

Fujitsu recommends Windows 10 Pro for business.

# Data Sheet

## Fujitsu CELSIUS W580power+

### VR-ready CAD Workstation

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We are (VR) ready for the future: As an industry first, the FUJITSU CELSIUS W580power+ desktop workstation goes far and beyond with its innovative 21-liter, space-saving microtower design. Now, engineers, designers and architects don't need to choose between performance, expandability, price and space.

No compromise in terms of performance, expandability and price  
Designed with CAD customers in mind: performance, reliability and great flexibility - at an affordable price

- Choose between the energy-efficient Intel® Core™ processors or the powerful Intel® Xeon® E-2200 processor family
- Support of Windows 10 Pro
- 64 GB DDR4 2,666 MHz memory (incl. ECC)
- Maximum capacity of 28 TB
- Broad choice of processors and professional graphics cards
- Boost your storage performance with super-fast PCIe SSDs
- Support of 24/7 operation with reliable high-endurance and business critical drives

Industry's smallest VR-ready desktop workstation

We are (VR) ready for the future. Enjoy a fully immersive and real-time experience.

- Intel® Core™ or Xeon® processors with frequencies up to 4.70 GHz
- Powered by the NVIDIA® Quadro® RTX 4000 VR-ready graphics

The smartest microtower workstation

Innovative space-saving design - made in Europe

- Cable-free design
- Easy accessibility of storage devices in the front (cold-plug)
- Optimized thermal management and cooling solutions
- Enjoy a silent workplace environment, thanks to low noise emission down to 18 dB(A) (depending on configuration)
- Reduced energy consumption thanks to a 400W power supply



# Components

Processor	Intel® Xeon® processor E-2288G (8 Cores / 16 Threads, 3.70 GHz, up to 5.0 GHz, 16 MB)
	Intel® Xeon® processor E-2286G (6 Cores / 12 Threads, 4.00 GHz, up to 4.9 GHz, 12 MB)
	Intel® Xeon® processor E-2278G (8 Cores / 16 Threads, 3.40 GHz, up to 5.0 GHz, 16 MB)
	Intel® Xeon® processor E-2276G (6 Cores / 12 Threads, 3.80 GHz, up to 4.9 GHz, 12 MB)
	Intel® Xeon® processor E-2274G (4 Cores / 8 Threads, 4.00 GHz, up to 4.9 GHz, 8 MB)
	Intel® Xeon® processor E-2246G (6 Cores / 8 Threads, 3.60 GHz, up to 4.8 GHz, 12 MB)
	Intel® Xeon® processor E-2244G (4 Cores / 8 Threads, 3.80 GHz, up to 4.8 GHz, 8 MB)
	Intel® Xeon® processor E-2236 (6 Cores / 12 Threads, 3.40 GHz, up to 4.8 GHz, 12 MB)
	Intel® Xeon® processor E-2234 (4 Cores / 8 Threads, 3.60 GHz, up to 4.8 GHz, 8 MB)
	Intel® Xeon® processor E-2226G (6 Cores / 6 Threads, 3.40 GHz, up to 4.6 GHz, 12 MB)
	Intel® Xeon® processor E-2224G (4 Cores / 4 Threads, 3.50 GHz, up to 4.7 GHz, 8 MB)
	Intel® Xeon® processor E-2224 (4 Cores / 4 Threads, 3.40 GHz, up to 4.6 GHz, 8 MB)
	Intel® Xeon® processor E-2186G (6 Cores / 12 Threads, 3.80 GHz, up to 4.7 GHz, 12 MB, Intel® UHD Graphics P630) *
	Intel® Xeon® processor E-2174G (4 Cores / 8 Threads, 3.80 GHz, up to 4.7 GHz, 8 MB, Intel® UHD Graphics P630) *
	Intel® Xeon® processor E-2136 (6 Cores / 12 Threads, 3.30 GHz, up to 4.5 GHz, 12 MB) *
	Intel® Xeon® processor E-2134 (4 Cores / 8 Threads, 3.50 GHz, up to 4.5 GHz, 8 MB) *
	Intel® Xeon® processor E-2126G (6 Cores / 6 Threads, 3.30 GHz, up to 4.5 GHz, 12 MB, Intel® UHD Graphics P630) *
	Intel® Xeon® processor E-2124 (4 Cores / 8 Threads, 3.30 GHz, up to 4.5 GHz, 8 MB) *
	Intel® Core™ i9-9900 processor (8 Cores / 16 Threads, 3.10 GHz, up to 5.0 GHz, 16 GB, Intel® UHD Graphics 630)
	Intel® Core™ i9-9900K processor (8 Cores / 16 Threads, 3.60 GHz, up to 5.0 GHz, 16 GB, Intel® UHD Graphics 630)
	Intel® Core™ i7-9700 processor (8 Cores / 8 Threads, 3.00 GHz, up to 4.7 GHz, 12 MB, Intel® HD Graphics 630) *
	Intel® Core™ i7-9700K processor (8 Cores / 8 Threads, 3.60 GHz, up to 4.9 GHz, 12 MB, Intel® UHD Graphics 630) *
	Intel® Core™ i5-9600 processor (6 Cores / 6 Threads, 3.10 GHz, up to 4.6 GHz, 9 MB, Intel® UHD Graphics 630) *
	Intel® Core™ i5-9500 processor (6 Cores / 6 Threads, 3.00 GHz, up to 4.4 GHz, 9 MB, Intel® UHD Graphics 630) *
	Intel® Core™ i5-8600 processor (6 Cores / 6 Threads, 3.10 GHz, up to 4.3 GHz, 9 MB, Intel® UHD Graphics 630) *
	Intel® Core™ i3-9100 processor (4 Cores / 4 Threads, 3.60 GHz, up to 4.2 GHz, 6 MB, Intel® HD Graphics 630) *
	Intel® vPro® Platform with all Intel® Xeon® processors
	No Intel® vPro® technology with Intel® Core™ i5 and Core™ i7 processors
	*with Intel® Turbo Boost Technology 2.0 (clock speed and performance will vary depending on workload and other variables)
Operating systems	
Operating system pre-installed	Windows 10 Pro for Workstations Windows 10 Pro. Fujitsu recommends Windows 10 Pro for business. Windows 10 Home
Operating system compatible	Linux
Operating system notes	Certified for Red Hat® Enterprise Linux Certified for SUSE Enterprise Desktop (pending) Certified for SUSE Enterprise Server (pending) For some configurations third party drivers are currently not available or configuration restrictions may apply. Windows 10 Support: After the end of the product life FUJITSU will continue to test and support all upcoming Windows 10 releases for a period of maximum 5 years – depending on the available extension of hardware services through FUJITSU Warranty top ups. For details please see "FUJITSU Service Statement for Windows 10 Semi-Annual-Channel Support" at <a href="http://support.ts.fujitsu.com">http://support.ts.fujitsu.com</a> .
Memory modules	
	4 GB (1 module(s) 4 GB) DDR4, unbuffered, non-ECC, 2,666 MT/s, UDIMM
	8 GB (1 module(s) 8 GB) DDR4, unbuffered, ECC, 2,666 MT/s, UDIMM
	8 GB (1 module(s) 8 GB) DDR4, unbuffered, non-ECC, 2,666 MT/s, UDIMM
	16 GB (1 module(s) 16 GB) DDR4, unbuffered, ECC, 2,666 MT/s, UDIMM
	16 GB (1 module(s) 16 GB) DDR4, unbuffered, non-ECC, 2,666 MT/s, UDIMM

Graphics	High-end 3D: NVIDIA® Quadro® RTX 4000, 8 GB, PCIe x16, 3 x DisplayPort, 1 x Virtual Link
	Midrange 3D: NVIDIA® Quadro® P2200, 5 GB, PCIe x16, 4 x DisplayPort
	Midrange 3D: AMD Radeon™ Pro WX 5100, 8 GB, 320 stream processors, PCIe x16, 4 x DisplayPort
	Entry 3D: NVIDIA® Quadro® P1000, 4 GB, PCIe x16, 4 x miniDP
	Entry 3D: AMD Radeon™ Pro WX 3100, 4 GB, 320 stream processors, PCIe x16, 1 x DisplayPort, 2 x miniDP
	Entry 3D: AMD Radeon™ Pro WX 2100, 2 GB, 320 stream processors, PCIe x16, 1 x DisplayPort, 2 x miniDP
	Entry 3D: NVIDIA® Quadro® P620, 2 GB, PCIe x16, 4 x miniDP
	Entry 3D: NVIDIA® Quadro® P400 , 2 GB, PCIe x16, 3 x miniDP
	Remote Graphics: CELSIUS RemoteAccess Dual Card, PCIe x1, 2 x miniDP, PCoIP
	Remote Graphics: CELSIUS RemoteAccess Quad Card, PCIe x1, 4 x miniDP, PCoIP
	Others: VGA Extension Card
	Others: DP to DVI-D (single link) Adapter Cable
	Others: MiniDP to DP Adapter Cable
Mass storage 3.5 inch size	HDD SATA III, 7,200 rpm, 8000 GB, 3.5-inch, business critical
Hard disk drives (internal)	SSD SATA III, 960 GB High Endurance, 1DWDP, 2.5-inch
	SSD SATA III, 480 GB High Endurance, 1DWDP, 2.5-inch
	SSD SATA III, 240 GB High Endurance, 1DWDP, 2.5-inch
	SSD PCIe, 2048 GB M.2 NVMe Highend module
	SSD PCIe, 1024 GB M.2 NVMe Highend module
	SSD PCIe, 512 GB M.2 NVMe Highend module
	SSD PCIe, 256 GB M.2 NVMe Highend module
	SSD PCIe, 1x 2048 GB M.2 NVMe Highend card
	SSD PCIe, 1x1024 GB M.2 NVMe Highend card
	SSD PCIe, 1x 512 GB M.2 NVMe Highend card
	SSD PCIe, 1x 256 GB M.2 NVMe Highend card
	RAID1 Bundle 2x512GB M.2 NVMe Highend
	RAID1 Bundle 2x256GB M.2 NVMe Highend
	SSD PCIe, 1024 GB M.2 NVMe module
	SSD PCIe, 512 GB M.2 NVMe module
	SSD PCIe, 256 GB M.2 NVMe module
	SSD PCIe, 1024 GB M.2 NVMe module, SED
	SSD PCIe, 512 GB M.2 NVMe module, SED
	SSD PCIe, 256 GB M.2 NVMe module, SED
	SSD PCIe, 1x 1024 GB M.2 NVMe card
	SSD PCIe, 1x 512 GB M.2 NVMe card
	SSD PCIe, 1x 256 GB M.2 NVMe card
	SSD SATA III, 1024 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
	HDD SATA III, 7,200 rpm, 4,000 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, 2,000 GB, 2.5-inch, business critical
	HDD SATA III, 7,200 rpm, 1,000 GB, 2.5-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
	HDD SATA III, 7,200 rpm, 500 GB, 3.5-inch

Hard disk notes	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)
Drives (optional)	BD Triple Writer SATA ultra slim (tray) DVD-ROM DVD Super Multi DVD Super Multi ultra slim (tray) MultiCard Reader 24in1 USB 2.0 3.5"

## Base unit

Base unit	CELSIUS W580power+
<b>Mainboard</b>	
Mainboard type	D3617
Chipset	Intel® C246
Processor socket	LGA 1151
Processor quantity maximum	1
Supported capacity RAM (max.)	64 GB
Memory slots	4 DIMM (DDR4) ECC/non-ECC
Memory frequency	2,666 MT/s
Memory notes	Dual channel support For dual channel performance, 2 memory modules have to be ordered. Capacity per channel has to be the same. 2666 MHz may be clocked down to 2400 MHz depending on processor and memory configuration
LAN	10/100/1,000 MBit/s Intel® I219LM
BIOS version	AMI Aptio V UEFI Specification 2.6
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	Internal speaker supports audio playback (optional), High Definition audio, 5.1 surround sound
<b>I/O controller on board</b>	
Serial ATA total	8
thereof SATA III	8
thereof eSATA	2 (optional)
Controller functions	Serial ATA III (6 Gbit) NCQ AHCI RAID 0/1/5/10
<b>Interfaces</b>	
Audio: line-in	1
Audio: line-out	1
Front audio: microphone	1
Front audio: headphone	1
Internal speakers	1
USB 2.0 total	5
USB 3.1 Gen1 (USB 3.0) total	3

**Interfaces**

USB 3.1 Gen2 total	5
USB front	2x USB 2.0; 2x USB 3.1 (gen2), 1x USB 3.1 (gen2) Type C; optional: 1x USB 3.1 Type-C (Gen2) via add on card and front adapter bay
USB rear	2x USB 2.0; 3x USB 3.1 (Gen1); 1x USB 3.1 (Gen2); optional: additional 1x USB 3.1 Type C (Gen2) via add on card
USB internal	1x USB 2.0 + 1x USB A 3.1 (Gen2)
VGA	optional: via adapter card
DisplayPort	2
DVI	1 (DVI-D)
Serial (RS-232)	optional: serial port (9pin, 16 byte FIFO, 16550 compatible)
Mouse / Keyboard (PS/2)	2
Ethernet (RJ-45)	1
Parallel	1 (optional) (25pin with EPP and ECP)
eSATA	1 (optional)
Interface Module notes	Anytime USB charge functionality, USB Typ C connector supports up to 15W

**Input device / components**

Input devices (optional)	Keyboard Mouse KBPC PX ECO Mouse M440 ECO Space Explorer USB
Drive bays total	9
2.5-inch internal bays	1
3.5-inch internal bays	4
5.25-inch external bays	2
Drive bay notes	5,25" bays: one bay in HH format, one bay for slim optical disc drive only; internal 3.5" bays: 3.5" drive (screwless) or 2.5" drive (screws; optional screwless); drive cage for external 3.5" bay and internal 2.5" bay: optional

**Slots**

PCI-Express 3.0 x1	2 x ( / ) Full height
PCI-Express 3.0 x4 (mech. x16)	1 x (215 mm / ) Full height
PCI-Express 3.0 x16	1 x (240 mm / ) Full height
Graphics brand name	Intel® HD Graphics P630, Intel® HD Graphics 630
Shared video memory	up to 1,782 MB
TFT resolution (VGA)	1,024 x 768 pixel 1,280 x 1,024 pixel 1,360 x 768 pixel 1,440 x 900 pixel 1,600 x 900 pixel 1,600 x 1,200 pixel 1,680 x 1,050 pixel 1,920 x 1,080 pixel
TFT resolution (DVI)	1,280 x 1,024 pixel 1,360 x 768 pixel 1,440 x 900 pixel 1,600 x 900 pixel 1,680 x 1,050 pixel 1,920 x 1,080 pixel 1,920 x 1,200 pixel

TFT resolution (DisplayPort)	1,280 x 1,024 pixel 1,360 x 768 pixel 1,440 x 900 pixel 1,600 x 900 pixel 1,680 x 1,050 pixel 1,920 x 1,080 pixel 1,920 x 1,200 pixel 2,560 x 1,440 pixel 2,560 x 1,600 pixel 3,440 x 1,440 pixel 3,840 x 2,160 pixel 4,096 x 2,304 pixel
Graphics features	Support for up to three independent displays DirectX® 12 HDCP support OpenCL® 2.0 OpenGL® 4.4 One DisplayPort connector can be converted to DVI-D or HDMI with an optional external adapter For multi monitoring mode, graphics card and integrated graphics run in parallel DisplayPort interface supports Ver. 1.2 incl. Multi-Stream DVI-D interface supports audio output for HDMI monitors
Graphics notes	up to 1 GB dedicated video memory (main memory owned and locked for graphics use) Tested resolutions, depending on display type additional resolutions and frequencies possible Shared memory depending on main memory size and operating system Resolution (color depth up to 32 Bit/pixel) For TFT we recommend using 60Hz

**Electrical values**

Power efficiency note	power supply efficiency at 10% / 20% / 50% / 100% load for 230V: 80% / 87% / 90% / 87%; for 115V: 80% / 87% / 90% / 87%
Rated voltage range	100 V - 240 V
Rated frequency range	50 Hz - 60 Hz
Operating voltage range	90 V - 264 V
Operating line frequency range	47 Hz - 63 Hz
Max. output of single power supply	400 W
Power factor correction/active power	active

**Dimensions / Weight / Environmental**

Dimensions (W x D x H)	180 x 304 x 375 mm 7.09 x 11.97 x 14.76 inch
Operating position	Vertical
Weight	approx. 12 kg
Weight (lbs)	approx. 30.86 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 W580power+
Model	MI6W
Germany	GS (planned)
Europe	CE
USA/Canada	FCC Class B cTUVus
Global	RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronic equipment) Microsoft Operating Systems (HCT / HCL entry / WHQL) ENERGY STAR® in progress

**Compliance**

China	CCC (planned) CCC (depending on configuration) CEL (Chinese energy label) TPM 2.0 for China (optional)
Compliance link	<a href="https://sp.ts.fujitsu.com/sites/certificates">https://sp.ts.fujitsu.com/sites/certificates</a>

**Additional Software**

Additional software (preinstalled)	Adobe® Reader® (pdf reader) McAfee® LiveSafe™ (provides award-winning antivirus protection for your PC and much more. 30 days trial pre-installed) Microsoft Office (1 month trial for new Microsoft® Office 365 customers. Buy Microsoft Office.)
Additional software (optional)	Recovery DVD for Windows® Drivers & Utilities DVD (DUDVD) CyberLink PowerDVD BD (playback software for Blu-ray Disc™) CyberLink PowerDVD DVD (playback software for DVD) Nero Essentials XL Microsoft® Office Professional 2019 Microsoft® Office Home and Business 2019 (A Microsoft Account is required to activate each copy of these products. For purchase and activation only in the region in which it was acquired.)

**Security**

Physical Security	Kensington Lock support Eye for padlock Integrated cabinet lock (optional) Cable Cover (optional; covers and secures the ports and cables on rear side)
System and BIOS Security	Embedded security (TPM 2.0) EraseDisk (optional) Credential Guard Ready and Device Guard Capable (Windows 10, v. 1809; requires 8 GB or more system RAM and SSD PCIe NVME) Boot sector virus protection Write protect option for the Flash EPROM Control of all USB interfaces External USB ports can be disabled separately Control of external interfaces
User Security	User and supervisor BIOS password Hard disk password Access protection via external SmartCard reader (optional) Access protection via internal SmartCard reader (optional) Workplace Protect (secure authentication solution)
Workplace Embedded Tools	Auto BIOS Update via Fujitsu Server Auto BIOS Update via customer server Easy PC Protection

**Manageability**

Manageability technology	DeskUpdate Driver management PXE 2.1 Boot code Wake up from S5 (off mode) Intrusion switch (optional) WoL (Wake on LAN) iAMT 12.0 (depending on processor)
Manageability software	DeskView Client DeskView Instant BIOS Management
DeskView components	BIOS Management incl. Security Inventory Management Driver Management Alarm Management

**Manageability**

Supported standards	DMI (Desktop Management Interface) SMBIOS (System Management BIOS) PXE (Preboot Execution Environment) WMI (Windows Management Instrumentation) WBEM (Web Based Enterprise Management) CIM (Common Information Model)
Manageability link	<a href="http://www.fujitsu.com/fts/manageability">http://www.fujitsu.com/fts/manageability</a>

**Miscellaneous**

	Keyboard on (Special Fujitsu keyboard required) Thermal management Keyboard on with one key (KBPX Eco, KB521) Keyboard on with 2 keys (CTRL+CTRL) with PS2 or special USB keyboards Keyboard on with any key (USB) Extended lifetime 24/7 (limited configurations)
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**Warranty**

Warranty period	3 years (depending on country)
Warranty type	Bring-In / Onsite Service (for countries within region EMEA, for all other countries depending on local regulations)

**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

## Recommended Accessories

**Display P27-8 TS UHD**

The FUJITSU Display P27-8 TS UHD is perfect for multi-monitor use scenarios with its 3840 x 2160 Ultra HD resolution and the thin bezel housing. The monitor has a 78°/178° wide viewing angle and a 100% sRGB color space to deliver you a consistent high picture quality. Features like ECO function, the DisplayView™ IT Suite manageability software as a range of connectivity options meet the requirements of medium- and large-sized businesses.

Order Code:  
S26361-K1610-V160



# More information

In addition to Fujitsu CELSIUS W580power+, 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/products/computing/](http://www.fujitsu.com/global/products/computing/)

**Software**  
[www.fujitsu.com/software/](http://www.fujitsu.com/software/)

More information

Learn more about Fujitsu CELSIUS W580power+, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.  
<http://ts.fujitsu.com>

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