

Fujitsu recommends Windows 8 Pro.

Data Sheet

Fujitsu CELSIUS W420 Workstation

The Gateway to Workstation Performance

If your application requirements have outgrown the performance of a standard PC, the Fujitsu CELSIUS W420 is designed for you. This attractively-priced, compact workstation is individually configurable and allows easy tool-less expansion for greater working flexibility. Unique low-noise emissions help you increase your productivity.

Noise-reduced system engineered in Germany

Quiet and productive working environment

- Optimized thermal management, low-noise chassis and silent fans

Advanced performance

Get more done in less time

- The latest processors and professional graphics cards

Upgradeability

Minimum downtime in the event of rapid component upgrades

- Screw less access system design

Leading workstation application certification

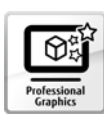
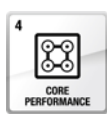
Maximum compatibility and performance with customer-preferred applications

- Support for a selection of ISV applications and easy integration into existing IT environments

Individual products

Free configurability for all product lines

- You are given a system optimized for your individual requirements



Components

Processor	Intel® Core™ i7-3770 processor (4 Cores / 8 Threads, 3.40 GHz, up to 3.9 GHz, 8 MB, Intel® HD Graphics 4000) * Intel® Core™ i5-3570 processor (4 Cores / 4 Threads, 3.40 GHz, up to 3.8 GHz, 6 MB, Intel® HD Graphics 2500) * Intel® Core™ i5-3470 processor (4 Cores / 4 Threads, 3.20 GHz, up to 3.6 GHz, 6 MB, Intel® HD Graphics 2500) * Intel® Core™ i3-3220 processor (2 Cores / 4 Threads, 3.30 GHz, 3 MB, Intel® HD Graphics 2500) Intel® vPro™ Logo with Intel® Core i5 and Core i7 processors
Operating systems	
Operating system	Windows 8 Pro Windows 8 Windows® 7 Professional 64-bit Windows® 7 Professional 32-bit Windows® 7 Home Premium 64-bit Windows® 7 Home Basic 32-bit (EM)
Operating system compatible	Windows® XP Linux
Operating system notes	Limited Windows® XP support. Microsoft discontinued Windows® XP certification on system level, basic drivers via http://support.ts.fujitsu.com Certified for Red Hat® Enterprise Linux Certified for SUSE Enterprise Desktop Certified for SUSE Enterprise Server
Memory modules	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, non-ECC, 1600 MHz, PC3-12800, DIMM 8 GB (1 module(s) 8 GB) DDR3, unbuffered, non-ECC, 1600 MHz, PC3-12800, DIMM
Graphics	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, 1x Dual Link DVI-I, 2x DisplayPort Midrange 3D: AMD FirePro™ W5000, 2 GB, 768 cores, PCIe x16, 1x Dual Link DVI-I, 2x DisplayPort Entry 3D: AMD FirePro™ V4900, 1 GB, 480 stream processors, PCIe x16, 1x Dual Link DVI-I, 2x DisplayPort Entry 3D: NVIDIA® Quadro® 600, 1 GB, 96 cores, PCIe x16, 1x Dual Link DVI-I, 1x DisplayPort Entry 3D: AMD FirePro™ V3900, 1 GB, 480 stream processors, PCIe x16, 1x Dual Link DVI-I, 1x DisplayPort Entry 3D: NVIDIA® Quadro® 410, 512 MB, 192 cores, PCIe x16, 1x DVI-I, 1x DisplayPort Professional 2D: NVIDIA® NVS 510, 2 GB, 16 cores, PCIe Gen2 x16, 4x miniDP Professional 2D: NVIDIA® NVS 310, 512 MB, 16 cores, PCIe Gen2 x16, 2x DisplayPort Professional 2D: NVIDIA® NVS 300, 512 MB, 16 cores, PCIe Gen2 x16, 2x LFH59 (DP/DVI-I)
Hard disk drives (internal)	SSD SATA III Premium, 128 GB, 2.5-inch 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 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 II, 7200 rpm, 320 GB, 2.5-inch
Hard disk notes	One Gigabyte equals one billion bytes, when referring to hard disk drive capacity. 24/7 ready (business critical HDDs required) Up to 20 GB of HDD space is reserved for system recovery

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)	
	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
Base unit	CELSIUS W420
Mainboard	
Mainboard type	D3162
Formfactor	µATX
Chipset	Intel® Q77
Processor socket	LGA 1155
Processor quantity maximum	1
Memory slots	4 DIMM (DDR3)
Supported capacity RAM (max.)	32 GB
Memory frequency	1600 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	10/100/1000 MBit/s Intel® 82579 LM
BIOS version	AMI Aptio 4.6
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)
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	10
USB 3.0 total	4
USB front	2x 2.0/ 2x 3.0
USB rear	6x 2.0 / 2x 3.0

Interfaces

USB internal	2
VGA	1 (via DVI to VGA adapter, part of shipment)
DisplayPort	1
DVI	1
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	7
2.5-inch internal bays	1
3.5-inch internal bays	2
3.5-inch external bays	2
5.25-inch external bays	2
Drive bay notes	Up to 1x 2.5-inch HDDs and up to 2x 3.5-inch HDDs

Slots

PCI-Express 2.0 x16	1 x (312 mm / 12.29 inch) Full height
PCI-Express 2.0 x4 (mech. x16)	1 x (312 mm / 12.29 inch) Full height
PCI-Express x1	1 x (312 mm / 12.29 inch) Full height
PCI (32-bit / 33 MHz)	1 x (170 mm / 6.69 inch) Full height

Graphics on board

Graphics brand name	Intel® HD Graphics, HD Graphics 2000, HD Graphics 2500, HD Graphics 4000 (depending on CPU)
Shared video memory	up to 1759 MB
TFT resolution (VGA)	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
TFT resolution (DVI)	1360 x 768 pixel 1440 x 900 pixel 1600 x 900 pixel 1680 x 1050 pixel 1920 x 1080 pixel 1920 x 1200 pixel
TFT resolution (DisplayPort)	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
Graphics features	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 or Windows 8)

Graphics on board

Graphics notes	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
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Electrical values

Power efficiency note	power supply efficiency (at 230V; 20% / 50% / 100% load) : 87% / 90% / 87%
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	300 W
Power factor correction/active power	active

Noise for standard configuration (HDD, ODD)

Noise emission	According to ISO9296
Related Processors for noise	Intel® Core™ i7-3770 processor
Noise Operation mode 4: High load	24 dB(A)
Noise Operation mode 5: Office applications	21 dB(A)
Noise notes	A weighted sound power level Lwad (in B) / workplace related A-weighted sound pressure level LpAm (in dB(A)), Bystander position

Dimensions / Weight / Environmental

Dimensions (W x D x H)	175 x 419 x 395 mm
Operating position	Vertical
Weight	approx. 11 kg
Weight notes	Actual weight may vary depending on configuration
Operating ambient temperature	10 - 35 °C
Operating relative humidity	5 - 85 % (relative humidity)

Compliance

Product	CELSIUS W420
Model	M15W-3162
Germany	TÜV GS
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) ENERGY STAR® 5.0 EPEAT® Gold (dedicated regions)
Compliance link	http://globalsp.ts.fujitsu.com/sites/certificates

Security

Physical Security	Kensington Lock support Eye for padlock Integrated cabinet lock (optional) Intrusion switch (optional)
System and BIOS Security	EraseDisk (optional) 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

Security	
User Security	User and supervisor BIOS password Hard disk password Access protection via external SmartCard reader (optional) Access protection via internal SmartCard reader (optional) SmartCase Logon+ (optional)
Additional Software	
Additional software (preinstalled)	Workplace Protect (secure authentication solution) Adobe® Reader® McAfee Multi Access (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/DVD playback software for Blu-ray Disc™) CyberLink PowerDVD (DVD playback software) Nero Essentials XL
Miscellaneous	
	Keyboard on (Special Fujitsu keyboard required) Thermal management Extended lifetime
Manageability	
Manageability technology	DeskUpdate Driver management PXE 2.1 Boot code Wake up from S5 (off mode) Intrusion switch (optional) iAMT 8.0 (depending on CPU)
Manageability software	DeskView 10.x client management including:
DeskView components	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)
Manageability link	http://www.fujitsu.com/fts/manageability
Input device / components	
Input devices (optional)	Optical USB tilt wheel mouse Optical USB/PS2 tilt wheel mouse KBPC PX ECO Mouse M440 ECO Space Explorer USB Keyboard
Warranty	
Standard Warranty	3 years (depending on country)
Service level	Bring-In / Onsite Service (for countries within region FTS CEMEA&I, for all other countries depending on local regulations, minimum: 3 years material warranty)
Warranty Terms & Conditions	http://support.ts.fujitsu.com/warranty
Maintenance and Support Services - the perfect extension	
Recommended Service	9x5, 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

Kensington Combination Ultra



The Fujitsu Kensington Combination Ultra Laptop Lock protects your device from theft. The push button design offers one hand operation for ease of use and the four-wheel combination lock makes it nearly impossible to crack. Simply anchor it to any fixed structure to get Ultra security.

Order Code:
S26361-F1650-L510

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

SpaceMouse™ Pro



Using the SpaceMouse™ Pro 3D mouse to navigate 3D models or environments is as simple as holding them in your hand. A slight movement of the controller cap delivers easy and precise control. SpaceMouse™ Pro is a companion to the traditional mouse and is operated with the free hand. Your traditional mouse hand is free to select, create and edit.

Order Code:
S26381-K459-L100

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)

Keyboard KB900



The KB900 is a very flat keyboard with extra low keys and spill-resistant protection. The elegant design and top-quality construction makes the KB900 the ideal input device for any PC or Notebook user. If you accidentally spill some water or coffee onto the keyboard, this special construction helps the liquid to flow away.

S26381-K560-L4** (**: Country specific variation)

More information

Fujitsu OPTIMIZATION Services

In addition to Fujitsu CELSIUS W420, 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/

Software

www.fujitsu.com/software/

More information

Learn more about Fujitsu CELSIUS W420, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
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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