

DATASHEET

ESPRIMO P3520 E85+

Your flexible economy PC

Issue: December 2009

ESPRIMO P3520 E85+

The ESPRIMO P3520 is the right choice for major customers requiring the latest standard features. This Microtower PC is the ultimate balance between top performance and very attractive prices. Freely configurable, with proven Intel® technology and an extended maximum 12-month product lifecycle - this PC is the perfect choice for cost-driven projects.

Excellent price/performance ratio

Cost-effective system for large account projects

- Entry-level PC with standard technology

Flexibility

Freedom of choice with tailored systems, perfect fit for specific requirements

- Flexible logistics concept - Customizing program (made4you)

Reliability

Excellent quality and functional stability

- Own development and production in Europe

Lifecycle

Hardware continuity for long lasting project needs

- Managed lifecycle up to 12 months

Technology

High-performance and reliable partner for your daily business

- Intel® G41 chipset and Intel® Core™2 Quad processors



Components

Processor	Intel® Core™2 Quad processor Q9650 (4C/4T, 3.0 GHz, 12 MB, 1333 MHz) Intel® Core™2 Quad processor Q9550 (4C/4T, 2.83 GHz, 12 MB, 1333 MHz) Intel® Core™2 Quad processor Q9505 (4C/4T, 2.83 GHz, 6 MB, 1333 MHz) Intel® Core™2 Quad processor Q9400 (4C/4T, 2.66 GHz, 6 MB, 1333 MHz) Intel® Core™2 Quad processor Q8300 (4C/4T, 2.5 GHz, 4 MB, 1333 MHz) Intel® Core™2 Duo processor E8600 (2C/2T, 3.33 GHz, 6 MB, 1333 MHz) Intel® Core™2 Duo processor E8500 (2C/2T, 3.16 GHz, 6 MB, 1333 MHz) Intel® Core™2 Duo processor E8400 (2C/2T, 3.0 GHz, 6 MB, 1333 MHz) Intel® Core™2 Duo processor E7600 (2C/2T, 3.06 GHz, 3 MB, 1066 MHz) Intel® Core™2 Duo processor E7500 (2C/2T, 2.93 GHz, 3 MB, 1066 MHz) Intel® Core™2 Duo processor E7400 (2C/2T, 2.8 GHz, 3 MB, 1066 MHz) Intel® Pentium® processor E6300 (2C/2T, 2.8 GHz, 2 MB, 1066 MHz) Intel® Pentium® processor E5400 (2C/2T, 2.7 GHz, 2 MB, 800 MHz) Intel® Pentium® processor E5300 (2C/2T, 2.6 GHz, 2 MB, 800 MHz) Intel® Pentium® processor E5200 (2C/2T, 2.5 GHz, 2 MB, 800 MHz) Intel® Celeron® processor E3200 (2C/2T, 2.4 GHz, 1 MB, 800 MHz) Intel® Celeron® processor 450 (1C/1T, 2.2 GHz, 512 KB, 800 MHz)
Memory modules	4 GB (1 module(s) 4 GB) DDR2, 800 MHz, PC2-6400, DIMM 2 GB (1 module(s) 2 GB) DDR2, 800 MHz, PC2-6400, DIMM 1 GB (1 module(s) 1 GB) DDR2, 800 MHz, PC2-6400, DIMM
Hard disk drives (internal)	SATA II, 7200 rpm, 1000 GB, 3.5-inch, S.M.A.R.T. SATA II, 7200 rpm, 500 GB, 3.5-inch, S.M.A.R.T. SATA II, 7200 rpm, 320 GB, 3.5-inch, S.M.A.R.T. SATA II, 7200 rpm, 250 GB, 3.5-inch, S.M.A.R.T. SATA II, 7200 rpm, 160 GB, 3.5-inch, S.M.A.R.T.
Hard disk notes	Supporting NCQ and 3 GBit
Graphics add on cards (optional)	ATI Radeon® HD 3450, 256 MB DVI Extension Adapter NVIDIA® GeForce® 9300GE, 256 MB NVIDIA® GeForce® 9300GE, 512 MB NVIDIA® Quadro NVS 290, 256 MB
Modular bay options	1.44 MB Floppy Blu-ray Disc Triple Writer DVD-ROM DVD Super Multi MultiCard Reader 20in1, 3,5-Inch
Interface add on cards/components (optional)	WLAN III, 802.11g/Draft-n (Windows only) Parallel Interface Modem adapter kit (EU) Modem 56k incl. RJ11 modem cable Gigabit Ethernet PCIe x1 FireWire PCI-Card IEEE1394 Dual serial card, PCI, EX-43092
Base unit	ESPRIMO P3520 E85+
Mainboard	
Mainboard type	D2841
Formfactor	µATX
Chipset	Intel® G41
Processor socket	LGA 775
Processor quantity maximum	1
System bus (FSB / HT / QPI)	up to 1333 MHz

Mainboard

Memory slots	2 DIMM (DDR2)
Supported capacity RAM (max.)	8 GB
Memory frequency	800 MHz
Memory notes	Dual channel support. For dual channel performance, 2 memory modules have to be ordered. Capacity per channel has to be the same.
LAN	10/100/1000 MBit/s Broadcom BCM5784M
BIOS version	Phoenix 6.0
BIOS features	BIOS Flash EPROM update by software Recovery BIOS
Audio codec	Realtek ALC663
Audio features	High Definition audio, 5.1 surround sound

I/O controller on board

Serial ATA total	4
thereof eSATA	0
Controller functions	Serial ATA II 3 GBit

Interfaces

Audio: line-in	1
Audio: line-in / microphone	1
Audio: line-out	1
DVI	optional
Ethernet (RJ-45)	1
Front audio: headphone	1
Front audio: microphone	1
Mouse / Keyboard (PS/2)	2
Parallel	optional (25pin with EPP and ECP)
Serial (RS-232)	1 (9pi, 16 byte FIFO, 16550 compatible)
USB front	2
USB internal	2
USB rear	4
USB 2.0 total	8
VGA	1

Input device / components

Optical USB wheel mouse
Optional: Optical USB/PS2 tilt wheel mouse

Drive bays

Drive bays total	5
3.5-inch internal bays	2
3.5-inch external bays	1
5.25-inch external bays	2

Slots

PCI-Express x16	1 x (210 mm) full height
PCI-Express x1	1 x (210 mm) full height
PCI (32-bit / 33 MHz)	2 x (170/ 220 mm) full height

Graphics on board

Graphics brand name	Intel® GMA 4500
Shared video memory	up to 256 MB
Refresh rate 1024 x 768 (recommended / max.)	85 Hz / -
Refresh rate 1280 x 1024 (recommended / max.)	85 Hz / -
Refresh rate 1600 x 1200 (recommended / max.)	85 Hz / 85 Hz

Graphics on board

TFT resolution (VGA)	1360 x 768 pixel 1440 x 900 pixel 1680 x 1050 pixel 1920 x 1200 pixel
TFT resolution (DVI)	1360 x 768 pixel 1440 x 900 pixel 1680 x 1050 pixel 1920 x 1200 pixel
Graphics notes	Tested resolutions, depending on display type additional resolutions and frequencies possible Shared memory depending on main memory size 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) : 85% / 87% / 85%) 0-Watt mode with hard-off switch
Rated voltage range	100 - 240 V
Rated frequency range	50 - 60 Hz
Operating voltage range	90 - 264 V
Operating line frequency range	47 - 63 Hz
Max. output of power supply	300 W
Power factor correction/active power	active
Monitor outlet	No

Power consumption

Power consumption note	see white paper Energy Consumption
Link to Energy White Paper	http://docs.ts.fujitsu.com/dl.aspx?id=25f696ba-cfb4-4966-8f8b-3ca26fddf47a

Heat dissipation

Heat dissipation notes	see white paper Energy Consumption
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Noise for standard configuration (HDD, ODD, FDD)

Noise emission	According to ISO9296
Related Processors for noise	Intel® Core™2 Duo E8600
Noise Operation mode 1: ODD load (Blue angel requirement)	3.9 B / 23 dB(A)
Noise Operation mode 2: HDD load (Blue angel requirement)	3.8 B / 23 dB(A)
Noise Operation mode 3: CPU 90% load (Blue angel requirement)	3.7 B / 22 dB(A)
Noise Operation mode 4: High load	3.8 B / 23 dB(A)
Noise Operation mode 5: Office applications	3.8 B / 23 dB(A)
Idle mode (Blue Angel requirement)	3.7 B / 21 dB(A)
Noise notes / description	A weighted sound power level L _{wad} (in B) / workplace related A-weighted sound pressure level L _{pAm} (in dB(A)), Bystander position

Dimensions / Weight / Environmental

Dimension (W x D x H)	175 x 425 x 353 mm
Weight	approx. 11 kg
Weight notes	Actual weight may vary depending on configuration
Operating ambient temperature	15 - 35°C

Compliance

Product	ESPRIMO P3520
Model	MI4W-D2841
Germany	GS
Europe	CE
USA/Canada	FCC Class B cCSAus

Compliance

Global	RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronic equipment) Microsoft Operating Systems (HCT / HCL entry / WHQL)
Compliance link	https://sp.ts.fujitsu.com/sites/certificates/default.aspx

Operating system

Operating system optional preinstalled	Microsoft® Windows® 7 Home Premium Microsoft® Windows® 7 Professional Microsoft® Windows Vista® Home Basic Microsoft® Windows Vista® Home Premium Microsoft® Windows Vista® Business 32-bit TwinLoad Microsoft® Windows® XP Professional (DVD)
Operating system compatible	Linux
Operating system notes	All Windows Vista® and Windows® 7 versions are Office 2007 ready.

Additional Software

Additional software (preinstalled)	Nero Essentials S (burning software)
Additional software (optional)	Recovery DVD for Windows® Drivers & Utilities DVD (DUDVD) CyberLink PowerDVD BD (playback software for Blu-ray Disc™, only with Blu-ray Disc™ drive)

Compatibility (references)

DMI 2.0
PC 2001
WMI 1.5
USB 2.0

Manageability

Manageability features	DeskUpdate Driver management DeskView Migrate (optional) DeskView Control (optional) PXE 2.1 Boot code Wake up from S5 (off mode)
DeskView features	WoL (Wake on LAN)
Manageability link	http://ts.fujitsu.com/manageability http://www.altiris.com/fujitsu

Security

Physical security	Kensington Lock support Eye for padlock
System security	Boot sector virus protection Write protect option for the Flash EPROM Boot protection for floppy disk / CD drive and write protection for floppy disk drive Control of all USB interfaces
User security	User and supervisor BIOS password Optional: Access protection via external SmartCard reader Optional: Access protection via internal SmartCard reader

Serviceability

Packaging information

Packaging dimension	500x290x540 mm
Max. quantity / pallet	24
Material - Weight (g) Carton	1270 g
Material - Weight (g) EPS / PS	210 g
Material - Weight (g) PE	appr. 60 g
Packaging notes	printed user documentation is bleached in chlorine free process

Warranty

Maintenance and Support Services - the perfect extension

Recommended Service	5x9, Response Time: Next Business Day
Spare Parts availability	5 years
Service Weblink	http://ts.fujitsu.com/Supportservice

Information about environmental care, policies, programs and our Environmental Guideline FSC 03230:

<http://ts.fujitsu.com/aboutus>

Take back and Recycling information:

<http://ts.fujitsu.com/recycling>

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