

Fujitsu recommends Windows 10 Pro.

Data Sheet

FUJITSU Desktop ESPRIMO P520 E85+

Your Flexible and Economic PC

FUJITSU ESPRIMO P520 PCs deliver high-quality computing for your demanding office applications. Designed for the specific needs of project-based customers they cover attractive price points and focus on providing the continuity needed for daily operations. They can be either individually configured or customized to meet your specific hardware needs.

High performance and best price/performance ratio

Powerful and cost-effective project PC

- 4th generation Intel® Core™ processor family

System management

The perfect answer to offload your IT administrators

- DeskView Admin enhances the management of the devices in your IT infrastructure during productive operation - even remotely and after hours

Made in Germany

Outstanding quality and stable functions based on German production standards

- The development, production and function tests - all under one roof in Germany

Lifecycle

Hardware continuity for long-lasting project requirements

- Managed lifecycle up to 12 months

Meets ENERGY STAR® requirements

Low power consumption and low costs, without any loss in performance

- 85% energy efficient power supply



Components

Processor	<p>Intel® Core™ i7-4790 processor (4 Cores / 8 Threads, 3.60 GHz, up to 4.0 GHz, 8 MB, Intel® HD Graphics 4600) *</p> <p>Intel® Core™ i5-4690 processor (4 Cores / 4 Threads, 3.50 GHz, up to 3.9 GHz, 6 MB, Intel® HD Graphics 4600) *</p> <p>Intel® Core™ i5-4590 processor (4 Cores / 4 Threads, 3.30 GHz, up to 3.7 GHz, 6 MB, Intel® HD Graphics 4600) *</p> <p>Intel® Core™ i5-4460 processor (4 Cores / 4 Threads, 3.20 GHz, up to 3.4 GHz, 6 MB, Intel® HD Graphics 4600)</p> <p>Intel® Core™ i3-4170 processor (2 Cores / 4 Threads, 3.70 GHz, 3 MB, Intel® HD Graphics 4400)</p> <p>Intel® Pentium® processor G3460 (2 Cores / 2 Threads, 3.50 GHz, 3 MB, Intel® HD Graphics)</p> <p>Intel® Pentium® processor G3260 (2 Cores / 2 Threads, 3.30 GHz, 3 MB, Intel® HD Graphics)</p> <p>Intel® Celeron® processor G1840 (2 Cores / 2 Threads, 2.80 GHz, 2 MB, Intel® HD Graphics)</p> <p>*with Intel® Turbo Boost Technology (clock speed and performance will vary depending on workload and other variables)</p>
Operating systems	
Operating system pre-installed	<p>Windows 8.1 Pro</p> <p>Windows 8.1</p> <p>Windows 7 Professional 64-bit</p> <p>Windows 7 Professional 32-bit</p>
Operating system compatible	<p>Windows 10 Pro (license + recovery media only)</p> <p>openSUSE Linux</p>
Memory modules	<p>2 GB (1 module(s) 2 GB) DDR3, unbuffered, non-ECC, 1,600 MHz, PC3-12800, DIMM</p> <p>4 GB (1 module(s) 4 GB) DDR3, unbuffered, non-ECC, 1,600 MHz, PC3-12800, DIMM</p> <p>8 GB (1 module(s) 8 GB) DDR3, unbuffered, non-ECC, 1,600 MHz, PC3-12800, DIMM</p>
Hard disk drives (internal)	<p>SSD SATA III Premium, 512 GB, 2.5-inch</p> <p>SSD SATA III Premium, 256 GB, 2.5-inch</p> <p>SSD SATA III Premium, 128 GB, 2.5-inch</p> <p>SSD SATA III, 256 GB, 2.5-inch</p> <p>SSD SATA III, 128 GB, 2.5-inch</p> <p>SSD SATA III, 256 GB, 2.5-inch, SED</p> <p>SSD SATA III, 128 GB, 2.5-inch, SED</p> <p>SSHD SATA III, 7,200 rpm, 1,000 GB, 3.5-inch</p> <p>SSHD SATA III, 5,400 rpm, 500 GB, 2.5-inch</p> <p>HDD SATA III, 7,200 rpm, 2,000 GB, 3.5-inch</p> <p>HDD SATA III, 7,200 rpm, 1,000 GB, 3.5-inch</p> <p>HDD SATA III, 7,200 rpm, 500 GB, 3.5-inch</p> <p>HDD SATA II, 5,400 rpm, 320 GB, 2.5-inch</p>
Hard disk notes	<p>Up to 20 GB of HDD space is reserved for system recovery</p> <p>SED (Self-Encrypting Drive)</p> <p>SSD (Solid State Disk)</p> <p>SSHD (Solid State Hard Disk, Hybrid drive)</p>
Graphics	<p>NVIDIA® NVS™ 315, 1 GB</p> <p>NVIDIA® GeForce® GTX 745 2 GB FH, 2 GB</p> <p>NVIDIA® GeForce® GT630 DisplayPort 2GB FH, 2 GB</p> <p>NVIDIA® GeForce® 605 DisplayPort 1GB FH, 1 GB</p> <p>LFH59/ 2x DVI-I adapter cable</p> <p>LFH59/ 2x DP adapter cable</p> <p>DVI-I to VGA Adapter</p> <p>DP to DVI-D (single link) Adapter Cable</p> <p>DP Extension Card</p> <p>AMD® Radeon R9 255 FH, 2 GB</p>

Drives (optional)	BD Triple Writer SATA slim (tray)
	DVD-ROM
	DVD Super Multi
	MultiCard Reader 24in1 USB 2.0 3.5"

Interface add on cards/components (optional)	Parallel Interface
	Gigabit Ethernet PCIe x1, DS
	eSATA Interface
	Dual serial card PCIe x1

Base unit

Base unit	ESPRIMO P520 E85+
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Mainboard	
Mainboard type	D3220
Formfactor	µATX
Chipset	Intel® B85
Processor socket	LGA 1150
Processor quantity maximum	1
Supported capacity RAM (max.)	32 GB
Memory slots	4 DIMM (DDR3)
Memory frequency	1,600 MHz
Memory notes	Dual channel support. For dual channel performance, a minimum of 2 memory modules have to be ordered. Capacity per channel has to be the same
LAN	10/100/1,000 MBit/s Intel® I217LV
BIOS version	AMI Aptio 4.6
BIOS features	BIOS Flash EPROM update by software Recovery BIOS Unified Extensible Firmware Interface (UEFI)
Audio type	On board
Audio codec	Realtek ALC671
Audio features	Internal speaker supports audio playback (optional), High Definition Audio, 5.1 surround sound

I/O controller on board	
Serial ATA total	4
thereof SATA III	4
thereof eSATA	1 (optional)
Controller functions	Serial ATA II (3 Gbit) Serial ATA III (6 Gbit) NCQ AHCI

Interfaces	
Audio: line-in	1
Audio: line-in / microphone	1
Audio: line-out	1
Front audio: microphone	1
Front audio: headphone	1
USB 2.0 total	8
USB 3.1 Gen1 (USB 3.0) total	4
USB front	2x 2.0
USB rear	4x 2.0/ 2x 3.0

Interfaces

USB internal	2x 2.0/ 2x 3.0
VGA	1
DisplayPort	1 (optional)
DVI	1 (DVI-D)
Serial (RS-232)	1 (9pin, 16 byte FIFO, 16550 compatible)
Mouse / Keyboard (PS/2)	2
Ethernet (RJ-45)	1
Parallel	1 (optional) (25pin with EPP and ECP)
eSATA	1 (optional)
Interface Module notes	Anytime USB charge functionality

Input device / components

	Optical USB wheel mouse
Input devices (optional)	Optical USB/PS2 tilt wheel mouse KBPC PX ECO Mouse M440 ECO

Drive bays

Drive bays total	5
3.5-inch internal bays	2
3.5-inch external bays	1
5.25-inch external bays	2
Drive bay notes	3,5" bay can be used for 2,5" drives

Slots

PCI-Express 3.0 x16	1 x (210 mm / 8.27 inch) Full height
PCI-Express 2.0 x4 (mech. x16)	1 x (210 mm / 8.27 inch) Full height
PCI-Express x1	2 x (190 mm / 7.48 inch) Full height

Graphics on board

Graphics brand name	Intel® HD Graphics, HD Graphics 4400, HD Graphics 4600 (depending on processor)
Shared video memory	up to 1,782 MB
TFT resolution (VGA)	1,024 x 768 pixel 1,280 x 1,024 pixel 1,360 x 768 pixel 1,440 x 900 pixel 1,600 x 900 pixel 1,600 x 1,200 pixel 1,680 x 1,050 pixel 1,920 x 1,080 pixel
TFT resolution (DVI)	1,280 x 1,024 pixel 1,360 x 768 pixel 1,440 x 900 pixel 1,600 x 900 pixel 1,680 x 1,050 pixel 1,920 x 1,080 pixel 1,920 x 1,200 pixel
TFT resolution (DisplayPort)	1,280 x 1,024 pixel 1,360 x 768 pixel 1,440 x 900 pixel 1,600 x 900 pixel 1,680 x 1,050 pixel 1,920 x 1,080 pixel 1,920 x 1,200 pixel 2,560 x 1,440 pixel 2,560 x 1,600 pixel 3,840 x 2,160 pixel (requires Intel® Core™ i3, i5 or i7 processor)

Graphics on board

Graphics features	Support for up to three independent displays DirectX® 11.1 HDCP support Open CL® 1.2 OpenGL® 4.0 For multi monitoring mode, graphics card and integrated graphics run in parallel (Microsoft® Windows® 7 or Windows 8)
Graphics notes	up to 1 GB dedicated video memory (main memory owned and locked for graphics use) Tested resolutions, depending on display type additional resolutions and frequencies possible Shared memory depending on main memory size and operating system Resolution (color depth up to 32 Bit/pixel) For TFT we recommend using 60Hz

Electrical values

Power efficiency note	power supply efficiency (at 230V; 20% / 50% / 100% load) : 83% / 86% / 85% 0-Watt mode with hard-off switch
Rated voltage range	100 V - 240 V
Rated frequency range	50 Hz - 60 Hz
Operating voltage range	90 V - 264 V
Operating line frequency range	47 Hz - 63 Hz
Max. output of single power supply	280 W
Power factor correction/active power	active
Monitor outlet	No

Power consumption

Power consumption note	See white paper Energy Consumption 0-Watt mode with hard-off switch
Link to Energy White Paper	http://docs.ts.fujitsu.com/dl.aspx?id=ca528720-8063-41ee-bd80-9fe120eccb20

Heat dissipation

Heat dissipation notes	See white paper Energy Consumption
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Noise emission

Related Processors for noise	Intel® Core™ i7 4770
Standard noise emission	2x2 GB, HDD, ODD, Windows According to ISO 7779:2010, ECMA-74
Standard noise notes / description	Bystander position
Standard noise operation mode: CPU 50% load	3.5 B / 22 dB(A) Bystander ; 26 dB(A) Operator position
Standard noise operation mode: HDD load	3.6 B / 22 dB(A) Bystander ; 26 dB(A) Operator position
Standard noise operation mode: Idle mode	3.5 B / 22 dB(A) Bystander ; 25 dB(A) Operator position
Standard noise operation mode: ODD load	4.5 B / 31 dB(A) Bystander ; 36 dB(A) Operator position
Standard noise operation mode: Office applications 2.0	3.5 B / 22 dB(A) Bystander ; 25 dB(A) Operator position
Blue angel noise emission according certification	According to ISO 7779:2010, ECMA-74 for max. possible configuration
Blue angel noise operation mode: HDD load	3.7 B = 37 dB (A)
Blue angel noise operation mode: Idle mode	3.6 B = 36 dB (A)
Blue angel noise operation mode: ODD load	4.6 B = 46 dB (A)

Dimensions / Weight / Environmental

Dimensions (W x D x H)	175 x 425 x 353 mm 6.89 x 16.74 x 13.9 inch
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Dimensions / Weight / Environmental

Operating position	Vertical
Weight	10 kg
Weight (lbs)	22.05 lbs
Weight notes	Actual weight may vary depending on configuration
Operating ambient temperature	10 - 35 °C (50 - 95 °F)
Operating relative humidity	5 - 85 % (relative humidity)

Compliance

Product	ESPRIMO P520
Model	MI4W
Germany	TÜV GS Blauer Engel / Blue Angel
Europe	CE
USA/Canada	FCC Class B cCSAus
Global	RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronic equipment) Microsoft Operating Systems (HCT / HCL entry / WHQL) EPEAT® Gold (dedicated regions) ENERGY STAR® 6.0 (dedicated regions)
Compliance link	https://sp.ts.fujitsu.com/sites/certificates

Additional Software

Additional software (preinstalled)	Workplace Protect (secure authentication solution) Adobe® Reader® (pdf reader) McAfee Multi Access Security (anti-virus and internet security software; 60 days trial version) Win7: Fujitsu Recovery (hard disk based recovery) Win8: Microsoft Push Button Recovery (hard disk based recovery) Microsoft Office (buy license to activate the pre-installed Microsoft Office)
Additional software (optional)	Recovery DVD for Windows® Drivers & Utilities DVD (DUDVD) CyberLink PowerDVD BD (playback software for Blu-ray Disc™) CyberLink PowerDVD DVD (playback software for DVD) Nero Essentials XL

Manageability

Manageability technology	DeskUpdate Driver management PXE 2.1 Boot code Wake up from S5 (off mode) WoL (Wake on LAN)
Manageability software	DeskView Client DeskView Instant BIOS Management
DeskView components	Inventory Management BIOS Management Driver Management Security Management Alarm Management
Supported standards	DMI (Desktop Management Interface) SMBIOS (System Management BIOS) PXE (Preboot Execution Environment) WMI (Windows Management Instrumentation) WBEM (Web Based Enterprise Management) CIM (Common Information Model)
Manageability link	http://www.fujitsu.com/fts/manageability

Security

Physical Security	Kensington Lock support Eye for padlock
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Security	
System and BIOS Security	Boot sector virus protection Write protect option for the Flash EPROM Control of external interfaces Optional: Trusted platform module (TPM 1.2)
User Security	User and supervisor BIOS password Hard disk password Access protection via external SmartCard reader (optional) Access protection via internal SmartCard reader (optional)
Miscellaneous	
	Keyboard on (Special Fujitsu keyboard required) Thermal management
Packaging information	
Packaging dimension (mm)	516 x 278 x 562 mm
Packaging dimension (inch)	20.31 x 10.94 x 22.13 inch
Max. quantity / pallet	24
Material - Weight (g) Carton	1280 g
Material - Weight (lbs) Carton	2.82 lbs
Material - Weight (g) EPS / PS	140 g
Material - Weight (lbs) EPS / PS	0.31 lbs
Material - Weight (g) PE	60 g
Material - Weight (lbs) PE	0.13 lbs
Packaging notes	printed user documentation is bleached in chlorine free process
Warranty	
Warranty period	1 year (for countries in EMEA)
Warranty type	Bring-In / Onsite Service (for countries within region EMEA, for all other countries depending on local regulations)
Warranty Terms & Conditions	http://support.ts.fujitsu.com/warranty
Product Support Services - the perfect extension	
Recommended Service	9x5, Onsite Response Time: Next Business Day
Spare Parts availability	5 years after end of product life
Service Weblink	http://www.fujitsu.com/fts/services/support

Recommended Accessories

Display B24-8 TE Pro		The FUJITSU Display B24-8 TE Pro is made for intensive office work. With visual and mechanical ergonomics this marble-grey display enables fatigue-free working for hours in front of the screen. The large 60.5 cm (23.8-inch) screen allows you to keep always track of all open applications. This high-quality display works unfailingly around the clock. Easy connectivity, manageability and usability help you increase your productivity.	Order Code: S26361-K1577-V140
Mouse M440 ECO		Fujitsu Mouse M440 ECO is made from 100% bio material and has a completely PVC free cable. The elegant M440 ECO works on nearly every surface and follows all your hand movements smoothly and precisely. It features two main buttons and as well as a scroll wheel providing comfortable computing to both right and left-handed users.	Order Code: S26381-K450-L200
SOUNDSYSTEM DS E2000 Air		The new more powerful SOUNDSYSTEM DS E2000 Air gives you impressive, well-balanced sound throughout the frequency band. It is an unbeatable USB speaker set with a surprisingly small form factor. The robust satellite speakers are decorated with a deluxe piano finish and the base is adorned with warm ambient lighting.	Order Code: S26391-F7128-L600

**UC&C USB Headset Stereo
H650e**



The UC&C USB Headset Stereo H650e is the ultimate in style and functionality. Long, uncomfortable work calls are a thing of the past thanks to the cushioned ear pads and crystal clear sound. Adjustable headband and microphone provides the perfect fit for everyone. Optimized for Microsoft® Lync™ the headset displays a red 'in-call' LED to let your co-workers know when you're available, thus helping to boost office productivity.

Order Code:
S26391-F7139-L10

Keyboard KBPC PX ECO



Fujitsu's KBPC PX ECO keyboard is the perfect contribution to Green IT. The keyboard is made out of 45% renewable raw material and comes with a PVC free USB cable. In addition, the KBPC PX ECO offers first class comfort and ergonomics. It attracts attention with its impressive modern design and useful extras.

S26381-K341-L1** (**:
country specific variation)

More information

Fujitsu OPTIMIZATION Services

In addition to FUJITSU Desktop ESPRIMO P520 E85+, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Fujitsu Portfolio

Build on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offering, ranging from clients to datacenter solutions and includes the broad stack of Business Solutions, as well as the full stack of Cloud offering. This allows customers to leverage from alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

Computing Products

www.fujitsu.com/global/products/computing/

Software

www.fujitsu.com/software/

More information

Learn more about FUJITSU Desktop ESPRIMO P520 E85+, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
www.fujitsu.com/fts/ESPRIMO

Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment. Using our global know-how, we aim to contribute to the creation of a sustainable environment for future generations through IT. Please find further information at <http://www.fujitsu.com/global/about/environment>



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