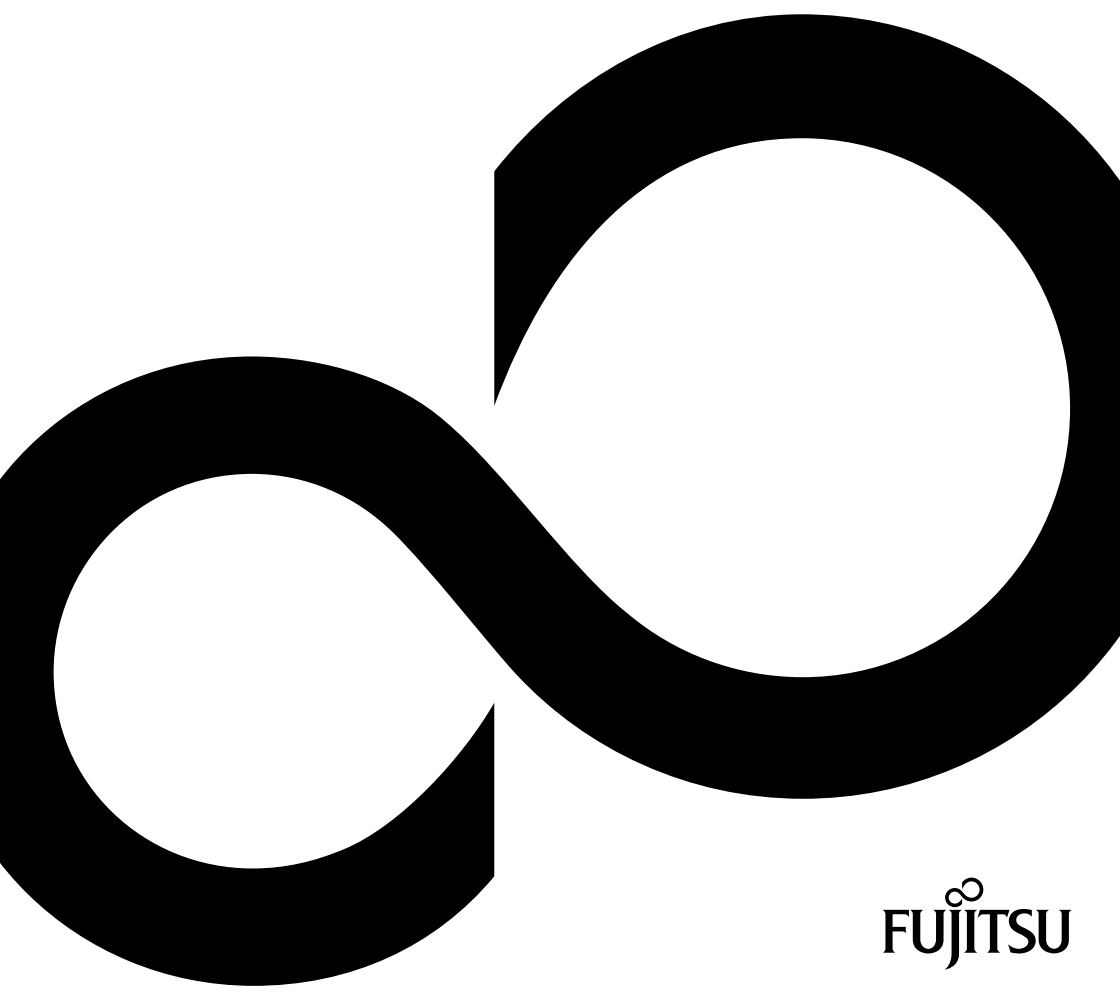


FUJITSU Workstation CELSIUS

W570 / W570power / W570power+

W580 / W580power / W580power+



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FUJITSU Workstation CELSIUS W570 / W570power / W570power+ W580 / W580power / W580power+

Operating Manual

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Your CELSIUS...

... is available with various configuration levels which differ in terms of hardware and software equipment. You can install accessible drives (e.g. DVD drives) and other modules.

This manual tells you how to start using your device and how to operate it in daily use. This manual applies for all configuration levels. Depending on the chosen configuration level, some of the hardware components described may not be available on your PC. Please also read the notes about your operating system.

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

Further information on this device is also provided:

- in the "Quick Start Guide" poster
- in the "Safety/regulations" manual
- in the "Warranty" manual
- in the BIOS manual for your device
- in the operating manual for the monitor
- in the manual for the mainboard
- in the documentation for your operating system
- in the information files (e.g. *.PDF, *.HTML, *.DOC, *.CHM, *.TXT, *.HLP)

Notational conventions

	Pay particular attention to text marked with this symbol. Failure to observe these warnings could pose a risk to health, damage the device or lead to loss of data. The warranty will be invalidated if the device becomes defective through failure to observe these warnings.
	Indicates important information for the proper use of the device.
	Indicates an activity that must be performed
	Indicates a result
This font	indicates data entered using the keyboard in a program dialogue or at the command line, e.g. your password (Name123) or a command used to start a program (start.exe)
This font	indicates information that is displayed on the screen by a program, e.g.: Installation is complete.
<i>This font</i>	indicates - terms and texts used in a software interface, e.g.: Click on <i>Save</i> - names of programs or files, e.g. <i>Windows</i> or <i>setup.exe</i>.
"This font"	indicates - cross-references to another section, e.g. "Safety information" - cross-references to an external source, e.g. a web address: For more information, go to http://www.fujitsu.com/fts/ - Names of CDs, DVDs and titles or designations for other materials, e.g.: "CD/DVD Drivers & Utilities" or "Safety/Regulations" manual
	indicates a key on the keyboard, e.g: 
This font	indicates terms and texts that are emphasised or highlighted, e.g.: Do not switch off the device

Validity of the Reference Manual

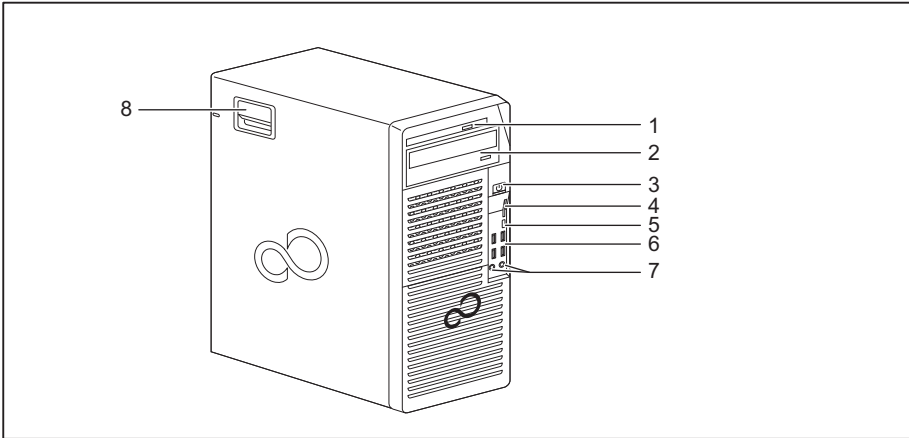
This Reference Manual is valid for the following systems:

- FUJITSU Workstation CELSIUS W570
- FUJITSU Workstation CELSIUS W570power
- FUJITSU Workstation CELSIUS W570power+
- FUJITSU Workstation CELSIUS W580
- FUJITSU Workstation CELSIUS W580power
- FUJITSU Workstation CELSIUS W580power+

Ports and Operating Elements

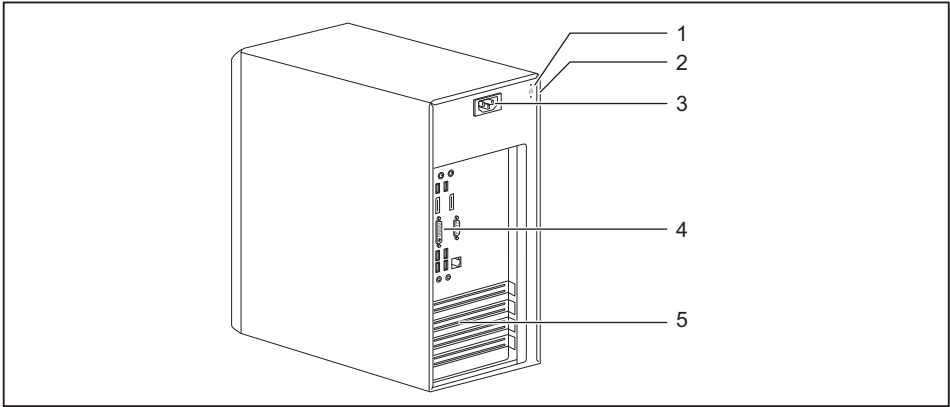
This chapter presents the individual hardware components of your device. This will provide you with an overview of the ports and operating elements on the device. Please familiarise yourself with these components before you start to work with the device.

Front



- | | |
|---|--|
| 1 = Slim-line drive | 6 = USB ports |
| 2 = Module bay for a 5 1/4-inch drive | 7 = Microphone connection (right), headphone connection (left).
In order to use a headset, connect the headset with both connections. |
| 3 = ON/OFF switch | 8 = Latch with optional casing lock |
| 4 = Slot for memory cards (format: SD Secure Digital card) | |
| 5 = USB connection 3.1 with a charging function (USB Type-C™) | |

Rear



1 = Device for a Security Lock

2 = Holes for a padlock

3 = Alternating voltage socket (AC IN)

4 = Ports for external devices
(device-dependent)

5 = Slot covers

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 information



Please note the information provided in the "Safety/regulations" manual and in the following safety notes.

When installing and operating the device, please observe the notes on environmental conditions in Chapter ["Technical data", Page 82](#) as well as the instructions in Chapter ["Getting started", Page 13](#).

When setting up the device, make sure there is clearance all around it so that the casing receives enough ventilation. In order to avoid overheating, do not cover the ventilation areas of the monitor or the device.

You must only operate the device if the rated voltage used by the device is set to the local mains voltage.

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

Only operate the device with the casing closed.

Replace the lithium battery on the mainboard in accordance with the instructions in ["Replacing the lithium battery", Page 81](#).

Caution, components in the system can get very hot.

The activities described in these instructions must always be performed with the greatest care.

Repairs to the device must only be performed by qualified technicians. Incorrect repairs could put the user at great risk or cause serious damage to the equipment (electric shock, risk of fire).

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.

If the device is brought from a cold environment into the room where it will be used, condensation may occur. Before operating the device, wait until it is absolutely dry and has reached approximately the same temperature as the installation site.

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 (alcohol, thinner or acetone).

Never clean the device with water! Water entering into the device could present a serious risk to users (e.g. electric shock).

Ensure that no liquid enters the system.

The surface can be cleaned 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

You can find information on these subjects in the "Environment and Energy Information" manual or on our website ("<http://www.fujitsu.com/fts/about/fts/environment-care/>").

Getting started



Please observe the safety information in the ["Important notes", Page 11](#) 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 contents of the package for any visible damage caused during transport.
- ▶ Check whether the delivery conforms to 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 external devices such as mouse, keyboard and monitor
- 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 external devices in addition to your own device (e.g. a printer), do not connect these until after the initial installation. The following sections describe 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 expansions", Page 33](#) chapter.

Setting up the device



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

We recommend that you place your device on a surface which is not slippery. In view of the many different finishes and varnishes used on furniture, it is possible that the rubber feet will mark the surface they stand on.

Depending on the location of your device, bothersome vibrations and noises may occur. To prevent this, a distance of at least 10 mm / 0.39 in should be maintained from other devices on casing sides without ventilation surfaces.

In order to avoid overheating, do not cover the ventilation areas of the monitor or the device.

A minimum distance of 200 mm / 7.87 in from the device must be observed for ventilation areas.

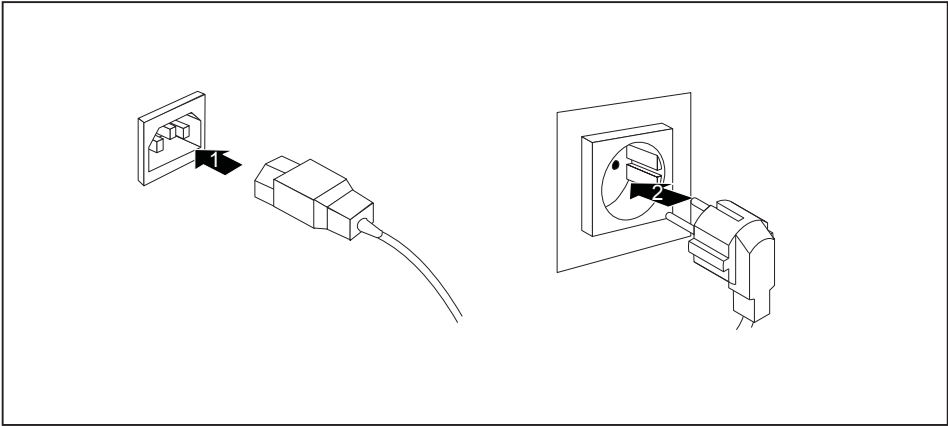
Do not stack several devices on top of each other.

Do not expose the device to extreme ambient conditions (see ["Technical data", Page 82](#), section "Ambient conditions"). Protect the device against dust, humidity and heat.

Connecting the device to the mains supply



Use the following table to check which mains plug applies for your country. The following illustration may be different from your country variant.



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

Power connection	Country
	USA, Canada, Mexico, parts of South America, Japan, Korea, the Philippines, Taiwan
	Russia and the Commonwealth of Independent States (CIS), large parts of Europe, parts of South America, the Middle East, parts of Africa, Hong Kong, India, large parts of South Asia.
	UK, Ireland, Malaysia, Singapore, parts of Africa
	China, Australia, New Zealand

Connecting external devices



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 when disconnecting a cable. Never pull the cable!

To ensure that your device works properly, use only the supplied connection cable or only use a high-quality connection cable.

Ports on the device

The ports 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 ports is provided in the manual for the mainboard.



PS/2 keyboard port, purple



PS/2 mouse port, green



Serial port 1, turquoise



Serial port 2, turquoise



Headphones, light green (back of device) or black (front of device)



Microphone port, pink (back of device) or black (front of device)



Audio output (Line out), light green



Audio input (Line in), light blue



Parallel port/printer (optional)



LAN port



USB 3.1 - Universal Serial Bus, type A: blue, type C™: black



USB type 2.0 - Universal Serial Bus, black



USB 3.1 Gen2 - Universal Serial Bus, type A: blue, type C: black



VGA monitor connection, blue DP

DP

DisplayPort



DVI-I monitor port



SD Card (slot for memory cards in the format Secure Digital Card)



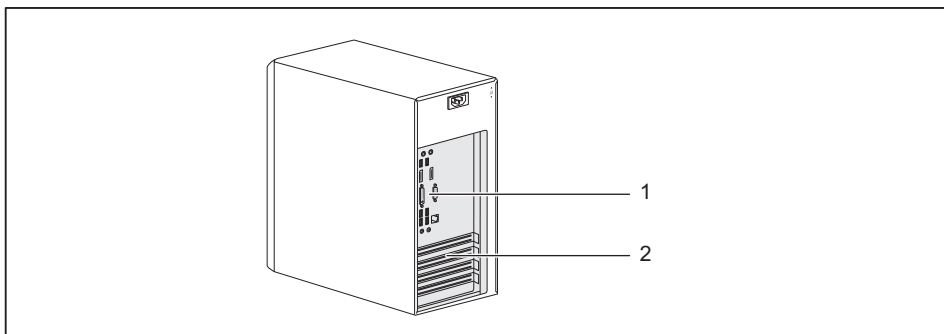
Some of the connected devices require special software (e.g. drivers) (refer to the documentation for the connected device and operating system).

Connecting a monitor

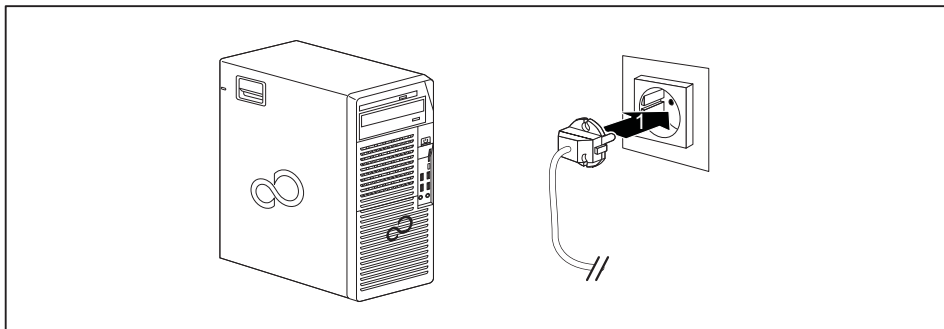


Only connect the screen to your device when it is switched off.

Depending on requirements, you can use the monitor ports of the mainboard (1) or the monitor ports of an optional display adapter in one of the board slots (2) to connect a monitor to your device.



- ▶ 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).



- ▶ Depending on the connector and configuration level of your device, plug the monitor power cable into an earthed mains outlet (1).

Connecting the mouse

You can connect a USB mouse or a PS/2 mouse to your device.

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.

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 or on the rear of the keyboard.
- ▶ Plug the flat rectangular USB connector 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 or on the rear of the keyboard.
- ▶ Plug the round connector of the keyboard cable into a keyboard port of the device.

Connecting external devices to the parallel or serial interface (optional)

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

- ▶ 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 refer to the documentation of the external device.

Port settings



You can change the port settings (e.g. address, interrupt) in the *BIOS Setup*.

Device drivers



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, mouse or keyboard).



USB devices are hot-pluggable. This means you can connect and disconnect USB cables while your device is switched on.

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 one of the USB ports on your device.

Device drivers



External USB devices which you connect to one of the USB ports don't usually need their own drivers because the software required is already included in the operating system. If the device requires separate software, please follow the instructions in the manufacturer's documentation.

Switching on for the first time: installing the software



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.



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.

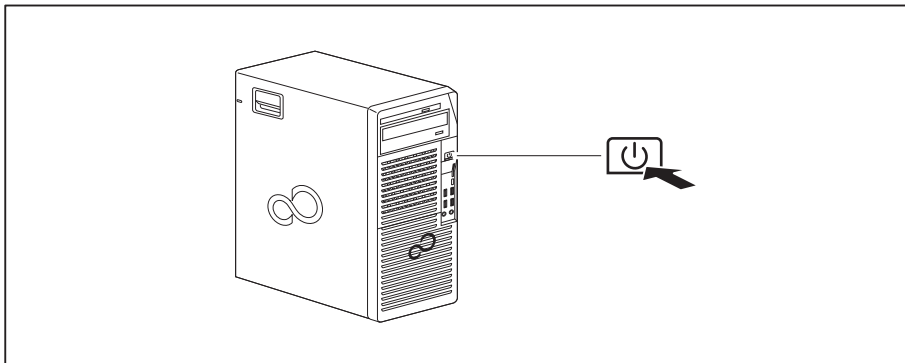
When you switch on the device for the first time, the supplied software is installed and configured. Plan a reasonable amount of time for this, as this process must not be interrupted.

Switch on the monitor and the machine



In order to avoid overheating, do not cover the ventilation areas on the monitor or the device.

- Switch on the monitor (see operating instructions for the monitor).



- Press the on/off button on the front of the machine.
- ↳ The operational display will light up and the machine will start.

Installing the software

- During installation, follow the on-screen instructions.
- If anything is unclear regarding the data you are asked to input, read the online Help in your operating system.



You will find more information on the system, as well as drivers, utilities and updates on the optional "Drivers & Utilities" DVD and on the Internet at ["http://www.fujitsu.com/fts/support"](http://www.fujitsu.com/fts/support).

You can find information and help on the Windows operating system functions on the Internet at ["http://windows.microsoft.com"](http://windows.microsoft.com).

Operation

Switch the device on

- ▶ If necessary, switch the monitor on (see the operating manual for the monitor).
- ▶ Press the ON/OFF switch on the front of the device.
- ↳ The power indicator glows and the device is started.

Switching off the device



Switching the device off does not disconnect it from the mains voltage. To completely disconnect the mains voltage, remove the power plug from the power socket.

- ▶ Shut down the operating system in the proper way.
- ↳ The device switches to power saving mode automatically and switches off.

Procedure in an emergency



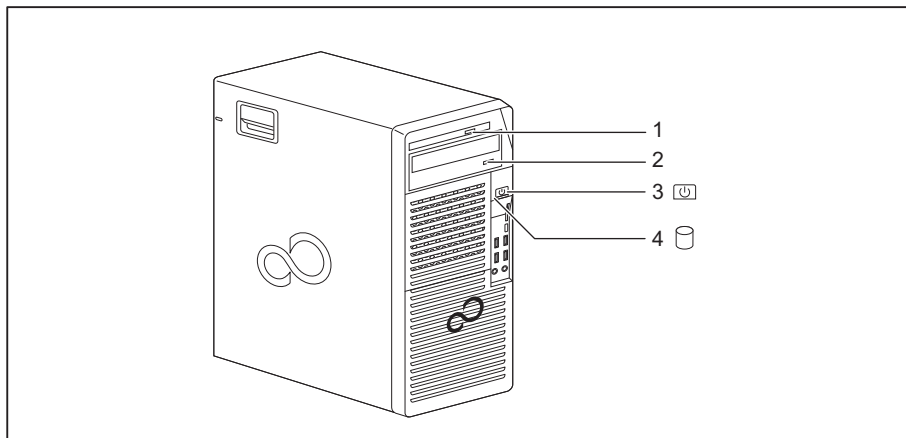
If the device cannot be switched off, you can force a shutdown by using the following emergency procedure.

Warning, this could lead to a loss of data!

- ▶ Press the ON/OFF switch for at least 4 seconds.
 - ↳ The device will switch off.
- When you next restart the device, error messages may be displayed due to the improper shutdown.

Indicators on 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.

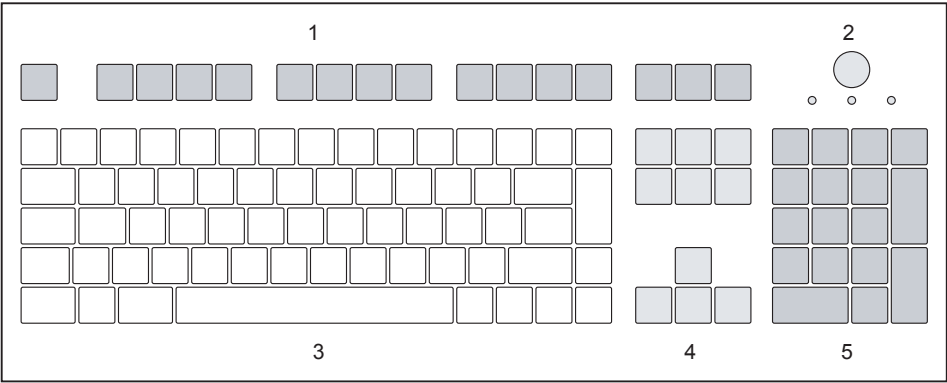


No.	indicator	Description
1, 2	Drive indicators	The indicators light up when the Slim-Line drive or CD-ROM or DVD drive of the device is accessed. You must never under any circumstances remove the CD/DVD while the indicator light is on.
3	Power-on indicator	Warning: In the energy saving mode, the device must not be disconnected from the mains, as this can result in a loss of data. - Indicator is illuminated: The device is switched on. - The indicator flashes (depending on device type): The device is in energy-saving mode. After being switched on with the ON/OFF switch, the device powers up or returns to the state it was in before it entered energy-saving mode. - The indicator is not illuminated: The device is switched off or disconnected from the mains. If the device is ready for operation, it can be switched on with the ON/OFF switch.
4	Hard disk indicator	The indicator lights up when the hard disk drive of the device is accessed.

Keyboard



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



- 1 = Function keys
- 2 = On/off switch (optional)
- 3 = Alphanumeric keypad
- 4 = Cursor keys
- 5 = Numeric keypad (calculator keypad)

Important keys and keyboard shortcuts

The description of the following keys and keyboard shortcuts applies to Microsoft operating systems. Details of other keys and keyboard shortcuts can be found in the documentation for the relevant application program.

Key / key combination	Description
	On/off switch (optional) Depending on the setting in the <i>BIOS Setup</i> , the device can be switched on or off with this switch. Some operating systems allow you to configure additional functions of the ON/OFF switch in the Control Panel. 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 highlighted selection. The Enter key is also referred to as the "Return" key.

Key / key combination	Description
	Windows key calls up the Windows <i>Start</i> menu.
	Menu key calls up the menu for the marked item (Windows).
	Shift key enables upper-case letters and the upper key symbols to be displayed.
	Alt Gr key (country-dependent) produces a character shown on the bottom right of a key (e.g. the @ sign on the  key).
	Num Lock key By pressing the Num Lock key you switch between the upper- and lower-case levels of the calculator keypad. When the Num Lock indicator is lit the numeric keypad and arithmetic keys are active. When the Num Lock indicator is not lit the cursor control functions on the Numeric keypad are active.
	Ctrl key performs a special operation when pressed in conjunction with another key. The  key is also called the "Control" or "Control key".
	Windows Security/Task Manager This key combination opens the Windows Security/Task Manager window.

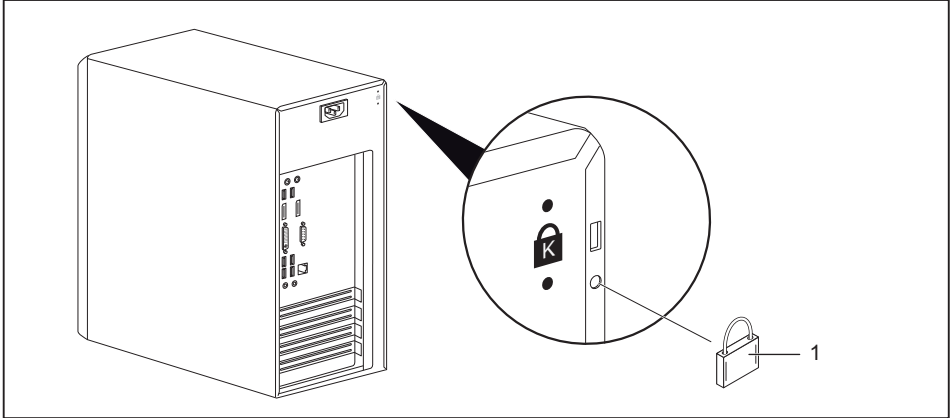
Settings in BIOS Setup

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*.

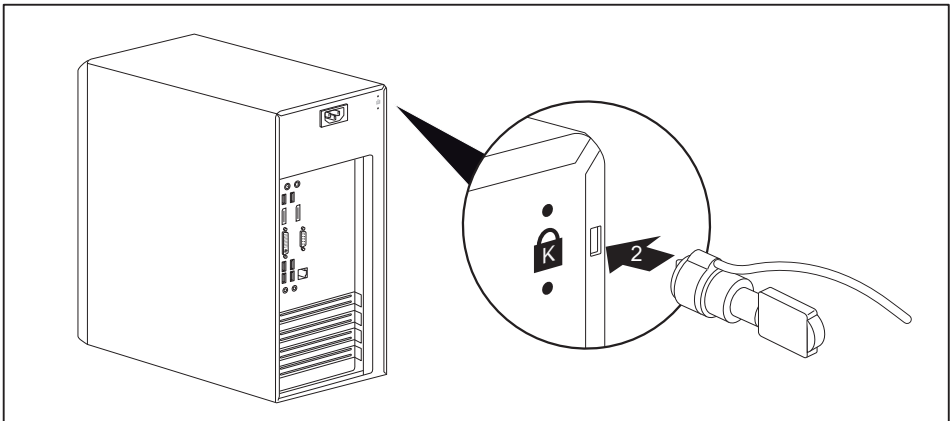
Property and data protection

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

Anti-theft protection and lead-sealing



1 = Holes for a padlock



2 = Device for a security lock

Anti-theft protection

You can protect your device from theft

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

Lead-sealing

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

Mechanical casing lock (optional)

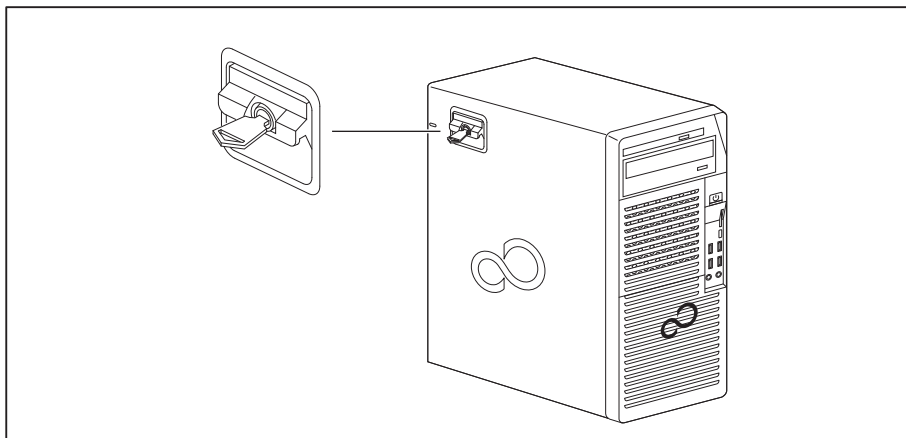
With the casing lock you can mechanically lock the casing to prohibit unauthorised persons from opening it. The keys can be found on the rear panel of your device.

FUJITSU Workstation CELSIUS W570power+ / W580power+: If you have a casing with a casing lock, the cover of the drive cage on the front of the device is also secured against unauthorised opening when the lock is locked.



In addition to the casing lock, an open  and a closed lock  are also illustrated.

- Key turned towards the closed lock: The device is locked.
- Key turned towards the open lock: The device is unlocked.



Locking the casing

- ▶ Turn the key towards the closed lock .

Unlocking the casing

- ▶ Turn the key towards the open lock .

BIOS setup security functions

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

- Prevent unauthorized access to *BIOS Setup*
- Prevent unauthorised system access
- Prevent unauthorised access to the settings of boards with their own BIOS
- Activate virus warnings
- Protect BIOS from overwriting
- Protect 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 authorisation via SmartCard

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

Operating the SmartCard reader (optional)



Operation of a SmartCard reader with a RFID reader is not permitted in Taiwan.

- ▶ 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/regulations" manual and in the ["Getting started", Page 13](#) chapter when connecting or disconnecting cables.

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

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

Help if problems occur

Should you encounter a problem with your computer that you cannot resolve yourself:

- ▶ Note the ID number of your device. The ID number is found on the type rating plate on the back, the underside or the top of the casing.
- ▶ Contact the Service Desk responsible for your country for clarification of the problem: ["http://support.ts.fujitsu.com/contact/servicedesk"](http://support.ts.fujitsu.com/contact/servicedesk). When you do this, please have ready the ID number and serial number of your system.

Troubleshooting

Power-on indicator remains unlit after you have switched on your device

Cause	Troubleshooting
The mains voltage supply is faulty.	▶ Check whether the power cable is plugged properly into the device and a grounded mains outlet.
Internal power supply overloaded.	▶ Pull the power plug of the device out of the mains outlet. ▶ Wait approx. 3 min. ▶ Plug the power plug into a properly grounded mains outlet again. ▶ Switch the device on.

The device cannot be switched off with the On/Off switch.

Cause	Troubleshooting
System crash	▶ Press the On/Off switch for at least 4 seconds, until the device switches off. Attention: Warning, this could lead to a loss of data! 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	Remedy
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. If necessary, 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 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 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.
Incorrect setting for the monitor	▶ Restart the system. ▶ Press [F8] while the system is booting. ▶ Start the system in Safe Mode. ▶ Set up the monitor as described in the documentation for your operating system and monitor.

No mouse pointer displayed on the screen

Cause	Remedy
The mouse is not correctly connected.	▶ Shut down your operating system in the proper manner, for instance using [Ctrl] + [Alt] + [Del]. ▶ 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.
Disabled USB ports	▶ In the <i>BIOS Setup</i>, check whether the USB ports are <i>Enabled</i> (see the "BIOS Setup" manual or the mainboard manual)

Time and/or date is not correct

Cause	Remedy
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 <i>BIOS Setup</i>.
The lithium battery is discharged.	▶ If the time and date are repeatedly wrong when you switch on your device, replace the lithium battery (see "Replacing the lithium battery", Page 81).

Error messages on the screen

Error messages and their explanations are provided:

- in the technical manual for the mainboard
- in the documentation for the programs used

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.

Tips

Topic	Tip
Out of system resources	▶ Close unnecessary applications. or ▶ Run the applications in a different order.

System expansions



Repairs to the device must only be performed by qualified technicians. Incorrect repairs may greatly endanger the user (electric shock, fire risk) and will invalidate your warranty.

After consulting the Hotline/Service Desk, you may remove and install the components described in this manual yourself.



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 beforehand.

The following illustrations may differ slightly from your device, depending on its configuration level.

Nachfolgend ist in der Regel die FUJITSU Workstation CELSIUS W570power+ / W580power+ abgebildet. Auf Unterschiede zwischen den drei Gerätevarianten FUJITSU Workstation CELSIUS W570 / W580, FUJITSU Workstation CELSIUS W570power / W580power und FUJITSU Workstation CELSIUS W570power+ / W580power+ wird in den entsprechenden Abschnitten hingewiesen.

If further documentation was delivered with your device, please also read this through carefully.

In addition, before removing or installing system components, please pay attention to the following:



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

Remove the power plug before opening the device.

Be careful that no wires become trapped when removing or installing components.

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



An update of the BIOS may be required for a system expansion or hardware upgrade. Further information can be found in the BIOS help section or if necessary in the Technical Manual for the mainboard.

Information about boards

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

Note that some components on the mainboard may be very hot if the device was in use shortly before the casing was removed.

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 handling boards fitted with ESDs, you must always 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.
- Only touch or hold the boards by the edge or, if present, at the areas marked green (Touch Points).
- Never touch pins or conductors on boards fitted with ESDs.

Opening the casing

- Switch the device off. The device must not be in power-saving mode.

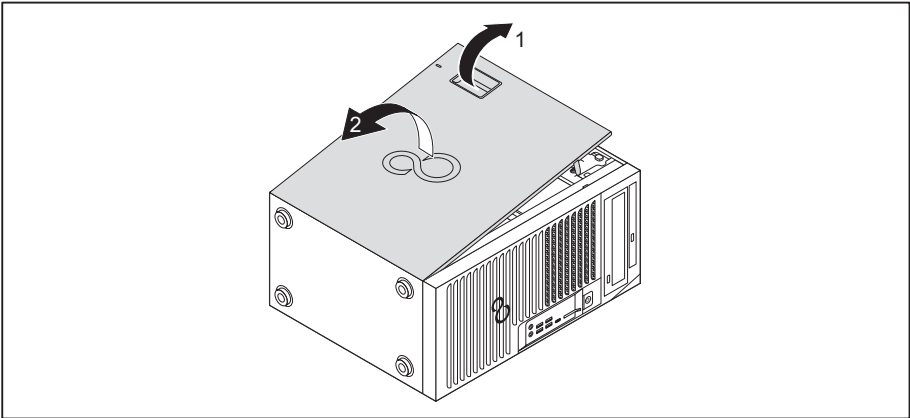


Please observe the safety information in ["Important notes", Page 11](#).

Disconnect the mains plug from the mains outlet.

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

- Remove any connected wires which are in the way.
- On devices with a casing lock: Unlock the casing.
- Lay the device on its side in the manner shown.



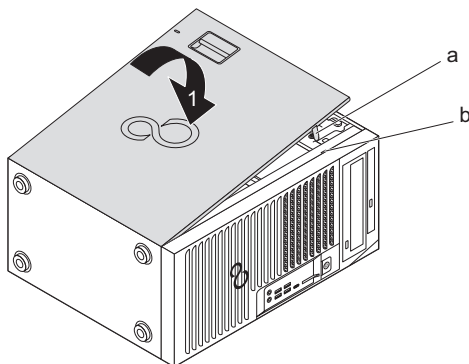
- Pull the locking device (1) and swivel the side part in the direction of the arrow (2).

Closing the casing

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

i

During the installation, make sure that you insert the detent (a) into the corresponding opening on the housing (b). Otherwise the casing cannot be closed.



- Swivel the side cover 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.

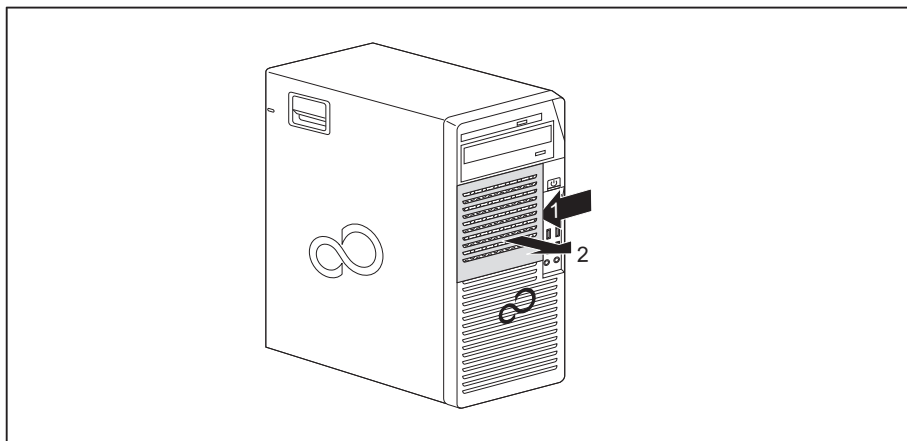
Open and close the drive cage (only for the model FUJITSU Workstation CELSIUS W570power+ / W580 power+)

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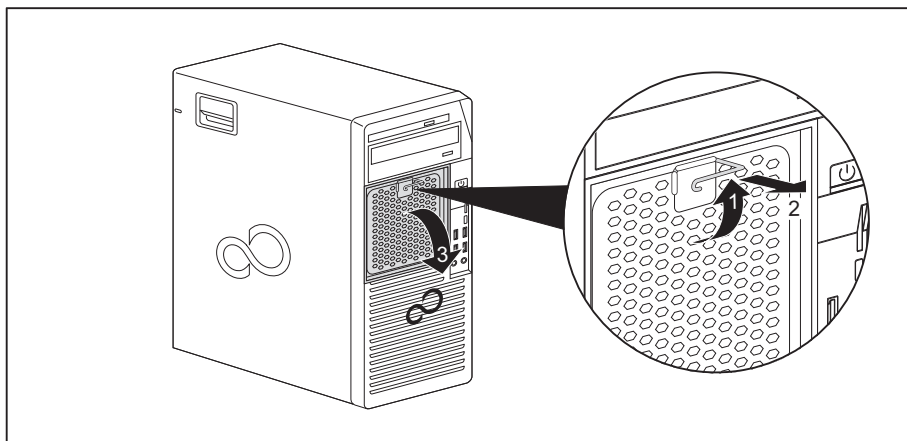
For some of the work steps described below, the FUJITSU Workstation CELSIUS W570power+/ W580power+ requires that the drive cage should be opened and, if necessary, also pulled out of the casing.

Open the drive cage

- Open the casing (see ["Opening the casing", Page 35](#)). Otherwise, the cover on the drive cage cannot be removed since it is also secured by the casing lock.



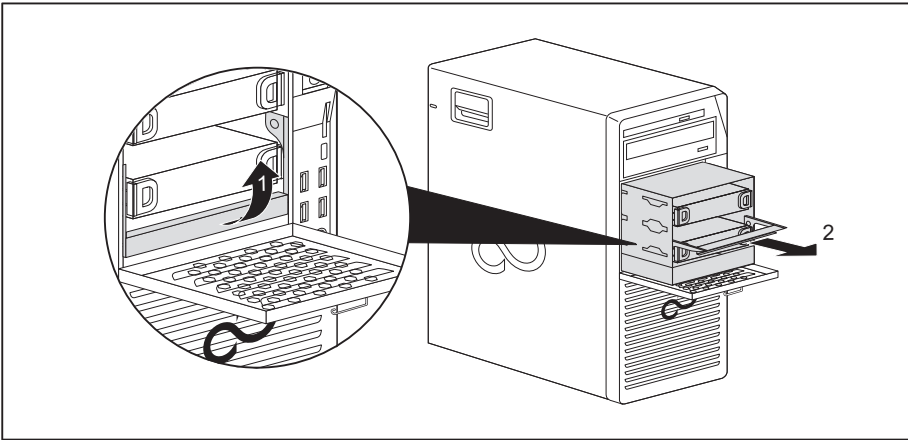
- Access this from the side, reaching into the opening on the drive cage (1).
- Remove the cover (2).



- Release the lever from the cover (1).
- Pull the lever (2).
- Fold the cover in the direction of the arrow (3).

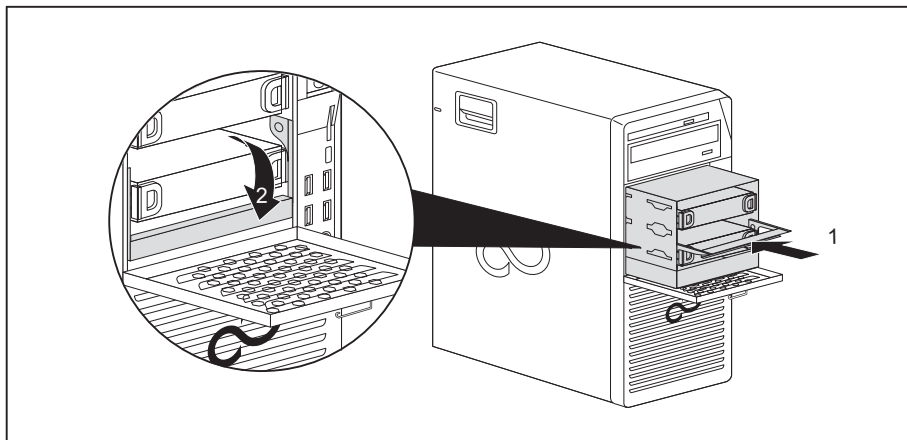
Pull the drive cage out of the casing.

- Open the drive cage (see ["Open the drive cage", Page 38](#)).



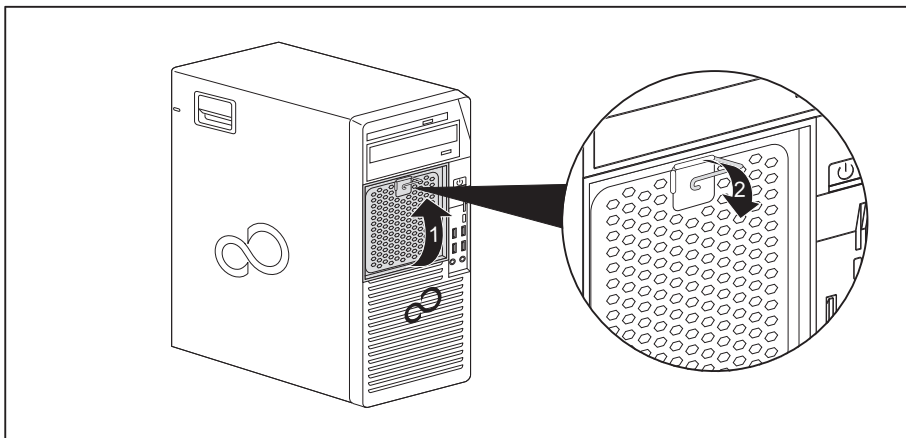
- Fold upwards the lever on the drive cage (1).
- Pull the drive cage out of the casing using the lever (2).

Slide the drive cage into the housing.

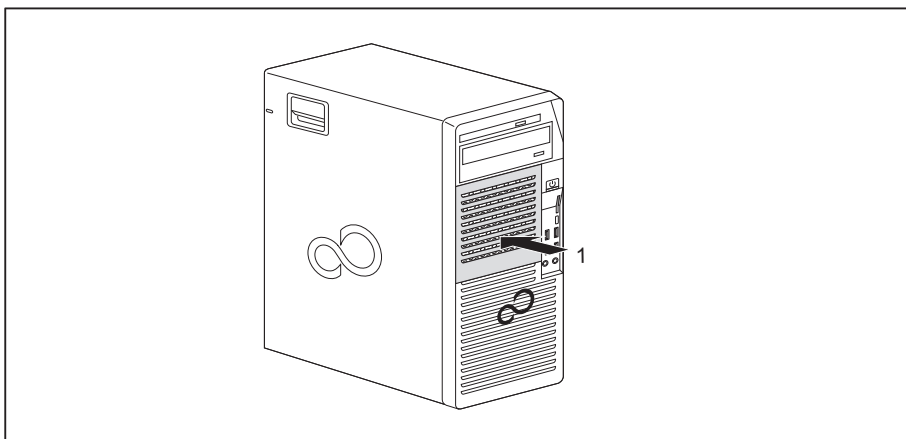


- ▶ Slide the drive cage into the housing (1).
- ▶ Fold the lever on the drive cage back into the cage (2).
- ▶ Close the drive cage (see ["Close the drive cage", Page 41](#)).

Close the drive cage



- ▶ Fold the cover upwards (1).
- ▶ Attach the lever to the cover (2).



- ▶ Position the cover on the drive cage (1).
- ▶ Close the casing (see ["Closing the casing", Page 36](#)).

Overview of the drive bays and drives in your device

The casing has space for several accessible and non-accessible drives:

- One installation slot for a slim-line drive
- One installation slot for an accessible 5¹/₄-inch drive
- One installation slot for a M.2 module
- Non-operable hard disk drives, depending on the device variant and the version level / installation kit used (["Overview of the hard disk drives", Page 48](#))



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

Install and remove the slim-line drive

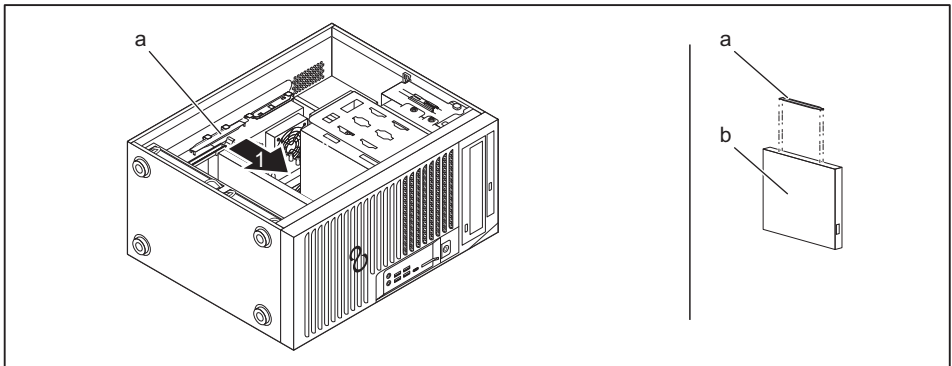
Installing an accessible drive

To use the locking function of the slimline drive, you must fit the appropriate drive plate on the drive before installing the drive in the casing.

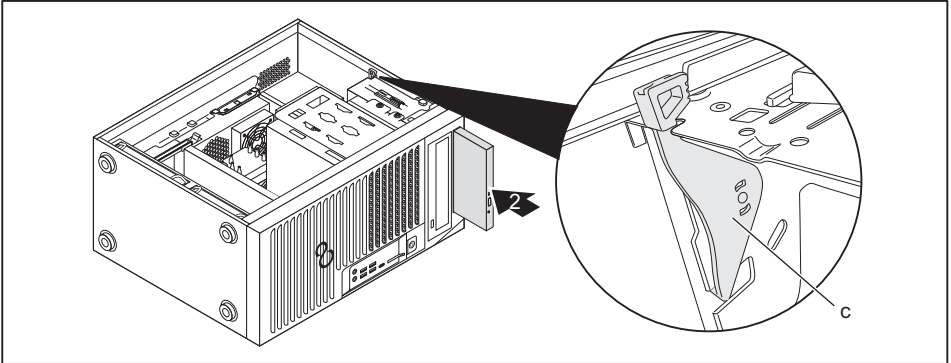
- ▶ Open the casing (see ["Opening the casing", Page 35](#)).
- ▶ If you have already fitted a cover (optional), remove it.



Do not throw away the cover. For cooling and protection against fire you must refit the cover if you remove the drive again later (see ["Removing an accessible drive", Page 47](#)).



- ▶ Take the drive cover (a) out of the holder in the direction of the arrow (1).
- ▶ Attach the drive cover (a) to the slim-line drive (b).



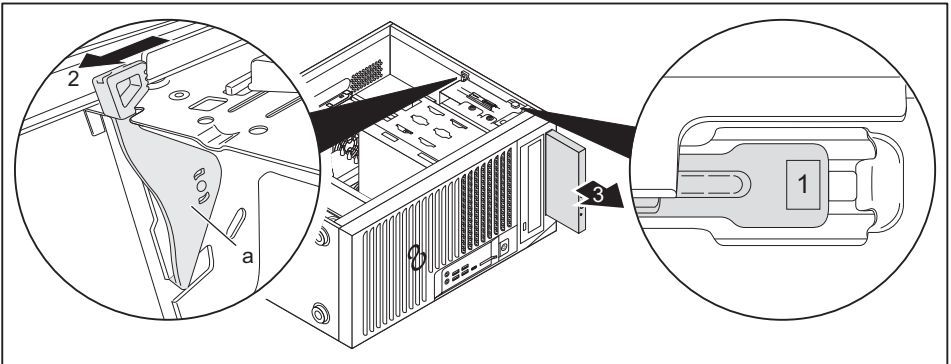
- ▶ Slide the drive into the housing (2) until it slots into place in the lock (c).
- ▶ Close the casing (see ["Closing the casing", Page 36](#)).



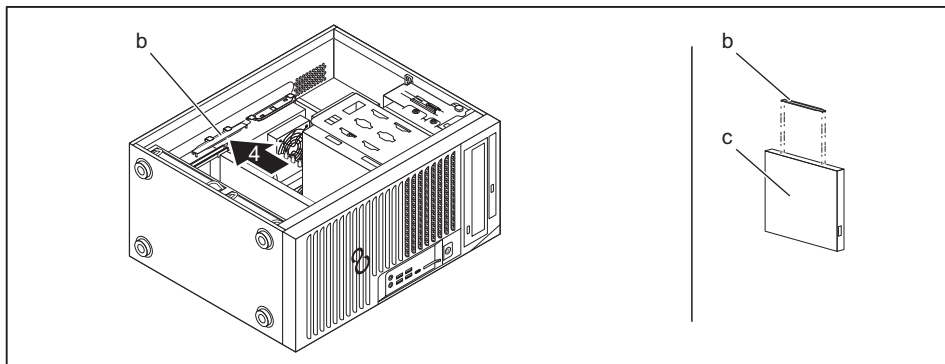
It may be necessary to modify the entry for the drive in the *BIOS Setup*.

Removing an accessible drive

- ▶ Open the casing (see ["Opening the casing", Page 35](#)).



- ▶ Press the release button (1).
- ▶ Press the clip (a) in the direction of the arrow (2).
- ↳ The drive will be pushed forward out of the slot.
- ▶ Pull the drive out of the casing in the direction of the arrow (3).



- ▶ Remove the drive cover (b) from the drive (c).
- ▶ Insert the drive cover in the direction of the arrow (4) into the holder.
- ▶ If necessary, make the required settings on the remaining hard disk drives.
- ▶ If you are not installing a new drive, reinstall the previously removed cover (optional) for the purposes of cooling, fire protection and to prevent foreign objects from getting into the casing.
- ▶ Close the casing (see ["Closing the casing", Page 36](#)).



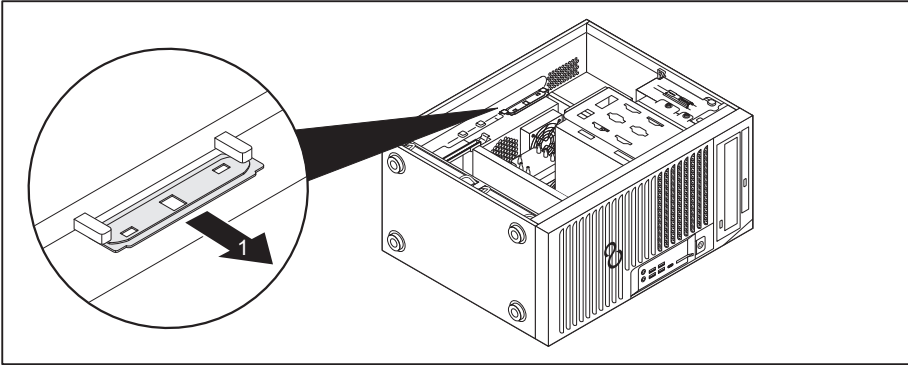
It may be necessary to modify the entry for the drive in the *BIOS Setup*.

Installing and removing the accessible 5¹/₄ inch drive

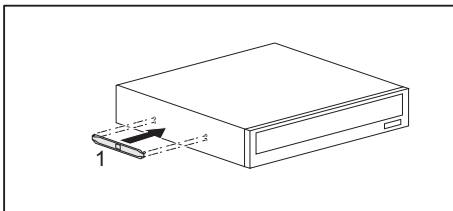
Fitting the drive cover for the 5 ¹/₄ inch drive

To use the latch function of the accessible 5¹/₄ inch drive, you must fit the corresponding drive cover before installing the drive in the casing. Proceed as follows:

- Open the casing (see ["Opening the casing", Page 35](#)).



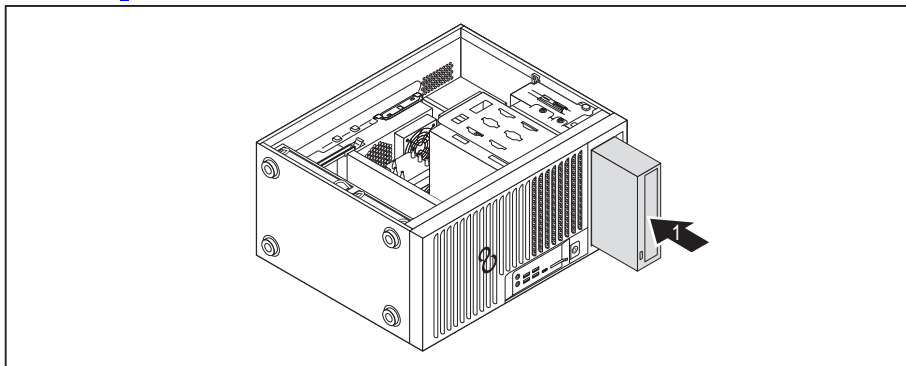
- Remove the drive cover from the bracket in the direction of the arrow (1).



- Connect the drive cover to the drive (1).

Installing an accessible drive

- ▶ Open the casing (see ["Opening the casing", Page 35](#)).
- ▶ Break out the pre-cut plastic cover on the drive bay.
- ▶ Fit the drive cover for the 5 1/4 inch drive (see ["Fitting the drive cover for the 5 1/4 inch drive", Page 45](#)).



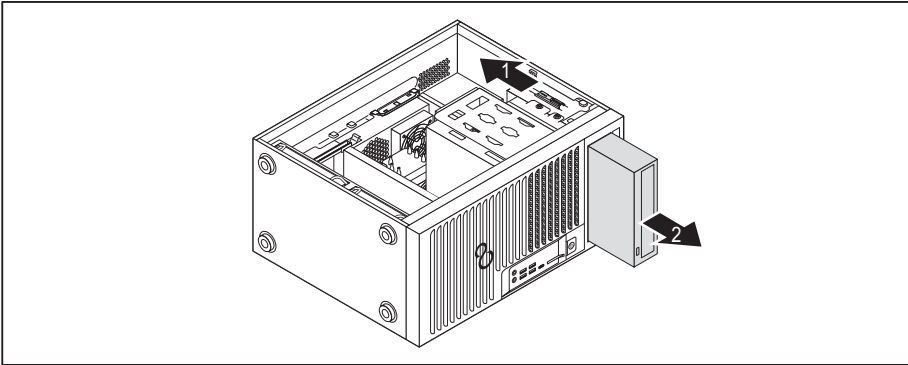
- ▶ Slide the accessible drive into the casing until it snaps in place (1).
- ▶ Connect the cables to the drive. Make sure the polarity is correct.
- ▶ Close the casing (see ["Closing the casing", Page 36](#)).



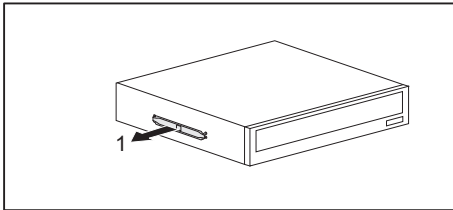
It may be necessary to modify the entry for the drive in the *BIOS Setup*.

Removing an accessible drive

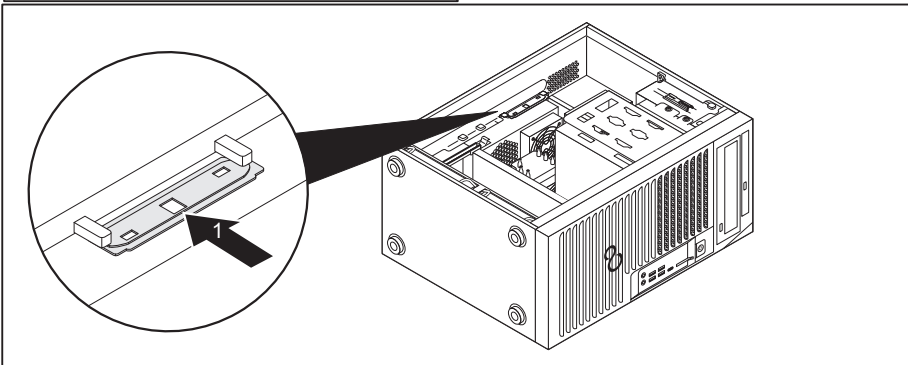
- Open the casing (see ["Opening the casing", Page 35](#)).



- Disconnect the cables connected to the drive.
- Slide the clip in the direction of the arrow (1).
- Pull the drive out of the casing in the direction of the arrow (2).



- Remove the drive cover from the drive (1).



- Place the drive cover on the holder in the direction of the arrow (1).
- If necessary, make the required settings on the remaining hard disk drives.
- Close the casing (see ["Closing the casing", Page 36](#)).



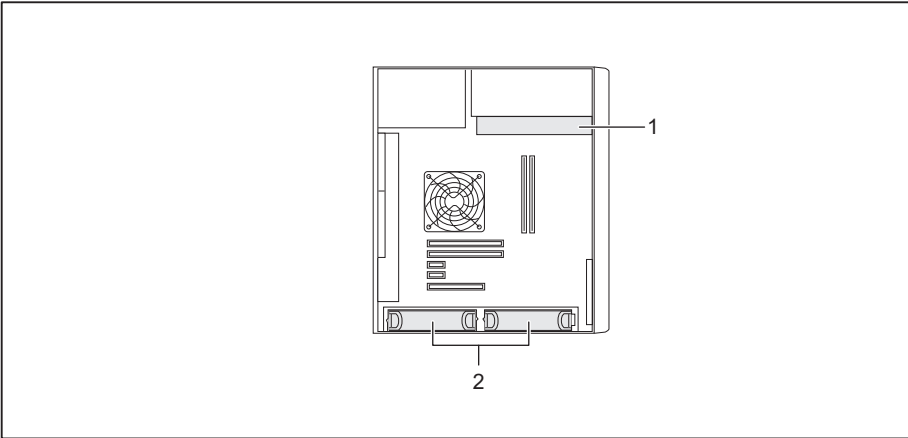
It may be necessary to modify the entry for the drive in the *BIOS Setup*.

Overview of the hard disk drives



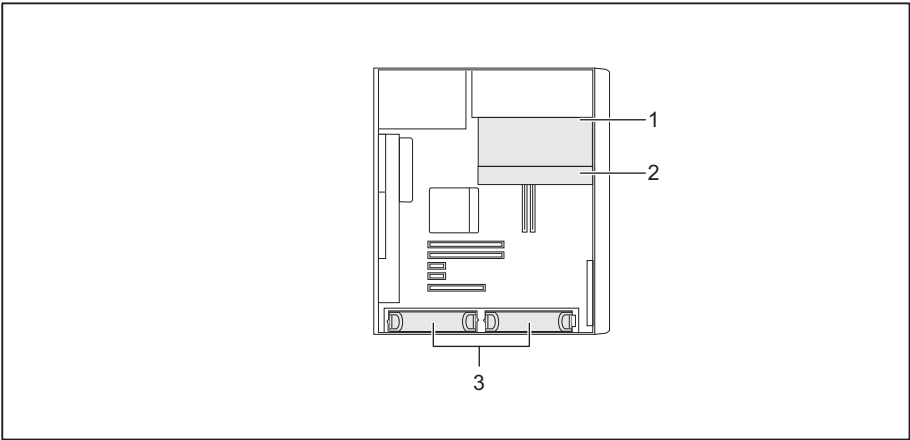
The EasyChange rails for the installation are provided together with the particular drive or installation kit.

FUJITSU Workstation CELSIUS W570 / W570power / W580 / W580power



No.	Upgrade options	Reference
1	One hard disk, size 2 1/2 inches or Solid State Disk (SSD)	"Removing and installing 2 1/2 inch hard disks or Solid State Discs (SSD) (FUJITSU Workstation CELSIUS W570 / W570power and W580 / W580power: according to the operable 5 1/4 inch drive, FUJITSU Workstation CELSIUS W570power+ / W580power+: on the drive frame)", Page 59
2	2 hard disks, size 3 1/2 inches	"Removing and installing hard disks in the lower part of the device (variants: FUJITSU Workstation CELSIUS W570 / W570power / W580 / W580power)", Page 53
	2 hard disks, size 2 1/2 inches	

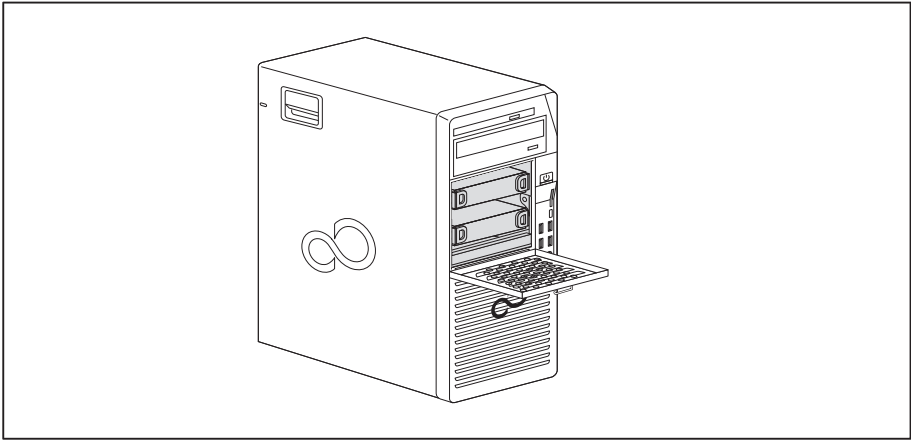
FUJITSU Workstation CELSIUS W570power+ / W580power+



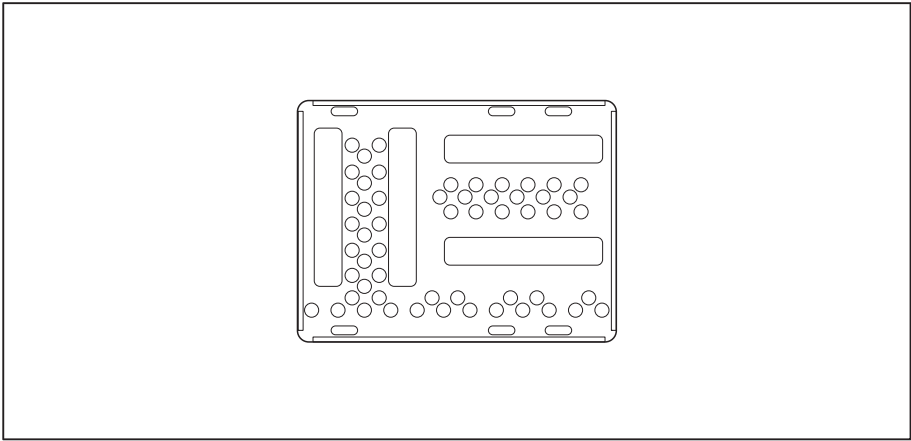
The FUJITSU Workstation CELSIUS W570power+ / W580power+ is available in two variants: with the installation kit 1 (standard) or the installation kit 2 (optional). The table below therefore also shows the respective installation options for the two installation kits:

No.	Upgrade options	Type of device / installation kit	Reference
1	2 hard disks, size 3½ inches (horizontal)	Installation kit 1 (standard, cold plug, no disconnecting of the cables is required)	"Removing and installing 3 ½ inch hard disks in the drive cage (only for the model FUJITSU Workstation CELSIUS W570 power+ with installation kit 1 (standard))", Page 62
	2 hard disks, size 2½ inches (vertical)		The procedure is the same for both installation kits.
	4 hard disks, size 2½ inches (vertical)	Installation kit 2 (optional, cold plug, no disconnecting of the cables is required)	"Installing the hard disk drive", Page 65 "Removing and installing 2 ½ inch hard disks in the drive cage (only for the model FUJITSU Desktop CELSIUS W570power+, with both installation kits)", Page 65
2	One hard disk, size 2 ½ inches or Solid State Disk (SSD)	Both installation kits	"Removing and installing 2½ inch hard disks or Solid State Discs (SSD) (FUJITSU Workstation CELSIUS W570 / W570power and W580 / W580power: according to the operable 5¼ inch drive, FUJITSU Workstation CELSIUS W570power+ / W580power+: on the drive frame)", Page 59
3	2 hard disks, size 3½ inches or	Both installation kits (cold plug, no disconnecting of the cables is required)	"Removing and installing hard disks in the lower part of the device (variant: FUJITSU Workstation CELSIUS W570power+, cold plug)", Page 56
	2 hard disks, size 2½ inches		

Example: Installation kit 1 (standard, with 2 hard disks horizontal or 2 hard disks vertical)

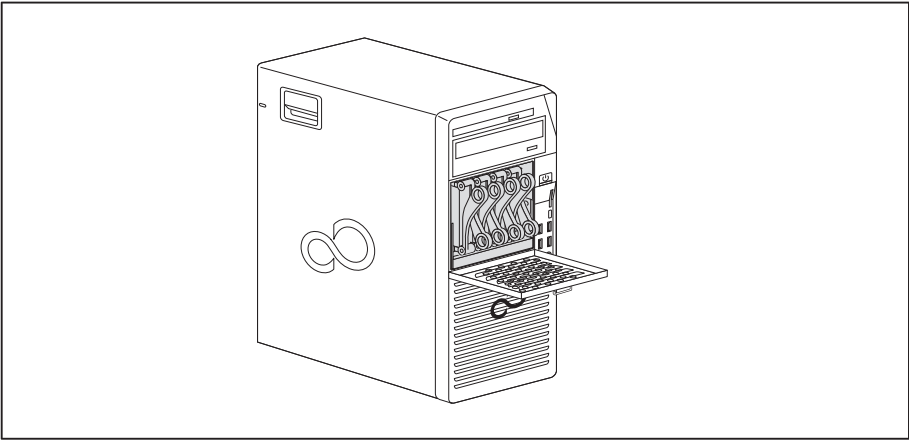


Installation kit 1 for up to 2 hard disks, size 3½ inches (horizontal), or up to 2 hard disks, size 2½ inches (vertical):

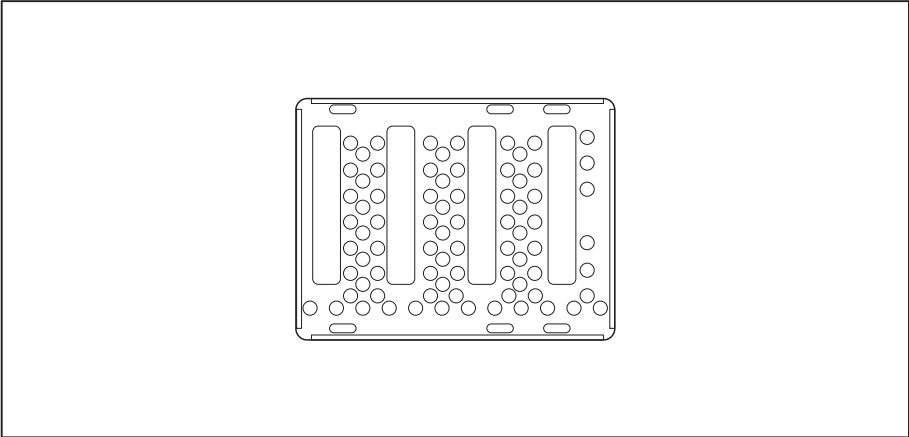


The hard disks, size 2½ inches (vertical), are also installed like the hard disks of installation kit 2 shown in the image below.

Example: Installation kit 2 (optional, with 4 hard disks, maximum upgrade, vertical)



Drive cage above: Installation kit 2 (optional) for up to 4 hard disks, size 2½ inches (vertical)



Removing and installing hard disks in the lower part of the device (variants: FUJITSU Workstation CELSIUS W570 / W570power / W580 / W580power)

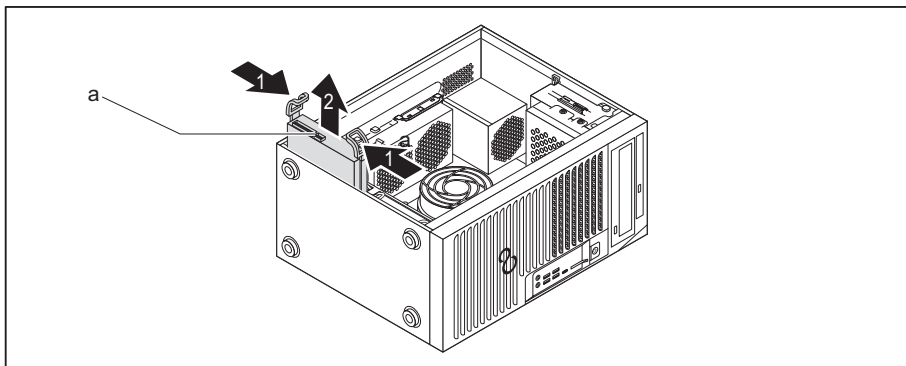


The following sections apply both to 3 1/2 inch hard disks and to 2 1/2 inch hard disks.

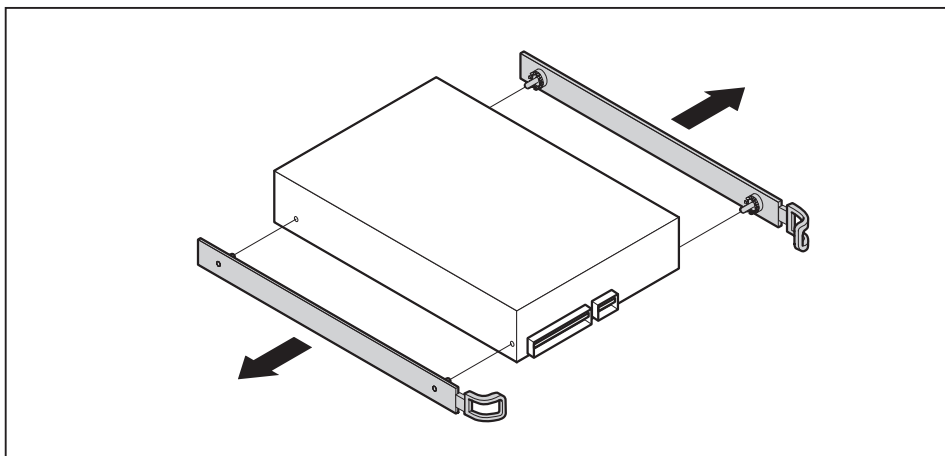
The only difference between 2 1/2 inch drives and 3 1/2 inch drives is their EasyChange rails.

Removing the hard disk drive

- Open the casing (see ["Opening the casing", Page 35](#)).



- Disconnect the cables (a) connected to the hard disk drive.
- Press the brackets of the EasyChange rails on the hard disk drive in the direction of the arrow (1) and pull the hard disk drive out of the drive cage in the direction of the arrow (2).



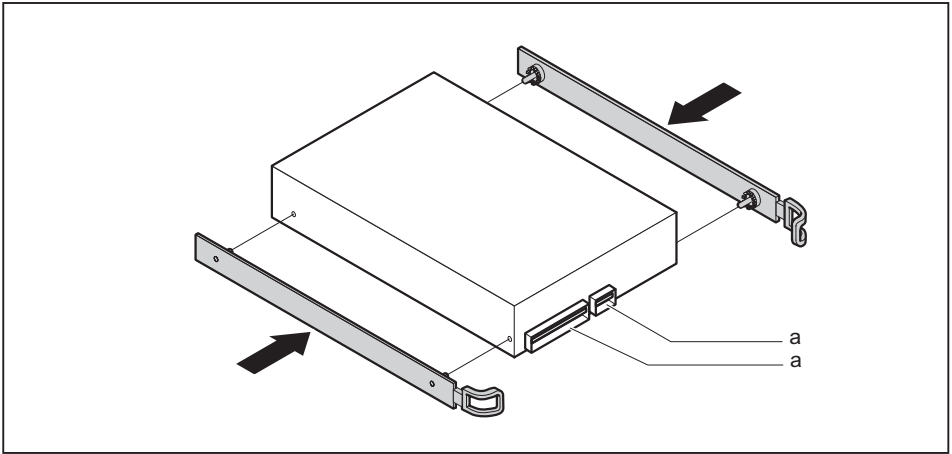
- Pull the EasyChange rails off the hard disk drive.
- If you no longer need the EasyChange rails, secure them again at their location in the drive cage.



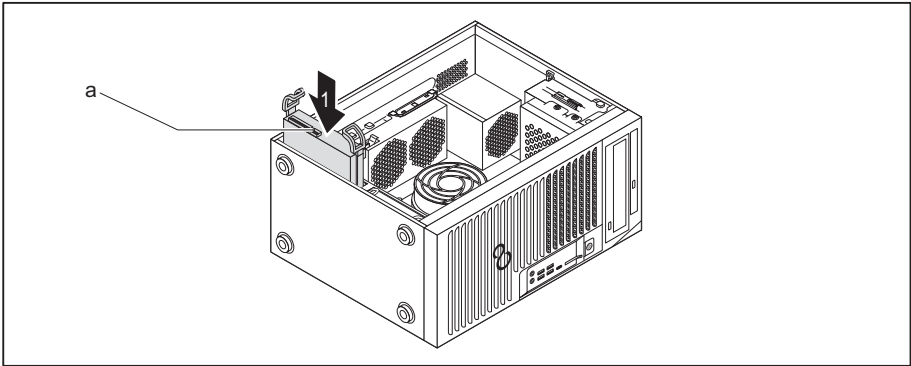
It may be necessary to modify the entry for the drive in the *BIOS Setup*.

Installing a hard disk drive

- Open the casing (see ["Opening the casing", Page 35](#)).



- Secure the EasyChange rails to the side of the hard disk drive by inserting the upper pins of the EasyChange rail into the corresponding holes of the hard disk. The connections (a) face towards the front.



- Slide the hard disk drive with the EasyChange rails into the drive cage in the direction of the arrow (1). Make sure that the hard disk drive connections (a) are pointing outwards as shown in the diagram.
- Connect the cables to the hard disk drive (a).
- Close the casing (see ["Closing the casing", Page 36](#)).



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

Removing and installing hard disks in the lower part of the device (variant: FUJITSU Workstation CELSIUS W570power+, cold plug)

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The following sections apply both to 3 1/2 inch hard disks and to 2 1/2 inch hard disks.

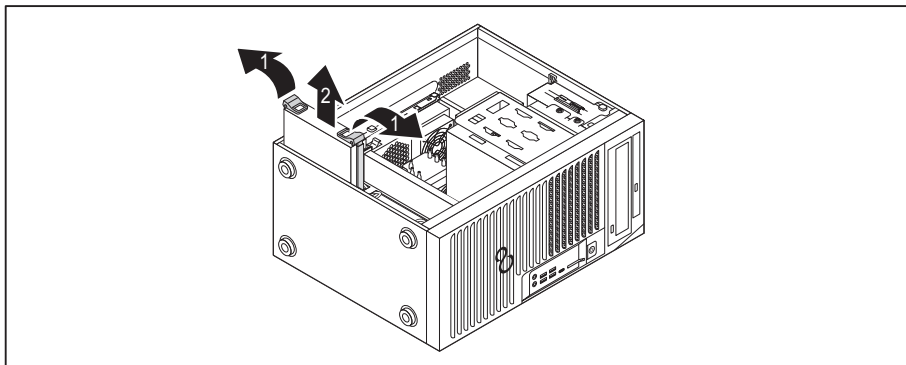
The only difference between 2 1/2 inch drives and 3 1/2 inch drives is their EasyChange rails.

Removing the hard disk drive

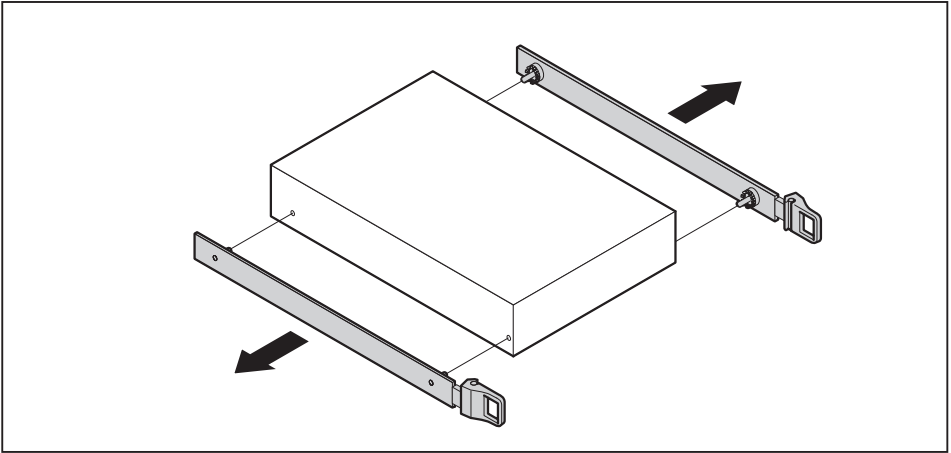
i

In the cold-plug process, the cables connected at the back of the drive will be disconnected automatically when the EasyChange rails are activated, as described below.

- Open the casing (see ["Opening the casing", Page 35](#)).



- Press the brackets of the EasyChange rails on the hard disk drive in the direction of the arrow (1) and pull the hard disk drive out of the drive cage in the direction of the arrow (2).



- Pull the EasyChange rails off the hard disk drive.
- If you no longer need the EasyChange rails, secure them again at their location in the drive cage.



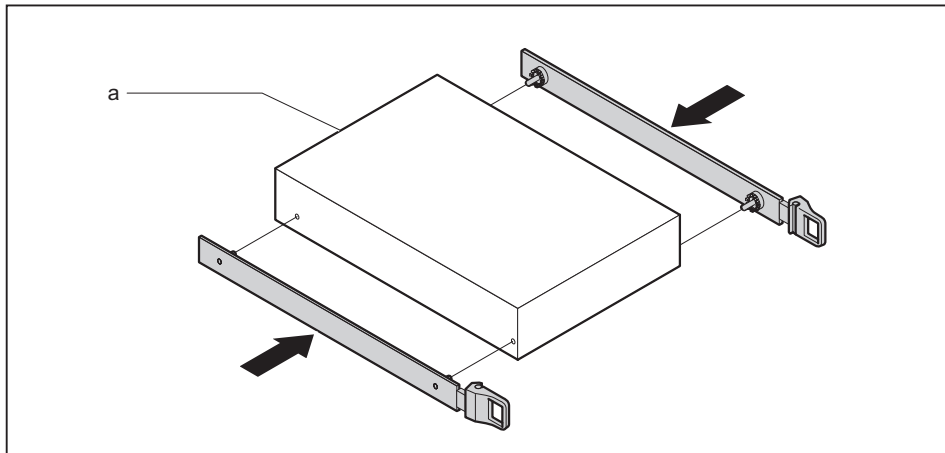
It may be necessary to modify the entry for the drive in the *BIOS Setup*.

Installing a hard disk drive

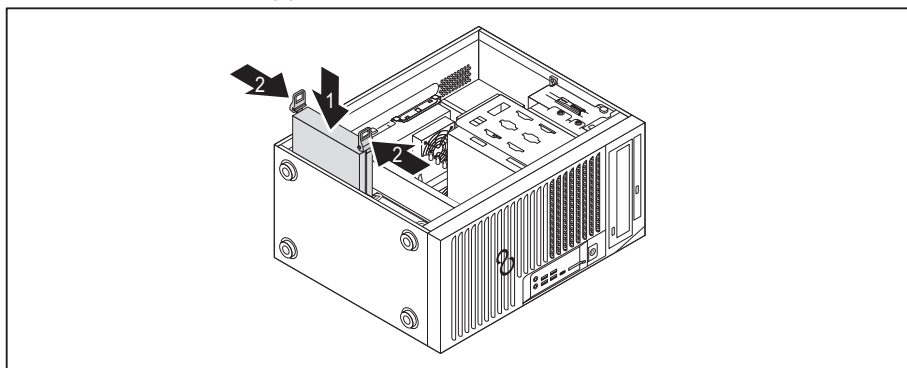


In the cold-plug process, the cables in the casing for the drive automatically lock into place when the EasyChange rails are activated, as described below.

- Open the casing (see ["Opening the casing", Page 35](#)).



- Secure the EasyChange rails to the side of the hard disk drive by inserting the upper pins of the EasyChange rail into the corresponding holes of the hard disk. The connections (a) face towards the rear.



- Slide the hard disk drive with the EasyChange rails into the drive cage in the direction of the arrow (1). Ensure that the connections of the hard disk drive face inwards towards the bottom of the casing.
- Press the levers of the EasyChange rails in the direction of the arrows (2).
- Close the casing (see ["Closing the casing", Page 36](#)).



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

Removing and installing 2¹/₂ inch hard disks or Solid State Discs (SSD) (FUJITSU Workstation CELSIUS W570 / W570power and W580 / W580power: according to the operable 5¹/₄ inch drive, FUJITSU Workstation CELSIUS W570power+ / W580power+: on the drive frame)



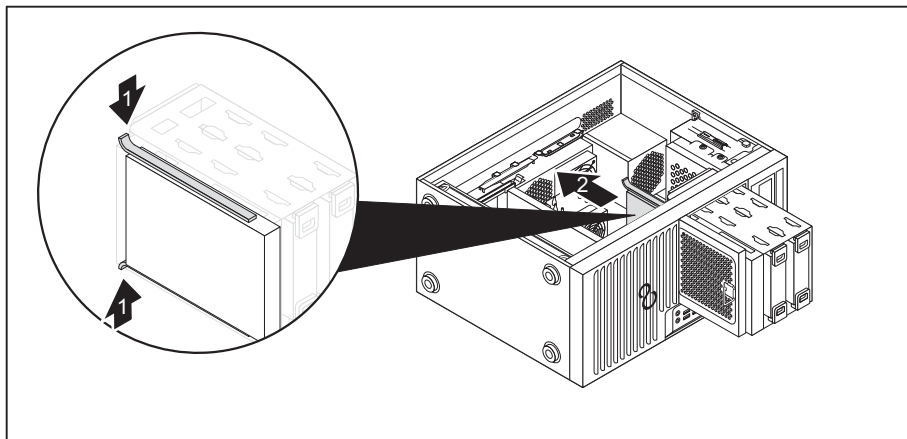
The procedure is identical for all three device variants and for both installation kits of the FUJITSU Workstation CELSIUS W570power+ / W580power+. Only the position in the casing is different (see ["Overview of the hard disk drives", Page 48](#)):

The device variant described below is the FUJITSU Workstation CELSIUS W570power+. / W580power+

For installation in this model, only use the EasyChange rails designed for this slot. If no suitable drive has already been installed at the time of delivery, these rails will already be pre-fitted in the slot.

Removing the hard disk drive (size: 2 1/2 inches or a Solid State Disc (SSD))

- ▶ Open the casing (see ["Opening the casing", Page 35](#)).
- ▶ **FUJITSU Workstation CELSIUS W570power+ / W580power+**: Open the drive cage (see ["Open the drive cage", Page 38](#)) and pull it out of the casing (see ["Pull the drive cage out of the casing.", Page 39](#)).
- ▶ Disconnect the cables connected to the hard disk drive.
- ▶ Place the device on its side as shown below.



- ▶ Press the EasyChange rails slightly together (1).
- ▶ Pull the hard disk drive out of the drive cage in the direction of the arrow (2).
- ▶ Pull the EasyChange rails off the hard disk drive.
- ▶ If you no longer need the EasyChange rails, secure them again at their location in the drive cage.
- ▶ **FUJITSU Workstation CELSIUS W570power+ / W580power+**: Reinsert the drive cage into the casing (see ["Slide the drive cage into the housing.", Page 40](#)) and close the drive cage (see ["Close the drive cage", Page 41](#)).
- ▶ Close the casing (see ["Closing the casing", Page 36](#)).
- ▶ Position the device vertically again.



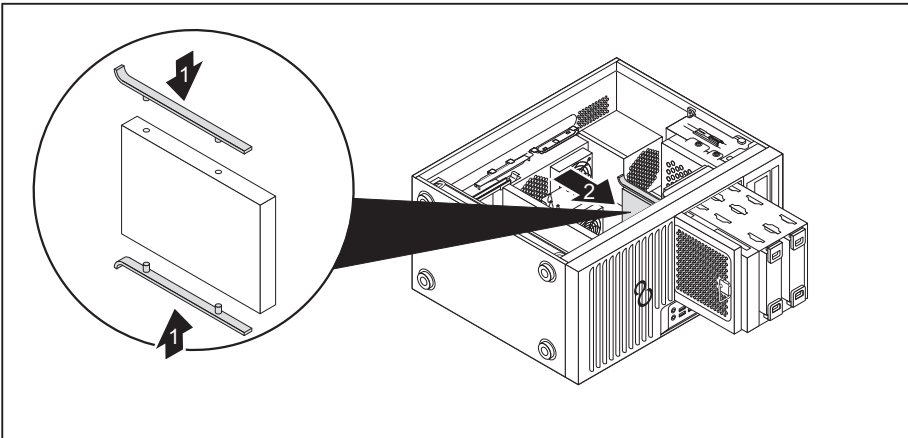
If necessary, you must adjust the entry for the drive accordingly in the *BIOS setup*.

Install a hard disk, size 2 1/2 inches or a Solid State Disk (SSD)



EasyChange rails for the hard disk drive are located on the drive cage.

- ▶ Open the casing (see ["Opening the casing", Page 35](#)).
- ▶ **FUJITSU Workstation CELSIUS W570power+ / W580power+**: Open the drive cage (see ["Open the drive cage", Page 38](#)) and pull it out of the casing (see ["Pull the drive cage out of the casing.", Page 39](#)).
- ▶ Place the device on its side as shown below.



- ▶ Secure the EasyChange rails on the side of the hard disk (1) by inserting the upper pins of the EasyChange rail into the corresponding holes of the hard disk.
- ▶ Slide the hard disk drive with the EasyChange rails into the drive cage in the direction of the arrow (2), until the hard disk is locked in place.
- ▶ Connect the cables to the hard disk drive.
- ▶ **FUJITSU Workstation CELSIUS W570power+ / W580power+**: Reinsert the drive cage into the casing (see ["Slide the drive cage into the housing.", Page 40](#)) and close the drive cage (see ["Close the drive cage", Page 41](#)).
- ▶ Close the casing (see ["Closing the casing", Page 36](#)).
- ▶ Position the device vertically again.



If necessary, you must adjust the entry for the drive accordingly in the *BIOS setup*.

Removing and installing 3 1/2 inch hard disks in the drive cage (only for the model FUJITSU Workstation CELSIUS W570 power+ with installation kit 1 (standard))



If you have ordered a device with installation kit 1, you can replace 3 1/2 inch hard disks as described below.

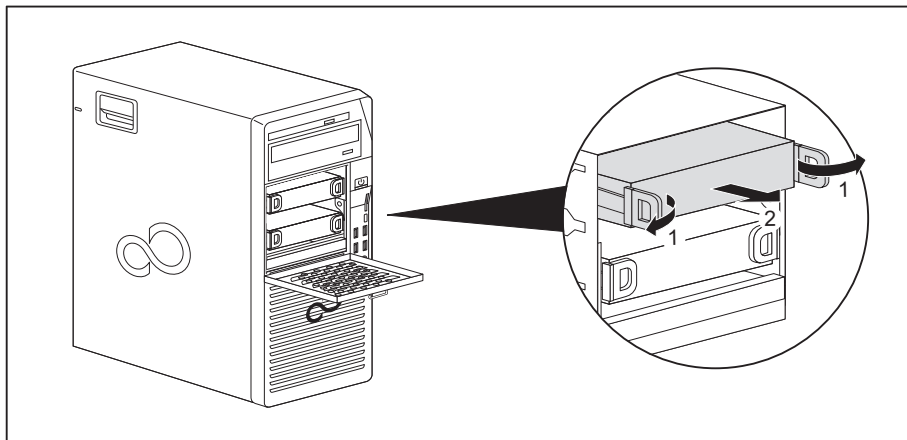
2 1/2 inch hard disks (vertical) are also installed with installation kit 1 (standard) like the hard disks in the following sections with installation kit 2 ("[Removing and installing 2 1/2 inch hard disks in the drive cage \(only for the model FUJITSU Desktop CELSIUS W570power+, with both installation kits\)](#)", [Page 65](#)).

Removing the hard disk drive

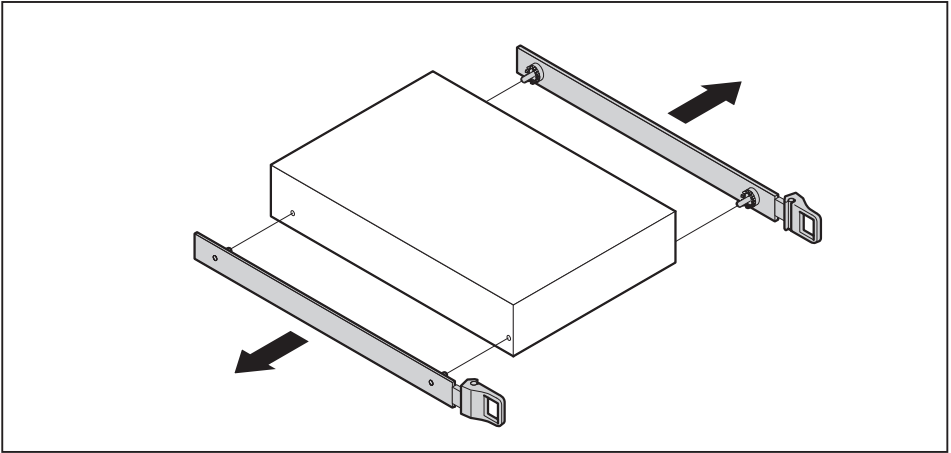


In the cold-plug process, the cables connected at the back of the drive will be disconnected automatically when the EasyChange rails are activated, as described below.

- Open the drive cage (see "[Open the drive cage](#)", [Page 38](#)).



- Press the brackets of the EasyChange rails on the hard disk drive in the direction of the arrow (1) and pull the hard disk drive out of the drive cage in the direction of the arrow (2).



- ▶ Pull the EasyChange rails off the hard disk drive.
- ▶ If you no longer need the EasyChange rails, secure them again at their location in the drive cage.
- ▶ Close the drive cage (see ["Close the drive cage", Page 41](#)).

i

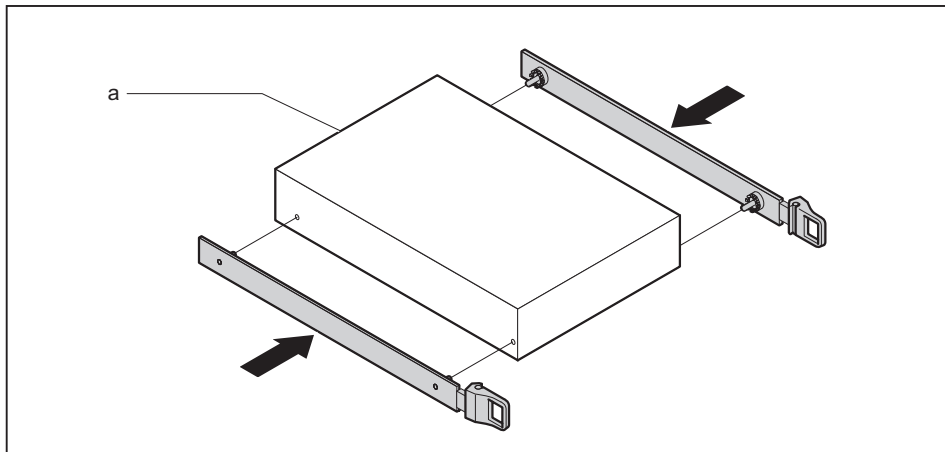
If necessary, you must adjust the entry for the drive accordingly in the *BIOS setup*.

Installing a hard disk drive

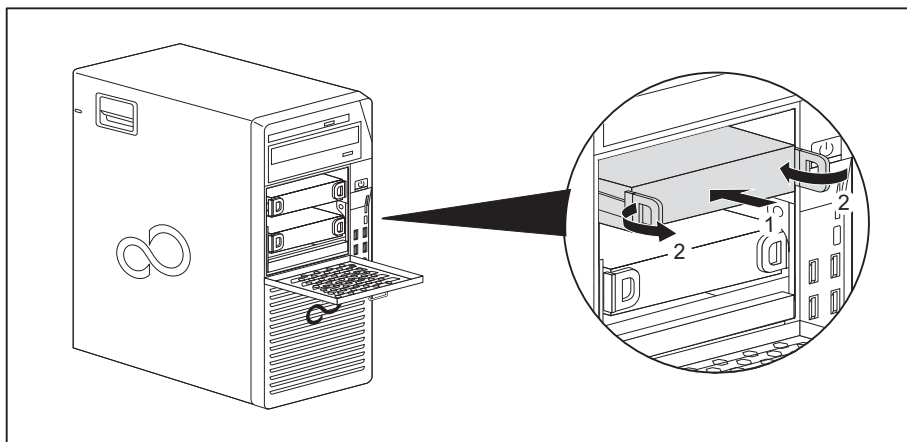
i

In the cold-plug process, the cables in the casing for the drive automatically lock into place when the EasyChange rails are activated, as described below.

- ▶ Open the drive cage (see ["Open the drive cage", Page 38](#)).



- Secure the EasyChange rails to the side of the hard disk drive by inserting the upper pins of the EasyChange rail into the corresponding holes of the hard disk. The connections (a) face towards the rear.



- Slide the hard disk drive with the EasyChange rails into the drive cage in the direction of the arrow (1). Ensure that the connections of the hard disk drive face inwards towards the inside of the casing.
- Press the levers of the EasyChange rails in the direction of the arrow (1).
- Close the drive cage (see ["Close the drive cage", Page 41](#)).



If necessary, you must adjust the entry for the drive accordingly in the *BIOS setup*.

Removing and installing 2 1/2 inch hard disks in the drive cage (only for the model FUJITSU Desktop CELSIUS W570power+, with both installation kits)

i

The procedure for installation kit 1 (for the installation variant with up to two 2 1/2 inch drives, vertical) is identical to that of installation kit 2 (up to four 2 1/2 inch drives, vertical)

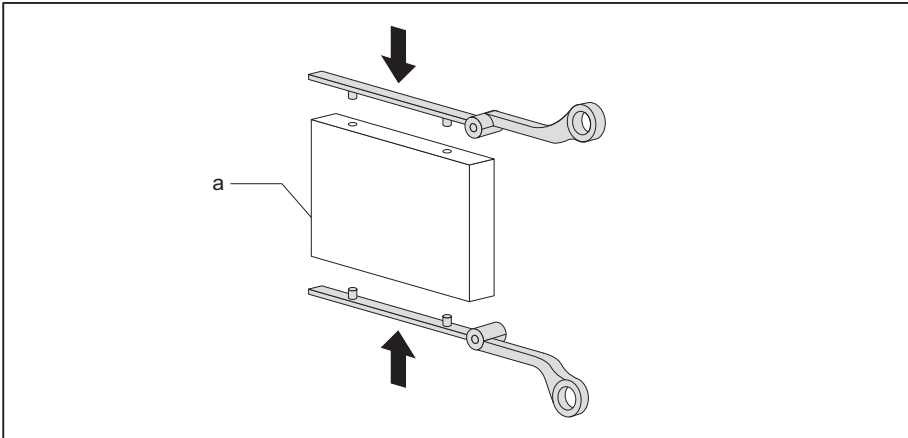
The device variant with installation kit 2 and four drives is shown below.

Installing the hard disk drive

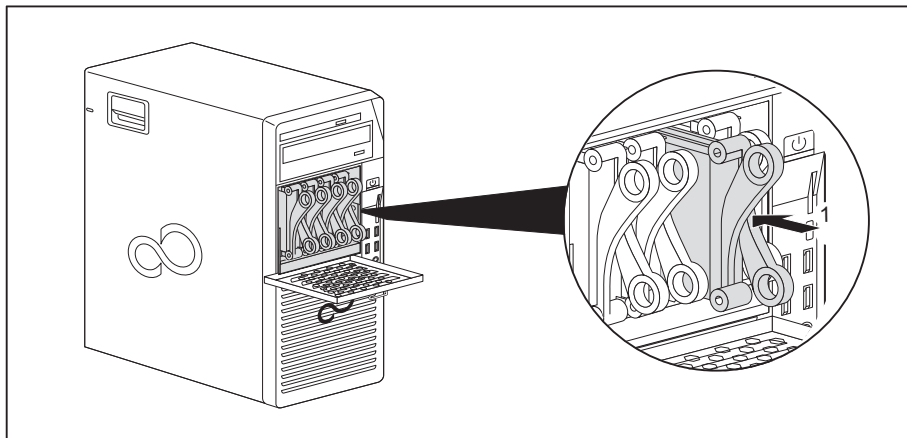
i

In the cold-plug process, the cables in the casing for the drive automatically lock into place when the EasyChange rails are activated, as described below.

- Open the drive cage (see ["Open the drive cage", Page 38](#)).



- Secure the EasyChange rails to the side of the hard disk drive by inserting the upper pins of the EasyChange rail into the corresponding holes of the hard disk. The connections (a) point to the rear, the label on the drive points to the right.



- ▶ Press together the EasyChange rails (1) and push the hard disk drive into the drive cage in the direction of the arrow (2). Ensure that the connections of the hard disk drive face inwards towards the inside of the casing.
- ▶ Close the drive cage (see ["Close the drive cage", Page 41](#)).



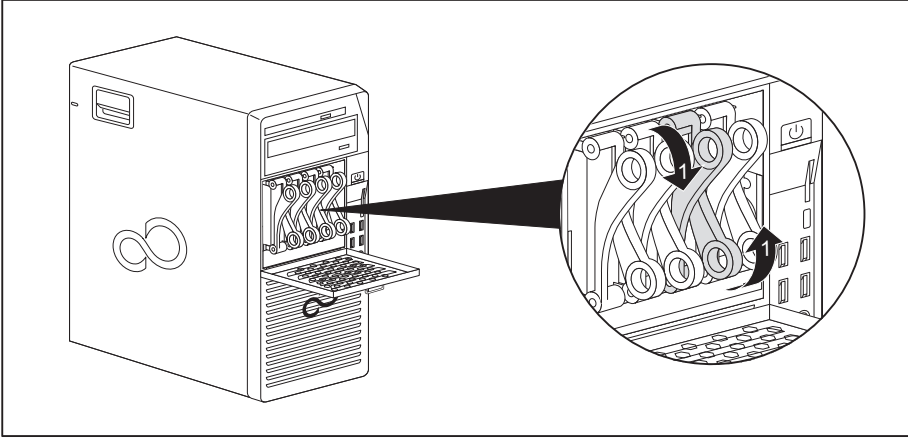
If necessary, you must adjust the entry for the drive accordingly in the *BIOS setup*.

Removing a hard disk drive

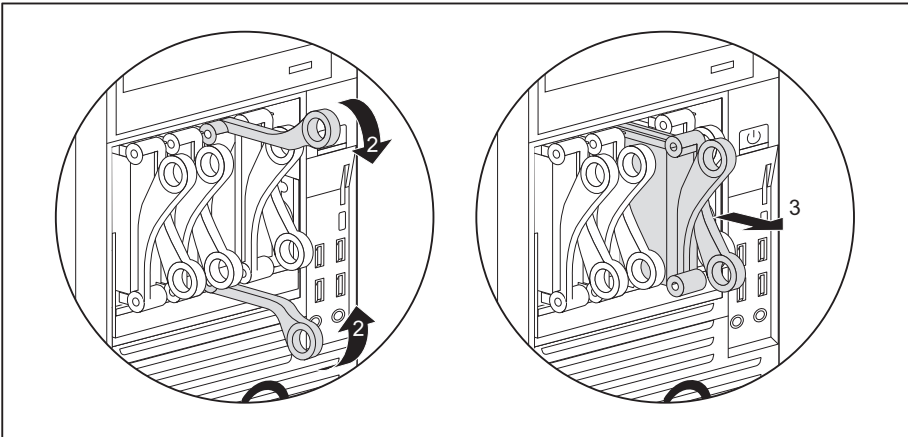


In the cold-plug process, the cables connected at the back of the drive will be disconnected automatically when the EasyChange rails are activated, as described below.

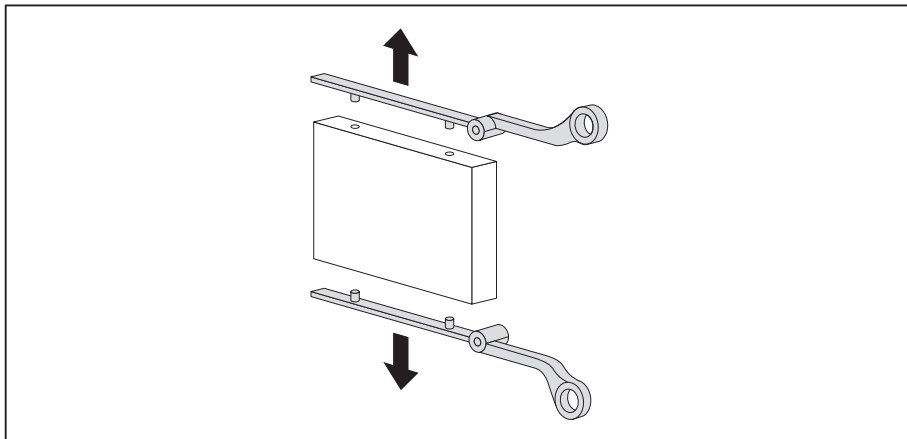
- Open the drive cage (see ["Open the drive cage", Page 38](#)).



- Press outwards the brackets of the EasyChange rails on the hard disk drive in the direction of the arrow (1), until the levers move upwards and the hard disk is unlocked.



- Press the levers together again (2).
- Pull the hard disk drive out of the drive cage in the direction of the arrow (3).



- ▶ Pull the EasyChange rails off the hard disk drive.
- ▶ If you no longer need the EasyChange rails, secure them again at their location in the drive cage.
- ▶ Close the drive cage (see ["Close the drive cage", Page 41](#)).



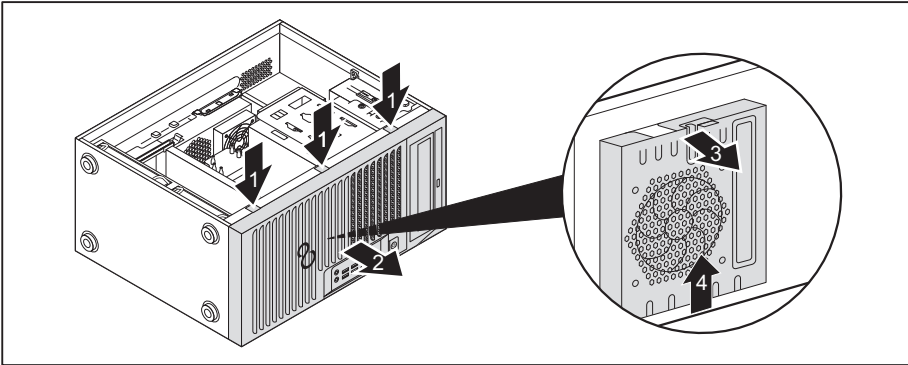
If necessary, you must adjust the entry for the drive accordingly in the *BIOS setup*.

Removing and fitting the front fan

In order to remove or fit long component groups or an M.2 module, it is recommended to remove the front fan under the front panel while working on the device.

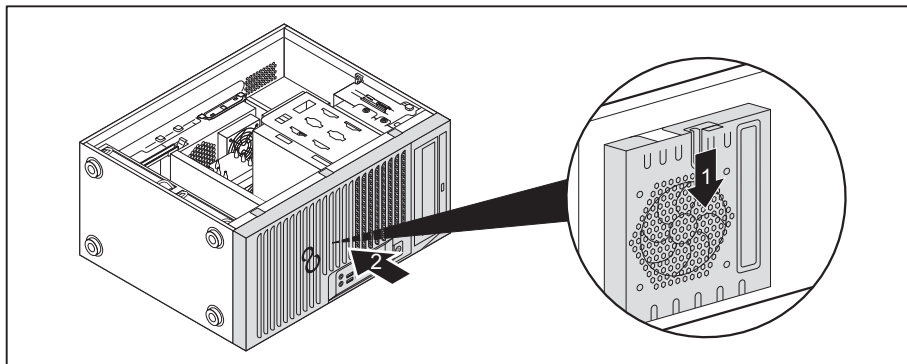
Removing the front fan

- Instructions: Open the casing (see ["Opening the casing", Page 35](#)).
- Disconnect the fan cable from the mainboard.



- Release the detents of the front cover (1).
 - Remove the front cover from the casing in the direction of the arrow (2).
 - Release the detent (3) and slide the fan away from the casing in the direction of the arrow (4).
- ↳ You can now remove or install the M.2 module or long modules.

Installing the front fan



- ▶ Attach the front fan to the centering pins on the housing and move it in the direction of the arrow (1).
- ↳ The front fan will then be locked in position.
- ▶ Fit the front cover onto the casing (2).
- ▶ Connect the fan cable to the mainboard.
- ▶ Close the casing (see ["Closing the casing", Page 36](#)).

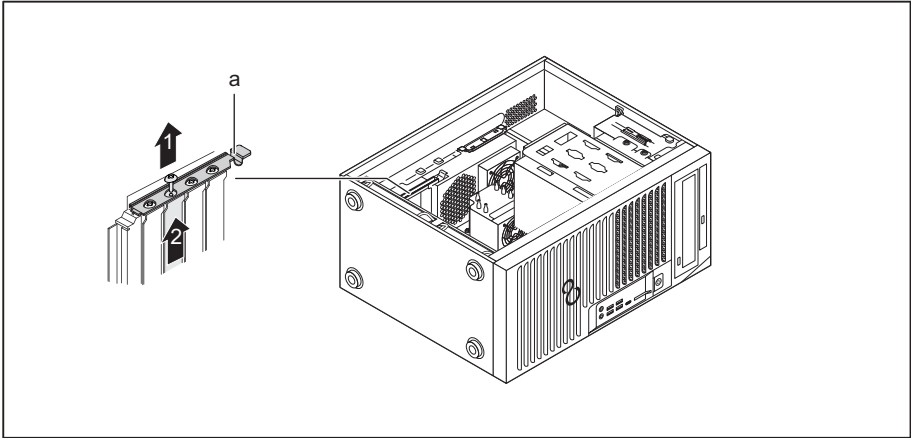
Installing and removing a board

You can install additional modules in order to increase the performance of your machine.

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

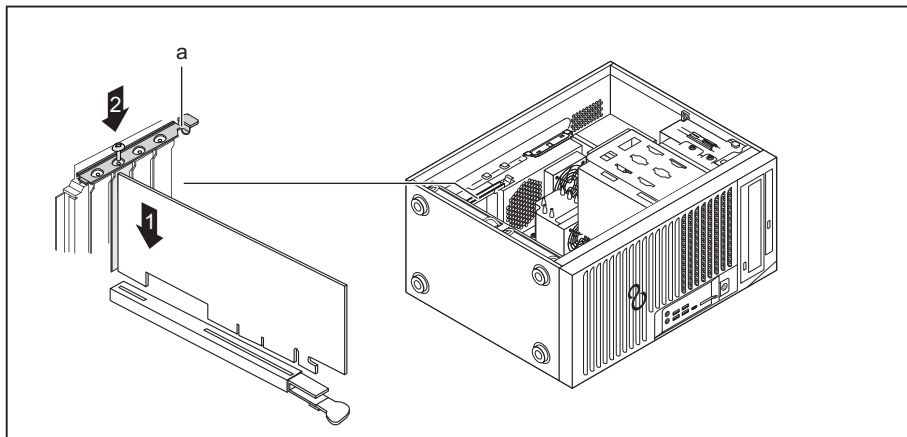
- For long modules: Remove the front fan (see ["Removing and fitting the front fan", Page 69](#)).
- Open the casing (see ["Opening the casing", Page 35](#)).



- Fold the module lock (a) upwards to open it.
- Loosen the screw on the slot cover (1), if one is fitted.
- 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.



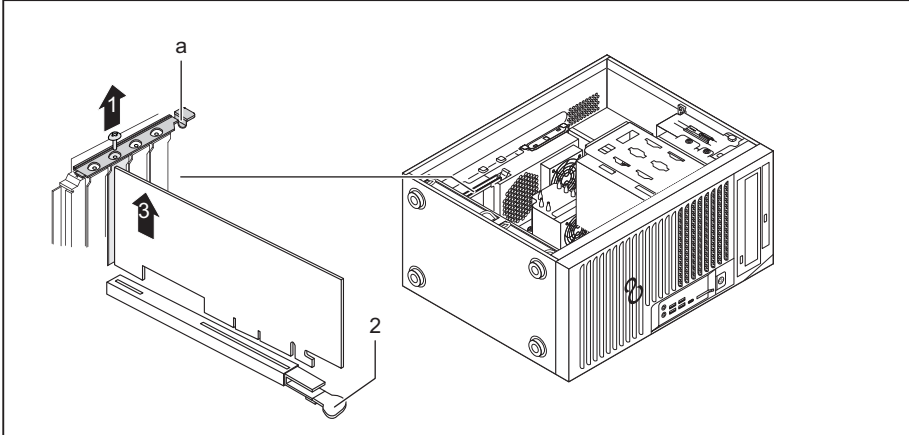
- ▶ Push the board into the slot (1).
- ▶ Secure the module with the screw (2), if one is fitted.
- ▶ Fold the module lock (a) back down to close it.
- ▶ If necessary, connect the cables to the board.
- ▶ For long modules: Install the front fan (see ["Removing and fitting the front fan", Page 69](#)).
- ▶ Close the casing (see ["Closing the casing", Page 36](#)).



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.

Removing a board

- ▶ For long modules: Remove the front fan (see ["Removing and fitting the front fan", Page 69](#)).
- ▶ Open the casing (see ["Opening the casing", Page 35](#)).
- ▶ Disconnect the cables connected to the board.



- ▶ Fold the module lock (a) upwards to open it.
- ▶ Loosen the screw on the module (1), if one is fitted.

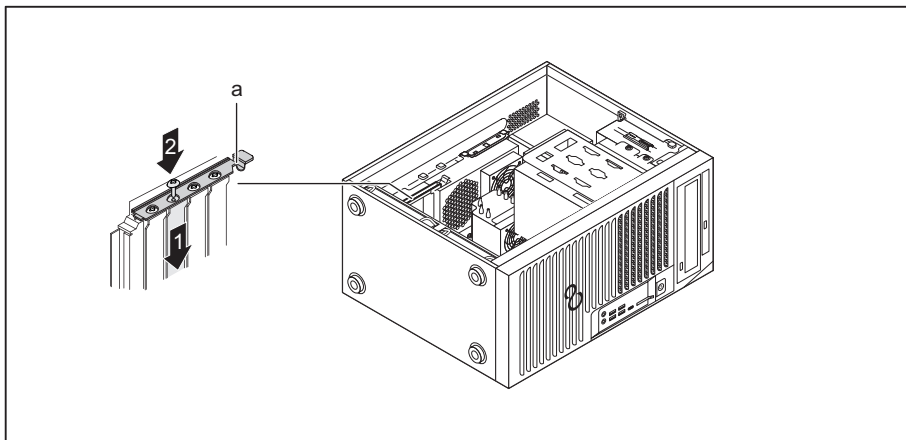


Modules in the PCI Express x16 slot are also secured at the bottom of the slot with a locking latch (2). Push the latch to the side to release the card. You can then remove the card as described below.

- ▶ Pull the slot cover out of the slot in the direction of the arrow (3).
- ▶ Place the board in suitable packaging.



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



- ▶ Slide the slot cover into the slot (1).
- ▶ Secure the slot cover with the screw (2), if one is provided.
- ▶ Fold the module lock (a) back down to close it.
- ▶ For long modules: Install the front fan (see ["Removing and fitting the front fan", Page 69](#)).
- ▶ Close the casing (see ["Closing the casing", Page 36](#)).

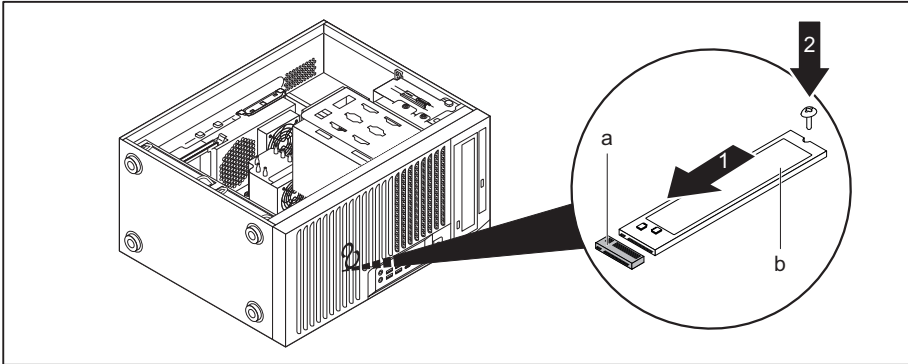


If you have installed or removed a PCI board, please check the relevant PCI slot settings in the *BIOS Setup*. If necessary, change the settings. Further information is provided in the PCI board documentation.

Installing and removing an M.2 module

Installing an M.2 module

- ▶ Open the casing (see ["Opening the casing", Page 35](#)).
- ▶ If necessary, remove the front fan and long component groups for easier installation (see ["Removing and fitting the front fan", Page 69](#) and ["Removing a board", Page 73](#)).



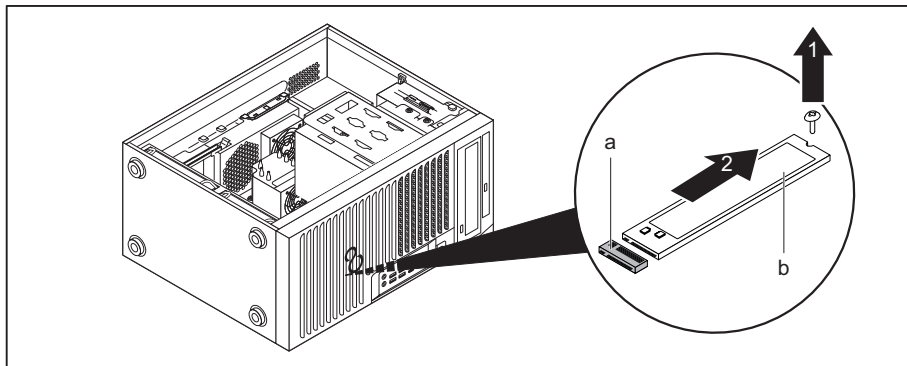
- ▶ Insert the M.2 module (b) at a slight angle in the direction of the arrow (1) into the slot (a) on the mainboard.
- ▶ Secure the M.2 module on the mainboard with the screw (2).
- ▶ If you have removed the front fan and long component groups: Refit these components (see ["Removing and fitting the front fan", Page 69](#) and ["Installing a board", Page 71](#)).
- ▶ Close the casing (see ["Closing the casing", Page 36](#)).



If necessary, you must adjust the entry for the drive accordingly in the *BIOS Setup*.

Removing an M.2 module

- ▶ Open the casing (see ["Opening the casing", Page 35](#)).
- ▶ If necessary, remove the front fan and long component groups for easier installation (see ["Removing and fitting the front fan", Page 69](#) and ["Removing a board", Page 73](#)).



- ▶ Undo the screw (1).
- ▶ Pull the M.2 module (b) slightly at an angle in the direction of the arrow (2) and out of the slot (a) on the mainboard and remove it from the casing.
- ▶ If you have removed the front fan and long component groups: Refit these components (see ["Removing and fitting the front fan", Page 69](#) and ["Installing a board", Page 71](#)).
- ▶ Close the casing (see ["Closing the casing", Page 36](#)).



If necessary, you must adjust the entry for the drive accordingly in the *BIOS Setup*.

Installing and removing WLAN antennas

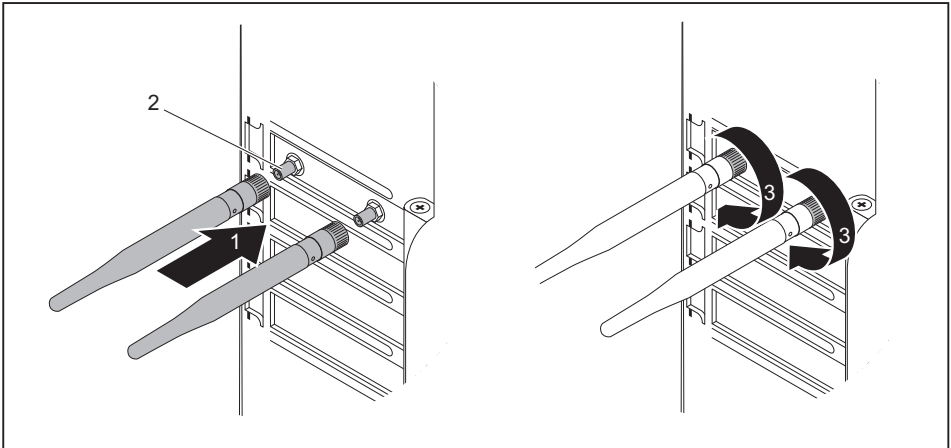
If you have installed a suitable low-profile board, you can install and remove the associated WLAN antennas as described below.



Operation of WLAN antennas is not permitted in Taiwan.

Installing external WLAN antennas

- A suitable board is installed (see ["Installing a board", Page 71](#)).



- ▶ Working in the direction of the arrow (1), place the WLAN antennas onto the plug-in positions of the board (2).
- ▶ Secure the WLAN antennas by turning in the direction of the arrow (3).
- ▶ Align the WLAN antennas as required.

Removing external WLAN antennas

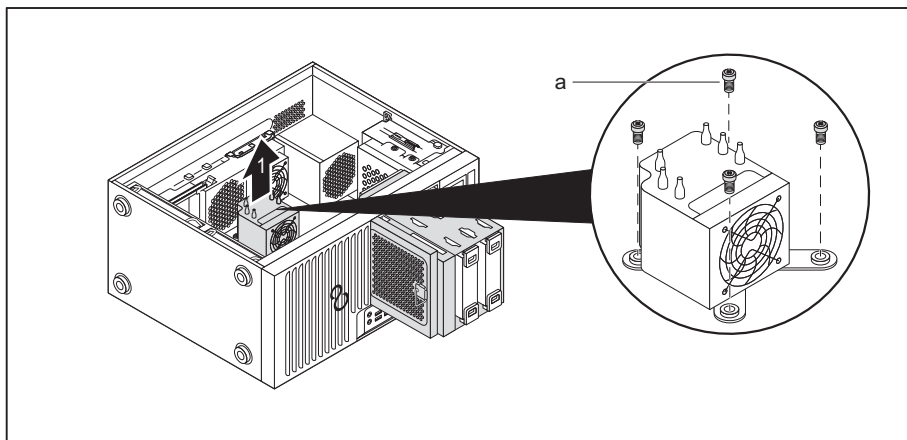
- ▶ Undo the WLAN antennas by turning in the direction of the arrow (1).
- ▶ Pull the WLAN antennas in the direction of the arrow (3) and away from the plug-in positions of the board (2).

Installing and removing heat sinks

Removing the heat sink

The shape and position of the heat sink are device-dependent. The approach is the same for all variants.

- ▶ Open the casing (see ["Opening the casing", Page 35](#)).
- ▶ **FUJITSU Workstation CELSIUS W570+ / W580power+:** Open the drive cage (see ["Open the drive cage", Page 38](#)) and pull the drive cage out of the casing (see ["Pull the drive cage out of the casing.", Page 39](#)).
- ▶ Disconnect the fan cable (FAN (CPU)) from the mainboard.



- ▶ Undo the screws on the heat sink (a).
- ▶ Lift the heat sink out of the casing (1).
- ↳ You can now replace the processor (see ["Replacing the processor", Page 80](#)).



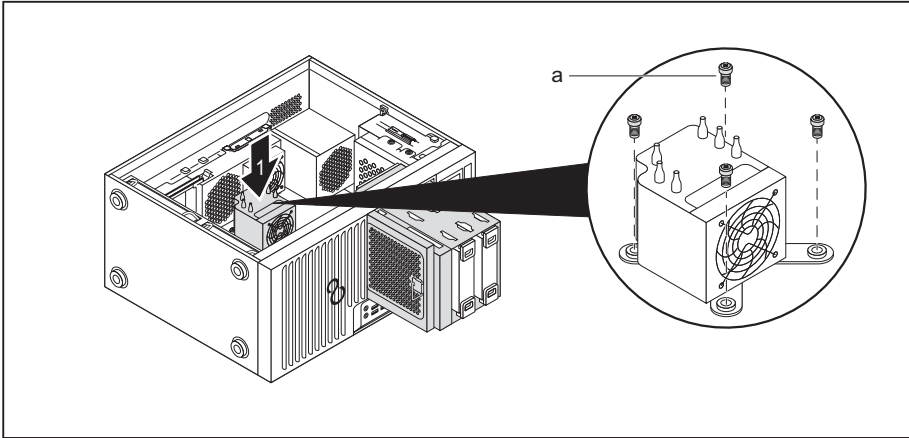
Never operate the device without a heat sink! Before initial startup, install the heat sink again in the same way as it was installed in the device before removal.

Installing the heat sink

- Open the casing (see ["Opening the casing", Page 35](#)).



Install the heat sink again in the same way as it was fitted in the device at the time of removal.



- Insert the heat sink into the casing (1). In doing so, correctly align the screw holes on the heat sink with the screw holes on the mainboard.
- Fasten the screws (a).
- Connect the fan leads to the mainboard (FAN CPU).
- **FUJITSU Workstation CELSIUS W570+ / W580power+:** Insert the drive cage into the casing (see ["Slide the drive cage into the housing.", Page 40](#)) and close the drive cage (see ["Close the drive cage", Page 41](#)).
- Close the casing (see ["Closing the casing", Page 36](#)).

Mainboard expansions

Details on how to upgrade the main memory or the processor of your device can be found in the manual for the mainboard.

Upgrading main memory

- ▶ Open the casing (see ["Opening the casing", Page 35](#)).
- ▶ **FUJITSU Workstation CELSIUS W570+ / W580power+**: Open the drive cage (see ["Open the drive cage", Page 38](#)) and pull the drive cage out of the casing (see ["Pull the drive cage out of the casing.", Page 39](#)).
- ▶ Upgrade the main memory according to the description in the manual for the mainboard.
- ▶ **FUJITSU Workstation CELSIUS W570+ / W580power+**: Insert the drive cage into the casing (see ["Slide the drive cage into the housing.", Page 40](#)) and close the drive cage (see ["Close the drive cage", Page 41](#)).
- ▶ Close the casing (see ["Closing the casing", Page 36](#)).

Replacing the processor

- ▶ Open the casing (see ["Opening the casing", Page 35](#)).
- ▶ Remove the heat sink (see ["Removing the heat sink", Page 78](#)).
- ▶ Replace the processor as described in the manual for the mainboard.
- ▶ Install the heat sink again (see ["Installing the heat sink", Page 79](#)).
- ▶ Close the casing (see ["Closing the casing", Page 36](#)).

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.



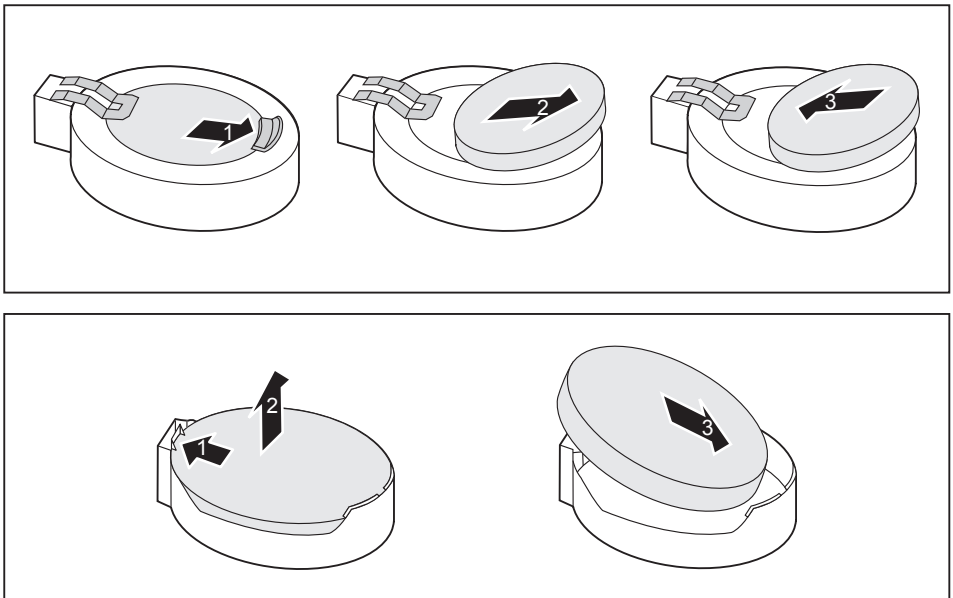
Incorrect replacement of the lithium battery may lead to a risk of explosion!

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

Do not dispose of lithium batteries with 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 jumps out of the holder slightly.
- ▶ Remove the battery (2).
- ▶ Push the new lithium battery of the identical type into the holder (3) and press it down until it engages.

Technical data

Electrical data	
Protection class:	I
Rated voltage range	100 V – 240 V
Rated frequency	50 Hz – 60 Hz
Max. rated current	100 V – 240 V
CELSIUS W570 (250 W)	3.3 – 1.3 A
CELSIUS W570power / W570power+ (360 W)	4.4 – 1.8 A
CELSIUS W580 (250 W)	3.5 – 1.5 A
CELSIUS W580power / W580power+ (360 W)	4.6 – 2.1A
Dimensions	
Height/width/depth:	180 mm x 313 mm x 374 mm / 7,09 in x 12,32 in x 14,72 in
Weight	
in basic configuration (configuration dependent:	about 7.5 kg / 16,5 lbs
Ambient conditions	
Environment class 3K2	DIN IEC 721 part 3-3
Environment class 2K2	DIN IEC 721 part 3-2
Temperature	
Operation (3K2)	10 °C 35 °C / 50 °F ... 95 °F
Transportation (2K2)	-25 °C 60 °C / -3 °F ... 140 °F
The formation of condensation is not permitted while the device is in operation !	
Clearance required to ensure adequate ventilation:	
without air vents	at least 10 mm / 0,39 in
with air vents	at least 200 mm / 7,87 in



The data sheets of these devices contains further technical data. The data sheets can be found on our website at ["http://www.fujitsu.com/fts/"](http://www.fujitsu.com/fts/).

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