

Data Sheet

FUJITSU Workstation CELSIUS R940

Breaking all Barriers

Fujitsu's CELSIUS R940 desktop workstation is designed to surpass all expectations. Achieving first-class benchmark results, this reliable, high-end dual processor desktop workstation is individually configurable and optimized for extremely demanding and memory intensive multi-threaded applications. CELSIUS workstations offer you an "IT made in Germany" quality in which you can trust.

Unleash the power

Achieve the optimum out of any demanding application

- Intel® Xeon® processor E5-2600 v3 family up to 2 x 18 cores, support of up to 1024 GB of DDR4 memory, SAS RAID controller as well as a Fujitsu SSD PCIe card (up to 2x 512 GB)

Maximum expandability

Broad selection and configurability options

- Broad choice of high-end professional graphic cards from AMD and Nvidia (up to three ultra-high-end or four mid-range graphic cards) and support for eight hard disk drives

Work around the clock

Certain components can be configured to support an extended lifetime usage

- Selection of top-quality components and comprehensive testing in certified in-house laboratories

Made in Germany

Design, engineering, product management, support and production - located at the Augsburg factory in Germany

- Optimized air flow and dedicated triple "Air Tunnel" flow results in reduced noise emissions even under full system load

Comprehensive ISV certifications

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

- Maximum compatibility and performance with customer-preferred applications



Components

Processor

Intel® Xeon® processor E5-2699v3 (18 cores, 2.30 GHz, 45 MB)
Intel® Xeon® processor E5-2698v3 (16 cores, 2.30 GHz, 40 MB)
Intel® Xeon® processor E5-2697v3 (14 cores, 2.60 GHz, 35 MB)
Intel® Xeon® processor E5-2690v3 (12 cores, 2.60 GHz, 30 MB)
Intel® Xeon® processor E5-2687Wv3 (10 Cores, 3.10 GHz, 25 MB)
Intel® Xeon® processor E5-2680v3 (12 cores, 2.50 GHz, 30 MB)
Intel® Xeon® processor E5-2670v3 (12 cores, 2.30 GHz, 30 MB)
Intel® Xeon® processor E5-2667v3 (8 Cores, 3.20 GHz, 20 MB)
Intel® Xeon® processor E5-2660v3 (10 Cores, 2.60 GHz, 25 MB)
Intel® Xeon® processor E5-2650v3 (10 Cores, 2.30 GHz, 25 MB)
Intel® Xeon® processor E5-2643v3 (6 Cores, 3.40 GHz, 20 MB)
Intel® Xeon® processor E5-2640v3 (8 Cores, 2.60 GHz, 20 MB)
Intel® Xeon® processor E5-2637v3 (4 Cores, 3.50 GHz, 15 MB)
Intel® Xeon® processor E5-2630v3 (8 Cores, 2.40 GHz, 20 MB)
Intel® Xeon® processor E5-2623v3 (4 Cores, 3.00 GHz, 10 MB)
Intel® Xeon® processor E5-2620v3 (6 Cores, 2.40 GHz, 15 MB)
Intel® Xeon® processor E5-2609v3 (6 Cores, 1.90 GHz, 15 MB)
Intel® Xeon® processor E5-2603v3 (6 Cores, 1.60 GHz, 15 MB)

Operating systems

Operating system	Windows 10 Pro Windows 8.1 Pro Windows 7 Professional 64-bit	Windows 10 Pro Windows 8.1 Pro Windows 7 Professional 64-bit
Operating system compatible	Windows 8.1 Windows® Server 2012 Linux	Windows 8.1 Windows® Server 2012 Linux
Operating system notes	Certified for Red Hat® Enterprise Linux Certified for SUSE Enterprise Desktop Certified for SUSE Enterprise Server	Certified for Red Hat® Enterprise Linux Certified for SUSE Enterprise Desktop Certified for SUSE Enterprise Server

Memory modules

4 GB (1 module(s) 4 GB) DDR4, registered, ECC, 2,133 MHz, PC4-2133
8 GB (1 module(s) 8 GB) DDR4, registered, ECC, 2,133 MHz, PC4-2133
16 GB (1 module(s) 16 GB) DDR4, registered, ECC, 2,133 MHz, PC4-2133
32 GB (1 module(s) 32 GB) DDR4, registered, ECC, 2,133 MHz, PC4-2133

Graphics

Ultra-high-end 3D: NVIDIA® Quadro® M6000, 12 GB, 3,072 cores, PCIe x16, 1x Dual Link DVI-I, 4 x DisplayPort, stereo, SLI
Ultra-high-end 3D: AMD FirePro™ W9100, 16 GB, 2816 stream processors, PCIe x16, 6x miniDP, 6x miniDP/DP Adapter
Ultra-high-end 3D: NVIDIA® Quadro® M5000, 8 GB, 2304 cores, PCIe x16, 1x Dual Link DVI-I, 4 x DisplayPort
Ultra-high-end 3D: NVIDIA® Quadro® K5200, 8 GB, 2304 cores, PCIe x16, 1x Dual Link DVI-I, DVI-D, 2x DisplayPort
High-end 3D: AMD FirePro™ W7100, 8 GB, PCIe x16, 4 x DisplayPort
High-end 3D: NVIDIA® Quadro® M4000, 8 GB, 1344 cores, PCIe x16, 4 x DisplayPort
High-end 3D: NVIDIA® Quadro® K4200, 4 GB, 1344 cores, PCIe x16, 1x Dual Link DVI-I, 2x DisplayPort
Midrange 3D: NVIDIA® Quadro® K2200, 4 GB, 640 cores, PCIe x16, 1x Dual Link DVI-I, 2x DisplayPort
Midrange 3D: AMD FirePro™ W5100, 4 GB, PCIe x16, 4 x DisplayPort
Entry 3D: NVIDIA® Quadro® K1200, 4 GB, 384 cores, PCIe x16, 4x miniDP, 4x miniDP/DP Adapter
Entry 3D: AMD FirePro™ W4100, 2 GB, 512 stream processors, PCIe x16, 4x miniDP, 4x miniDP/DP Adapter
Entry 3D: NVIDIA® Quadro® K620, 2 GB, 384 cores, PCIe x16, 1x Dual Link DVI-I, 1x DisplayPort
Entry 3D: AMD FirePro™ W2100, 2 GB, 320 stream processors, PCIe x16, 2x DisplayPort
Entry 3D: NVIDIA® Quadro® K420, 1 GB, 192 cores, PCIe x16, 1x Dual Link DVI-I, 1x DisplayPort
Professional 2D: NVIDIA® NVS™ 510, 2 GB, 16 cores, PCIe 2.0 x16, 4x miniDP, 4x miniDP/DP Adapter
Professional 2D: NVIDIA® NVS™ 315, 1 GB, 48 cores, PCIe 2.0 x16, 1x LFH59 (max. 2x DP or 2x DVI-I)
Professional 2D: NVIDIA® NVS™ 315 fanless, 1 GB, 48 cores, PCIe 2.0 x16, 1x LFH59 (max. 2x DP or 2x DVI-I)
GPU computing card: NVIDIA® GRID™ K1 16GB A, 16 GB, 768 cores, PCIe x16
GPU computing card: NVIDIA® GRID™ K2 8GB A, 8 GB, 3,072 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

Personal Supercomputing

Coprocessor: NVIDIA® Tesla® K40, 12 GB, 2,496 cores, PCIe x16
Coprocessor: NVIDIA® Tesla® K80, 2x 12 GB, 2,496 cores, PCIe x16
Coprocessor: Intel® Xeon Phi™ Coprocessor 3120A, PCIe x16
Coprocessor: Intel® Xeon Phi™ Coprocessor 5110P, PCIe x16

Hard disk drives (internal)	SSD PCIe 2x512 GB Highend card
	SSD PCIe 1x512 GB Highend card
	SSD PCIe 2x256 GB Highend card
	SSD PCIe 1x256 GB Highend card
	SSD SATA III, 400 GB High Endurance, 2.5-inch
	SSD SATA III, 200 GB High Endurance, 2.5-inch
	SSD SATA III, 1024 GB Mainstream, 2.5-inch
	SSD SATA III Premium, 512 GB, 2.5-inch
	SSD SATA III Premium, 256 GB, 2.5-inch
	SSD SATA III Premium, 128 GB, 2.5-inch
	SSD SATA III, 256 GB, 2.5-inch
	SSD SATA III, 128 GB, 2.5-inch
	SSHD SATA III, 7,200 rpm, 1,000 GB, 3.5-inch
	HDD SAS, 15,000 rpm, 600 GB, 2.5-inch
	HDD SAS, 15,000 rpm, 300 GB, 2.5-inch
	HDD SAS, 10,000 rpm, 1200 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
	HDD SATA III, 10,000 rpm, 1,000 GB, 2.5-inch, business critical
	HDD SATA III, 10,000 rpm, 500 GB, 2.5-inch, business critical
	HDD SATA III, 7,200 rpm, 6,000 GB, 3.5-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, 1,000 GB, 3.5-inch, business critical
	HDD SATA III, 7,200 rpm, 2 TB, 2.5-inch, business critical
	HDD SATA III, 7,200 rpm, 1 TB, 2.5-inch, business critical
	HDD SATA III, 7,200 rpm, 1000 GB, 2.5-inch, enhanced availability
	HDD SATA III, 7,200 rpm, 500 GB, 2.5-inch, enhanced availability
	HDD SATA III, 7,200 rpm, 2,000 GB, 3.5-inch
	HDD SATA III, 7,200 rpm, 1,000 GB, 3.5-inch
HDD SATA III, 7,200 rpm, 500 GB, 3.5-inch	
Hard disk notes	<p>*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) Up to 20 GB of HDD space is reserved for system recovery SSHD (Solid State Hard Disk, Hybrid drive) SED (Self-Encrypting Drive) SSD (Solid State Disk)</p>
Drives (optional)	BD Triple Writer SATA slim (tray)
	DVD-ROM
	DVD Super Multi
	DVD Super Multi ultra slim
	MultiCard Reader 24in1 USB 2.0 3.5"
SCSI / SAS Controller	RAID 5/6 Ctrl. 12 Gbit/s 8 ports int.
	RAID 0/1 Ctrl. 12 Gbit/s 8 ports int.
	RAID 0/1 Ctrl. 6 Gbit/s 8 ports int.

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

Gigabit Ethernet PCIe x1, DS
eSATA Interface
Dual serial card PCIe x1
Dual 10 Gigabit Ethernet PCIe x8

Base unit CELSIUS R940 CELSIUS R940 power

Mainboard

Mainboard type D3358
Formfactor proprietary
Chipset Intel® C612
Processor socket Socket R3
Processor quantity maximum 2
Supported capacity RAM (max.) 512 GB
Memory slots 16 (8 per processor) DIMM (DDR4) ECC
LAN 10/100/1,000 Mbit/s Intel® I217LM and Intel® I210
BIOS version AMI Aptio V
BIOS features BIOS Flash EPROM update by software
Recovery BIOS
Unified Extensible Firmware Interface (UEFI)
Audio type On board
Audio codec Realtek ALC671
Audio features High Definition Audio

I/O controller on board

Serial ATA total 10
thereof SATA III 10
Controller functions Serial ATA III (6 Gbit)
AHCI
RAID 0/1/5/10

Interfaces

Audio: in (rear) 1
Audio: out (rear) 1
Audio: in 1
Audio: out 1
Internal speakers 1
USB 2.0 total 9
USB 3.0 total 4
USB front 4 (2x USB 3.0)
USB rear 6
USB internal 3, thereof 1 type A
Ethernet (RJ-45) 2
Interface Module notes Anytime USB charge functionality

Input device / components

Input devices (optional) Optical USB wheel mouse
Keyboard
Optical USB tilt wheel mouse
Optical USB wheel mouse

Drive bays

Drive bays total 12
2.5-inch internal bays 8
3.5-inch internal bays 4
3.5-inch external bays 2

Drive bays

5.25-inch external bays	1
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 x8	1 x (200 mm) Full height
PCI-Express 3.0 x16	4 x (340 mm / 13.39 inch) Full height (2x PCIe 3.0x16 per processor)
PCI-Express 2.0 x4 (mech. x16)	1 x (340 mm / 13.39 inch) Full height
PCI-Express 2.0 x1 (mech. x8)	1 x (340 mm / 13.39 inch) Full height
PCI-Express 3.0 x8 (internal)	1 x (170 mm / 6.69 inch) Full height (available with 2nd CPU)

Electrical values

Power consumption note	500 W depending on configuration	650 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	90 V - 264 V	90 V - 264 V
Operating line frequency range	47 Hz - 63 Hz	47 Hz - 63 Hz
Max. output of single power supply	1000 W up to 90% efficiency	1300 W up to 90% efficiency for an input voltage above 115 V
Power factor correction/active power	active	active
Power supply output	2 graphics power rails (8pin connector / 18.5A@12V)	1000 W for an input voltage below 115 V 3 graphics power rails (8pin connector / 18.5A@12V)

Noise for standard configuration (HDD, ODD)

Related Processors for noise	Intel® Xeon® E5-2643v3 w/ NVIDIA® Quadro® K2200	Intel® Xeon® E5-2643v3 w/ NVIDIA® Quadro® K2200
Standard noise emission	8x4 GB, HDD, ODD, Windows According to ISO 7779:2010, ECMA-74	8x4 GB, HDD, ODD, Windows According to ISO 7779:2010, ECMA-74
Standard noise notes / description	A-weighted sound power level L _{wad} (in B) / Workplace related A-weighted sound pressure level L _{pAm} (in dB(A))	A-weighted sound power level L _{wad} (in B) / Workplace related A-weighted sound pressure level L _{pAm} (in dB(A))
Standard noise operation mode: CPU 50% load	4.0 B / 23 dB(A) Bystander position	4.0 B / 23 dB(A) Bystander position
Standard noise operation mode: CPU 90% load	4.4 B / 26 dB(A) Bystander position	4.3 B / 26 dB(A) Bystander position
Standard noise operation mode: HDD load	3.9 B / 23 dB(A) Bystander position	4.0 B / 23 dB(A) Bystander position
Standard noise operation mode: Idle mode	3.8 B / 22 dB(A) Bystander position	3.9 B / 22 dB(A) Bystander position
Standard noise operation mode: ODD load	4.6 B / 29 dB(A) Bystander position	4.6 B / 29 dB(A) Bystander position
Standard noise operation mode: Office applications 2.0	3.8 B / 22 dB(A) Bystander position	3.9 B / 22 dB(A) Bystander position

Dimensions / Weight / Environmental

Dimensions (W x D x H)	186 x 618 x 430 mm 7.32 x 24.3 x 16.9 inch
Operating position	Vertical / horizontal
Weight	approx. 20 kg
Weight (lbs)	approx. 44.8 lbs
Weight notes	Actual weight may vary depending on configuration
Operating ambient temperature	10 - 35 °C (50 - 95 °F)
Operating relative humidity	5 - 85 % (relative humidity)

Compliance

Product	CELSIUS R940	CELSIUS R940 Power
Model	ETNA_L-D3358	
Germany	GS depending on configuration	
Europe	CE	
USA/Canada	FCC Class B cCSAus	
Global	RoHS (EU & China) Microsoft Operating Systems (HCT / HCL entry / WHQL) WEEE (Waste electrical and electronic equipment) ENERGY STAR® 5.0 (dedicated regions) EPEAT® Silver (dedicated regions)	
Compliance link	http://globalsp.ts.fujitsu.com/sites/certificates	

Additional Software

Additional software (preinstalled)	Workplace Protect (secure authentication solution) McAfee Multi Access Security (anti-virus and internet security software; 60 days trial version) Microsoft Office (buy license to activate the pre-installed Microsoft Office)	
Additional software (optional)	Drivers & Utilities DVD (DUDVD) Windows® 8 and Windows® 7	

Security

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

Manageability

Manageability technology	DeskUpdate Driver management iAMT 9.0 (depending on CPU)	
Manageability software	DeskView Client DeskView Instant BIOS Management DeskView Integration for Symantec Management Platform	
DeskView components	Inventory Management BIOS Management Driver Management Security Management Alarm Management	
Supported standards	WMI BootP (made4you) PXE WoL (Wake on LAN)	
Manageability link	http://www.fujitsu.com/fts/manageability	

Miscellaneous

	Rack mountable (5U)	Rack mountable (5U)
Spare part availability	5 years	5 years

Packaging information

Packaging dimension (mm)	394 x 730 x 578 mm	
Packaging dimension (inch)	15.51 x 28.74 x 22.76 inch	
Max. quantity / pallet	11	11

Packaging information

Packaging notes	printed user documentation is bleached in chlorine free process	printed user documentation is bleached in chlorine free process
------------------------	---	---

Warranty

Warranty period	3 years (depending on country)	
Warranty type	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	
Product Support Services - the perfect extension		
Recommended Service	9x5, Onsite 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

Display P24W-7 LED		If you're a pixel, color and performance-hungry professional using demanding applications, the FUJITSU P24W-7 LED Display is the perfect choice. The display provides outstanding picture performance thanks to a cutting-edge graphic panel. It also boasts unique and innovative features such as our patent-applied Presence Sensor technology and the Always Available Powered USB Hub.	Order Code: S26361-K1498-V140
Display P27T-7 UHD		For pixel, color and performance-hungry professionals using demanding applications, look no further than the FUJITSU P27T-7 UHD Display. It provides outstanding picture quality with Ultra High Definition (UHD) resolution, also known as 4k. Picture in Picture (PiP), unrivalled ergonomics, a multitude of UHD supporting interfaces and manageability make this the perfect choice.	Order Code: S26361-K1564-V140
Blue LED Mouse GL9000		Blue LED Mouse GL9000 comes in a slim design with proven Fujitsu engineering quality. The state-of-the-art blue LED sensor enables ultra precise switchable resolution at 1,000, 1,500 and 2,000 dpi. Blue LED Mouse GL9000 makes your life easier because it's tailor-made for right handed users. It just feels great in your hand.	Order Code: S26381-K438-L100
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 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 the FUJITSU Workstation CELSIUS R940, 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/products/computing/

Software

www.fujitsu.com/software/

More information

Learn more about the FUJITSU Workstation CELSIUS R940, 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>



Copyrights

All rights reserved, including intellectual property rights. Changes to technical data reserved. Delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner.

For further information see www.fujitsu.com/terms

© 2015 Fujitsu Technology Solutions GmbH

Disclaimer

Technical data is subject to modification and delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner.

Contact

Fujitsu Technology Solutions
Website: www.fujitsu.com/fts
2016-01-06 CE-EN

All rights reserved, including intellectual property rights. Changes to technical data reserved. Delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner. For further information see www.fujitsu.com/terms
© 2015 Fujitsu Technology Solutions GmbH