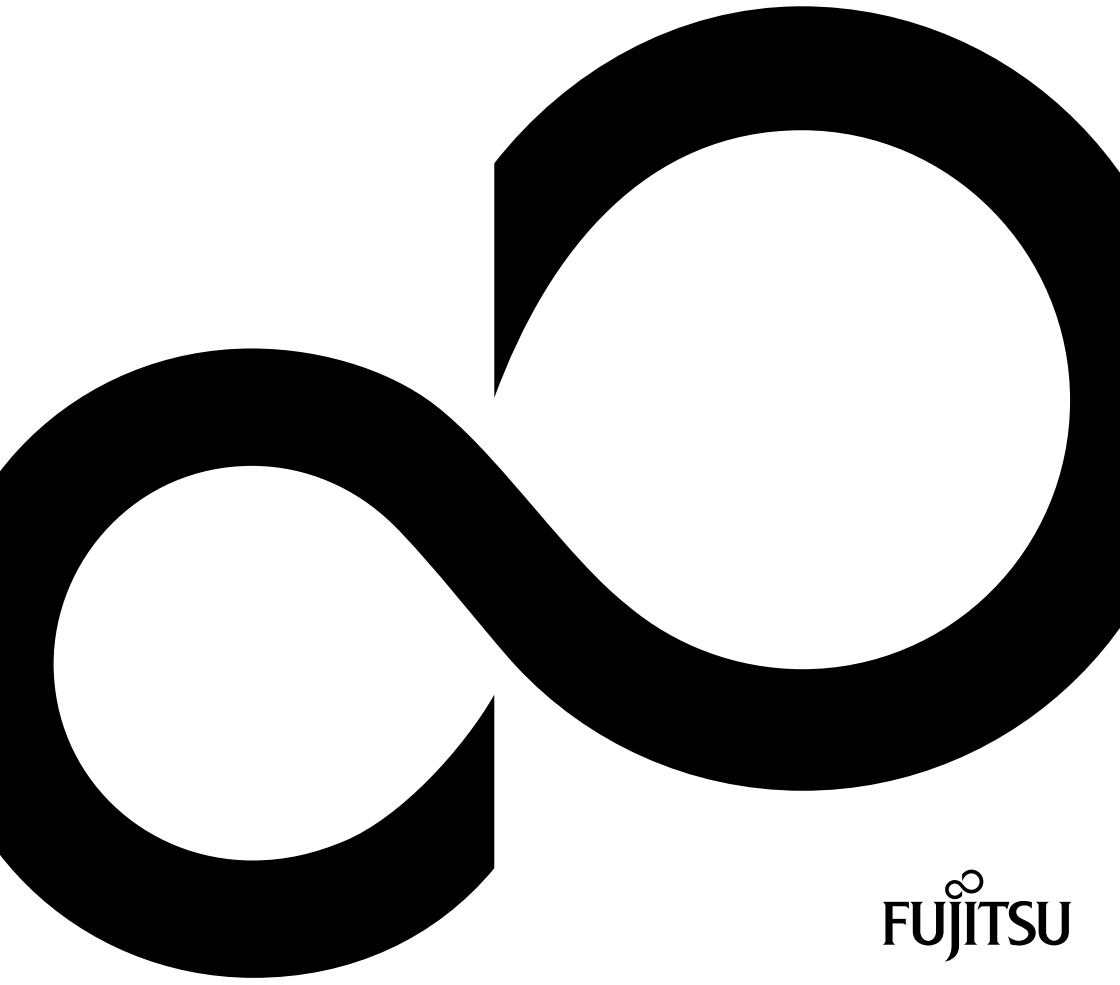


FUJITSU ALL-IN-ONE PC
ESPRIMO K55x/24
ESPRIMO K55x/20



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- Your sales office

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FUJITSU ALL-IN-ONE PC ESPRIMO K55x/24

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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 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 selected configuration, the operating system is preinstalled on your hard disk.

Further information on this device is provided:

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









With the programme *Acrobat Reader*, you can display targeted information on the screen quickly. It is of course also possible to print out a copy of the manual if required.

Validity of the Reference Manual

This Reference Manual is valid for the following systems:

- FUJITSU ALL-IN-ONE ESPRIMO K557/24
- FUJITSU ALL-IN-ONE ESPRIMO K557/20
- FUJITSU ALL-IN-ONE ESPRIMO K558/24
- FUJITSU ALL-IN-ONE ESPRIMO K558/20

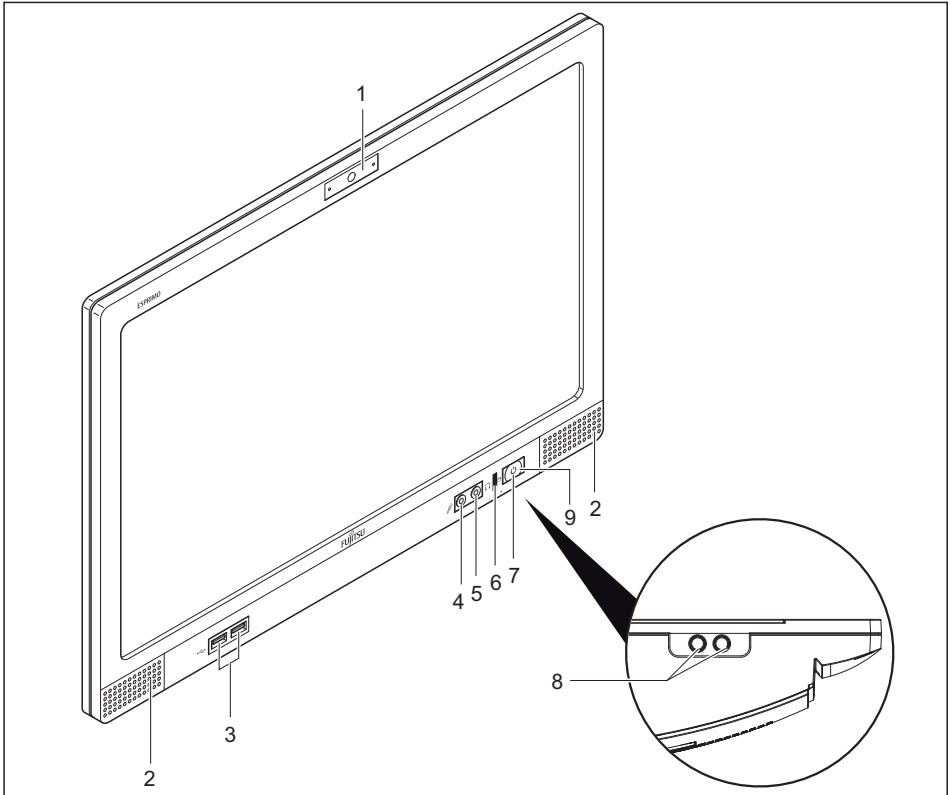
Notational conventions

	Pay particular attention to text marked with this symbol. Failure to observe these warnings could pose a risk to health, damage the device or lead to loss of data. The warranty will be invalidated if the device becomes defective through failure to observe these warnings.
	Indicates important information for the proper use of the device.
	Indicates an activity that must be performed
	Indicates a result
This font	indicates data entered using the keyboard in a program dialogue or at the command line, e.g. your password (Name123) or a command used to start a program (start.exe)
This font	indicates information that is displayed on the screen by a program, e.g.: Installation is complete.
<i>This font</i>	indicates <ul style="list-style-type: none"> terms and texts used in a software interface, e.g.: Click on <i>Save</i> names of programs or files, e.g. <i>Windows</i> or <i>setup.exe</i>.
"This font"	indicates <ul style="list-style-type: none"> cross-references to another section, e.g. "Safety information" cross-references to an external source, e.g. a web address: For more information, go to "http://www.fujitsu.com/fts" Names of CDs, DVDs and titles or designations for other materials, e.g.: "CD/DVD Drivers & Utilities" or "Safety/Regulations" manual
	indicates a key on the keyboard, e.g: 
This font	indicates terms and texts that are emphasised or highlighted, e.g.: Do not switch off the device

Ports and Operating Elements

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

Front



1 = Multimedia module with camera and microphone (only ESPRIMO K557/24, optional)

2 = Loudspeaker

3 = USB 3.0 ports

4 = Microphone port

5 = Headphone port

6 = Hard disk indicator

7 = Power-on indicator

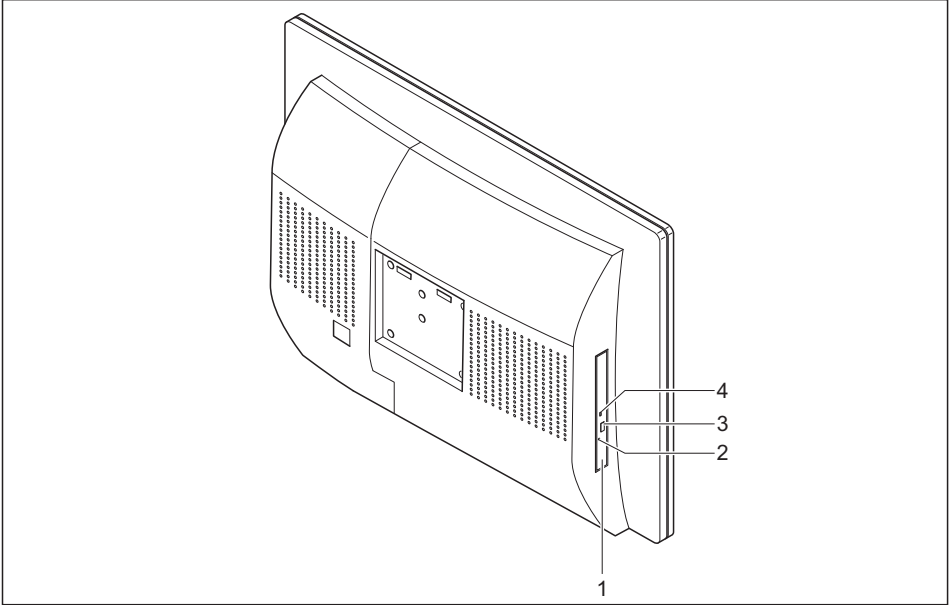
8 = Screen brightness buttons on the underside

9 = On/off switch

Left side



As an option, a SmartCard reader can be installed in the optical drive bay.



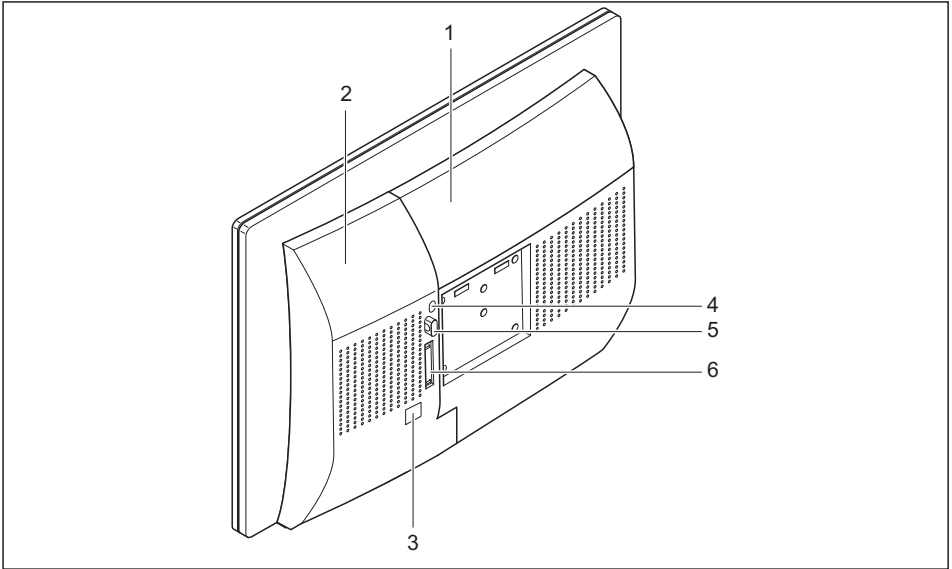
1 = Optical drive (DVD or Blue-ray, only
ESPRIMO K557/24 and K558/24)

2 = Emergency removal

3 = Insert/eject button, optical drive

4 = Optical drive status indicator (optional)

Rear



1 = Service cover

2 = Cover for ports

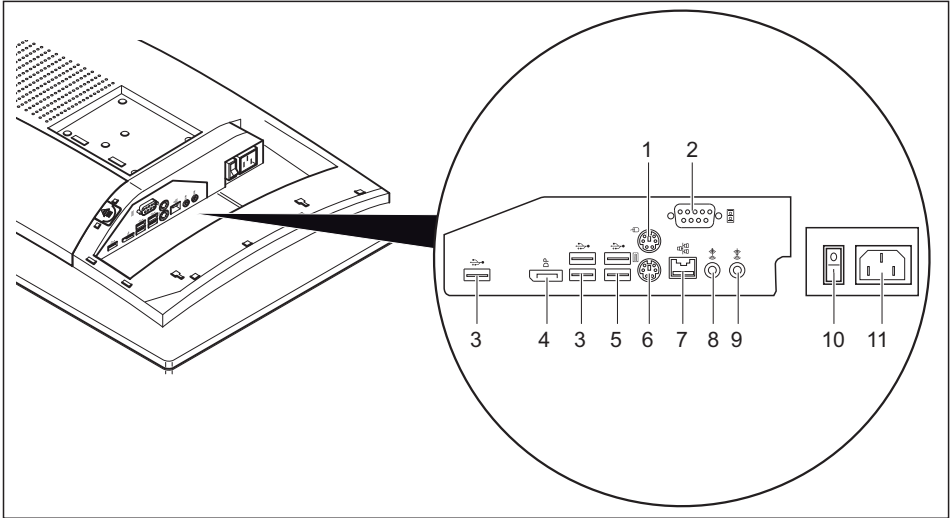
3 = Cover for main switch

4 = Security Lock device

5 = Padlock mounting option

6 = Clip

Rear side (under cover)



- 1 = PS/2 mouse port
- 2 = Serial port (optional)
- 3 = USB 2.0 ports
- 4 = DisplayPort port
- 5 = USB 3.0 ports
- 6 = PS/2 keyboard port

- 7 = LAN port
- 8 = Audio output (Line Out)
- 9 = Audio input (Line In)
- 10 = Main switch
- 11 = Power 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 59](#) as well as the instructions in Chapter ["Getting started", Page 14](#).

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

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

The main switch and the ON/OFF switch do not disconnect the device from the mains voltage. For complete disconnection from the mains voltage, you must pull the mains plug out of the socket.

Only operate the device with the casing closed.

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).

Safety notes for the system

This device complies with the relevant safety regulations for data processing equipment, including electronic office machines for use in an office environment. If you have any questions about whether the device can be used in the intended environment, please contact your sales office or our Service Desk.

- The display surface of the device is sensitive to pressure and scratches. You should therefore be careful with the display surface in order to avoid lasting damage (scratches).
- If the device is brought into the installation site from a cold environment, condensation can form. Before operating the device, wait until it is absolutely dry and has reached approximately the same temperature as the installation site.
- When installing and operating the device, please observe the notes on ambient conditions in "[Technical data](#)", [Page 59](#) and the instructions in "[Setting up an ergonomic video workstation](#)", [Page 15](#).
- To ensure sufficient ventilation, the air inlet and outlet openings of the device must be kept clear.
- The device automatically sets itself to the correct voltage within the range from 100 V to 240 V. Make sure that the local mains voltage is neither higher nor lower than this range.
- Ensure that the power socket on the device and the mains outlet are freely accessible.
- The on/off switch does not disconnect the device from the mains voltage. To completely disconnect from the mains voltage, you must remove the mains plug from the mains socket.
- The device is equipped with a power cable that complies with safety standards.
- Use the supplied power cable only.
- Lay the cables in such a way that they do not create a hazard (danger of tripping) and cannot be damaged. When connecting the device, observe the relevant notes in chapter "[Connecting external devices](#)", [Page 24](#).
- No data transfer cables should be connected or disconnected during a thunderstorm.
- Make sure that no objects (e.g. jewellery chains, paper clips, etc.) or liquids get inside the device (danger of electric shock, short circuit).
- The device is not waterproof! Never immerse the device in water and protect it from spray water (rain, sea water).
- In an emergency (e.g. damaged casing, operation controls or cables, penetration of liquids or foreign matter), switch off the device, disconnect the power plug and contact your sales outlet or our Service Desk.
- Only set the resolution and refresh rates that are indicated in chapter "[Technical data](#)", [Page 59](#). If you set other values, you may damage the device. If you are in any doubt, contact your sales outlet or our Service Desk.
- Use a screen saver with moving images and activate the power management for your monitor to prevent still images from "burning in".
- We recommend that you place your device on a durable, non-slip surface. In view of the many different finishes and varnishes used on furniture, it is possible that the feet of the device may mark the surface they stand on.

Transporting the device



Transport all devices separately in their original packaging or in a packaging that protects them from knocks and jolts.

Unpack them only at the installation site.

If the device is brought from a cold environment into the room where it will be used, condensation may occur. In order to avoid damage to the device, wait before preparing it for use until the device has reached the ambient temperature and it is absolutely dry.

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 on the Recovery DVD or on our website ("<http://www.fujitsu.com/fts/about/fts/environment-care/>").

Getting started



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

Unpacking and checking the delivery



The display surface of the device is sensitive to pressure and scratches. Always hold the device by the casing!

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
- Connecting external devices such as a mouse and keyboard
- Check the voltage at the mains outlet and connect the device to an electrical outlet
- Switch the device on

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

External devices



If you have received other 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 48](#) chapter.

Setting up the device



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

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

Depending on the location of your device, bothersome vibrations and noises may occur. To prevent this, a distance of at least 10 mm / 0.39" 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.

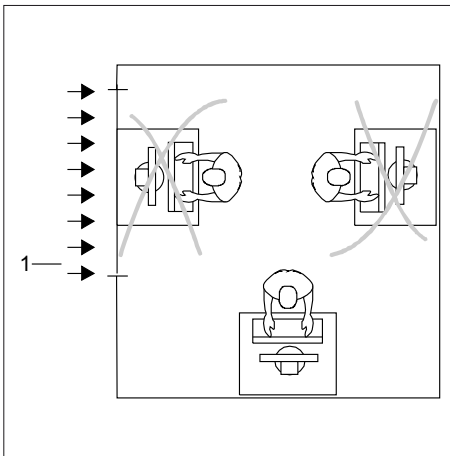
A minimum distance of 200 mm / 7.87" from the device must be observed for ventilation areas.

Do not expose the device to extreme ambient conditions (see ["Technical data", Page 59](#), section "Ambient conditions"). Protect the device against dust, humidity and heat.

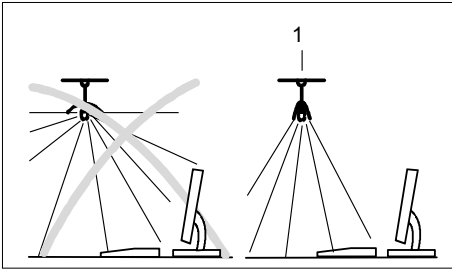
When the lighting conditions are unfavourable (for instance direct sunlight), reflections may occur which can cause the displayed characters to be difficult to read. Suitable ambient lighting is necessary to avoid these kinds of reflections.

In addition, align your system according to the ambient lighting conditions, for instance by changing the position of the display (horizontal or vertical angle).

Setting up an ergonomic video workstation



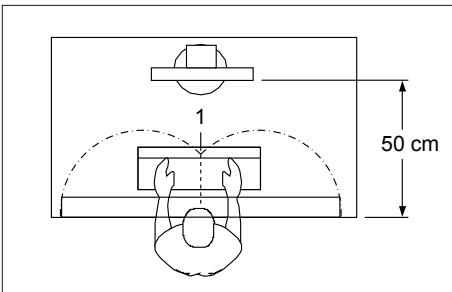
- ▶ Do not position the video workstation opposite a window (1).



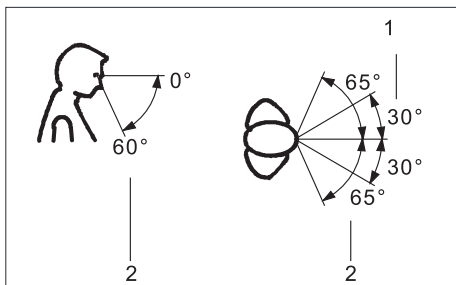
- Position the system outside the reach of a light source (1).



- Position the keyboard where it is easiest to reach (1).



- Position the system so that the eye distance to the screen (1) is around 50 cm / 20 inches.



- ▶ Position the device for optimum viewing (1). The monitor should not extend beyond the acceptable viewing range (2).

Adjusting the inclination

The monitor can be tilted up to $+20^\circ$ backwards from its vertical position.

- ▶ Hold the monitor with both hands on the left and right sides of the casing and move it to the desired angle.

Adjusting the rotation

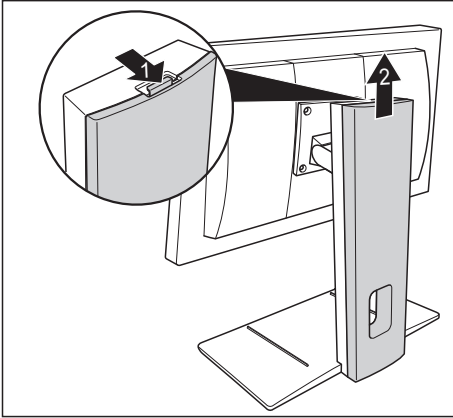
The device can be rotated by $\pm 170^\circ$.

- ▶ Grasp the device with both hands on the right and left edge of the casing and turn it to the desired position.

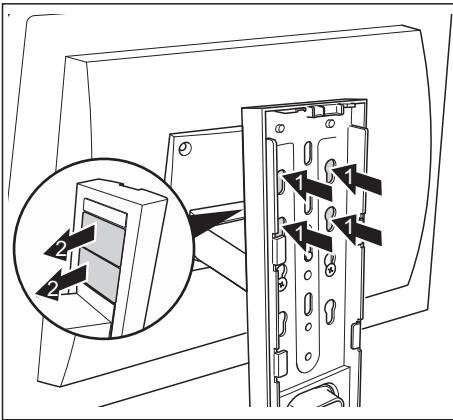
Adjusting the height

- ▶ Switch the device off.
- ▶ Disconnect the mains plug.
- ▶ Disconnect all cables from the front of the device.

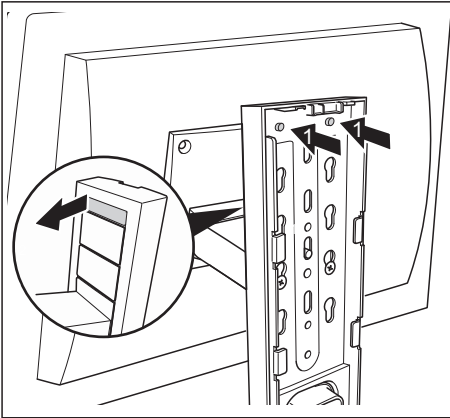
Removing covers



- ▶ Press the tabs in the direction of the arrow (1) and hold.
- ▶ Pull the cover off the foot in the direction of the arrow (2).



- ▶ Press a blunt, thin object carefully through the drilled holes in the direction of the arrow (1).
- ↳ The covers are pushed out (2).



- ▶ To remove the topmost cover, manually push the cover out from behind (1).

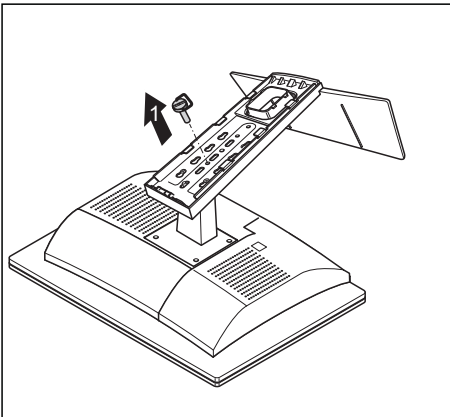


The topmost cover must only be removed if the device is to be positioned in the top position of the foot.

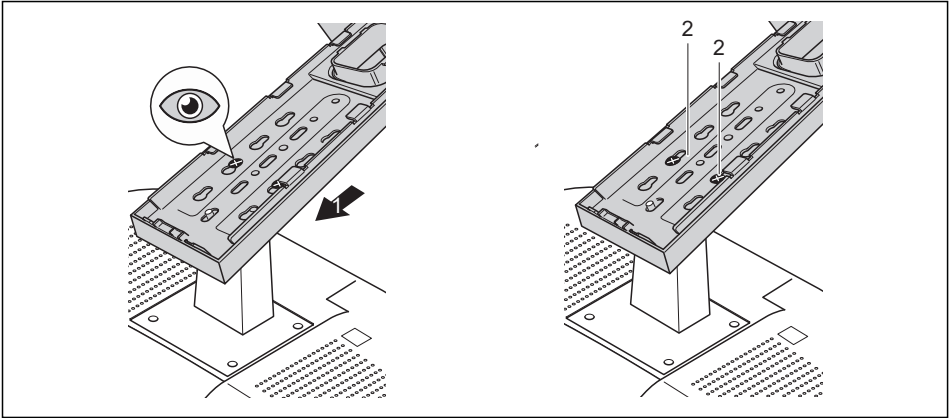
Adjusting the height



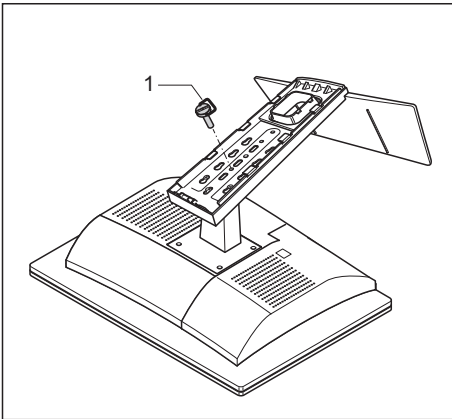
The display surface of the device is sensitive to pressure and scratches!
Always hold the device by the casing!



- ▶ Lay the monitor on its front on a soft surface.
- ▶ Remove the screw (1) by hand.

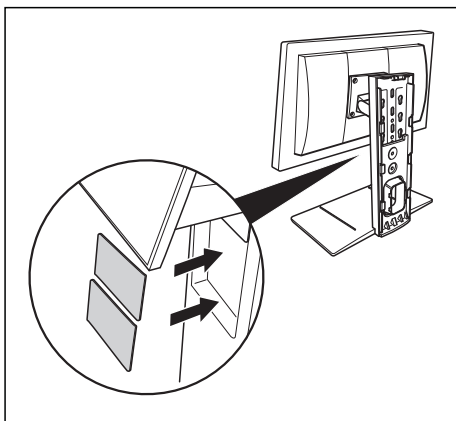


- ▶ Slide the foot in the direction of the arrow (1) until the extension screws are located in the large diameter of the lengthways hole (2).
- ▶ Remove the foot.
- ▶ Choose one of the 4 height settings and mount the foot at the desired height.
- ▶ Lock the extension screws into place in the small diameter of the lengthways hole.

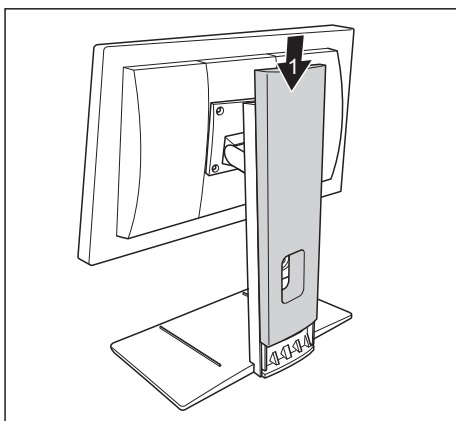


- ▶ Tighten the screw (1) by hand.

Mounting covers



- ▶ Press the covers onto the foot in the direction of the arrow, until the covers engage.



- ▶ Push the cover onto the foot in the direction of the arrow (1).

Information on how to fit a VESA mount monitor base carrier

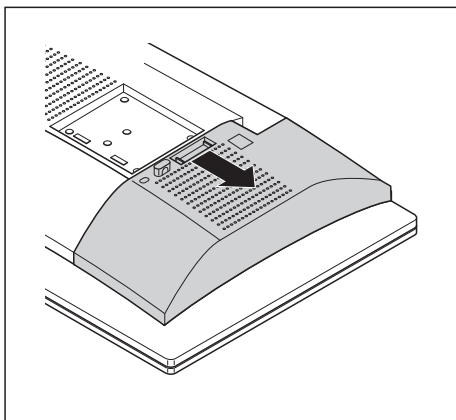


Operate the unit horizontally only. Operation in other positions is not permitted.

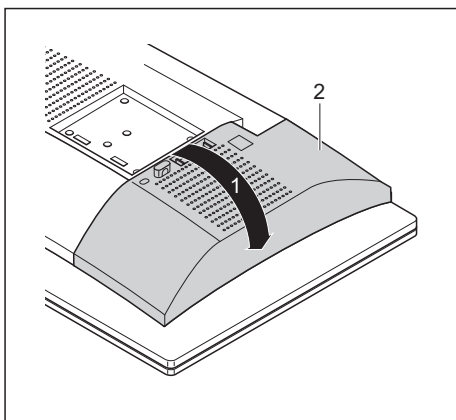
Your device can be mounted on a VESA mount monitor base carrier:

- The device weights over 6 kg. Use a suitable VESA mount monitor base carrier and suitable mounting materials (M4 screws).
- The screw holes for the VESA mount monitor base carrier are spaced 100 mm apart.
- The maximum screw insertion depth is 10 mm.
- When mounting on a VESA mount mounting hole, ensure that the ventilation openings are not covered.
- For additional information, see the manual supplied with your VESA mount monitor base carrier.

Removing the cover for external devices ports



- ▶ Press the clip in the direction of the arrow.



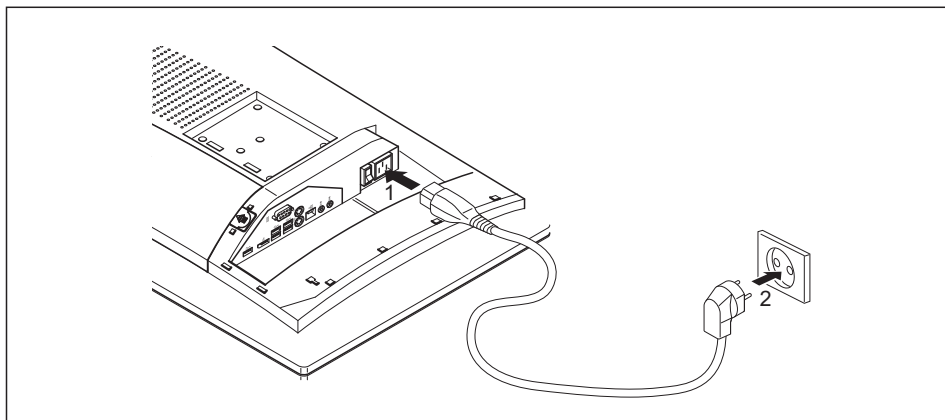
- ▶ Lift the cover for the external devices ports (2) in the direction of the arrow (1).

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.



- ▶ Connect the power cable to the power connector (1) of the device.
- ▶ Plug the mains supply plug into an earthed mains supply socket (2).

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.

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

Ports on the device

The ports are located on the front and rear 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).

DP	DisplayPort		USB 3.0 - Universal Serial Bus, blue (device-dependent)
	Audio output (Line Out)		LAN port
	Audio input (Line in)		PS/2 mouse port, green
	Serial port		PS/2 keyboard port, purple
	USB 2.0 - Universal Serial Bus, black		



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

Connecting the mouse

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

Connecting a USB mouse

- ▶ Connect the USB mouse to one of the USB ports on the device.

Connecting a PS/2 mouse



The PS/2 mouse is only detected by the device if you connect the mouse when the device is switched off and then switch the device on again.

- ▶ Connect the PS/2 mouse to the PS/2 mouse port of the device.
- ▶ Switch your device on again.

Connecting the keyboard

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

Connecting a USB keyboard

Use the supplied keyboard cable only.

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

Connecting a PS/2 keyboard

Use the supplied keyboard cable only.



The PS/2 keyboard is only detected by the device if you connect the keyboard when the device is switched off and then switch the device on again.

- ▶ Switch your device off.
- ▶ Plug the round plug of the keyboard cable into a keyboard port of the device.
- ▶ Switch your device on again.

Connecting external devices to the serial interface



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

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.

Port settings



You can change the settings of the port 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).

i

USB devices and hot plug-enabled. 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.

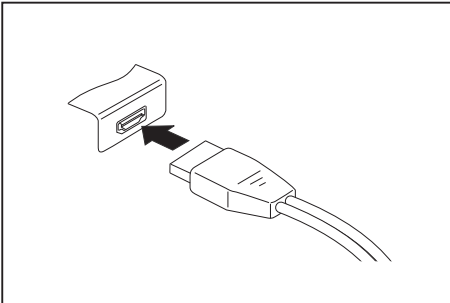
Device drivers

i

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

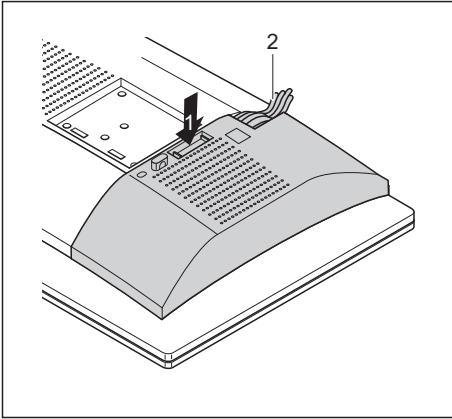
Connect a second monitor to the display port

You can connect a second monitor via the DisplayPort.

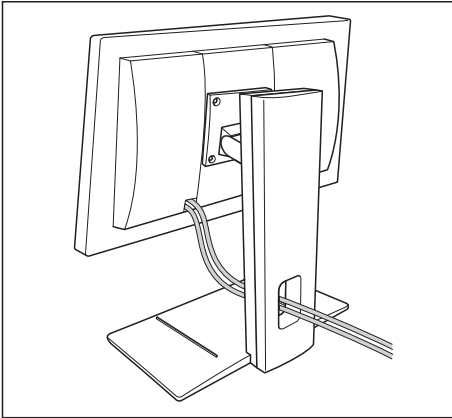


- ▶ Connect the data cable to your ALL-IN-ONE PC
- ▶ Connect the data cable to the display port of the second monitor.

Mounting the cover for external devices ports



- ▶ Place the cover on its mounting location.
- ▶ Slide the cover in the direction of the arrow (1) until the clip engages.
Ensure that all cables are guided through the recess (2) in the cover and that no cables are trapped.



- ▶ Guide all cables through the opening in the base towards the rear.

Switching on for the first time: installing the software



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

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

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



If the device is integrated into a network, the user and server details as well as the network protocol are required during the software installation.

Contact your network administrator if you have any questions about these settings.

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

Switch the device on



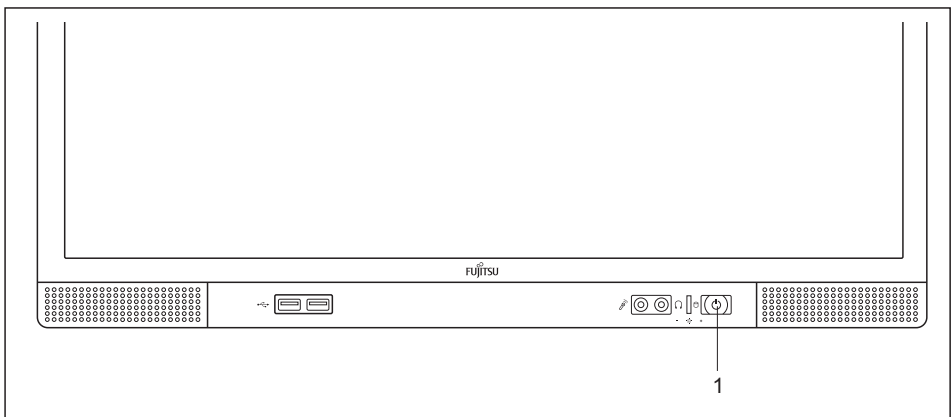
In order to avoid overheating, do not cover the ventilation areas of the device.

- ▶ Switch the device off at the main switch.



The main switch is located on the rear of the device under a cover (see ["Rear", Page 9](#)).

In delivery status, the main switch is at position "I".



- ▶ Press the ON/OFF switch on the front of the device.
- ↳ The power indicator glows and the device starts.

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.



For more information on the system as well as drivers, utilities and updates see ["http://www.fujitsu.com/fts/support"](http://www.fujitsu.com/fts/support) on the Internet.

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

Operation

Switch the device on



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

- ▶ If necessary, switch the device off at the main switch.



The main switch is located on the rear of the device under a cover (see ["Rear", Page 9](#)).

- ▶ Press the ON/OFF switch on the front of the device.
- ↳ The power indicator glows and the device starts.

Switching the device off

- ▶ Shut down the operating system in the proper way. With Windows: in the *Start* menu via the *Exit* function.
- ▶ If the operating system does not automatically switch the device into energy-saving mode or switch it off, press the ON/OFF switch. Warning, this could lead to a loss of data!
- ↳ If the device is ready-to-use, the device consumes a minimum of energy.
- ▶ Switch the device off at the main switch.
- ↳ The device no longer uses any power.



The main switch and the ON/OFF switch do not disconnect the device from the mains voltage.

- ▶ For complete disconnection from the mains voltage, pull the mains plug out of the socket.

LCD screen

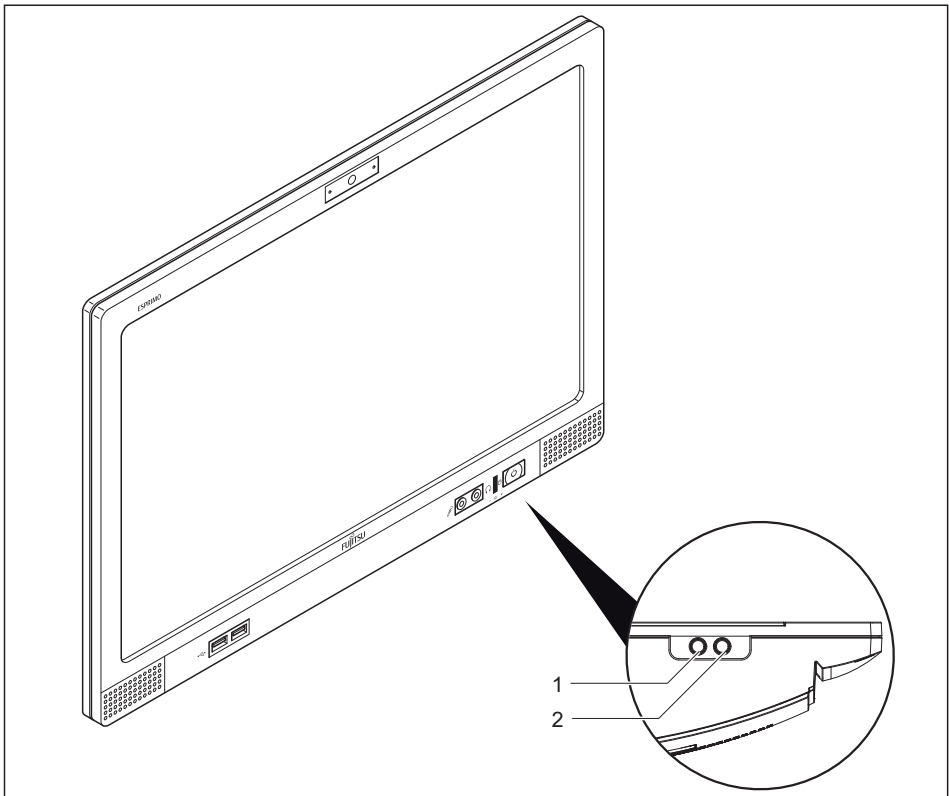
High-quality TFT monitors are installed in systems from Fujitsu Technology Solutions GmbH. For technical reasons, TFT monitors are manufactured for a specific resolution. An optimal, clear picture can only be ensured with the correct resolution intended for the relevant TFT monitor. A screen resolution which differs from the specification can result in an unclear picture.

The screen resolution of the LCD monitor of your system is optimally set at the factory.



TFT monitors are operated with LED background lighting. The luminosity of the background lighting can decrease during the period of use of the system. However, you can set the brightness of your monitor individually.

Adjusting the brightness



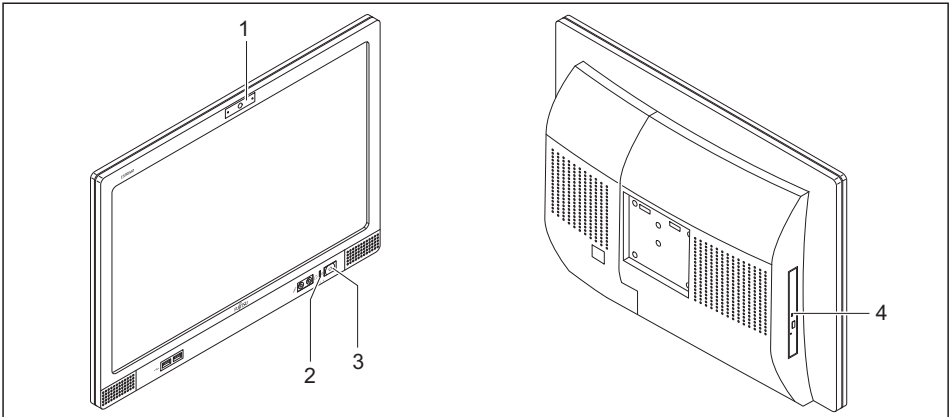
1 = Decrease screen brightness

2 = Increase screen brightness

- ▶ Press the screen brightness buttons on the underside (1, 2) to adjust the brightness of the screen.
- ↳ The adjustment changes the background illumination.

Indicators on the device

The indicators are on the front of the casing.



No.	indicator	Description
1	Multimedia module LED indicator (optional)	The LED lights up blue when the camera is active.
2	Hard disk indicator	The indicator lights up when the hard disk drive in the device is being accessed.
3	Power-on indicator	<ul style="list-style-type: none"> • 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.
4	Drive indicator (optional, only ESPRIMO K557/24 and K558/24)	The indicator lights up when the optical drive of the device is being accessed. You must never under any circumstances remove the CD/DVD while the indicator light is on.

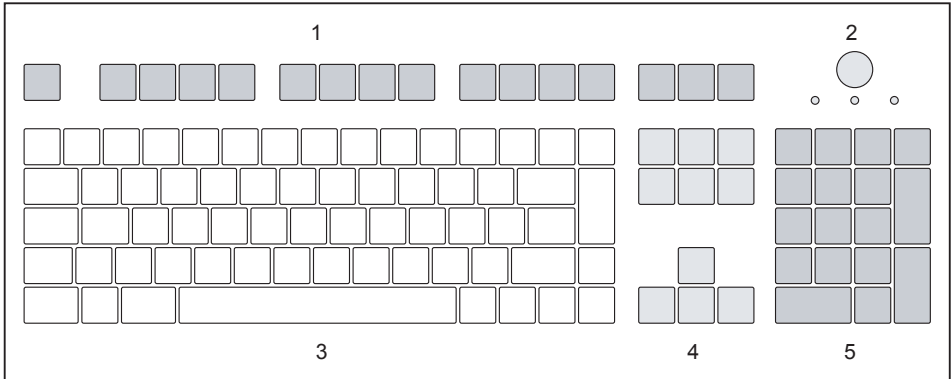


In an energy-saving mode the device must not be switched off with the main switch or disconnected from the mains supply, as this may result in data loss.

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

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

Multimedia module (optional)



As an option, your system is equipped with a multimedia module, which is integrated in the device.

The multimedia module has the following functions:

- Multimedia: for video recordings up to a resolution of 1920 x 1080 pixels (1080 p)
- Digital microphone: for stereo audio recordings



You can activate or deactivate the camera with the installed software or in the *BIOS Setup*.
The digital microphone can only be activated or deactivated in the *BIOS-Setup*.

Depending on the software used, you can use the multimedia module to take pictures, record video clips or take part in web chats.

The multimedia module has a separate LED indicator. The LED lights up blue when the camera is active.

- The picture quality depends on the lighting conditions and the software being used.
- You can only operate the multimedia module with a particular application (e.g. an Internet telephony program or a video conferencing program which supports multimedia).
- When using the multimedia module, the system support (e.g. the table) should not wobble or vibrate, as this affects the picture quality.
- The multimedia module automatically adjusts itself to the current light level. For this reason the LCD display may flicker while the light level is adjusted.



Further information on use of the multimedia module and additional settings for your multimedia module can be found in the help function of the program using the multimedia module.

Wireless LAN/Bluetooth radio components (optional)



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

Switching the wireless components on and off



With the programme *Device Manager* you can switch off the wireless components on or off separately.

Pay attention to the additional safety notes for devices with wireless 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.

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
<i>Main</i>	System settings such as time and date
<i>Advanced</i>	Advanced system settings
<i>Security</i>	Password settings and security functions
<i>Power</i>	Energy saving function
<i>Event Logs</i>	Protocol settings
<i>Boot</i>	Configuration of the start-up sequence
<i>Save & Exit</i>	Exits the <i>BIOS Setup Utility</i>

The following function keys can also be used:

Key	Description
Esc	To exit the <i>BIOS Setup Utility</i> . The current settings are not saved.
F2	To reject changes and load the previous configuration of the <i>BIOS Setup Utility</i> .
F3	To load the default configuration of the <i>BIOS Setup Utility</i> .
F4	To exit the <i>BIOS Setup Utility</i> . The current settings are saved.

Starting the BIOS Setup Utility

- ▶ Start the device (switch off/on or reboot the Operating System).
- ↳ Depending on the setting for *Fast Boot* in the *BIOS Setup Utility* the following display, if applicable, appears on the screen on start-up:

```
<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 **F3** 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 *Save & Exit* menu and activate it by pressing the Enter key:

Save Changes and Exit - Save the changes and exit the BIOS Setup Utility

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

Discard Changes and Exit - Discard changes and exit the BIOS Setup Utility

- ▶ Select *Discard Changes and Exit* and *Yes* to discard the changes you have made.
 - ↳ The settings which applied when *BIOS Setup Utility* was called up remain effective. The *BIOS Setup Utility* is terminated and the device is rebooted.

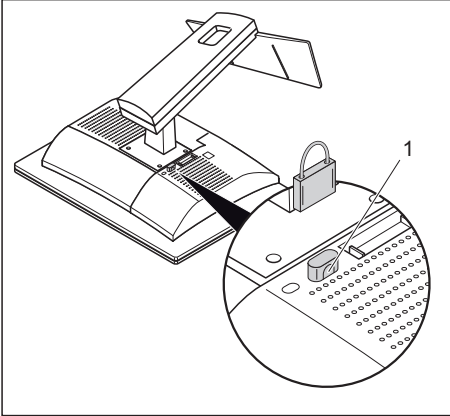
Property and data protection

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.

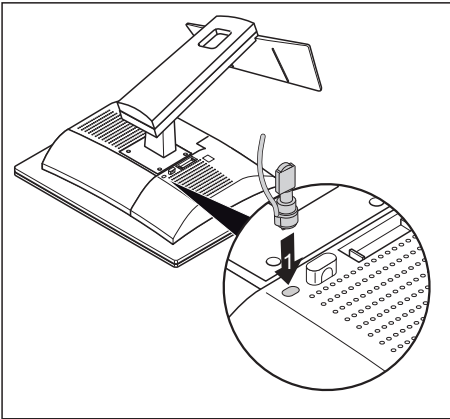
Anti-theft protection and lead-sealing

Anti-theft protection

You can protect your device against theft with a padlock and a chain, which you have previously connected to a fixed object, or with a Kensington Lock Microsaver (steel cable, accessories). Consult the manual for your Kensington Lock Microsaver.



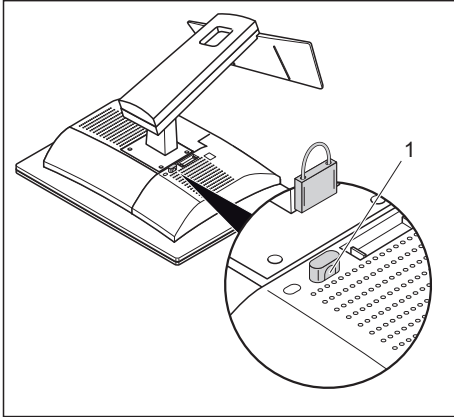
- ▶ Guide a padlock through the hole (1).



- ▶ Secure the Kensington Lock Microsaver in the Security Lock device (1).

Lead-sealing

To prevent unauthorised persons from opening the casing, the casing can be lead-sealed.



- ▶ To do this, feed a lead-seal through the hole (1) and seal the chain with the lead seal.

BIOS setup security functions

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

- Prevent unauthorized access to *BIOS Setup*
- Prevent unauthorised system access
- Prevent unauthorised access to the settings of boards with their own BIOS
- Activate virus warnings
- Protect BIOS from overwriting
- Protect the device from being switched on by an external device

You can also combine these functions.

A detailed description of the menu *Security* and how to assign passwords can be found in the BIOS manual for your device.

SmartCard reader (optional)



The SmartCard reader can be installed in the optical drive bay as an option. In this case, there is no optical drive.

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 and the *Workplace Protect* software 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.

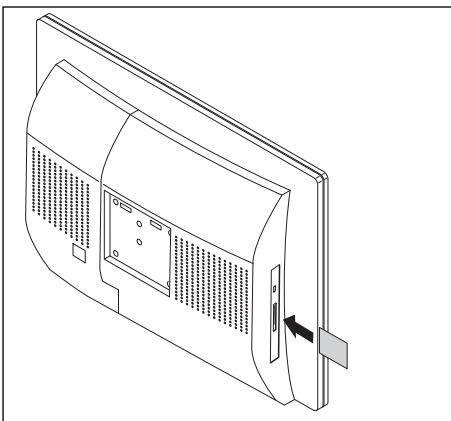
When you use the CardOS SmartCard for the first time, you will either need to enter the preset PIN "12345678" or the PIN given to you by your systems administrator.

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.

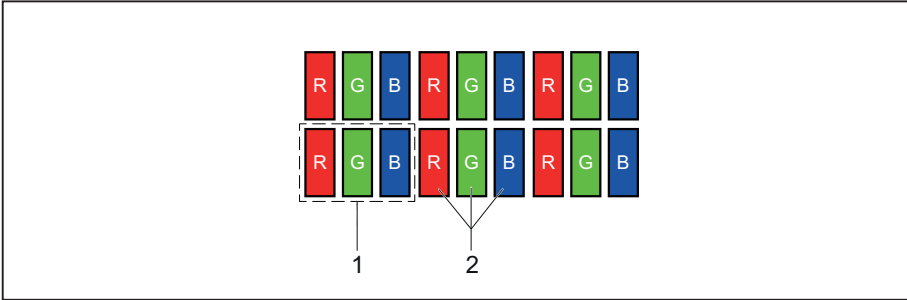


- ▶ Hold the SmartCard so that the chip faces the front of the device.
- ▶ Push the SmartCard into the SmartCard reader.

Explanatory information about standard ISO 9241-307

Permanently unlit or lit pixels

Today's production techniques cannot guarantee an absolutely fault-free screen display. Depending on the total number of pixels (resolution), there may be a few constantly lit or unlit pixels or subpixels.



1 = Pixel

2 = Subpixel

Pixel	A pixel consists of 3 subpixels, normally red, green and blue. A pixel is the smallest element that can be generated by complete functionality of the display.
Subpixel	A subpixel is a separately addressable internal structure within a pixel that enhances the pixel function.
Pixel fault	All 3 subpixels are lit/unlit. The result is a brighter or darker pixel.
Subpixel fault	Only one subpixel is lit/unlit. The result is a pixel with missing colours.

The maximum permitted number of faulty pixels is stipulated in the international standard ISO 9241-307. The LCD displays from Fujitsu comply to at least Class I. Fujitsu guarantees displays that are free of pixel faults, so that only subpixel faults may occur.

Examples:

A flat-screen display with a resolution of 1920 x 1080 has 1920 x 1080 = 2073600 pixels. Each pixel consists of three subpixels (red, green and blue), making a total of about 6,2 million subpixels. According to ISO 9241-3 (Class I), a maximum of 2 lit and 2 unlit pixels plus 5 lit or 10 unlit subpixels, or a corresponding combination, may be faulty (1 lit subpixel counts as two unlit subpixels). Because Fujitsu supplies displays that are free of pixel faults, only subpixel faults enter into the evaluation.

Troubleshooting and tips



Refer to the safety notes in the "Safety/regulations" manual and in the ["Getting started", Page 14](#) chapter when connecting or disconnecting cables.

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

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

Help if problems occur

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

- ▶ Note the ID number of your device. The Ident-No. can be found on the type rating plate on the back of the device.
- ▶ Contact the Service Desk responsible for your country for clarification of the problem: ["http://support.ts.fujitsu.com/contact/service desk"](http://support.ts.fujitsu.com/contact/service desk). When you do this, please have ready the ID number and serial number of your system.

Troubleshooting

Power indicator remains off after you have switched on your device

Cause	Remedy
The mains voltage supply is faulty.	<ul style="list-style-type: none"> ▶ Check that the power cable is correctly plugged into the device and into a grounded mains outlet. ▶ Check that the main switch at the rear of the device is set to the "I" position. ▶ Switch the device on.
Internal power supply overloaded.	<ul style="list-style-type: none"> ▶ Pull the power plug of the device out of the mains outlet. ▶ Wait for about 3 minutes. ▶ Plug the power plug into a properly grounded mains outlet again. ▶ Switch the device on.

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

Cause	Troubleshooting
System crash	<ul style="list-style-type: none"> ▶ Press the On/Off switch for at least 4 seconds, until the device switches off. <p>Attention: Warning, this could lead to a loss of data!</p> <p>The Operating System is not shut-down properly in the process. Error messages are therefore possible the next time the system is booted.</p>

The internal screen stays blank

Cause	Remedy
Power saving has been activated (screen is blank)	<ul style="list-style-type: none"> ▶ Press any key on the keyboard. <p>or</p> <ul style="list-style-type: none"> ▶ Deactivate the screen saver. If necessary, enter the appropriate password. <p>or</p> <ul style="list-style-type: none"> ▶ Alter the brightness and/or contrast until you get a picture (see "Adjusting the brightness", Page 32).
Brightness control is set to dark	<ul style="list-style-type: none"> ▶ Adjust the brightness control to bright (see "Adjusting the brightness", Page 32).
The screen display becomes darker	<p>The background lighting has a limited lifetime.</p> <ul style="list-style-type: none"> ▶ If your screen display becomes too dark, contact our Service Desk. ▶ Check the ambient temperature.

The external monitor remains blank

Cause	Troubleshooting
Monitor is switched off.	▶ Switch the external monitor on.
Power saving has been activated (monitor is blank).	▶ Press any key to continue.
Brightness is set to dark.	▶ Adjust the brightness of the monitor.
Screen output is set to the system's LCD monitor.	▶ Press the key combination to switch the screen output, see " Important keys and keyboard shortcuts ", Page 34.
The external monitor's power cable or data cable is not connected properly.	<ul style="list-style-type: none"> ▶ Switch off the external monitor and the system. ▶ Check whether the power cable is plugged properly into the external monitor and into the power socket. ▶ Check whether the data cable is properly connected to the system and the external monitor (if it is plugged in with a connector). ▶ Switch on the external monitor and the system.

The external monitor is blank or the image is unstable

Cause	Troubleshooting
The wrong external monitor has been selected or the wrong screen resolution has been set for the application program.	<ul style="list-style-type: none"> ▶ Terminate the application program in Windows by pressing [Alt] + [F4]. If the error persists after terminating the program, use the key combination for switching the screen output (see "Important keys and keyboard shortcuts", Page 34), in order to switch to the LCD monitor of the system. Change the following setting: ▶ Set the screen resolution: Set the screen resolution as described in the documentation for your operating system.

No mouse pointer displayed on the monitor

Cause	Troubleshooting
The mouse is not properly connected.	<ul style="list-style-type: none"> ▶ Shut down the Operating System correctly. ▶ Switch the device off. ▶ Check that the mouse cable is properly connected. If you are using an adapter or extension lead for the mouse cable, check the plug-in connection. ▶ Make sure that only one mouse is connected. ▶ Switch the device on.

Date and time are not correct

Cause	Troubleshooting
Date and time are set incorrectly.	<ul style="list-style-type: none"> ▶ Set the correct time and date under the Operating System you are using. <p>or</p> <ul style="list-style-type: none"> ▶ In the <i>BIOS Setup</i>, set the date or time.

SmartCard reader is not recognised

Cause	Troubleshooting
Chip card inserted incorrectly.	<ul style="list-style-type: none"> ▶ Check whether you have inserted your SmartCard into the SmartCard reader the right way 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.

Error messages on the screen

Error messages and their explanations are provided:

- in the documentation for the programs used

Installing new software

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

Tips

Topic	Tip
Out of system resources	<ul style="list-style-type: none"> <li data-bbox="572 236 916 261">▶ Close unnecessary applications. <li data-bbox="572 280 591 306">or <li data-bbox="609 304 1028 330">▶ Run the applications in a different order.

Other important links:

- Warranty: ["www.fujitsu.com/fts/support/warranty"](http://www.fujitsu.com/fts/support/warranty)
- Service Desk: ["www.fujitsu.com/fts/contact/service desk"](http://www.fujitsu.com/fts/contact/service desk)
- Drivers & downloads: ["www.fujitsu.com/fts/download"](http://www.fujitsu.com/fts/download)
- Recycling: ["www.fujitsu.com/fts/recycling"](http://www.fujitsu.com/fts/recycling)

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.



It may be necessary to update the BIOS when carrying out a system expansion or hardware upgrade. Please refer to the Help facility of the BIOS for more information.

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.

Preparing to remove components



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

Pull the mains plug out of the socket provided with contact protection.

- ▶ Switch the device off.

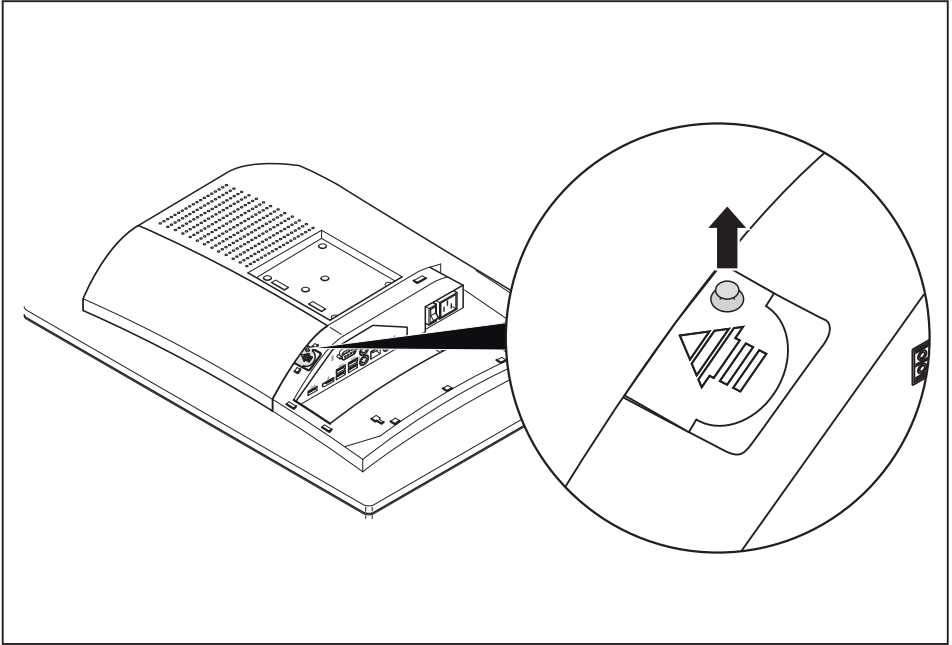


The device should not be in energy-saving mode.

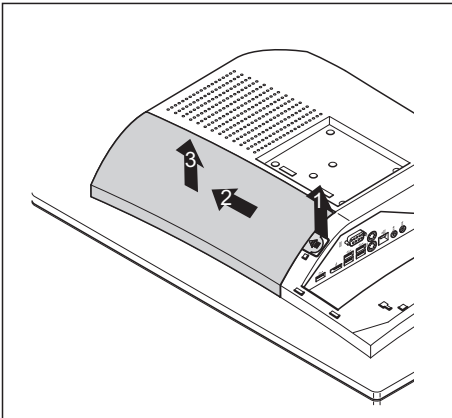
- ▶ Remove all the cables from the device.
- ▶ Place the device on a stable, flat and clean surface. If necessary, place a slip-resistant cloth on this surface to prevent the device from being scratched.

Removing the service cover

- ▶ Prepare for removal (see ["Information about boards", Page 49](#)).
- ▶ Remove the cover for the ports (see ["Removing the cover for external devices ports", Page 23](#)).

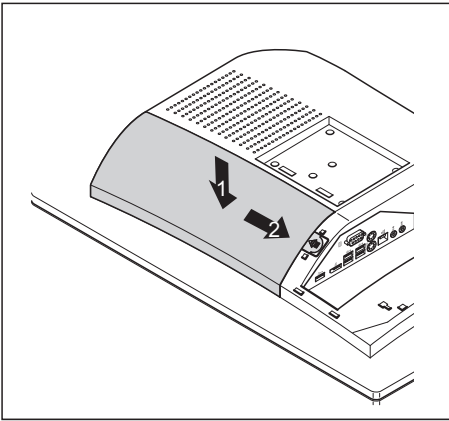


► Remove the locking pin.

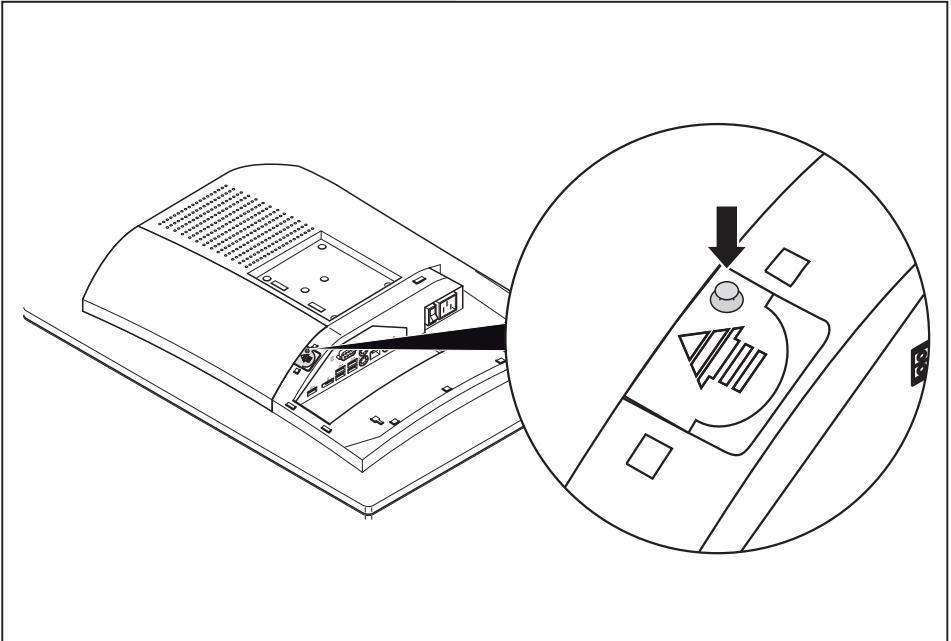


- Pull the tab (1) until the clip disengages.
- Slide the service cover in the direction of the arrow (2).
- Lift the service cover off the device (3).

Mounting the service cover



- ▶ Place the service cover in the correct mounting position (1).
- ▶ Slide the service cover in the direction of the arrow (2) until the clip engages.



- ▶ Position the locking pin.
- ▶ Mount the cover for the ports (see ["Mounting the cover for external devices ports", Page 28](#)).
- ▶ Complete the installation (see ["Finishing component removal", Page 58](#)).

Remove and install memory expansion



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

When installing/removing memory modules, the device must not be connected to the current, see ["Preparing to remove components", Page 49](#).

Only use memory extensions that have been approved for your device, see chapter ["Technical data", Page 59](#).

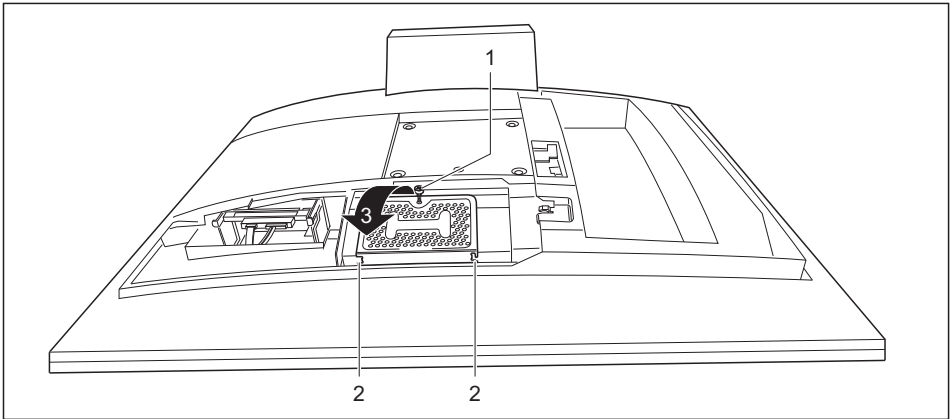
Never use force when installing or removing a memory extension.

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.

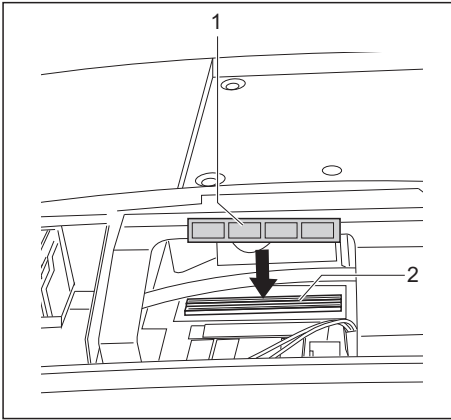
Removing a cover

- ▶ Remove the service cover ["Removing the service cover", Page 49](#)

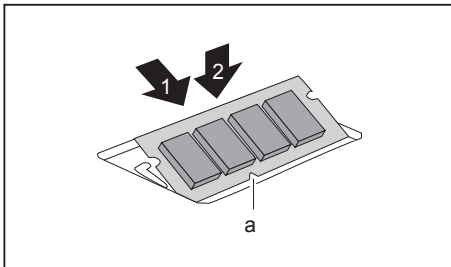


- ▶ Loosen the screw (1).
- ▶ Unhook the cover (2) with a slight twisting movement (3) and remove it.

Installing a memory module

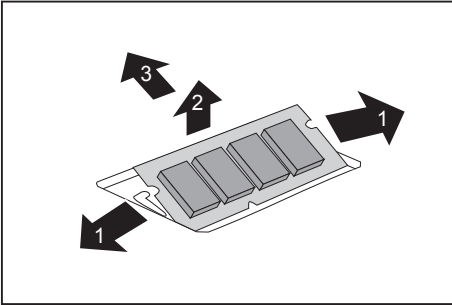


- ▶ Insert the memory module (1) in its slot as follows (2).

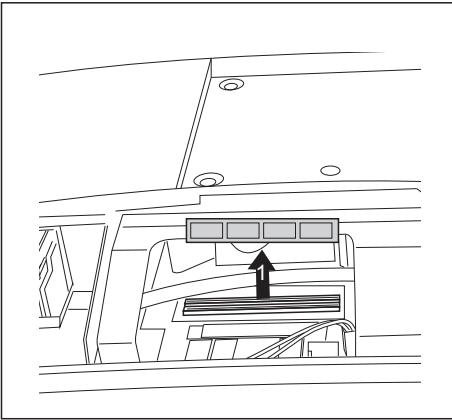


- ▶ Insert the memory module in the slot with the contacts and the recess (a) facing in the direction of the arrow (1).
- ▶ Carefully push the memory module downwards until you feel it click into place (2).

Removing memory modules

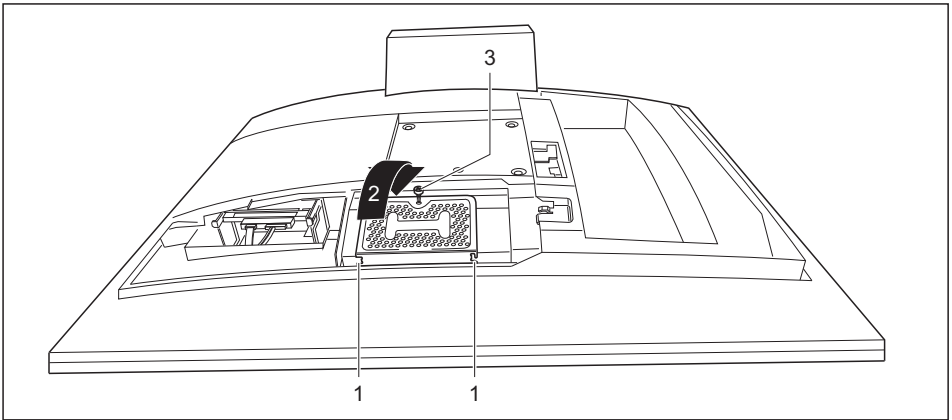


- ▶ Carefully push the two mounting clips outwards (1).
- ↳ The memory module snaps upwards (2).



- ▶ Pull the memory module (1) out of its slot in the direction of the arrow.

Attaching the cover



- ▶ Place the cover (1) in its installation opening with a slight twisting movement (2).
- ↳ The cover must hook into place.

i

Take care not to trap any cables when fitting the cover.

- ▶ Fasten the cover in place with the screw (3).
- ▶ Re-fasten the service cover (see ["Mounting the service cover", Page 51](#))

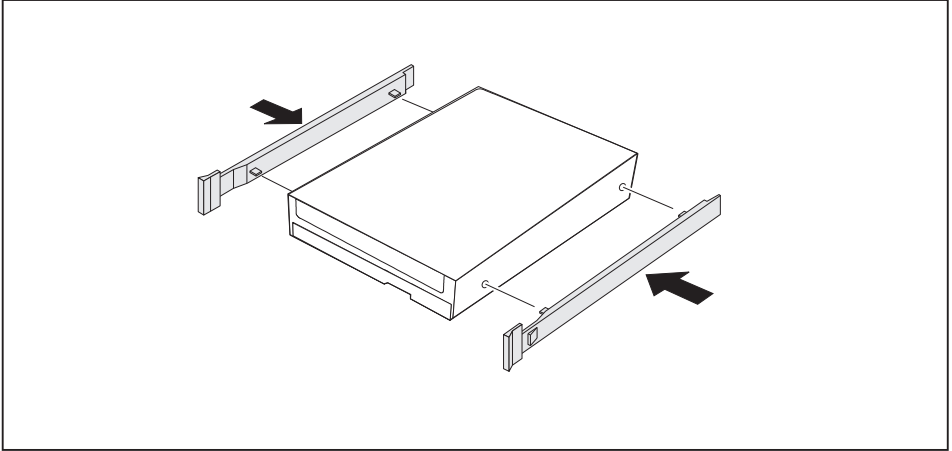
Installing and removing the hard disk drive

i

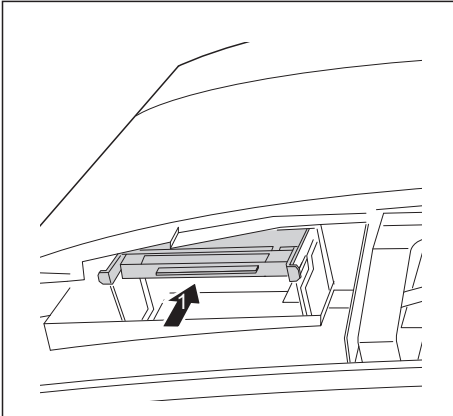
The following information applies to FUJITSU ESPRIMO K557/K558 only

Installing a hard disk drive

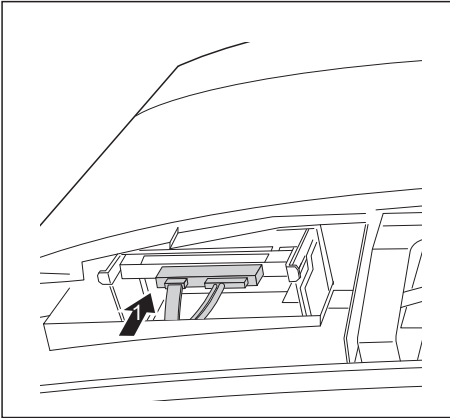
- ▶ Remove the service cover (see ["Removing the service cover", Page 49](#)).



- ▶ Secure the EasyChange rails to the side of the hard disk drive by inserting the upper pins of the EasyChange rail in the corresponding holes of the hard disk.



- ▶ Slide the hard disk drive with the EasyChange rails into the drive cage in the direction of the arrow (1). Ensure that the hard disk drive screws face the rear wall of the housing.



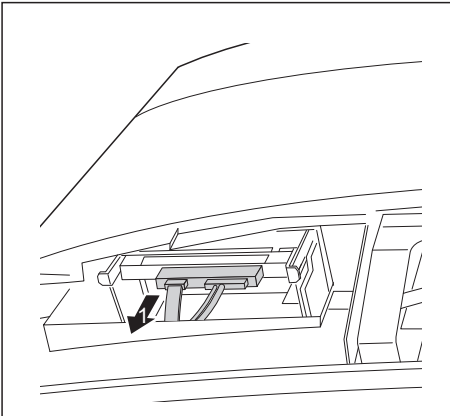
- ▶ Connect the cables to the hard disk drive.
- ▶ Re-fasten the service cover (see ["Mounting the service cover", Page 51](#)).



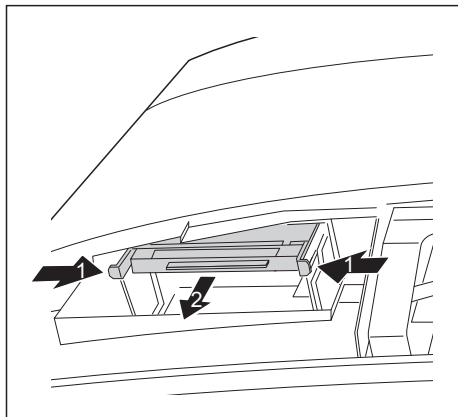
It may be necessary to modify the entry for the drive in the *BIOS Setup*.

Removing the hard disk drive

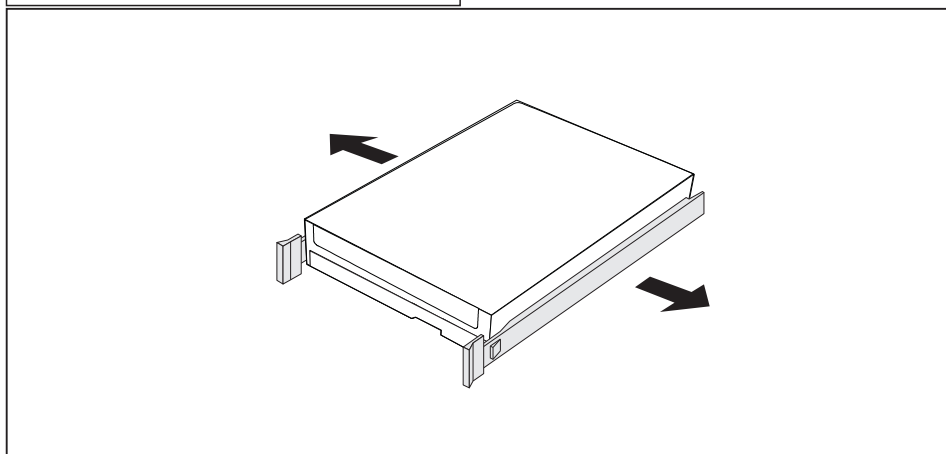
- ▶ Remove the service cover (see ["Removing the service cover", Page 49](#)).



- ▶ Disconnect the cables (1) connected to the hard disk drive.



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



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



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

Finishing component removal

- ▶ Reconnect the previously disconnected cables to the device.

Technical data

	ESPRIMO K557/24 and K558/24	ESPRIMO K557/20 and K558/20
Electrical data		
Safety regulations 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	1.7 – 0.7 A	
Dimensions		
With x Depth x Height (without foot)	560 mm x 93 mm x 368 mm / 22.05 inch x 3.66 inch x 14.50 inch	460 mm x 93 mm x 331 mm / 18.11 inch x 3.66 inch x 13.03 inch
Width x Depth x Height (with foot, monitor in the second position from bottom)	560 mm x 258 mm x 446 mm / 22.05 inch x 10.16 inch x 17.56 inch	459 mm x 258 mm x 424 mm / 18.07 inch x 10.16 inch x 16.70 inch
Min./max. Height (with foot)	411/516 mm / 16.18/20.31 inch	389/494 mm / 15.31/19.45 inch
Weight		
In basic configuration	approx. 6.3 kg / 13.9 lbs	approx. 5 kg / 11 lbs
With foot	approx. 9.5 kg / 20.9 lbs	approx. 8.1 kg / 17.9 lbs
Ambient conditions		
Environment class 3K2	DIN EN 60721-3-3	
Environment class 2K2	DIN EN 60721-3-2	
Temperature		
Operation (3K2)	15 °C 35 °C / 59 °F ... 95 °F	
Transportation (2K2)	-25 °C 60 °C / -13 °F ... 140 °F	
The formation of condensation is not permitted while the device is in operation !		
Clearance required to ensure adequate ventilation:		
without air vents	min. 10 mm / 0.39"	
with air vents	min. 200 mm / 7.87"	
Maximum resolution	1920 x 1080	1440 x 900
Pixel error class according to ISO 9241-307	Class I	
Multimedia module		
Camera resolution	1920 x 1080 (1080 p)	–
Microphone	Digital, stereo	–



The data sheets of these devices contain further technical data. You can find the data sheets on the Internet at ["http://www.fujitsu.com/fts"](http://www.fujitsu.com/fts).

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