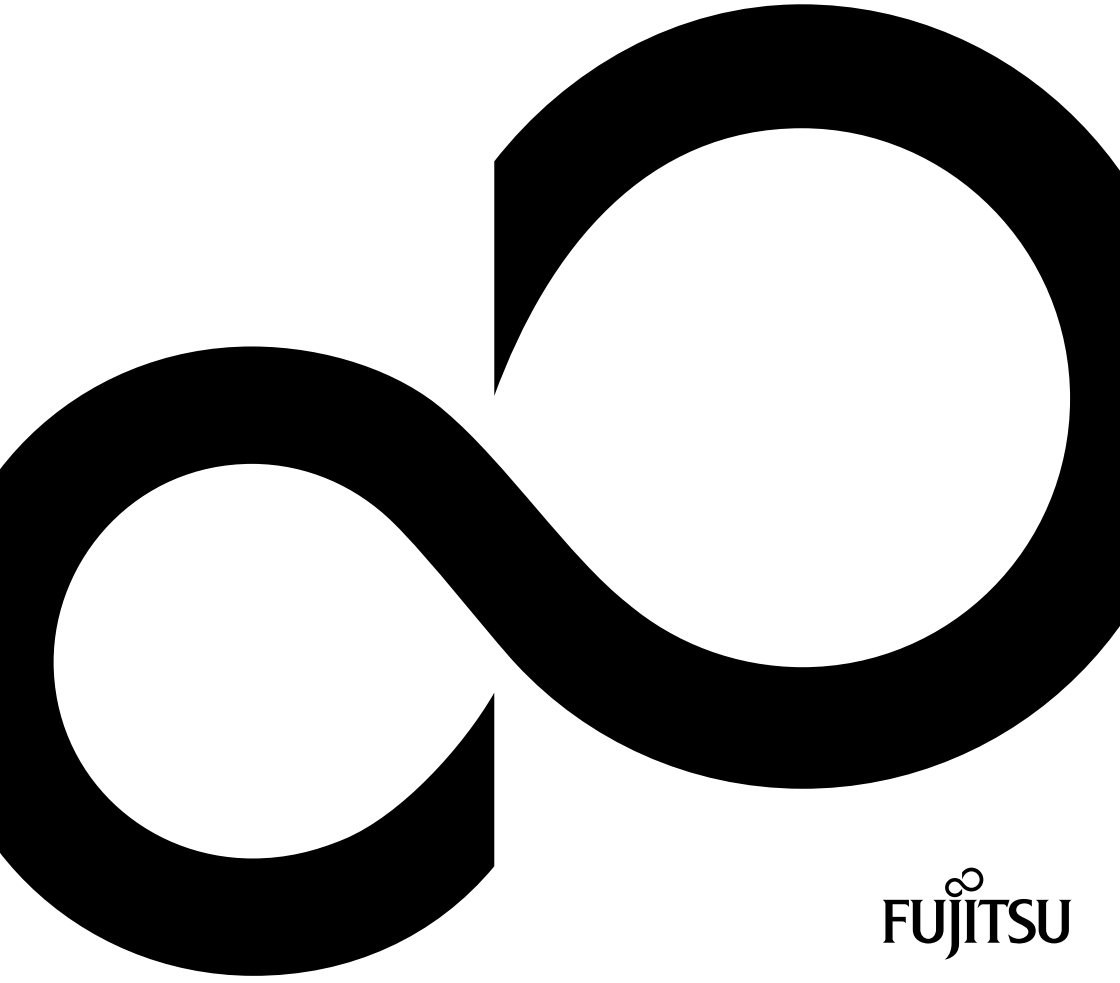
FUJITSU Desktop
ESPRIMO Q55x / Q95x



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- Your sales office

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FUJITSU Desktop
ESPRIMO Q55x / Q95x

Operating Manual

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Your ESPRIMO

... is available with various configuration levels which differ in terms of hardware and software equipment. You can install additional drives (for example a DVD drive) and other boards.

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 provided:

- in the "Quick Start Guide" poster
- in the "Safety/regulations" manual
- in the "Warranty" manual
- in the "BIOS Setup" 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*)

Validity of the Reference Manual

This Reference Manual is valid for the following systems:

- FUJITSU Desktop ESPRIMO Q556
- FUJITSU Desktop ESPRIMO Q956

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.`
This font	indicates • terms and texts used in a software interface, e.g.: Click on *Save* • names of programs or files, e.g. *Windows* or *setup.exe*.
"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
Key	indicates a key on the keyboard, e.g: F10
This font	indicates terms and texts that are emphasised or highlighted, e.g.: **Do not switch off the device**

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 starting to work with your device.

Front

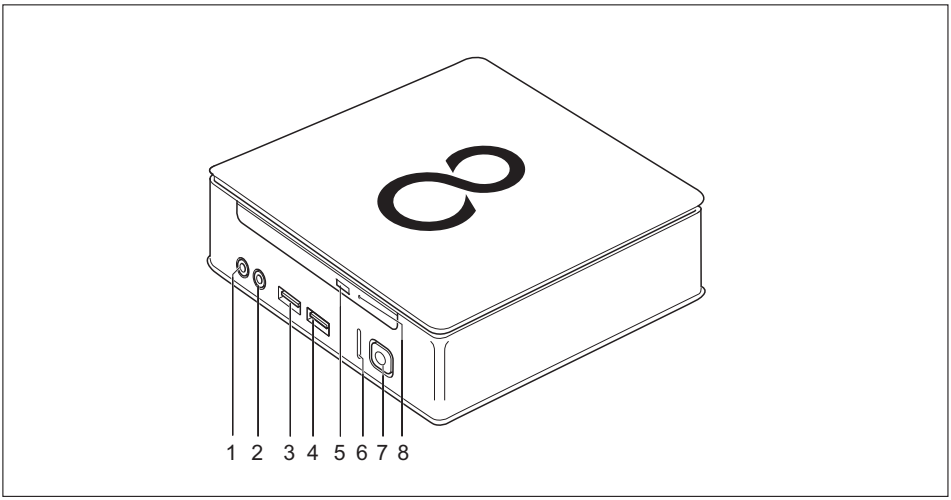
The device is available in several device variants:

- Device variant with optical drive
- Device variant with SmartCard reader and/or palm sensor

If you have not installed either an optical drive or a SmartCard reader / palm sensor, fit the blanking plate.

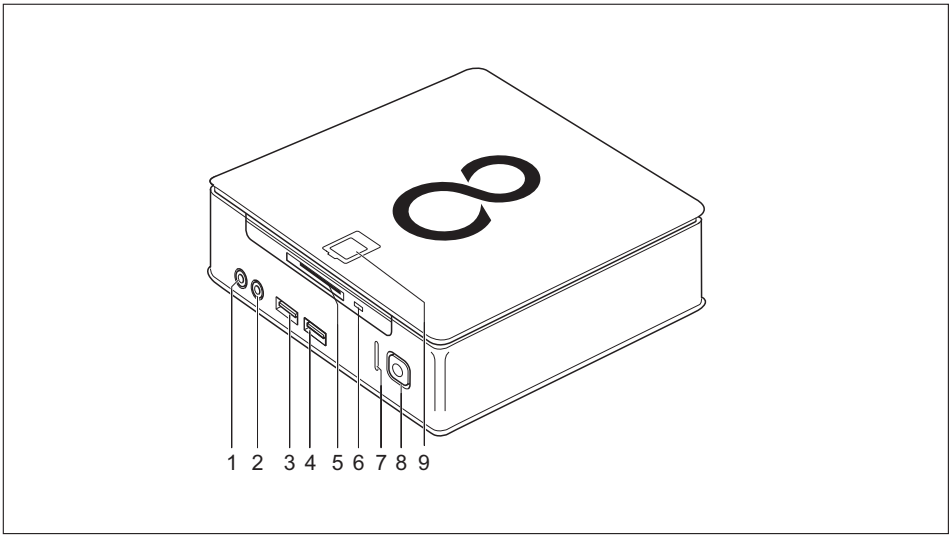
You can find information on modifying the device and on installing and removing components in Section "System expansions", Page 60.

Device variant with the maximum of components



1 = Microphone port
2 = Audio output
3 = USB port (USB 3.0)
4 = USB port (USB 3.0)
5 = Insert/eject button, optical drive (optional)
6 = Hard disk indicator
7 = ON/OFF switch with power indicator
8 = Emergency removal

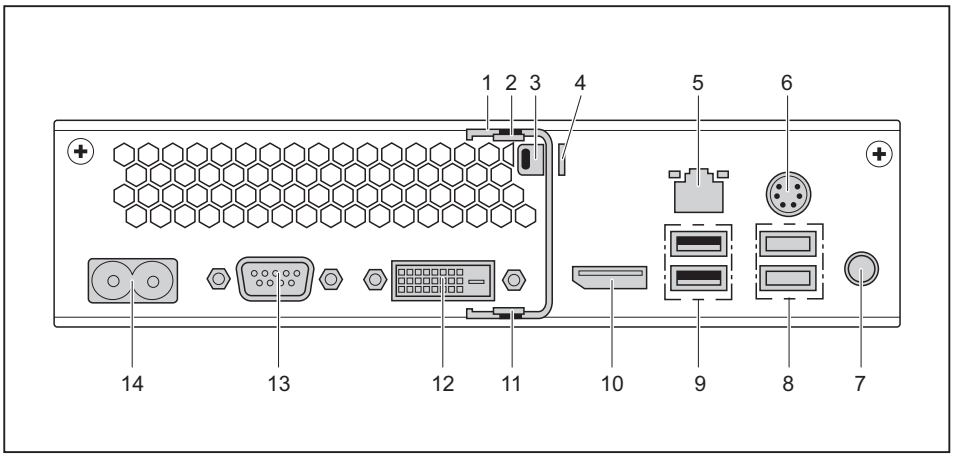
Device variant with SmartCard reader and/or palm sensor



1 = Microphone port
2 = Audio output
3 = USB port (USB 3.0)
4 = USB port (USB 3.0)
5 = SmartCard reader (optional)
6 = SmartCard reader indicator (optional)
7 = Hard disk indicator
8 = ON/OFF switch with power-on indicator
9 = Palm sensor (optional)

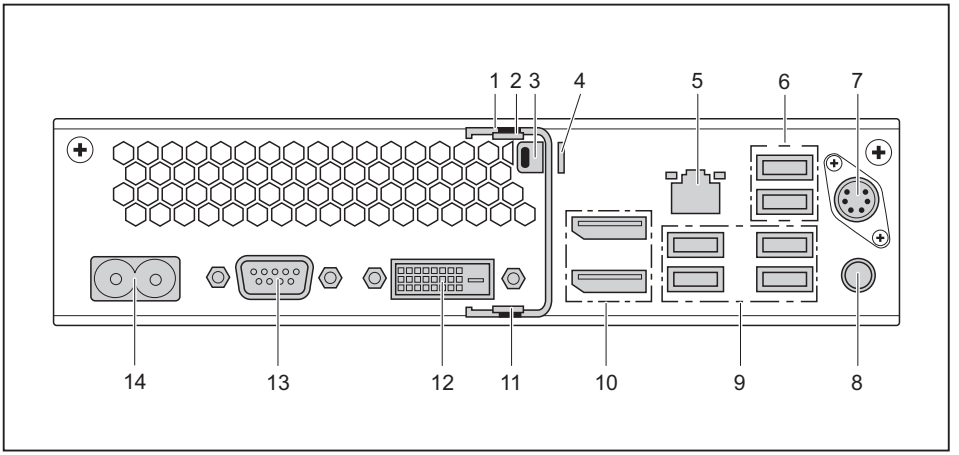
Rear

FUJITSU Desktop ESPRIMO Q55x



1 = Top casing cover unlocking mechanism
2 = Locking bracket (optional)
3 = Security lock device
4 = Padlock clamp
5 = LAN port
6 = PS/2 port
7 = Audio output
8 = 2 USB ports (USB 3.0)
9 = 2 USB ports (USB 2.0)
10 = DisplayPort
11 = Bottom casing cover unlocking mechanism
12 = DVI-D monitor port
13 = Serial interface
14 = Power connection (AC IN)

FUJITSU Desktop ESPRIMO Q95x



1 = Top casing cover unlocking mechanism
2 = Locking bracket (optional)
3 = Security lock device
4 = Padlock clamp
5 = LAN port
6 = 2 USB ports (USB 2.0)
7 = PS/2 port (optional)
8 = Audio output
9 = 4 USB ports (USB 3.0)
10 = 2 DisplayPorts
11 = Bottom casing cover unlocking mechanism
12 = DVI-D monitor port
13 = Serial interface
14 = Mains connection (AC IN)

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 91 as well as the instructions in Chapter "Getting started", Page 17.

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.

You must remove the power plug from the power socket so that the mains voltage is completely disconnected.

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).

Do not lay or place any objects on the upper side of the device.

Do not apply any pressure to the upper side of the device during operation.

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. To avoid damaging the device, wait until it has reached room temperature and is absolutely dry before initial startup.

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/").

CE marking

The shipped version of this device complies with the requirements of EU directives 2004/108/EC "Electromagnetic compatibility", 2006/95/EC "Low voltage directive", 2011/65/EC "RoHS directive" and 2009/125/EC "ecodesign directive" from 20 April 2016: 2014/30/EC "Electromagnetic Compatibility" and 2014/35/EC "Low Voltage Directive").

CE marking for devices with radio component

This equipment complies with the requirements of Directive 1999/5/EC of the European Parliament and Commission from 9 March, 1999 governing Radio and Telecommunications Equipment and mutual recognition of conformity.

CE nnnn (!) ; nnnn: For digits and exclamation mark (!), see label on the product.

You can find more information and declarations of conformity on the Internet at: "http://globalsp.ts.fujitsu.com/sites/certificates".

This equipment can be used in the following countries:

Belgium	Bulgaria	Denmark	Germany
Estonia	Finland	France	Greece
UK	Ireland	Iceland	Italy
Croatia	Latvia	Liechtenstein	Lithuania
Luxembourg	Malta	Netherlands	Norway
Austria	Poland	Portugal	Rumania
Sweden	Switzerland	Slovakia	Slovenia
Spain	Turkey	Czech Republic	Hungary
Cyprus			

Contact the corresponding government office in the respective country for current information on possible operating restrictions. If your country is not included in the list, then please contact the corresponding supervisory authority as to whether the use of this product is permitted in your country.

FCC Compliance Statement

If the device complies with the FCC regulations, the FCC sign can be found on the type rating plate.

FCC Class B Compliance Statement

DOC (INDUSTRY CANADA) NOTICES
Notice to Users of Radios and Television :

This class B digital apparatus complies with Canadian ICES-003.

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 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. 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.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

The transmitters in this device must not be co-located or operated in conjunction with any other antenna or transmitter.

To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

Users are not authorized to modify this product. Any modifications invalidate the warranty.

This equipment may not be modified, altered, or changed in any way without signed written permission from Fujitsu. Unauthorized modification will void the equipment authorization from the FCC and Industry Canada and the warranty.

Getting started

Please observe the safety information in the "Important notes", Page 13 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 60 chapter.

Fitting the underside cover (device dependent)

Type rating plate

FUJITSU Desktop ESPRIMO Q95x:

When your device is delivered, the lower cover (2) is not yet installed on the underside of the device, instead it is enclosed with the system, so that you can see the type rating plate (3) and the software licence information during the initial start-up.

The type rating plate and the software licence are affixed on the device cover and are normally not visible underneath the installed lower cover.

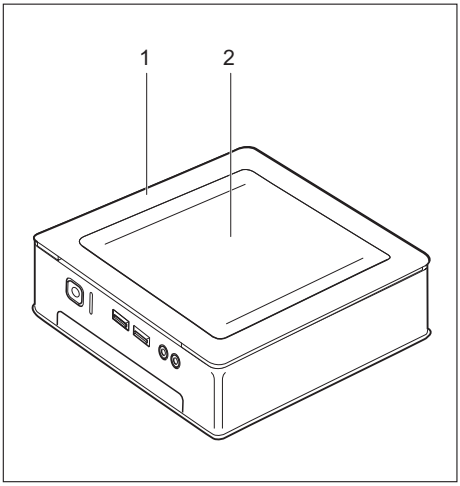
FUJITSU Desktop ESPRIMO Q55x:

With the FUJITSU Desktop ESPRIMO Q55x, the type rating plate is attached to the underside of the device or to the right side of the device (when used vertically).

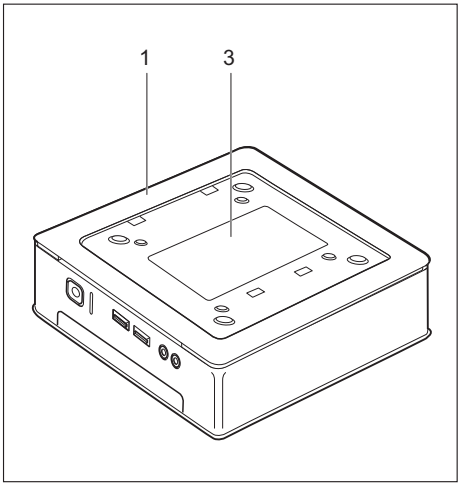
FUJITSU Desktop ESPRIMO Q95x:

Only fit the underside cover if you are using the device in a horizontal or vertical operating position without attaching it to a VESA interface (see Section "Setting up the device", Page 20).

If you are fitting the device onto the VESA interface of a monitor, you must not fit the underside cover. If you do, the screw holes for the VESA attachment will no longer be accessible.



Device with device cover (1), with installed lower cover (2)

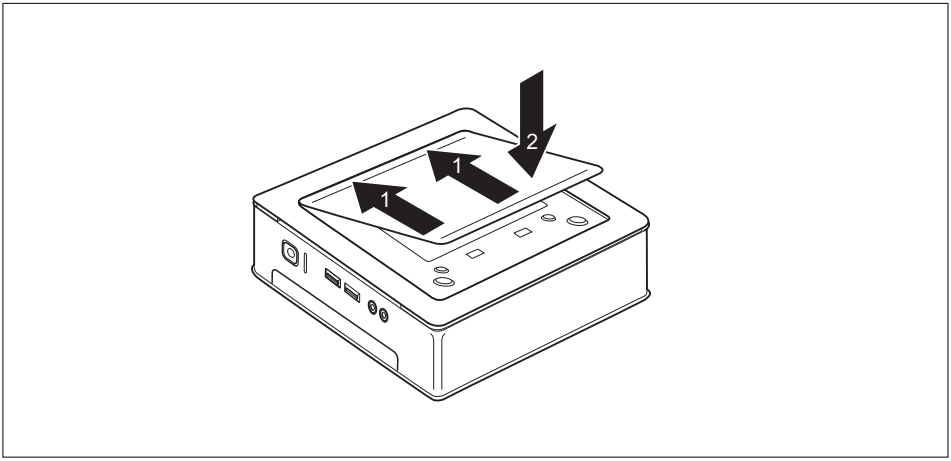


Device with device cover (1) and visible type plate (3, ESPRIMO Q95x only), no underside cover.

The device is equipped with a device cover (1) on the underside. The device cover is divided into two: during operation, the lower cover (2) is inserted in the device cover.

To install the lower cover before the initial start-up and to be able to use the device for the first time, proceed as follows:

► Turn the device over and place it on a stable, flat and clean surface. If necessary, lay an anti-slip cloth on this surface to prevent the device from being scratched.



► Place the lower cover on the underside of the device as shown.

► Hook the lower cover into the openings provided for it on the underside (1).

► Fold the cover in the direction of the arrow (2), until you feel and hear it engage.

You will find information on removing the lower cover in section "Remove the lower cover", Page 26.

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 inches 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 inches from the device must be observed for ventilation areas.

Do not stack several devices on one another and do not stand a monitor on the device.

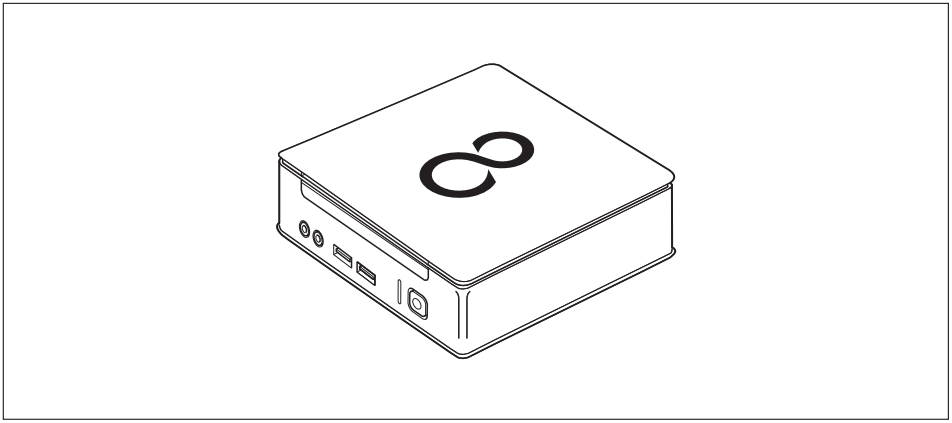
Do not expose the device to extreme ambient conditions (see "Technical data", Page 91, section "Ambient conditions"). Protect the device against dust, humidity and heat.

Operating position

You can use the device in various operating positions:

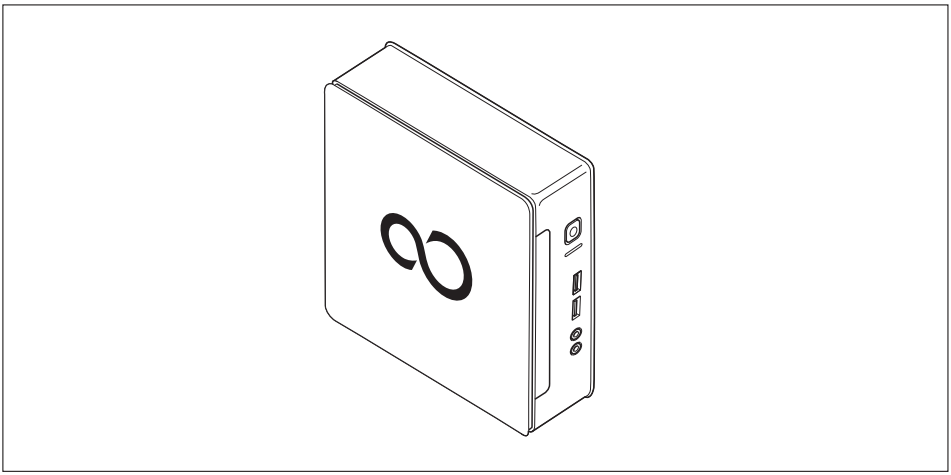
Horizontal, top casing cover upwards

With the FUJITSU Desktop ESPRIMO Q55x device version, you will need to affix the adhesive feet you were supplied with to the four corners of the underside of the device in this operating position (see Section "Attaching the adhesive feet (optional)", Page 24).



Vertical with no base, ON/OFF switch facing upwards

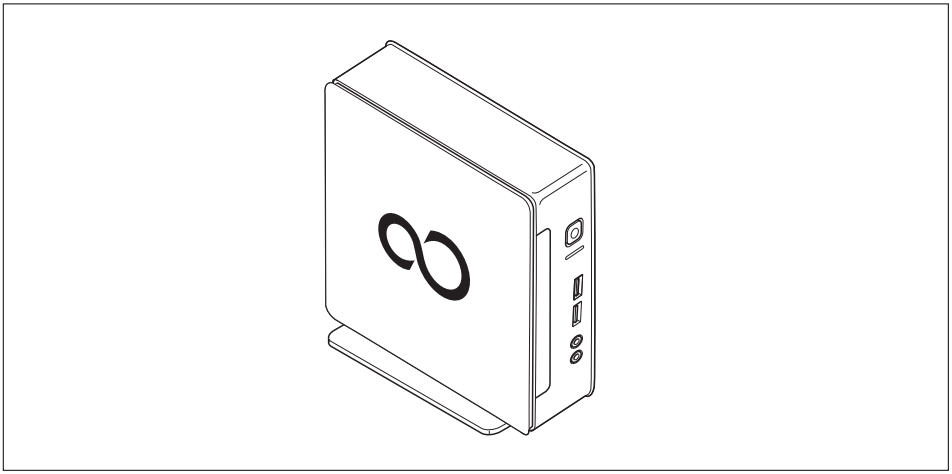
If you are not using a base, you will need to affix the adhesive feet you were supplied with to the four corners of the left side of the device (side with screw holes for attaching the base). Affix the adhesive feet in such a way that no fan vents are covered (see Section "Attaching the adhesive feet (optional)", Page 24).



Operation in the vertical operating position is not allowed in Taiwan.

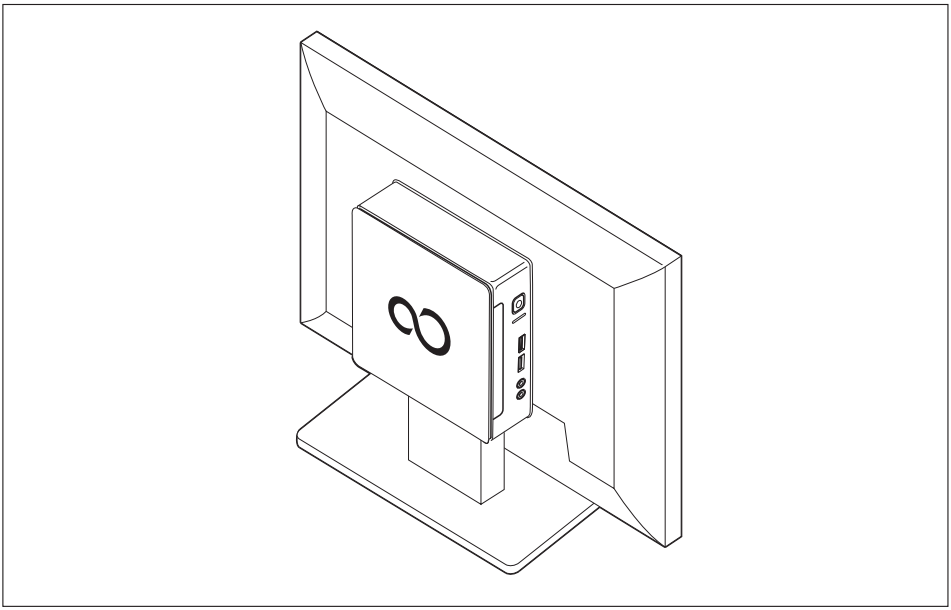
Vertical with base, ON/OFF switch facing upwards

For fitting see Section "Fitting the base (optional)", Page 25



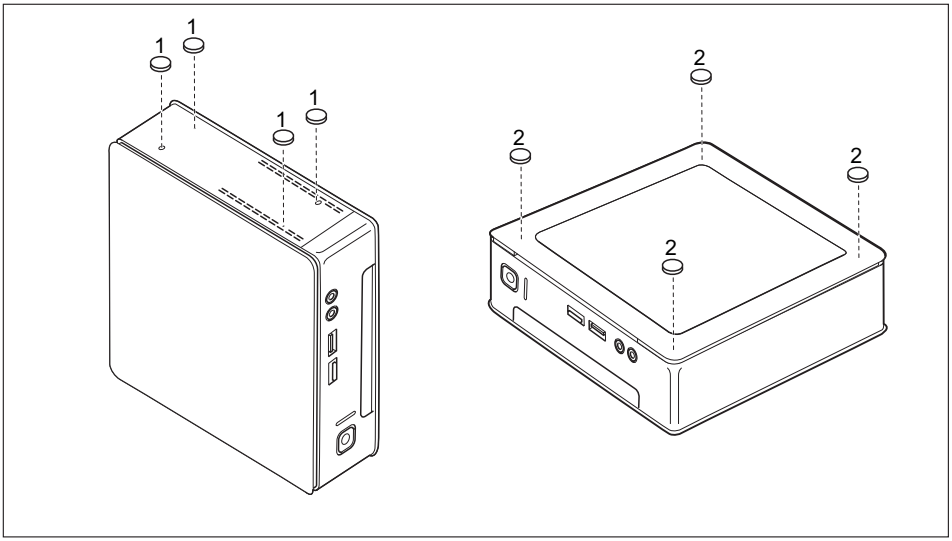
On the VESA interface of a monitor, ON/OFF switch facing upwards

For fitting see Section "Fitting the device to the VESA interface on a monitor (optional)", Page 26



Attaching the adhesive feet (optional)

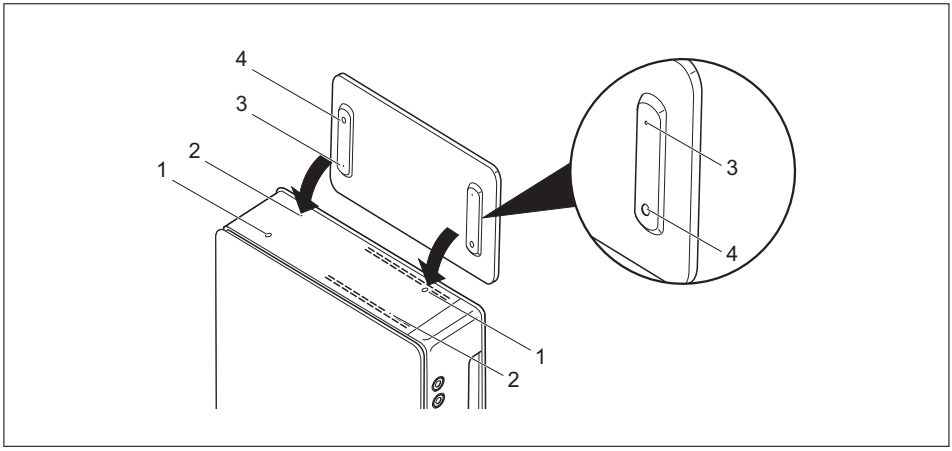
With the horizontal and vertical operating positions with no base, you will need to attach the adhesive feet to the device.



- ► Vertical operating position with no base: Position the adhesive feet on the four corners of the left side of the device as illustrated (side with screw holes for attaching the base). Affix the adhesive feet in such a way that no fan vents are covered.
- ► Horizontal operating position with no base: Position the adhesive feet on the four corners of the underside of the device as illustrated (2).

Fitting the base (optional)

Screw holes for attaching the base can only be found on the left side of the device.



► Place the device on the right side as shown.

↳ The screw holes (1) and guide openings (2) for securing the base on the left side of the device are facing upwards.

► Place the base on the left side of the device such that the locking lugs (3) are inserted into the corresponding guide openings (2) on the device and the screw holes (1) and (4) directly overlap.

► Place the screws into the overlapping screw holes (1 & 4) and attached the base to the device using the screws.

Fitting the device to the VESA interface on a monitor (optional)

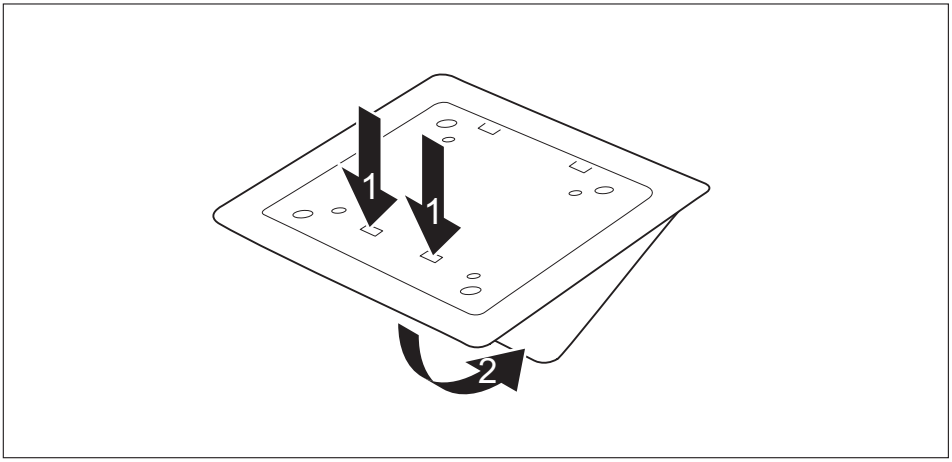
With ESPRIMO Q95x type devices, the casing cover is already fitted with the corresponding screw holes as standard.

With ESPRIMO Q55x type devices, you can order the corresponding casing cover with screw holes separately if necessary.

The device must be fitted onto the screen in such a way that the connecting and operating elements can be used from the side.

Remove the lower cover

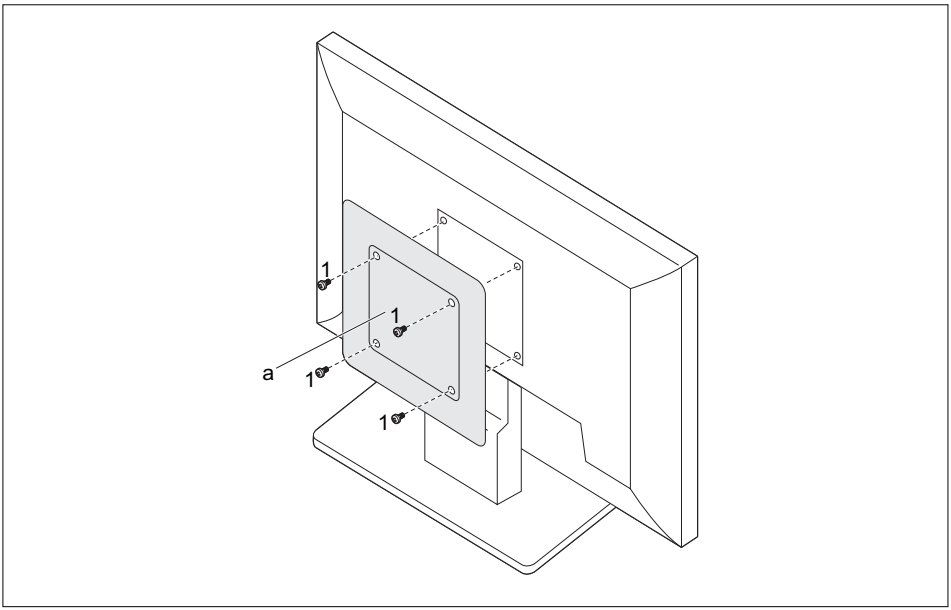
- Requirement: The casing is open and the casing cover is removed (see "Removing the bottom casing cover", Page 87).



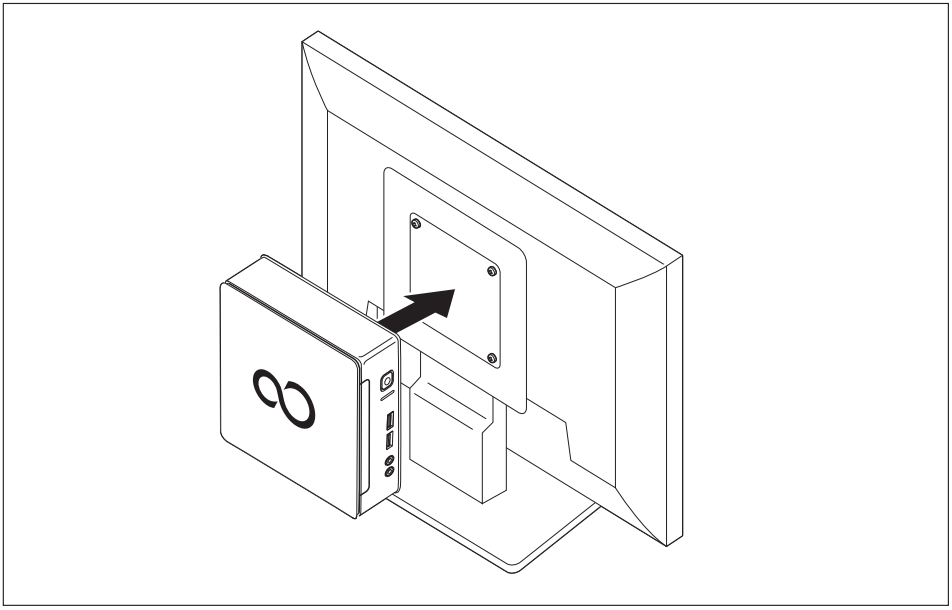
► Release the locking lugs (1) on the underside cover from the casing cover and remove the underside cover (2).

You will find information on securing the lower cover in section "Fitting the underside cover (device dependent)", Page 18.

Mounting with screws

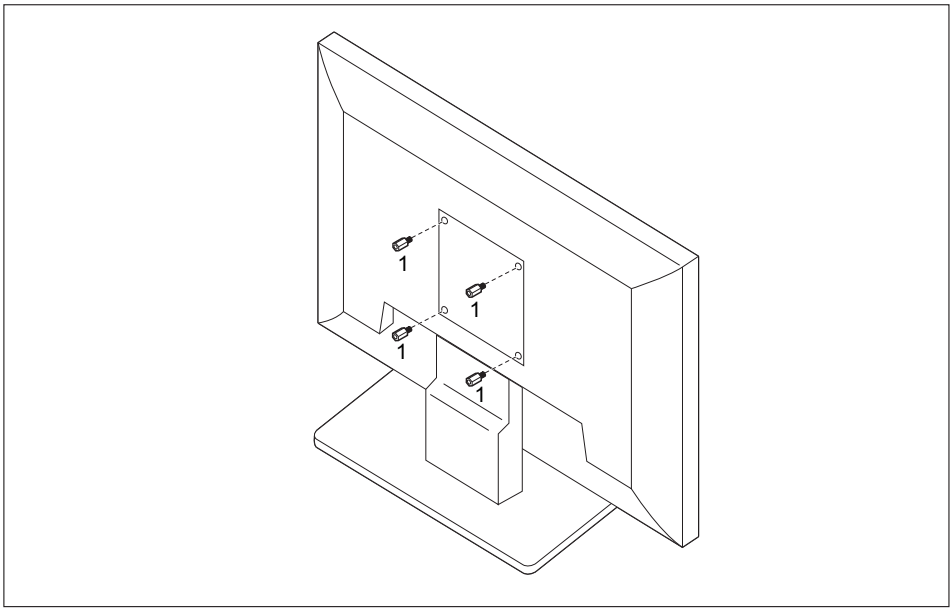


► Install the casing cover (a) on the rear of the monitor using the screws supplied (1).

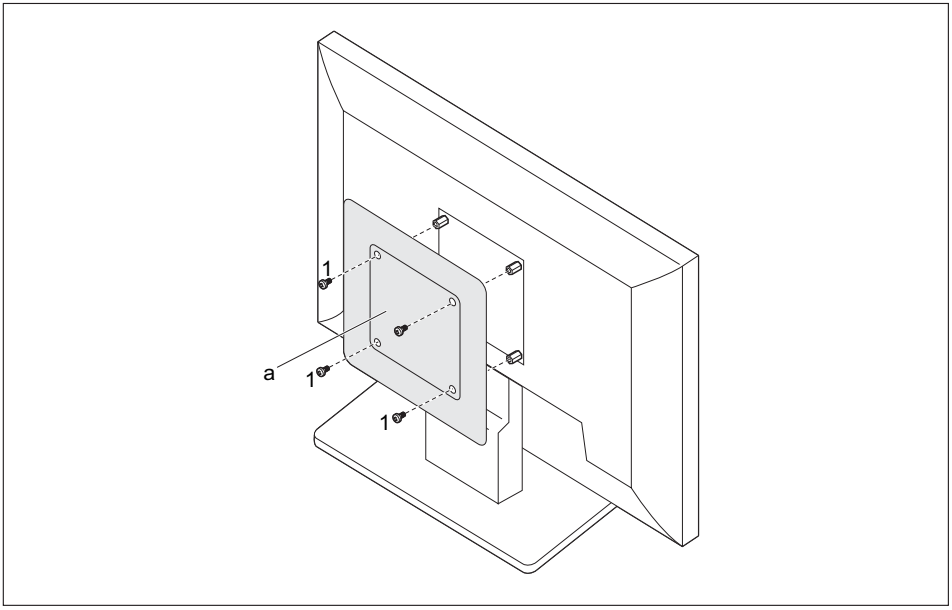


► Secure the device on the casing cover mounted on the monitor.

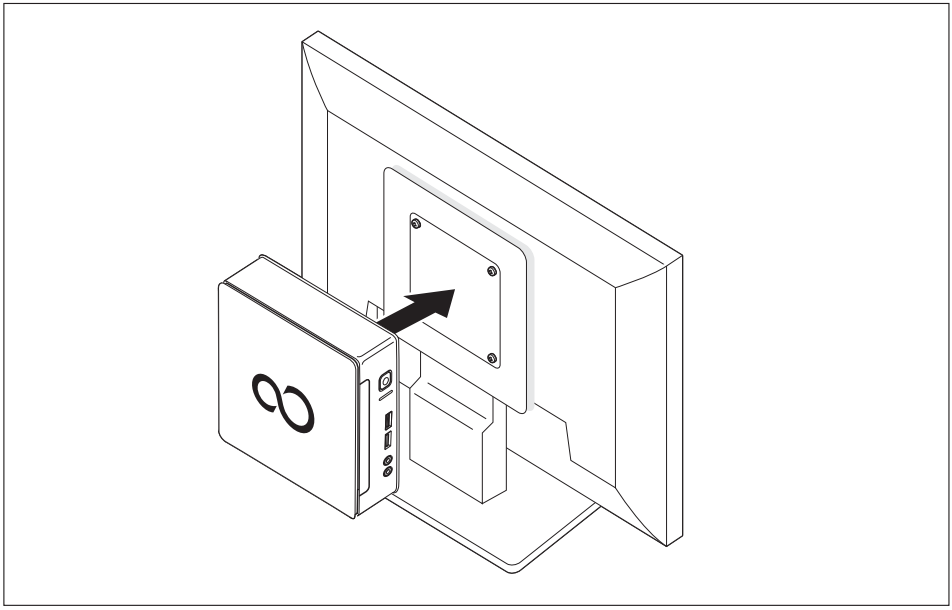
Mounting with bolts and screws



► Screw in the four hexagon head bolts at the rear of the monitor (1).

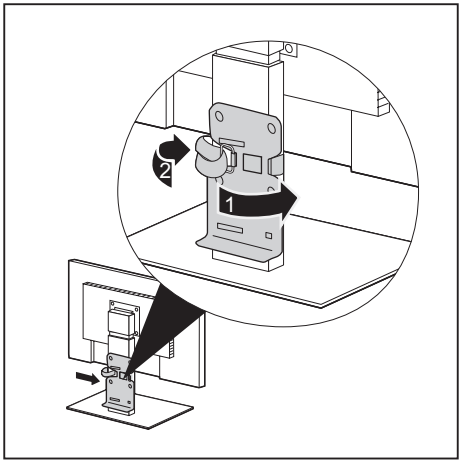


► Install the casing cover (a) into the bolts at the rear of the monitor using the screws supplied (1).



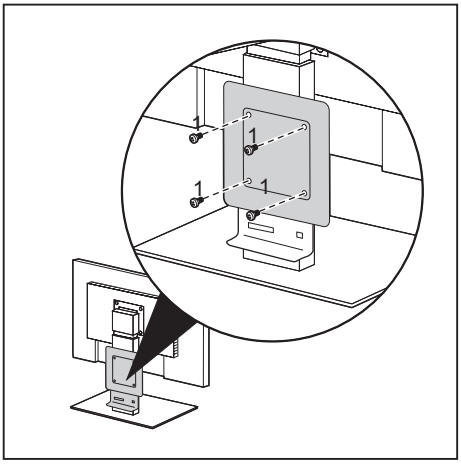
► Secure the device on the casing cover mounted on the monitor.

Mounting on monitors with height-adjustable column

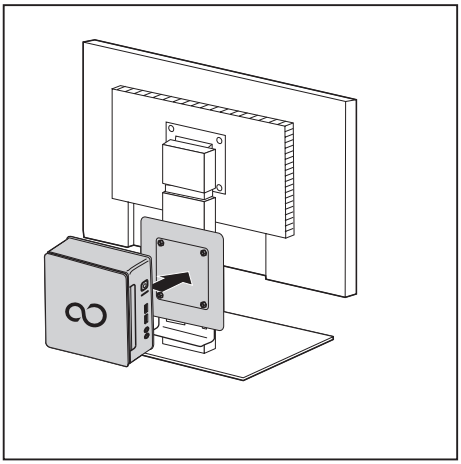


► Detach all cables from the monitor.

► Fix the monitor base adapter by laying the velcro tape around the monitor base (1) and looping it back through the metal eye (2).



► Install the casing cover onto the base adapter using the screws supplied (1).



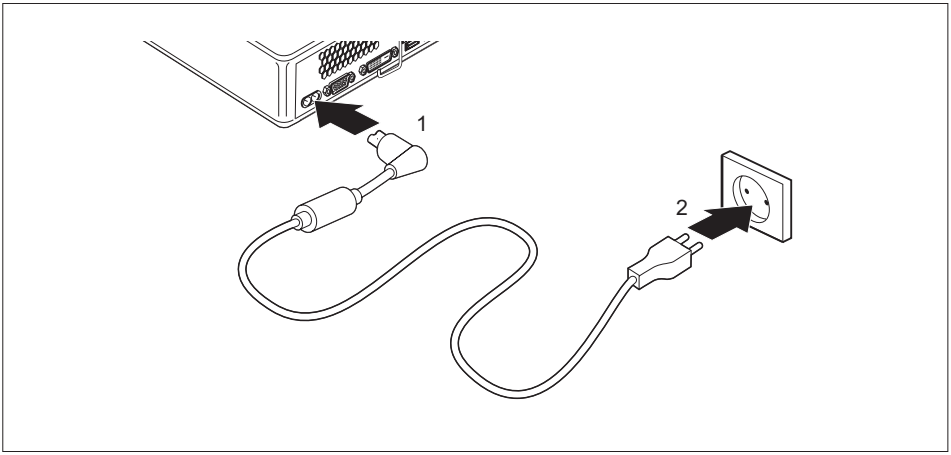
► Secure the device on the casing cover mounted on the monitor.

Connecting the power cable

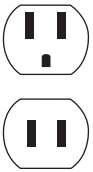
Observe the safety notes in the enclosed "Safety/Regulations" manual.

The supplied power cable conforms to the requirements of the country in which you purchased your device. Make sure that the power cable is approved for use in the country in which you intend to use it.

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 (1) to the power connection (AC IN) of the device.
► Plug the mains cable (2) into a mains outlet.

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. Never unplug a cable by pulling the cable itself.

Ports on the device

The ports are located on the front and rear side 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.

	DVI-D monitor port, white	DP	DisplayPort
	Serial interface		LAN port
	USB 2.0 - Universal Serial Bus, black		Audio input (Line in)
	USB 3.0 - Universal Serial Bus, blue		Audio output (Line Out), light green
—	PS/2 port		

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

- ► Follow the instructions contained in the monitor manual to prepare the monitor for use (e.g. connect the cables).
- ► Plug the data cable into the desired monitor port of the device.
- ► Plug the monitor power cable into a grounded mains outlet.

Connecting a USB mouse

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

Connecting a USB keyboard

Only use the keyboard cable supplied with the keyboard (not within the delivery scope of the device).

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

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

Connecting external devices to the serial interface

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

► Connect the data cable to the external device.

► Connect the data cable to the corresponding serial interface.

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

Port settings

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

Device drivers

The devices connected to the serial interface require drivers. Your operating system already includes many drivers. If the required drive is missing, install it. The latest 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).

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

The external USB devices that you connect to one of the USB ports usually require no driver of their own, as the required software is already included in the operating system. If the device requires separate software, please note the information in the manufacturer's manual.

Connecting the PS/2 device

Only use the supplied lead.

A PS/2 device is only recognised by the PC if you connect the PS/2 device when the PC is switched off and then switched on again.

- ► Connect the PS/2 device to the PS/2 port on the PC.
- ► Switch the PC back on.

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.

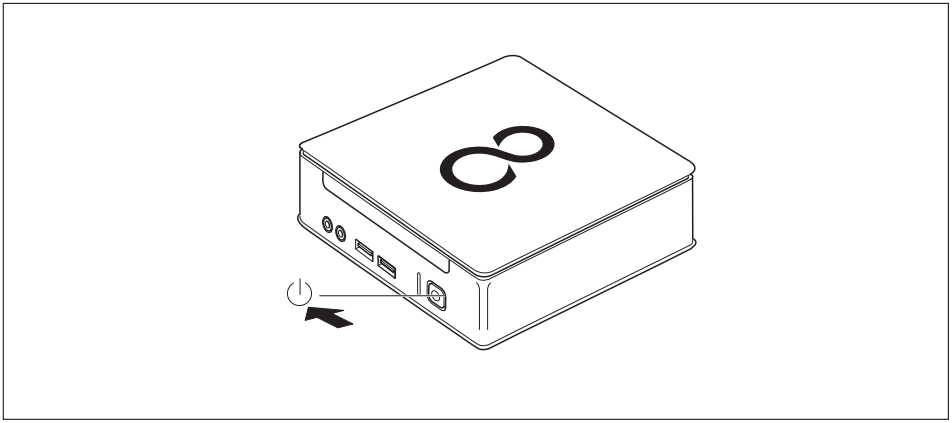
When you switch on the device for the first time, the supplied software is installed and configured. Plan a reasonable amount of time for this, as this process must not be interrupted.

You may need the Windows licence number during the installation. You will find the licence number as a sticker on your device (see "Remove the lower cover", Page 26).

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 "Drivers & Utilities" DVD and on the Internet under "http://www.fujitsu.com/fts/support".

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

► Shut down the operating system in a defined manner.
► If the operating system does not automatically switch the device into energy-saving mode or switch it off, press the ON/OFF switch until the device switches off. Warning, this could lead to a loss of data!
↳ If the device is switched off, the device consumes a minimum of energy.

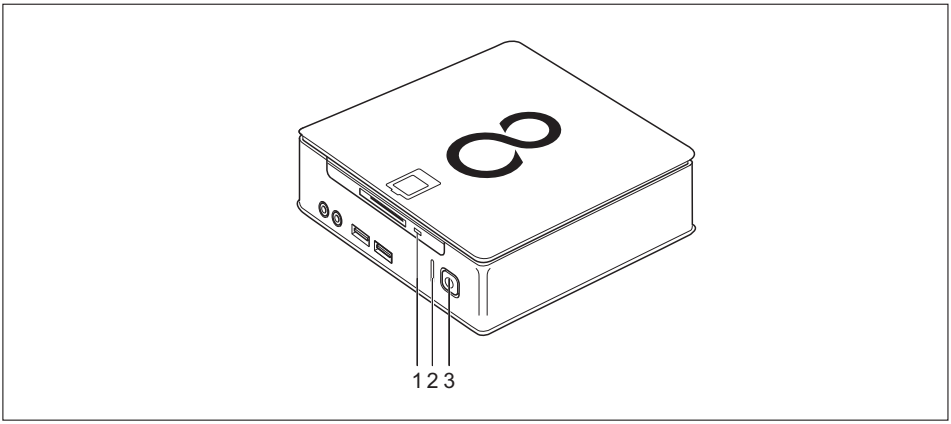
The ON/OFF switch does not disconnect the device from the mains voltage. To completely disconnect the mains voltage, remove the power plug from the power socket.

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

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.

Example: Device variant with SmartCard reader and/or palm sensor:

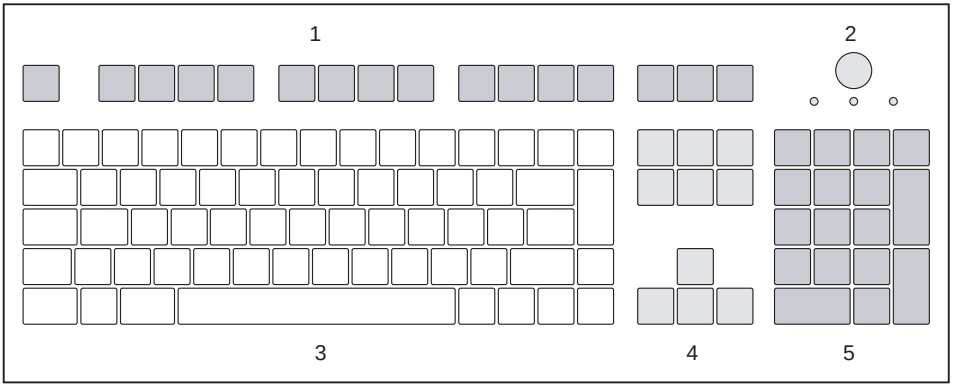


No.	indicator	Description
1	SmartCard reader indicator (device dependent)	The indicator lights up when the device's SmartCard reader is accessed (device dependent).
2	Hard disk indicator	The indicator lights up when the hard disk drive in the device is being accessed.
3	Power-on indicator	**Caution:**In energy saving mode, the device must not be disconnected from the mains supply as this can cause loss of data. • The indicator is illuminated: The device is switched on. • The indicator is flashing: 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 (disconnected from the mains) or is ready to operate. If the device is ready to operate, it can be switched on with the ON/OFF switch.

In energy-saving mode the device must not be disconnected from the mains supply, as data loss may occur.

Keyboard

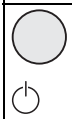
The illustrated keyboard is an example and may differ from the model you use.



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 *BIOS Setup*, 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 (device dependent: variant 1) calls up the Windows *Start* menu.
	Menu key (device dependent: variant 1)) calls up the menu for the marked item (Windows).
	Windows key (device dependent: variant 2) The Windows key switches between the main screen and the last application used.
	Menu key (device dependent: variant 2) The Menu key calls up the menu for the active application.
	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 Q 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 Ctrl key is also called the "Control" or "Control key".
	Windows Security/Task Manager This key combination opens the Windows Security/Task Manager window.

Optical drive (device dependent)

Depending on the device variant, your device is fitted with an optical drive.

An optical drive on one side and a SmartCard reader/palm sensor on the other cannot be combined with one another.

This product contains a light emitting diode, classification according to IEC 60825 1:2007: LASER CLASS 1, and must therefore not be opened.

Handling data carriers

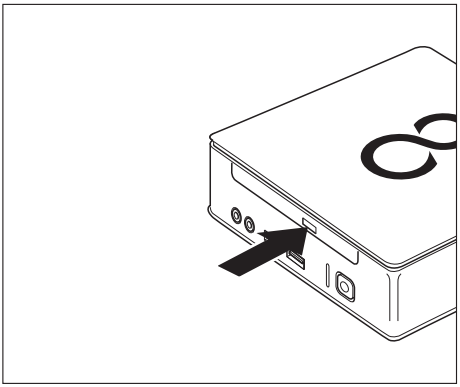
Observe the following guidelines when handling data carriers:

- Avoid touching the surface of a data carrier. Only handle data carriers by their edges.
- Always store data carriers in their cases. This will protect the data carrier against being covered in dust, scratched or damaged in any other way.
- Protect your data carriers against dust, mechanical vibrations and direct sunlight.
- Avoid storing a data carrier in areas subject to high temperatures or humidity.

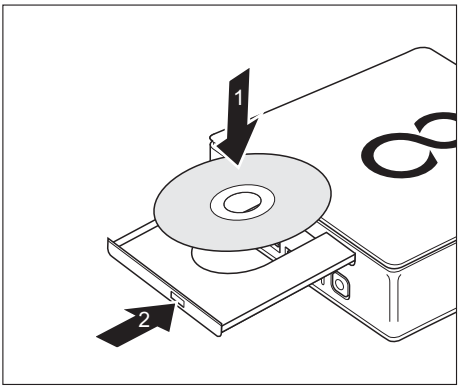
You may use 12 cm diameter data carriers in the drive. Do not use any business card CDs or other small data carriers.

When using a data carrier of lesser quality, vibrations and reading errors may occur.

Inserting or removing a data carrier



► Press the Insert/Eject button to open the tray.
↳ The drive tray will open.



► Place the data carrier in the tray with the printed side facing upwards.

or

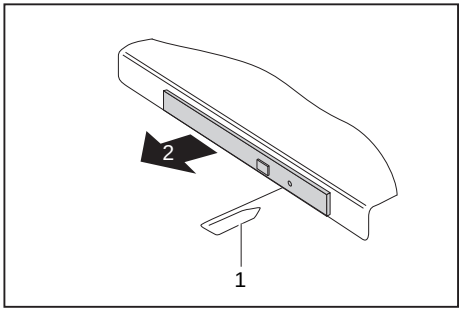
► Remove any data carrier already in there.

i

If you press the Eject button while the data carrier in the optical drive is being accessed, the data carrier will not be automatically ejected. Wait until the process has finished, then try it again.

Manual removal of data carriers (emergency removal)

In the event of a power failure or damage to the drive it may be necessary to manually remove the CD/DVD.



- ► Switch your device off.
- ► Push a pen or a piece of wire (such as a paperclip) firmly into the opening (1).
- ↳ The drive tray is ejected. You can now pull the drive tray (2) out of the drive.

Wireless LAN / Bluetooth wireless components (device dependent)

The installation of radio components not approved by Fujitsu will invalidate the certifications issued for this device.

The operation of these radio components is not allowed in Taiwan.

Switching the wireless components on and off

You can use the *Device Manager* program to switch the radio components on and off individually.

Pay attention to the additional safety notes for devices with radio components provided in the "Safety/Regulations" manual.

Details on using Wireless LAN can be found in the online help system included with the Wireless LAN software.

You can find more information on how to use Bluetooth on the CD you received with your Bluetooth software.

Settings in BIOS Setup Utility

The *BIOS Setup Utility* allows you to set the system functions and the hardware configuration for your device.

When it is supplied, the device is set to factory default settings. You can change these settings in the *BIOS Setup Utility* menu. Any changes you make take effect as soon as you save and exit the *BIOS Setup Utility*.

The *BIOS Setup Utility* program contains the following menus:

Menu	Description
Main	System settings such as time and date
Advanced	Advanced system settings
Boot	Configuration of the start-up sequence
Power	Energy saving function
Security	Password settings and security functions
Exit	Exits the *BIOS Setup Utility*

The following function keys can also be used:

Key	Description
Esc	To exit the *BIOS Setup Utility*. The current settings are not saved.
F7	To reject changes and load the previous configuration of the *BIOS Setup Utility*.
F9	To load the default configuration of the *BIOS Setup Utility*.
F10	To exit the *BIOS Setup Utility*. The current settings are saved.

Starting the BIOS Setup Utility

► Reboot the device (switch off/on or reboot the operating system).

↳ Depending on the *Fast Boot* setting in the *BIOS Setup utility*, the following information may appear on the screen during start:

```
<F2> BIOS Setup <F12> Boot Menu
```

► Press the function key F2.

► If a password has been assigned, enter the password and press the Enter key.

If you have forgotten the password, contact your system administrator or contact our customer service centre.

The *BIOS Setup Utility* starts.

Operating BIOS Setup Utility

Press the F1 key to display help on the operation of the *BIOS Setup Utility*. The description of the individual settings is shown in the right-hand window of the *BIOS Setup Utility*.

With the F9 key you can load the default settings of the *BIOS Setup Utility*.

► Use the cursor keys ← or → to select the menu you wish to access to make changes.
↳ The menu is displayed on the screen.
► Select the option you want to change with the cursor keys ↑ or ↓.
► Press the Enter key.
► Press the ESC key to exit the selected menu.
► For future reference, make a note of the changes you have made (for example, in this manual).

Exiting BIOS Setup Utility

You need to select the desired option in the *Exit* menu and activate it by pressing the Enter key:

Exit Saving Changes - save changes and exit BIOS Setup Utility

► To save the current menu settings and exit the *BIOS Setup Utility*, select *Exit Saving Changes* and *Yes*.
↳ The device is rebooted and the new settings come into effect.

Exit Discarding Changes – Discard changes and exit BIOS Setup Utility

► To discard the changes, select *Exit Discarding Changes* and *Yes*.
↳ The settings which applied when *BIOS Setup Utility* was called up remain effective.
The *BIOS Setup Utility* is terminated and the device is rebooted.

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.

BIOS Setup security functions

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

- Prevent unauthorised access to the system
- Prevent unauthorized access to the *BIOS Setup*

Before using the various options for password protection in the *BIOS Setup utility* to increase data security, please observe the following:

Make a note of passwords and keep them in a safe place. If you forget your supervisor password you will no longer be able to access your device. Deleting passwords is not covered by your warranty and a charge will be made for assistance.

Your password can be a maximum of 32 characters long and can consist of letters and numbers. No distinction is made between uppercase and lowercase.

Using the SmartCard reader (device dependent)

Whether your device has a SmartCard reader depends on the device variant you have ordered.

The SmartCard reader allows access to be limited to only those users that have an appropriate SmartCard.

SmartCards are not supplied as standard equipment. You can use all SmartCards that comply with the ISO standard 7816-1, -2 or -3. These SmartCards are available from various manufacturers.

With the appropriate software you can use your SmartCard as an alternative to password protection, but also as a digital signature, for encrypting your e-mails or for home banking.

We recommend that you always use two SmartCards. Always keep one of the SmartCards in a safe place if you are carrying the other SmartCard with you.

In order to be able to take advantage of all the security features of your system, you will need a CardOS SmartCard from Fujitsu Technology Solutions.

The SmartCard can only be used with a PIN, offering maximum protection even if you lose the SmartCard. In order to maximise your security, the CardOS SmartCard is disabled if three incorrect attempts are made to enter the PIN.

When you use the CardOS SmartCard for the first time, you will either need to enter the preset PIN "12345678" or the PIN given to you by your systems administrator.

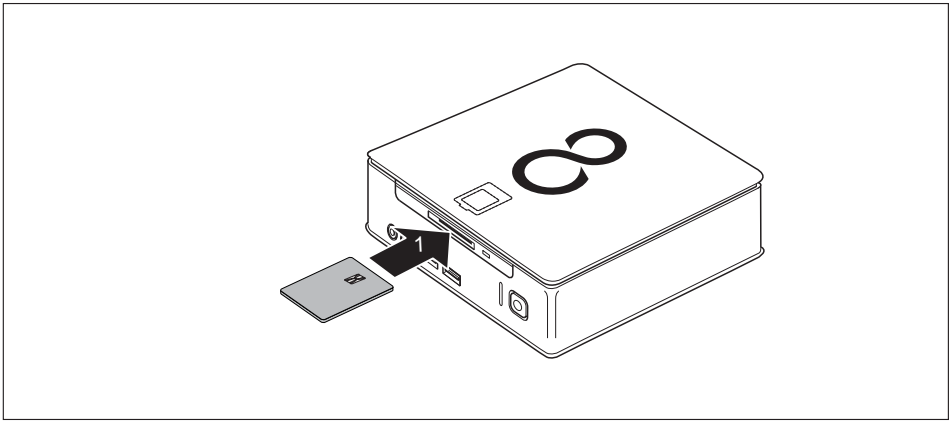
Fitting a SmartCard reader

Fit the SmartCard reader as described in section "Installing and removing the SmartCard reader and palm sensor (device dependent)", Page 75.

Inserting the SmartCard

Do not use force when inserting and removing the SmartCard.

Make sure that foreign objects do not fall into the SmartCard reader.

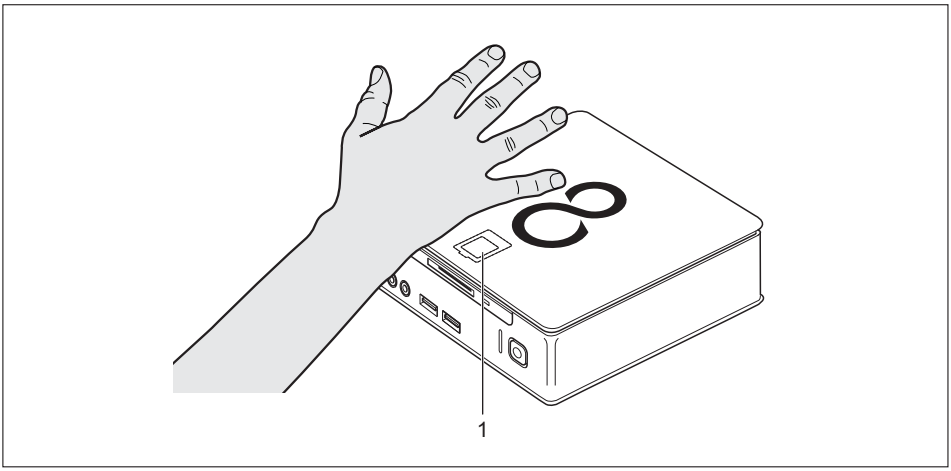


► Push the SmartCard into the SmartCard reader with the chip facing upwards.

Using a palm sensor (device dependent)

Whether your device has a palm sensor depends on the device variant you have ordered.

The palm sensor (1) can record the image of the pattern of the veins in the hand. This image is evaluated by additional software and can be used instead of a password.



Fitting a palm sensor

Fit the palm sensor as described in Section "Installing and removing the SmartCard reader and palm sensor (device dependent)", Page 75.

Using the palm sensor

- ► To be able to use the palm sensor, you must install and launch the software.
- ► Follow the instructions on the screen.

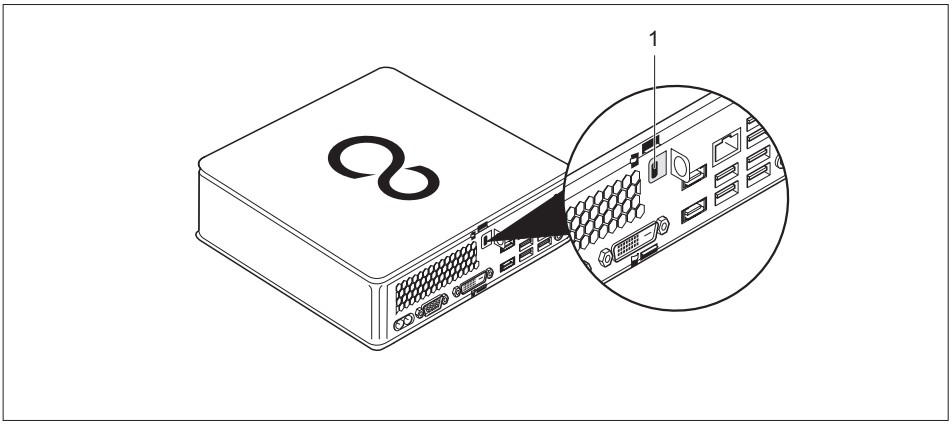
The surface of the hand must be positioned such that the palm of the hand lies centrally over the palm sensor. In doing so, the palm of the hand and slightly spread fingers should form an even surface.

The supplied software shows the precise position of the hand above the palm sensor.

Using the Security Lock

The following illustration shows the FUJITSU Desktop ESPRIMO Q95x device variant. You will find the security lock device in the same position in the FUJITSU Desktop ESPRIMO Q55x device variant.

Your device has provision for a security lock (1). You can use the security lock device and the Kensington Lock cable (steel cable, accessory) to protect your device against theft. Please consult the manual for your Kensington Lock.



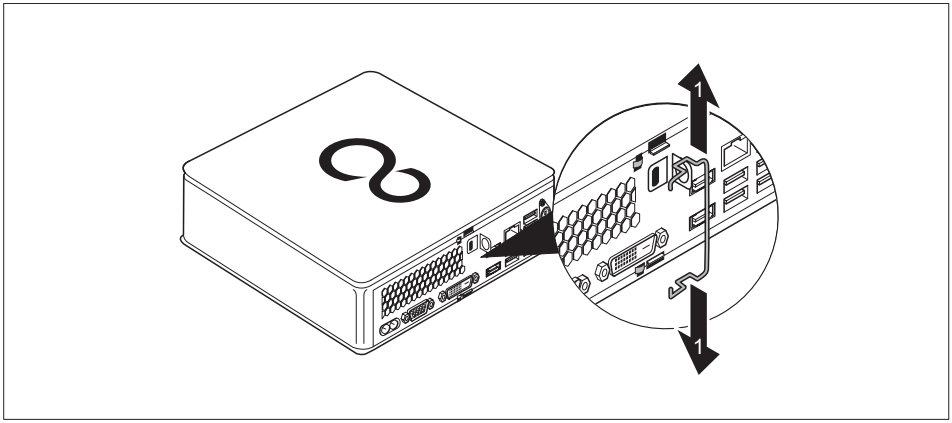
► Attach the Kensington Lock cable to the Security Lock mechanism (1) on your device.

Using a locking bracket

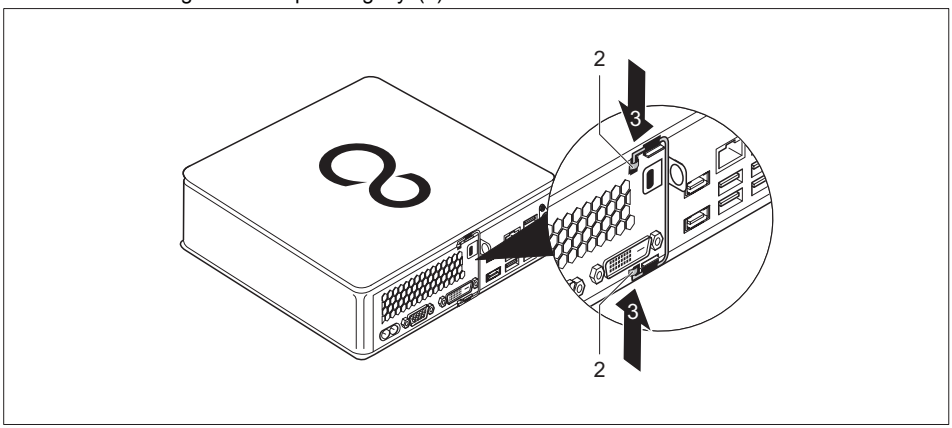
You can also purchase a locking bracket for your device. Contact the service desk or sales partner responsible for your country.

The following illustration shows the FUJITSU Desktop ESPRIMO Q95x device variant. You will find the components concerned in the same position in the FUJITSU Desktop ESPRIMO Q55x device variant.

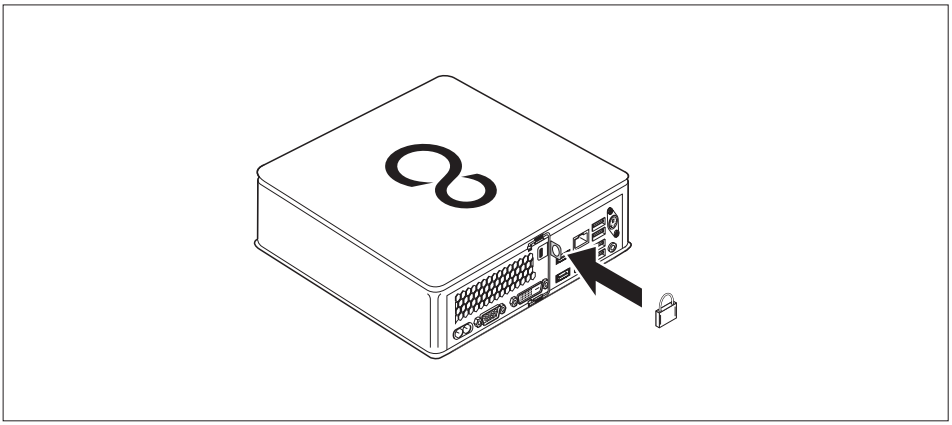
You can use the padlock clamp located on the device and the locking bracket to protect your device from unauthorised opening.



► Pull the locking bracket apart slightly (1).



► Insert the locking bracket into the eyes (2) in the direction of the arrow (3).



► If you have not already done so, fold the locking bracket fully to the right until it is lying against the side of the device and attach a padlock to the padlock clamp.

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Alternatively you can use a Kensington Lock cable (see "Using the Security Lock", Page 52). This will prevent unauthorised opening of the locking bracket and, with it, the casing cover.

Lead-sealing the casing

To prevent unauthorised persons from opening casing, you can lead-seal it.

► Insert the lead-sealing chain or wire through one of the eyes on the back of the device (see Section "Rear", Page 11).

► Use the seal to secure the lead-sealing chain or wire.

Troubleshooting and tips

Refer to the safety notes in the "Safety/regulations" manual and in the "Getting started", Page 17 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. You will find the ID number on the type rating plate under the type rating plate cover on the underside of your device (see "Fitting the underside cover (device dependent)", Page 18). If necessary, remove the type rating plate cover to be able to gain access to the ID number.

► For further clarification of the problem, contact the Service Desk for your country (see the Service Desk list or visit the Internet at "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 that the power cable is properly plugged into the device and into the mains socket.
Internal power supply overloaded.	► Unplug the power plug of the device from the mains socket. ► Wait approx. 3 min. ► Plug the power plug of the device into the mains socket again. ► Switch the device on.

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

Cause	Remedy
System crash	► Keep the on/off switch pressed for at least 4 seconds until the machine switches off. Caution: This can lead to a loss of data! This procedure does not allow the operating system to shut down in an orderly way. The next time the system is started there may well be error messages.

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.
Wrong monitor settings	► Restart the system. ► Press F8 while the system is booting. ► Start the system in Safe Mode. ► Set the correct values for the connected monitor as described in the operating manual of your 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.

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 *BIOS Setup*.

SmartCard reader is not recognised.

Cause	Troubleshooting
Chip card inserted incorrectly.	► Make sure you have inserted your SmartCard into the SmartCard reader with the chip facing upwards. ► Check whether the SmartCard you are using is supported. Your SmartCard must comply with the ISO standard 7816-1, -2, -3 and -4.

SmartCard PIN forgotten

Cause	Troubleshooting
PIN forgotten	► If you are working in a network, contact your system administrator, who can unlock your system with a Supervisor PIN.

SmartCard lost

Cause	Troubleshooting
SmartCard lost	► If you are working in a network, contact your system administrator, who can boot your system with a Supervisor SmartCard.

User and/or supervisor SmartCard lost

Cause	Troubleshooting
User and/or supervisor SmartCard lost	► If you have lost your User SmartCard, you can continue working with the Supervisor SmartCard and initialise a new User SmartCard or deactivate the SystemLock function. ► If you have lost the Supervisor SmartCard, you can continue working, but you no longer have all your rights and can no longer initialise a Supervisor SmartCard. ► If you have lost both SmartCards, you can no longer boot your system. Please contact our Service Desk. You must provide proof of ownership for the device. Then the Service Desk will refer you to our service partner, who will unlock your device (for a charge).

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.

Restoring the hard disk contents

You will find the instructions for restoring the contents of the hard disk in the "Recovery Guide" manual.

Tips

Topic	Tip
Out of system resources	► Close unnecessary applications. **or** ► Run the applications in a different order.
Other manuals	Further manuals are provided as PDF files on the "Drivers & Utilities" DVD.

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/Help 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.

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.

Overview of the drive bays and drives in your device

The casing can accommodate multiple drives and components.

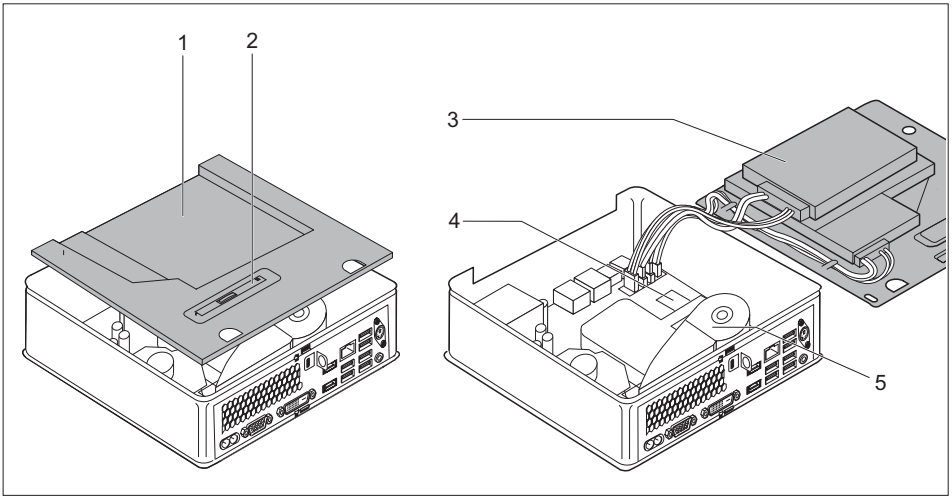
Drive/component combination options

Depending on the device variant, the following combinations are possible:

	Optical drive	Palm sensor	SmartCard reader	2.5" hard disk	M.2 module
Optical drive	-	-	-	+	+
Palm sensor	-	-	+	+	+
SmartCard reader	-	+	-	+	+
2.5" hard disk	+	+	+	-	+
M.2 module	+	+	+	+	-

Underneath the top casing cover:

The following components can be found underneath the top casing cover (see "Removing and attaching the top casing cover", Page 65):



1 = Space for an optical drive or SmartCard reader/palm sensor (device dependent)

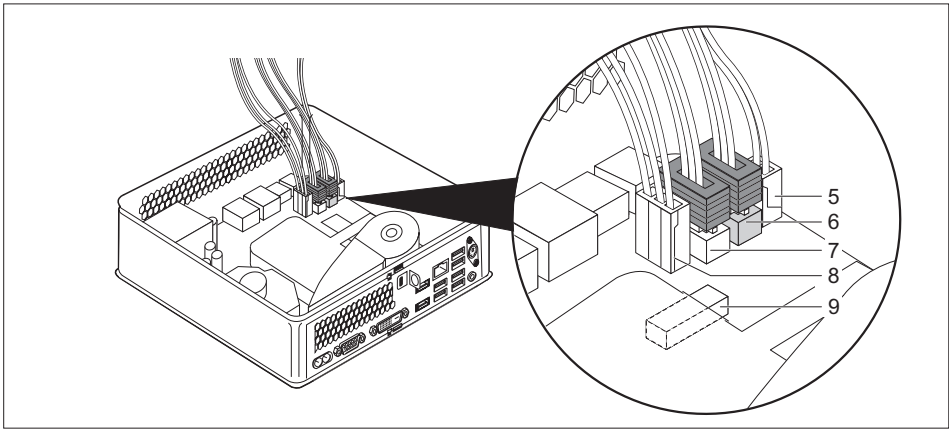
2 = Drive plate location for an optical drive or SmartCard reader/palm sensor

3 = Space for a 2.5" hard disk

4 = Space for an M.2 module

5 = Fan/lithium battery beneath fan

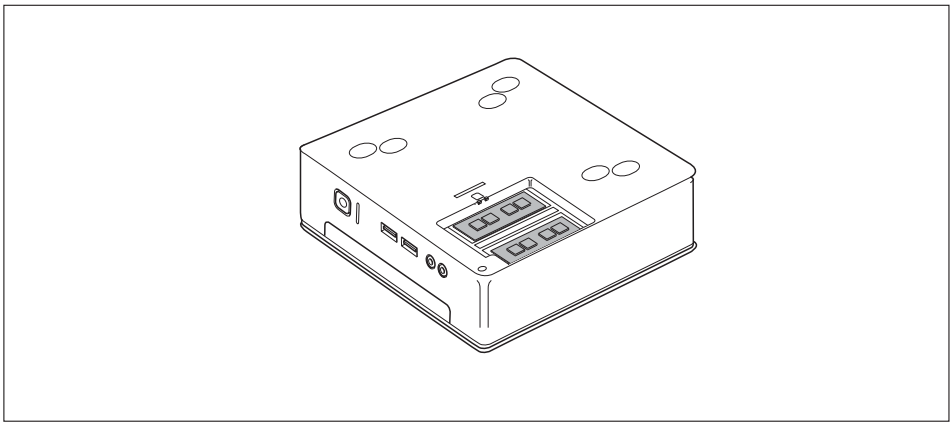
Connections for components on the mainboard:



5 = Connection and plug for optical drive: Power
6 = Connection and plug for optical drive: Data
7 = Connection and plug for 2.5" hard disk: Data
8 = Connection and plug for 2.5" hard disk: Power
9 = SmartCard reader/palm sensor connection

Underneath the bottom casing cover:

Underneath the bottom casing cover (see "Removing the top casing cover", Page 65) are:
Two memory modules beneath an additional service cover (not shown):



Prepare to remove components

Please observe the safety information in chapter "Important notes", Page 13.

Remove the power plug from the mains outlet!

► Switch the device off.

The device must not be in energy-saving mode !

► Remove all the cables from the device.
► Place the device on a stable, flat and clean surface. If necessary, lay an anti-slip cloth on this surface to prevent the device from being scratched.

Removing and attaching the top casing cover

You need to remove the top casing cover if you want to remove or install the following components:

- Optical drive and leads
- SmartCard reader/palm sensor and leads
- 2.5" Hard disk
- M.2 module, lithium battery and fan

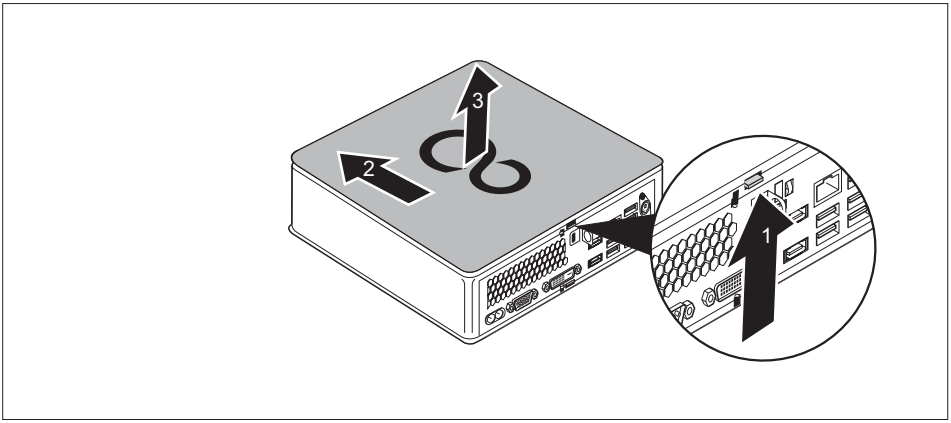
Then you will also need to remove and install the drive cage (see "Inserting and removing the drive cage", Page 67).

Removing the top casing cover

► If you are using a locking bracket and a padlock to protect the device, remove the lock and open the locking bracket (see "Using a locking bracket", Page 53).

or

► If you are using a locking bracket and a Kensington Lock cable to protect the device, remove the Kensington Lock cable and open the locking bracket (see "Using the Security Lock", Page 52 and "Using a locking bracket", Page 53).



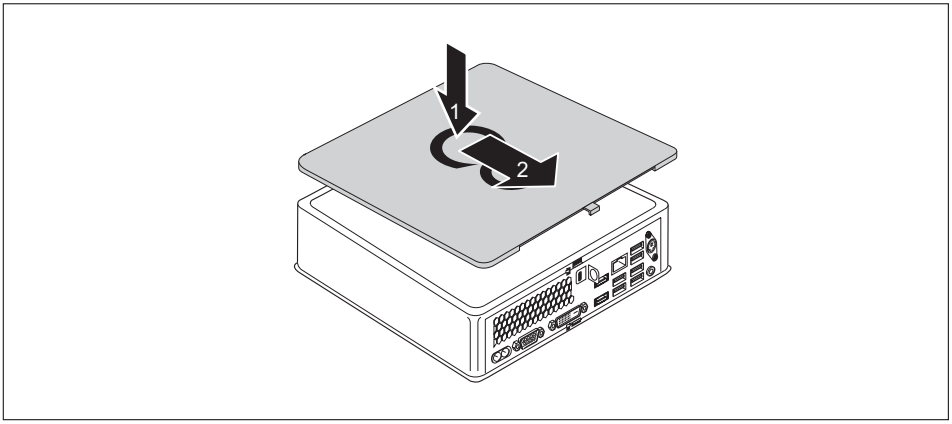
► Push the release on the rear side of the device in the direction of the arrow (1) while at the same time sliding the top casing cover in the direction of the arrow (2).

► Lift the top casing cover off the device (3).

Securing the top casing cover

The top casing cover depends on your device variant: the device variant for the optical drive/blanking plate and the device variant for the SmartCard reader/palm reader each have their own top casing cover.

If you have both options, ensure that you use the associated casing cover in each case.



► Place the top casing cover on the device (1).

► Slide the top casing cover in the direction of the arrow (2) until it engages noticeably.

► If you are using a locking bracket and a padlock to protect the device, close the locking bracket and fasten the lock (see "Using a locking bracket", Page 53).

or

► If you are using a locking bracket and a Kensington Lock cable to protect the device, close the locking bracket and fasten the Kensington Lock cable (see "Using a locking bracket", Page 53 and "Using the Security Lock", Page 52).

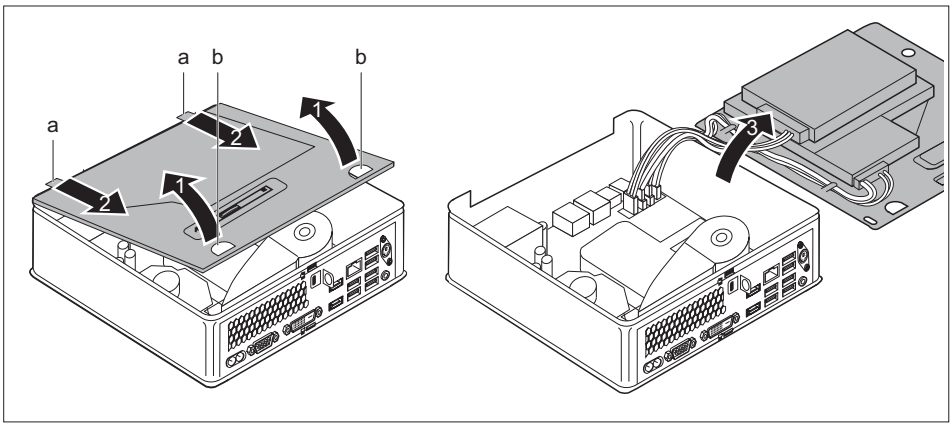
Inserting and removing the drive cage

You first need to remove the drive cage to be able to install and remove drives and components on the top side of the casing.

Removing the drive cage

- The top casing cover has been removed (see "Removing the top casing cover", Page 65).

When removing the drive cage, ensure that you do not damage any of the leads attached to the main board that are attached to components in the drive cage. For this reason, always remove the drive cage very carefully and do not pull hard on the attached leads.



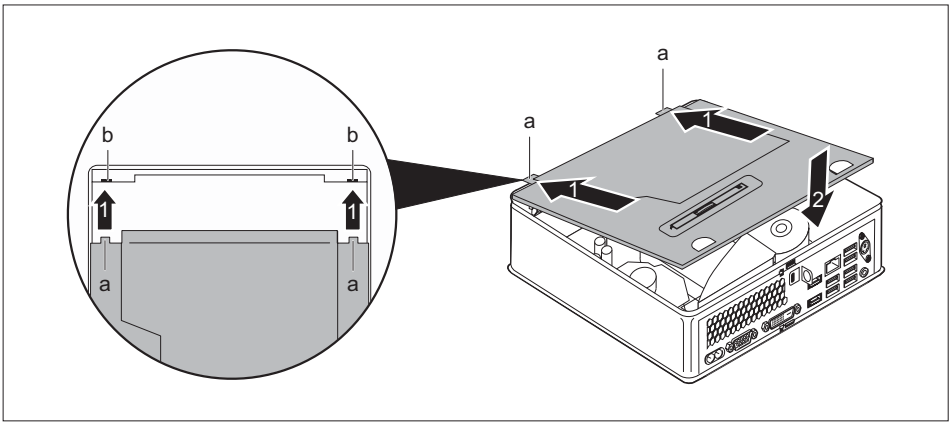
► Grip the two openings (b) and carefully lift the drive cage at an angle (1). Be careful of attached leads.

► Remove the guides (a) on the drive cage from the corresponding openings on the casing (2).

You can find information on pin allocation on the mainboard in Section "Overview of the drive bays and drives in your device", Page 62 and in your mainboard manual.

► Carefully lay the drive cage to the side (3).

Installing the drive cage



► Insert the guides (a) on the drive cage into the corresponding openings on the casing (b) in the direction of the arrow (1).

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You can find information on pin allocation on the mainboard in Section "Overview of the drive bays and drives in your device", Page 62 and in your mainboard manual.

► Take the drive cage out of the casing (2). Take care that no cables or leads become trapped.

► If you do not want to remove or install any other components, reattach the top casing cover (see "Securing the top casing cover", Page 66).

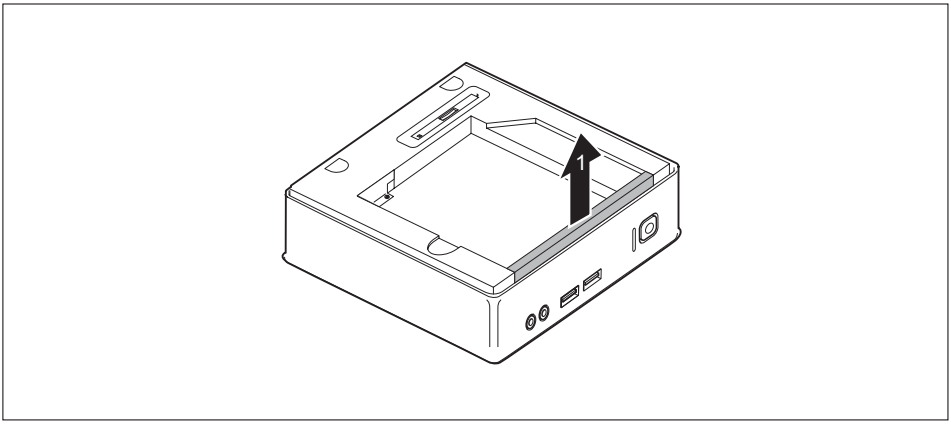
Installing and removing an optical drive (device dependent)

Installing the optical drive

• The top casing cover has been removed (see "Removing the top casing cover", Page 65).

If you have already installed a blanking plate or a SmartCard reader/palm sensor prior to installing the drive, carry out the corresponding steps in the relevant sub-section of this chapter first.

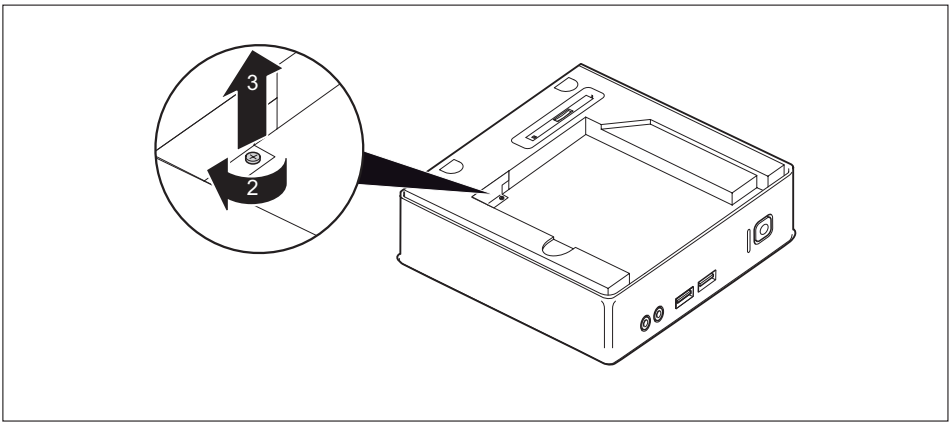
If you have already installed a blanking plate



► Remove the blanking plate (1) that the drive cage bay is secured with.

Keep the blanking cover safe for later use, e.g. if you ever remove the optical drive again at a later date.

Ensure that you do not pull strongly on attached leads.



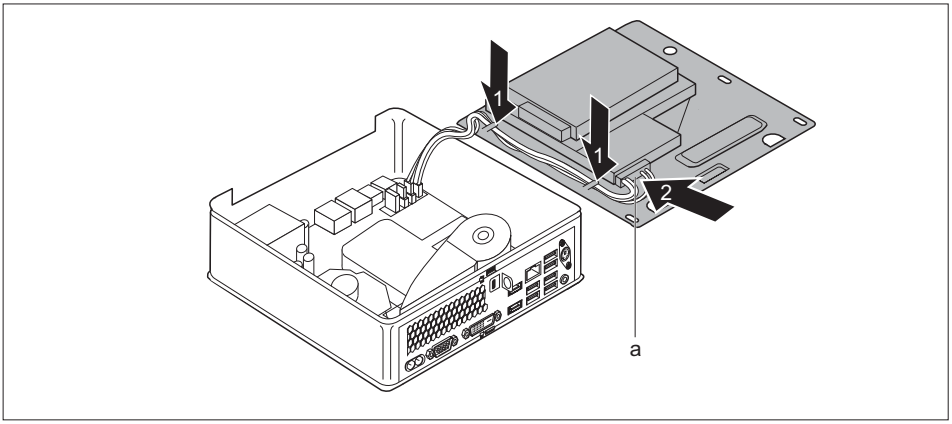
► Remove the screw (2) and lift the metal cover (EMC protection) secured by it off the casing (3).

If you have already installed a SmartCard reader/palm sensor

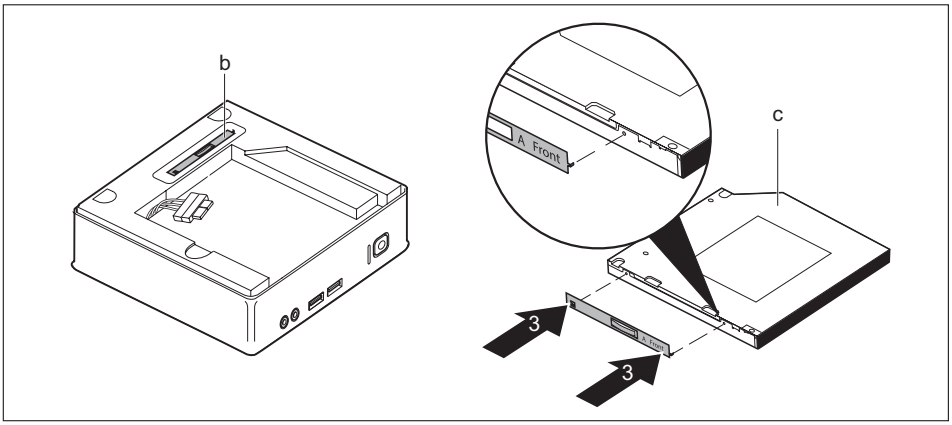
► Remove the SmartCard reader/palm sensor and associated lead (see "Removing the reader/sensor", Page 77).

Installing a drive

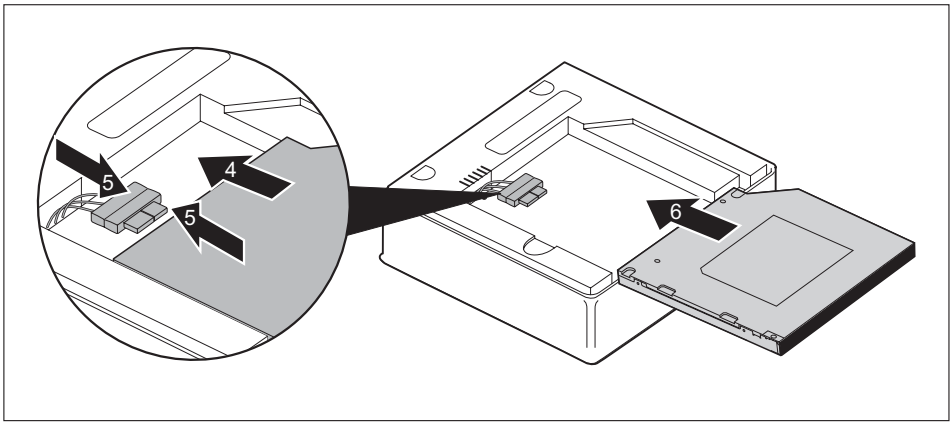
- ► Remove the drive cage (see "Removing the drive cage", Page 67).
- ► Attach the drive leads to the mainboard (see graphic on slots in Section "Overview of the drive bays and drives in your device", Page 62).



- ► Install the drive leads onto the drive cage (1) as illustrated.
- ► Insert the plug for the drive leads (a) through the opening in the drive cage (2).
- ► Reinstall the drive cage (see "Installing the drive cage", Page 68). Take care that no cables or leads become trapped.



- ► Remove the drive plate (b) from the drive cage.
- ► Attach the drive plate to the drive (c) as shown (3). The "Front" label on the drive plate must be visible on the front right as illustrated.



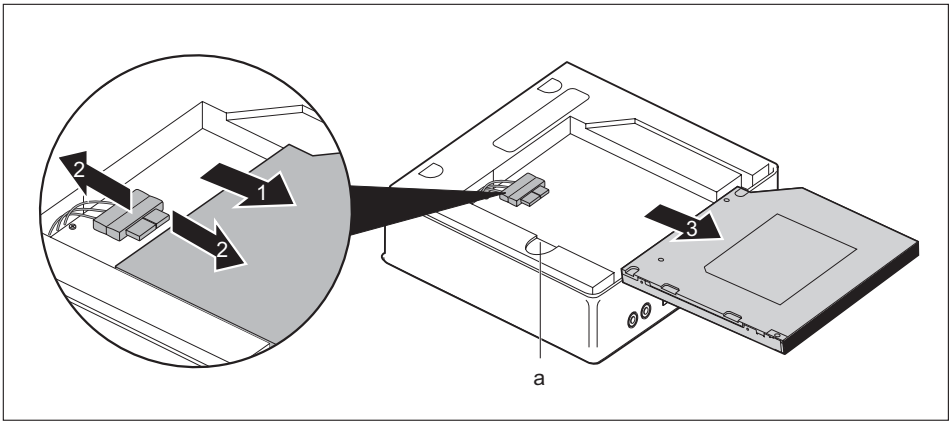
- ► Carefully push the drive into the drive bay in the direction of the arrow (4) until you can attach the leads to the drive.
- ► Connect the leads to the drive (5).
- ► Slide the drive fully into the drive bay (6). Take care that no cables or leads become trapped.
- ► If you do not want to remove or install any other components, replace the top casing cover (see "Securing the top casing cover", Page 66).

Removing the optical drive

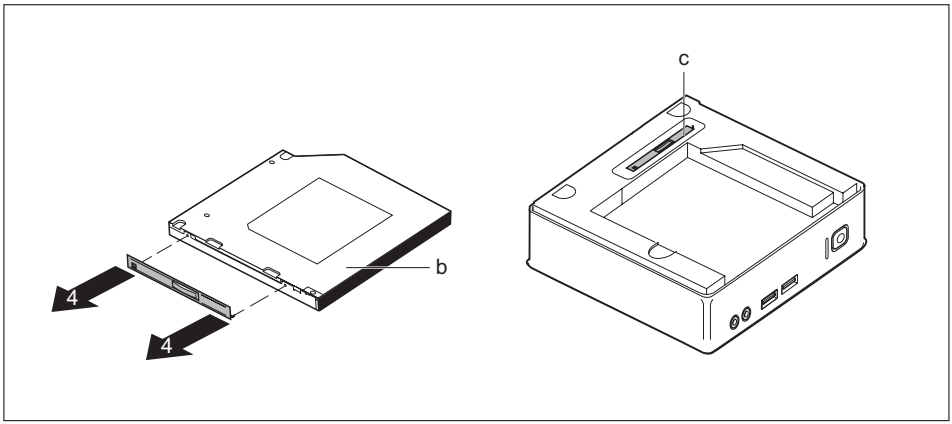
- The top casing cover has been removed (see "Removing the top casing cover", Page 65).

Removing the drive

Ensure that you do not pull strongly on attached leads.

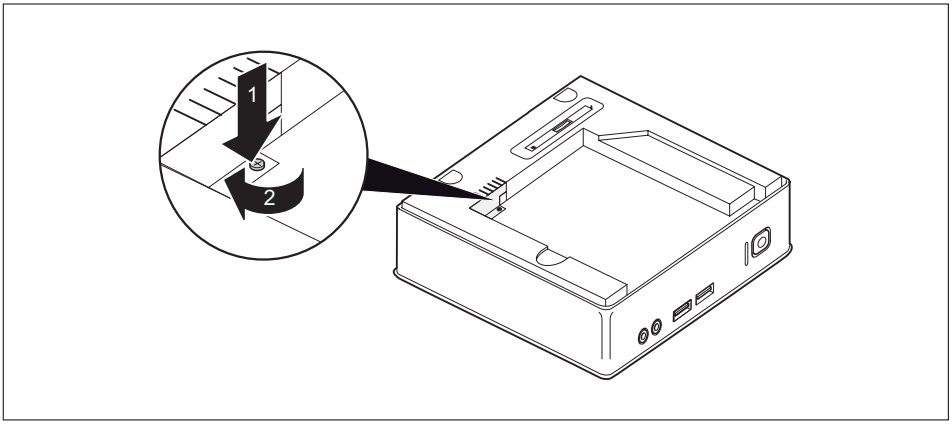


- ► Press and hold the unlocking mechanism (a) and carefully slide the optical drive slightly in the direction of the arrow (1) until the drive and casing contacts and leads are accessible.
- ► Detach the leads from the drive (2).
- ► Lift the drive out of the drive bay (3).
- ► Remove the drive cage (see "Removing the drive cage", Page 67).
- ► Detach the plug for the drive leads from the drive cage by pulling it through the opening.
- ► Detach the drive leads from the mainboard (see graphic on slots in Section "Overview of the drive bays and drives in your device", Page 62).
- ► Reinstall the drive cage (see "Installing the drive cage", Page 68). Take care that no cables or leads become trapped.

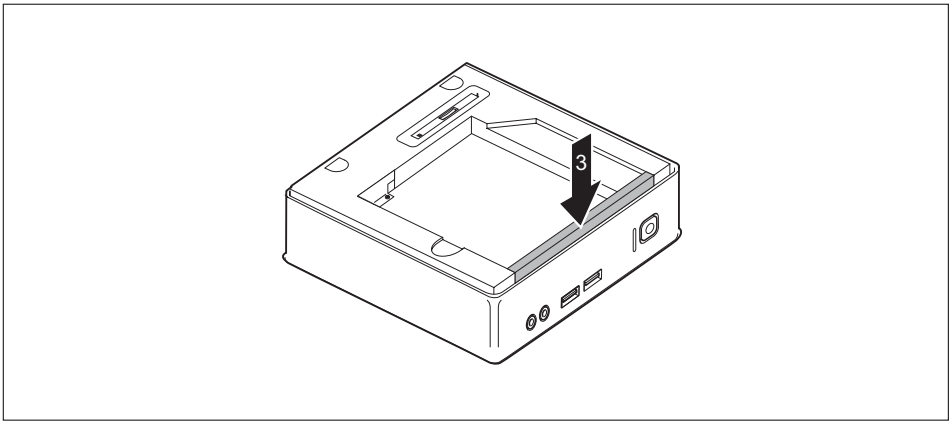


► Detach the drive plate from the drive (b) as shown (4).
► Fasten the drive plate (c) to the drive cage.

If you want to install a blanking cover



► Insert the metal cover (EMC protection) in the casing (1) and secure it with the screw (2).



► Fasten the blanking cover to the drive cage (3).

► If you do not want to remove or install any other components, replace the top casing cover (see "Securing the top casing cover", Page 66).

If you want to install a SmartCard reader / palm sensor

► Install the SmartCard reader / palm sensor and associated lead (see "Installing the reader/sensor", Page 75).

Installing and removing the SmartCard reader and palm sensor (device dependent)

Operation of this module is not permitted in Taiwan.

In systems equipped with a SmartCard reader and palm sensor, access can be restricted to those users who have a corresponding SmartCard or have stored their palm print.

Installing the SmartCard reader/palm sensor

- The top casing cover has been removed (see "Removing the top casing cover", Page 65).

If you have already fitted a blanking plate or an optical drive prior to installing the SmartCard reader/palm sensor, carry out the corresponding steps in the relevant sub-section of this chapter first.

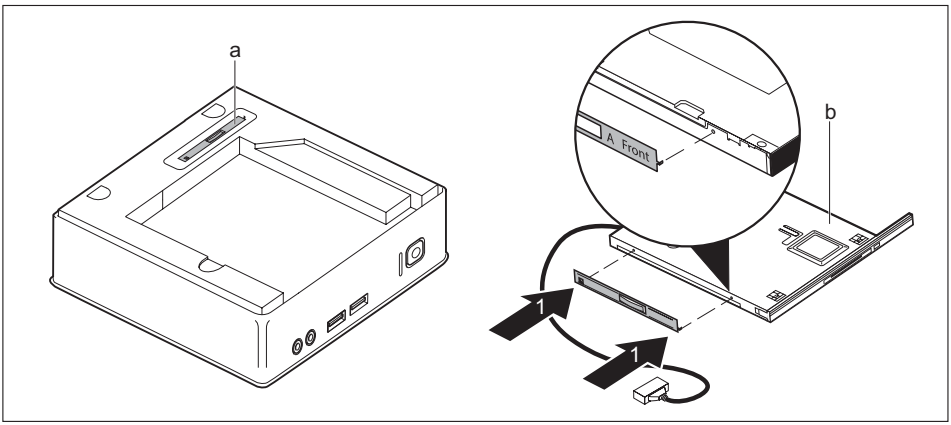
If you have already fitted a blanking plate

► Remove the blanking plate (see "If you have already installed a blanking plate", Page 69).

If you have already fitted an optical drive

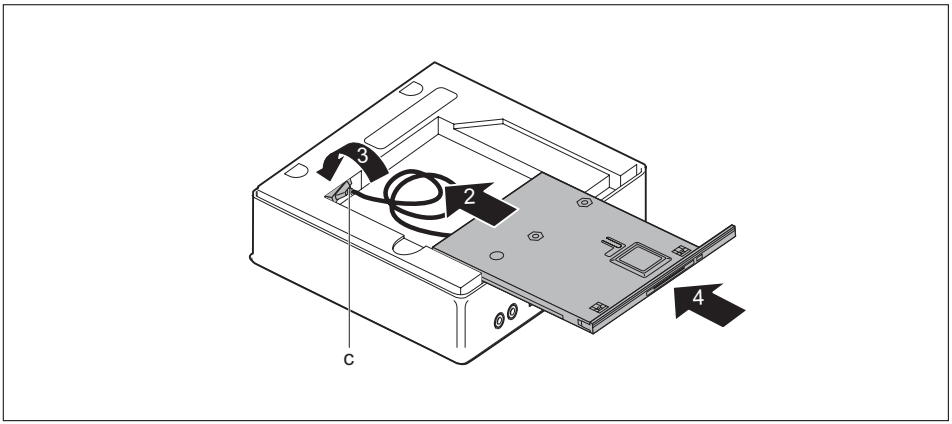
► Remove the optical drive and associated cabling (see "Removing the drive", Page 72).

Installing the reader/sensor

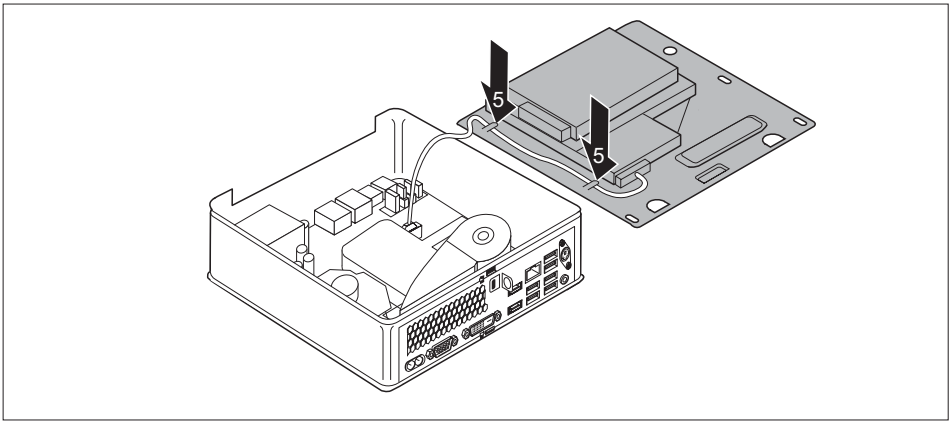


► Remove the drive plate (a) from the drive cage.

► Attach the drive plate to the reader/sensor (b) as shown (1). The "Front" label on the drive plate must be visible on the front right as illustrated.



- ► Carefully slide the reader/sensor partly into the drive bay in the direction of the arrow (2).
- ► Fully feed the reader/sensor cable (c) through the opening in the drive cage (3) into the interior of the casing.
- ► Slide the reader/sensor fully into the drive bay (4). Take care that no cables or leads become trapped.
- ► Remove the drive cage (see "Removing the drive cage", Page 67).
- ► Attach the reader/sensor lead to the mainboard (see graphic on slots in Section "Overview of the drive bays and drives in your device", Page 62).



- ► Insert the reader/sensor lead into the drive cage (5) as illustrated.
- ► Reinstall the drive cage (see "Installing the drive cage", Page 68). Take care that no cables or leads become trapped.
- ► If you do not want to remove or install any other components, replace the top casing cover (see "Securing the top casing cover", Page 66).

Removing the SmartCard reader/palm sensor

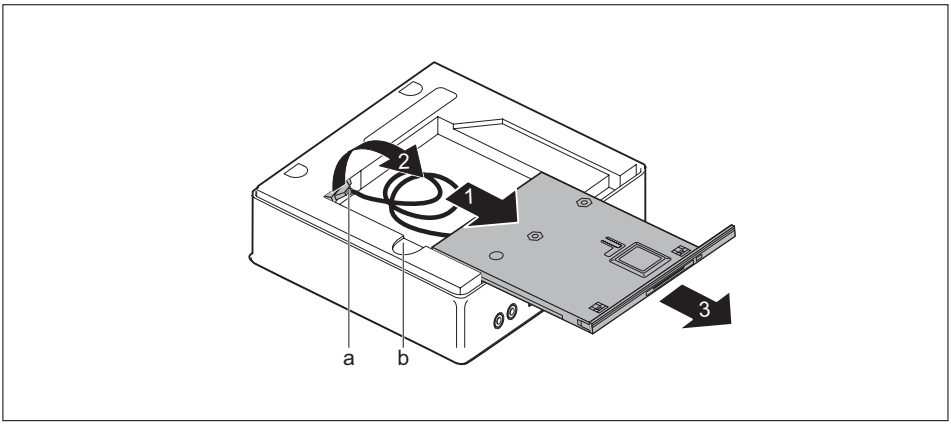
- The top casing cover has been removed (see "Removing the top casing cover", Page 65).

Removing the reader/sensor

► Remove the drive cage (see "Removing the drive cage", Page 67).

► Remove the reader/sensor lead from the mainboard (see graphic on slots in Section "Overview of the drive bays and drives in your device", Page 62).

► Reinstall the drive cage (see "Installing the drive cage", Page 68). Take care that no cables or leads become trapped.

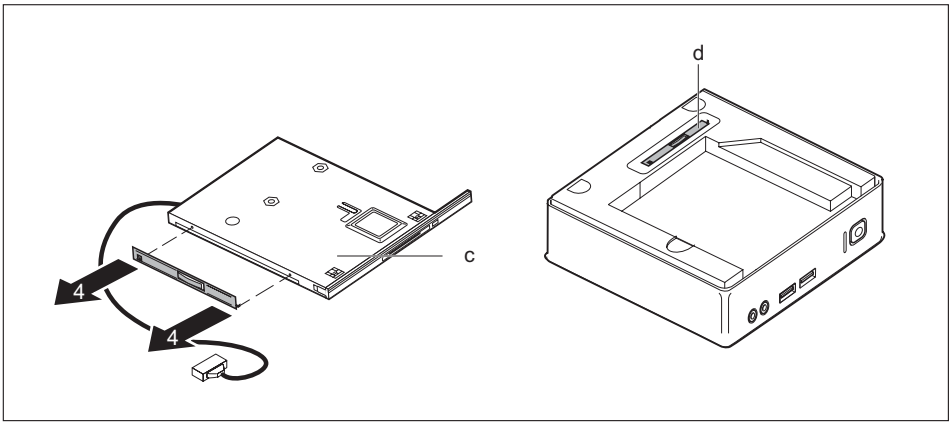


► Press and hold the unlocking mechanism (b) and carefully push the reader/sensor slightly in the direction of the arrow (1) until the reader/sensor and casing contacts and cables are accessible.

Ensure that you do not pull strongly on attached leads.

► Fully feed the reader/sensor lead and plug (c) through the opening in the drive cage (2) out of the interior of the casing.

► Lift the reader/sensor out of the drive bay (3).



► Detach the drive plate from the drive (c) as shown (4).
► Fasten the drive plate (d) to the drive cage.

If you want to install a blanking cover

► Install the blanking plate (see "If you want to install a blanking cover", Page 74).

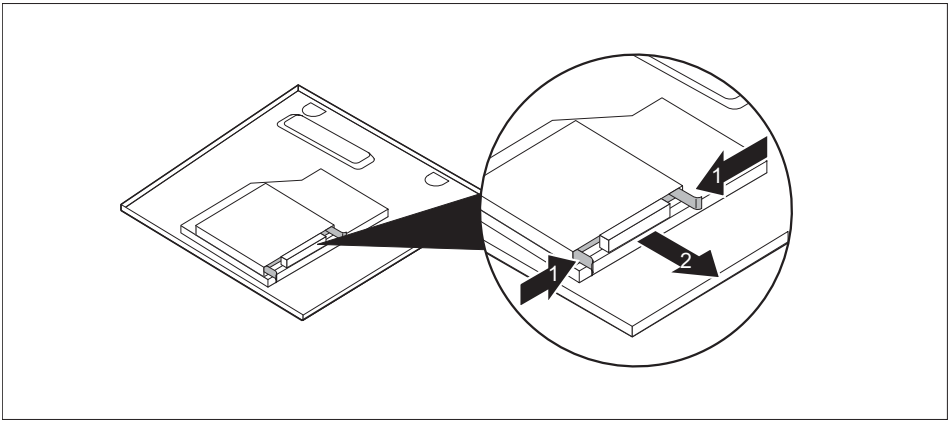
If you want to install an optical drive

► Insert the optical drive and associated lead (see "Installing a drive", Page 70).

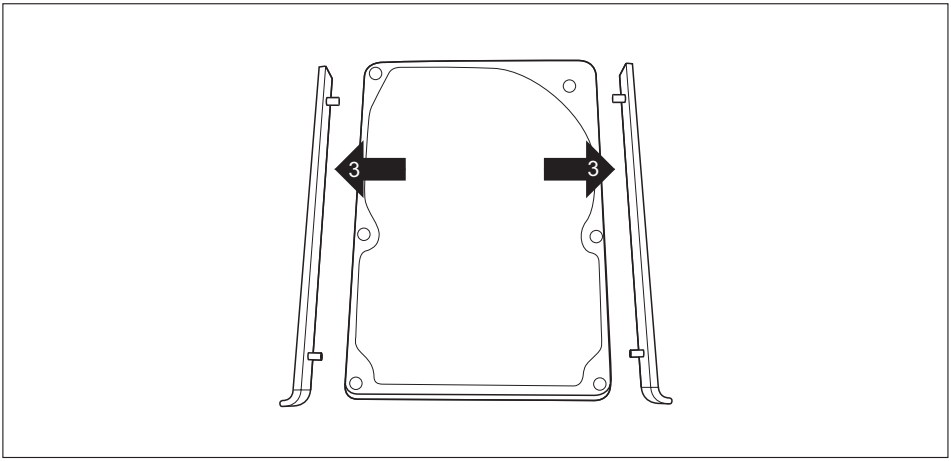
Removing and installing the 2.5" hard disk

Removing the 2.5" hard disk

- The top casing cover and the drive cage have been removed and the data and power supply cables detached from the hard disk and mainboard (see "Removing the top casing cover", Page 65 and "Removing the drive cage", Page 67).



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

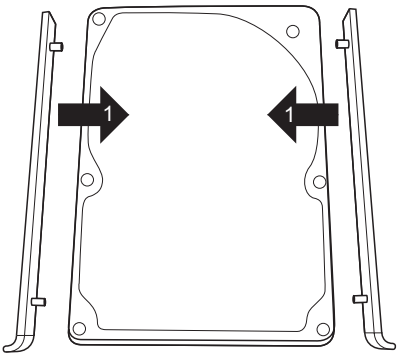


► Release the die EasyChange rails from the hard disk (3).

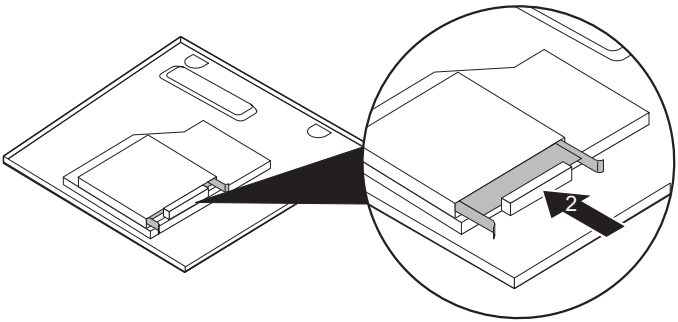
► If you do not want to remove or install any other components, replace the drive cage and the top casing cover (see "Installing the drive cage", Page 68 and "Securing the top casing cover", Page 66). Take care that no cables or leads become trapped.

Installing a 2.5" hard disk

- The top casing cover and drive cage have been removed (see "Removing the top casing cover", Page 65 and "Removing the drive cage", Page 67).



► Secure the EasyChange rails to the side of the hard disk drive (3) by inserting the pins of the EasyChange rail into the corresponding holes in the hard disk.



► Slide the hard disk with the EasyChange rails fitted into the drive cage in the direction of the arrow (2). Ensure that the label on the hard disk is facing upwards.

► Attach the leads to the hard disk and onto the mainboard (see "Removing the drive cage", Page 67).

You can find information on pin allocation on the mainboard in Section "Overview of the drive bays and drives in your device", Page 62 and in your mainboard manual.

► If you do not want to remove or install any other components, replace the drive cage and the top casing cover (see "Installing the drive cage", Page 68 and "Securing the top casing cover", Page 66). Take care that no cables or leads become trapped.

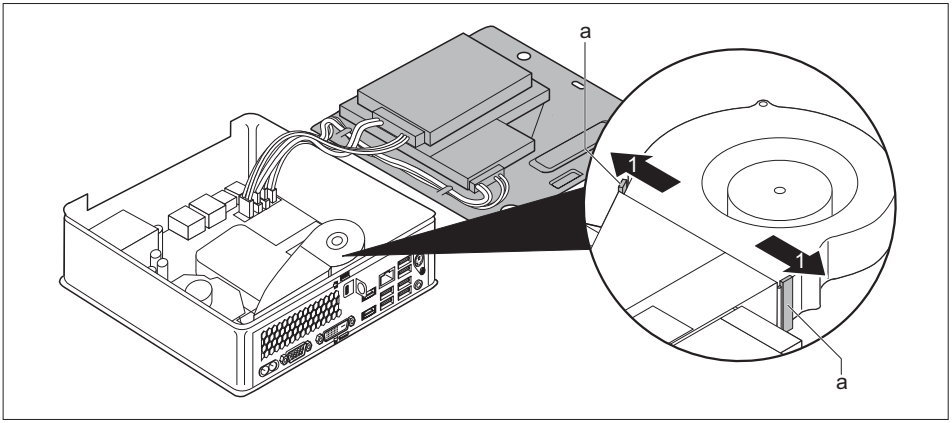
Removing and installing the fan

You first need to remove the fan to be able to remove and install the M.2 module and/or the lithium battery.

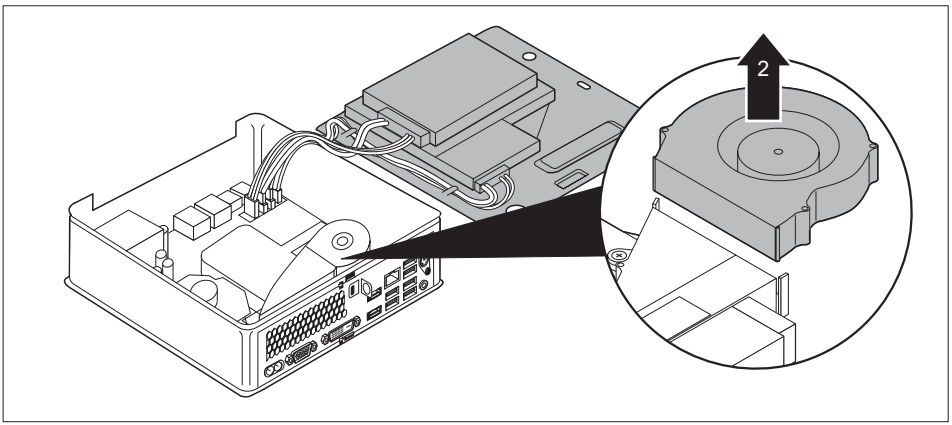
Removing the fan

- The top casing cover and drive cage have been removed (see "Removing the top casing cover", Page 65 and "Removing the drive cage", Page 67).

► Disconnect the fan cables from the mainboard.



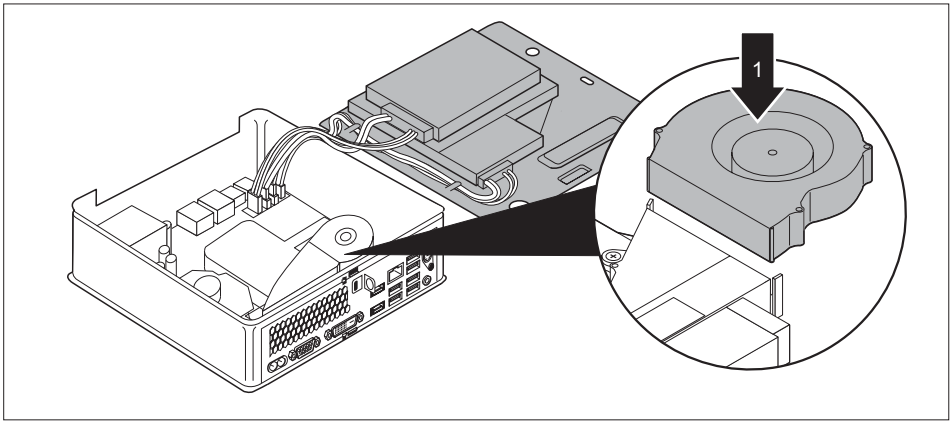
► To release the fan attachment, keep the locking lugs (a) pressed in the direction of the arrow (1).



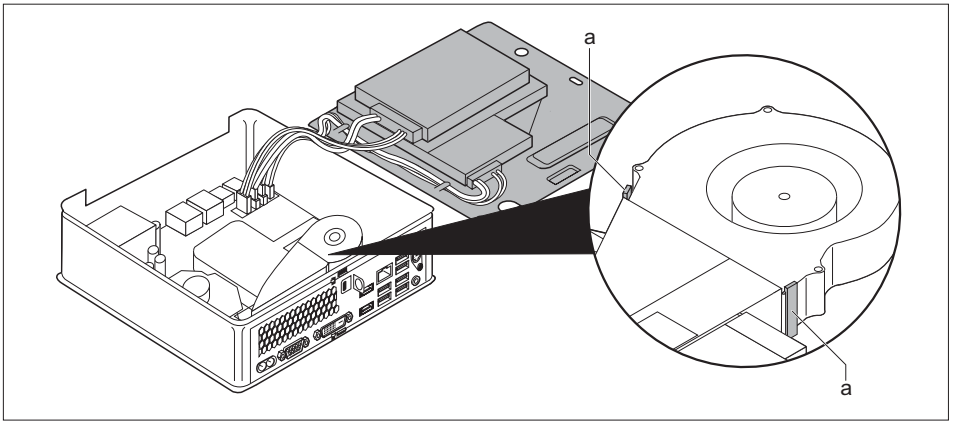
► Lift the fan out of the casing (2).

Installing the fan

- The top casing cover and drive cage have been removed (see "Removing the top casing cover", Page 65 and "Removing the drive cage", Page 67).



► Place the fan in its installation position in the casing (1).



► Make sure that the locking lugs (a) re-engage.

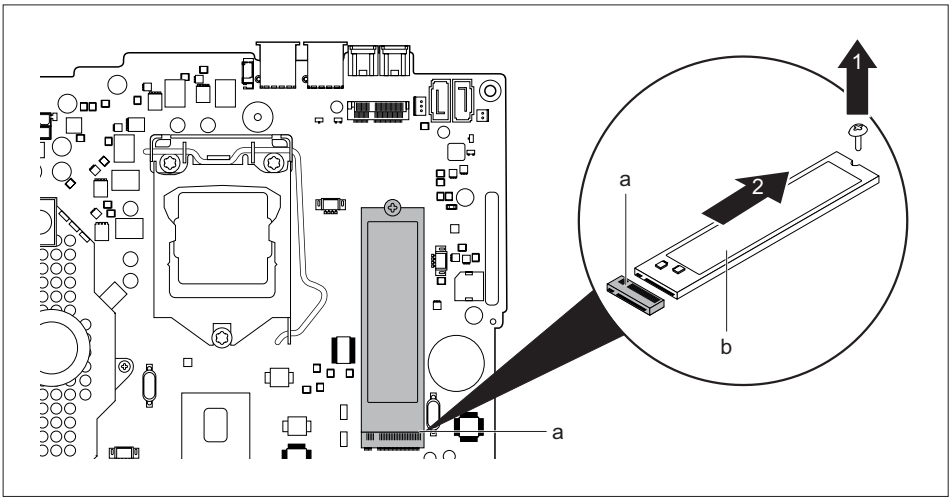
► Connect the fan leads to the mainboard.

► If you do not want to remove or install any other components, replace the drive cage and the top casing cover (see "Installing the drive cage", Page 68 and "Securing the top casing cover", Page 66). Take care that no cables or leads become trapped.

Inserting and removing the M.2 module

Removing the M.2 module

- The top casing cover and drive cage have been removed (see "Removing the top casing cover", Page 65 and "Removing the drive cage", Page 67).
- The fan has been removed (see "Removing the fan", Page 82).



► Undo the screw (1).

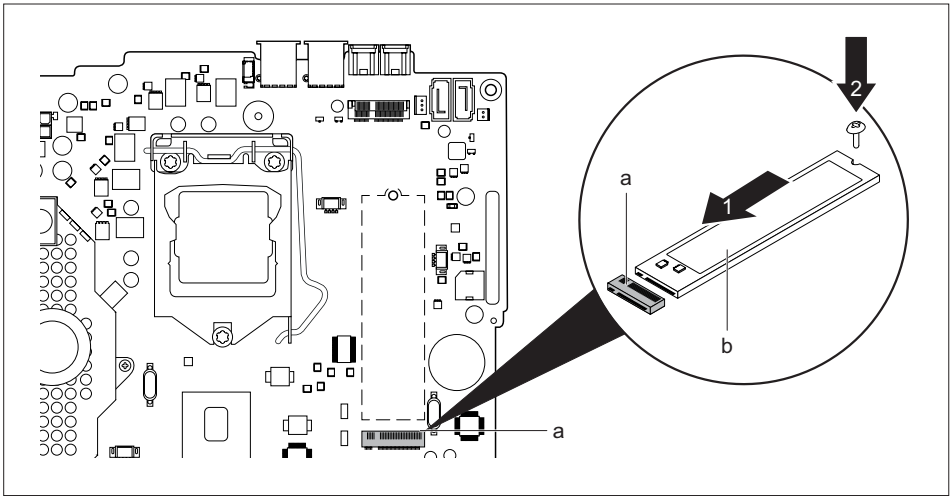
► Pull the M.2 module (b) slightly at an angle in the direction of the arrow (2) and out of the slot (a) on the mainboard and remove it from the casing.

► Reinstall the fan (see "Installing the fan", Page 83).

► If you do not want to remove or install any other components, replace the drive cage and the top casing cover (see "Installing the drive cage", Page 68 and "Securing the top casing cover", Page 66). Take care that no cables or leads become trapped.

Installing the M.2 module

- The top casing cover and drive cage have been removed (see "Removing the top casing cover", Page 65 and "Removing the drive cage", Page 67).
- The fan has been removed (see "Removing the fan", Page 82).



► 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 onto the mainboard with the screw (2).

► Reinstall the fan (see "Installing the fan", Page 83).

► If you do not want to remove or install any other components, replace the drive cage and the top casing cover (see "Installing the drive cage", Page 68 and "Securing the top casing cover", Page 66). Take care that no cables or leads become trapped.

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!

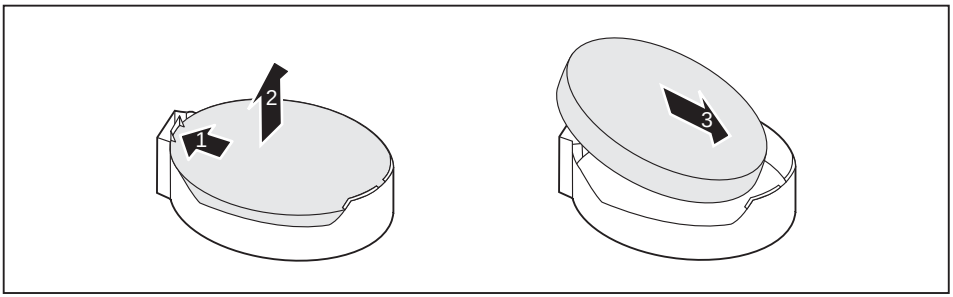
The lithium battery may be replaced only with an identical battery or with a type recommended by the manufacturer.

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.

- ► Remove the top casing cover and drive cage (see "Removing the top casing cover", Page 65 and "Removing the drive cage", Page 67).
- ► Remove the fan (see "Removing the fan", Page 82).



- ► 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.
- ► Reinstall the fan (see "Installing the fan", Page 83).
- ► If you do not want to remove or install any other components, replace the drive cage and the top casing cover (see "Installing the drive cage", Page 68 and "Securing the top casing cover", Page 66). Take care that no cables or leads become trapped.

Removing and attaching the top casing cover

You need to remove the top casing cover if you want to remove or install the following components:

- Memory modules

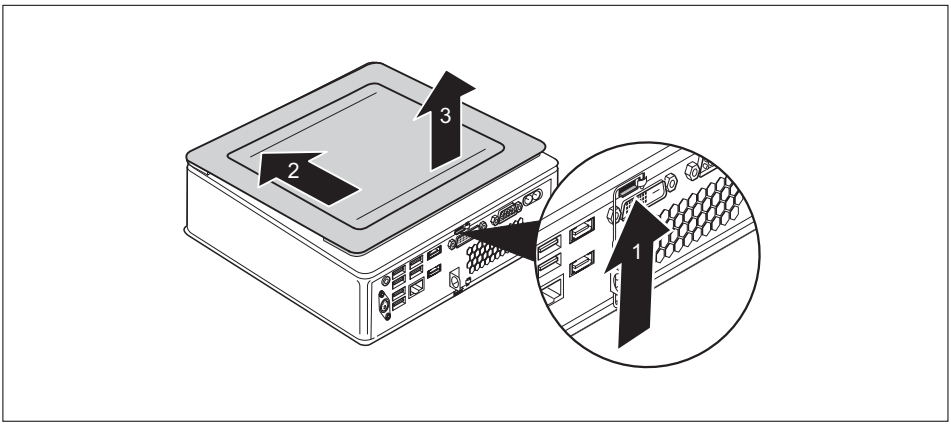
Removing the bottom casing cover

► Turn the device over.

► If you are using a locking bracket and a padlock to protect the device, remove the lock and open the locking bracket (see "Using a locking bracket", Page 53).

or

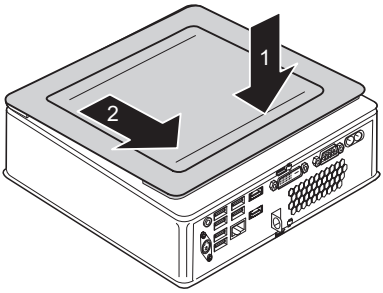
► If you are using a locking bracket and a Kensington Lock cable to protect the device, remove the Kensington Lock cable and open the locking bracket (see "Using the Security Lock", Page 52 and "Using a locking bracket", Page 53).



► Push the release on the rear side of the device in the direction of the arrow (1) while at the same time sliding the bottom casing cover in the direction of the arrow (2).

► Lift the bottom casing cover off the device (3).

Securing the bottom casing cover



- ► Place the bottom casing cover on the device (1).
- ► Slide the bottom casing cover in the direction of the arrow (2) until it engages noticeably.
- ► If you are using a locking bracket and a padlock to protect the device, close the locking bracket and fasten the lock (see "Using a locking bracket", Page 53).

or

- ► If you are using a locking bracket and a Kensington Lock cable to protect the device, close the locking bracket and fasten the Kensington Lock cable (see "Using a locking bracket", Page 53 and "Using the Security Lock", Page 52).

- ► Position the device the correct way up again.

Installing and removing memory expansion

Please observe the safety information in chapter "Important notes", Page 13.

The device must not be connected to the power supply when memory modules are installed or removed, see "Prepare to remove components", Page 64.

Only use memory extensions that have been approved for your device, see chapter "Technical data", Page 91.

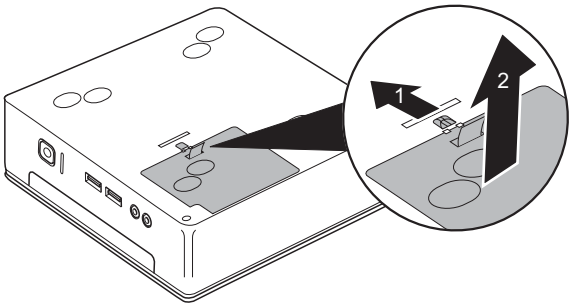
Never use force when installing or removing a memory extension.

Make sure that foreign objects do not fall into the memory extension compartment.

You must open the service cover to remove or install the memory module.

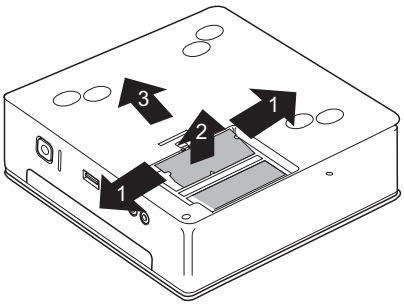
The following description is identical for both memory modules.

Open the service cover



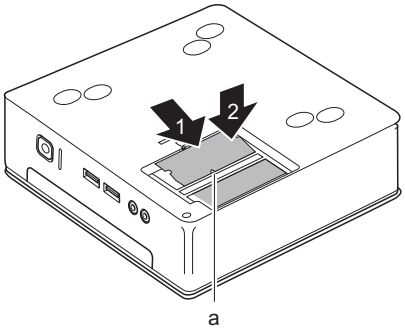
► Slide the clip in the direction of the arrow (1) and hold it there.
► Pull the cover on the tab in the direction of the arrow (2) and away from the casing.

Removing memory modules



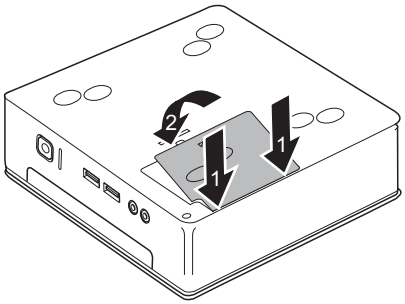
► Carefully push the two mounting clips outwards (1).
↳ The memory module snaps upwards (2).
► Pull the memory module out of its slot in the direction of the arrow (3).

Installing a memory module



► Insert the memory module with the contacts and the recess (a) facing the slot (1).
► Carefully push the memory module downwards until you feel it click into place (2).

Close the service cover



► Insert the catches of the cover in the associated recesses on the casing (2).
► Fold the cover in the direction of the arrow (2).

Finish component removal

► Connect the previously disconnected cables to the device again.

Technical data

Electrical data	
Safety standards complied with:	IEC 60950-1, EN 60950-1, UL 60950-1 CSA 22.2 No.60950-1
Protection class:	II
Rated voltage range	100 – 240 V
Rated frequency	50 – 60 Hz (AC)
Max. rated current	1.5 – 0.8 A
Dimensions	
Width/depth/height:	**ESPRIMO Q95x:** 185 mm x 190 mm x 57.6 mm / 7.28 inches x 7.48 inches x 2.27 inches **ESPRIMO Q55x:** 185 mm x 190 mm x 54 mm / 7.28 inches x 7.48 inches x 2.13 inches
Weight	
in basic configuration:	approx. 1.8 kg / 4.0 lbs
Ambient conditions	
Environment class 3K2 Environment class 2K2	DIN EN 60721-3-3 DIN EN 60721-3-2
Temperature	
Operation (3K2)	15°C to 35°C / 59°F to 95°F
Transportation (2K2)	-25°C to 60°C / -13F to 140°F
The formation of condensation is not permitted while the device is in operation ! Clearance required to ensure adequate ventilation:	
without air vents with air vents	min. 10 mm / 0.39 inch min. 200 mm / 7.87 inches (exception: underside in vertical operating position, see "Setting up the device", Page 20)

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

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