

Fujitsu recommends Windows® 7.

# Data Sheet

## Fujitsu CELSIUS R670 Workstation

### The New Uncompromising High-end Workstation

If you need record-breaking workstation performance, the ultra-reliable Fujitsu CELSIUS R670 with leading benchmark results will surpass all your expectations. This high-end dual processor workstation is individually configurable for the most power hungry, 24/7 operating environments. Best-in-class noise emissions of just 23 dB, and comprehensive ISV certifications that ensure smooth application operation, enhance your productivity.

#### Performance

Higher productivity

- High performance multi-core processors, hard disk drives and next generation graphics subsystems

#### Ergonomics

Quiet system for a pleasant working environment

- 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

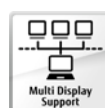
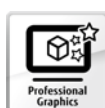
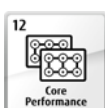
Stability, compatibility and performance for the main workstation applications

- 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 192 GB



# Components

<b>Processor</b>	Intel® Xeon® processor X5690 (6 Cores / 12 Threads, 3.46 GHz, 12 MB)	
	Intel® Xeon® processor X5690 (6 Cores / 12 Threads, 3.46 GHz, 12 MB, 6.4 GT/s)	
	Intel® Xeon® processor X5687 (4 Cores / 8 Threads, 3.60 GHz, 12 MB)	
	Intel® Xeon® processor X5687 (4 Cores / 8 Threads, 3.60 GHz, 12 MB, 6.4 GT/s)	
	Intel® Xeon® processor X5680 (6 Cores / 12 Threads, 3.33 GHz, 12 MB, 6.4 GT/s)	
	Intel® Xeon® processor X5677 (4 Cores / 8 Threads, 3.46 GHz, 12 MB, 6.4 GT/s)	
	Intel® Xeon® processor X5675 (6 Cores / 12 Threads, 3.06 GHz, 12 MB)	
	Intel® Xeon® processor X5675 (6 Cores / 12 Threads, 3.06 GHz, 12 MB, 6.4 GT/s)	
	Intel® Xeon® processor X5672 (4 Cores / 8 Threads, 3.20 GHz, 12 MB)	
	Intel® Xeon® processor X5672 (4 Cores / 8 Threads, 3.20 GHz, 12 MB, 6.4 GT/s)	
	Intel® Xeon® processor X5670 (6 Cores / 12 Threads, 2.93 GHz, 12 MB, 6.4 GT/s)	
	Intel® Xeon® processor X5667 (4 Cores / 8 Threads, 3.06 GHz, 12 MB, 6.4 GT/s)	
	Intel® Xeon® processor X5660 (6 Cores / 12 Threads, 2.80 GHz, 12 MB, 6.4 GT/s)	
	Intel® Xeon® processor X5650 (6 Cores / 12 Threads, 2.66 GHz, 12 MB, 6.4 GT/s)	
	Intel® Xeon® processor X5647 (4 Cores / 8 Threads, 2.93 GHz, 12 MB, 5.86 GT/s)	
	Intel® Xeon® processor L5640 (6 Cores / 12 Threads, 2.26 GHz, 12 MB, 5.86 GT/s)	
	Intel® Xeon® processor L5630 (4 Cores / 8 Threads, 2.13 GHz, 12 MB, 5.86 GT/s)	
	Intel® Xeon® processor L5609 (4 Cores / 8 Threads, 1.86 GHz, 12 MB)	
	Intel® Xeon® processor L5609 (4 Cores / 8 Threads, 1.86 GHz, 12 MB, 5.86 GT/s)	
	Intel® Xeon® processor E5649 (6 Cores / 12 Threads, 2.53 GHz, 12 MB)	
	Intel® Xeon® processor E5649 (6 Cores / 12 Threads, 2.53 GHz, 12 MB, 5.86 GT/s)	
	Intel® Xeon® processor E5647 (4 Cores / 8 Threads, 2.93 GHz, 12 MB)	
	Intel® Xeon® processor E5645 (6 Cores / 12 Threads, 2.40 GHz, 12 MB)	
	Intel® Xeon® processor E5645 (6 Cores / 12 Threads, 2.40 GHz, 12 MB, 5.86 GT/s)	
	Intel® Xeon® processor E5640 (4 Cores / 8 Threads, 2.66 GHz, 12 MB, 5.86 GT/s)	
	Intel® Xeon® processor E5630 (4 Cores / 8 Threads, 2.53 GHz, 12 MB, 5.86 GT/s)	
	Intel® Xeon® processor E5620 (4 Cores / 8 Threads, 2.40 GHz, 12 MB, 5.86 GT/s)	
	Intel® Xeon® processor E5607 (4 Cores / 8 Threads, 2.26 GHz, 8 MB, 4.8 GT/s)	
	Intel® Xeon® processor E5607 (4 Cores / 4 Threads, 2.26 GHz, 8 MB)	
	Intel® Xeon® processor E5606 (4 Cores / 8 Threads, 2.13 GHz, 8 MB, 4.8 GT/s)	
	Intel® Xeon® processor E5606 (4 Cores / 4 Threads, 2.13 GHz, 8 MB)	
	Intel® Xeon® processor E5603 (4 Cores / 8 Threads, 1.60 GHz, 8 MB, 4.8 GT/s)	
	Intel® Xeon® processor E5603 (4 Cores / 4 Threads, 1.60 GHz, 8 MB)	
	<b>Operating systems</b>	
<b>Operating system</b>		Genuine Windows® 7 Professional 64-bit Genuine Windows® 7 Professional 32-bit
<b>Operating system compatible</b>		Genuine Windows® XP Professional x64 Edition Genuine Windows® XP Professional Linux
<b>Operating system notes</b>		Red Hat® certification Novell® certification For some configurations third party drivers are currently not available or configuration restrictions may apply.
<b>Memory modules</b>	1 GB (1 module(s) 1 GB) DDR3, 1333 MHz, PC3-10600	
	1 GB (1 module(s) 1 GB) DDR3, ECC, 1333 MHz, PC3-10600	
	2 GB (1 module(s) 2 GB) DDR3, ECC, 1333 MHz, PC3-10600	
	2 GB (1 module(s) 2 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600	
	4 GB (1 module(s) 4 GB) DDR3, ECC, 1333 MHz, PC3-10600	
	4 GB (1 module(s) 4 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600	
	8 GB (1 module(s) 8 GB) DDR3, registered, ECC, 1333 MHz, PC3-10600	
	16 GB (1 module(s) 16 GB) DDR3, registered, ECC, 1066 MHz, PC3-8500	

<b>Graphics add on cards (optional)</b>	<p>Entry 3D: AMD FirePro™ V4900, 1 GB, 400 stream processors, PCIe x16, Dual Link DVI-I, 2x DisplayPort</p> <p>Ultra-high-end 3D: NVIDIA® Quadro® 6000, 6 GB, 448 cores, PCIe x16, 1x DVI-I, 2x DisplayPort, 2x DVI/VGA</p> <p>Ultra-high-end 3D: NVIDIA® Quadro® 5000, 2.5 GB, 352 cores, PCIe x16, Dual Link DVI-I, 2x DisplayPort, DVI, VGA</p> <p>High-end 3D: AMD FirePro™ V7900, 2 GB, 1140 stream processors, PCIe x16, 4 x DisplayPort</p> <p>High-end 3D: ATI FirePro™ V7800, 2 GB, 1140 stream processors, PCIe x16, Dual Link DVI-I, 2x DisplayPort</p> <p>High-end 3D: NVIDIA® Quadro® 4000, 2 GB, 256 cores, PCIe x16, Dual Link DVI-I, 2x DisplayPort</p> <p>Midrange 3D: ATI FirePro™ V5800, 1 GB, 800 stream processors, PCIe x16, Dual Link DVI-I, 2x DisplayPort</p> <p>Midrange 3D: NVIDIA® Quadro® 2000D, 1 GB, 192 cores, PCIe x16, 2x Dual Link DVI-I</p> <p>Midrange 3D: NVIDIA® Quadro® 2000, 1 GB, 192 cores, PCIe x16, Dual Link DVI-I, 2x DisplayPort</p> <p>Midrange 3D: AMD FirePro™ V5900, 2 GB, 800 stream processors, PCIe x16, Dual Link DVI-I, 2x DisplayPort</p> <p>Entry 3D: ATI FirePro™ V4800, 1 GB, 400 stream processors, PCIe x16, Dual Link DVI-I, 2x DisplayPort</p> <p>Entry 3D: NVIDIA® Quadro® 600, 1 GB, 96 cores, PCIe x16, Dual Link DVI-I, DisplayPort</p> <p>Entry 3D: NVIDIA® Quadro® 400, 512 MB, 48 cores, PCIe x16, 1x DVI-I, DisplayPort</p> <p>Entry 3D: ATI FirePro™ V3800, 512 MB, 400 stream processors, PCIe x16, Dual Link DVI-I, DisplayPort</p> <p>Professional 2D: NVIDIA® Quadro® NVS 450, 512 MB, 2 x 8 cores, PCIe x16, 4 x DisplayPort</p> <p>Professional 2D: NVIDIA® Quadro® NVS 300, 512 MB, 16 cores, PCIe Gen2 x16, 2x DVI/VGA</p> <p>Professional 2D: NVIDIA® Quadro® NVS 295, 256 MB, 8 Cores, PCIe x16, 2x DisplayPort</p> <p>Multi monitor 2D: NVIDIA® Quadro® NVS 295, 256 MB, 8 Cores, PCIe x1, 2x DisplayPort</p> <p>Remote Graphics: CELSIUS RemoteAccess Card, PCIe x1, 2x DVI-I</p> <p>GPU computing card: NVIDIA® Tesla™ C2075, 6 GB, 448 cores, PCIe x16, 1x DVI-I</p>
<b>Hard disk drives (internal)</b>	<p>SSD SATA, 512 GB, 2.5-inch</p> <p>SSD SATA, 256 GB, 2.5-inch</p> <p>SSD SATA, 128 GB, 2.5-inch</p> <p>HDD SATA III, 10000 rpm, 600 GB, 3.5-inch internal</p> <p>HDD SATA III, 10000 rpm, 300 GB, 2.5-inch</p> <p>HDD SATA III, 7200 rpm, 1000 GB, 3.5-inch, business critical</p> <p>HDD SATA III, 7200 rpm, 500 GB, 3.5-inch, business critical</p> <p>HDD SATA II, 7200 rpm, 2000 GB, 3.5-inch, business critical</p> <p>HDD SATA II, 7200 rpm, 1000 GB, 3.5-inch, S.M.A.R.T.</p> <p>HDD SATA II, 7200 rpm, 160 GB, 3.5-inch, S.M.A.R.T.</p> <p>HDD SAS, 15000 rpm, 600 GB, 3.5-inch internal</p> <p>HDD SAS, 15000 rpm, 450 GB, 3.5-inch</p> <p>HDD SAS, 15000 rpm, 300 GB, 3.5-inch</p>
<b>Hard disk notes</b>	<p>2.5-inch drives will be mounted in the 3.5-inch bays</p> <p>One Gigabyte equals one billion bytes, when referring to hard disk drive capacity.</p>
<b>Drives (optional)</b>	<p>Blu-ray Disc™ Triple Writer</p> <p>DVD-ROM</p> <p>DVD Super Multi</p> <p>MultiCard Reader 20in1, 5.25-Inch</p> <p>MultiCard Reader 20in1 USB 2.0 5.25-Inch</p>
<b>Interface add on cards/components (optional)</b>	<p>WLAN III, 802.11g/Draft-n (Windows only)</p> <p>USB 3.0 PCIe x1</p> <p>Gigabit Ethernet PCIe x1</p> <p>eSATA Interface</p> <p>Dual serial card PCIe x1, powered</p> <p>Dual serial card PCIe x1</p> <p>Dual 1 Gigabit Ethernet PCIe x4</p> <p>Dual 10 Gigabit Ethernet PCIe x8</p>
<b>Interface add on/component note</b>	<p>1x eSATA interface already on board</p>

Base unit	CELSIUS R670-2
<b>Mainboard</b>	
Mainboard type	D2618
Formfactor	AT03
Chipset	Intel® 5520, Intel® 82801JIB ICH10
Processor socket	LGA 1366
Processor quantity maximum	2
Memory slots	12 (6 per processor)
Supported capacity RAM (max.)	192 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).
LAN	2x Built-in 10/100/1000 MBit/s Realtek RTL8111
Audio codec	Realtek ALC663
Audio features	High Definition Audio
<b>I/O controller on board</b>	
Serial ATA total	4
SATA RAID support	0, 1, 1E
SAS Controller type	8 ports, LSI 1068E
SAS RAID support	0, 1, 1E
<b>Interfaces</b>	
Audio: in (rear)	1
Audio: out / SPDIF (rear)	2 / 1
Audio: in	1
Audio: out	1
FireWire (IEEE1394) (front)	1
FireWire (IEEE1394) (rear)	1
Internal speakers	1
USB 2.0 total	11
USB front	2
USB rear	6
USB internal	3, thereof 1 type A
Serial (RS-232)	1 (9 pin)
Mouse / Keyboard (PS/2)	1 / 1
Ethernet (RJ-45)	2
eSATA	1
Interface Module notes	Anytime USB charge functionality
<b>Drive bays</b>	
Drive bays total	7
3.5-inch internal bays	4
5.25-inch external bays	3
<b>Slots</b>	
PCI-Express 2.0 x16	2 x (350 mm) Full height
PCI-Express 2.0 x4 (mech. x8)	3 x (350 mm) Full height
PCI (32-bit / 33 MHz)	1 x (350 mm) Full height
<b>Graphics</b>	
Graphics notes	For some configurations third party drivers are currently not available or configuration restrictions may apply.
<b>Electrical values</b>	
Operating voltage range	100 V - 240 V
Operating line frequency range	50 Hz - 60 Hz
Max. output of single power supply	1000 W up to 85% efficiency

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

Noise Operation mode 4: High load	23 dB(A)
Idle mode	22 dB(A)
Office mode	23 dB(A)
Noise notes / description	depending on configuration

**Dimensions / Weight / Environmental**

Dimensions (W x D x H)	215 x 622 x 446 mm
Weight	26 kg
Weight notes	Actual weight may vary depending on configuration
Operating ambient temperature	15 - 35°C
Operating relative humidity	10 - 75 %

**Compliance**

Product	CELSIUS R670-2
Model	MCL-D2618
Germany	GS depending on configuration
Europe	CE
USA/Canada	cCSAus FCC Class B
Global	RoHS (EU & China) ENERGY STAR® 5.0 Medical EMC standard IEC60601-1-2 in combination with medical kit
China	CCC
Compliance link	<a href="https://sp.ts.fujitsu.com/sites/certificates/">https://sp.ts.fujitsu.com/sites/certificates/</a>

**Security**

System protection	Kensington Lock support Eye for padlock Optional: Integrated cabinet lock Seal option
Audit proof protection	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 External USB interfaces detachable separately Embedded security (TPM 1.2) - Infineon
Access protection	Optional: Access protection via internal SmartCard reader User and supervisor BIOS password Optional: SmartCase Logon+

**Additional Software**

Additional software (preinstalled)	Norton Internet Security (incl. Firewall) 60 days version Microsoft® Office Starter: reduced-functionality Word and Excel® only, with advertising. No PowerPoint® or Outlook®. Buy Office 2010 to use the full-featured software.
Additional software (optional)	Drivers & Utilities DVD (DUDVD) Windows® 7 & Vista & XP CyberLink PowerDVD 9 Nero 9 Essentials XL Recovery DVD (Windows® 7) Windows® XP 64 downgrade pack Windows® XP 32 downgrade pack

**Manageability**

Manageability technology	DeskUpdate Driver management
Manageability software	DeskView 10.x client management including: DASH 1.1 remote system management

**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
<b>Supported standards</b>	WMI BootP (made4you) PXE WoL (Wake on LAN)
<b>Manageability link</b>	<a href="http://ts.fujitsu.com/manageability">http://ts.fujitsu.com/manageability</a>

**Input device / components**

<b>Input devices (optional)</b>	Optical USB tilt wheel mouse Keyboard Optical USB/PS2 tilt wheel mouse Space Navigator USB Space Explorer USB Space Pilot USB
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**Warranty**

<b>Standard Warranty</b>	3 years (depending on country)
<b>Service level</b>	On-site Service (depending on country)
<b>Maintenance and Support Services - the perfect extension</b>	
<b>Recommended Service</b>	5x9, Response Time: Next Business Day
<b>Service Weblink</b>	<a href="http://ts.fujitsu.com/Supportservice">http://ts.fujitsu.com/Supportservice</a>

## More information

### Fujitsu platform solutions

In addition to Fujitsu CELSIUS R670, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

#### Dynamic Infrastructures

With the Fujitsu Dynamic Infrastructures approach, Fujitsu offers a full portfolio of IT products, solutions and services, ranging from clients to datacenter solutions, Managed Infrastructure and Infrastructure as-a-Service. How much you benefit from Fujitsu technologies and services depends on the level of cooperation you choose. This takes IT flexibility and efficiency to the next level.

#### 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 R670, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.  
<http://ts.fujitsu.com/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 resolve issues of environmental energy efficiency through IT. Please find further information at <http://www.fujitsu.com/global/about/environment/>



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