Data Sheet

We make sure

FUJITSU COMPUTERS
SIEMENS

CELSIUS M460
Your thoroughbred workstation

Issue: November 2008

Fujitsu Siemens Computers is the leading European IT manufacturer. With a strategic focus on innovative mobility and the dynamic data center, we offer a unique range of products and services from notebooks and desktops to servers and IT infrastructure solutions. Famous German engineering and exceptional in-house quality testing capabilities in our test centers ensure extraordinary product quality and reliability across all product lines.

CELSIUS M460

The CELSIUS M Series is the performing mainstream workstation with price and power well-balanced. If you need more power and expandability than an entry-level workstation can offer, the CELSIUS M460 is your choice for many business segments, such as CAD/CAE, virtual reality and finance. The ISV certification process enables workstation users to run their preferred applications with maximum system stability.

Extremely powerful workstations
Get more done in less time
■ Fastest available processors, graphics and hard disk drives

Noise-reduced system
Silent working enviroment
■ 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
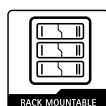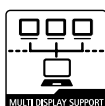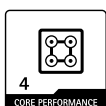Free configurability for all product lines
■ Customer is given a system optimized for his requirements

Communication

S26361-F3108-E2 WLAN II, 802.11g, 54Mbps   WLAN II, 802.11g, 54Mbps

S26361-F3316-E2 Dual serial card, PCI, EX-43092   Dual serial card, PCI, EX-43092

4 CORE PERFORMANCE | PROFESSIONAL GRAPHICS | ISV CERTIFICATION | MULTI DISPLAY SUPPORT | QUIET RUNNING | RACK MOUNTABLE | TWINLOAD

Components

Processor	Intel® Core™2 Quad Q9650 (3.0 GHz, 12 MB, 1333 MHz)
	Intel® Core™2 Quad Q9550 (2.83 GHz, 12 MB, 1333 MHz)
	Intel® Core™2 Quad Q9450 (2.66 GHz, 12 MB, 1333 MHz)
	Intel® Core™2 Quad Q9400 (2.66 GHz, 6 MB, 1333 MHz)
	Intel® Core™2 Quad Q9300 (2.5 GHz, 6 MB, 1333 MHz)
	Intel® Core™2 Quad Q8200 (2.33 GHz, 4 MB, 1333 MHz)
	Intel® Core™2 Quad Q6700 (2.66 GHz, 8 MB, 1066 MHz)
	Intel® Core™2 Quad Q6600 (2.4 GHz, 8 MB, 1066 MHz)
	Intel® Core™2 Duo E8600 (3.33 GHz, 6 MB, 1333 MHz)
	Intel® Core™2 Duo E8500 (3.16 GHz, 6 MB, 1333 MHz)
	Intel® Core™2 Duo E8400 (3.0 GHz, 6 MB, 1333 MHz)
	Intel® Core™2 Duo E7400 (2.8 GHz, 3 MB, 1066 MHz)
	Intel® Core™2 Duo E7300 (2.66 GHz, 3 MB, 1066 MHz)
	Intel® Core™2 Duo E7200 (2.53 GHz, 3 MB, 1066 MHz)
	Intel® Core™2 Duo E4600 (2.4 GHz, 2 MB, 800 MHz)
Memory modules	4 GB (2 module(s) with 2 GB, DDR2), 800 MHz
	2 GB (2 module(s) with 1 GB, DDR2), 800 MHz
	1 GB (2 module(s) with 512 MB, DDR2), 800 MHz
	1 GB (1 module(s) with 1 GB, DDR2), 800 MHz
	512 MB (1 module(s) with 512 MB, DDR2), 800 MHz
Graphics add on cards (optional)	Ultra-high-end 3D: NVIDIA® Quadro FX 4600, 768 MB, PCIe x16, 2 x DL-DVI-I
	High-end 3D: NVIDIA® Quadro FX 3700, 512 MB, PCIe Gen2 x16, 2 x DL-DVI-I
	Midrange 3D: NVIDIA® Quadro FX 1700, 512 MB, PCIe x16, 2 x DL-DVI-I, HDTV-out
	Midrange 3D: NVIDIA® Quadro FX 570, 256 MB, PCIe x16, 2 x DL-DVI-I
	Midrange 3D: ATI FireGL V5600, 512 MB, PCIe x16, 2 x DL-DVI-I
	Midrange 3D: ATI FireGL V5200, 256 MB, PCIe x16, 2 x 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, 4 x 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, 160 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 business critical
	SATA II, 7200 rpm, 750 GB, 3.5-inch business critical
	SATA II, 7200 rpm, 500 GB, 3.5-inch S.M.A.R.T.
	SATA II, 7200 rpm, 500 GB, 3.5-inch business critical
	SATA II, 7200 rpm, 250 GB, 3.5-inch S.M.A.R.T.
	SATA II, 7200 rpm, 160 GB, 3.5-inch S.M.A.R.T.
	SATA II, 7200 rpm, 80 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, standard
	Blu-ray Disc Triple Writer
	DVD
	DVD Super Multi
	MultiCard Reader 15in1, 3,5-Inch
SAS Controller (optional)	LSI 3041E, , 4 ports
	D2507 (LSI 1064e), 0, 1, 10, 4 ports
Interface add on cards/components (optional)	
	WLAN III, 802.11g/Draft-n
	WLAN II, 802.11g, 54Mbps
	Parallel Interface
	Gigabit Ethernet SysKonnect
	Gigabit Ethernet PCIe x1
	eSATA Interface
	Dual serial card, PCI, EX-43092
Base unit	**CELSIUS M460**
Mainboard	
Mainboard type	D2608
Formfactor	ATX
Chipset	Intel® X38 Express, Intel® 82801IR ICH9R
Processor socket	LGA 775
Processor quantity maximum	1
Memory slots	4 DIMM
Supported capacity RAM (max.)	8 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	10/100/1000 MBit/s Intel® 82566 DM
WLAN	Optional
Audio codec	Realtek ALC262
Audio features	High Definition audio

I/O controller on board

Serial ATA total	6
thereof eSATA	1, optional
SATA RAID support	5
SAS Controller type	Optional

Interfaces

Audio: in (rear)	2
Audio: out / SPDIF (rear)	1
Front Audio: in	1
Front Audio: out	1
FireWire (IEEE1394) (rear)	1
Front IEEE1394 (FireWire)	1
Internal speakers	1
USB 2.0 total	12
USB front	2
USB rear	8
USB internal	2
Serial (RS-232)	1
Mouse / Keyboard (PS/2)	2
Ethernet (RJ-45)	1
Parallel	Optional
Multicardreader	Optional

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 (312 mm) full height
PCI-Express x4 (mech. x8)	1 x (312 mm) full height
PCI-Express x1	1 x (312 mm) full height
PCI (32-bit / 33 MHz)	3 x (312 mm) full height

Electrical values

Power consumption note	190 W depending on configuration
Rated voltage range	100 - 240 V
Rated frequency range	50 - 60 Hz
Max. output of power supply	410 W

Noise for standard configuration (HDD, ODD, FDD)

Noise emission	According to ISO9296 (LpAm at bystander position)
Noise Operation mode 4: High load	23 dB
Idle mode	23 dB
Noise notes / description	depending on configuration

Dimensions / Weight / Environmental

Operating ambient temperature	15 - 35°C
Operating relative humidity	20 - 75 %
Dimension (W x D x H)	215 x 520 x 446 mm
Operating position	Vertical / horizontal
Weight	18 kg
Weight notes	Weight may vary depending on actual configuration.

Compliance

Germany	GS
Europe	CE
USA/Canada	FCC Class B
	CSA c
All	RoHS (Restriction of hazardous substances)
	IEC60601-1-2 in combination with medical kit
China	CCC
Compliance link	https://sp.fujitsu-siemens.com/sites/certificates/default.aspx

Security

Physical security	Kensington Lock support
	Eye for padlock
	Seal option
	Intrusion switch
System security	Write protect option for the Flash EPROM
	Boot protection for floppy disk / CD drive and write protection for floppy disk drive

Security

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 64bit
	Microsoft® Windows Vista® Business 32bit
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)	Drivers & Utilities DVD (DUDVD) Windows Vista®
	Nero 7 Essentials XL
Additional software (included as a CD/DVD)	Drivers & Utilities DVD (DUDVD) Windows® XP
	Norton Internet Security (incl. Firewall)
	Nero Essentials (burning software)

	Keyboard on (Fujitsu Siemens Computers keyboard required)
	Thermal management
Spare part availability	5 years

Manageability

Manageability type	DeskView 10
Manageability link	http://www.fujitsu-siemens.com/manageability

Input device / components

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

Warranty

Service level	(depending on country)

Maintenance and Support Services - the perfect extension

Recommended Service	5x9, Response Time: Next Business Day
Service Weblink	www.fujitsu-siemens.com/Supportservice

Information about environmental care, policies, programs and our Environmental Guideline FSC 03230:
http://www.fujitsu-siemens.com/aboutus
Take back and Recycling information:
http://www.fujitsu-siemens.com/recycling