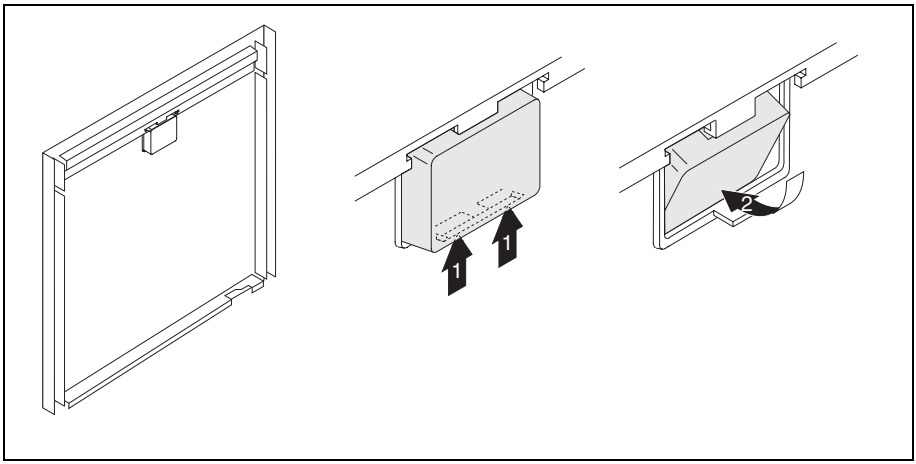
► Swivel the side part in the direction of the arrow (1) until it engages.

► On devices with a casing lock: Lock the casing.

► Reconnect the cables that you disconnected before.

Installing the locking device with casing lock

Removing the locking device



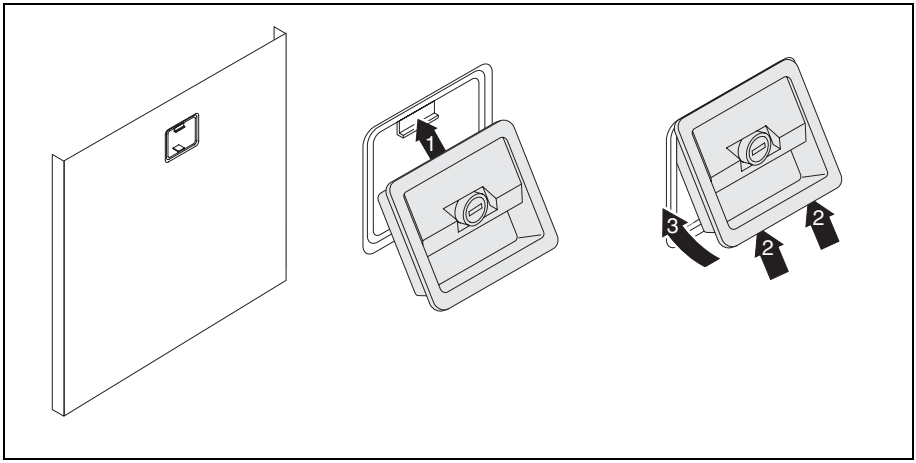
► Open the casing (see "Opening the casing").

► Place the removed side part on a flat surface with the inside facing upwards.

► Press the catch in the direction of the arrow (1).

► Carefully thread the locking device out of the side part in the direction of the arrow (2).

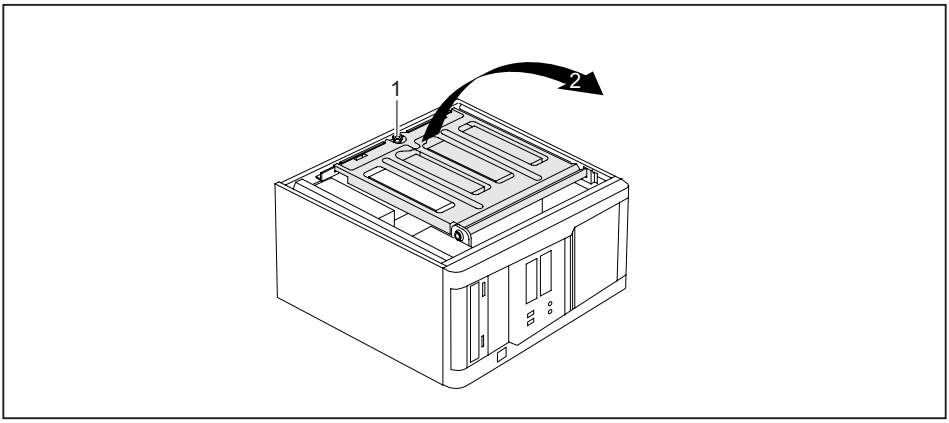
Installing the locking device with casing lock



- ► Turn the removed side part over (so that the outside faces upwards).
- ► Guide the locking device with the casing lock in the direction of the arrow (1) into the side part.
- ► Press the catch in the direction of the arrow (2) and, at the same time, press the locking device into the side part (3) until the catch engages.

Opening the drive cage

► Open the casing (see "Opening the casing").

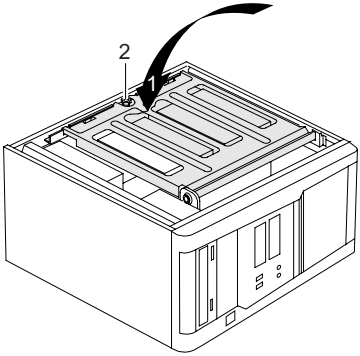


► Unscrew the knurled screw (1).

► Fold open the drive cage (2).

i Thanks to the integrated torque controller the drive cage will stop in any position.

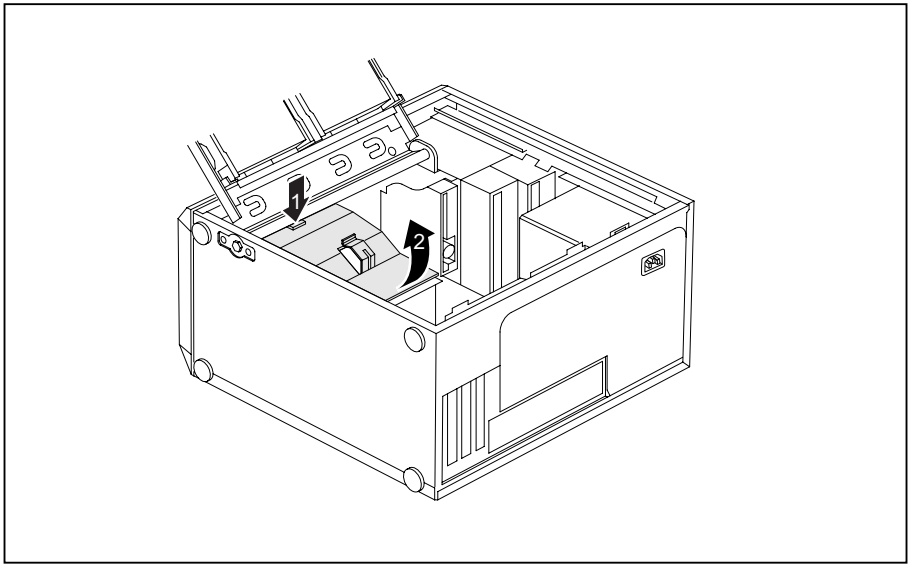
Closing the drive cage



- ► Fold down the drive cage (1). Be careful that no wires become trapped.
- ► Secure the drive cage with the knurled screw (2).
- ► Close the casing (see "Closing the casing").

Removing ventilation duct

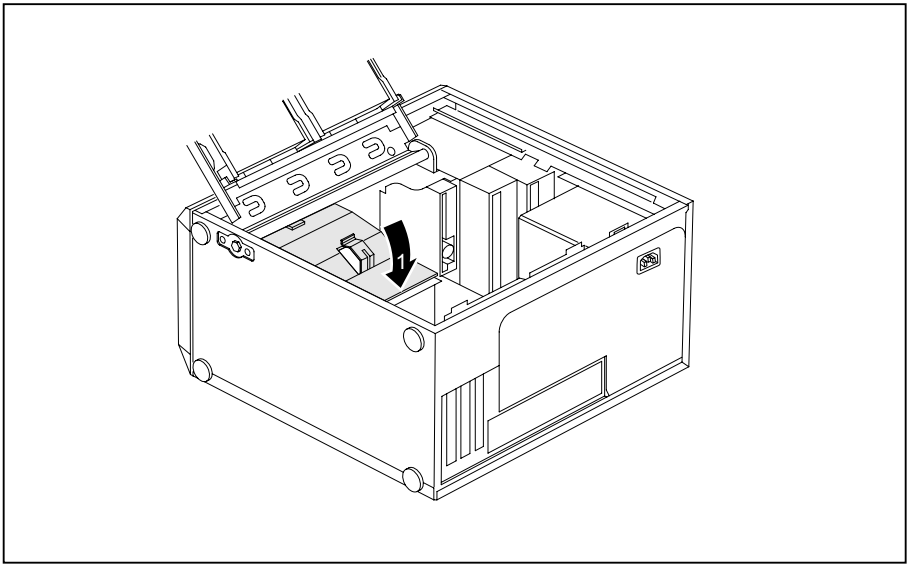
i When removing the ventilation duct, be careful not to damage the processor cooler on the mainboard.



- ► Open the casing (see "Opening the casing").
- ► Fold up the drive cage (see "Opening the drive cage").
- ► Unhook the wires from the holder on the ventilation duct.
- ► Remove any plugged-in wires which are in the way.
- ► Unlock the ventilation duct by pressing locking hooks in the direction of the arrow (1).
- ► Keep pressing the locking hook and pull the ventilation duct in the direction of the arrow (2) out from the casing.

Installing ventilation duct

i When installing the ventilation duct, be careful not to damage the processor cooler on the mainboard.



- ► Insert the latches on the underside of the ventilation duct into the corresponding slots in the casing.
- ► Press the ventilation duct into the casing in the direction of the arrow (1) so that the locking hook is felt to engage.
- ► Reconnect the cables that you disconnected before.
- ► Hook the wires into the holder on the ventilation duct.
- ► Fold down the drive cage (see "Closing the drive cage").
- ► Close the casing (see "Closing the casing").

Installing and removing a board

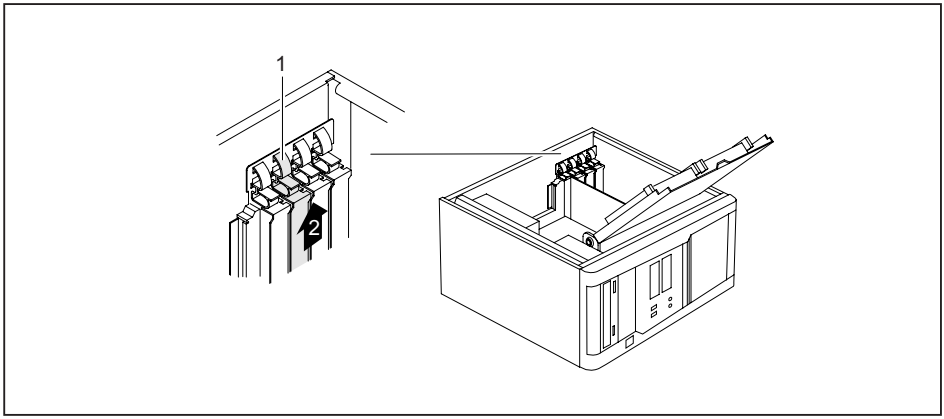
Please take note of the section "Information about boards".

When installing new boards, make sure that they do not interfere with existing boards.

The number, position and arrangement of the board slots on the mainboard can be found in the manual for the mainboard. Boards may already be installed on shipment.

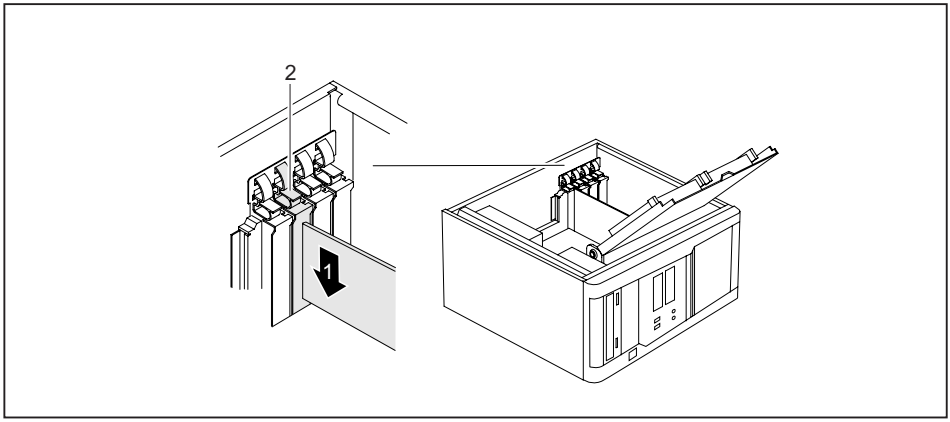
Installing a board

- ► Open the casing (see "Opening the casing").
- ► Fold up the drive cage (see "Opening the drive cage").



- ► Press on the curved part of the retaining clip (1).
- ► Pull the slot cover out of the slot in the direction of the arrow (2).

Do not throw away the slot cover. For cooling, protection against fire and in order to comply with EMC regulations, you must refit the slot cover if you remove the board.



- ► Push the board into the slot (1).
- ► Press on the retaining clip until it noticeable engages (2).
- ► If necessary also secure the board with a screw.
- ► If necessary, connect the cables to the board.
- ► Fold down the drive cage (see "Closing the drive cage").
- ► Close the casing (see "Closing the casing").

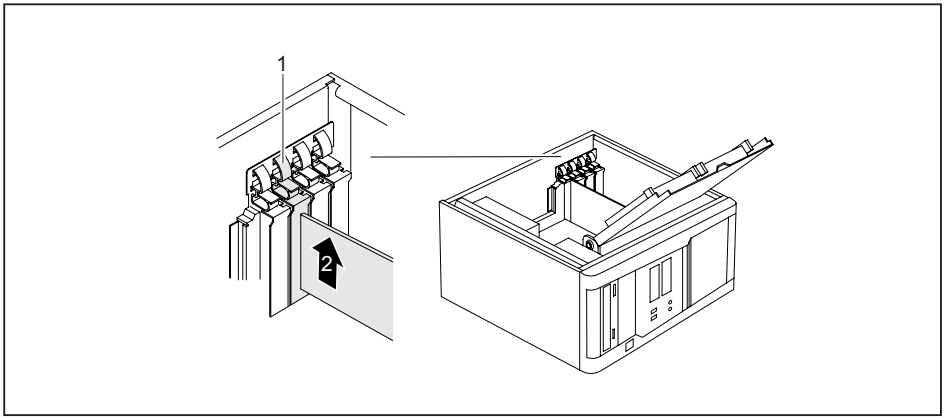
i

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

Information about the installation of low profile boards can be found in the section "Low-profile boards".

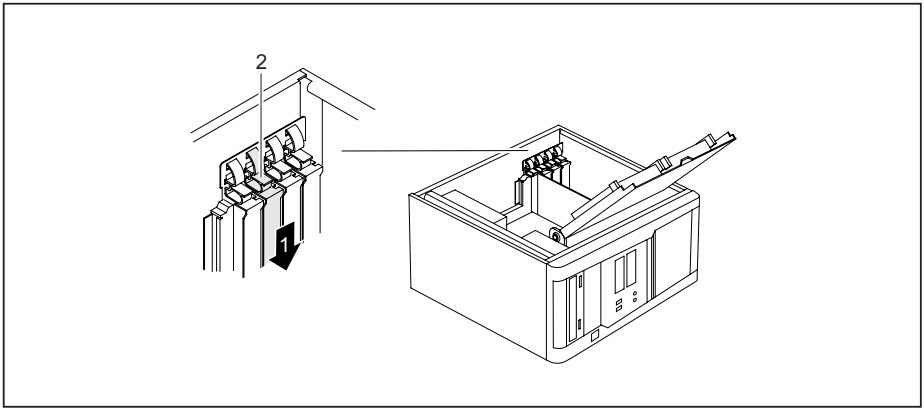
Removing boards

- ► Open the casing (see "Opening the casing").
- ► Fold up the drive cage (see "Opening the drive cage").
- ► Disconnect the cables connected to the board.



- ► Press on the curved part of the retaining clip (1).
- ► If you have also secured the board with an additional screw, remove the screw now.
- ► Pull the board out of the slot in the direction of the arrow (2).
- ► Place the board into appropriate packaging.

For cooling, protection against fire, and in order to comply with EMC (electromagnetic compatibility) regulations, you must refit the slot cover.



- ► Push the slot cover into the slot (1).

- ► Press on the retaining clip until it noticeable engages (2).
- ► Fold down the drive cage (see "Closing the drive cage").
- ► Close the casing (see "Closing the casing").

i

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

Low-profile boards

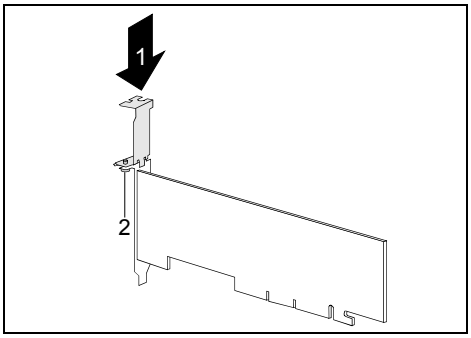
You will need to fit a corresponding slot adapter first before you can install a low-profile board in a normal board slot.

Two-piece board slot covers are fitted to the slots intended for low-profile boards. The two pieces are connected together with a screw.

► Remove the desired board slot cover and undo the screw.

Do not dispose of the slot cover. If you remove the board again, you must reinstall the slot cover (cooling, fire protection or EMC regulations to be complied with).

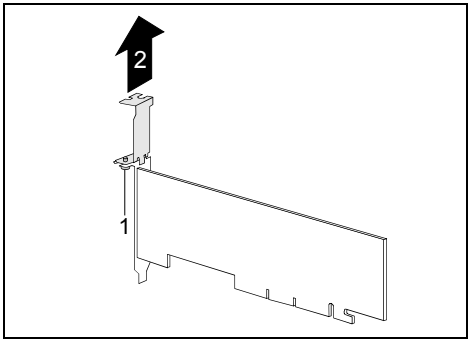
Mounting slot adapter



► Fit the slot adapter on the slot cover of the low-profile board (1) and screw it on (2).

Now you can install the low-profile board in a suitable slot like a normal board (see "Installing a board").

Removing slot adapter



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

Installing and removing drives

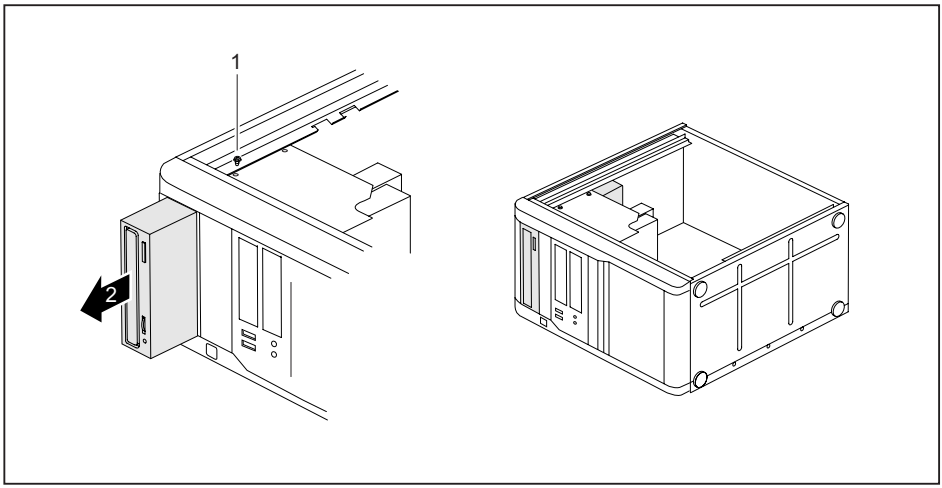
The PC casing can accommodate a total of five drives:

- four accessible drives
  (two 5 1/4 inch drives and two 3 1/2 inch drives)
- two non-accessible drives
  (both 3 1/2 inch drives with half installation height)

"Accessible drives" are e.g. DVD or CD ROM drives, into which a data carrier can be inserted from outside. Non-accessible drives are e.g. hard disk drives.

Removing an accessible drive

► Open the casing (see "Opening the casing").



► Pull the data and the power supply connectors from the drive.

► Press on the retaining clip (1) and, at the same time, slide it down slightly (2).

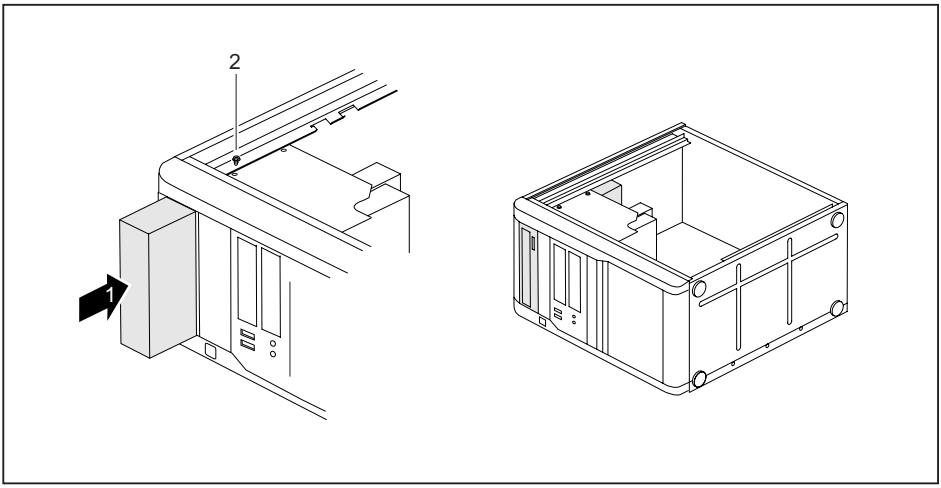
► Open the retaining clip.

► Slide the drive out of the bay in the direction of the arrow (3) from behind.

The drive now protrudes slightly out of the casing.

► Pull the drive out of the casing in the direction of the arrow (3).

► If necessary, make the required settings on the remaining drives.



- ► If you are not installing a new drive, slide the empty slide-in module as far as it will go into the casing (1).
- ► Press on the retaining clip (2) and, at the same time, slide it up slightly.
- ► Close the casing (see "Closing the casing").

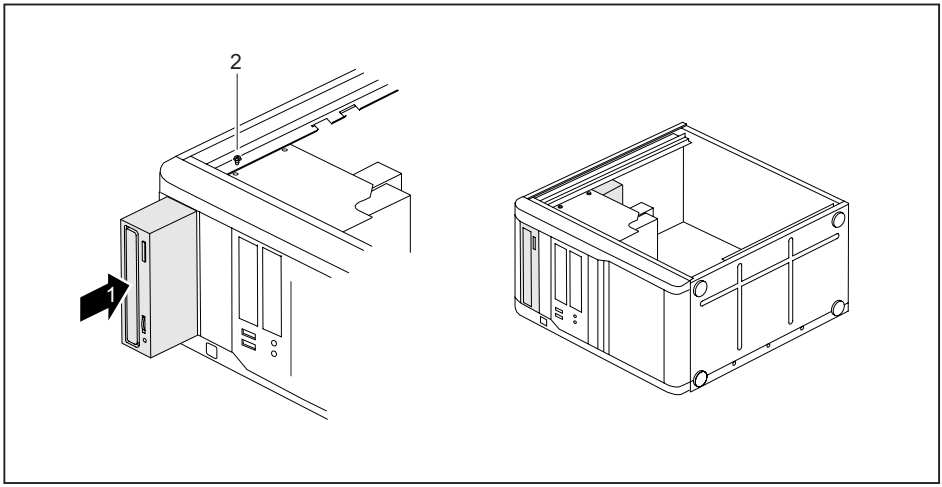
i It may be necessary to modify the entry for the drive in the *BIOS Setup*.

Installing an accessible drive

- ► Open the casing (see "Opening the casing").
- ► If a slide-in module is fitted, remove this first. To do this, proceed in the same way as when removing an accessible drive (see "Removing an accessible drive").

Do not dispose of the empty slide-in module. For cooling, protection against fire, and in order to comply with EMC regulations, you must refit the empty slide-in module if you remove the drive again later.

- ► Adjust the required settings on the drive (if necessary, on already-installed drives as well).

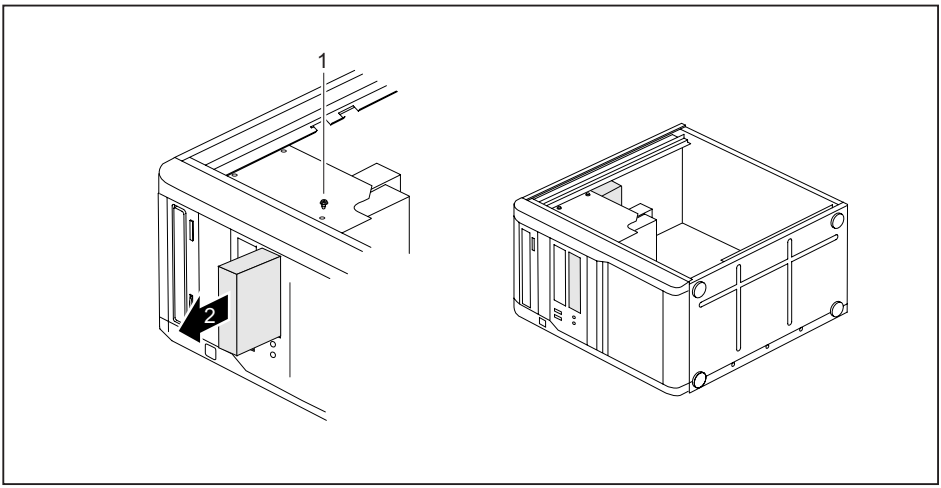


- ► Slide the accessible drive into the casing as far as the stop (1).
- ► Plug the data and the power supply connectors into the drive. Make sure the polarity is correct.
- ► Press on the retaining clip (2) and, at the same time, slide it up slightly.
- ► Close the casing (see "Closing the casing").

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

Installing and removing the floppy disk drive

► Open the casing (see "Opening the casing").



► Remove the data and power supply connectors from the floppy disk drive.

► Remove the screws (1) on the right side of the floppy disk drive.

► Slide the floppy disk drive out of the casing in the direction of the arrow (2).

► Slide the new floppy disk drive into the case opposite the direction of the arrow (2).

► Fasten the floppy disk drive with the screws (1).

► Fit the data and power supply connectors to the floppy disk drive. Make sure the polarity is correct.

► Close the casing (see "Closing the casing").

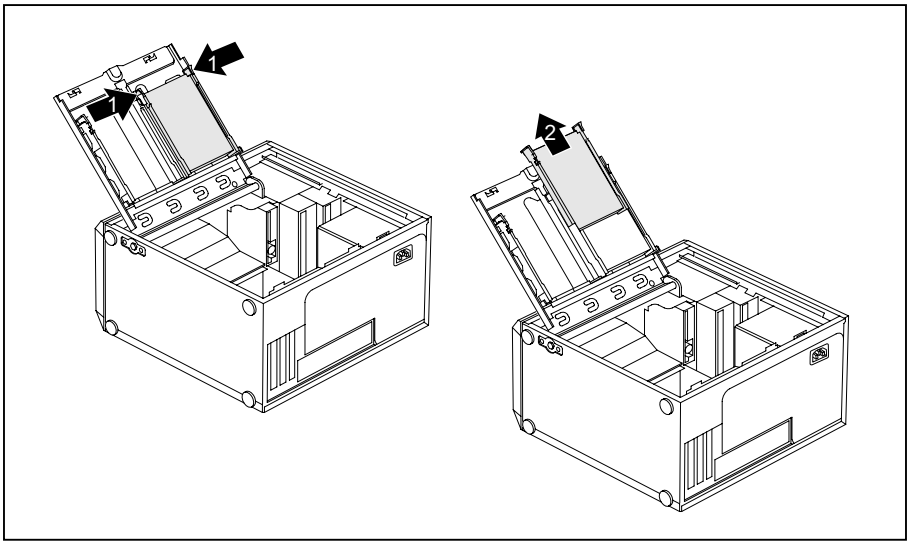
i It may be necessary to modify the entry for the drive in the *BIOS Setup*.

Installing and removing the hard disk drive

Removing a hard disk drive

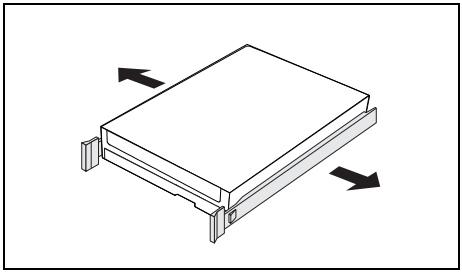
► Open the casing (see "Opening the casing").

► Fold up the drive cage (see "Opening the drive cage").



► Slightly press together the EasyChange rails mounted on the hard disk (1) and pull the hard disk drive out of the drive cage in the direction of the arrow (2).

► Disconnect all cables connected to the drive (data cable, power supply cable).



► Pull the EasyChange rails off the hard disk drive.

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

► Fold down the drive cage (see "Closing the drive cage").

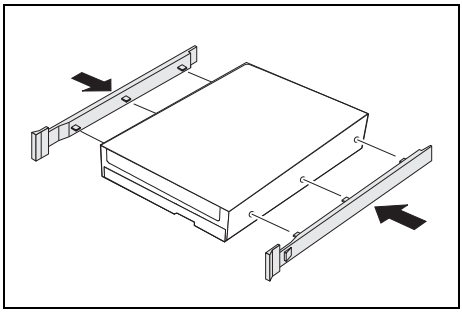
► Close the casing (see "Closing the casing").

Hard disk drive: installing

► Open the casing (see "**Opening the casing**").

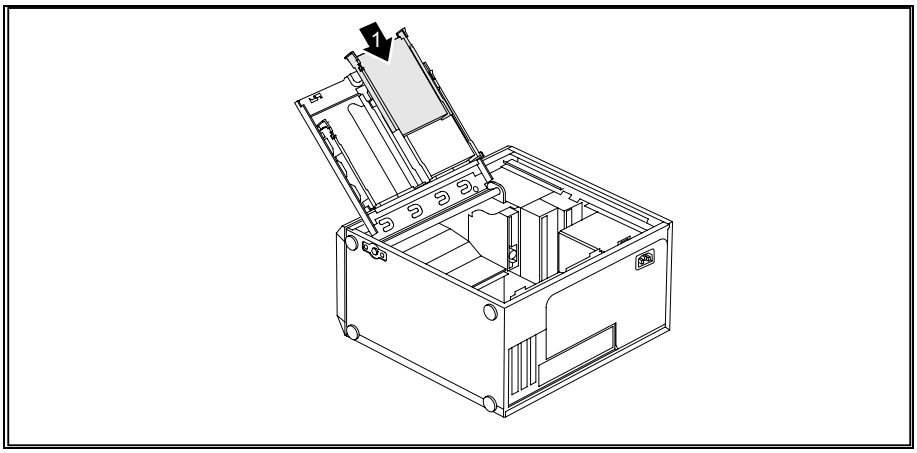
► Fold up the drive cage (see "Opening the drive cage").

i EasyChange rails for any additional hard disk drives are mounted on the drive cage.



► Secure the EasyChange rails on the side of the hard disk by inserting the upper pins of the EasyChange rail in the corresponding holes of the hard disk.

► Connect the cables to the hard disk drive.



- ► Slide the hard disk drive with the EasyChange rails in the direction of the arrow (1) into the drive cage. Check that the component side of the hard disk drive faces inwards towards the casing.
- ► Fold down the drive cage (see "Closing the drive cage").
- ► Close the casing (see "Closing the casing").

i

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

Mainboard expansions

Details on how you can upgrade the main memory or the processor of your device are provided in the manual for the mainboard.

Main memory, upgrading

- ► Open the casing (see "Opening the casing").
- ► Fold up the drive cage (see "Opening the drive cage").
- ► Upgrade the memory as it is described in the manual for the mainboard.
- ► Fold down the drive cage (see "Closing the drive cage").
- ► Close the casing (see "Closing the casing").

Processor, replacing

- ► Open the casing (see "Opening the casing").
- ► Fold up the drive cage (see "Opening the drive cage").
- ► Remove the ventilation duct (see "Removing ventilation duct").
- ► Replace the processor as it is described in the manual for the mainboard.
- ► Install the ventilation duct (see "Installing ventilation duct").
- ► Fold down the drive cage (see "Closing the drive cage").
- ► Close the casing (see "Closing the casing").

Replacing the lithium battery

In order to permanently save the system information, a lithium battery is installed to provide the CMOS-memory with a current. A corresponding error message notifies the user when the charge is too low or the battery is empty. The lithium battery must then be replaced.

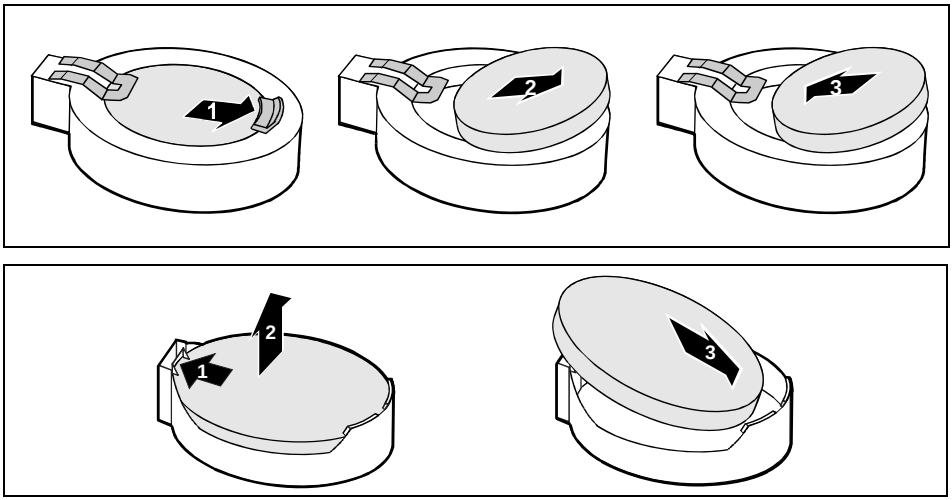
Incorrect replacement of the lithium battery may lead to a risk of explosion!

The lithium battery may be replaced only with an identical battery or with a type recommended by the manufacturer.

Do not throw lithium batteries into the household waste. They must be disposed of in accordance with local regulations concerning special waste.

Make sure that you observe the correct polarity when replacing the lithium battery. The plus pole must be on the top!

The lithium battery holder exists in different designs that function in the same way.



► Press the catch in the direction of the arrow (1).

The battery will slightly jump out of the holder.

► Remove the battery (2).

► Push the new lithium battery of the identical type into the holder (3) and press it downward until it engages.

Technical data

Electrical data	
Regulations complied with:	IEC 60950-1, EN 60950-1, UL 60950 CSA 22.2 No.60950-1
Protection class:	I
Rated voltage range:	100 V – 240 V
Frequency:	50 Hz – 60 Hz
Max. rated current CELSIUS W380:	100 V – 240 V / 5.0 A – 2.5 A
Max. rated current CELSIUS W480:	100 V – 240 V / 6.0 A – 3.0 A
Dimensions	
Width/depth/height:	203 mm/429 mm/446 mm
Weight	
In basic configuration:	approx. 11 kg
Environmental conditions	
Environment class (3K2) Environment class (2K2)	DIN IEC 721 part 3-3 DIN IEC 721 part 3-2
Temperature	
Operating (3K2)	15 °C .... 35 °C
Transport (2K2)	–25 °C .... 60 °C
Condensation must be avoided during operation.	
Clearance required to ensure adequate ventilation:	
Without air vents With air vents	min. 10 mm min. 200 mm

The data sheets of these devices contains further technical data. You will find the data sheets on the internet at *http://ts.fujitsu.com/support*.

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