3D-Tool Version 10 - Specifications

3D-Tool is a professional CAD-Viewer for 3D-models and 2D-drawings. You do not need any special CAD skills to view models in 3D, to measure distances, angles, radii and wall thicknesses and to create cross sections and exploded views.

The 3D-NativeCAD Converter lets you convert 3D-CAD files to common 3D exchange formats.

Available Program Versions

- 3D-Tool Free Viewer
- 3D-Tool Basic
- 3D-Tool Advanced
- 3D-Tool Premium inclusive 3D-NativeCAD Converter

The difference among the Basic, the Advanced, and the Premium version is the supported 3D file formats. Apart from that they offer the same functions for viewing and analyzing 3D-models and 2D-drawings. The Premium Version of 3D-Tool additionally contains the 3D-NativeCAD Converter.

The 3D-Tool Free Viewer supports 3D-Tool EXE and DDD files plus STL files. The import of multiple files into one scene is not possible. The Free Viewer can not publish/save data and has limited features.

Languages
- Installation and documentation: English, German
- User interface: English, German, French, Korean

Free Test

You can request a one-time 14day trial of the program with all its features.
To do so, install the latest program version from our website.
Then run 3D-Tool and in the licensing window click on the [Get Trial-Key] button.

Licensing and Activation

For each license ordered you will receive a 3D-Tool License Certificate by e-mail.
The software is provided by download from our website.

After installation the software needs to be activated with a License Key. License Keys can be requested using the Authorization Key from the 3D-Tool License Certificate. Detailed information on this can be found on the License Certificate.

Software Requirements

Supported Operating Systems

- Windows XP SP2 (32/64bit)
- Windows Vista (32/64bit)
- Windows 7 (32/64bit)
- Windows 8 (32/64bit)

Software Requirements to use the Premium Import
The following software will be installed together with 3D-Tool, as it is required to use the Premium Import:
Dassault Systemes Software VC9 Prerequisites x86 - x64
Microsoft Visual C++ 2010 [x86/x64] Redistributable

64bit Interfaces
3D-Tool Premium features 64bit interfaces for import and conversion of CATIA V4/V5, Pro/E, Inventor, Solidworks, UG/NX, STEP, IGES, VDA, SAT, and Parasolid files. To use the 64bit interfaces one of the following operation systems is required:
Windows XP x64, Windows, Vista x64, Windows 7 x64, or Windows 8 x64.

Hardware Requirements

3D-Tool does not have exceptional hardware requirements. All that is needed is a desktop-PC or laptop having a main memory of 1GB or more and a screen resolution of 1024 x 768 pixels or more. Most current computers will import and display 3D-models by an adequate speed. The speed of import and display depends on the complexity of the models, the CPU speed and the performance of the graphics adapter. Complex and large models may cause low-efficiency computers (netbooks, older PCs) reaching their performance limits.

Supported File Formats - 3D-Tool Viewer (Version 10.05)

3D File Formats	Supported by 3D-Tool Version
CATIA V5 (*.catpart,*.catproduct) R2 to R23	Premium
CATIA V4 (*.model,*.exp,*.session) 4.1.9 to 4.2.4	Premium
Pro/E (*.prt,*.asm,*.xpr,*.xas) V16 to Wildfire 5, Creo 2.0	Premium
Inventor (*.ipt) V6 to 2013 (*.iam) V11 to 2013	Premium
Solidworks (*.sldprt, *.sldasm) 98 to 2013	Premium
UG/NX (*.prt) 11 to NX 8.5	Premium
Parasolid files (*.x_t,*.x_b) V10 to V25	Advanced, Premium
STEP files (*.stp)	Advanced, Premium
IGS files (*.igs)	Advanced, Premium
VDA files (*.vda)	Advanced, Premium
SAT files (*.sat)	Advanced, Premium
STL files (*.stl)	Free Viewer, Basic, Advanced, Premium
VRML1, VRML2 files (*.wrl)	Basic ,Advanced, Premium
Render files (*.slp)	Basic, Advanced, Premium
PLY files (*.ply)	Basic, Advanced, Premium
XGL files (*.xgl *.zgl)	Basic, Advanced, Premium
OBJ files (*.obj)	Basic, Advanced, Premium
3DS files (*.3ds *prj *.pli)	Basic, Advanced, Premium
ASC files (*.asc)	Basic, Advanced, Premium
DXF files (*.dxf) nur 3D-faces	Basic, Advanced, Premium
Open-Inventor files (*.iv)	Basic, Advanced, Premium

2D File Formats	Supported by 3D-Tool Version
DXF files (*.dxf)	Basic, Advanced, Premium
DWG files (*.dwg)	Basic, Advanced, Premium
HPGL files (*.plt,*.plo,*.hpg)	Basic, Advanced, Premium

3D-Tool Formats (3D/2D Scenes)	Supported by 3D-Tool Version
3D-Tool EXE files (*.exe)	Free Viewer, Basic, Advanced, Premium
3D-Tool DDD files (*.ddd)	Free Viewer, Basic, Advanced, Premium

Supported File Formats - 3D-NativeCAD Converter (Version 10.05)

3D File Formats - Input

CATIA V5 (*.catpart,*.catproduct) R2 to R23
CATIA V4 (*.model,*.exp,*.session) 4.1.9 to 4.2.4
Pro/E (*.prt,*.asm,*.xpr,*.xas) V16 to WF 5, Creo 2.0
Inventor (*.ipt) V6 to 2013 (*.iam) V11 to 2013
Solidworks (*.sldprt, *.sldasm) 98 to 2013
UG/NX (*.prt) 11 to NX 8.5
Parasolid files (*.x_t,*.x_b) V10 to V25
STEP files (*.stp)
IGS files (*.igs)
VDA files (*.vda)
SAT files (*.sat)

3D File Formats - Output

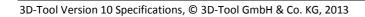| |
|---|
| **CATIA V5** (*.catpart,*.catproduct) R6 to R23 |
| **CATIA V4** (*.model) |
| **STEP** files (*.stp) |
| **IGS** files (*.igs) |
| **VDA** files (*.vda) |
| **SAT** files (*.sat) V2 to V23 |
| **STL** files (*.stl) |

- Hide and show elements
- Adjust graphical display of elements: color, transparency, shade mode
- Move, rotate, scale and copy elements
- Property Editor to edit names, colors and transparency *

- Create cross sections
- Explode assemblies
- Create animations
- Place models in the coordinate system and align models*
- Repair bad edges and twisted surfaces *
- RP-Layout tool to place models on a RP-platform *
- Support of 3D-mice made by 3Dconnexion

- 3D-dimensions: distance, angle, radius, diameter, wall thickness, clearance
- 2D-dimensions: distance, angle, radius, diameter
- Tooling analysis: drafts, draft angles, projected area
- Wall thickness analysis
- Information about dimensions, volume and surface area

- Save Custom Views
- Custom Views Editor to manage Custom Views *
- Add 3D-annotations
- Add 2D-annotations and redline markups
- Add pictures and text

- Publish 3D-Tool EXE/DDD files to share your designs *
- Publish 3D-PDF files to be viewed with the Acrobat Reader *
- Save models as STL, VRML, PLY and 3DS *
- Print
- Create BMP/JPG pictures
- Capture screen section to clipboard
- Export animations as AVI-video *

Limited touch-screen / tablet-pc support
Some 3D-Tool functions can be used by touch-screen only with limited functionality.

Function Limitations of the 3D-Premium Import

The following limitations apply to CATIA V4/V5, Pro/E, Inventor, Solidworks, UG, STEP, IGES, VDA, and SAT files during the Premium-Import into the 3D-Tool Viewer and conversion using the 3D-NativeCAD Converter.

Common
- **Assembly attributes**
  Attributes assigned on the assembly level are not read by the viewer or the converter, for example: Colors assigned on the assembly level get lost and Elements hidden on the assembly level will be loaded.
- **Assembly features**
  Features (e.g. cuts, bodies, holes) added on the assembly level are not supported and ignored by the viewer or the converter. The support of patterns added on the assembly level is limited in the viewer or the converter.
- **Product Manufacturing Information**
  PMI-data is not supported by the viewer or the converter.
- **2D-data / 2D-sketches**
  2D-data and 2D-sketches are not supported by the viewer or the converter.
- **Visualization data / Facetted data**
  Visualization data and facetted data embedded in CAD files are not supported by the viewer or the converter.
- **Layers**
  Layers are not displayed in the viewer. In the converter the translation of layer information is limited.
- **Free parts, faces, and curves**
  The converter supports free parts, faces, and curves only on the top assembly level and not within sub-assemblies.
- Axes, planes, and local coordinate systems
  The support of axes, planes, and local coordinate systems is limited in the converter.
- **User-defined views**
  User-defined views, component views, and simplified views are not supported by the viewer or the converter.

Catia V5
- All parts and sub-assemblies of an assembly file (*.CATProduct) have to be in the folder of the assembly file or sub-folders, otherwise they will not be read by the viewer or the converter.
- File names may only contain characters of the ISO-646 character set. Additionally the characters < > * : " ? \ | / cannot be used. During the conversion to CATIA V5 all invalid characters in file and part names will be replaced by an underscore.
- During the conversion to CATIA V5 the attributes line-type and line-thickness will only be translated for free wires and curves, not for edges.
- Due to hardware requirements, it may not be possible to view or convert CATIA V5 files using an older computer (approx. before 2003). If you plan to use 3D-Tool Premium on such a system, request a free Trial Key to test the import and conversion.

IGES
- Binary and compressed IGES files are not supported by the viewer or the converter.

Inventor
- All parts and sub-assemblies of an assembly file (*.iam) have to be in the same folder, otherwise they will not be read by the viewer or the converter.
- Attributes, such as color and layer, are not read by the viewer or the converter. This also applies to the hidden attribute. Hidden elements will always be displayed and converted.
- Some special Inventor features, such as "Lofting" and "Weld Symbols", are not supported by the viewer or the converter.
- Sketches are not supported by the viewer or the converter.

Pro/Engineer
- All parts and sub-assemblies of an assembly file (*.asm) have to be in the same folder, otherwise they will not be read by the viewer or the converter.
- Instances in family tables are read by the viewer or the converter only if the corresponding XPR and XAS files are present, even though these are only optional in Pro/E. Without the XPR and XAS files always the generic parts are read.
- The converter translates local coordinate systems only to file formats that support assemblies (CATIA V5, STEP, IGES, ASAT).
- The curves "using equation" and "local push" are not supported by the viewer or the converter.
- Cosmetic features are not supported by the viewer or the converter.

SolidWorks
- All parts and sub-assemblies of an assembly file (*.sldasm) have to be in the folder of the assembly file or sub-folders, otherwise they will not be read by the viewer or the converter.
- Colors are supported by the viewer or the converter starting with SolidWorks 2004.
- Colors assigned to instances of parts and assemblies are not read by the viewer or the converter.
- The units of a model are read by the viewer or the converter starting with SolidWorks 2001. With earlier versions, the units are always assumed as meters.
- Hidden bodies and features within parts are not supported by the viewer or the converter.
- The attributes "Show", "No-show" and "Hidden" will be read by the viewer or the converter starting with SolidWorks 2004.
- When reading assemblies (*.SLDASM) and parts (*.SLDPRT), there is no selection of configurations available in the viewer or the converter. Generally, the default configuration will be read. However, the parts within assemblies are displayed correctly and converted in accordance with the assembly configuration. Such assembly configurations are supported starting with SolidWorks98Plus.
- In order to display and convert a part within an assembly in its correct configuration, the according configuration must be saved in the part file. This is not necessarily the case, especially not, if older parts have been opened and saved with a newer version of SolidWorks. If configurations are missing, open the part in SolidWorks, activate each configuration, and save the part.
- Coordinate systems, work planes, free curves, and free points are not supported by the converter.

UG / NX
- All parts and sub-assemblies of an assembly file (*.prt) have to be in the folder of the assembly file or sub-folders, otherwise they will not be read by the viewer or the converter.

VDA
- Errors can occur when reading VDA files with the viewer or the converter, especially if the accuracy of the VDA data is insufficient. If such errors occur, as much data as possible is read.

Function Limitations of the 2D-Import

The following limitations apply to DXF, DWG, and HPGL files when loaded into the 3D-Tool viewer.

- **Embedded pictures**
  The display of embedded pictures in the viewer is limited.
- **Filled polylines**
  Filled polylines (Trace entities) are not supported by the viewer.
- **AEC objects**
  AEC (Architecture, Engineering, and Construction) objects are not supported by the viewer.

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