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) *
FIOCESSOI	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	g
Operating system	Windows 8 Pro
- p - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	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
O	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, PCle x16, 1x Dual Link DVI-I, 2x DisplayPort
	Midrange 3D: AMD FirePro™ W5000, 2 GB, 768 cores, PCle x16, 1x Dual Link DVI-I, 2x DisplayPort
	Entry 3D: AMD FirePro™ V4900, 1 GB, 480 stream processors, PCle x16, 1x Dual Link DVI-I, 2x DisplayPort
	Entry 3D: NVIDIA® Quadro® 600, 1 GB, 96 cores, PCle x16, 1x Dual Link DVI-I, 1x DisplayPort
	Entry 3D: AMD FirePro™ V3900, 1 GB, 480 stream processors, PCle 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

Page 2 / 8 www.fujitsu.com/fts/CELSIUS

DVD Super Multi MultiClard Reader 24/m1 USB 2.0.3.5"		
Interface add on cards/components Interface add on cards/components Interface add on cards/components	Drives (optional)	BD Triple Writer SATA slim (tray)
MulhiCard Reader 24/In LUSB 2.0 3.5" Interface add on cards/components Coptional WAIN III, 802.11g/Draft in (Mindows only, dedicated regions only) Parallel Interface Cigable Ethemee PCle xl., 05 eSAM Interface Cigable Ethemee PCle xl., 05 eSAM Interface Dual serial card PDe xl., powered Dual serial PDE xl., powe		
interface add on cards/components (optional) WAN III, 802.11g/Draft in (Windows only, dedicated regions only) Parallel Interface Gigabit Fitheree PClex t, DS eSAF Interface Datal serial card PCle x1, powered Mainboard Main		
MAN III. 802 11 g/DraFen (Windows only, dedicated regions only) Parallel Interface Gigath Thomes PCle x1, DS Seek Alv Interface Doal serial card PCle x1 DS Seek Alv Interface Doal serial card PCle x1 Draft Serial Card PCle x1 DS Seek Alv Interface Doal serial card PCle x1 Mainboard The Card Card Card Card Card Card Card Card		MultiCard Reader 24in1 USB 2.0 3.5"
Parallel Interface Gigabit Ethernet PClex 1, DS	Interface add on cards/components (optional)	
Gigabit Ethernet PCle x1, DS eSCIA Interface Dual serial card PCle x1, powered	•	WLAN III, 802.11g/Draft-n (Windows only, dedicated regions only)
ESAIL Interface Dual serial card PCle x1 Dual serial card PCle x1		Parallel Interface
Base unit CFLSUS W420 Mainboard Mainboard Vpe Dali Ser Mark Mark Mark Mark Mark Mark Mark Mar		Gigabit Ethernet PCle x1, DS
Base unit CELSUS W420 Mainboard Mainboard type Dail 62 Mornicor		eSATA Interface
Base unit Mainboard Mainboard type D3162 Formfactor µNZ Chipset Incl** 077 Processor socket LGA 1155 Processor guantity maximum Memory slots Supported capacity RAM (max) 3 V G Memory notes Dual channel support. For dual channel support. For dual channel support. For dual channel support. Bod Maximum AM 10/100/1000 MBit/s Incl** 82579 LM BIOS reatures BIOS Features BIOS Features BIOS Features BIOS Features BIOS Features Conexant CX20662 Audio features Internal speaker supports audio playback, High Definition audio, 5.1 surround sound UC controller on board Serial ATA total 6 6 thereof SATA Controller functions Serial ATA III (6 Gbit) NCO AHCI RND 071/5/10 (Windows XP not supported) Interl* Serial ATA III (6 Gbit) NCO AHCI RND 071/5/10 (Windows XP not supported) Interl* Serial Response Technology (depending on CPU) Interfaces Audio: line-in /intcrophone 1 Audio: line-in /intcrophone 1 Audio: line-in /intcrophone 1 Audio: line-in /intcrophone 1 Controller (interpolation) 108 3.0 total 4 4 USB 1 total 4 4 USB 1 total 4 5 USB 3.0 total USB 3.0 total 4 5 USB 3.0 total		Dual serial card PCIe x1, powered
Mainboard Mainboard type D3162 Formfactor µATX Chipset Intel® 077 Processor socket LGA 1155 Processor quantity maximum 1 Memory slos 4 DIMM (DDR3) Supported capacity RAM (max.) 32 GB Memory requency 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® 825.79 LM BIOS Features BIOS Flash EPROM update by software Recovery BIOS Unified Extensible Firmware Interface (UEF) Audio codec Conceant CX-2064.2 Audio features Internal speaker supports audio playback, High Definition audio, 5.1 surround sound I/O controller on board Serial ATA total 6 Evenial TAX total 6 6 Evenial Functions Serial ATA (II (6 Gbt) NC Serial ATA (II (6 Gbt) NC AC Madio: line-in / mcrophone 1 AUdio: line-in / microphone 1 Audio: line-in / microphone 1 Certain audio: headphone 1 <td></td> <td>Dual serial card PCIe x1</td>		Dual serial card PCIe x1
Mainboard type D3162 Formlactor µATX Chipset Inte® 077 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 Fata Tal A total 6 Hereof SATA Till 2 Verial ATA total 6 Hereof SATA III 2 Controller functions Serial ATA II (I Gbit) (Gbit) (MICO) (WINDOWS XP not supported) (Inte® Smart Response Technology (depending on CPU) Interfaces Audio: line-in / microphone 1 Audio: line-in / microphone 1 1 Ground and microphone 1 U	Base unit	CELSIUS W420
Form factor µATX Chipset Intel® 077 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 / 10 / 10 / 10 / 10 / 10 / 10 / 10 /	Mainboard	
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Processor socket LGA 1155 Processor quantity maximum 1 Memony Stos 4 DIMM (DDR3) Supported capacity RAM (max.) 32 GB Memory notes 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 Features BIOS Flash EPROM update by software Recovery BIOS. Unified Extensible Firmware Interface (UEFI) Audio codec Conexant CX20642 Audio features 6 Memory Audio features 6 Serial ATA total 6 thereof SATA 2 (potional) Controller functions Serial ATA III (3 Gbit) Serial ATA III (6 Gbit) NCO ANCO AHCI AND IV/S/10 (Windows XP not supported) Intel® Smart Response Technology (depending on CPU) Interfaces Audio: line-in / microphone 1 Audio: line-in / microphone 1 Interfaces 1 Serial audio: microphone 1 Interfaces 1	Formfactor	μATX
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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	Audio: line-in / microphone	1
Front audio: headphone 1 USB 2.0 total 10 USB 3.0 total 4 USB front 2x 2.0/ 2x 3.0	Audio: line-out	1
USB 2.0 total 10 USB 3.0 total 4 USB front 2x 2.0/ 2x 3.0	Front audio: microphone	1
USB 3.0 total 4 USB front 2x 2.0/ 2x 3.0	Front audio: headphone	1
USB front 2x 2.0/ 2x 3.0		10
USB rear 6x 2.0 / 2x 3.0		
	USB rear	6x 2.0 / 2x 3.0

Page 3 / 8 www.fujitsu.com/fts/CELSIUS

1	
Interfaces	2
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	@ D C
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
TET recolution (Display Deat)	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)

Page 4 / 8 www.fujitsu.com/fts/CELSIUS

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)
Florida Locker	For TFT we recommend using 60Hz
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 (HDI	O, 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	21 dB(A)
applications	
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 ℃
Operating relative humidity	5 - 85 % (relative humidity)
Compliance	
Product	CELSIUS W420
Model	MI5W-3162
Germany	TÜV GS
Еигоре	CE
USA/Canada	FCC Class B cCSAus
Global	RoHS (Restriction of hazardous substances)
Global	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
Thysical Security	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

Page 5 / 8 www.fujitsu.com/fts/CELSIUS

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	Silantesse Esgon (optional)
Additional software (preinstalled)	Workplace Protect (secure authentication solution)
Additional software (premistanea)	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	
- Insection of the second of t	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
- Components	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	
<u> </u>	Optical USB tilt wheel mouse
Input devices (optional)	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 - t	·
Recommended Service	9x5, Response Time: Next Business Day
Spare Parts availability Service Weblink	5 years after end of product life http://www.fujitsu.com/fts/services/support
Service Webliffk	nttp.//www.rujitsu.com/rts/services/support

Page 6 / 8 www.fujitsu.com/fts/CELSIUS

Recommended Accessories

Kensington Combination Ultra



The Fujitsu Kensington Combination Ultra Laptop Lock protects your device Order Code: 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.

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

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 country specific variation) 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** (**:

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 accidently 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.

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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.

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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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