# Hardware Notes - Creo 1.0 Parametric, Direct and Simulate

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| Platform Support     |   |                                     |  |  |
|----------------------|---|-------------------------------------|--|--|
| Partner              | Operating System  | Operating System levels             |  |  |
|                      | Windows Server 2008 R2 64-bit Edition   | Base OS                             |  |  |
|                      | Windows 7 Professional 64-bit Edition<br>Windows 7 Ultimate 64-bit Edition<br>Windows 7 Enterprise 64-bit Edition | Base OS                             |  |  |
| Microsoft            | Windows 7 Professional 32-bit Edition Windows 7 Ultimate 32-bit Edition Windows 7 Enterprise 32-bit Edition       | Base OS                             |  |  |
|                      | Windows XP Professional x64 Edition   | Base OS,<br>Service Pack 2          |  |  |
|                      | Windows XP Professional Edition;  | Base OS,<br>Service Pack 1, 2 and 3 |  |  |
| NOTES                |   |                                     |  |  |
| Creo 1.0 does not su | pport Sun Solaris 10 or Microsoft Windows Vista   |                                     |  |  |

| System Requirements                 |  |   |  |  |  |
|-------------------------------------|--|---|--|--|--|
|                                     | Operating System   | Recommended ammount                     |  |  |  |
|                                     | Windows Server 2008  | 4GB or higher                           |  |  |  |
| Main Managan (DAM)                  | Windows 7 64-bit   | 4GB or higher                           |  |  |  |
| Main Memory (RAM)                   | Windows 7 32-bit   | 3GB <sup>a</sup>                        |  |  |  |
|                                     | Windows XP x64 (64-bit)  | 3GB or higher                           |  |  |  |
|                                     | Windows XP (32-bit)  | 3GB <sup>b</sup>                        |  |  |  |
| Internal Browser Support            | <ul> <li>Microsoft Internet Explorer 9.0 (with M01)</li> <li>Microsoft Internet Explorer 8.0</li> <li>Microsoft Internet Explorer 7.0</li> <li>Microsoft Internet Explorer 6.0 (SP1 or la Mozilla based browser (embedded with Creo</li> </ul> | ter)<br>1.0)                            |  |  |  |
| Monitor                             | 1280 x 1024 (or higher) resolution support wit   | h 24-bit or greater color               |  |  |  |
| Network                             | Microsoft TCP/IP Ethernet Network Adapter  |   |  |  |  |
| Mouse                               | Microsoft-approved 3-button mouse  |   |  |  |  |
| File systems                        | NTFS   | ·                                       |  |  |  |
| Misc.                               | DVD drive  |   |  |  |  |
| NOTES                               |  |   |  |  |  |
| 32-bit operating systems can physic | ally allocate only 3GB of RAM. RAM greater than 3GB (  | (if installed) will remain un-utilized. |  |  |  |
| For Windows XP you must enable th   | ne /3GB switch in order to utilize up to 3GB.  |   |  |  |  |

# **Limitations of 32-bit Windows platforms**

Due to inherit hardware memory limitations of 32-bit platforms, PTC will no longer offer technical support for "out of memory conditions" on 32bit hardware for Creo 1.0 in cases where /3GB switch is utilized. Customers planning on upgrading to Creo 1.0 must carefully examine whether their current 32-bit hardware will be adequate for their large assembly needs and consider switching to 64-bit hardware.

# **Graphics Information**

For 3D-hardware acceleration, an OpenGL graphics card must be used that has been tested in a PTC-certified configuration. To ensure the compatibility of a graphics driver with Creo 1.0, a PTC certified or supported hardware configuration is recommended. Graphics cards that support at least OpenGL 3.1 are recommended for Creo 1.0.

For users of Direct3D on Windows 7, the March 2009 or later release of the DirectX 10.0 End User Run Time libraries must be installed. Additionally, Medium to High-End graphics cards that fully support Direct3D 10.0 are recommended for adequate performance. Visit the Microsoft website for more information about downloading and installing Direct3D.

## **Dual Monitor Support**

Limited dual monitor support is provided in Creo 1.0. PTC has successfully performed limited testing of some graphics card models from AMD and NVIDIA that support dual monitor capabilities. If your graphics card is certified for Creo 1.0 and provides dual monitor support\*\*, PTC expects that it will run in this mode without issue. PTC will provide limited support to resolve issues arising when running in dual monitor mode, however, the entire solution will not be submitted for formal certification as a complete configuration.

Note: in the event that dual monitor mode fails, we advise use of Span mode as a workaround.

\*\*Please consult with AMD, NVIDIA, or the hardware platform partner to confirm the availability of this functionality with a given graphics card that has been certified with Creo 1.0.

# **Certified and Supported Graphics Cards**

PTC provides Customer Support for all certified and supported graphics cards. Please note that graphics cards are part of a fully-certified or supported configuration (e.g. workstation model, operating system, graphics card, graphics card driver).

PTC does not certify or support graphic cards independently from the configurations in which they are certified or supported. Please refer to the official PTC <u>Platform Support</u> web page for specific hardware partners and available configurations.

Additional certified and supported workstation hardware information will be added to PTC <u>Platform Support</u> web page as our hardware partners complete certifications in preparation for production Creo 1.0 shipment.

| Workstation Vendor | Certified and Supported Graphics Cards |                           |  |  |
|--------------------|--|---------------------------|--|--|
|                    | AMD (ATI)                              | NVIDIA                    |  |  |
| <u>Dell</u>        | Yes                                    | Yes                       |  |  |
| <u>Fujitsu</u>     | Yes                                    | Yes                       |  |  |
| <u>HP</u>          | Yes                                    | Yes                       |  |  |
| Lenovo             | Yes                                    | Yes                       |  |  |
| NEC                | Currently none available.              | Currently none available. |  |  |
| SUN                | NOT SUPPORTED                          |                           |  |  |

# **Supported Peripherals and Accessories**

| 3D Controllers for Creo 1.0  Please refer to http://www.3dconnexion.com/software/ for specific driver information. |                  |  |  |  |
|--|------------------|--|--|--|
| SpaceNavigator   | Certified        |  |  |  |
| SpaceNavigator for Notebooks   | <u>Certified</u> |  |  |  |
| SpaceExplorer 3DX  | <u>Certified</u> |  |  |  |
| SpacePilot 3DX   | <u>Certified</u> |  |  |  |

#### **Plotters and Printers**

Creo 1.0 supports HPGL, HPGL/2 and PostScript standard plotting formats. In addition, Creo 1.0 supports the Microsoft Print Manager.

If you do not see your printer/plotter on the list below, please refer to the Introduction and Support Policy.

#### Emulation

Various manufacturers produce printers and plotters that may be compatible with or emulate a device that is supported by PTC. Please be

aware that such devices are not tested by PTC and therefore, may not produce correct plotted output. If you are using a device which emulates a printer or plotter listed in the tables below, PTC Technical Support will attempt to provide support by using a similar certified device. Any support pertaining to compatibility with a supported plotter or the correctness of emulation can only be made by the manufacturers of the device in question, and not by PTC.

The Microsoft Printer Manager creates an emulation of what appears on the screen and attempts to print this. Since this emulation is between the Print Manager driver and the printer/plotter driver, quality and results may vary. You may choose to try a certified PTC printer/plotter driver, which has been optimized for high quality printing.

| Plotters                    |                  |  |  |  |
|-----------------------------|------------------|--|--|--|
| HP T1200                    | <u>Certified</u> |  |  |  |
| HP DesignJet 1055CM+        | Certified        |  |  |  |
| HP DesignJet 800PS          | Certified        |  |  |  |
| HP DesignJet 5500PS         | Certified        |  |  |  |
| HP DesignJet copier cc800PS | Certified        |  |  |  |
| HP DesignJet 4000           | Certified        |  |  |  |
|                             | Printers         |  |  |  |
| HP DeskJet 1220cps          | <u>Certified</u> |  |  |  |
| HP color InkJet cp1700ps    | Certified        |  |  |  |
| HP business InkJet 2600dn   | <u>Certified</u> |  |  |  |

## **Supported MCAD Systems**

You can integrate several MCAD systems with Creo 1.0

| Platforms                    | Creo Elements/Direct (all languages) | CATIA (English only) | Unigraphics (English only) |  |  |
|------------------------------|--------------------------------------|----------------------|----------------------------|--|--|
| 32-bit Windows XP, Windows 7 | 18.0                                 | n/a                  | NX6                        |  |  |
| 64-bit Windows XP, Windows 7 | 18.0                                 | n/a                  | NX6                        |  |  |

# **Supported Finite Element Solvers**

You can integrate several Finite Element Solvers with Creo 1.0 for use in FEM mode. The following table lists the supported Finite Element Solvers and platforms.

| Platforms                    | NASTRAN | ANSYS |
|------------------------------|---------|-------|
| 32-bit Windows XP, Windows 7 | 2008    | 12.0  |
| 64-bit Windows XP, Windows 7 | 2008    | 12.0  |

## **Platform Support for Data Exchange**

| Processor | Format | - | Platform |
|-----------|--------|---|----------|
|-----------|--------|---|----------|

|                   |  |     | 32-bit Windows XP<br>and Windows 7 | 64-bit Windows XP<br>and Windows 7 |
|-------------------|--|-----|------------------------------------|------------------------------------|
|                   | Image Formats  |     |                                    |                                    |
| ВМР               | *.bmp – Edit via Image Editor, used in style feature as trace sketch, export parts and assemblies via Distributed Pro/BATCH  | I/E | Yes                                | Yes                                |
| EPS               | *.eps – Save a Copy of parts and assemblies, export parts and assemblies via Distributed Pro/BATCH   | Е   | Yes                                | Yes                                |
| GIF               | *.gif – import via Image Editor, used in style feature as trace sketch   | ı   | Yes                                | Yes                                |
| HDR               | *.hdr – import via Image Editor  | ı   | Yes                                | Yes                                |
| JPEG              | *.jpg – Edit via Image Editor, used in style feature as trace sketch, Save a Copy of parts and assemblies, export parts, assemblies and drawings via Distributed Pro/BATCH | I/E | Yes                                | Yes                                |
| PDF               | *.pdf – Save a Copy of parts, assemblies and drawings, export parts and assemblies via Distributed Pro/BATCH   | Е   | Yes                                | Yes                                |
| Picture           | *.pic – Save a Copy of parts, assemblies and drawings  | Е   | Yes                                | Yes                                |
| PNG               | *.png – Edit via Image Editor, used in style feature as trace sketch   | I/E | Yes                                | Yes                                |
| PTC Bumpmap       | *.tx1 – Edit via Image Editor  | I/E | Yes                                | Yes                                |
| PTC Color Texture | *.tx4 – Edit via Image Editor, used in style feature as trace sketch   | I/E | Yes                                | Yes                                |
| PTC Decal         | *.tx3 – Edit via Image Editor, used in style feature as trace sketch   | I/E | Yes                                | Yes                                |
| PTC Image         | *.imf – Edit via Image Editor, used in style feature as trace sketch   | I/E | Yes                                | Yes                                |
| RGB               | *.rgb – Edit via Image Editor, used in style feature as trace sketch   | I/E | Yes                                | Yes                                |
| RLA               | *.rla - Edit via Image Editor, used in style feature as trace sketch   | I/E | Yes                                | Yes                                |
| Session Texture   | *.mem – Import via Image Editor  | ı   | Yes                                | Yes                                |
| Shaded Image      | *.shd – Edit via Image Editor, Save a Copy of parts and assemblies   | I/E | Yes                                | Yes                                |
| SHIMA-SEIKI       | *.pic – Edit via Image Editor, used in style feature as trace sketch   | I/E | Yes                                | Yes                                |
| TGA               | *.tga – Edit via Image Editor, used in style feature as trace sketch   | I/E | Yes                                | Yes                                |
| TIFF              | *.tif – Edit via Image Editor, used in style feature as trace sketch, Save a Copy of parts, assemblies and drawings, export parts and assemblies via Distributed Pro/BATCH | I/E | Yes                                | Yes                                |
|                   | 2D Formats   |     |                                    |                                    |
| Adobe Illustrator | *.ai   | T   | Yes                                | Yes                                |
| CGM               | *.cgm  | I/E | Yes                                | Yes                                |
| DWG               | *.dwg  | I/E | Yes                                | Yes                                |
| DXF               | *.dxf  | I/E | Yes                                | Yes                                |
| IGES              | *.igs  | I/E | Yes                                | Yes                                |
| Medusa            | *.s* – Format generated by UNIX on export  *.she – Format generated by Windows on export  *.asc – (import)   | I/E | Yes                                | Yes                                |
| PDF               | *.pdf – Direct drawing export  | Е   | Yes                                | Yes                                |
| ProductView       | *.ed (structure) & *.plt (drawing)  *.edz (compressed structure and drawings)  *.pvs (structure) & *.plt (drawing)  *.pvz (packaged structure and drawings)                | Е   | Yes                                | Yes                                |
| SET               | *.set  | Е   | Yes                                | Yes                                |
| STEP              | *.stp – (import/export) *.step – (import)  | I/E | Yes                                | Yes                                |
| Stheno            | *.tsh  | I/E | Yes                                | Yes                                |
|                   | 3D Formats   |     |                                    |                                    |
| ACIS              | *.acs  | I/E | Yes                                | Yes                                |
| Autodesk Inventor | *.iam, *.ipt<br>Requires installation of and licensing for Autodesk Inventor   | I   | Yes                                | Yes                                |

| CATIA V4             | *.model – (import/export)   |          |     |     |
|----------------------|---|----------|-----|-----|
|                      | *.exp, *.session – (import)   | I/E      | Yes | No  |
|                      | Requires Interface for CATIA II license   |          |     |     |
| CATIA V5             | *.CATPart   |          |     |     |
|                      | *.CATProduct *.cgr - Facet Only   | I/E      | Yes | Yes |
|                      | Requires Interface for CATIA V5 license   |          |     |     |
| DWG                  | *.dwg – with embedded ACIS  |          | Yes | Yes |
| DXF                  | *.dxf – with embedded ACIS  | 1        | Yes | Yes |
| Granite              | *.g   | I/E      | Yes | Yes |
| JT                   | *.jt  |          |     |     |
|                      | Requires Interface for JT license   | I/E      | Yes | Yes |
| IBL                  | *.ibl   | ı        | Yes | Yes |
| ICEM                 | *.icm   | I        | Yes | Yes |
| IGES                 | *.igs – (import/export)   | I/E      | Yes | Yes |
|                      | *.iges – (import)   |          |     |     |
| Neutral              | *.neu   | I/E      | Yes | Yes |
| Optegra visualize    | *.gbf Facet Only  | Е        | Yes | Yes |
| Parasolid 3D         | *.xmt, *.xmt_txt, *.x_t, *.xmt_neu, *.x_n *.xmt_bin, *.x_b - (import) *.x_t - (export)                  | I/E      | Yes | Yes |
| PDF                  | *.pdf – Direct model export   | Е        | Yes | Yes |
| Points               | *.pts   | ı        | Yes | Yes |
| Pro/DESKTOP          | *.des   |          | Yes | Yes |
|                      | *.pdt   | '        | 165 | 168 |
| Creo Elements/View & | *.ed (structure) & *.ol (models)  |          |     |     |
| Creo View            | *.edz (compressed structure and models) *.pvs (structure) & *.ol (models)                               | I/E      | Yes | Yes |
|                      | *.pvz (packaged structure and models)   |          |     |     |
| Render               | *.slp – Facet Only  | Е        | Yes | Yes |
| Rhino                | *.3dm   | <u> </u> | Yes | Yes |
| SET                  | *.set   | I/E      | Yes | Yes |
| SolidWorks           | *.sldprt, *.sldasm  |          |     | V   |
|                      | Requires installation of SolidWorks or SolidWorks Explorer and a license of SolidWorks.                 | I        | Yes | Yes |
| STEP                 | *.stp – (import/export)   | I/E      | Yes | Yes |
|                      | *.step – (import)   | -        |     |     |
| STL                  | *.stl – Facet Only  | I/E      | Yes | Yes |
| U3D                  | *.u3d   | Е        | Yes | Yes |
| Unigraphics          | *.prt (UG format) Requires UG license and installation  | I/E      | Yes | Yes |
| VDA                  | *.vda   | I/E      | Yes | Yes |
| VRML                 | *.wrl – Facet Only  | I/E      | Yes | Yes |
| Wavefront            | *.obj   | ı/L      | Yes | Yes |
| vavenoni             |   | <u> </u> | 163 | 163 |
|                      | ECAD Formats  |          |     |     |
| Allegro              | *.mdb – For board outline files   |          |     |     |
|                      | *.mdc – For component placement files   | I/E      | Yes | Yes |
| 5 4 7 W              | *.mdf – For footprint files, such as the ones in component outline libraries                            |          |     |     |
| DAZIX                | *.edn – Neutral file of the board outline and component placement. Dazix refers to this as a core file. | I/E      | Yes | Yes |
|                      | *.edp – Profile file that contains component outlines. Dazix refers to this as a library file           | 1/∟      | 162 | 165 |
| EDMD                 | *.idx   | I/E      | Yes | No  |
| IDF                  | *.emn – (import/export)   |          |     |     |
|                      | *.emp – library file (import)   | I/E      | Yes | Yes |
| Neutral              | *.nwf   | I/E      | Yes | Yes |
| Routed Systems       | *.xml   |          | Yes | Yes |
| Designer             | L   | ·        |     |     |
| Visula               | *.evs   | I/E      | Yes | Yes |
| NOTES                |   |          |     |     |

Object Linking and Embedding (OLE) may provide additional format support but is dependent on operating system, installed software components, and third-party support for OLE.