DASSAULT SYSTEMES

SOLIDWORKS

SOLIDWORKS PREMIUM

THE POWER YOU NEED TO DRIVE INNOVATION



3D DESIGN SOLUTIONS

SOLIDWORKS® Premium seamlessly integrates powerful design tools—including industry-leading part, assembly, and drawing capabilities with built-in simulation, cost estimation, rendering, animation, and product data management—to help you get your work done faster and easier than ever before. With innovative capabilities, SOLIDWORKS Premium moves you smoothly through the phases of product creation (Design, Validate, Collaborate, Build) to achieve a more productive 3D design experience.

"Innovation has helped us gain a commanding share of our market, and SOLIDWORKS software is one of the tools that helps us to innovate freely."

— Kai Birger Olsen, Engineering Director, Ramboll Offshore Wind

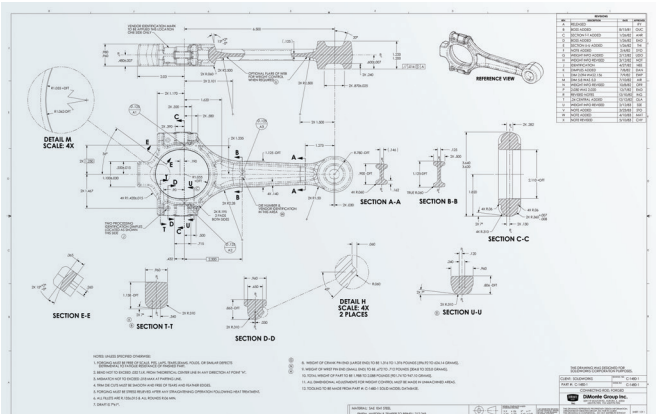
MOVE QUICKLY FROM IDEA TO REALITY

Advance your ideas from concept to market with increased modeling flexibility.

Part and assembly modeling

SOLIDWORKS Premium allows you to design products for a broad range of industries and applications.

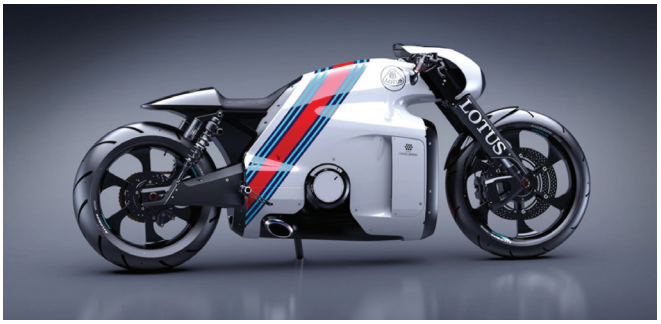
- **3D solid modeling:** create and edit 3D part and assembly models and create 2D drawings that automatically update with design changes
- **Conceptual design:** create layout sketches; apply motors and forces to check mechanism performance; import images and scans to use as a reference for creating 3D geometry
- **Large assembly design capabilities:** create and manage extremely large designs, and work in either detailed or simplified modes
- **Advanced surfacing:** create and edit complex solid and surface geometry, including stylish C2 surfaces
- **Sheet metal:** design from scratch or convert your 3D part to sheet metal; includes automatic flattening of sheet metal parts with bend length compensation
- **Weldments:** quickly design welded structures composed of structural members, plates, and gussets; includes a library of predefined structural shapes
- **Mold design:** design molded parts and the tooling to create them, including core and cavity, draft, automated parting surfaces, and mold base components
- **Piping/tubing design:** generate and document 3D mechanical systems, including pipe/tube paths, pipe spools, pipe slope, and a complete Bill of Materials (BOM)
- **Electrical cable/harness and conduit design:** generate and document 3D electrical route paths, and complete the BOM for your design



Design reuse and automation

Leverage existing design work.

- **SOLIDWORKS Search:** search for any file—on your computer, network,SOLIDWORKS PDM system, or the internet
- **SOLIDWORKS Treehouse:** create, organize, and reuse assembly tree diagrams as a starting point for new designs
- **Design automation:** automate repetitive design tasks—including part, assembly, and drawing generation
- **SOLIDWORKS Toolbox:** over one million components and other items to add to your assemblies; includes automated assembly of fasteners
- **Online components:** reduce design time by using 2D and 3D catalog components provided by suppliers



Animations and photorealistic renderings

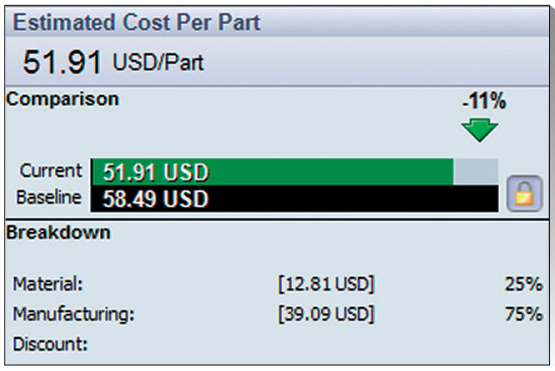
Clearly communicate your design intent with powerful visuals.

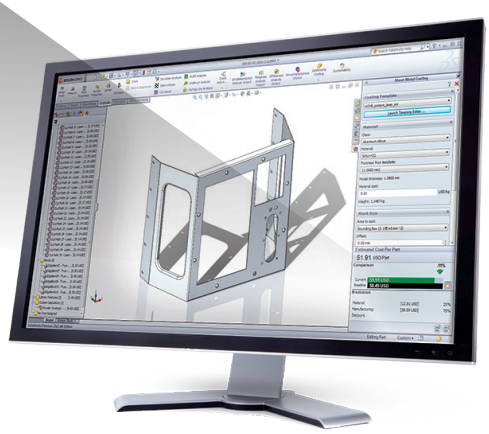
- **Advanced rendering:** create photorealistic images, animations, immersive content and more with SOLIDWORKS Visualize
- **Walk-through/fly-through animations:** take a virtual walkthrough of your design or record a video
- **Assembly animation:** demonstrate your design's basic operations by applying motion, gravity, and component contact, or by manually moving components; record and save a video

2D drawings

Quickly create production-ready 2D drawings.

- **Automatic Drawing View creation:** drag and drop the 3D model into a drawing to automatically create a view
- **Automatic Drawing View updates:** drawing views update automatically with 3D model changes
- **Dimensioning and Tolerancing:** automated creation and placement of dimensions and tolerances
- **Bill of Materials (BOM):** automated BOMs with balloon note callouts and cut lists that update with model changes; includes output BOMs to Microsoft® Excel®
- **Annotations:** ability to create all necessary symbols, notes, hole callouts, and tables
- **Standards checking:** automatically compare your drawings to company standards to ensure consistency
- **Drawing control:** graphically compare drawings to understand differences and control revisions





VALIDATE DESIGN PERFORMANCE WITH VIRTUAL TESTING

Ensure your ideas will perform as designed with innovative simulation tools fully integrated inside SOLIDWORKS CAD to help you solve complex problems during design. Take the risk out of innovation and reduce the number of physical prototypes, thereby saving money and reducing the time to product completion.

Time-based Motion

SOLIDWORKS Motion uses assembly mates, part contacts, and a robust physics-based solver to accurately determine the physical dynamic movements of an assembly under load to verify that you have met your design goals throughout the operating cycle.

Linear Static Simulation

Calculate stresses, deformations, and factor of safety of geometry under loads to intuitively identify areas prone to failure or over-dimensioned areas. You can also evaluate design changes to enhance quality and performance.

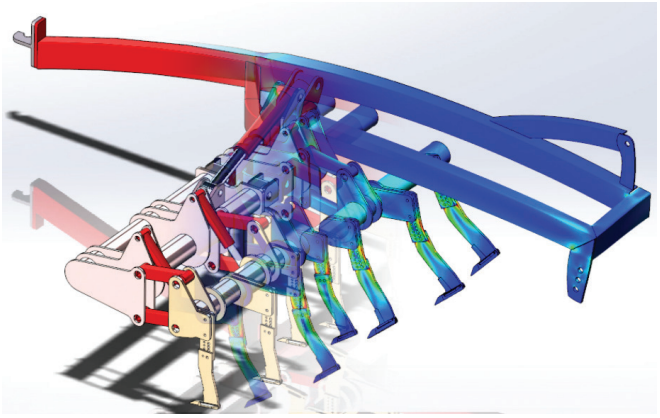
For more advanced simulation capabilities see more SOLIDWORKS Simulation solutions at www.solidworks.com/simulation.

SOLIDWORKS Sustainability

SOLIDWORKS Sustainability, included with SOLIDWORKS Premium, enables you to assess the environmental impact of the entire design, optimize material selection and part geometry, and assess product energy consumption.

SOLIDWORKS FloXpress

SOLIDWORKS FloXpress provides initial air and water flow simulation and reporting.



MEET COST TARGETS AND MANUFACTURE CORRECTLY THE FIRST TIME

Bridge the gap with design, fast-track your design to manufacture, and streamline your product development process.

Design for Cost (DFC) and automated quoting

- **Automatic cost estimation:** estimate part and assembly manufacturing costs automatically
- **Customizable manufacturing settings:** customize cost estimation to match your specific manufacturing environment

Design for Manufacturability (DFM)

- **DFMXpress:** automatically check the manufacturability of your designs
- **Compare parts and drawings for changes:** use part and drawing comparison tools to graphically show differences between two versions of a part or drawing
- **Draft, undercut, and wall thickness checks:** automatically check for draft, undercut, and wall thickness issues in molded, cast, and forged parts and tooling

Detect interferences

- **Automatic collision, interference, and hole alignment checks:** check for interferences, collisions, clearances, and hole misalignments between components
- **Tolerance stack-up analysis:** automatically check the effects of tolerances on parts and assemblies

Electrical manufacturing

- **Harness pin board:** automatically flatten wire harnesses to generate pin board drawings and wire cut lists for electrical manufacturing

Pipe/tube systems manufacturing

- **Export:** CNC pipe bend data, spool data, BOM, and PCF for ISOGEN™
- **Import**: generate route specifications from P&ID files

"The SOLIDWORKS Costing tool gives us a competitive advantage in terms of turning around accurate proposals. The information provided by the Costing application is very accurate, so we use it as the basis of all of our manufacturing proposals."

— Managing Director P. Chandramouli, Domotech Appliances

Other data output for manufacturing

- **Sheet metal flat pattern:** automatically flatten sheet metal design with bend compensation
- **Flatten non-developable surfaces:** flatten surfaces that require material to be stretched or compressed
- **3D printing/rapid prototyping:** print directly to 3D printers supporting 3MF and AMF, output STL, and other file formats for rapid prototyping
- **2D manufacturing data:** automatically export CNC-ready DXF and DWG file information directly from SOLIDWORKS 3D models
- **Streamline production prep:** automatic output of hole charts, weld tables, cut lists, and punch tool data
- **3D CAM partner integration:** automatically update NC toolpaths directly inside SOLIDWORKS without the need for data translation using Certified Gold Partner CAM products

COLLABORATE AND COMMUNICATE YOUR IDEAS FASTER

Share CAD data with others and collaborate across multiple disciplines in organization and with customers and vendors. Mechatronic design processes, concurrent design on one platform, and streamlined electrical/mechanical design help you quickly and easily finalize product designs.

Data exchange

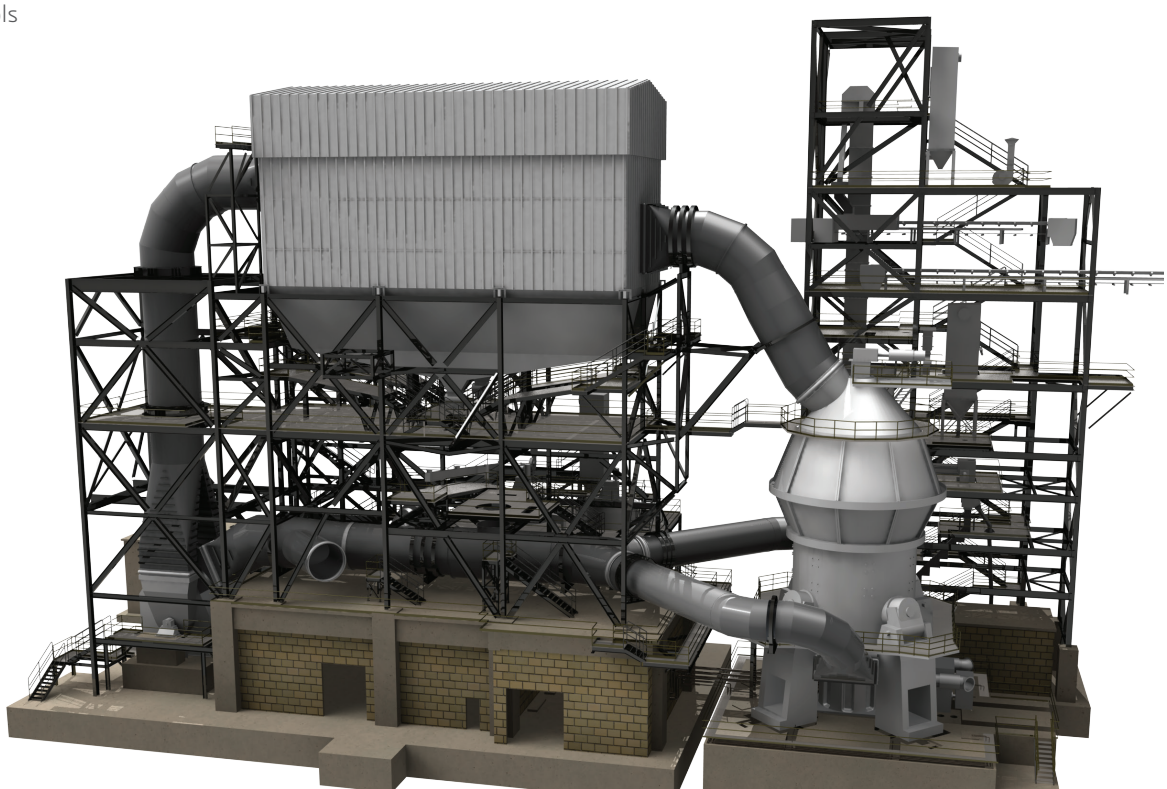
- **Import/export:** convert CAD data into a format that meets your needs, including IFC file import/export to interact with AEC design software
- **Existing 2D DWG data:** maintain designs using SOLIDWORKS 2D CAD tools
- **Automatic Feature Recognition:** automatically convert non-SOLIDWORKS CAD data into easily modifiable SOLIDWORKS models
- **ECAD-MCAD data exchange:** use CircuitWorks™ to provide two-way data exchange between mechanical and electrical designers
- **Import scanned data:** convert scanned data into SOLIDWORKS CAD geometry to facilitate reverse engineering

Collaboration tools

- **Large Design Review:** walk through, measure, section, and create snapshot views with comments on massive assemblies
- **eDrawings® Viewer:** view and mark up SOLIDWORKS files using an email-friendly file format; supports SOLIDWORKS CAD, DWG, and numerous other CAD formats; supported on mobile devices
- **Protect your intellectual property:** use Defeature to hide and protect selected aspects of your design before sharing models
- **SOLIDWORKS Visualize:** design and market products faster and more effectively by turning imagination into reality through impactful content and experiences

SOLIDWORKS Product Data Management (PDM)

- **Manage your data:** manage your design data with automatic revision control, data security, and access control
- **Find your data:** search components for use in new designs, and find and leverage existing designs for re-use



ONE PACKAGE TACKLES YOUR DESIGN CHALLENGES

SOLIDWORKS Premium 2017 gives you powerful, easy-to-use functionality that automates tasks, streamlines workflows, and helps you quickly define and validate the form, fit, and function of your design. Part of the SOLIDWORKS product development solution—covering design, simulation, sustainability, technical communication, and data management—SOLIDWORKS Premium empowers innovative design with specific tools that help you work more efficiently so you can make better design decisions.

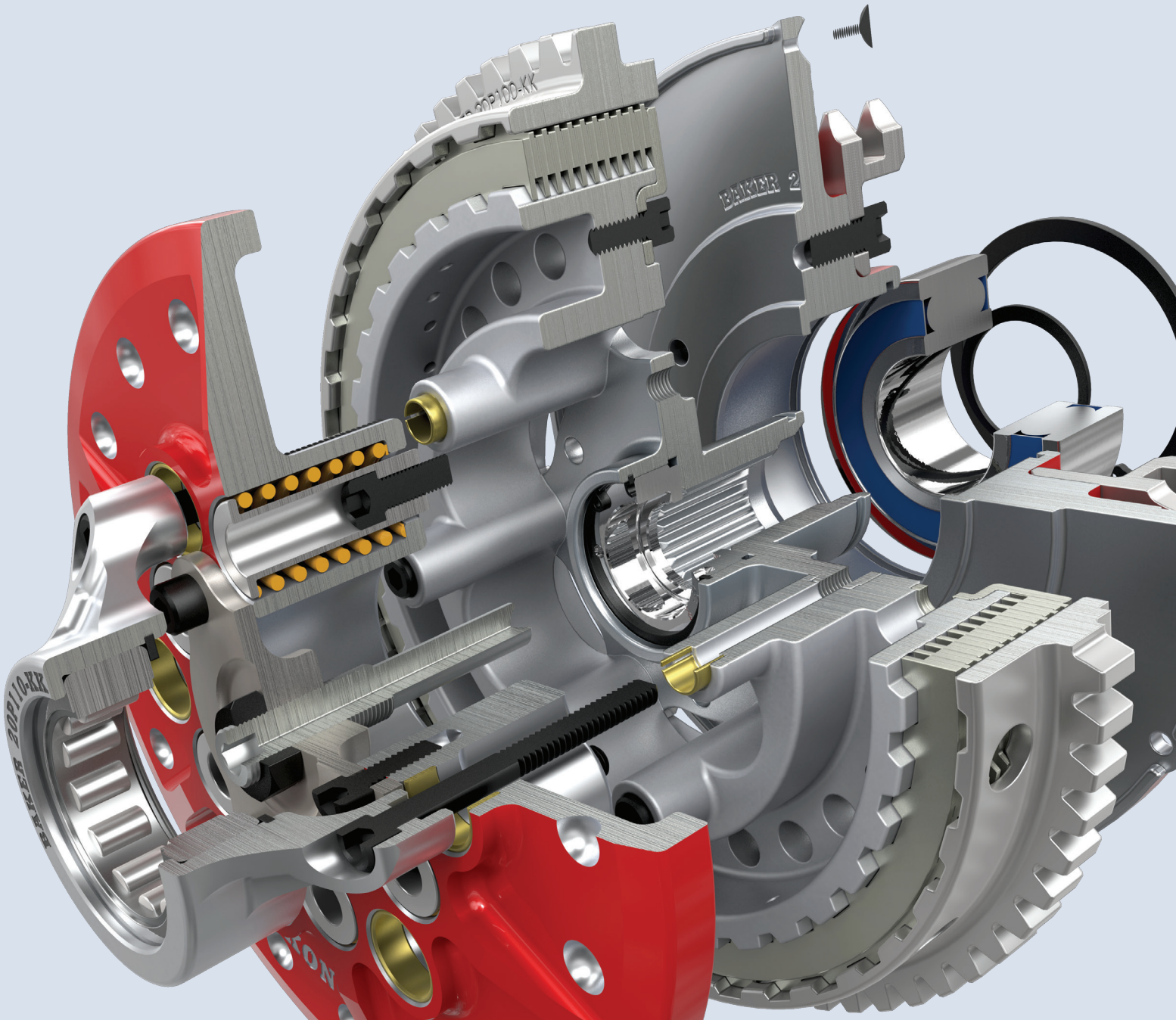
LEARN FAST, WORK FAST, BE MORE PRODUCTIVE

SOLIDWORKS software combines ease of use with broad customization to help new users learn fast and experienced users work faster. Companies of all sizes can use SOLIDWORKS Premium to bring their product vision to life.

Designed to help make you instantly productive, the intuitive SOLIDWORKS user interface (UI) is easy to learn and use. The UI reduces CAD overhead so you need fewer "picks and clicks" and have easier access to commands with in-context menus, toolbar commands organized by design function, and automated Command Search to get to any command instantly. And an extensive set of tutorials and support documentation helps you progress at a rapid pace.

Easy customization enables you to dramatically increase design productivity. You can customize toolbars, in-context menus, hotkeys, and environment settings. Mouse gestures provide quick access to commands, and you can automatically perform design functions through Application Programming Interfaces (APIs) and batch processing.

Intelligent design and detailing help improve user productivity by automatically detecting and resolving modeling and detailing challenges that could typically frustrate new users or be considered tedious and time-consuming by experienced users.



SOLIDWORKS PRODUCT DEVELOPMENT SOLUTIONS

SOLIDWORKS software provides an intuitive 3D development environment that helps maximize the productivity of your design and engineering resources to create better products faster and more cost-effectively. See the full range of SOLIDWORKS software for design, simulation, technical communication, and data management at www.solidworks.com/products2017.

SOLIDWORKS VISUALIZE INCLUDED!

As an added value to our customers, SOLIDWORKS Premium or Professional users who are active with their Subscription are eligible to download SOLIDWORKS Visualize Standard at no cost! For more details, please visit www.solidworks.com/visualize.

LEARN MORE

To learn more about SOLIDWORKS Premium solutions, visit www.solidworks.com/premium or contact your local authorized SOLIDWORKS reseller.

SOLIDWORKS systems requirements can be found by visiting www.solidworks.com/systemsrequirements.

DATA EXCHANGE

SOLIDWORKS Premium 2017 features built-in translators that let you exchange CAD data created in a wide variety of software applications and file formats.

NATIVE CAD FORMATS

- 3D XML
- ACIS
- Autodesk® 3D Studio Max (3DS)
- Autodesk Inventor® Assembly
- Autodesk Inventor Part
- CADKEY®
- CATIA® (optional)
- CATIA Graphics
- DWG
- DXF
- eDrawings
- HCG
- Hoops HSF
- Mechanical Desktop®
- Parasolid®
- Pro/Engineer®/Creo® Assembly
- Pro/Engineer/Creo Part
- Rhino
- SLDXML
- Solid Edge® Assembly
- Solid Edge Part
- Unigraphics® NX

NEUTRAL CAD FORMATS

- IDF
- IFC (4.0 and 2x3)
- IGES
- PADS
- ProStep EDMD
- STEP AP203/214
- VDAFS
- VRML

POINT CLOUD/MESH DATA

- Mesh Files
- Point Cloud

3D PRINTING FORMATS

- 3MF
- AMF
- OBJ
- STL

IMAGE AND DOCUMENT FORMATS

- Adobe Illustrator®
- Adobe Photoshop®
- JPG
- Microsoft XAML
- PDF (2D and 3D)
- PNG
- TIFF

EXTERNAL APPLICATIONS

- DLL

SUPPORTED STANDARDS

- ANSI
- BSI
- DIN
- GB
- GOST
- ISO
- JIS

Our 3DEXPERIENCE® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the **3DEXPERIENCE®** Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes' collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 210,000 customers of all sizes in all industries in more than 140 countries. For more information, visit **www.3ds.com**.

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