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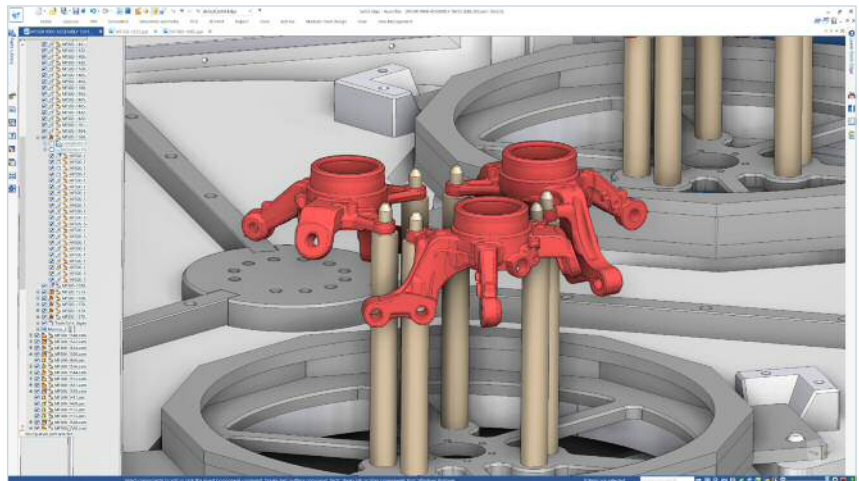
Ingenuity for life

What's new in Solid Edge 2020

Digitalize your product development process
and transform your business

solidedge.siemens.com

The latest version of Solid Edge® software from Siemens Digital Industries provides next-generation technologies that solve today's toughest product development challenges. With new features such as augmented reality (AR), expanded validation tools, model-based definition, 2D Nesting and extensive enhancements to core computer-aided design (CAD) capabilities, Solid Edge 2020 can be used to enhance collaboration and fully digitalize the design-to-manufacturing process.



Mechanical design

Visualize and validate your ideas with next-generation technology, from augmented reality to model-based definition.

- Augmented reality - Design visualization brings ideas to life, allowing engineers to validate their digital design in a physical environment
- Reverse engineering - Integrate next-generation technologies to provide a rapid and simplified way to create a digital twin of a physical product
- Model-based definition - Realize significant gains in manufacturing productivity by using model-based definition, which provides a complete digital characterization of parts and assemblies using 3D design data. Spend less time on engineering documentation and drive downstream validation while minimizing manufacturing errors

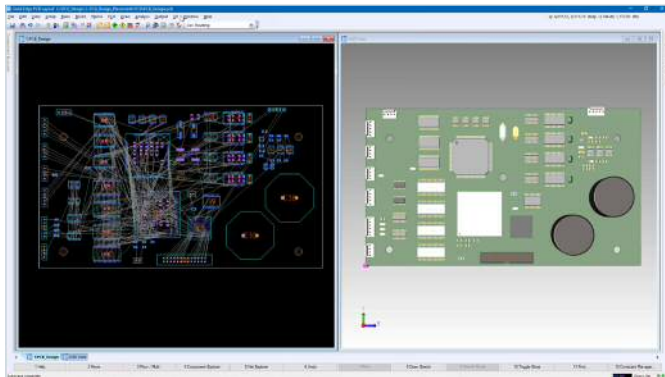
- Design for additive manufacturing (DfAM) - Streamline access to the latest manufacturing methods, ensuring your 3D print is right first time. Automating the creation of a physical thread makes common fastening types available to the additive manufacturing world
- Core CAD enhancements - Productivity gains in areas such as large assembly, sheet metal and data migration reduce design challenges

As a result, you can:

- Achieve substantial performance gains (up to 10 times faster workflows) with new high-performance mode and automatic activation as assembly size grows
- Build complex 3D sheet metal models more easily using enhanced lofted flanges and unique bend bulge relief capabilities in a 3D CAD environment
- Provide new photorealistic rendering with Keyshot 8.1 integration, which supports customer requests for cut-aways
- Simplify data migration of 3D models and 2D drawings from other industry software, including SolidWorks, PTC Creo Elements Direct, PTC Creo Parametric (or Pro/ENGINEER), AutoDesk Inventor and AutoCAD, into Solid Edge

Electrical design

Electromechanical design as it's meant to be, a seamless integration of electronic computer-aided design (ECAD) and mechanical computer-aided design (MCAD).

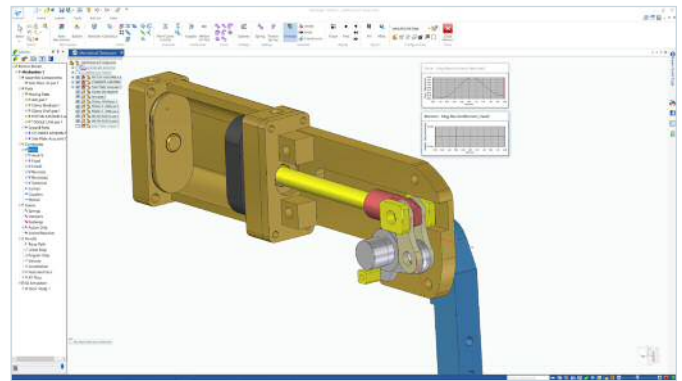


Fully functional and manufacturable electromechanical designs are created in a seamless ECAD-MCAD environment. Changes are highlighted interactively in both domains, minimizing design errors and shortening development time.

- **Solid Edge Wiring and Harness Design** - Enhancements improve productivity, streamline processes, manage change management conflicts and optimize user interactions
- **Solid Edge Electrical Routing** - Easier harness topology exchange enhancements reduce design time and manufacturing readiness in both connected and disconnected modes
- **Solid Edge PCB Design** - Native 3D PCB design for placement, routing and MCAD collaboration delivers productivity gains through sketch routing
- **Solid Edge PCB Collaboration** – Improve electromechanical product designs and reduce development time by easily creating and exporting design intent for printed circuit boards (PCBs) from MCAD environment

Simulation

Put your designs in motion with simulation tools that are built for designers but are powerful enough for analysts.



Digitally validating and optimizing parts, assemblies and complete systems early in the design process reduces the need for physical prototypes, saving time and costs.

Three new levels of simulation capabilities are now offered in Solid Edge:

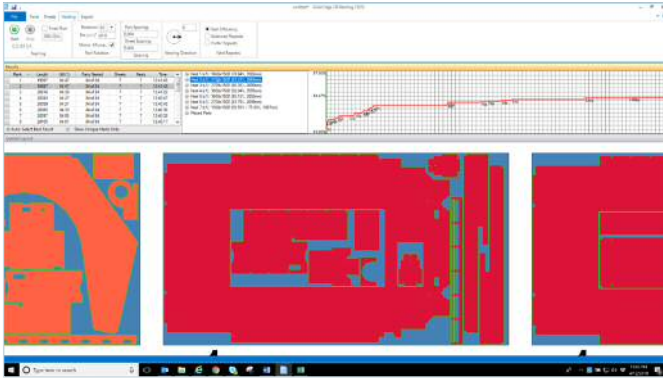
- **Solid Edge Premium:** The base offering is included in Solid Edge Premium and includes modeling and evaluation, linear static, motion and optimization
- **Solid Edge Simulation – Standard version** that includes premium capabilities together with normal modes and buckling
- **Solid Edge Simulation – Advanced version** offers the most robust feature set, and includes the addition of heat transfer and dynamic response

New capabilities enable you to:

- Simulate all aspects of mechanism motion. With new motion simulation functionality, understand the true dynamic function of a design before producing or assembling physical hardware
- Simulate the vibration level of a structure during product operation with harmonic response analysis to ensure designs will successfully overcome resonance and other dynamics effects
- Rapidly interpret and understand model behavior with comprehensive graphical postprocessing tools

Manufacturing

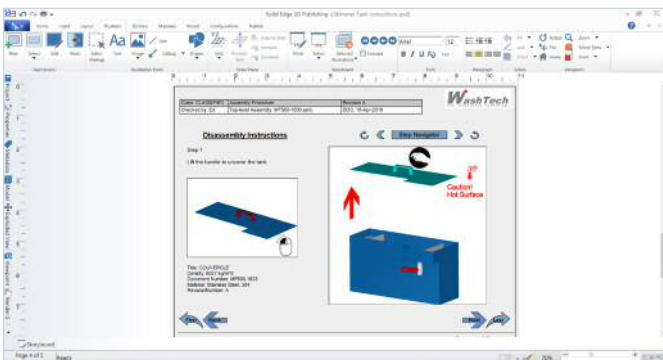
Fully optimized additive and subtractive manufacturing.



- Solid Edge 2D Nesting can be used to generate optimized layouts for the two-dimensional cutting of fabrication material, including sheet metal, plastic, wood, fabric and textiles
- Define and execute a wide range of manufacturing processes, including computer numerical control (CNC) machining, nesting, cutting, bending, molding, welding, assembling and additive manufacturing
- Print right-first-time thanks to dynamic model sectioning, unseen void removal, print bed preparation (including scaling, orienting and settling), overhang analysis to minimize supports and validate wall thickness. Print the most common fastening type thanks to automated physical-thread creation
 - Import and export in the popular OBJ file format
 - Print in-house with automated print preparation, including color printing capability
 - Print service with real-time price and lead-time comparison and rapid delivery

Technical publications

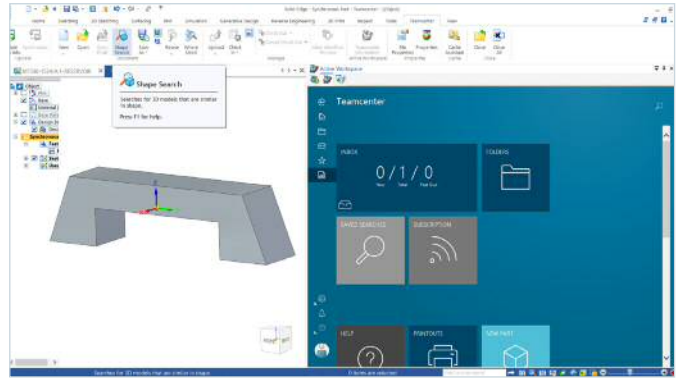
Communicate globally your digital design documentation.



- New and enhanced publishing tools allow users to import and export Solid Edge section views, publish vector graphics for PDF documents, define individual sizing for illustrations and produce images or vectors with transparent backgrounds
- Reach a larger, global market using XML Localization Interchange File Format (XLIFF) language translation to easily translate and localize digital documents

Data management

Scalable, searchable and manageable data.



From built-in data management to Teamcenter® software integration, the scalable set of Solid Edge tools can meet the varying needs of manufacturers.

- With Solid Edge data management solutions, easily search, manage and share product data efficiently and securely. Search for drawings, parts and assemblies using file names and standard or custom properties for quick and easy access to data
- Shape search capabilities identify similar parts allowing for the re-use of existing design data, reducing costs and saving time
- One-step and quick-release workflows with email notifications offer simple processes for design approval
- Systematically and effectively track and report customer and regulatory design requirements with Solid Edge Requirements Management



Cloud-based collaboration

Secure storage, viewing, markup and sharing of CAD files.

- Online CAD storage, viewing and collaboration
- Browser-based access for viewing and markup of CAD files on any device
- Secure sharing of projects
- All common CAD formats supported

Solid Edge is a portfolio of affordable, easy-to-deploy, maintain and use software tools that advance all aspects of the product development process – mechanical and electrical design, simulation, manufacturing, technical documentation, data management and cloud-based collaboration.

Developed by Siemens, Solid Edge provides an innovative and comprehensive approach to product development for the mainstream market.

For more information visit solidedge.siemens.com

Siemens Digital Industries Software
siemens.com/plm

Americas +1 314 264 8499
Europe +44 (0) 1276 413200
Asia-Pacific +852 2230 3333

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