

Fujitsu recommends Windows.

# Data Sheet

## FUJITSU CELSIUS R920 Workstation

### Uncompromising Workstation Performance for Extreme Requirements

Fujitsu's most performing workstation the CELSIUS R920 achieving first-class benchmark results is designed to surpass all your expectations. This reliable, high-end dual processor workstation is individually configurable for the most power hungry, 24/7 operating environments. Best-in-class noise emissions of just 21 dB, and comprehensive ISV certifications that ensure smooth application operation, enhance your productivity. The convenient cold plug access at front simplifies subsequent expansion.

#### Performance

Higher productivity

- High performance multi-core processors, next generation graphics subsystems, quad-channel memory technology and high-speed hard disk drives

#### Ergonomics

Noise-reduced system engineered in Germany

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

#### Reliability

System stability for the complete lifecycle

- High product standards thanks to top-quality components and comprehensive testing in certified in-house laboratories for 24/7 operation

#### Certification of workstation applications

Stability, compatibility and performance for the main workstation applications

- Comprehensive support for ISV applications and ease of integration into existing IT networks

#### Expandability

Excellent expandability for future demands

- Increased memory capacities of up to 512 GB



# Components

## Processor

Intel® Xeon® processor E5-2690 (8 Cores / 16 Threads, 2.90 GHz, up to 3.8 GHz, 20 MB, 8.0 GT/s)
Intel® Xeon® processor E5-2687W (8 Cores / 16 Threads, 3.10 GHz, up to 3.8 GHz, 20 MB, 8.0 GT/s)
Intel® Xeon® processor E5-2680 (8 Cores / 16 Threads, 2.70 GHz, up to 3.5 GHz, 20 MB, 8.0 GT/s)
Intel® Xeon® processor E5-2670 (8 Cores / 16 Threads, 2.60 GHz, up to 3.3 GHz, 20 MB, 8.0 GT/s)
Intel® Xeon® processor E5-2667 (6 Cores / 12 Threads, 2.90 GHz, up to 3.5 GHz, 15 MB, 8.0 GT/s)
Intel® Xeon® processor E5-2665 (8 Cores / 16 Threads, 2.40 GHz, up to 3.1 GHz, 20 MB, 8.0 GT/s)
Intel® Xeon® processor E5-2660 (8 Cores / 16 Threads, 2.20 GHz, up to 3.0 GHz, 20 MB, 8.0 GT/s)
Intel® Xeon® processor E5-2650L (8 Cores / 16 Threads, 1.80 GHz, up to 2.3 GHz, 20 MB, 7.2 GT/s)
Intel® Xeon® processor E5-2650 (8 Cores / 16 Threads, 2.00 GHz, up to 2.8 GHz, 20 MB, 8.0 GT/s)
Intel® Xeon® processor E5-2643 (4 Cores / 8 Threads, 3.30 GHz, up to 3.5 GHz, 10 MB, 8.0 GT/s)
Intel® Xeon® processor E5-2640 (6 Cores / 12 Threads, 2.50 GHz, up to 3.0 GHz, 15 MB, 7.2 GT/s)
Intel® Xeon® processor E5-2637 (2 Cores / 4 Threads, 3.00 GHz, up to 3.2 GHz, 5 MB, 8.0 GT/s)
Intel® Xeon® processor E5-2630L (6 Cores / 12 Threads, 2.00 GHz, up to 2.5 GHz, 15 MB, 6.4 GT/s)
Intel® Xeon® processor E5-2630 (6 Cores / 12 Threads, 2.30 GHz, up to 2.8 GHz, 15 MB, 7.2 GT/s)
Intel® Xeon® processor E5-2620 (6 Cores / 12 Threads, 2.00 GHz, up to 2.5 GHz, 15 MB, 7.2 GT/s)
Intel® Xeon® processor E5-2609 (4 Cores / 8 Threads, 2.40 GHz, 10 MB, 6.4 GT/s)
Intel® Xeon® processor E5-2603 (4 Cores / 8 Threads, 1.80 GHz, 10 MB, 6.4 GT/s)

## Operating systems

### Operating system

Windows 7 Professional 64-bit

### Operating system compatible

Windows 8  
Windows® XP  
Windows® Server 2008 R2  
Linux

### Operating system notes

Certified for Red Hat® Enterprise Linux  
Certified for SUSE Enterprise Desktop  
Certified for SUSE Enterprise Server  
For some configurations third party drivers are currently not available or configuration restrictions may apply.  
SCU ports are not supported for Windows® XP 32bit (restriction by Intel®). Therefore an additional storage controller (D2607 or D2616) is necessary.

## Memory modules

4 GB (1 module(s) 4 GB) DDR3, ECC, 1,600 MHz, PC3-12800
4 GB (1 module(s) 4 GB) DDR3, registered, ECC, 1,600 MHz, PC3-12800
8 GB (1 module(s) 8 GB) DDR3, registered, ECC, 1,600 MHz, PC3-12800
16 GB (1 module(s) 16 GB) DDR3, registered, ECC, 1,600 MHz, PC3-12800
32 GB (1 module(s) 32 GB) DDR3, registered, ECC, 1,333 MHz, PC3-10600

<b>Graphics</b>	Ultra-high-end 3D: NVIDIA® Quadro® 6000, 6 GB, 448 cores, PCIe x16, 1x DVI-I, 2x DisplayPort
	Ultra-high-end 3D: NVIDIA® Quadro® K5000, 4 GB, 1,536 cores, PCIe x16, 1x Dual Link DVI-I, DVI-D, 2x DisplayPort
	High-end 3D: AMD FirePro™ W8000, 4 GB, 1,792 stream processors, PCIe x16, 4 x DisplayPort
	High-end 3D: AMD FirePro™ W7000, 4 GB, 1,280 stream processors, PCIe x16, 4 x DisplayPort
	High-end 3D: NVIDIA® Quadro® K4000, 3 GB, 768 cores, PCIe x16, 1x Dual Link DVI-I, 2x DisplayPort
	Midrange 3D: NVIDIA® Quadro® K2000D, 2 GB, 384 cores, PCIe x16, 2x Dual Link DVI-I
	Midrange 3D: NVIDIA® Quadro® K2000, 2 GB, 384 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® K600, 1 GB, 192 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 2.0 x16, 4x miniDP
	Professional 2D: NVIDIA® NVS 310, 512 MB, 16 cores, PCIe 2.0 x16, 2x DisplayPort
	Professional 2D: NVIDIA® NVS 300, 1 GB, 16 cores, PCIe 2.0 x16, 2x LFH59 (DP/DVI-I)
	Professional 2D: NVIDIA® NVS 300, 512 MB, 16 cores, PCIe 2.0 x16, 2x LFH59 (DP/DVI-I)
	GPU computing card: NVIDIA® Tesla™ K20, 5 GB, 2,496 cores, PCIe x16
	Remote Graphics: CELSIUS RemoteAccess Dual Card, PCIe x1, 2x miniDP, PCoIP
	Remote Graphics: CELSIUS RemoteAccess Quad Card, PCIe x1, 4x miniDP, PCoIP
	<b>Hard disk drives (internal)</b>
SSD SATA III Premium, 256 GB, 2.5-inch	
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	
HDD SATA III, 10,000 rpm, 1,000 GB, 2.5-inch, business critical	
HDD SATA III, 10,000 rpm, 600 GB, 2.5-inch	
HDD SATA III, 10,000 rpm, 500 GB, 2.5-inch, business critical	
HDD SATA III, 7,200 rpm, 4,000 GB, 3.5-inch, business critical	
HDD SATA III, 7,200 rpm, 3,000 GB, 3.5-inch, business critical	
HDD SATA III, 7,200 rpm, 2,000 GB, 3.5-inch, business critical	
HDD SATA III, 7,200 rpm, 2,000 GB, 3.5-inch	
HDD SATA III, 7,200 rpm, 1,000 GB, 3.5-inch, business critical	
HDD SATA III, 7,200 rpm, 1,000 GB, 3.5-inch	
HDD SATA III, 7,200 rpm, 500 GB, 3.5-inch, business critical	
HDD SATA III, 7,200 rpm, 500 GB, 3.5-inch	
HDD SATA III, 7,200 rpm, 250 GB, 3.5-inch	
HDD SAS, 15,000 rpm, 300 GB, 2.5-inch	
HDD SAS, 10,000 rpm, 900 GB, 2.5-inch	
HDD SAS, 10,000 rpm, 600 GB, 2.5-inch	
HDD SAS, 10,000 rpm, 300 GB, 2.5-inch	
<b>Hard disk notes</b>	*Disk imaging software of the customer must be 4k sector size / advanced format ready One Gigabyte equals one billion bytes, when referring to hard disk drive capacity. 24/7 ready (business critical HDDs required)
<b>Drives (optional)</b>	BD Triple Writer SATA slim (tray)
	DVD-ROM
	DVD Super Multi
	MultiCard Reader 24in1 USB 2.0 3.5"
<b>SCSI / SAS Controller</b>	RAID Contr BBU Upgrade for RAID 5/6 Ctrl
	RAID 5/6 Ctrl. 6 Gbit/s 8 ports int. 512 MB Cache
	RAID 0/1 Ctrl. 6 Gbit/s 8 ports ext.

**Interface add on cards/components  
(optional)**

USB 3.0 PCIe x1
Serial Interface FH
Gigabit Ethernet PCIe x1, DS
eSATA Interface
Dual serial card PCIe x1, powered
Dual serial card PCIe x1
Dual 10 Gigabit Ethernet PCIe x8

<b>Interface add on/component note</b>	1x eSATA interface already on board
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## Base unit

Base unit	CELSIUS R920	CELSIUS R920 power
<b>Mainboard</b>		
Mainboard type	D3118	
Formfactor	proprietary	
Chipset	Intel® C602	
Processor socket	Socket R	
Processor quantity maximum	2	
Memory slots	16 (8 per processor) DIMM (DDR3) registered	
Supported capacity RAM (max.)	512 GB	
Memory notes	In configurations with 4 GB and more the visible memory may be reduced to approximately 3.5 GB or less (for 32-bit operating systems) and configurations with 8 GB the visible memory may be reduced to approximately 7.5 GB or less (depending on system configuration). Large memory may lead to long boot times. When using a 32-bit operating system the maximum of memory might be 900 MB.	
LAN	2x Built-in 10/100/1,000 MBit/s Intel® 82579 LM and Intel® 82574L	
Audio type	On board	
Audio codec	Conexant CX20642	
Audio features	High Definition Audio	
<b>I/O controller on board</b>		
Serial ATA total	7	
thereof SATA III	2	
thereof eSATA	1	
SATA RAID support	0, 1, 10, 5	
SAS Controller type	optional upgrade to 8 ports, Intel C606	
SAS RAID support	0, 1, 10	
<b>Interfaces</b>		
Audio: in (rear)	1	
Audio: out (rear)	1	
Audio: in	1	
Audio: out	1	
Internal speakers	1	
USB 2.0 total	11	
USB 3.0 total	2	
USB front	4 (2x USB 3.0)	
USB rear	6	
USB internal	3, thereof 1 type A	
Mouse / Keyboard (PS/2)	1 / 1	

**Interfaces**

Ethernet (RJ-45)	2
eSATA	1
Interface Module notes	Anytime USB charge functionality

**Input device / components**

	Optical USB wheel mouse
Input devices (optional)	Optical USB/PS2 tilt wheel mouse Space Explorer USB Keyboard

**Drive bays**

Drive bays total	12
2.5-inch bays	8
3.5-inch internal bays	4
3.5-inch external bays	2
5.25-inch external bays	2
Drive bay notes	Up to 8x 2.5-inch HDDs (cold plug) and 1x 2.5-inch SSD or Up to 4x 3.5-inch HDDs (cold plug) and 1x 2.5-inch SSD or Up to 2x 2.5-inch and 2x 3.5-inch HDDs (cold plug) and 1x 2.5-inch SSD

**Slots**

PCI-Express 3.0 x4	1 x (312 mm / 12.29 inch) Full height
PCI-Express 3.0 x4 (mech. x16)	1 x (312 mm / 12.29 inch) Full height
PCI-Express 3.0 x16	4 x (312 mm / 12.29 inch) Full height (2x PCIe 3.0x16 per processor)
PCI-Express 2.0 x4 (mech. x8)	1 x (140 mm / 5.51 inch) Full height
PCI (32-bit / 33 MHz)	1 x (312 mm / 12.29 inch) Full height

**Electrical values**

Power consumption note	400 W depending on configuration	550 W depending on configuration
Rated voltage range	100 V - 240 V	100 V - 240 V
Rated frequency range	50 Hz - 60 Hz	50 Hz - 60 Hz
Operating voltage range	100 V - 240 V	100 V - 240 V
Operating line frequency range	50 Hz - 60 Hz	50 Hz - 60 Hz
Max. output of single power supply	800 W up to 90% efficiency	1100 W up to 90% efficiency
Power factor correction/active power	active	active
Noise emission	According to ISO9296 (LpAm at bystander position)	According to ISO9296 (LpAm at bystander position)
Noise Operation mode 4: High load	23 dB(A)	24 dB(A)
Noise Operation mode 5: Office applications	21 dB(A)	22 dB(A)
Idle mode	21 dB(A)	22 dB(A)
Office mode	21 dB(A)	22 dB(A)
Noise notes	depending on configuration	depending on configuration

**Dimensions / Weight / Environmental**

Dimensions (W x D x H)	186 x 618 x 430 mm
Operating position	Vertical / horizontal
Weight	20 kg
Weight notes	Actual weight may vary depending on configuration
Operating ambient temperature	10 - 35 °C
Operating relative humidity	5 - 85 % (relative humidity)

**Compliance**

<b>Product</b>	CELSIUS R920	CELSIUS R920 Power
<b>Model</b>	ETNA_L-D3118	
<b>Germany</b>	GS depending on configuration	
<b>USA/Canada</b>	cCSAus FCC Class B FCC Class A (in combination with InfiniBand add on card)	
<b>Global</b>	RoHS (EU & China) Medical EMC standard IEC60601-1-2 in combination with medical kit Microsoft Operating Systems (HCT / HCL entry / WHQL) ENERGY STAR® 5.0 WEEE (Waste electrical and electronic equipment) EPEAT® Gold (dedicated regions)	
<b>Japan</b>	VCCI	
<b>Russia</b>	GOST	
<b>South Korea</b>	KCC	
<b>China</b>	CCC	
<b>Taiwan</b>	BSMI	
<b>Saudi Arabia</b>	SASO	
<b>Compliance link</b>	<a href="http://globalsp.ts.fujitsu.com/sites/certificates">http://globalsp.ts.fujitsu.com/sites/certificates</a>	

**Additional Software**

<b>Additional software (preinstalled)</b>	Norton Internet Security (incl. Firewall) 60 days version Microsoft Office (buy license to activate the pre-installed Microsoft Office)	
<b>Additional software (optional)</b>	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) Drivers & Utilities DVD (DUDVD) Windows® 7 and Windows® XP Nero Essentials (burning software)	

**Security**

<b>Physical Security</b>	Kensington Lock support Eye for padlock Intrusion switch Integrated cabinet lock (optional)	
<b>System and BIOS Security</b>	Write protect option for the Flash EPROM Boot protection for floppy disk / CD drive and write protection for floppy disk drive Dynamic USB security for full hardware USB protection Control of all USB interfaces Trusted platform module (TPM 1.2) EraseDisk	
<b>User Security</b>	User and supervisor BIOS password Access protection via external SmartCard reader (optional) Access protection via internal SmartCard reader (optional)	

**Manageability**

<b>Manageability technology</b>	DeskUpdate Driver management iAMT Intel® Active Manageability Technology v7.1 (not activated, not set up)	
<b>Manageability software</b>	DeskView Client DeskView Instant BIOS Management DeskView Integration for Symantec Management Platform	
<b>DeskView components</b>	Inventory Management BIOS Management Driver Management Security Management Alarm Management	
<b>Supported standards</b>	WMI BootP (made4you) PXE WoL (Wake on LAN)	
<b>Manageability link</b>	<a href="http://www.fujitsu.com/fts/manageability">http://www.fujitsu.com/fts/manageability</a>	

	Rack mountable (5U)	Rack mountable (5U)
Spare part availability	5 years	5 years
<b>Packaging information</b>		
Packaging dimension (mm)	394 x 730 x 578 mm	394 x 730 x 578 mm
Packaging dimension (inch)	15.51 x 28.74 x 22.76 inch	15.51 x 28.74 x 22.76 inch
Max. quantity / pallet	11	11
Packaging notes	printed user documentation is bleached in chlorine free process	printed user documentation is bleached in chlorine free process
<b>Warranty</b>		
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	<a href="http://support.ts.fujitsu.com/warranty">http://support.ts.fujitsu.com/warranty</a>	
<b>Maintenance and Support Services - the perfect extension</b>		
Recommended Service	9x5, Response Time: Next Business Day	
Spare Parts availability	5 years after end of product life	
Service Weblink	<a href="http://www.fujitsu.com/fts/services/support">http://www.fujitsu.com/fts/services/support</a>	

## Recommended Accessories

### FUTRO L420



The FUJITSU FUTRO L420 meets a multitude of user and business needs. It is designed to handle standard office tasks and demanding, high-graphics applications over PCoIP. Dual-monitoring enables you to increase your productivity. As a smart zero client, the FUJITSU FUTRO L420 provides high security, easy management and zero noise, whilst being user-friendly and integrating easily into an existing VMware® network.

Order Code:  
S26361-K1062-V200

### FUTRO L620



The FUJITSU FUTRO L620 meets a multitude of user and business needs. It is designed to handle standard office tasks and demanding, high-graphics applications over PCoIP. Quad-monitoring enables you to increase your productivity. As a smart zero client, the FUJITSU FUTRO L620 provides high security, easy management and zero noise, whilst being user-friendly and integrating easily into an existing VMware® network.

Order Code:  
S26361-K1062-V300

### 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

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**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

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**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 the FUJITSU CELSIUS R920, 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 R920, 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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