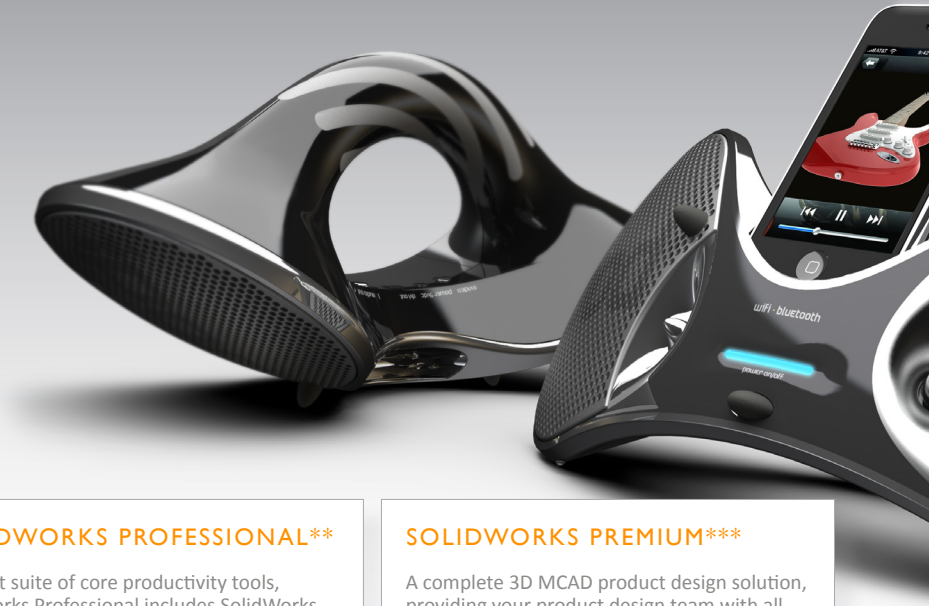
NTCADCAM

SOLIDWORKS COMPARISON



SOLIDWORKS STANDARD*

SolidWorks Standard offers unmatched MCAD 2D and 3D design capabilities, performance, and ease-of-use.

MECHANICAL DESIGN CAPABILITIES

* Part Modeling
* Assembly Modeling
* 2D Drawing Creation
* Import/Export Capabilities
* DWGeditor
* Advanced Surfacing
* Sheetmetal Design Tools
* Weldment Design
* Mold Design
* Assembly Motion
* Large Assembly Mgt
* Data Translation
* Design Reuse
* Bill of Materials
* SolidWorks Simulation Express
* SolidWorks Simulation Flow Express
* DriveWorks Express
* e-Drawings
* SustainabilityXpress
* DFM Xpress

DESIGN VALIDATION CAPABILITIES

* Part SimulationXpress
* FlowXpress
* Design Studies

SOLIDWORKS PROFESSIONAL**

A robust suite of core productivity tools, SolidWorks Professional includes SolidWorks 3D CAD software, a full range of 3D MCAD, communication and CAD productivity tools, plus PDMWorks, an easy-to-set-up-and-use product data management (PDM) solution that is uniquely adapted to managing SolidWorks product data for the individual or workgroup.

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** Design Collaboration eDrawings
** FeatureWorks
** SolidWorks Toolbox,
** Photorealistic Rendering
** PhotoWorks and PhotoView 360
** Design Standards Checking
** Advanced Productivity Tools
** SolidWorks Utilities

DESIGN VALIDATION CAPABILITIES

* Part SimulationXpress
* FlowXpress
* Design Studies

DATA MANAGEMENT CAPABILITIES

** Secure Access
** Revision Control
** Find Files

SOLIDWORKS PREMIUM***

A complete 3D MCAD product design solution, providing your product design team with all the mechanical design, verification, motion simulation, data management and communication tools that they need in one package.

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** SolidWorks Utilities

*** ScanTo3D
*** SolidWorks Routing.
*** CircuitWorks

DESIGN VALIDATION CAPABILITIES

* Part SimulationXpress
* FlowXpress
* Design Studies

*** Tolerance Stackup Validation
*** TolAnalyst
*** Assembly Simulation
*** Fully-Integrated Mechanism Simulation
*** Simulate Welded Structures

DATA MANAGEMENT CAPABILITIES

** Secure Access
** Revision Control
** Find Files

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Features of SolidWorks Standard * 2010

Part Modeling. With Instant3D, you have the fastest, easiest way to create & modify 3D part geometry. By simply clicking & dragging, you can precisely create & resize features–even section entities. Assembly Modeling. SolidWorks gives you the tools to get it right on-screen when you create assemblies, saving you the time and cost of physical prototyping & remanufacturing. You can mate components by picking individual surfaces, edges, curves, and vertices; create mechanical relationships between components; conduct interference, collision, and hole alignment checks; and link the motion of pulleys & sprockets. 2D Drawing Creation. Use the familiar interface of DWGeditor to draw in 2D, as well as edit & maintain your existing DWG data files. Design Communication. With SolidWorks, you have numerous capabilities for accurately communicating design ideas & data to collaborators, upstream and downstream partners, & customers. Working with DWG. SolidWorks includes data translation tools for AutoCAD® users, along with help documentation, so you can smoothly convert DWG files into 3D models. Alternatively, you can use DWGeditor®–included with SolidWorks software–to edit, manipulate, & maintain existing AutoCAD DWG files in their native format. Advanced Surfacing & Complex Shapes. Improve the aesthetics, ergonomics, & usability of your product designs. Using the Freeform feature, creating new geometry, or importing and manipulating new surfaces, is easy & intuitive. Sheet Metal Design Tools. Create sheet metal parts from scratch using folds, bends, flanges, rips, tabs, & mitres, as well as lofted bends, sketched bends, hems, & more. Alternatively, you can create a solid shape as a starting point. Advanced capabilities, such as the "convert solid to sheetmetal" functionality, let you develop a manufacturable sheet metal part. Weldment Design. Sketch a layout for your frame and select a weldment profile. SolidWorks will automatically generate a weldment design in 3D. Modify, validate, and reinforce your design, & then enhance it with standard parts that you can drag and drop from the Design Library or 3D ContentCentral®. Then, generate precise manufacturing drawings with cut lengths for all segments. Mold Design Tools. With SolidWorks, you can import part geometry in IGES, STEP, Parasolid®, ACIS®, & other formats to begin your mold designs. Create, validate, & execute your mold designs–& reduce manufacturing errors–with a complete range of tools and checks, speeding the design of cores & cavities, assembly features, & lip and groove features. Simulate Assembly Motion. Simply by clicking & dragging components, you can check an assembly for proper motion & collisions. In addition, you can simulate physical motion involving assembly mates, contact, springs, & gravity. SolidWorks Motion also provides accurate measurements of velocity, accelerations, & forces on components due to motion – so you have a realistic understanding of design decisions before producing the prototype product. Large Assembly Management Tools. Use "Lightweight" mode to reduce the time spent opening and working on large assemblies. SpeedPak technology enables you to create simplified versions of assemblies that speed assembly operations & drawing creation. Use Quick View to select & open just the component you need to work on, and use the Assembly Xpert to analyze & improve your assembly's performance. Data Translation. Easily import & use existing data, as well as data from external sources. SolidWorks includes translators that support DWG, DXF™, Pro/ENGINEER, IPT (Autodesk Inventor), Mechanical Desktop, Unigraphics, PAR (Solid Edge), CADKEY, IGES, STEP, Parasolid, SAT (ACIS), VDA-FS, VRML, STL, TIFF, JPG, Adobe Illustrator, Rhinocerous, IDF, and HSF (Hoops) formats. Design Reuse. Leverage your successful designs to create compelling proposals for new ones. Quickly search for already-created components in SolidWorks Toolbox, 3D ContentCentral, & your own custom Design Library. Then, simply drag & drop those parts into your new designs. Bill of Materials. Save significant time when you use SolidWorks to automatically generate a complete bill of materials (BOM) from your design. Your BOM is associative: When you change your design, the BOM updates automatically, & vice versa. Plus, you can export the BOM data to Excel, Intuitive ERP®, & other applications. Part Validation. SolidWorks Simulation tools help both new users & experts ensure their designs are durable, safe, & manufacturable. In addition, you can use SolidWorks FloXpress™ to optimize your designs for water- & air-flow effects. DriveWorksXpress. Save time with SolidWorks Smart Component technology to automate the selection & insertion of standard components. Use DriveWorksXpress to automate repetitive design tasks that can be used in product/sales configurators. eDrawings dramatically eases the sharing of product design information. SolidWorks® SustainabilityXpress considers how and where materials are produced, parts are manufactured, and products are used and discarded. DFM Xpress automates commonly followed manufacturability checks, integrated right aside CAD environment

SW * 2010 FEATURES + BONUS PRODUCTS WITH SOLIDWORKS PROFESSIONAL 2010

Collaborate more effectively by creating eDrawings files that can be reviewed and marked-up. Let an unlimited number of recipients mark-up and provide feedback on product designs. When people you collaborate with use other CAD systems, FeatureWorks helps you share imported data by allowing conversion directly to a SolidWorks 3D model. You can elect to rebuild the entire imported model with SolidWorks features, or select individual features to convert. With SolidWorks Toolbox, you have instant access to thousands of pre-built SolidWorks models of standard hardware such as bolts and screws, bearings, o-rings, gears, etc. Just drag and drop them into your design, or use the SmartFasteners capability to automatically assemble and size fasteners. Use PhotoWorks and PhotoView 360 to leverage your SolidWorks 3D models for presentations, proposals, and virtual and material studies—before creating any parts. Save time and eliminate the high costs of prototyping and photography. Raise your quality level with SolidWorks Design Checker. With thorough, automated checks and autocorrect capability, you can ensure full compliance with your company standards before you release your designs for manufacture. SolidWorks Utilities enables the designer to do many things including compare parts or drawings to find differences between two similar designs or similar drawings. FeatureWorks streamlines use of data from different CAD systems to work together.

WORKGROUP DATA MANAGEMENT CAPABILITIES

Protect your product design data with secure, managed access to authorized individuals, over a network or via the web. In addition to internal users, you can also permit access to partners, customers and your supply chain. Help your design team avoid overwriting files and help purchasing and manufacturing order and produce the correct parts, every time. Quickly and easily find SolidWorks files by searching on metadata (Custom Properties).

SW ** 2010 FEATURES + BONUS PRODUCTS WITH SOLIDWORKS PREMIUM 2010

Import digital scans of handcrafted models into SolidWorks using ScanTo3D. You can also import design concepts created in Rhino® software or sketches developed in Adobe® Illustrator®. Automate and accelerate the process of routing tubes, pipes, electrical cables, cable harnesses, and electrical conduits with SolidWorks Routing. Use CircuitWorks, a bi-directional ECAD translator, to ensure the fit and function of printed circuit boards (PCBs) into electrical and mechanical products.

DESIGN VALIDATION CAPABILITIES

TolAnalyst allows tolerance stack-up analysis directly inside SolidWorks, and analyzes designs based on the order and manner in which parts are assembled, as well as DimXpert-applied dimensions and tolerances. Determine if your design meets fit and function requirements without tedious and error-prone hand calculations. Study the interactions of assembly components onscreen, before incurring the costs of physical prototypes. Accurately simulate static or dynamic loads to evaluate your design's performance under stress, strain, and displacement. Apply a wide variety of physics-based models to simulate real-world operating conditions for your design. Check for colliding parts. Output numerical and graphic data of the results, as well as animations of your tests. Ensure your welded structures perform at peak operating conditions. Apply pressure, forces, and bearing loads. Then use powerful visualization tools like sections plots, iso-clipping, and animation to review the response of either the full assembly or only certain parts.

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