Fujitsu recommends Windows 10 Pro.

**FUJITSU Workstation CELSIUS**

Choose the right hardware to accelerate the software application

<table>
<thead>
<tr>
<th>APPLICATION FIELDS</th>
<th>USAGE SCENARIO</th>
<th>TYPICAL INDUSTRIES</th>
<th>SOFTWARE</th>
<th>TOP REQUIREMENTS</th>
<th>PRODUCTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD</td>
<td>2D and 3D technical drawing of physical objects, parts, and assemblies (Product design, industrial design, modelling, model analysis)</td>
<td>All manufacturers:  • Automotive, Aerospace, etc.</td>
<td>Autodesk (AutoCAD, Inventor)  • Dassault Systèmes (CATIA, 3D EXCITE, DeltaGen, SOLIDWORKS)  • Siemens PLM (NX, Teamcenter)  • PTC (Creo Parametric)</td>
<td>Single-threaded app =&gt; high processor frequencies  • Fast flash drives  • Moderate storage capacity  • Open GL graphics</td>
<td>CELSIUS H  CELSIUS J, W, M  CELSIUS R</td>
</tr>
<tr>
<td>CAE, SIM</td>
<td>Mechanical, thermal and fluid simulations Electronic design simulation</td>
<td>All industries</td>
<td>ANSYS (Fluent, CFX, Mechanical)  • Autodesk (Revit, Moldflow)  • Dassault Systèmes (SIMULIA)  • MSC.Software (Nastran, Patran)  • Siemens PLM (Tecnomatix, Fibersim)</td>
<td>Multi-threaded app =&gt; high number of cores  • Fast flash drives  • Maximum memory  • High storage capacity  • Compute GPUs &amp; 3D graphics</td>
<td>CELSIUS H  CELSIUS J &amp; W  CELSIUS M &amp; R  CELSIUS C</td>
</tr>
<tr>
<td>AEC</td>
<td>2D and 3D planning and construction (incl. BIM) of buildings, factories and infrastructure</td>
<td>• Plants  • Shipbuilding &amp; offshore industries  • Tunnels and bridges  • Urban planning</td>
<td>Autodesk (AutoCAD, Revit)  • ANSYS  • Bentley (Microstation)  • Hexagon (Geosystems, Metrology  • Nemetschek (Allplan)  • Trimble (SketchUp Pro, Tekla BIMsight)</td>
<td>Multi-threaded app =&gt; high number of cores  • Fast flash drives  • High storage capacity  • Open GL graphics</td>
<td>CELSIUS H  CELSIUS W &amp; M  CELSIUS C</td>
</tr>
<tr>
<td>M&amp;E</td>
<td>Content creation, video editing, animation, photo retouching, special effects, design and photorealistic renderings</td>
<td>• Broadcasting  • Film and animation studios  • Agencies  • Marketing</td>
<td>Adobe (Premiere Pro, After Effects, Photoshop)  • Autodesk (Maya, 3ds Max, 3603)  • avid (Media Composer)  • Chaos Group (V-Ray)  • Dassault Systèmes (SCM Surf Design)</td>
<td>Multi-threaded app =&gt; high number of cores  • Fast flash drives  • High storage capacity  • Graphics: 2D and 3D</td>
<td>CELSIUS H  CELSIUS W &amp; M  CELSIUS C</td>
</tr>
<tr>
<td>GIS, O&amp;G</td>
<td>Geos data collection, processing and visualisation</td>
<td>• Defense and government  • Science and research  • Cartography  • Transportation</td>
<td>ESR (ArcGIS)  • Integrate (Geospatial)  • Halliburton (Landmark, Pinnacle)  • Paradigm (Ech2o RTM, Tech)  • Schlumberger (Petrel, ECLIPSE, Omega)</td>
<td>Multi-threaded app =&gt; high number of cores  • Fast flash drives  • Maximum memory  • High storage capacity  • Compute GPUs &amp; 3D graphics</td>
<td>CELSIUS H  CELSIUS W &amp; M  CELSIUS C</td>
</tr>
<tr>
<td>Healthcare</td>
<td>Visualize and simulate biological and chemical systems Electronic Health &amp; Medical Record (EHR, EMR), Personal Health Record (PHR)</td>
<td>• Medical product vendors  • Chemistry and Pharmacology  • Hospitals  • Biotechnology and Laboratory Diagnostics</td>
<td>Mostly in-house developed software like Syngo (Siemens Healthcare)  • Dassault Systèmes: Simulia</td>
<td>Long lifecycle models  • Whisper quiet  • Customization (Made4You)</td>
<td>CELSIUS H  CELSIUS J &amp; W  CELSIUS C  CELSIUS R</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mobile Workstation</th>
<th>Elegant. Mobile. Power.</th>
<th>CELSIUS H:</th>
<th>H780 - 15.6-inch  H980 - 17.3-inch  H970 - 17.3-inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desktop Workstation</td>
<td>Develop, Simulate, Calculate and Visualize your Ideas</td>
<td>CELSIUS J:</td>
<td>JS80, JS50U2 Long Lifecycle</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CELSIUS W:</td>
<td>W580, W580power+, W550 Long Lifecycle</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CELSIUS M:</td>
<td>M770, M740 Long Lifecycle</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CELSIUS R:</td>
<td>R970 (dual-processor)</td>
</tr>
<tr>
<td>Rack Workstation</td>
<td>Ideal for a 1:1 remote access solution</td>
<td>CELSIUS C:</td>
<td>C780, C740 (1U rack workstation)</td>
</tr>
</tbody>
</table>


Develop, Simulate, Calculate and Visualize your Ideas

Ideal for a 1:1 remote access solution
Fujitsu recommends Windows 10 Pro.

<table>
<thead>
<tr>
<th>Series</th>
<th>MOBILE WORKSTATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CELSIUS H</td>
</tr>
<tr>
<td></td>
<td>H780</td>
</tr>
<tr>
<td>Form Factor</td>
<td>39.6 cm (15.6-inch) Full HD, Full HD Premium Toch, UHD/4K</td>
</tr>
<tr>
<td>Weight / liter</td>
<td>Weight: 2.7 kg</td>
</tr>
<tr>
<td>Noise emission</td>
<td>-</td>
</tr>
<tr>
<td>Processor (incl. cores &amp; frequency)</td>
<td>Intel® Xeon® processor E-2100M family (max. 6 cores / 4.6 GHz) Intel® Core™ i7 processor (max. 6 cores / 4.3 GHz)</td>
</tr>
<tr>
<td>Memory</td>
<td>Up to 64 GB, 4 SO DIMM memory slots, DDR4 - 2,400 MHz</td>
</tr>
<tr>
<td>Professional Graphics Cards</td>
<td>NVIDIA® Quadro® P600: 384 CUDA Cores</td>
</tr>
<tr>
<td>Compute Cards</td>
<td>-</td>
</tr>
<tr>
<td>Storage</td>
<td>SSD PCIe NVMe (Standard, Highend, SED) SSD SATA</td>
</tr>
<tr>
<td>Drive bays</td>
<td>-</td>
</tr>
<tr>
<td>Slots</td>
<td>1x DC-in, 2 digital array microphones, 2 internal speakers, 1x USB 3.1 Gen1, 4x USB 3.1 Gen2, 2x USB Type-C™, 1x VGA, 1x HDMI, 1x RJ-45, 1x SmartCard slot, 1x SW card slot, MultiCardReader, 1x Kensington Lock.</td>
</tr>
<tr>
<td>USB</td>
<td>5 in total</td>
</tr>
<tr>
<td>Serial ATA</td>
<td>-</td>
</tr>
<tr>
<td>Power Supply</td>
<td>230 W</td>
</tr>
<tr>
<td>Others</td>
<td>VR-ready Display: anti-glare, magnesium, 250 and 300 cd/m² PalmSecure™: optional, palm vein technology Port Replicator: Thunderbolt or mechanical</td>
</tr>
</tbody>
</table>
### Fujitsu recommends Windows 10 Pro.

#### DESKTOP WORKSTATIONS

<table>
<thead>
<tr>
<th>Series</th>
<th>CELSIUS J</th>
<th>CELSIUS W</th>
<th>W580 und W580power+</th>
<th>W550 Long Lifecycle</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td>J580</td>
<td>J550/2 Long Lifecycle</td>
<td>W580</td>
<td>W550 Long Lifecycle</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>Small Form Factor (SFF)</td>
<td>Small Form Factor (SFF)</td>
<td>Micro Tower</td>
<td>Micro Tower</td>
</tr>
<tr>
<td><strong>Weight / liter</strong></td>
<td>10 liter - single processor</td>
<td>10 liter - single processor</td>
<td>21 liter - single processor</td>
<td>29 liter - single processor</td>
</tr>
</tbody>
</table>

#### Processor (incl. cores & frequency)

- **Series CELSIUS J**
  - Intel® Xeon® processor E-2100G (max. 6 cores / 4.7 GHz)
  - Intel® Xeon® processor E-2100 (max. 4 cores / 5.5 GHz)
  - Intel® Xeon® processor E-2100 (max. 6 cores / 6.6GHz)
  - Intel® Core™ i5 processor (max. 6 cores / 5.5 GHz)
  - Intel® Core™ i3 processor (max. 4 cores / 4.3 GHz)
  - Intel® Xeon® processor E3-1200v5 family (max. 4 cores / 3.6 GHz)

- **Series CELSIUS W**
  - Intel® Xeon® processor E-2100G (max. 6 cores / 4.7 GHz)
  - Intel® Xeon® processor E-2100 (max. 4 cores / 4.5 GHz)
  - Intel® Xeon® processor E-2100 (max. 6 cores / 4.7 GHz)
  - Intel® Core™ i5 processor (max. 6 cores / 4.3 GHz)
  - Intel® Core™ i3 processor (max. 2 cores / 3.7 GHz)

#### Operating System (pre-installed)

- **Series CELSIUS J**
  - Windows 10 Pro
  - Fujitsu recommends Windows 10 Pro.

- **Series CELSIUS W**
  - Windows 10 Pro
  - Fujitsu recommends Windows 10 Pro.

#### Memory

- **Series CELSIUS J**
  - Up to 64 GB, 4 UDIMM memory slots, non-ECC/ECC, DDR4 - 2,666 MHz

- **Series CELSIUS W**
  - Up to 64 GB, 4 UDIMM memory slots, non-ECC/ECC, DDR4 - 2,400 MHz

#### Professional Graphics Cards

- **Series CELSIUS J**
  - Full height graphics cards: NVIDIA® Quadro®: up to P2000
  - AMD Radeon™ Pro WX: up to 5100

- **Series CELSIUS W**
  - Up to 1x high-end 3D graphic card: NVIDIA® Quadro®: up to RTX 4000 (VR-ready)
  - AMD Radeon™ Pro WX: up to 7100

#### Compute Cards

- **Series CELSIUS J**
  - -

- **Series CELSIUS W**
  - -

#### Storage

- **Series CELSIUS J**
  - Intel® Optane Memory

- **Series CELSIUS W**
  - Intel® Optane Memory

#### Drive bays

- **Series CELSIUS J**
  - 3 in total

- **Series CELSIUS W**
  - W580: 5 in total
  - W580power+: 9 in total
  - W550power: 9 in total

#### Slots

- **Series CELSIUS J**
  - Riser cards - 2 in total:
    - 1x PCIe 3.0 x16, 1x PCIe 3.0 x4 (mech. x16)
    - 1x PCIe 3.0 x16 and 1x PCI

- **Series CELSIUS W**
  - 4 in total:
    - 2x PCIe 3.0 x1
    - 1x PCIe 3.0 x4 (mech. x16)
    - 1x PCIe 3.0 x16

#### USB

- **Series CELSIUS J**
  - 12 in total:
    - (2x USB 2.0, 9x USB 3.1 Gen1; optional USB 3.1 Gen2 via add on card)

- **Series CELSIUS W**
  - 13 in total:
    - 6x USB 2.0, 7x USB 3.1 Gen2 via add on card

#### Power Supply

- **Series CELSIUS J**
  - 280 W - max. 92% efficiency

- **Series CELSIUS W**
  - 400 W - VR-ready

#### Others

- **Series CELSIUS J**
  - Minimum 36 months lifecycle

- **Series CELSIUS W**
  - 400 W VR-ready

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**Page 3 of 4**

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Fujitsu recommends Windows 10 Pro.

## DESKTOP WORKSTATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>CELSIUS M</th>
<th>CELSIUS R</th>
<th>CELSIUS C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series</td>
<td>M710</td>
<td>M740 Long Lifecycle</td>
<td>R970</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form Factor</td>
<td>Midi Tower</td>
<td>Big Tower</td>
<td>1U</td>
</tr>
<tr>
<td>Weight / liter</td>
<td>38 liter - single processor</td>
<td>38 liter - dual processor</td>
<td>Single processor</td>
</tr>
<tr>
<td>Noise emission</td>
<td>Whisper quiet: 20 dBA(A)</td>
<td>Whisper quiet: 21 dBA(A)</td>
<td>Whisper quiet: 26 dBA(A)</td>
</tr>
</tbody>
</table>

### Processor (incl. cores & frequency)

- **Intel® Xeon® processor W-2100 family**
  - (max. 10 cores / 4.0 GHz)
- **Intel® Core™ i7-9700X processor family**
  - (max. 10 cores / 3.6 GHz)
- **Intel® Core™ i5-7600 processor family**
  - (max. 6 cores / 3.8 GHz)

### Operating System (pre-installed)

- Windows 10 Pro for Workstations
- Windows 10 Pro
- Windows 10 Pro for Workstations
- Windows 10 Pro

### Memory

- DDR4 - 2,666 MHz
- DDR4 - 2,666 MHz
- DDR4 - 2,133 MHz
- DDR4 - 2,666 MHz

### Professional Graphics Cards

- NVIDIA® Quadro®: up to RTX 6000 (VR-ready)
- AMD Radeon™ Pro WX: up to W7100

### Compute Cards

- NVIDIA Tesla M60

### Storage

- SSD PCIe M.2 NVMe (Highend, card or module)
- SSD SATA (Standard, High Endurance, SED)
- SSD SATA (Standard, Business Critical)

### Drive Bays

- 7 in total:
  - 2 x PCI-Express 3.0 x16
  - 2 x PCI-Express 3.0 x4
  - 2 x PCI-Express 3.0 x1

### Slots

- 8 in total:
  - 4 x PCI-Express 3.0 x16
  - 2 x PCI-Express 3.0 x8
  - 1 x PCI-Express 3.0 x16 (Internal)

### USB

- 10 in total
  - 2x USB 2.0, 4x USB 3.1 Gen1
  - 2x USB 3.1 Gen2

### Power Supply

- 800 W - max. 90% efficiency

### Others

- Minimum lifecycle of 36 months: VR-ready
- Intel® VROC HW key: Standard M.2, Premium M.2

## RACK WORKSTATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>CELSIUS M</th>
<th>CELSIUS R</th>
<th>CELSIUS C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series</td>
<td>M770</td>
<td>M740</td>
<td>C780</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form Factor</td>
<td>Midi Tower</td>
<td>Big Tower</td>
<td>1U</td>
</tr>
<tr>
<td>Weight / liter</td>
<td>38 liter - single processor</td>
<td>49 liter - dual processor</td>
<td>Single processor</td>
</tr>
<tr>
<td>Noise emission</td>
<td>Whisper quiet: 20 dBA(A)</td>
<td>Whisper quiet: 21 dBA(A)</td>
<td>Whisper quiet: 26 dBA(A)</td>
</tr>
</tbody>
</table>

### Processor (incl. cores & frequency)

- **Intel® Xeon® processor E-2100 family**
  - (max. 6 cores / 4.5 GHz)
- **Intel® Core™ i7 processor (max. 6 cores / 4.7 GHz)
- **Intel® Core™ i5 processor (max. 6 cores / 4.3 GHz)
- **Intel® Core™ i3 processor (max. 4 cores / 3.6 GHz)

### Operating System (pre-installed)

- Windows 10 Pro for Workstations
- Windows 10 Pro
- Windows 10 Pro

### Memory

- DDR4 - 2,666 MHz
- DDR4 - 2,666 MHz
- DDR4 - 2,400 MHz

### Professional Graphics Cards

- NVIDIA® Quadro®: up to RTX 6000 (VR-ready)
- AMD Radeon™ Pro WX: up to W7100

### Compute Cards

- NVIDIA Tesla M60

### Storage

- SSD PCIe M.2 NVMe Highend, card or module
- SSD SATA (Standard, High Endurance, SED)
- SSD SATA (Standard, Business Critical)

### Drive Bays

- 8 in total:
  - 1x graphic card (double-width) or 2x graphics cards (single width)
  - 1x graphic card (double-height) or 2x graphics cards (single height)

### Slots

- 3 in total:
  - 1 x PCI-Express 3.0 x16 - 1 x double slot density
  - 1 x PCI-Express 3.0 x8 - 2 x single slot density

### USB

- 5 in total
  - 2x USB 2.0, 3x USB 3.1 Gen1

### Power Supply

- 800 W - max. 90% efficiency

### Others

- Minimum lifecycle of 36 months: VR-ready
- Intel® VROC HW key: Standard M.2, Premium M.2