Operating Manual

System

FUJITSU Desktop
ESPRIMO P5xxx / P7xxx / P9xxx

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Issued by / EU importer

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Publication Date
09/2020

Order No.: A26361-K1700-Z325-1-7619, edition 1

FUJITSU Desktop
ESPRIMO P5xxx / P7xxx / P9xxx

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 manual for your device
- in the "System expansions and repairs" manual
- in the operating manual for the monitor
- in the manual for the mainboard
- in your operating system documentation

Using the programme *Acrobat Reader*, you can display specific 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 applies to the following systems:

- FUJITSU Desktop ESPRIMO P501x
- FUJITSU Desktop ESPRIMO P701x
- FUJITSU Desktop ESPRIMO P901x
- FUJITSU Desktop ESPRIMO P991x

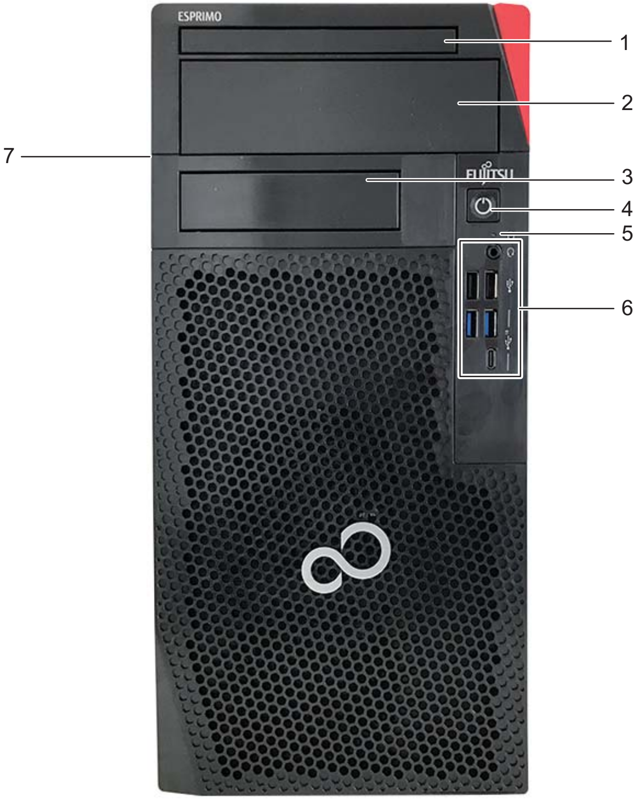
Notational conventions

⚠	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.
ℹ	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 you start to work with the device.

Front



1 = Slim-line drive (optional)
2 = Module bay for a 5$^1/_4$-inch drive
3 = Module slot for optional components
4 = ON/OFF switch
5 = Drive indicator
6 = Connections, depending on the configuration level (see "Ports on the device", Page 17)
7 = Latch with optional housing lock (left side, not shown in image)

Rear

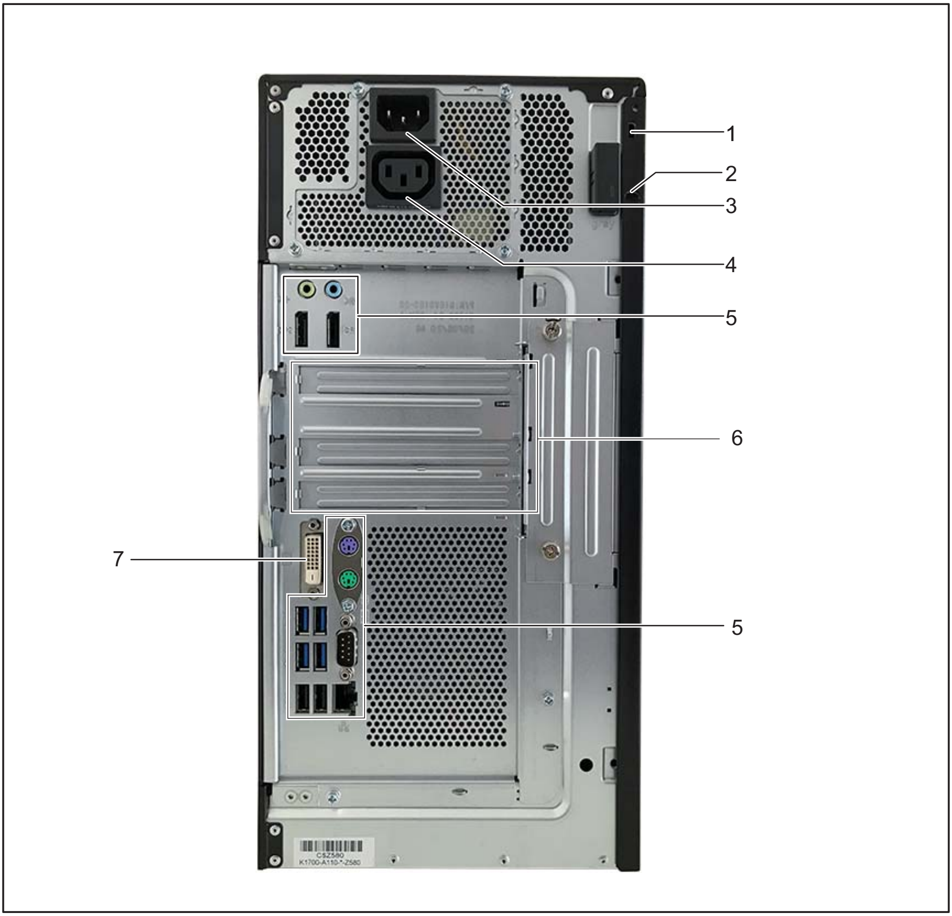
Depending on variants and configuration levels, your device features the following slots on the back for module or interface expansions:

- 3 full-height slots (FUJITSU Desktop ESPRIMO P501x, P701x and P901x)
- 4 full-height slots (FUJITSU Desktop ESPRIMO P991x)

The devices also have Flex I/O with one of the following connection types (exception: FUJITSU Desktop ESPRIMO P501x):

- USB Type-C
- HDMI
- VGA
- DVI-D

The connections and slots on the device depend on the ordered variant and its configuration level, and can therefore defer from the example below.



1 = Device for a Security Lock

2 = Holes for a padlock

3 = Alternating voltage socket (AC IN)

4 = Screen socket (AC OUT, optional)

5 = Connections, depending on the configuration level (see "Ports on the device", Page 17)

6 = Full-height slots

7 = Flex I/O (in the example: DVI-D)

⚠ Ventilation openings on graphics cards can become hot during operation. Therefore, do not touch the graphics card during operation.

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 44 as well as the instructions in Chapter "Getting started", Page 13.

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

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

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

Only operate the device with the casing closed.

Replace the lithium battery on the mainboard in accordance with the instructions in manual "System Upgrades and Repairs".

Caution, components in the system can get very hot.

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

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

Transporting the device

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

Do not unpack them until all transportation manoeuvres are completed.

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

Cleaning the device

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

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

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

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

Ensure that no liquid enters the system.

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

Use disinfectant wipes to clean the keyboard and the mouse.

Energy-saving, disposal and recycling

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

Getting started

Please observe the safety information in the "Important notes", Page 11 chapter.

Unpacking and checking the delivery

It is recommended not to throw away the original packaging material! It may be required for reshipment at some later date.

- ► Unpack all the individual parts.
- ► Check the contents of the package for any visible damage caused during transport.
- ► Check whether the delivery conforms to the details in the delivery note.
- ► Should you discover that the delivery does not correspond to the delivery note, notify your local sales outlet immediately.

Steps for initial setup

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

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

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

External devices

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

Drives and boards

If you have received drives or boards with your device, please do not install them until after first-time setup. The installation of drives and modules is described in the "System Upgrades and Repairs" manual.

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 your device location, disturbing vibrations and noises may occur. In order to avoid this, a minimum distance of 10 mm / 0.39 inch to other devices or objects should be maintained on housing sides without ventilation surfaces.

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

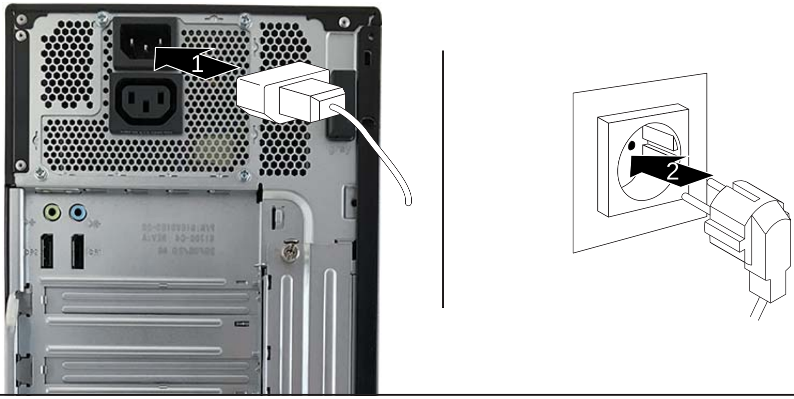
For ventilation surfaces, a minimum distance of 200 mm / 7.87 inch from the device must be maintained.

Do not stack several devices on top of each other.

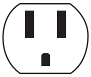
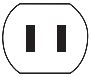
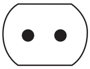
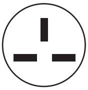
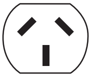
Do not expose the device to extreme ambient conditions (see "Technical data", Page 44, section "Ambient conditions"). Protect the device against dust, humidity and heat.

Connecting the device to the mains supply

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



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

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

Connecting external devices

Read the documentation on the external device before connecting it.

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

Do not connect or disconnect cables during a thunderstorm.

Always take hold of the actual plug when disconnecting a cable. Never pull the cable!

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

Ports on the device

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

ℹ The maximum possible configuration level of the device is described below.

The connections on the device depend on the ordered variant and its configuration level, and can therefore defer from the table below (e.g. Flex I/O connections).

Some of the connected devices require special drivers (see the documentation for the connected device).

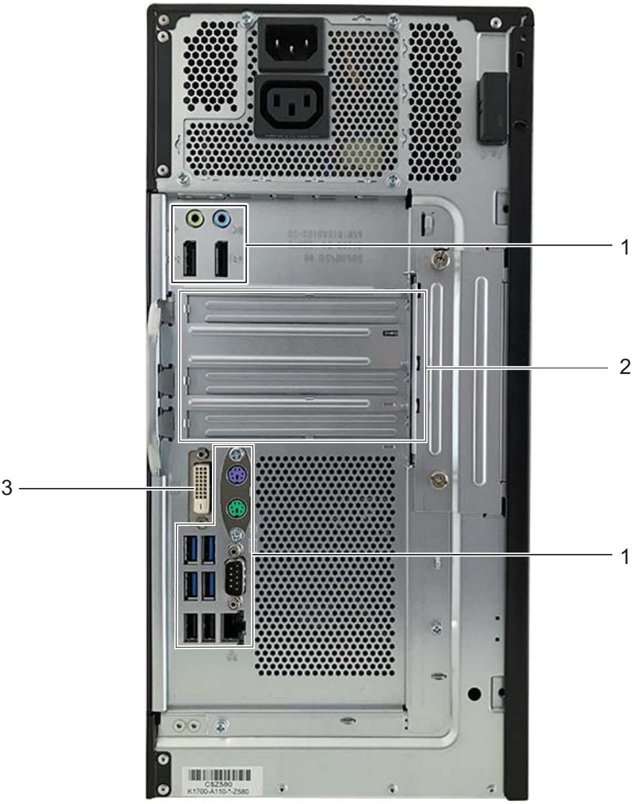
🎧	Combined headphone and microphone port, black (Line In/Out)		Audio input (Line In), light blue
	Audio output (Line Out), light green		USB 2.0 - Universal Serial Bus, type A, black
	USB 3.2 Gen1 - Universal Serial Bus, Type A: blue, Type C: black	10	USB 3.2 Gen2 - Universal Serial Bus, type A: blue, type C: black
🖱	PS/2 mouse port, green	⌨	PS/2 keyboard port, purple
	DVI-D monitor port	**DP1 / DP2**	Display port
▭	VGA monitor port, blue	**HDMI**	HDMI port
IOIOI	Serial port	🖨	Parallel port
LAN	LAN port		

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

Connecting a monitor

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

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



1 = Screen connections of the mainboard

2 = Screen connections of the graphics card (display adapter)

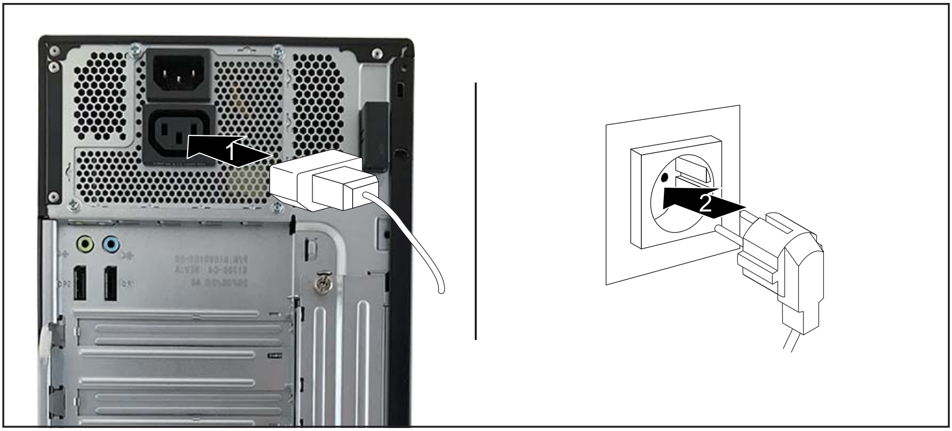
3 = Flex I/O monitor connection

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

- ► Plug the data cable into a suitable monitor port of the device (VGA, DVI-D, Displayport, HDMI).

i **On devices with monitor socket:**

The monitor power cable may only be connected to the monitor socket of the device if the monitor current consumption is less than 1.0 A at 230 V or 2.0 A at 100 V. The values for the monitor current consumption can be found in the technical data on the monitor or in the operating manual for the monitor.



- ► Depending on your device configuration level, plug the monitor power cable into either the monitor socket of the device (1) or a grounded power outlet (2).

i When you connect the monitor to the monitor socket of the device, it automatically switches off as soon as the device switches off.

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

Connecting a USB keyboard

Use the supplied keyboard cable only.

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

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

Connecting a PS/2 keyboard

Use the supplied keyboard cable only.

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

► Plug the round connector of the keyboard cable into a keyboard port of the device.

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

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

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

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

Port settings

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

Device drivers

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

Connecting external devices to the USB ports

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

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

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

- ► Connect the data cable to the external device.
- ► Connect the data cable to one of the USB ports on your device.

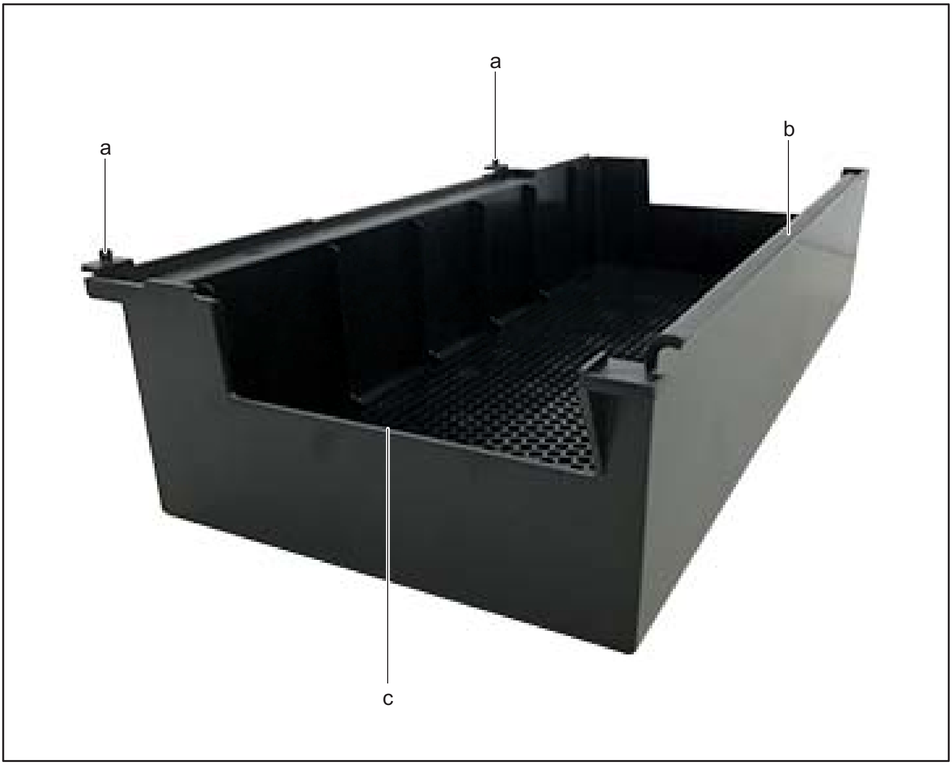
Device drivers

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

Installing the cable cover (optional)

- All necessary lines are connected to the device.
- All necessary measures to protect property and data have been taken (see "Property and data protection", Page 35).

The cable cover is constructed as follows:

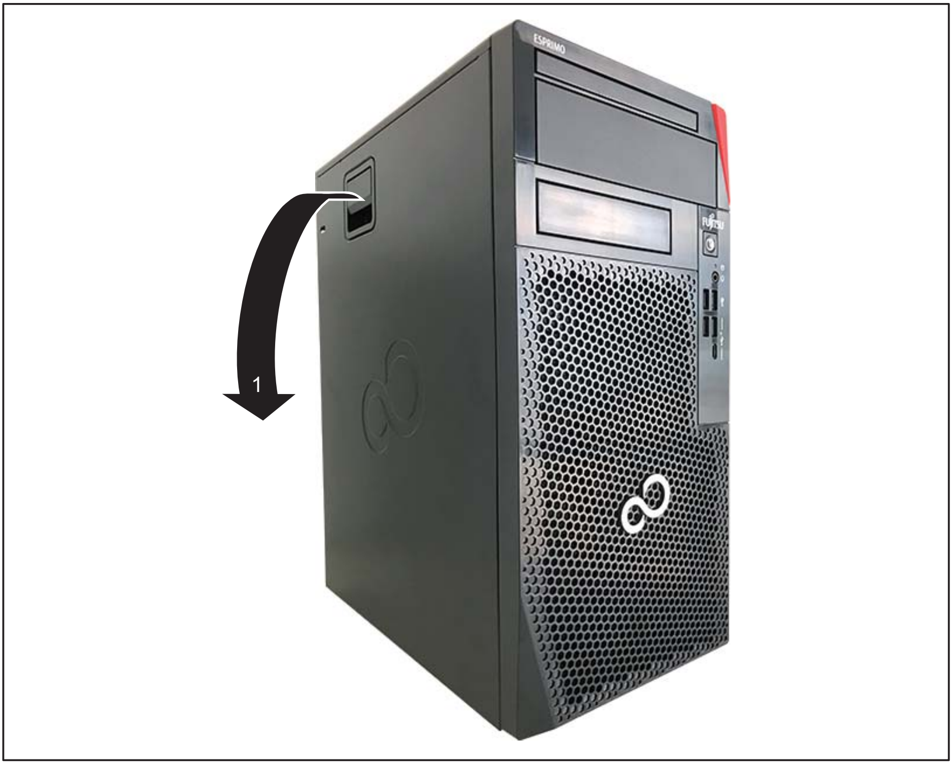


a = Locking elements

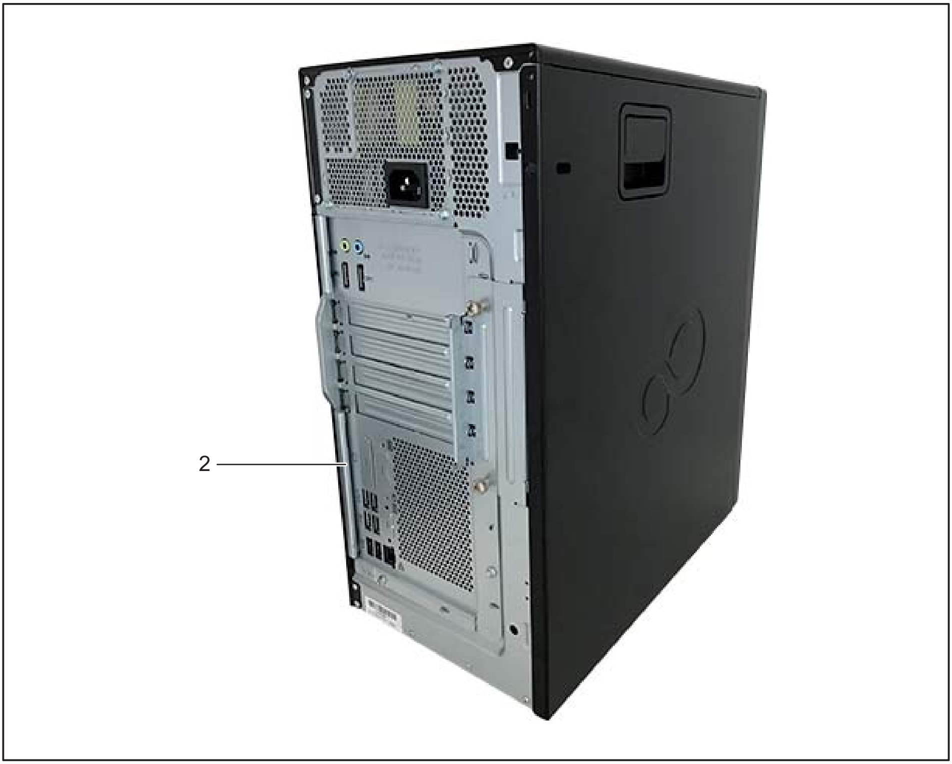
b = Guide rail

c = Cable opening

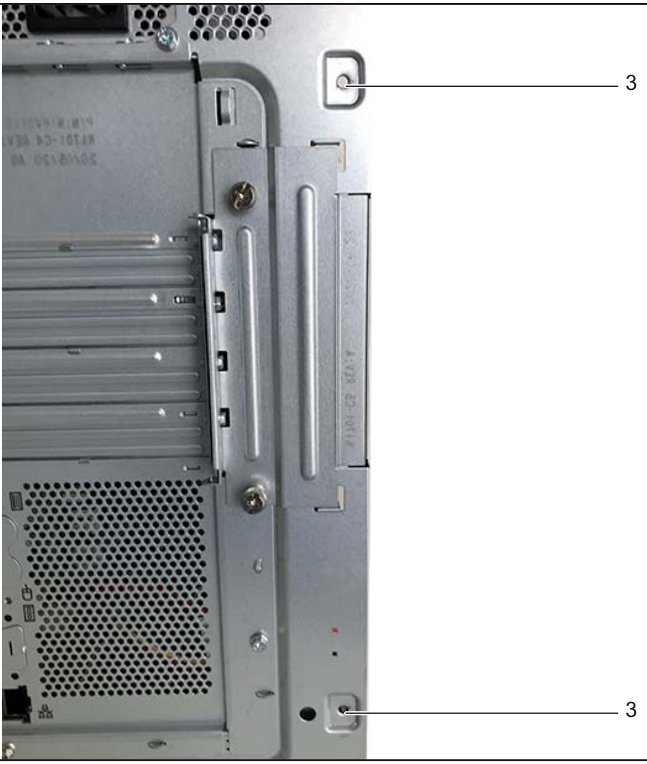
► On devices with a housing lock: Unlock the casing.



► Pull the latch and lift the side panel off the housing (1).



- ► Insert the guide rail (b) in the corresponding metal tab (2) to the left of the connections.
- ↳ The cable opening (c) faces downwards.
- ► Route the cables out through the cable opening (c) in the cable cover.



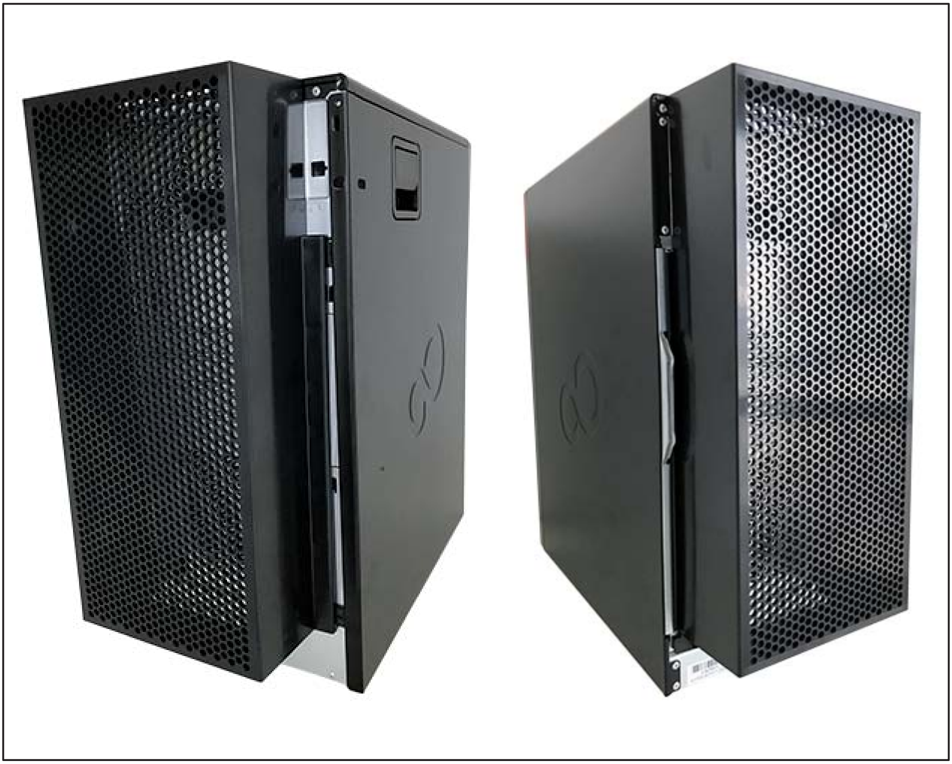
► Press the locking elements (a) into the corresponding openings (3) on the outer right side of the housing.

↳ The cable cover is positioned:

4
ESPRIMO
FUJITSU

- ► Close the housing (4).
- ► On devices with a housing lock: Lock the casing.

↳ The cable cover is secured:



i Further secure the cable cover with the side panel to prevent unauthorised removal (see "Property and data protection", Page 35).

Switching on for the first time: installing the software

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

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

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

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

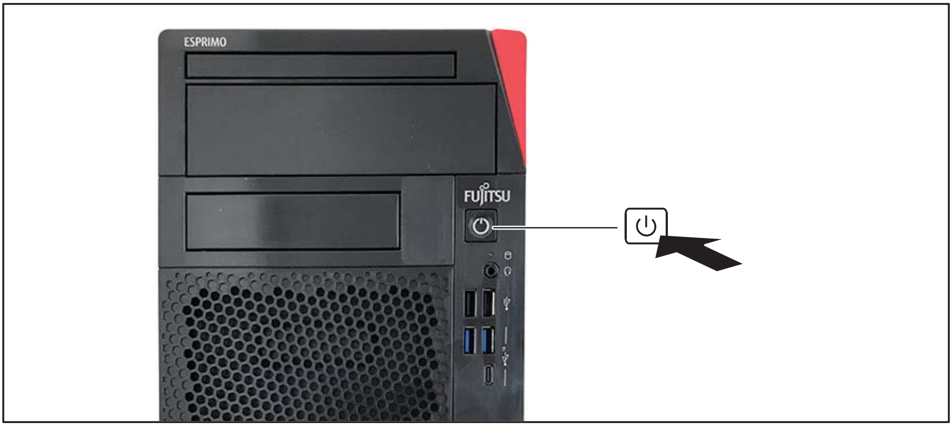
Contact your network administrator if you have any questions about these settings.

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

Switch on the monitor and the machine

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

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



► Press the on/off button on the front of the machine.

↳ The operational display will light up and the machine will start.

Installing the software

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

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

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

Operation

Switch the device on

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

► Press the ON/OFF switch on the front of the device.

↳ The power indicator glows and the device is started.

Switching off the device

► Shut down the operating system in the proper way.

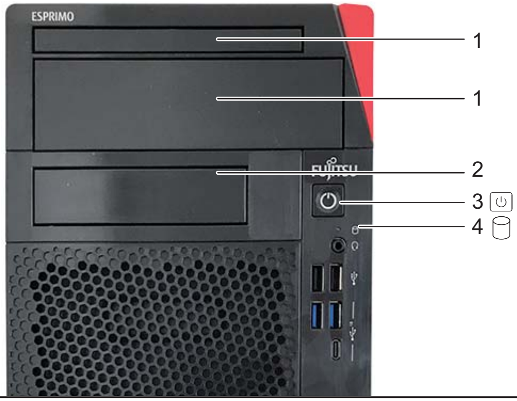
► If the operating system does not automatically switch the device into energy-saving mode or switch it off, press the ON/OFF switch. Warning, this could lead to a loss of data!

The ON/OFF switch does 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.

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

Indicators on the device

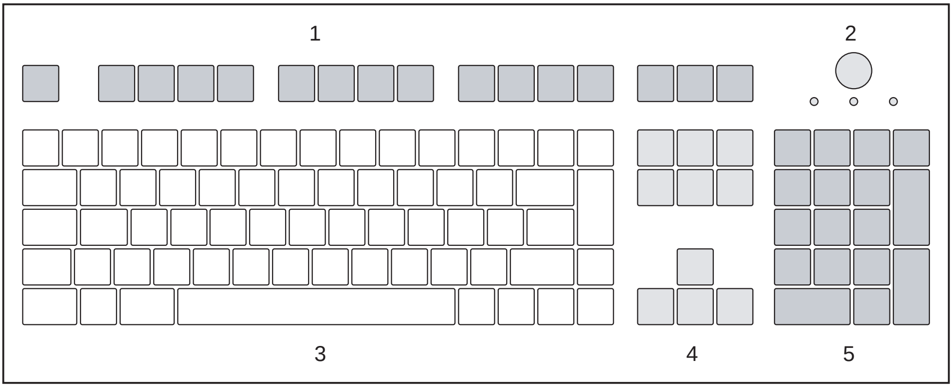
The indicators are on the front of the casing. Which indicators are available on your device depends on the configuration level you have selected.



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

Keyboard

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



1 = Function keys

2 = On/off switch (optional)

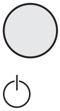
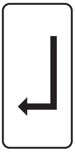
3 = Alphanumeric keypad

4 = Cursor keys

5 = Numeric keypad (calculator keypad)

Important keys and keyboard shortcuts

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

Key / key combination	Description
	**On/off switch (optional)** Depending on the setting in the *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** calls up the Windows *Start* menu.
≣	**Menu key** calls up the menu for the marked item (Windows).
⇧	**Shift key** enables upper-case letters and the upper key symbols to be displayed.
Alt Gr	**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 ⇩	**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	**Ctrl key** performs a special operation when pressed in conjunction with another key. The Ctrl key is also called the "Control" or "Control key".
Ctrl + Alt + Del	**Windows Security/Task Manager** This key combination opens the Windows Security/Task Manager window.

Settings in BIOS Setup

In the *BIOS Setup*, you can set system functions and the hardware configuration of the device. At delivery, the default entries are effective (see BIOS manual or mainboard manual). You can customize these settings in the *BIOS Setup*.

Property and data protection

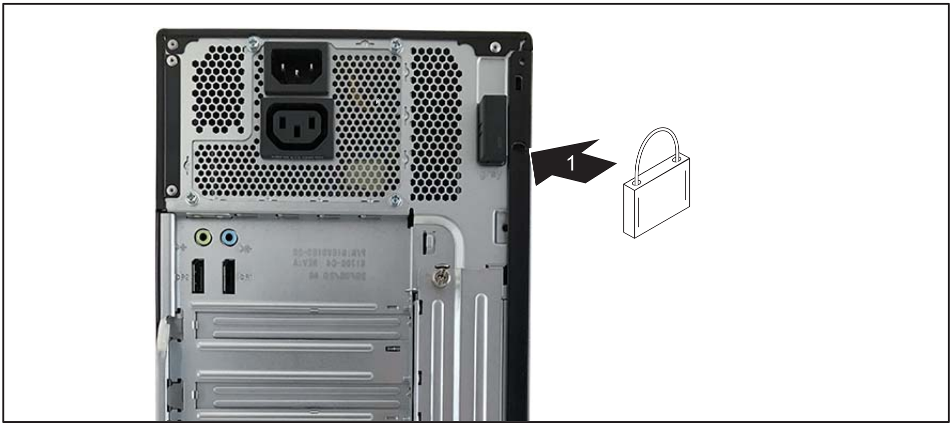
Software functions and mechanical locking offer a broad range of functions for protecting your device and your personal data against theft and unauthorised access. You can also combine these functions.

Anti-theft protection and lead-sealing

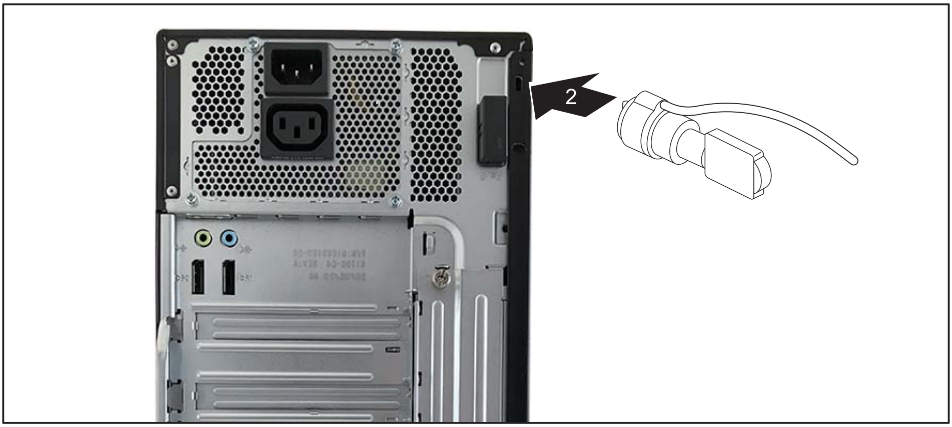
To avoid risk of injury, please ensure that the device is kept out of the reach of small children.

Unauthorised opening of the housing can also greatly endanger third parties (electric shock, risk of fire, etc.).

Use the measures described below to keep unauthorised persons from accessing the interior of the housing.



1 = Holes for a padlock



2 = Device for Security Lock

Anti-theft protection

You can protect your device from theft

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

Lead-sealing

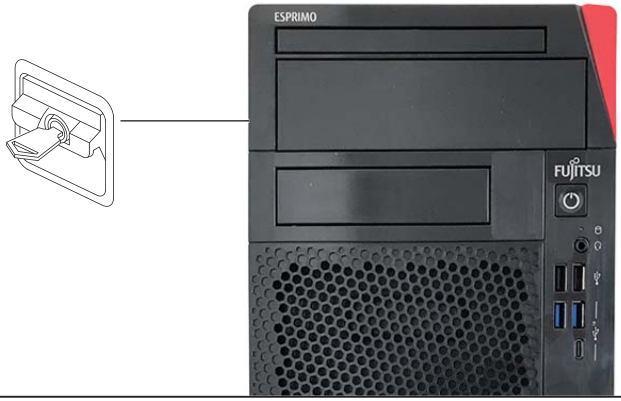
To prevent unauthorised persons from opening the casing, the casing can be lead-sealed. To do this, feed the sealing chain through the holes (1) and seal the chain with the lead seal.

Mechanical casing lock (optional)

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

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

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



Locking the casing

► Turn the key towards the closed lock 🔒.

Unlocking the casing

► Turn the key towards the open lock 🔓.

BIOS setup security functions

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

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

You can also combine these functions.

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

Access authorisation via SmartCard

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

Operating the SmartCard reader (optional)

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

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

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

Delete data

Erase Disk function for hard disks and solid state drives

Erase Disk is a solution integrated in the firmware of FUJITSU desktops (*UEFI*: *Unified Extensible Firmware Interface*) to delete all data from a hard disk or Solid State Disc drives (SSDs).

With this function, all data from internal disks or SSDs can be irretrievably deleted before the hard disks or the whole system are disposed of. The function can also be used if hard disks are to be completely deleted, e.g. before installing a new operating system.

Further information on *Erase Disk* can be found on the Internet at "http://support.ts.fujitsu.com/download".

Troubleshooting and tips

Refer to the safety notes in the "Safety/regulations" manual and in the "Getting started", Page 13 chapter when connecting or disconnecting cables.

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

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

Help if problems occur

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

► Note the ID number of your device. The ID number is found on the type rating plate on the back, the underside or the top of the casing.

► Contact the Service Desk responsible for your country for clarification of the problem: "http://support.ts.fujitsu.com/contact/servicedesk". When you do this, please have ready the ID number and serial number of your system.

Troubleshooting

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

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

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

Cause	Troubleshooting
System crash	► Press the On/Off switch for at least 4 seconds, until the device switches off. Attention: Warning, this could lead to a loss of data! The Operating System is not shut-down properly in the process. Error messages are therefore possible the next time the system is booted.

Monitor remains blank

Cause	Remedy
Monitor is switched off	► Switch your monitor on.
Power saving has been activated (screen is blank)	► Press any key on the keyboard. **or** ► Deactivate the screen saver. If necessary, enter the appropriate password.
Brightness control is set to dark	► Adjust the brightness control. For detailed information, please refer to the operating manual supplied with your monitor.
Power cable not connected	► Switch off the monitor and the device. ► Check that the monitor power cable is properly connected to the monitor and to a grounded mains outlet or to the monitor socket of the device. ► Check that the device power cable is properly plugged into the device and a grounded mains outlet. ► Switch on the monitor and the device.
Monitor cable not connected	► Switch off the monitor and the device. ► Check that the monitor cable is properly connected to the device and monitor. ► Switch on the monitor and the device.
Incorrect setting for the monitor	► Restart the system. ► Press F8 while the system is booting. ► Start the system in Safe Mode. ► Set up the monitor as described in the documentation for your operating system and monitor.

No mouse pointer displayed on the screen

Cause	Remedy
The mouse is not correctly connected.	► Shut down your operating system in the proper manner, for instance using Ctrl + Alt + Del. ► Switch the device off. ► Check that the mouse cable is properly connected to the system unit. If you use an adapter or extension lead with the mouse cable, check the connections. ► Make sure that only one mouse is connected. ► Switch the device on.
Disabled USB ports	► Check in the *BIOS Setup* whether the used USB ports are *enabled* (see BIOS manual or manual for the mainboard).

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*.
The lithium battery is empty.	► If the time and date are repeatedly wrong when you switch your device off and then on, change the lithium battery (see the "System expansions and repairs" manual).

Error messages on the screen

Error messages and their explanations are provided:

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

Installing new software

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

Tips

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

System expansions and repairs

Information on system expansions and repairs can be found on the Internet in the "System Expansions and Repairs" manual at "http://www.fujitsu.com/fts/support".

Operations that are distinguished in the manual as Only For Service, such as repairs to the device, may only however be performed by authorised service technicians. Incorrect repairs may greatly endanger the user (electric shock, fire risk) and will invalidate your warranty.

Technical data

Electrical data	
Protection class:	I
Rated voltage range	100 V – 240 V
Rated frequency	50 Hz – 60 Hz

Max. rated current:

Model	**Power supply**	**Without monitor socket**	**Monitor socket**
FUJITSU Desktop ESPRIMO P9910	Power supply Platinum 680W (E645-V50)	7.5 – 3.5 A	–
FUJITSU Desktop ESPRIMO P9010 FUJITSU Desktop ESPRIMO P7010 FUJITSU Desktop ESPRIMO P5010	Power supply Gold 280W (E643-V50)	3.5 – 1.5 A	–
	Power supply Platinum 300W (E642-V20)	5.5 – 2.5 A	2.0 – 1.0 A

Dimensions	
Width/depth/height without cable cover:	180 mm x 304 mm x 374 mm / 7,09 inch x 11,97 inch x 14,72 inch
Width/depth/height with cable cover (optional):	180 mm x 369 mm x 374 mm / 7,09 inch x 14,53 inch x 14,72 inch

Weight	
Depending on the device variant and configuration level	c. 8 kg / 17,64 lbs

Ambient conditions	
Environment class 3K2 Environment class 2K2	DIN IEC 721 part 3-3 DIN IEC 721 part 3-2
Temperature	
Operation (3K2)	10 °C .... 35 °C / 50 °F ... 95 °F
Transportation (2K2)	-25 °C .... 60 °C / -3 °F ... 140 °F
The formation of condensation is not permitted while the device is in operation ! Clearance required to ensure adequate ventilation:	
without air vents	at least 10 mm / 0,39 inch
with air vents	at least 200 mm / 7,87 inch

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

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