SOLIDWORKS® DESIGN PRODUCT MATRIX

This information applies to SOLIDWORKS Design and SOLIDWORKS Design with Cloud Services.

KEY CAPABILITIES	SOLIDWORKS Design Standard	SOLIDWORKS Design Professional	SOLIDWORKS Design Premium
3D DESIGN AND MODELING			
Part and Assembly Modeling Handle all aspects of your part and assembly modeling and transform ideas and concepts into virtual 3D models.	●	●	●
2D Drawings and 3D Manufacturing Documentation Create production-ready 2D drawings or go drawingless and use intelligent, automated 3D dimensioning and tolerancing capabilities.	●	●	●
Productivity Tools Easily analyze, compare, check, and report on your designs.	●	●	●
Design Reuse and Automation Simplify the reuse of existing design data with search, automation, and configuration tools that help you speed up the creation of new designs.	●	●	●
Resolving Manufacturing Issues Before Going to Manufacturing Verify in 2D and 3D that your parts and assemblies will fit, assemble, and move correctly. Review your designs for draft, undercut, thickness, hole alignments, component clearance, and more, ensuring manufacturability.	●	●	●
Advanced CAD File Import/Export Convert incoming CAD data and export SOLIDWORKS data to other CAD applications using over 30 provided translators.	●	●	●
Linked CAD Models Use models saved in other CAD formats directly inside SOLIDWORKS assemblies, parts, and drawings while maintaining associativity with the original CAD model.	●	●	●
Industry 3D Component Catalog Access over 50 million components from manufacturers worldwide through our online catalog.	●	●	●
Specialized Design Tools Speed up the design of sheet metal, plastic and cast parts, weldments, molds, tools, and dies.	●	●	●

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3D DESIGN AND MODELING			
Intelligent CAD Libraries Easily find, customize, and share hundreds of thousands of prebuilt industry-standard fasteners that configure on the fly and assemble automatically in your design.		●	●
CAD Standards and Drawings Checking Establish design standards and check drawings and models against them to create uniform designs and documentation.		●	●
Automated Tolerance Stackup Analysis Automatically check the effects of tolerances on parts and assemblies to ensure consistent fit of components and verify tolerancing schemes before manufacturing your designs.		●	●
Manufacturing Cost Analysis Continuously check your designs against cost targets with automatic cost estimation tools fully integrated within the 3D CAD solution.		●	●
Reverse Engineering Recreate designs with the ability to import, edit, evaluate, and create solid geometry from scanned point-cloud and mesh data.		●	●
Advanced Surface Flattening Flatten complex, nondevelopable surfaces often encountered in textiles and metal stampings.			●
Pipe and Tube Routing Speed up design and documentation of piping and tubing systems.			●
Electrical Cable and Wiring Harness Routing Speed up 3D electrical routing design and the creation of flattened harness drawings for manufacturing.			●
Duct and Tray Routing Route rectangular and round sections that include ducting, cable trays, conveyors, material handling chutes, and other systems.			●

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AI CAPABILITIES			
AI for Drawings Reduce drawing effort with the ability to automatically generate drawings complete with views, dimensional details, and automatic selection of formats.	●	●	●
AI for 3D Modeling Model faster with intelligent selection capabilities and automatic fastener recognition and assembly. Render designs faster with denoising algorithms.	●	●	●
Integrated AI Companion Boost productivity and collaboration with the companion's ability to generate relevant answers; summarize community posts, wikis, and help documentation; and quickly find information.	●	●	●
SIMULATION			
Linear Static Analysis for Parts and Assemblies Find the stresses and deformations of geometry using Finite Element Analysis (FEA) methods and run linear stress analysis to determine the response of parts and assemblies.			●
Motion Analysis Watch your design moving through its operational cycle, measure the forces and loads, correctly size motors, and ensure your design meets the desired performance goals.			●
CLOUD COLLABORATION			
Cross-Discipline Collaboration Collaborate in real time using configurable dashboards, social communities, Kanban-style task management, activity streams, persistent chat, and video calls.	●	●	●
Share and Markup Invite anyone, inside or outside your organization, to view, share, and mark up your 3D designs in the cloud, directly within SOLIDWORKS.	●	●	●
ECAD/MCAD Collaboration Share, compare, update, and track electrical design data, locally or in the cloud, so you can quickly resolve electrical and mechanical design issues.	●	●	●

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CLOUD DATA MANAGEMENT			
Store and Revise Utilize secure cloud storage that's purpose-built with CAD relationships and collaboration in mind. Save your data to the cloud right from SOLIDWORKS. Lock designs to ensure no one overwrites your work, easily manage revisions, and create detailed markups with redline, measurements, and annotations.	●	●	●
Data and Lifecycle Management Manage the lifecycle of any type of content, reduce design change conflicts with revision control, and streamline design change and approval workflows.	●	●	●
Administration Easily upgrade software, manage users, and assign and remove licenses all from a single dashboard.	●	●	●
LOCAL DATA MANAGEMENT			
Local Data Management Manage project data and control design revisions and access to files.		● *	● *
MANUFACTURING			
Additive Manufacturing Prepare your models, understand the constraints of additive manufacturing, and print directly to a 3D printer from SOLIDWORKS.	●	●	●
3-axis NC Machining and Machine Simulation Empower CNC programmers with 3-axis and 3+2-axis machining, machine simulation, and EDM to optimize tool paths before manufacturing the parts.	●	●	●
Sheet Metal Nesting and NC Programming Validate your designs by running what-if scenarios with advanced nesting. Quickly go from design to manufacturing with production nesting and NC programming capabilities.	●	●	●
MARKETING			
Animation and Visualization Easily create basic CAD videos, renderings, animations, and 3D walk-throughs.	●	●	●
AR/VR Exporter Export CAD data for AR, VR, and web viewing experiences while retaining geometry, appearance, motion studies, display states, and more.	●	●	●

* Available only with a device license.

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MARKETING			
Advanced Photorealistic Rendering with Artificial Intelligence Bring your products to life with stunning photorealistic renderings and leverage Artificial Intelligence to dramatically reduce render times.		●	●
Advanced Lighting Techniques for Sun and Sky Simulate the lighting at a specific location and time, and create sun study animations.		●	●
Advanced Photorealistic Animations and Immersive Virtual Reality Easily animate exploded views, cameras, and much more to create photo-realistic videos. Create immersive virtual reality experiences with 360-degree cameras and interactive output.		● **	● **
TRAINING AND SUPPORT			
Support Access personalized, high-quality support from your certified local value-added sales partner and interact with peers in a vibrant community.	●	●	●
Training Get up to speed and improve your skills with a library of over 440 learning modules comprising access to thousands of on-demand videos.	●	●	●

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With Dassault Systèmes' **3D**EXPERIENCE platform, 370 000 customers of all sizes, in all industries, can collaborate, imagine and create sustainable innovations that drive meaningful impact.

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Virtual Worlds for Real Life

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