



SIEMENS

Ingenuity for life



Siemens PLM Software

Solid Edge

A portfolio of affordable,
easy-to-use software solutions
for product development

solidedge.siemens.com

Disruption in product design and manufacturing



Digitalization technologies are changing how products are designed and manufactured. Product design is becoming a cross-discipline collaboration, because product complexity is increasing exponentially and the complete design-to-manufacture process can now be fully digitalized. Such advances are improving efficiency and effectiveness for all companies, enabling their success and growth. But for small and medium-sized businesses (SMBs) especially, digitalization can be a tremendous source of competitive advantage.

SMBs have become synonymous with innovation and disruption, but often lack the infrastructure to bring products to market quickly. Digitalization provides the ability to connect people, devices and businesses to lower or remove that barrier. Since SMBs are more agile, they can more easily leverage digital transformation to leapfrog the big incumbents. Today's startups and SMBs can be tomorrow's large enterprises.

Siemens PLM Software empowers SMBs with solutions that address their unique needs. The Solid Edge® software portfolio delivers value, flexibility and choice: a modular, end-to-end solution that begins with an exceptional electromechanical design experience that is seamlessly integrated with market-leading applications for product optimization, data management, documentation, and manufacturing.

"46.2% of decision makers believe that technology levels the playing field for small businesses versus larger corporations."

Thriving in the Digital Economy
IDC

Digital transformation technology



Image courtesy of Radio Bro

Selecting a technology platform is an important decision, one that a company can live or die by. As a leading provider of manufacturing and engineering solutions for more than 170 years, Siemens is well positioned to deliver the next-generation technologies that you need today.

Developed on Siemens' industry-leading technologies, Solid Edge provides small and medium-sized manufacturers with the most innovative and comprehensive approach to product development on the market, and a tried and tested path for growth if and when you are ready.

48.3% of SMB manufacturers believe their efforts around digital transformation will be essential to their company's survival in the next 3-5 years.

Thriving in the Digital Economy
IDC

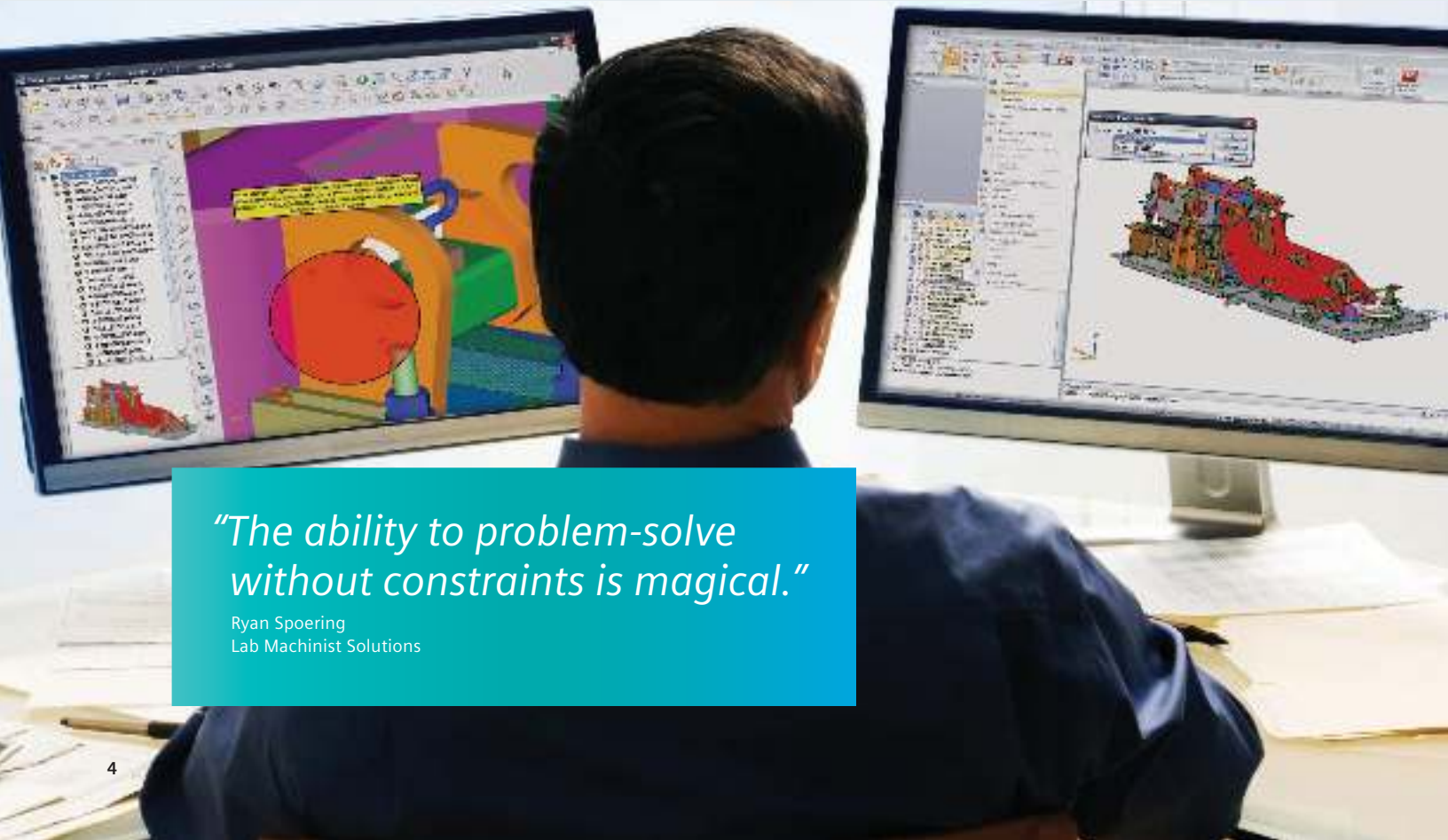
Next-generation product development for today's engineers

Synchronous Technology

The cornerstone of the Solid Edge portfolio is its market-leading computer-aided design (CAD) application. Developed from the ground up to be an open and extensible tool, Solid Edge with synchronous technology is the only CAD tool that provides you with the freedom to design naturally and iteratively with ease, whether you are working on a brand new design or editing existing parts, assemblies or products. That's because synchronous technology contains built-in intelligence that interprets design intent regardless of where the design originated.

Developed with foresight, Solid Edge with synchronous technology also enables collaboration like no other professional CAD solution. In today's open, highly connected digital design environment, interoperability is no longer just a nice feature to have – it is essential. Siemens synchronous technology provides the common language for the next generation of product design.

Additional components at the core of Solid Edge include game-changing technologies such as generative design, convergent modeling and reverse engineering. Deeply embedded in Solid Edge, these robust features are reshaping the way products are developed.



"The ability to problem-solve without constraints is magical."

Ryan Spoering
Lab Machinist Solutions

Solid Edge with synchronous technology will reshape the way you think about product design.

Reverse engineering

Regardless of where or how parts are created – imported from other systems, digitally scanned or products of a generative design analysis – Solid Edge provides you with uniquely powerful tools to prepare faceted bodies for downstream modeling and/or manufacturing.

Generative design

Solid Edge Generative Design Pro is a powerful solution that enables quick creation of optimized, lightweight product designs. It provides the latest topology optimization technology for fast and accurate design optimization so you can digitally analyze factors such as weight targets, load cases and other constraint scenarios simultaneously. Your generative design studies are sure to reshape both the way you think about designing a product and the product itself. Incorporating generative design capabilities early in your design process will help you to create new innovative designs, reduce material costs and influence your downstream manufacturing process, whether you're leveraging new additive technologies or employing traditional manufacturing processes.

Convergent modeling

Solid Edge Convergent Modeling™ technology allows you to incorporate mesh models into the design workflow to create real designs. You can also seamlessly combine traditional boundary representation (b-rep) solid models with triangular mesh models without time-consuming and error-prone conversions.



Parasolid software

At the heart of the Solid Edge portfolio is Siemens Parasolid® software, the industry's most widely used computer-aided geometric modeling kernel. Parasolid enables the creation and modification of digital 3D models and delivers 100 percent 3D model compatibility between product development applications such as design, simulation and manufacturing.

The Solid Edge portfolio

Solid Edge is a portfolio of affordable, easy-to-use software tools that address all aspects of the product development process. Solid Edge is available in a range of options, from introductory to advanced capabilities, via flexible licensing models to fit the requirements of designers and engineers working in start-ups, advanced manufacturing organizations and everywhere in between.

Solid Edge mechanical and electrical design

Powerful yet easy-to-use mechanical and electrical design applications, available in a range of packages.

Solid Edge simulation

Accelerate analysis, predict performance and reduce prototypes.

Solid Edge data management

Streamline collaboration, improve workflows and accelerate engineering changes.

Solid Edge technical publications

Quickly author accurate instructions for product manufacturing, installation and maintenance.

Solid Edge manufacturing

Advanced solutions for manufacturing, including NC machining and additive manufacturing

Cloud-based collaboration

Secure, password-based CAD file management, viewing, sharing and markup for ease of collaboration.



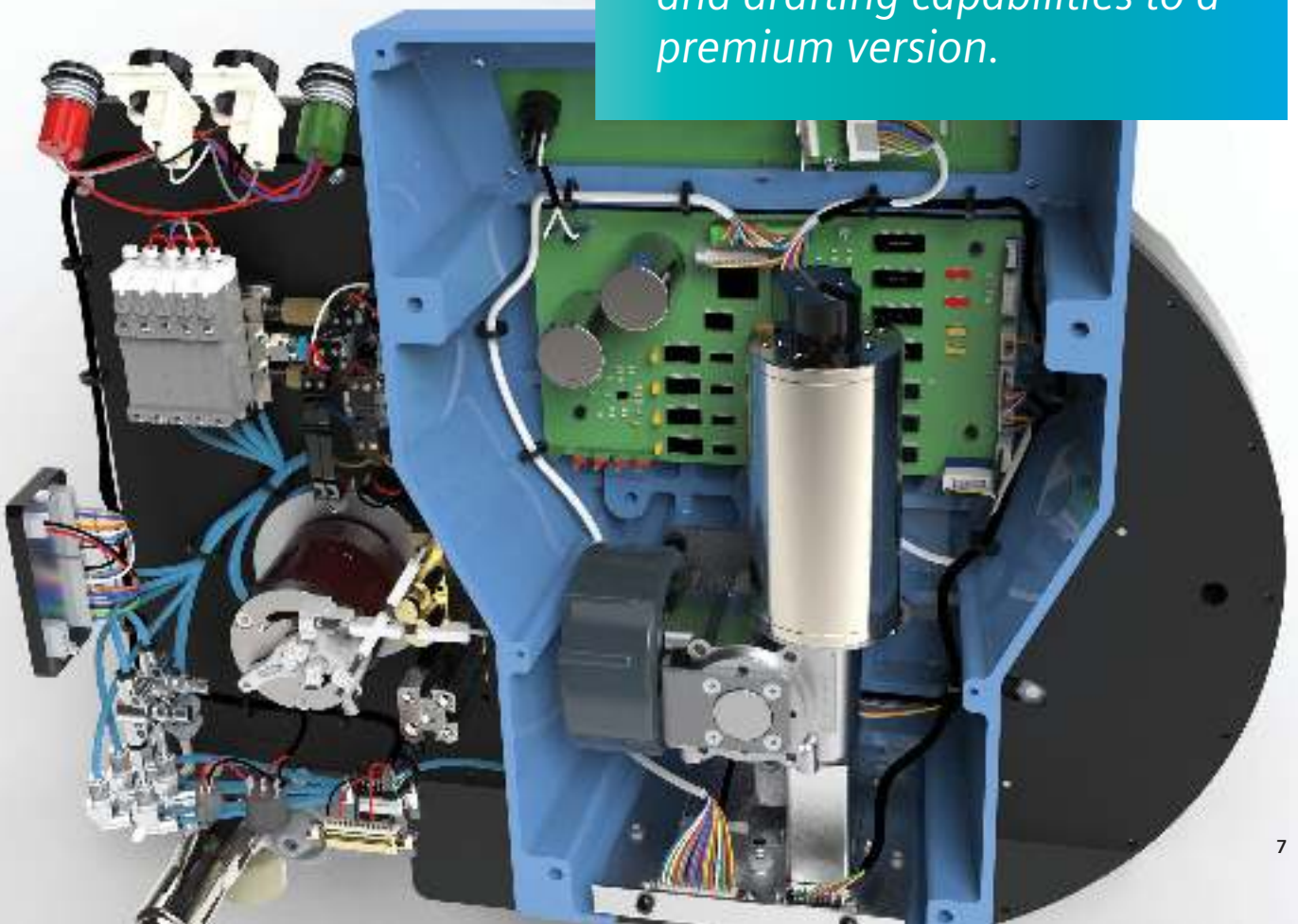
Solid Edge mechanical and electrical design

Across industries, products are increasingly smart and connected, designed to improve our productivity and simplify our daily lives. Designing those products is anything but simple.

Solid Edge integrated mechanical and electrical design (MCAD/ECAD) applications offer the most robust yet easy-to-use design tools available. A modular and scalable CAD application, Solid Edge design is available in four different packages, ranging from basic design and drafting capabilities to a premium version that includes capabilities for designing more advanced embedded systems. While your digital design starts with Solid Edge design, you won't want to stop there.

The fully integrated Solid Edge Wiring Design makes it easier to design the wiring of electrical systems, with electrically-aware schematic tools and built-in design rule checks to confirm correct-by-construction design. With a seamless data flow between the 2D wiring, 2D harness and 3D MCAD/ECAD domains, each team can understand and trace the impact of design decisions across domains. Schematic capture and PCB layout tools are also available, including sketch routing, hierarchical 2D/3D planning and placement, and ECAD/MCAD collaboration to simplify printed circuit board design.

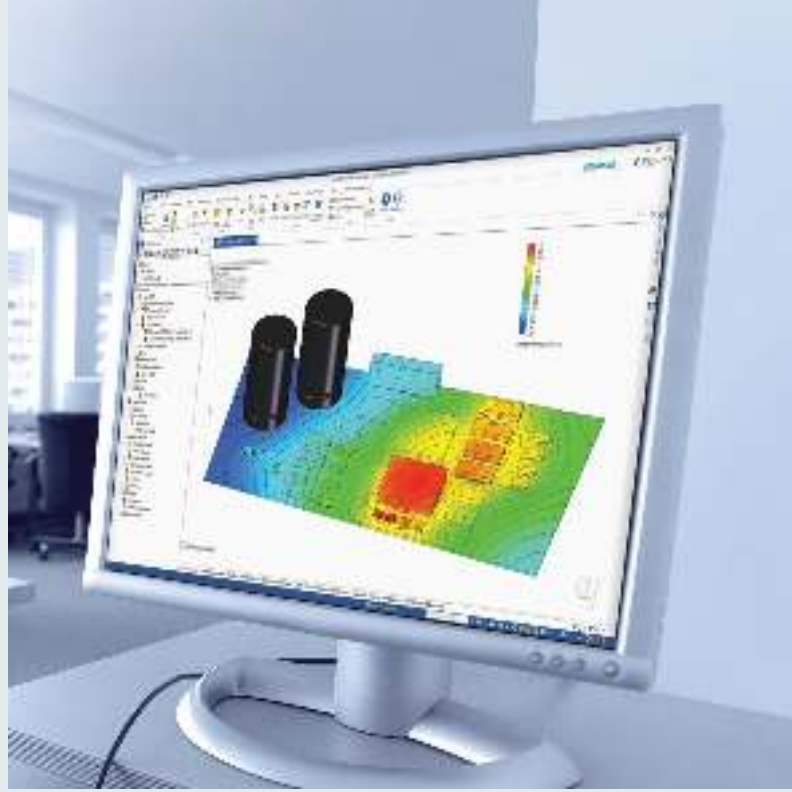
Solid Edge design is available in four different packages, ranging from basic design and drafting capabilities to a premium version.



Solid Edge simulation

Fully integrated and accessible from within Solid Edge, Solid Edge Simulation accelerates design analysis and help you to reduce or eliminate engineering prototypes. Solid Edge Simulation employs the powerful Simcenter Nastran® software solver, so you can analyze 3D parts and assemblies or complete systems and easily solve complex fit and position constraints with confidence.

Additionally, Solid Edge offers solutions for analyzing computational fluid dynamics, free surface flow, and thermal and transient heat transfer.



Solid Edge data management



Solid Edge offers a scalable set of data management solutions to meet the varying needs of manufacturing organizations. Solid Edge enables you to rapidly implement data management practices to improve workflows and experience measurable results, such as improved revision control, faster engineering changes, and reduced errors.

And when you're ready to grow to a more robust data management solution, Solid Edge provides a path to help. The Teamcenter® software Rapid Start configuration integrates Solid Edge with Teamcenter, the world's leading PLM solution, enabling you to manage, capture and share all your product development data and ensuring your participation in an advanced digital product development ecosystem.

Solid Edge technical publications

Ensure satisfactory in-field performance of your products and the success of your business with Solid Edge technical publications. Easy-to-use, fully integrated authoring applications enable you to clearly communicate detailed and accurate instructions for product manufacturing, installation and maintenance. Whether you want to create state-of-the-art illustrations or interactive 3D technical documents, Solid Edge technical publications can automatically retrieve content from CAD models so you don't have to manually recreate that data.



"Digitalization has also made it possible to better track and manage the materials used in production and Thermoplan's quality assurance processes. The company can now also offer customer service remotely over the internet; for example, by providing instructions for replacing the water filter."

Adrian Steiner
CEO and co-owner
Thermoplan

Solid Edge manufacturing

Solid Edge provides advanced tools needed to manufacture today's complex products, from CNC machining to 3D printing.

Machine tool programming that addresses all types of numerical control (NC) manufacturing, from simple NC programming to high-speed and multi-axis machining is available in Solid Edge CAM Pro, a comprehensive, highly flexible system that uses the latest machining technology to efficiently program your CNC machine tools.

Additionally, Solid Edge automates print preparation and color printing options for additive manufacturing. Whether you are doing additive manufacturing in-house or 3D printing with a service bureau, Solid Edge allows you to compare price and delivery options to make your ideas a reality.



Solid Edge Portal

The Solid Edge Portal offers a secure browser-based platform for managing, viewing and controlled sharing of project files. Open to engineers and designers around the globe, the portal enables you to collaborate with vendors, partners or employees. State of the art viewing tools allow users of any device to share, view, rotate, pan and section the most common CAD file formats, explode assemblies, and capture feedback with markup.



“Demanding customers, rapidly morphing products, new business models, and product development workflows provide valuable opportunity for innovation. And the opportunity to innovate across any or all of these axes is not a distant vision, it is very much a present-day possibility, but it will require a digital technology platform; one that enables more than the sum of its constituent parts.”

Digital Innovation value: The whole being greater than the sum of its parts,
Taxal Consulting

Solid Edge Community



Network with other Solid Edge users and improve your productivity.

The growing and vibrant Solid Edge Community includes students, teachers, mentors, makers, start-ups and co-creative communities, offering comradery and ongoing support.

The Solid Edge user forum provides tutorials, blogs, podcasts, and tips and tricks to improve your productivity. Regional user meetings and learning events provide opportunities to network with peers and deepen your proficiency with Solid Edge.

You can even become certified in Solid Edge from the comfort of your desk. The Solid Edge certification materials and exam are designed to evaluate skills and recognize Solid Edge Certified Professionals for their expertise.

Maximize the value of your investment

A deeply experienced network of value-added resellers around the globe provides 24x7 technical support and training for your entire design team to ensure your success. Achieve continuous value and maximize your return on investment in Solid Edge by harnessing the power of maintenance, enhancements and support (ME&S).

The Solid Edge portfolio delivers easy to use, affordable, industry-leading solutions, and much more. Combined with outstanding

customer support, a robust and engaged community, and Siemens technology know-how, Solid Edge provides an advantage that can help you to design and deliver tomorrow's innovations.

For detailed information about the individual products in the Solid Edge portfolio visit www.solidedge.siemens.com.

About Siemens PLM Software

Siemens PLM Software, a business unit of the Siemens Digital Factory Division, is a leading global provider of software solutions to drive the digital transformation of industry, creating new opportunities for manufacturers to realize innovation. With headquarters in Plano, Texas, and over 140,000 customers worldwide, Siemens PLM Software works with companies of all sizes to transform the way ideas come to life, the way products are realized, and the way products and assets in operation are used and understood. For more information on Siemens PLM Software products and services, visit www.siemens.com/plm.

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