## **SOLID** APPLICATIONS

## SOLIDWORKS Visualize Product Matrix

The table below details the feature differences between SOLIDWORKS Visualize products.

	Visualize Professional	Visualize Standard
Rendering		
Hardware agnostic, unbiased, interactive wysiwyg pathtracing using NVIDIA iray (Accurate Mode)	~	~
Hardware agnostic, biased, interactive wysiwyg raytracing using NVIDIA iray (Fast Mode)	~	~
Hardware agnostic, high quality, interactive wysiwyg rasterizer (Preview Mode)	4	~
Supported techniques such as global illumination, ambient occlusion, screenspace shadows, IBL, color bleeding, dispersive caustics, unlimited raybounces, refraction, rough reflections and more.	<b>v</b>	~
Automatic "Blending" between rendering modes	<b>v</b>	×
HDRI lighting	~	~
Light emission from geometry	<b>~</b>	~
Ground reflectivity and roughness	<b>~</b>	~
Rasterized baked lighting	<b>v</b>	
Rasterized accumulation	4	
Input		
SOLIDWORKS (SLDPRT/SDLASM)	~	~
Alias (WIRE)	~	~
3D PDF	<b>~</b>	~
3DXML	<b>~</b>	~
ACIS (SAT)	✓	~
IGES	✓	~
STEP	<b>~</b>	~
Collada (DAE)	~	~
Pro/E / Creo (PRT)	~	~
Filmbox (FBX)	~	~
Animated Filmbox (FBX)	~	

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	Visualize Professional	Visualize Standard
3D Studio Max (3DS)	<b>v</b>	~
Rhino (3DM)	✓	~
Wavefront (OBJ)	✓	~
SketchUp (SKP)	✓	~
Maya (MB)	A	<b>~</b>
SolidEdge (ASM/PAR)	A	<b>~</b>
Autodesk (DWG/DXF)	A	<b>~</b>
Inventor (IPT/IAM)	A	<b>~</b>
CATIA	A	<b>~</b>
ICEM	<b>v</b>	<b>~</b>
U3D (Unigraphics)	<b>v</b>	<b>~</b>
Parasolids	A	~
NX	<b>v</b>	<b>~</b>
VDA	<b>v</b>	<b>~</b>
Live Update from CAD	4	~

## Output

Unlimited resolution offline rendering	×	~
Alpha Channel	×	~
Early image save	×	~
Threaded offline renderings	×	~
JPG, BMP, PNG, TIFF, HDR and PSD output	<b>v</b>	~
Built in image viewer tab	<b>v</b>	~
Render Profiles	<b>v</b>	~
Preview (raster) output	<b>v</b>	~
Render all Configurations	<b>v</b>	
Render all Cameras	<b>v</b>	
Render Passes	<b>v</b>	
Turntable rendering	<b>v</b>	
Automatic movie (.mp4, .mkv, .flv) output	<b>v</b>	
Browser based VR output	<b>v</b>	
Browser based Panoramic output	<b>v</b>	

Scene Preparation <ul> <li>CAD Live-Update</li> <li>Auto-Paint</li> <li>Direct mainplulation of parts</li> <li>Surface/Part Splitter</li> <li>Group and reorganize parts in the tree view</li> <li>Model/Part reset and freeze</li> <li>Formation tool</li> <li>Part re-tessellation</li> <li>Multiple model sets</li> <li>Simple vehicle wheel building</li> </ul> <li>Proprietary "3D graph editor" Ribbon         <ul> <li>Turntable Animations</li> <li>Sun Study Animations</li> <li>Keyframe animation of Models, Groups and Parts</li> <li>Keyframe animation of Cameras</li> <li>Keyframe animation of Lights</li> <li>Relating turntable</li> </ul> </li> <li>Stupported techniques such as fresnel reflections, absorbtion, transmittance, anisotropic, bump and normal mapping             <ul> <li>Advanced materials: Subsurface, Thin Film, Backscatter</li> <li>Color/texture, opacity, specular, anisotropic, bump and normal mapping             <li>Advanced materials: Subsurface, Thin Film, Backscatter</li> <li>Keipfane animation file (.svap)</li> <li>Keipfane animation file (.svap)</li> </li></ul></li>		Visualize Professional	Visualize Standard
Auto-Paint••Direct manipulation of parts••Surface/Part Splitter••Group and reorganize parts in the tree view••Model/Part reset and freeze••Formation tool••Part re-tessellation••Multiple model sets••Simple vehicle wheel building••Proprietary "3D graph editor" Ribbon••Turntable Animations••Sun Study Animations••Keyframe animation of Models, Groups and Parts••Keyframe animation of Cameras••Keyframe animation of Environments••Keyframe animation of Lights••Realtime turntable••Supported techniques such as fresnel reflections, absorbtion, transmittance, anisotropy (mapable), emission.•Color/texture, opacity, specular, anisotropic, bump and normal mapping••Advanced materials: Subsurface, Thin Film, Backscatter••Fexible local or cloud based asset storage••	Scene Preparation		
Direct manipulation of parts Surface/Part Splitter Surface/Part Splitter Surface/Part Splitter Simple vector of the tree view Surface/Part reset and freeze Formation tool Part ressellation Multiple model sets Simple vehicle wheel building Animation Proprietary "3D graph editor" Ribbon Sun Study Animations Keyframe animations of Models, Groups and Parts Keyframe animation of Environments Keyframe animation of Environments Keyframe animation of Environments Keyframe animation of Lights Realtime turntable Scientifically accurate preset and adjustable materials Supported techniques such as fresnel reflections, absorbtion, transmittance, anisotropy (mappable), emission. Color/texture, opacity, specular, anisotropic, bump and normal mapping Advanced materials: Subsurface, Thin Film, Backscatter Fexible local or cloud based asset storage	CAD Live-Update	~	~
Surface/Part Splitter••Group and reorganize parts in the tree view••Model/Part reset and freeze••Formation tool••Part re-tessellation••Multiple model sets••Simple vehicle wheel building••Proprietary "3D graph editor" Ribbon••Turntable Animations••Sun Study Animations••Keyframe animation of Models, Groups and Parts•Keyframe animation of Materials•Keyframe animation of Environments•Keyframe animation of Environments•Keyframe animation of Lights•Realtime turntable•Scientifically accurate preset and adjustable materials•Supported techniques such as fresnel reflections, absorbtion, transmittance, anisotropy (mappable), emission.•Color/texture, opacity, specular, anisotropic, bump and normal mapping•Advanced materials: Subsurface, Thin Film, Backscatter•Flexible local or cloud based asset storage•	Auto-Paint	~	~
Group and reorganize parts in the tree viewModel/Part reset and freezeFormation toolPart re-tessellationMultiple model setsSimple vehicle wheel buildingAnimationProprietary "3D graph editor" RibbonTurntable AnimationsSun Study AnimationsKeyframe animations of Models, Groups and PartsKeyframe animation of MaterialsKeyframe animation of CamerasKeyframe animation of EnvironmentsKeyframe animation of LightsRealtime turntableScientifically accurate preset and adjustable materialsSupported techniques such as fresnel reflections, absorbtion, transmittance, anisotropy (mappable), emission.Color/texture, opacity, specular, anisotropic, bump and normal mappingAdvanced materials: Subsurface, Thin Film, BackscatterFlexible local or cloud based asset storage	Direct manipulation of parts	~	~
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Formation tool•Part re-tessellation•Multiple model sets•Simple vehicle wheel building•Animation•Proprietary "3D graph editor" Ribbon•Turntable Animations•Sun Study Animations•Keyframe animations of Models, Groups and Parts•Keyframe animation of Materials•Keyframe animation of Materials•Keyframe animation of Cameras•Keyframe animation of Lights•Realtime turntable•Materials•Scientifically accurate preset and adjustable materials•Supported techniques such as fresnel reflections, absorbtion, transmittance, anisotropy (mappable), emission.•Color/texture, opacity, specular, anisotropic, bump and normal mapping•Advanced materials: Subsurface, Thin Film, Backscatter•Flexible local or cloud based asset storage•	Group and reorganize parts in the tree view	~	~
Part re-tessellation•Multiple model sets•Simple vehicle wheel building•Animation•Proprietary "3D graph editor" Ribbon•Turntable Animations•Sun Study Animations•Keyframe animations of Models, Groups and Parts•Keyframe animation of Materials•Keyframe animation of Materials•Keyframe animation of Cameras•Keyframe animation of Environments•Keyframe animation of Lights•Realtime turntable•Materials•Scientifically accurate preset and adjustable materials•Supported techniques such as fresnel reflections, absorbtion, transmittance, anisotropy (mappable), emission.•Color/texture, opacity, specular, anisotropic, bump and normal mapping•Advanced materials: Subsurface, Thin Film, Backscatter•Flexible local or cloud based asset storage•	Model/Part reset and freeze	✓	~
Multiple model sets Simple vehicle wheel building•Animation•Proprietary "3D graph editor" Ribbon•Turntable Animations•Sun Study Animations•Sun Study Animations•Keyframe animations of Models, Groups and Parts•Keyframe animation of Materials•Keyframe animation of Cameras•Keyframe animation of Environments•Keyframe animation of Lights•Realtime turntable•Scientifically accurate preset and adjustable materials•Supported techniques such as fresnel reflections, absorbtion, transmittance, anisotropy (mappable), emission.•Color/texture, opacity, specular, anisotropic, bump and normal mapping•Advanced materials: Subsurface, Thin Film, Backscatter•Flexible local or cloud based asset storage•	Formation tool	×	
Simple vehicle wheel building Animation Proprietary "3D graph editor" Ribbon Turntable Animations Sun Study Animations Keyframe animations of Models, Groups and Parts Keyframe animation of Materials Keyframe animation of Cameras Keyframe animation of Environments Keyframe animation of Lights Realtime turntable  Materials Scientifically accurate preset and adjustable materials Supported techniques such as fresnel reflections, absorbtion, transmittance, anisotropy (mappable), emission. Color/texture, opacity, specular, anisotropic, bump and normal mapping Advanced materials: Subsurface, Thin Film, Backscatter Flexible local or cloud based asset storage	Part re-tessellation	×	
Animation Proprietary "3D graph editor" Ribbon Turntable Animations Sun Study Animations Sun Study Animations Keyframe animations of Models, Groups and Parts Keyframe animation of Materials Keyframe animation of Cameras Keyframe animation of Environments Keyframe animation of Environments Keyframe animation of Lights Realtime turntable Keyframe animation of Lights Realtime turntable Keyframe animation of Lights Color/texture, opacity, specular, anisotropic, bump and normal mapping Advanced materials: Subsurface, Thin Film, Backscatter Flexible local or cloud based asset storage	Multiple model sets	×	
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Turntable AnimationsImage: Sun Study AnimationsSun Study AnimationsImage: Sun Study AnimationsKeyframe animation of Models, Groups and PartsImage: Sun Study Animation of MaterialsKeyframe animation of CamerasImage: Sun Study Animation of CamerasKeyframe animation of EnvironmentsImage: Sun Study Animation of LightsKeyframe animation of LightsImage: Sun Study Animation of LightsRealtime turntableImage: Sun Study Animation of LightsScientifically accurate preset and adjustable materialsImage: Sun Study Animation of Sun Study Animation, transmittance, anisotropy (mappable), emission.Color/texture, opacity, specular, anisotropic, bump and normal mappingImage: Sun Study Animation, Sun	Animation		
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Keyframe animations of Models, Groups and PartsKeyframe animation of MaterialsKeyframe animation of CamerasKeyframe animation of EnvironmentsKeyframe animation of LightsRealtime turntableMaterialsScientifically accurate preset and adjustable materialsSupported techniques such as fresnel reflections, absorbtion, transmittance, anisotropy (mappable), emission.Color/texture, opacity, specular, anisotropic, bump and normal mappingAdvanced materials: Subsurface, Thin Film, BackscatterFlexible local or cloud based asset storage	Turntable Animations	~	
Keyframe animation of Materials•Keyframe animation of Cameras•Keyframe animation of Environments•Keyframe animation of Lights•Realtime turntable•Materials•Scientifically accurate preset and adjustable materials•Supported techniques such as fresnel reflections, absorbtion, transmittance, anisotropy (mappable), emission.•Color/texture, opacity, specular, anisotropic, bump and normal mapping•Advanced materials: Subsurface, Thin Film, Backscatter•Flexible local or cloud based asset storage•	Sun Study Animations	✓	
Keyframe animation of CamerasImage: Constraint of CamerasKeyframe animation of EnvironmentsImage: Constraint of CamerasKeyframe animation of LightsImage: Constraint of CamerasRealtime turntableImage: Constraint of CamerasMaterialsImage: Constraint of CamerasScientifically accurate preset and adjustable materialsImage: Constraint of CamerasSupported techniques such as fresnel reflections, absorbtion, transmittance, anisotropy (mappable), emission.Image: Constraint of CamerasColor/texture, opacity, specular, anisotropic, bump and normal mappingImage: Constraint of CamerasAdvanced materials: Subsurface, Thin Film, BackscatterImage: Constraint of CamerasFlexible local or cloud based asset storageImage: Constraint of Cameras	Keyframe animations of Models, Groups and Parts	✓	
Keyframe animation of EnvironmentsKeyframe animation of LightsRealtime turntableMaterialsScientifically accurate preset and adjustable materialsSupported techniques such as fresnel reflections, absorbtion, transmittance, anisotropy (mappable), emission.Color/texture, opacity, specular, anisotropic, bump and normal mappingAdvanced materials: Subsurface, Thin Film, BackscatterFlexible local or cloud based asset storage	Keyframe animation of Materials	<b>v</b>	
Keyframe animation of Lights Realtime turntableImage: Constraint of LightsRealtime turntableImage: Constraint of LightsMaterialsImage: Constraint of LightsScientifically accurate preset and adjustable materialsImage: Constraint of LightsAdvanced materials: Subsurface, Thin Film, Bac	Keyframe animation of Cameras	<b>v</b>	
Realtime turntable   Materials   Scientifically accurate preset and adjustable materials   Supported techniques such as fresnel reflections, absorbtion, transmittance, anisotropy (mappable), emission.   Color/texture, opacity, specular, anisotropic, bump and normal mapping   Advanced materials: Subsurface, Thin Film, Backscatter   Flexible local or cloud based asset storage	Keyframe animation of Environments	<b>v</b>	
MaterialsScientifically accurate preset and adjustable materialsScientifically accurate preset and adjustable materialsSupported techniques such as fresnel reflections, absorbtion, transmittance, anisotropy (mappable), emission.Color/texture, opacity, specular, anisotropic, bump and normal mappingAdvanced materials: Subsurface, Thin Film, BackscatterFlexible local or cloud based asset storage	Keyframe animation of Lights	<b>v</b>	
Scientifically accurate preset and adjustable materialsImage: Color of the sector of the	Realtime turntable	~	
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mappingImage: Constraint of the second s		~	<b>v</b>
Flexible local or cloud based asset storage		~	~
-	Advanced materials: Subsurface, Thin Film, Backscatter	~	~
Sharable material definition files (.svap)	Flexible local or cloud based asset storage	~	~
	Sharable material definition files (.svap)	~	~

	Visualize Professional	Visualize Standard
Drag and drop materials/textures from desktop or any folder		~
Unique in and out of app color picker/dropper	<b>v</b>	~
Save favorite colors	<b>v</b>	<b>~</b>
Texturable and paintable decals	<b>v</b>	~
Layered decals	✓	<b>~</b>
Decal projection	×	<b>~</b>
Controllable decal depth	✓	<b>~</b>
Multple part decals	✓	~
Displacement Mapping	4	~
Lighting		
Lighting, shadow and reflection casting from HDRI	~	~
High Dynamic Range Image (HDRI) interation and control	~	~
HDR Light Studio compatible	~	~
Prop creation for additinal light sources	<b>v</b>	<b>~</b>
Time of day (Sun and Sky) lighting model	<b>v</b>	
Photometric lights (Point, Spot and Directional)	<b>v</b>	
Raster object reflections (Preview Mode)	<b>v</b>	
Raster culling (Preview Mode)	4	
Camera Optics		
F-Stop, Focal length, Field of view and Perspective settings	4	~
Exchangeable camera files (.svcm)	<b>v</b>	~
Interactive depth of field with focal point selection	4	~
Multiple cameras with individual aspect ratio and settings	<b>v</b>	~
Orthographic camera	<b>v</b>	~
Walk-around camera	<b>v</b>	~
Rule of thirds overlay	<b>v</b>	~
Preset photographic camera filters	<b>v</b>	<b>~</b>
Real-time customizable photographic camera filters	<b>v</b>	
Follow and aim cameras and objects	<b>~</b>	
Real world camera positioning	~	
Motion blur	4	

	Visualize Professional	Visualize Standard
Region rendering	~	
FBX camera export	~	
Productivity		
Highly optimized parallel architechture	~	~
Hybrid Based CPU and GPU rendering	✓	~
Near Linear performance scaling with added CPU's and GPU's	✓	~
3D Connexion device support	✓	~
SOLIDWORKS Visualize cloud community connection	✓	~
Queue rendering manager	✓	
Configurations	✓	
Multiple viewports (Dual, Quad and Orthographic)	✓	