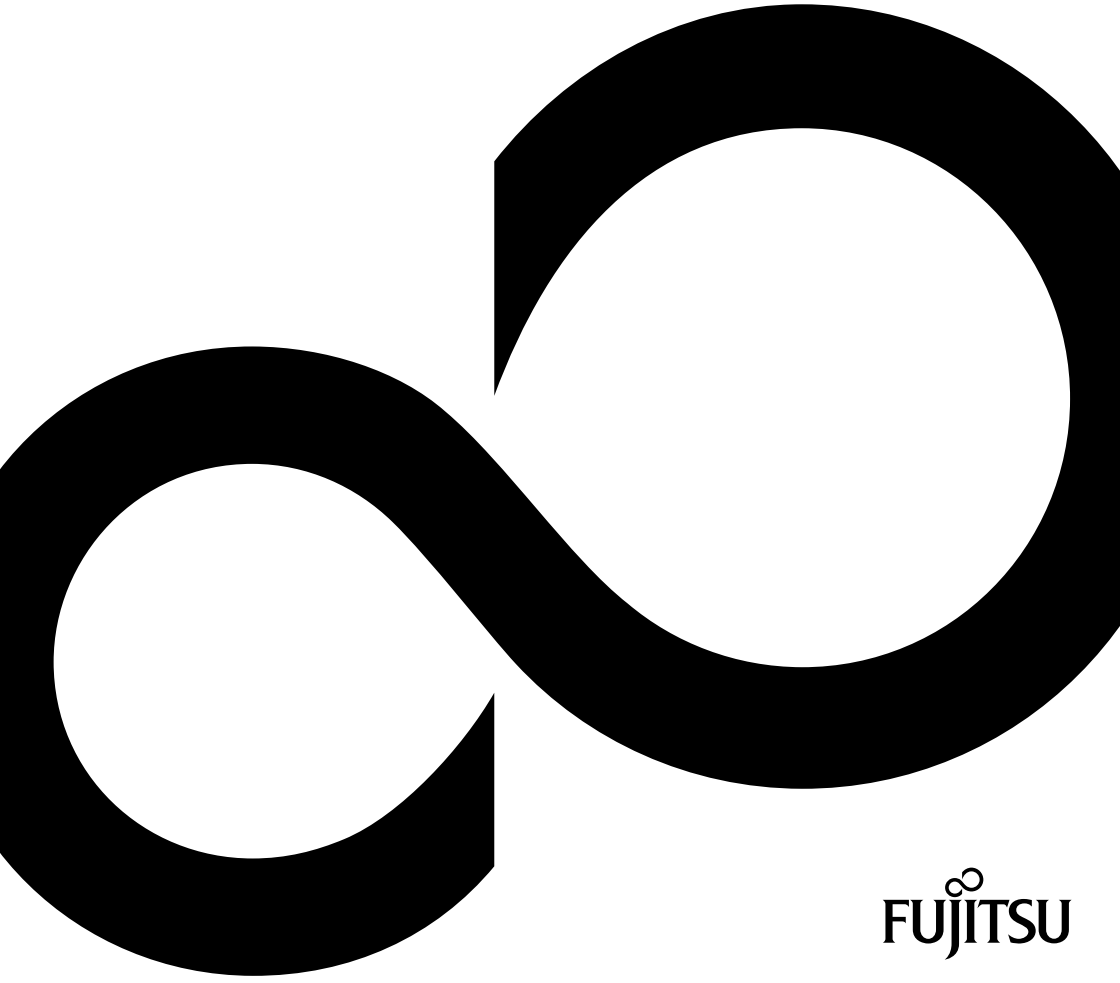
FUTRO A300



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FUTRO A300

Operating Manual

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Your FUTRO...

... is a universal network client. The intelligent and flexible terminal is reliable and easy to maintain. The thin client requires no fan and no hard disk. It therefore runs very quietly. The operating system is installed on a flash memory.

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 instructions displayed on the device. Failure to observe them will endanger your health or lead to physical damage.
▶	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://ts.fujitsu.com" • 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**

Important notes

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

Safety notes

Please follow the safety notes provided in the "Safety/Regulations" manual as well as the safety notes given below.

When installing and operating the device, please observe the notes on ambient conditions in "Technical specification ", Page 23 and the instructions in "Getting started", Page 9.

Replace the lithium battery on the mainboard exactly in accordance with the instructions in the "Replacing the lithium battery", Page 22 chapter.

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 carried out by qualified technicians. Incorrect repairs could put the user at great risk (electric shock, hazardous energy emissions, risk of fire) or cause serious damage to the equipment.

Power cable and mains adapter:

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.

The mains adapter's power cable should only be connected to a mains socket if the device is connected.

Do not use the mains adapter for other devices.

Use only the mains adapter which is intended for use with the device, see chapter "Technical specification ", Page 23.

Make sure that the rated current of the mains adapter is not higher than that of the power system to which you connect the mains adapter.

ON/OFF switches do not disconnect the device from the mains voltage. To completely disconnect the mains voltage, remove the power plug from the power socket.

Transporting the device

Transport all parts separately in their original packaging or in a packaging which protects them from knocks and jolts, to the new site.

Do not unpack them until all transportation manoeuvres are completed.

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

Cleaning the device

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

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

Do not use any cleaning agents that contain abrasives or may corrode plastic (alcohol, thinner or acetone).

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

Ensure that no liquid enters the system.

The surface can be cleaned with a dry cloth. If particularly dirty, use a cloth that has been moistened in mild domestic detergent and then carefully wrung out.

Use disinfectant wipes to clean the keyboard and the mouse.

Energy saving, disposal and recycling

Further information can be found on the "Drivers & Utilities" DVD.

FCC Class B Compliance Statement

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

NOTE:

This equipment has been tested and found to comply with the limits for a "Class B" digital device, pursuant to Part 15 of the FCC rules and meets all requirements of the Canadian Interference-Causing Equipment Standard ICES-003 for digital apparatus. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in strict accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

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

CE marking

The shipped version of this device complies with the requirements of the EC directives 2004/108/EC "Electromagnetic compatibility", 2006/95/EC "Low voltage directive" and 2009/125/EC "Ecodesign Directive".

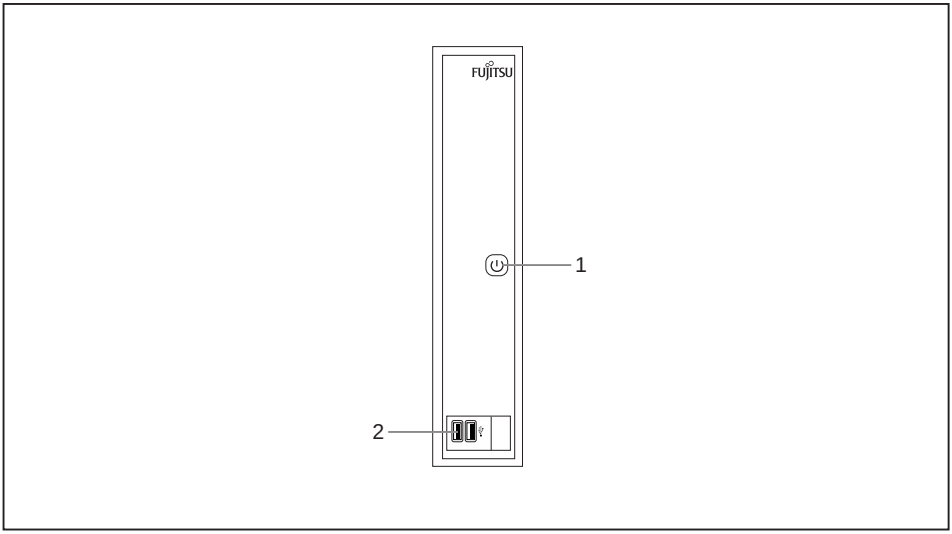
Getting started

Please observe the safety information in the "Important notes", Page 6 chapter.

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.

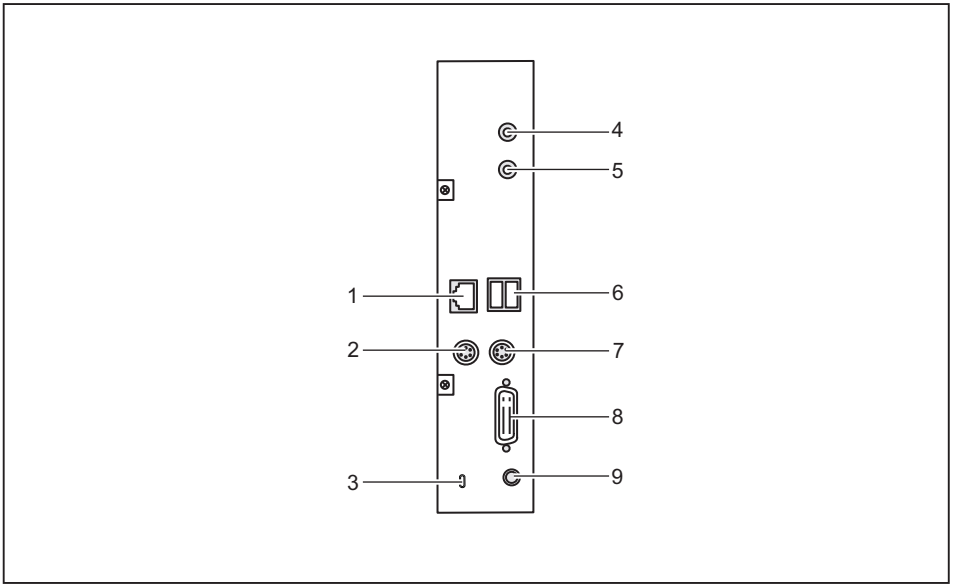
Front view



1 = ON/OFF switch

2 = USB ports

Rear view



1 = LAN port
2 = PS/2 mouse port
3 = Kensington Lock
4 = Headphones / Line-out port
5 = Microphone / Line in port
6 = USB ports
7 = PS/2 keyboard port
8 = DVI-I monitor port
9 = DC input connector (DC IN)

Setting up the device

To ensure that the casing is sufficiently ventilated and to prevent overheating, the device must be operated with the base foot attached and with the unit free-standing.

If the device is to be built-in, adequate ventilation must be assured.

Fit the base feet for horizontal or vertical operation (see "Vertical operating position", Page 11 and "Horizontal operating position (optional)", Page 12).

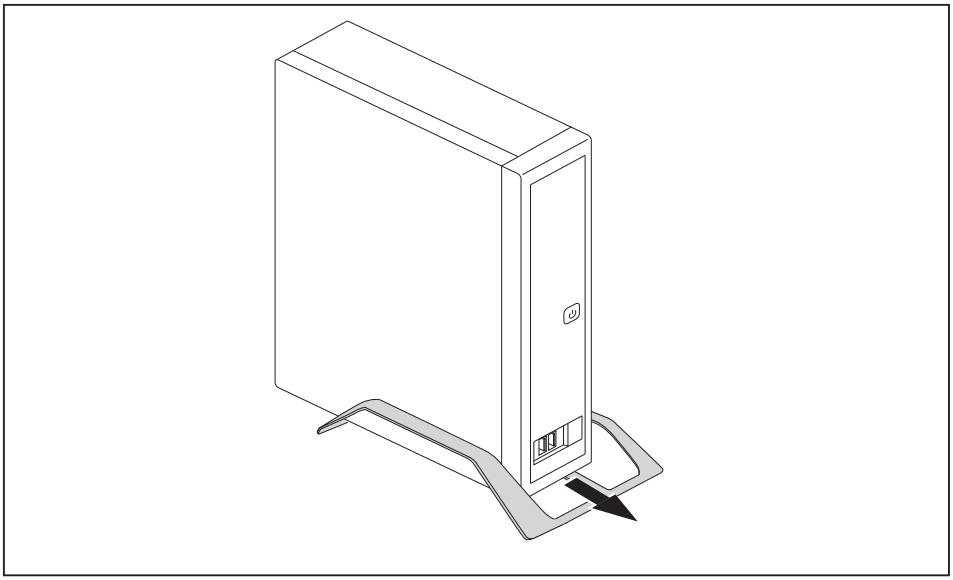
Base feet for horizontal operation are available as an option.

Vertical operating position

Use the supplied foot when the device is to be used in a vertical position.

Proceed as follows to operate the device in the vertical operating position:

► Disconnect the cables if required.



► Push the device onto the foot in the direction of the arrow.

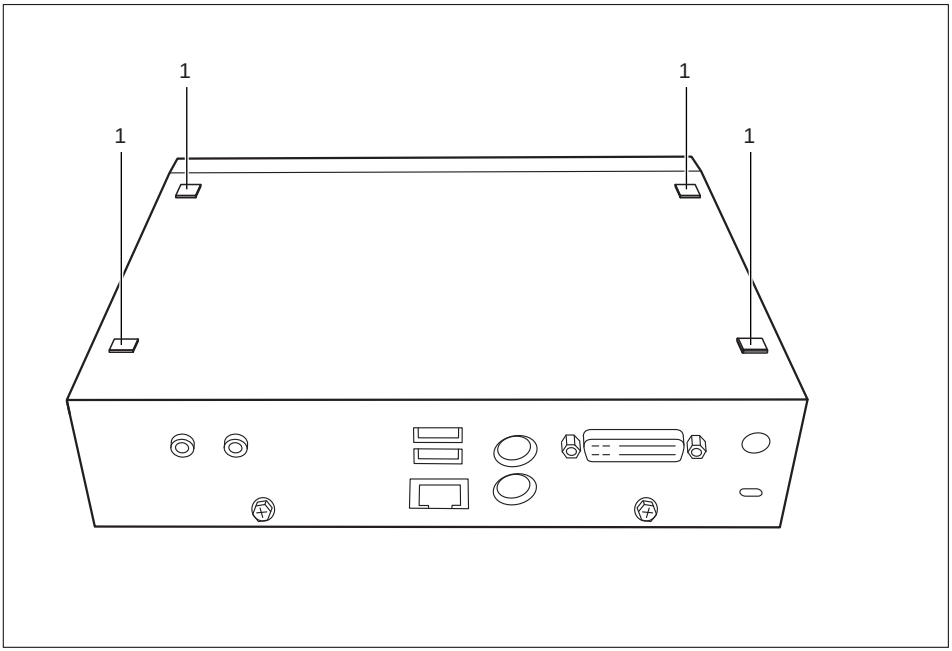
► If necessary, reconnect any cables that were previously disconnected.

Horizontal operating position (optional)

Proceed as follows to operate the device in the horizontal operating position:

► Disconnect the cables if required.

► Place the device on its upper side on a sturdy, flat and clean surface.



► Affix the adhesive feet (1) as shown over the drilled holes on the underside of the device.

► If necessary, reconnect any cables that were previously disconnected.

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.

Connect and disconnect the cables in the order described below.

Connecting the cables

- ► Turn off all power and equipment switches.
- ► Remove all power plugs from the grounded mains outlets.
- ► Connect all the cables to the device and the external devices. Please make sure that you always observe the safety notes provided in "Important notes", Page 6.
- ► Plug all data communication cables into the appropriate sockets.
- ► Plug all power cables into the grounded mains outlets.

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 "Connecting external devices to the USB ports", Page 15 and in the documentation for the USB devices.

Disconnecting the cables

- ► Switch off all affected devices.
- ► Remove all power plugs from the grounded mains outlets.
- ► Unplug all data communication cables from the appropriate sockets.
- ► Disconnect all of the cables from the device and from the external devices.

Ports on the device

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

DVI-I monitor port, white

Microphone / Line in port, pink

USB - Universal Serial Bus, black

Headphones / line-out port, light green

PS/2 mouse port, green

LAN port

PS/2 keyboard port, purple

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 operation (e.g. connecting cables).
- ► Connect the data cable to the required monitor port on your device.
- ► Plug the monitor power cable into the grounded mains outlet.

Connecting the mouse

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

Connecting a USB mouse

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

Connecting a PS/2 mouse

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

Connecting the keyboard

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 rectangular connector of the keyboard cable into the rectangular socket on the underside or on the rear of the keyboard.
► Plug the flat rectangular USB connector of the keyboard cable into a USB port of the device.

Connecting a PS/2 keyboard

Use the supplied keyboard cable only.

► Plug the rectangular connector of the keyboard cable into the rectangular socket on the underside or on the rear of the keyboard.
► Plug the round plug of the keyboard cable into the PS/2 keyboard port on the device.

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

To ensure the transmission capacity of USB 2.0, the cable from the external USB device to the USB port of your device must not be longer than 3 m.

Connecting microphone, headphones, line-out and line-in devices

- ► Connect the microphone to the microphone port.
- ► Connect the headphones to the headphones port.
- ► Connect line-out devices to the audio output.
- ► Connect the external line-in devices to the audio input.

Connecting the mains adapter

- ► Connect the mains adapter cable to the device.
- ► Connect the power cable to the mains adapter.
- ► Plug the power cable into a grounded mains outlet.

Connecting the device to the network (LAN)

- ► Connect the 10/100/1000 Base T network cable to the RJ45 LAN port.

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.

Switching off the device

► Shut down the operating system in a defined manner. In Windows: via the *Start* menu and the *Turn Off Computer* 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 switched off, it consumes a minimum of energy.
► Switch the device off at the main switch (if present).
↳ The device no longer uses any power.

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

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

Open BIOS Setup

► When the system starts, press the F2 key (several times if necessary).
↳ *BIOS Setup* will be started. Select one of the tabs to access other setting options in *BIOS Setup*.

PXE system boot

► Switch the device on with the ON/OFF switch.
► When starting the system, press the F12 key several times.
↳ The boot menu is displayed.
► Select the desired boot option.

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.

Opening the casing

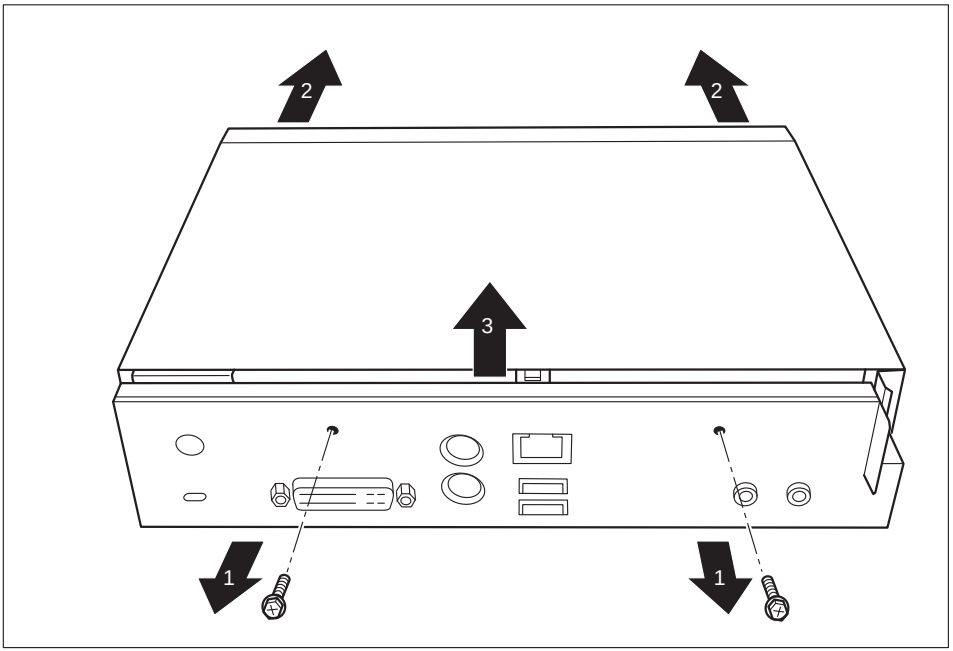
► Switch the device off. The device must not be in power-saving mode.

Please observe the safety information in "Important notes", Page 6.

Disconnect the mains plug from the mains outlet.

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

► Remove any connected wires which are in the way.



► Loosen the screws at the rear (1).
► Slide the casing cover in the direction of the arrow (2).
► Lift off the casing cover (3).

Closing the casing

► Replace the casing cover on the device and push it backwards.
► Secure the casing cover with the two screws on the rear of the device.

Make sure that the cables are not trapped between the casing and the components.

► Connect all the cables removed before.

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.

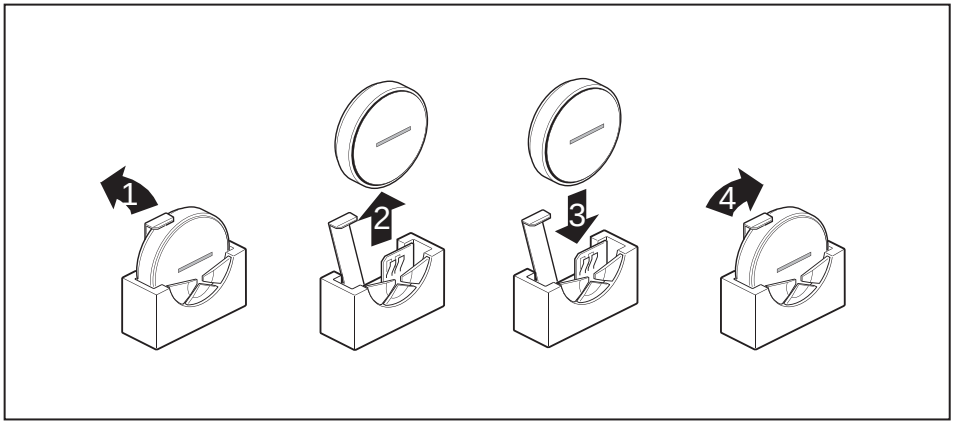
Incorrect replacement of the lithium battery may lead to a risk of explosion!

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.

Ensure that you observe the correct polarity when replacing the lithium battery!

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



- ► Press the catch in the direction of the arrow (1).
- ↳ The battery jumps out of the holder slightly.
- ► Remove the battery (2).
- ► Push the new lithium battery of the identical type into the holder (3) and press it down until it engages.
- ► Fasten the catch (4).

Technical specification

Do not stack several devices on top of each other.

Thin Client

Electrical data	
Processor:	VIA EDEN ULV 1 GHz
Rated voltage range:	DC 12V
Max. rated current:	3.0 A
Dimensions	
Width/depth/height (with base foot):	70 mm x 181 mm x 195 mm
Width/depth/height (without base foot):	42 mm x 185 mm x 185 mm
Weight	
in basic configuration:	approx. 1 kg
Ambient conditions	
Temperature:	
• Operation	15 °C .... 35 °C
• Transportation	-25 °C .... 60 °C

The formation of condensation is not permitted while the device is in operation !

Mains adapter

Electrical data	
Rated voltage:	100 – 240 V AC
Max. rated current:	1.5 A
Rated frequency:	50 – 60 Hz

Only the DSA-42D-12 2 120300 adapter with Limited Power Source may be used.

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