

Fujitsu recommends Windows 8 Pro.

# Data Sheet

## Fujitsu CELSIUS W520 Workstation

### Performance That Boosts Your Productivity

If you need a powerful entry-level workstation, Fujitsu's CELSIUS W520 is the ideal choice. Comprehensive ISV certifications ensure your professional applications run smoothly. Your workplace is silent and user-friendly thanks to best-in-class noise emissions. Plus, the cold plug access at the front of the workstation lets you expand your storage capacity or change drives for enhanced working flexibility.

#### Powerful workstation

Get more done in less time

- The fastest available processors, graphics cards and hard disk drives for entry-level 3D/CAD or DCC applications

#### Quality

Highest quality and reliability for continuous productivity

- Designed and manufactured in Germany

#### Upgradeability

Minimum downtime in the event of rapid component upgrades

- Screw less access system design

#### Leading workstation application certification

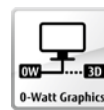
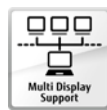
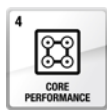
Maximum compatibility and performance with customer-preferred applications

- Full support for ISV applications and easy integration into existing IT environments

#### Easy and rapid change of hard disk drives

Quick upgrades and changes of hard disk drives

- Cold plug access at front



# Components

<b>Processor</b>	Intel® Core™ i3-3220 processor (2 Cores / 4 Threads, 3.30 GHz, 3 MB, Intel® HD Graphics 2500) Intel® Core™ i3-2130 processor (2 Cores / 4 Threads, 3.40 GHz, 3 MB, Intel® HD Graphics 2000) Intel® Core™ i3-2120 processor (2 Cores / 4 Threads, 3.30 GHz, 3 MB, Intel® HD Graphics 2000) Intel® Xeon® processor E3-1280v2 (4 Cores / 8 Threads, 3.60 GHz, up to 4.0 GHz, 8 MB) Intel® Xeon® processor E3-1275v2 (4 Cores / 8 Threads, 3.50 GHz, up to 3.9 GHz, 8 MB, Intel® HD Graphics P4000) Intel® Xeon® processor E3-1270v2 (4 Cores / 8 Threads, 3.50 GHz, up to 3.9 GHz, 8 MB) Intel® Xeon® processor E3-1245v2 (4 Cores / 8 Threads, 3.40 GHz, up to 3.8 GHz, 8 MB, Intel® HD Graphics P4000) Intel® Xeon® processor E3-1240v2 (4 Cores / 8 Threads, 3.40 GHz, up to 3.8 GHz, 8 MB) Intel® Xeon® processor E3-1230v2 (4 Cores / 8 Threads, 3.30 GHz, up to 3.7 GHz, 8 MB) Intel® Xeon® processor E3-1225v2 (4 Cores / 4 Threads, 3.20 GHz, up to 3.6 GHz, 8 MB, Intel® HD Graphics P4000) Intel® Xeon® processor E3-1220v2 (4 Cores / 4 Threads, 3.10 GHz, up to 3.5 GHz, 8 MB) Intel® vPro™ with all Intel® Xeon® processors
<b>Operating systems</b>	
<b>Operating system</b>	Windows® 7 Professional 64-bit Windows® 7 Professional 32-bit Windows® 7 Home Premium 64-bit Windows 8 Pro Windows 8
<b>Operating system compatible</b>	Windows® XP Linux
<b>Operating system notes</b>	Red Hat® certification pending Novell® certification pending For some configurations third party drivers are currently not available or configuration restrictions may apply. Limited Windows® XP support. Microsoft discontinued Windows® XP certification on system level, basic drivers via <a href="http://support.ts.fujitsu.com">http://support.ts.fujitsu.com</a>
<b>Memory modules</b>	2 GB (1 module(s) 2 GB) DDR3, unbuffered, ECC, 1600 MHz, PC3-12800, DIMM 2 GB (1 module(s) 2 GB) DDR3, unbuffered, non-ECC, 1600 MHz, PC3-12800, DIMM 4 GB (1 module(s) 4 GB) DDR3, unbuffered, ECC, 1600 MHz, PC3-12800, DIMM 4 GB (1 module(s) 4 GB) DDR3, unbuffered, non-ECC, 1600 MHz, PC3-12800, DIMM 8 GB (1 module(s) 8 GB) DDR3, unbuffered, ECC, 1600 MHz, PC3-12800, DIMM 8 GB (1 module(s) 8 GB) DDR3, unbuffered, non-ECC, 1600 MHz, PC3-12800, DIMM
<b>Graphics add on cards (optional)</b>	Ultra-high-end 3D: NVIDIA® Quadro® 5000, 2.5 GB, 352 cores, PCIe x16, Dual Link DVI-I, 2x DisplayPort High-end 3D: AMD FirePro™ V7900, 2 GB, 1140 stream processors, PCIe x16, 4 x DisplayPort Midrange 3D: NVIDIA® Quadro® 2000D, 1 GB, 192 cores, PCIe x16, 2x Dual Link DVI-I Midrange 3D: NVIDIA® Quadro® 2000, 1 GB, 192 cores, PCIe x16, Dual Link DVI-I, 2x DisplayPort Midrange 3D: AMD FirePro™ V5900, 2 GB, 800 stream processors, PCIe x16, Dual Link DVI-I, 2x DisplayPort Entry 3D: AMD FirePro™ V4900, 1 GB, 480 stream processors, PCIe x16, Dual Link DVI-I, 2x DisplayPort Entry 3D: NVIDIA® Quadro® 600, 1 GB, 96 cores, PCIe x16, Dual Link DVI-I, DisplayPort Entry 3D: AMD FirePro™ V3900, 1 GB, 480 stream processors, PCIe x16, Dual Link DVI-I, DisplayPort Entry 3D: NVIDIA® Quadro® 410, 512 MB, 192 cores, PCIe x16, 1x DVI-I, DisplayPort Professional 2D: NVIDIA® Quadro® NVS 450, 512 MB, 2 x 8 cores, PCIe x16, 4 x DisplayPort Remote Graphics: CELSIUS RemoteAccess Card, PCIe x1, 2x DVI-I, PCoIP
<b>Notes</b>	NVIDIA® Quadro® 5000, NVIDIA® Quadro® 4000 and ATI FirePro™ V7900 require CELSIUS W520 power.

<b>Hard disk drives (internal)</b>	SSD SATA III, 512 GB, 2.5-inch
	SSD SATA III, 256 GB, 2.5-inch
	SSD SATA III, 128 GB, 2.5-inch, SED
	SSD SATA III, 128 GB, 2.5-inch
	SSD SATA III, 64 GB, 2.5-inch
	SSD SATA, 256 GB, 2.5-inch
	SSD SATA, 128 GB, 2.5-inch, FDE
	SSD SATA, 128 GB, 2.5-inch
	HDD SATA III, 10000 rpm, 1000 GB, 2.5-inch, business critical
	HDD SATA III, 10000 rpm, 600 GB, 3.5-inch
	HDD SATA III, 10000 rpm, 600 GB, 2.5-inch
	HDD SATA III, 10000 rpm, 500 GB, 2.5-inch, business critical
	HDD SATA III, 10000 rpm, 300 GB, 2.5-inch
	HDD SATA III, 7200 rpm, 2000 GB, 3.5-inch
	HDD SATA III, 7200 rpm, 1000 GB, 3.5-inch, business critical
	HDD SATA III, 7200 rpm, 1000 GB, 3.5-inch
	HDD SATA III, 7200 rpm, 500 GB, 3.5-inch, business critical
	HDD SATA III, 7200 rpm, 500 GB, 3.5-inch
	HDD SATA III, 7200 rpm, 250 GB, 3.5-inch
	HDD SATA II, 7200 rpm, 2000 GB, 3.5-inch, business critical
	HDD SATA, 160 GB, 2.5-inch
<b>Hard disk notes</b>	One Gigabyte equals one billion bytes, when referring to hard disk drive capacity. 24/7 ready (business critical HDDS required) Up to 18 GB of HDD space is reserved for system recovery
<b>Drives (optional)</b>	BD Triple Writer SATA slim (tray) DVD-ROM DVD Super Multi MultiCard Reader 24in1 USB 2.0 3.5"
<b>Interface add on cards/components (optional)</b>	WLAN III, 802.11g/Draft-n (Windows only, dedicated regions only) Parallel Interface Gigabit Ethernet PCIe x1, DS eSATA Interface Dual serial card PCIe x1, powered Dual serial card PCIe x1
<b>Base unit</b>	CELSIUS W520
	CELSIUS W520power
<b>Mainboard</b>	
<b>Mainboard type</b>	D3167
<b>Formfactor</b>	ATX
<b>Chipset</b>	Intel® C216
<b>Processor socket</b>	LGA 1155
<b>Processor quantity maximum</b>	1
<b>Memory slots</b>	4 DIMM (DDR3) ECC/non-ECC
<b>Supported capacity RAM (max.)</b>	32 GB
<b>Memory frequency</b>	1600 MHz
<b>Memory notes</b>	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.
<b>LAN</b>	10/100/1000 MBit/s Intel® 82579 LM

**Mainboard**

BIOS features	BIOS Flash EPROM update by software Recovery BIOS Unified Extensible Firmware Interface (UEFI)
Audio codec	Conexant CX20642
Audio features	Internal speaker supports audio playback, High Definition audio, 5.1 surround sound

**I/O controller on board**

Serial ATA total	6
thereof SATA III	2
thereof eSATA	2 (optional)
Controller functions	Serial ATA II (3 Gbit) Serial ATA III (6 Gbit) NCQ AHCI RAID 0/1/5/10 (Windows XP not supported) Intel® Smart Response Technology (depending on CPU)
SATA RAID support	0, 1, 10, 5

**Interfaces**

Audio: in (rear)	2
Audio: out (rear)	1
Audio: in	1
Audio: out	1
Internal speakers	1
USB 2.0 total	10
USB front	2x 2.0/ 2x 3.0
USB rear	6x 2.0 / 2x 3.0
USB internal	1 + 1
VGA	1 (depends on processor, via DVI to VGA adapter)
DisplayPort	1
DVI	1 (depends on processor)
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

**Drive bays**

Drive bays total	8
3.5-inch internal bays	4
3.5-inch external bays	2
5.25-inch external bays	2

**Slots**

PCI-Express 2.0 x16	1 x (312 mm / ) Full height
PCI-Express 2.0 x4 (mech. x16)	1 x (210 mm / ) Full height
PCI-Express x1	3 x (312mm (2x) / 170 mm (1x) mm / ) Full height
PCI (32-bit / 33 MHz)	2 x (312 mm / ) Full height

**Graphics on board**

Shared video memory	up to 1759 MB
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**Graphics on board**

<b>TFT resolution (VGA)</b>	1024 x 768 pixel 1280 x 1024 pixel 1360 x 768 pixel 1440 x 900 pixel 1600 x 900 pixel 1600 x 1200 pixel 1680 x 1050 pixel 1920 x 1080 pixel 1920 x 1200 pixel
<b>TFT resolution (DVI)</b>	1360 x 768 pixel 1440 x 900 pixel 1600 x 900 pixel 1680 x 1050 pixel 1920 x 1080 pixel 1920 x 1200 pixel
<b>TFT resolution (DisplayPort)</b>	1360 x 768 pixel 1440 x 900 pixel 1600 x 900 pixel 1680 x 1050 pixel 1920 x 1080 pixel 1920 x 1200 pixel 2560 x 1440 pixel 2560 x 1600 pixel
<b>Graphics features</b>	Dual display support DirectX® 10.1 or DirectX® 11 (depending on CPU) HDCP support Open GL® 3.1 (depending on CPU) Open CL™ 1.1 (depending on CPU) For multi monitoring mode, graphics card and integrated graphics run in parallel (Microsoft® Windows 7® only)
<b>Graphics notes</b>	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**

<b>Power efficiency note</b>	power supply efficiency (at 230V; 20% / 50% / 100% load) : 87% / 90% / 87%
<b>Rated voltage range</b>	100 V - 240 V
<b>Rated frequency range</b>	50 Hz - 60 Hz
<b>Operating voltage range</b>	90 V - 264 V
<b>Operating line frequency range</b>	47 Hz - 63 Hz
<b>Max. output of single power supply</b>	300 W (CELSIUS W520); 500 W (CELSIUS W520power)
<b>Power factor correction/active power</b>	active

**Noise for standard configuration (HDD, ODD)**

<b>Noise Operation mode 4: High load</b>	18 dB(A)	18 dB(A)
<b>Noise Operation mode 5: Office applications</b>	18 dB(A)	18 dB(A)
<b>Idle mode</b>	tbd	tbd
<b>Office mode</b>	tbd dB(A)	tbd dB(A)

**Dimensions / Weight / Environmental**

<b>Dimensions (W x D x H)</b>	186 x 481 x 430 mm
<b>Operating position</b>	Vertical / horizontal
<b>Weight</b>	approx. 16 kg
<b>Weight notes</b>	Actual weight may vary depending on configuration
<b>Operating ambient temperature</b>	10 - 35°C
<b>Operating relative humidity</b>	5 - 85 % (relative humidity)

**Compliance**

<b>Product</b>	CELSIUS W520power
<b>Model</b>	MTB-D3167
<b>Germany</b>	TÜV GS
<b>Europe</b>	CE
<b>Global</b>	RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronic equipment) Microsoft Operating Systems (HCT / HCL entry / WHQL) ENERGY STAR® 6.0 EPEAT® Silver (dedicated regions)
<b>Compliance notes</b>	Energy Star compliance may vary depending on actual configuration
<b>Compliance link</b>	<a href="https://sp.ts.fujitsu.com/sites/certificates/">https://sp.ts.fujitsu.com/sites/certificates/</a>

**Security**

<b>System protection</b>	Kensington Lock support Eye for padlock Seal option Intrusion switch Optional: Integrated cabinet lock
<b>Audit proof protection</b>	EraseDisk Boot sector virus protection Write protect option for the Flash EPROM Embedded security (TPM 1.2) Control of all USB interfaces External USB ports can be disabled separately Control of external interfaces
<b>Access protection</b>	User and supervisor BIOS password Hard disk password Optional: Access protection via external SmartCard reader Optional: Access protection via internal SmartCard reader Optional: SmartCase Logon+

**Additional Software**

<b>Additional software (preinstalled)</b>	Nero Essentials S (burning software) Fujitsu Recovery (Hard Disk Based Recovery) Norton Internet Security (incl. Firewall) 60 days version Don't forget Office.
<b>Additional software (optional)</b>	Recovery DVD for Windows® Drivers & Utilities DVD (DUDVD) CyberLink PowerDVD BD (playback software for Blu-ray Disc™, only with Blu-ray Disc™ drive / Blu-ray playback is not supported under Windows XP if the system runs on Intel onboard graphics) Nero 10 Essentials XL

**Miscellaneous**

	Keyboard on (Special Fujitsu keyboard required) Thermal management Extended lifetime	Keyboard on (Special Fujitsu keyboard required) Thermal management Extended lifetime
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**Manageability**

<b>Manageability technology</b>	DeskUpdate Driver management PXE 2.1 Boot code Wake up from S5 (off mode) Intrusion switch (optional) iAMT 8.0 (depending on CPU)
<b>Manageability software</b>	DeskView 10.x client management including:

**Manageability**

<b>DeskView components</b>	On/Offline remote client management Detailed system inventory management and reports BIOS Management Remote power management System notifications Security Remote Control DeskView Helpdesk Integration WoL (Wake on LAN)
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**Input device / components**

<b>Input devices (optional)</b>	Optical USB tilt wheel mouse Optical USB/PS2 tilt wheel mouse KBPC PX ECO Mouse M440 ECO Space Explorer USB Keyboard
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**Warranty**

<b>Standard Warranty</b>	3 years (depending on country)
<b>Service level</b>	Bring-In / On-Site Service (for countries within region FTS CEMEA&I / for all other countries depending on local regulations, minimum: 3 years material warranty)
<b>Warranty Terms &amp; Conditions</b>	<a href="http://support.ts.fujitsu.com/warranty">http://support.ts.fujitsu.com/warranty</a>
<b>Maintenance and Support Services - the perfect extension</b>	
<b>Recommended Service</b>	5x9, Response Time: Next Business Day
<b>Spare Parts availability</b>	5 years after end of product life
<b>Service Weblink</b>	<a href="http://www.fujitsu.com/fts/services/support">http://www.fujitsu.com/fts/services/support</a>

## Recommended Accessories

## More information

### Fujitsu OPTIMIZATION Services

In addition to Fujitsu CELSIUS W520, 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/services/computing/](http://www.fujitsu.com/global/services/computing/)

### Software

[www.fujitsu.com/software/](http://www.fujitsu.com/software/)

### More information

Learn more about Fujitsu CELSIUS W520, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.  
[www.fujitsu.com/fts/CELSIUS](http://www.fujitsu.com/fts/CELSIUS)

### 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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