SOLID EDGE ELECTRICAL

The best mechanical CAD for electronics

Thanks to synchronous technology, Solid Edge is the only CAD solution that combines the speed and simplicity of direct modeling with the flexibility and control of parametric design.

Solid Edge shortens design iterations and reduces time-to-market for complex electromechanical products through seamless collaboration with Siemens electronics solutions such as PADS Professional and Xpedition for PCB design, FLOEFD for thermal simulation, and Solid Edge Wiring & Harness Design for electrical design.

Why choose Solid Edge?

Easy to learn and use

The intuitive user interface allows users to switch seamlessly between direct and parametric modeling to explore design alternatives. The learning curve is quick thanks to tutorials and guided learning paths.

### Design flexibility eliminates costly rework

Synchronous technology enables rapid concept creation, easy implementation of design changes, and simultaneous updates to multiple parts within an assembly—long before reaching the final product stage.

Simplified electro-mechanical co-design

Integration with EDA tools facilitates smooth collaboration between mechanical and electronic departments (ECAD-MCAD). Solid Edge is ideal for designing devices that include PCBs and harnesses.

Integrated electronics CFD analysis

Thermal and fluid flow simulation (3D CFD) is embedded directly in Solid Edge, delivering a competitive edge in industries such as Automotive, Medical, Lighting, and Power Electronics.
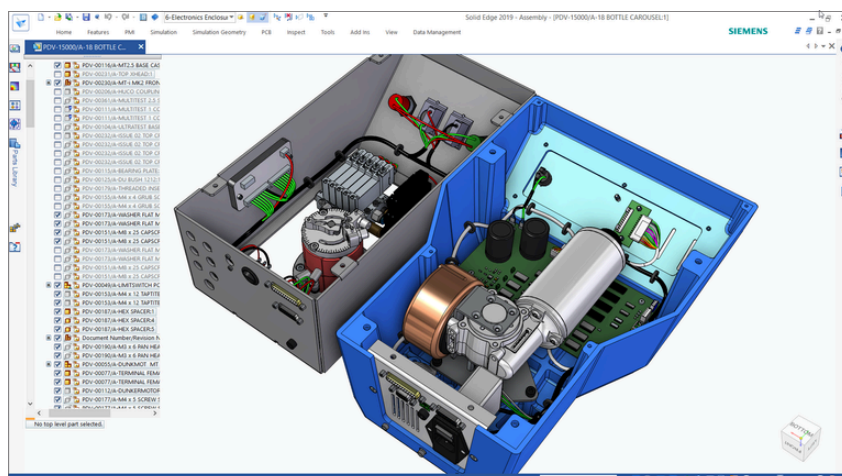
Solid Edge addresses the challenges of electromechanical design by including PCBs as an integral part of the **Digital Twin**, enabling full collaboration and data exchange between electrical and mechanical disciplines.

Solid Edge PCB Collaboration

Solid Edge PCB Collaboration allows electrical and mechanical designers to work in their native environments while effectively communicating design intent, such as PCB footprints, component placement, mounting holes, and more.
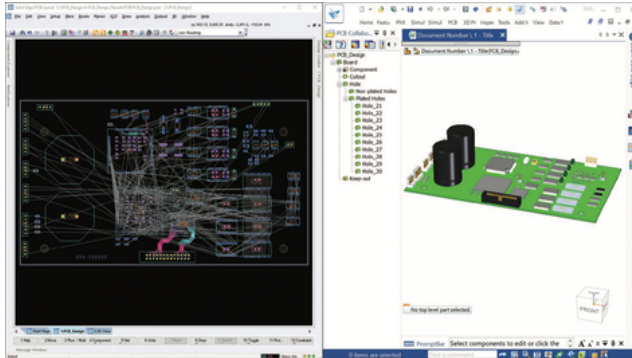
- Enables better electromechanical product development
- Enhances multidisciplinary design collaboration
- Reduces costly design revisions and accelerates time-to-market
- Transfers design data bidirectionally between domains using the IDX format
- Imports copper data from ECAD to MCAD
- Easily identifies components within the PCB
- Honors domain-specific constraints
- Provides an open and interoperable environment
- Includes starter 3D models and component libraries

Solid Edge Wiring and Harness Design

A 2D graphical design environment for electrical systems and wire harness design, fully integrated with Solid Edge 3D to enable 3D routing of electrical connections.
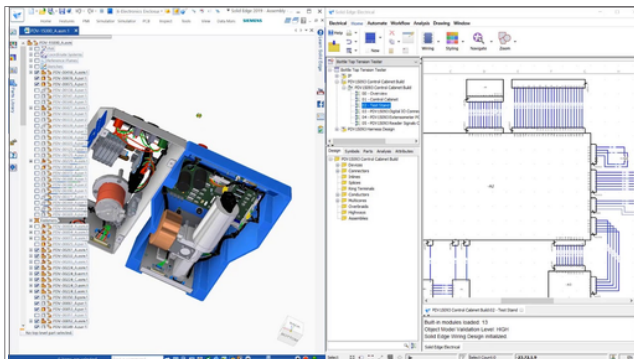
- Delivers optimal results in complete electromechanical system design
- Increases harness production efficiency through end-to-end process automation
- Reduces manual tasks and boosts efficiency by automating the design workflow
- Enables 3D modeling and collaboration on electrical details to enhance electromechanical design productivity
- Eliminates the need for costly physical prototypes through digital mockups
- Validates designs using built-in electrical behavior and design automation with intelligent part selection