# Hardware Notes - Creo 2.0

Parametric, Direct, Layout, Schematics, Options Modeler, Simulate

# **Table of Content**

Last updated: April 10, 2014

- Platform Support
- System Requirements
- Graphics Information
- <u>Certified and Supported Graphics Cards</u>
- Desktop Virtualization Environment Support
- Supported Peripherals and Accessories
- Supported MCAD Systems
- Supported Finite Element Solvers
- Platform Support for Data Exchange

Platform Support				
Partner	Operating System	Operating System levels		
	Windows Server 2008 R2 64-bit Edition*	Base OS		
	Windows 8.1 32 and 64-bit Edition** Windows 8.1 Pro 32 and 64-Edition**	Base OS		
	Windows 8 32 and 64-bit Edition*** Windows 8 Pro 32 and 64-Edition***	Base OS		
Microsoft	Windows 7 Professional 32 and 64-Edition Windows 7 Ultimate 32 and 64-Edition Windows 7 Enterprise 32 and 64-Edition	Base OS, Service Pack 1		
	Windows XP Professional x64 Edition	Base OS, Service Pack 2		
	Windows XP Professional Edition;	Base OS, Service Pack 1, 2 and 3		
NOTES				
* Windows Server 20	008 is NOT supported for Creo Schematics			
** Windows 8.1 supp	oort added starting with Creo 2.0 release M100 and later			
*** Windows 8 suppo	ort added starting with Creo 2.0 release M030 and later			

	System Requirements			
	Operating System Recommended amo			
	Windows Server 2008 R2	4GB or higher		
	Windows 8 and 8.1 64-bit	4GB or higher		
Main Manani (DAM)	Windows 8 and 8.1 32-bit	3GB <sup>a</sup>		
	Windows 7 64-bit	4GB or higher		
	Windows 7 32-bit	3GB <sup>a</sup>		
	Windows XP x64 (64-bit)	3GB or higher		
	Windows XP (32-bit)	3GB <sup>⊳</sup>		
Internal Browser Support	<ul> <li>One of the following:</li> <li>Microsoft Internet Explorer 11.0<sup>d</sup></li> <li>Microsoft Internet Explorer 10.0<sup>c</sup></li> <li>Microsoft Internet Explorer 9.0</li> <li>Microsoft Internet Explorer 8.0</li> <li>Microsoft Internet Explorer 7.0</li> <li>Microsoft Internet Explorer 6.0 (SP1 or later Mozilla based browser (embedded with Creo 2.0</li> </ul>			
Monitor	1280 x 1024 (or higher) resolution support with 2	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				
<sup>a</sup> 32-bit operating systems can physically a	allocate only 3GB of RAM. RAM greater than 3GB (if i	nstalled) will remain un-utilized.		
<sup>b</sup> For Windows XP you must enable the /30				
<sup>°</sup> IE 10.0 is supported on Creo 2.0 M080 a				
<sup>d</sup> IE 11.0 is supported on Creo 2.0 M100 a	nd above on Windows 7, 8, and 8.1.			

### 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 2.0 in cases where /3GB switch is utilized. Customers planning on upgrading to Creo 2.0 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 2.0, a PTC certified or supported hardware configuration is recommended. Graphics cards that support at least OpenGL 3.1 are recommended for Creo 2.0.

PTC recognizes that customers can benefit from using latest graphics driver and performance optimizations and improvements made by PTC's Graphics Hardware Partners. With new workstations being continuously certified by PTC, the most current graphics drivers used in the certification process can now be re-applied to previously certified configurations, as long as the configuration belongs to the same combination of workstation and graphics hardware families.

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 2.0. 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 2.0 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 2.0.

### **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 2.0 shipment.

Workstation Vendor	Certified and Supported Graphics Cards				
	AMD (ATI)	NVIDIA	INTEL		
Dell	Yes	Yes	No		
<u>Fujitsu</u>	Yes	Yes	No		
<u>HP</u>	Yes	Yes	Yes		
IBM	Currently none available	Yes	No		
Lenovo	Yes	Yes	Yes		
<u>Toshiba</u>	Currently none available	Yes	No		

#### **Desktop Virtualization Environment Support**

PTC has certified the following PTC Creo Applications to work in Virtualized Desktop Environments:-

- PTC Creo 2.0 Parametric M060 and later
- PTC Creo 2.0 Direct M060 and later
- PTC Creo 2.0 Layout M060 and later
- PTC Creo 2.0 Simulate M060 and later
- PTC Creo 2.0 Options Modeler M060 and later

Please refer to the official PTC Platform Support web page for specific hardware partners and available configurations.

## **Supported Peripherals and Accessories**

<b>3D Controllers for Creo 2.0</b> Please refer to <u>http://www.3dconnexion.com/service/drivers.html</u> for specific driver information.					
Device 3DxSoftware version Status					
SpaceExplorer	3.16.1	Certified			
SpaceMouse Pro	3.16.1	Certified			
SpaceNavigator	3.16.1	Certified			
SpaceNavigator for Notebooks	3.16.1	Certified			
SpacePilot Pro	3.16.1	Certified			

### **Plotters and Printers**

Creo 2.0 supports HPGL, HPGL/2 and PostScript standard plotting formats. In addition, Creo 2.0 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	Certified
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	Certified
HP color InkJet cp1700ps	Certified
HP business InkJet 2600dn	Certified

### Supported MCAD Systems

You can integrate several MCAD systems with Creo 2.0

Platforms	Creo Elements/Direct (all languages)	CATIA (English only)	Unigraphics (English only)
32-bit Windows XP, Windows 7	18.1	n/a	NX7
64-bit Windows XP, Windows 7	18.1	n/a	NX7

### Supported Finite Element Solvers

You can integrate several Finite Element Solvers with Creo 2.0 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	2012	14.5*				
64-bit Windows XP, Windows 7 2012 14.5*						
NOTES						
ANSYS 13.0 supported for Creo 2.0 F000-M040. ANSYS 14.5 supported for Creo 2.0 M050 and above.						

### Platform Support for Data Exchange

		ш	Platform	
Processor	Format	Import / Export	32-bit Windows XP and Windows 7	64-bit Windows XP, Windows 7 and Windows Server 2008 R2
	Image Formats			
BMP	*.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	Ι	Yes	Yes
HDR	*.hdr – import via Image Editor	Ι	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	Ι	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	Ι	Yes	Yes
CGM	*.cgm	I/E	Yes	Yes

DXF         i.dd         UE         VES         VES <th>DWG</th> <th>*.dwg</th> <th>I/E</th> <th>Yes</th> <th>Yes</th>	DWG	*.dwg	I/E	Yes	Yes
Medusa     s. <sup>5</sup> – Format generated by UNIX on export t.she – Format generated by Windows on export t.she – Format generated by Windows on export t.she – Commat generated by Windows on export t.she – Commat generated by Windows on export t.she – Commat generated by Windows on export t.she – Compressed structure and drawings) t.et (compressed structure and drawings) t.et (compressed structure and drawings) t.et (composed structure and drawings) t.et (mport) t.stp – (import/seport) t.stp – (import/seport) t.cATPratt -CATPratt -CATPratt -CATPratt -CATPratt -CATProtot t.stp – (import/seport) t.stp – (import/seport)	DXF	*.dxf	I/E	Yes	Yes
*.she – Formit generated by Windows on export         //E         Yes         Yes           PDF         '.pdf – Direct drawing expont         E         Yes         Yes           Croo View         ed (crouncles & tpl (crawing) ".pw (packaged structure and drawings)         E         Yes         Yes           Toro Elements/View & ed (crouncles & tpl (crawing) ".pw (packaged structure and drawings)         E         Yes         Yes           STEP         '.stp – (inport/isport)         I/E         Yes         Yes           Steno         I.stp – (inport/isport)         I/E         Yes         Yes           Autodesk Inventor         I.stp - (inport/isport)         I/E         Yes         Yes           Autodesk Inventor         I.stp - (inport/isport)         I/E         Yes         Yes           Autodesk Inventor         I.gequires Installation of and licensing for Autodesk Inventor         I         Yes         Yes           CATIA V4         '.mooti-Informotexport)         I/E         Yes         Yes         Yes           CATIA V5         '.CATProduct '.cGATProduct '.cgr - Facet Only         I/E         Yes         Yes           CATIA V5         '.dd - with embedded ACIS         I         Yes         Yes           GES         '.dg - (inport/export)         <	IGES		I/E	Yes	Yes
Cree Elements/View & i ed (structure) & 'ph ((frawing)) . ed (structure) & 'ph ((frawing)) . pyx (structure) & 'ph ((fra	Medusa	*.she – Format generated by Windows on export	I/E	Yes	Yes
Creo Elements/View & ied (structure) & 'pti (drawing) . edd (compressed structure) and drawings) . pyx (structure) & 'pti (drawing) . p	PDF		Е	Yes	Yes
*.step - (import)         //E         /YE         YEs         YEs           Stheno         1.tsh         //E         Yes         Yes         Yes           ACIS         *.acs         //E         Yes         Yes         Yes           ACIS         *.acs         //E         Yes         Yes         Yes           ALIO dekt Inventor         *.lam, *.jpt         Requires installation of and licensing for Autodesk Inventor         I         Yes         Yes           CATIA V4         *.model - (import)         //E         Yes         Yes         Yes           CATIA V5         *.CATProduct         *.cssion - (import)         //E         Yes         Yes         Yes           CATIA V5         *.CATProduct         *.cssion - (import)         //E         Yes         Yes         Yes           DVG         *.dxd - with embedded ACIS         I         Yes         Yes         Yes         Yes           Granite         *.g         .g.g.         .import/sport)         //E         Yes         Yes         Yes           IGE         .idl         .idl         .idl         Yes         Yes         Yes         Yes           IGES <td.igs (import="" -="" sport)<="" td="">         .idl</td.igs>		*.ed (structure) & *.plt (drawing) *.edz (compressed structure and drawings) *.pvs (structure) & *.plt (drawing)	E	Yes	Yes
Stheno       1.tsh       UE       Yes       Yes       Yes         ACIS       .acs       .utodesk Inventor       .iam, ".ipt       Requires installation of and licensing for Autodesk Inventor       I       Yes       Yes       Yes         ActIdedsk Inventor       .iam, ".ipt       Requires installation of and licensing for Autodesk Inventor       I       Yes       Yes       Yes         CATIA V4       *.model - (import/sport)       .exp, *.session - (import)       I/E       Yes       Yes       No         Requires Interface for CATIA II license       I/E       Yes       Yes       Yes       Yes         DWG       .dwg - with embedded ACIS       I       Yes       Yes       Yes       Yes         DXF       .dxd - with embedded ACIS       I       Yes       Yes       Yes       Yes         DXF       .dxd - with embedded ACIS       I       Yes       Yes       Yes       Yes       Yes         IBL       .ibl       .ibl       I       Yes       Yes       Yes       Yes         IGES       *.igs - (import/sport)       .ivE       Yes       Yes       Yes       Yes         Not       .ibl       .icenoticle avisualize       .igbf Facat Only       IE	STEP		I/E	Yes	Yes
ACIS       .acs       I/E       Yes       Yes       Yes         Autodesk Inventor       i.am, *ipt       requires installation of and licensing for Autodesk Inventor       I       Yes       Yes         CATIA V4       "model – (import/export)       "expires installation of and licensing for Autodesk Inventor       I       Yes       No         CATIA V5       ".CATPart       ".CATPart       I/E       Yes       Yes        cort - Facet Only       Requires Interface for CATIA V5 license       I       Yes       Yes         DWG       ".dwg – with embedded ACIS       I       Yes       Yes       Yes         Granite       :g       I/E       Yes       Yes       Yes         GT       .idm       -idt embedded ACIS       I       Yes       Yes         IZE       .idm       .idm       I       Yes       Yes       Yes         IGE       .idm       .idm       I       Yes       Yes       Yes         IGES       .igs - (import/export)       I/E       Yes       Yes       Yes         PDF       .pdf Facet Only       .cm       Yes       Yes       Yes         PDF       .pdf - Direct model export       I/E       Yes       Yes <td>Stheno</td> <td></td> <td>I/E</td> <td>Yes</td> <td>Yes</td>	Stheno		I/E	Yes	Yes
ACIS       .acs       I/E       Yes       Yes       Yes         Autodesk Inventor       i.am, *ipt       requires installation of and licensing for Autodesk Inventor       I       Yes       Yes         CATIA V4       "model – (import/export)       "expires installation of and licensing for Autodesk Inventor       I       Yes       No         CATIA V5       ".CATPart       ".CATPart       I/E       Yes       Yes        cort - Facet Only       Requires Interface for CATIA V5 license       I       Yes       Yes         DWG       ".dwg – with embedded ACIS       I       Yes       Yes       Yes         Granite       :g       I/E       Yes       Yes       Yes         GT       .idm       -idt embedded ACIS       I       Yes       Yes         IZE       .idm       .idm       I       Yes       Yes       Yes         IGE       .idm       .idm       I       Yes       Yes       Yes         IGES       .igs - (import/export)       I/E       Yes       Yes       Yes         PDF       .pdf Facet Only       .cm       Yes       Yes       Yes         PDF       .pdf - Direct model export       I/E       Yes       Yes <td></td> <td>3D Formats</td> <td><u> </u></td> <td></td> <td></td>		3D Formats	<u> </u>		
Autodesk Inventor     i am, *.ipt Requires installation of and licensing for Autodesk Inventor     I     Yes     Yes       CATIA V4     *.model – (import/export) *.exp, *.ession – (import) Requires Interface for CATIA III license     I/E     Yes     No       CATIA V5     *.CATPart .CATPoduct     I/E     Yes     Yes     Yes       CATIA V5     *.CATPart .CATPoduct     I/E     Yes     Yes     Yes       DWG     .dwg – with embedded ACIS     I     Yes     Yes       DXF     .d.d- with embedded ACIS     I     Yes     Yes       QFanite     1     Yes     Yes     Yes       JT     .jt     Requires Interface for JT license     I/E     Yes     Yes       IBL     i.bl     I     Yes     Yes     Yes       IGES     .igs - (import/export)     I/E     Yes     Yes       Yes     .equires Interface for JT license     I/E     Yes     Yes       IGES     .igs - (import/export)     I/E     Yes     Yes       Yes     .equires (mport/export)     I/E     Yes     Yes       Porter addial 3D     *.xmt, *.xmt_neu, *.x_n *.xmt_bin, *.x_b - (import)     I/E     Yes       Yes     .pdf Facet Only     I/E     Yes     Yes       Creo Elements/View & ted (s				Vee	Vaa
Requires installation of and licensing for Autodesk Inventor         I         Yes         Yes           CATIA V4         ':model - (import/export) ':exp, ':session - (import) Requires Interface for CATIA II license         I/E         Yes         No           CATIA V5         ':CATProduct ':CATProduct' ':CATProduct' ':CATProduct' ':CATProduct         I/E         Yes         Yes         Yes           DWG         ':CATProduct ':CATProduct         I/E         Yes         Yes         Yes           DWG         ':CATProduct ':CATProduct         I/E         Yes         Yes         Yes           DWG         ':CATProduct ':CAT - Sact Only         I         Yes         Yes         Yes           DWG         ':daf - with embedded ACIS         I         I         Yes         Yes           Granite         '.g         I/E         Yes         Yes         Yes           IBL         ':bit         I:le         Yes         Yes         Yes         Yes           Neutral         '.neu         I/E         Yes         Yes         Yes         Yes           Potegra visualize         '.gbf Facet Only         I/E         Yes         Yes         Yes         Yes           Portidi 3D         '.x.t - (export)         '.put, "x.mt, "x.mt,			1/⊏	162	162
CATIA V4       *.model - (import/export) rexp.*.session - (import) Requires Interface for CATIA II license       VE       Yes       No         CATIA V5       *.CATPart *.CATPart       VE       Yes       Yes       Yes         CATIA V5       *.CATPart *.CATPartduct       VE       Yes       Yes       Yes         DWG       *.dwg-with embedded ACIS       1       Yes       Yes       Yes         DXF       *.dxf - with embedded ACIS       1       Yes       Yes       Yes         JT       *.dxf - with embedded ACIS       1       Yes       Yes       Yes         JT       *.id       Requires Interface for JT license       I/E       Yes       Yes       Yes         IBL       *.ibi       1       Yes       Yes       Yes       Yes       Yes         IGES       *.ige - (import/export)       I/E       Yes       Yes       Yes       Yes       Yes         Polptegra visualize      gbf Facet Only       I/E       Yes       Yes       Yes       Yes       Yes       Yes         PDF       *.pdf - Direct model export       E       Yes	Autodesk inventor		I	Yes	Yes
*.CATProduct Requires Interface for CATIA V5 licenseJFVEYesYesYesDWG*.dwg - with embedded ACISIIYesYesDXF.d.d. – with embedded ACISIIYesYesGranite*.gJEYesYesYesGranite*.gIIYesYesYesJT*.g.iblIIYesYesYesIBL*.iblIYesYesYesYesIGES*.iges - (import/export)IIYesYesYesNeutral*.neuUEYesYesYesOptegra visualize0.ptf Facet OnlyEYesYesParasolid 3D*.xmt, *.mt_bt, *.x.t, *.xmt_neu, *.x.n *.xmt_bin, *.x.b - (import)I/EYesYesPDF*.pdf - Direct model exportIYesYesYesPointsptsd(indels)IYesYesYesCreo View*.ed (structure) & *.ol (models)IYesYesYesSolidWorks*.slip - Facet OnlyEYesYesYesSolidWorks*.slip - facet OnlyIYesYesYesSTL*.stal-facet OnlyI/EYesYesYesSTL*.stal-facet OnlyI/EYesYesYesUnigraphics*.gtor(IG format)I/EYesYesYesSTL*.stal-facet OnlyI/EYesYesYesVDA	CATIA V4	*.model – (import/export) *.exp, *.session – (import)	I/E	Yes	No
DWG         *.dwg – with embedded ACIS         I         Yes         Yes           DXF         *.dxf – with embedded ACIS         I         Yes         Yes           Granite         *.g         I/E         Yes         Yes           JT         *.jt         Requires Interface for JT license         I/E         Yes         Yes           BL         *.ibl         I         Yes         Yes         Yes           IGES         *.ige – (import/export)         I/E         Yes         Yes           Neutral         *.neu         I/E         Yes         Yes           Optegra visualize         *.gbf Facet Only         I/E         Yes         Yes           PDF         *.neu         .neu, *.x_n *.xmt_bin, *.x_b – (import)         I/E         Yes         Yes           PDF         .pdf – Direct model export         E         Yes         Yes         Yes           Points         *.pdf sci (structure) & *.ol (models)         .ed (structure) & *.ol (models)         I/E         Yes         Yes           Render         *.slp – Facet Only         .ed (structure and models)         I/E         Yes         Yes           Stieb – (import/export)         .ed(structure) & *.ol (models)         .ed(structure) & *.ol (mod	CATIA V5	*.CATProduct *.cgr - Facet Only	I/E	Yes	Yes
Granite     '.g     I/E     Yes     Yes       JT     ',it     Requires Interface for JT license     I/E     Yes     Yes       IBL     '.ibi     I     Yes     Yes     Yes       IGES     '.igs - (import/export)     I     Yes     Yes       Neutral     'neu     I/E     Yes     Yes       Optegra visualize     '.gbf Facet Only     IE     Yes     Yes       Parasolid 3D     'xmt, 'xmt Lxt, 'x, 'xmt_neu, 'x_n 'xmt_bin, 'x_b - (import)     I/E     Yes       Yes     'ages - (import)     I/E     Yes     Yes       PDF     '.pdf - Direct model export     E     Yes     Yes       PDF     '.pdf - Direct model export     E     Yes     Yes       'pvs (structure) & '.ol (models)     '.ed (structure) & *.ol (models)     I/E     Yes       'pvs (structure) & *.ol (models)     '.pvs (structure) & *.ol (models)     I/E     Yes       'spis     '.add     I     Yes     Yes       SolidWorks     '.sldprt, '.sldasm     I     Yes     Yes       Stab     '.sldprt, '.sldasm     I     Yes     Yes       Stab     '.stap - (import)     I/E     Yes     Yes       Stab     '.stap - (import)     I/E     Yes </td <td>DWG</td> <td>•</td> <td>Ι</td> <td>Yes</td> <td>Yes</td>	DWG	•	Ι	Yes	Yes
JT         ',it Requires Interface for JT license         //E         Yes         Yes           IBL         ',ib         I         Yes         Yes         Yes           IGEM         ',ib         I         Yes         Yes         Yes           IGES         ',igs - (import/export)         I/E         Yes         Yes         Yes           Neutral         ',neu         I/E         Yes         Yes         Yes           Optegra visualize         ',gbf Facet Only         E         Yes         Yes           Parasolid 3D         *.xmt, *.xmt, txt, *.x.t, *.x.n *.x.mt_bin, *.x_b - (import)         I/E         Yes         Yes           PDF         *.pdf - Direct model export         E         Yes         Yes         Yes           Points         *.pts         I         Yes         Yes         Yes         Yes           .ed (structure) & *.ol (models)         *.ed (structure) & *.ol (models)         I/E         Yes         Yes           .ed/downks         *.ed (ormpressed structure and models)         *.pvz (packaged structure and models)         I/E         Yes         Yes           SolidWorks         *.silp - Facet Only         E         Yes         Yes         Yes           STL	DXF	*.dxf – with embedded ACIS	Ι	Yes	Yes
JT       'jt Requires Interface for JT license       I/E       Yes       Yes         IBL       'i.bl       1       Yes       Yes       Yes         ICEM       '.icm       1       Yes       Yes       Yes         IGES       '.igs - (import/export)       I/E       Yes       Yes       Yes         Neutral       *.neu       I/E       Yes       Yes       Yes         Optegra visualize       '.gbf Facet Only       E       Yes       Yes         Parasolid 3D       *.xmt, *.xmt, *.x.t, *.xmt_neu, *.x_n *.xmt_bin, *.x_b - (import)       I/E       Yes       Yes         PDF       *.pdf - Direct model export       E       Yes       Yes       Yes         Points       *.pts       1       Yes       Yes       Yes         Creo View       *.edc (compressed structure and models)	Granite	*.g	I/E	Yes	Yes
ICEM       *.icm       I       Yes       Yes         IGES       *.igs - (import/export)       I/E       Yes       Yes         Neutral       *.neu       I/E       Yes       Yes         Optegra visualize       *.gbt Facet Only       E       Yes       Yes         Parasolid 3D       *.xmt, *.xmt_txt, *.x.t_*.xmt_neu, *.x.n *.xmt_bin, *.x.b - (import)       I/E       Yes       Yes         PDF       *.pdf - Direct model export       E       Yes       Yes       Yes         Points       .pts       I       Yes       Yes       Yes         Creo Elements/View & *.edz (compressed structure and models)       *.edz (compressed structure and models)       I/E       Yes       Yes         *.pvs (structure) & *.ol (models)       *.pvs (structure) & *.ol (models)       I/E       Yes       Yes         SolidWorks       *.slop - Facet Only       E       Yes       Yes       Yes         SolidWorks       *.slop - facet Only       I       Yes       Yes       Yes         SolidWorks       *.slop - facet Only       I       Yes       Yes       Yes         STEP       *.stp - (import/export)       I/E       Yes       Yes       Yes         Unigraphics       *.pr	JT	*.jt	I/E	Yes	Yes
IGES       *.igs - (import/export)       I/E       Yes       Yes         Neutral       *.neu       I/E       Yes       Yes         Optegra visualize       *.gbf Facet Only       E       Yes       Yes         Parasolid 3D       *.xmt, *.xmt_txt, *.x_t, *.xmt_neu, *.x_n *.xmt_bin, *.x_b - (import)       I/E       Yes       Yes         Parasolid 3D       *.xmt, *.xmt_txt, *.x_t, *.xmt_neu, *.x_n *.xmt_bin, *.x_b - (import)       I/E       Yes       Yes         PDF       *.pdf - Direct model export       E       Yes       Yes       Yes         Points       *.pts       I       Yes       Yes       Yes         Creo Elements/View &       *.ed (structure) & *.ol (models)       I/E       Yes       Yes         *.pvz (packaged structure and models)       *.pvz (packaged structure and models)       I/E       Yes       Yes         Render       *.slp - Facet Only       E       Yes       Yes       Yes         SolidWorks       *.sldprt, *.sldasm       I       Yes       Yes       Yes         STEP       *.ste - (import/export)       I/E       Yes       Yes       Yes         Unigraphics       *.prit (UG format)       I/E       Yes       Yes       Yes <t< td=""><td>IBL</td><td>*.ibl</td><td>Ι</td><td>Yes</td><td>Yes</td></t<>	IBL	*.ibl	Ι	Yes	Yes
*i.ges - (import)       //E       Yes       Yes         Neutral       *.neu       //E       Yes       Yes         Optegra visualize       *.gbf Facet Only       E       Yes       Yes         Parasolid 3D       *.xmt, *.xmt_xt, *.x_t, *.xmt_neu, *.x_n *.xmt_bin, *.x_b - (import)       //E       Yes       Yes         PDF       *.pdf - Direct model export       E       Yes       Yes       Yes         Points       *.pts       I       Yes       Yes       Yes         Creo Elements/View &       *.ed (structure) & *.ol (models)       *.edz (compressed structure and models)       //E       Yes       Yes         *.ptz (packaged structure and models)       *.pvz (packaged structure and models)       //E       Yes       Yes         Render       *.slp – Facet Only       E       Yes       Yes       Yes         SolidWorks       *.sldprt, *.sldasm       I       Yes       Yes       Yes         STEP       *.stp – (import/export)       //E       Yes       Yes       Yes         Unigraphics       *.prt (UG format)       Requires UG license and installation       I/E       Yes       Yes         VDA       *.vda       //E       Yes       Yes       Yes	ICEM	*.icm	Ι	Yes	Yes
Optegra visualize     *.gbf Facet Only     E     Yes     Yes       Parasolid 3D     *.xmt, *.xmt_txt, *.x_t, *.xmt_neu, *.x_n *.xmt_bin, *.x_b - (import)     I/E     Yes     Yes       PDF     *.pdf - Direct model export     E     Yes     Yes     Yes       Points     *.pts     I     Yes     Yes     Yes       Creo Elements/View &     *.ed (structure) & *.ol (models)     I     Yes     Yes      pvz (packaged structure and models)     *.pvs (structure) & *.ol (models)     I/E     Yes      pvz (packaged structure and models)     *.pvs (structure) & *.ol (models)     I/E     Yes      pvz (packaged structure and models)     *.pvs (structure) & *.ol (models)     I/E     Yes       SolidWorks     *.slp - Facet Only     E     Yes     Yes       SolidWorks     *.sldprt, *.sldasm     I     Yes     Yes       STEP     *.stp - (import/export)     I/E     Yes     Yes       STL     *.stf - Facet Only     I/E     Yes     Yes       Unigraphics     *.prd (UG format)     I/E     Yes     Yes       VDA     *.vda     I/IE     Yes     Yes       VDA     *.vda     I/IE     Yes     Yes       Wavefront     *.obj     I/E     Yes     Yes </td <td>IGES</td> <td></td> <td>I/E</td> <td>Yes</td> <td>Yes</td>	IGES		I/E	Yes	Yes
Parasolid 3D*.xmt, *.xmt_txt, *.xmt_neu, *.x_n *.xmt_bin, *.x_b - (import)I/EYesYesPDF*.pdf - Direct model exportEYesYesPoints*.pts1YesYesCreo Elements/View & creo View*.edz (compressed structure and models) *.pvs (structure) & *.ol (models) *.pvs (structure) & *.ol (models) *.pvs (structure and models) *.pvs (structure and models) *.pvs (structure and models)I/EYesYesRender*.slp - Facet OnlyEYesYesYesSolidWorks*.sldprt, *.sldasm Requires installation of SolidWorks or SolidWorks Explorer and a license of SolidWorks.IYesYesSTEP*.stp - (import/export) *.stp - (import)I/EYesYesYesUnigraphics*.prt (UG format) Requires UG license and installationI/EYesYesVDA*.vdaVeaVeaYesYesVDA*.odaVeaI/EYesYesVEAL*.odaI/EYesYesVDA*.odaI/EYesYesVDA*.odaI/EYesYesVEAL*.odaI/EYesYesVEAL*.odaI/EYesYesVEAL*.odaI/EYesYesVDA*.odaI/EYesYesVEAL*.odaI/EYesYesVEAL*.odaI/EYesYesVEAL*.odaI/EYesYesVEA	Neutral	*.neu	I/E	Yes	Yes
*.x_t - (export)//EYesYesPDF*.pdf - Direct model exportEYesYesPoints*.pts1YesYesCreo Elements/View & Creo View*.ed (structure) & *.ol (models) *.edz (compressed structure and models) *.pvz (packaged structure and models) *.pvz (packaged structure and models)//EYesYesRender*.slp - Facet OnlyEYesYesYesSolidWorks*.sldprt, *.sldasm Requires installation of SolidWorks or SolidWorks Explorer and a license of SolidWorks.1YesYesSTEP*.stp - (import/export) *.stp - (import)//EYesYesYesUigraphics*.prt (UG format) Requires UG license and installation//EYesYesVDA*.vda.ud//EYesYesVEX*.vda.ud//EYesYesVEX*.vda.ud.ud.udYesYesVEX*.vda.ud.ud.udYesYesVEX*.vda.ud.ud.udYesYesVEX*.vda.ud.ud.udYesYesVEX*.vda.ud.ud.udYesYesVEX*.vda.ud.ud.udYesYesVEX*.vda.ud.ud.ud.udYesYesVEX*.vda.ud.ud.ud.ud.ud.udYesYesYesYesYes <t< td=""><td>Optegra visualize</td><td>*.gbf Facet Only</td><td>Е</td><td>Yes</td><td>Yes</td></t<>	Optegra visualize	*.gbf Facet Only	Е	Yes	Yes
Points       *.pts       I       Yes       Yes         Creo Elements/View & Creo View       *.ed (structure) & *.ol (models) *.pvs (structure) & *.ol (models) *.pvs (structure) & *.ol (models) *.pvs (structure) & *.ol (models)       I/E       Yes       Yes         Render       *.slp – Facet Only       E       Yes       Yes       Yes         SolidWorks       *.slp – Facet Only       E       Yes       Yes       Yes         SolidWorks       *.slp – Facet Only       E       Yes       Yes         SolidWorks       *.slp – facet Only       I       Yes       Yes         STEP       *.stp – (import/export) *.stp – (import/export)       I/E       Yes       Yes         STL       *.stl – Facet Only       I/E       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       ECAD Formats       I       Yes       Yes	Parasolid 3D		I/E	Yes	Yes
Creo Elements/View & Creo View*.ed (structure) & *.ol (models) *.edz (compressed structure and models) *.pvs (structure) & *.ol (models) *.pvz (packaged structure and models) *.pvz (packaged structure and models)I/EYesYesRender*.slp – Facet OnlyEYesYesYesSolidWorks*.slprt, *.sldasm Requires installation of SolidWorks or SolidWorks Explorer and a license of SolidWorks.IYesYesSTEP*.stp – (import/export) *.step – (import)I/EYesYesYesSTL*.stl – Facet OnlyI/EYesYesYesUnigraphics*.juldEYesYesYesVDA*.vdaI/EYesYesYesVRL*.wrl – Facet OnlyI/EYesYesYesVEXYesYesYesYesYesStructure*.stp – (import/export) *.stp – (import)I/EYes <td>PDF</td> <td>*.pdf – Direct model export</td> <td>Е</td> <td>Yes</td> <td>Yes</td>	PDF	*.pdf – Direct model export	Е	Yes	Yes
Creo View       *.edz (compressed structure and models) *.pvs (structure) & *.ol (models) *.pvz (packaged structure and models)       I/E       Yes       Yes         Render       *.slp – Facet Only       E       Yes       Yes         Rhino       *.3dm       I       Yes       Yes         SolidWorks       *.sldprt, *.sldasm Requires installation of SolidWorks or SolidWorks Explorer and a license of SolidWorks.       I       Yes       Yes         STEP       *.stp – (import/export) *.stp – (import)       I/E       Yes       Yes         STL       *.stl – Facet Only       I/E       Yes       Yes         Ua3D       *.u3d       I/E       Yes       Yes         VDA       *.vda       I/IG format) Requires UG license and installation       I/E       Yes       Yes         VML       *.wrl – Facet Only       I/E       Yes       Yes         VEX       *.obj       I       Yes       Yes         VEX       Yes       Yes       Yes       Yes         VDA       *.vda       I/IE       Yes       Yes         VEX       *.wrl – Facet Only       I/E       Yes       Yes         VEX       Yes       Yes       Yes       Yes         VEX       Yes<	Points	*.pts	Ι	Yes	Yes
Render*.slp - Facet OnlyEYesYesRhino*.3dmIYesYesSolidWorks*.sldprt, *.sldasm Requires installation of SolidWorks or SolidWorks Explorer and a license of SolidWorks.IYesYesSTEP*.stp - (import/export) *.step - (import)I/EYesYesYesSTL*.stap - (import/export) *.step - (import)I/EYesYesYesU3D*.u3dEYesYesYesUnigraphics*.prt (UG format) Requires UG license and installationI/EYesYesVDA*.vdaI/EYesYesYesVA*.wirl - Facet OnlyI/EYesYesVBL*.wirl - Facet OnlyI/EYesYesVEXYesYesYesYesVDA*.vdaI/EYesYesVEXYesYesYesYesVEX*.objIYesYesVEXYes		*.edz (compressed structure and models) *.pvs (structure) & *.ol (models)	I/E	Yes	Yes
SolidWorks*.sldprt, *.sldasm Requires installation of SolidWorks or SolidWorks Explorer and a license of SolidWorks.IYesYesSTEP*.stp - (import/export) *.step - (import)I/EYesYesYesSTL*.stl - Facet OnlyI/EYesYesYesU3D*.u3dEYesYesYesUnigraphics*.prt (UG format) Requires UG license and installationI/EYesYesVDA*.vdaI/EYesYesVRML*.wrl - Facet OnlyI/EYesYesWavefront*.objIYesYesECAD Formats	Render	*.slp – Facet Only	Е	Yes	Yes
Requires installation of SolidWorks or SolidWorks Explorer and a license of SolidWorks.       I       Yes       Yes         STEP       *.stp – (import/export) *.step – (import)       I/E       Yes       Yes       Yes         STL       *.stl – Facet Only       I/E       Yes       Yes       Yes         U3D       *.u3d       E       Yes       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       I       Yes       Yes	Rhino	*.3dm	Ι	Yes	Yes
*.step - (import)     I/E     Yes     Yes       STL     *.stl - Facet Only     I/E     Yes     Yes       U3D     *.u3d     E     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     I     Yes     Yes	SolidWorks		I	Yes	Yes
U3D     *.u3d     E     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     I     Yes     Yes	STEP		I/E	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       I       Yes       Yes         ECAD Formats	STL		I/E	Yes	Yes
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     I     Yes     Yes	U3D	*.u3d	E	Yes	Yes
VDA     *.vda     I/E     Yes     Yes       VRML     *.wrl – Facet Only     I/E     Yes     Yes       Wavefront     *.obj     I     Yes     Yes       ECAD Formats	Unigraphics		I/E	Yes	Yes
Wavefront *.obj I Yes Yes ECAD Formats	VDA	•	I/E	Yes	Yes
ECAD Formats	VRML	*.wrl – Facet Only	I/E	Yes	Yes
	Wavefront	*.obj	Ι	Yes	Yes
		ECAD Formats			
Allegro I <sup>*</sup> mdb - For board outline tiles II/EI Voc I Voc	Allegro	*.mdb – For board outline files	I/E	Yes	Yes

	*.mdc – For component placement files *.mdf – For footprint files, such as the ones in component outline libraries			
DAZIX	<ul> <li>*.edn – Neutral file of the board outline and component placement. Dazix refers to this as a core file.</li> <li>*.edp – Profile file that contains component outlines. Dazix refers to this as a library file</li> </ul>	I/E	Yes	Yes
EDMD	*.idx	I/E	Yes	Yes
IDF	*.emn – (import/export) *.emp – library file (import)	I/E	Yes	Yes
Neutral	*.nwf	I/E	Yes	Yes
Creo Schematics	*.xml	Ι	Yes	Yes
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.