

DATA SHEET

CELSIUS R650

Issue: November 2009

Your high-end workstation without compromise

CELSIUS R650

The CELSIUS R Series is a high-end dual-processor workstation with an extensive selection of graphics subsystems. The powerful CELSIUS R650 is ready to take on your greatest graphic challenges with the latest technology and best components available. With a whole range of expansion options, this system is the one for your most memory-hungry applications.

Extremely powerful workstations

Get more done in less time

- Fastest available processors, graphics and hard disk drives

Noise-reduced system

Silent working environment

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

Serviceability

Minimum downtime if system failure

- Service-friendly system design

Leading workstation application certification

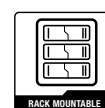
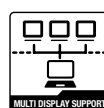
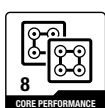
Maximum compatibility and performance with customer-preferred applications

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

Built to order

Free configurability for all product lines

- Customer is given a system optimized for his requirements



Components

Graphics add on cards (optional)

Remote Graphics: CELSIUS RemoteAccess Card, , PCIe x1, 2x DVI-I
GPU computing card: NVIDIA® Tesla C1060, 4 GB, PCIe x16, -
Ultra-high-end 3D: Second NVIDIA® Quadro FX 5800, 4 GB, PCIe x16, 2x DVI-I, DP
Ultra-high-end 3D: Second NVIDIA® Quadro FX 4800, 1.5 GB, PCIe x16, 1x DVI-I, 2x DP
Ultra-high-end 3D: NVIDIA® Quadro FX 5800, 4 GB, PCIe x16, 2x DL-DVI-I, DP
Ultra-high-end 3D: NVIDIA® Quadro FX 5600, 1536 MB, PCIe x16, 2x DL-DVI-I
Ultra-high-end 3D: NVIDIA® Quadro FX 4800, 1.5 GB, PCIe x16, 2x DL-DVI-I, 2x DP
Ultra-high-end 3D: NVIDIA® Quadro FX 4700x2, 2x1 GB, PCIe x16, 4x SL DVI-I
Ultra-high-end 3D: NVIDIA® Quadro FX 4600, 768 MB, PCIe x16, 2x DL-DVI-I
Ultra-high-end 3D: 2nd NVIDIA® Quadro FX 5600, 1.5 GB, PCIe x16, 2x DL-DVI-I
High-end 3D: NVIDIA® Quadro FX 3700, 512 MB, PCIe Gen2 x16, 2x DL-DVI-I
High-end 3D: ATI FireGL V7600, 512 MB, PCIe x16, 2x DL-DVI-I
Midrange 3D: NVIDIA® Quadro FX 1700, 512 MB, PCIe x16, 2x DL-DVI-I, HDTV-out
Midrange 3D: NVIDIA® Quadro FX 570, 256 MB, PCIe x16, 2x DL-DVI-I
Midrange 3D: ATI FireGL V5600, 512 MB, PCIe x16, 2x DL-DVI-I
Midrange 3D: ATI FireGL V5200, 256 MB, PCIe x16, 2x DL-DVI-I
Entry 3D: NVIDIA® Quadro FX 370, 256 MB, PCIe x16, DL-DVI-I, SL DVI-I
Multi monitor 2D: NVIDIA® Quadro NVS 440, 256 MB, PCIe x1, 4x SL DVI-I
Multi monitor 2D: NVIDIA® Quadro NVS 290, 256 MB, PCIe x1, 2 x SL DVI-I
Professional 2D: NVIDIA® Quadro NVS 290, 256 MB, PCIe x16, 2 x SL DVI-I

Hard disk drives (internal)

SATA II, 10000 rpm, 300 GB, 2.5-inch, S.M.A.R.T.
SATA II, 10000 rpm, 150 GB, 2.5-inch, S.M.A.R.T.
SATA II, 7200 rpm, 1000 GB, 3.5-inch, S.M.A.R.T. business critical
SATA II, 7200 rpm, 750 GB, 3.5-inch, S.M.A.R.T. business critical
SATA II, 7200 rpm, 500 GB, 3.5-inch, S.M.A.R.T. business critical
SATA II, 7200 rpm, 500 GB, 3.5-inch, S.M.A.R.T.
SATA II, 7200 rpm, 160 GB, 3.5-inch, S.M.A.R.T.
SAS, 15000 rpm, 450 GB, 3.5-inch
SAS, 15000 rpm, 300 GB, 3.5-inch
SAS, 15000 rpm, 146 GB, 3.5-inch
SAS, 15000 rpm, 73 GB, 3.5-inch

Hard disk notes

2.5-inch drives will be mounted in the 3.5-inch bays
One Gigabyte equals one billion bytes, when referring to hard disk drive capacity.

Drives (optional)

1.44 MB Floppy
Blu-ray Disc Triple Writer
DVD
DVD Super Multi

Interface add on cards/components (optional)

WLAN III, 802.11g/Draft-n (Windows only)
WLAN II, 802.11g, 54Mbps (Windows only)
Gigabit Ethernet PCIe x1
Dual serial card, PCI, EX-43092

Base unit **CELSIUS R650**

Mainboard

Mainboard type	D2568
Formfactor	AT03
Chipset	Intel® 5400, Intel® 6321ESB I/O Controller Hub
Processor socket	LGA 771
Processor quantity maximum	2
Memory slots	8 FullyBuffered DIMM
Supported capacity RAM (max.)	64 GB

Mainboard

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	Built-in 10/100/1000 MBit/s Intel® 82563 EB
WLAN	optional
Audio codec	Realtek ALC888
Audio features	High Definition audio

I/O controller on board

Fast IDE/Ultra DMA-100	1 port (for 2 drives)
Serial ATA total	6
SATA RAID support	0, 1, 10, 5
SAS Controller type	8 ports
SAS RAID support	0,1

Interfaces

Audio: in (rear)	2
Audio: out / SPDIF (rear)	1
Ethernet (RJ-45)	2
FireWire (IEEE1394) (front)	1
FireWire (IEEE1394) (rear)	1
Front Audio: in	1
Front Audio: out	1
Internal speakers	1
Mouse / Keyboard (PS/2)	2
Parallel	1
Serial (RS-232)	1 (9 pin)
USB front	2
USB internal	2
USB rear	4
USB 2.0 total	8

Drive bays

Drive bays total	7
3.5-inch internal bays	4
5.25-inch external bays	3

Slots

PCI-Express Gen2 x16	2 x (350 mm) full height
PCI-Express x8	1 x (350 mm) full height
PCI-X (64 bit / 133 MHz)	2
PCI (32-bit / 33 MHz)	1 x (350 mm) full height

Graphics

Refresh rate 1024 x 768 (recommended / max.)	/
Refresh rate 1280 x 1024 (recommended / max.)	/
Refresh rate 1600 x 1200 (recommended / max.)	/
Graphics notes	For some configurations third party drivers are currently not available or configuration restrictions may apply.

Electrical values

Operating voltage range	100 - 240 V
Operating line frequency range	50 - 60 Hz
Max. output of power supply	1000 W, efficiency up to 82%

Noise for standard configuration (HDD, ODD, FDD)

Noise Operation mode 4: High load	22 dB
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Noise for standard configuration (HDD, ODD, FDD)

Idle mode	22 dB
Noise notes / description	depending on configuration

Dimensions / Weight / Environmental

Dimension (W x D x H)	215 x 620 x 446 mm
Weight	26 kg
Weight notes	Weight may vary depending on actual configuration
Operating ambient temperature	15 - 35°C
Operating relative humidity	10 - 75 %

Compliance

Product	CELSIUS R650
Model	MCL-D2568
Germany	GS
Europe	CE
USA/Canada	FCC Class B CSA
Global	RoHS (Restriction of hazardous substances) ENERGY STAR® 4.0 (depending on configuration)

Security

Physical security	Kensington Lock support Eye for padlock Optional: Integrated cabinet lock
System security	Write protect option for the Flash EPROM Boot protection for floppy disk / CD drive and write protection for floppy disk drive
User security	Optional: Access protection via internal SmartCard reader Hard disk password User and supervisor BIOS password Optional: SmartCase Logon+

Operating system

Operating system optional preinstalled	Microsoft® Windows Vista® Business 64-bit Microsoft® Windows Vista® Business 32-bit
Operating system compatible	Microsoft® Windows® XP Professional x64 Edition Microsoft® Windows® XP Professional Linux
Operating system notes	RedHat / Novell certification pending For some configurations third party drivers are currently not available or configuration restrictions may apply.

Additional Software

Additional software (optional)	Recovery DVD (Windows Vista®) Windows® XP downgrade pack
Additional software (included as a CD/DVD)	Drivers & Utilities DVD (DUDVD) Windows Vista® Norton Internet Security (incl. Firewall)

Manageability

Manageability type	DeskView 10
Manageability link	http://ts.fujitsu.com/manageability

Input device / components

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

Warranty

Service level	(depending on country)
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Maintenance and Support Services - the perfect extension

Recommended Service	5x9, Response Time: Next Business Day
Service Weblink	http://ts.fujitsu.com/Supportservice

Information about environmental care, policies, programs and our Environmental Guideline FSC 03230:

<http://ts.fujitsu.com/aboutus>

Take back and Recycling information:

<http://ts.fujitsu.com/recycling>

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