

CAPITAL ESSENTIALS

Electrical systems, wiring, and harness design

Capital Essentials (formerly VeSys) is a comprehensive software suite for electrical schematics and harness design. Optimized for fast implementation and easy installation, it combines powerful yet intuitive features to minimize design effort and reduce the risk of errors.

Capital Essentials is the ideal solution for small to mid-sized companies in the automotive and aerospace industries.

Why should OEMs choose Capital Essentials?

Intuitive and productive circuit design and development

Capital Wiring Designer Essentials and Capital Harness Designer Essentials can be used independently or together, allowing seamless data flow between wiring and harness designs. This reduces design effort and mitigates the risk of errors across projects.

Effective design validation and automation methods

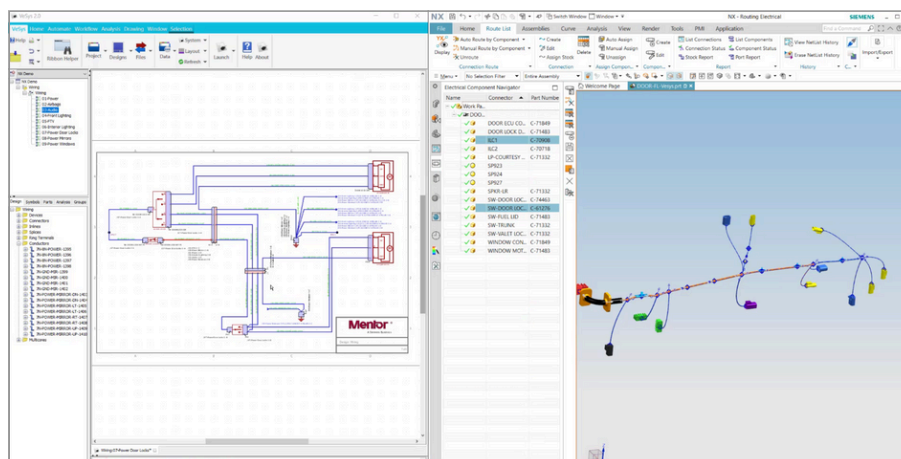
Capital Essentials enables fast, error-free design with robust validation features including electrical simulation, voltage drop calculations, and current checks. Automated outputs such as 2D drawings, BOMs, and wire cut lists can be generated to streamline production.

User-friendly and engineer-oriented tool

Capital Essentials is intuitive and engineered specifically for engineers. It comes with tutorial videos, step-by-step documentation, access to an active user community, and integrated online training resources.

Improved collaboration with mechanical and PLM systems

Capital Essentials exchanges data with all major MCAD tools (NX, Solid Edge, CATIA, SolidWorks, and Creo) to support 3D routing and accurate wire length calculations. It also integrates directly with PLM systems such as Teamcenter.



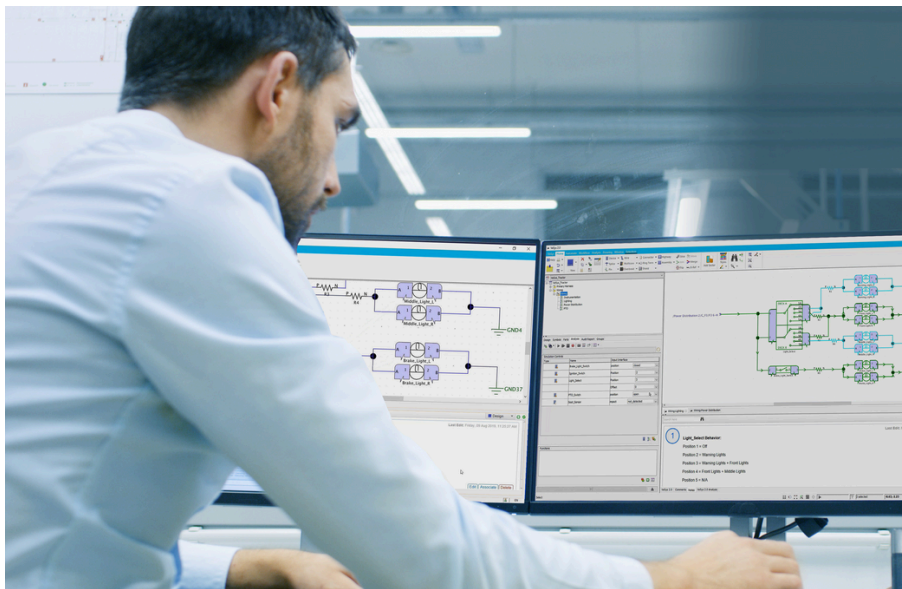
The integration between Capital Essentials and NX enables 3D routing of electrical connections within the MCAD model, allowing accurate wire length validation and bundle size verification.

Capital Wiring Designer Essentials

- Enables definition and reuse of electrical schematics
- Includes electrical simulation and design validation
- Integrates MCAD models with electrical connections for 3D length calculations
- Validates bundle clearance and bend radius against MCAD constraints
- Syncs seamlessly with Capital Harness Designer Essentials and exchanges data across the supply chain

Capital Harness Designer Essentials

- Acquires harness topology from MCAD and defines connectivity from Capital Wiring Designer Essentials
- Includes patented 3D flattener technology for 3D MCAD integration
- Offers automatic design rule checking
- Calculates harness weight and actual wire lengths, generates BOMs and manufacturing reports
- Syncs data from Capital Wiring Designer Essentials or exchanges it with Capital and OEM systems



The Three Principles of Capital Essentials

Fast, first-time-right, error-free electrical and harness design



Data consistency

Harness and electrical design is data-driven, ensuring synchronization and reliability throughout the development process.



Electromechanical co-design

Capital Essentials integrates seamlessly with MCAD systems, enhancing collaboration between electrical and mechanical domains.



Automation

Model-based design principles automate complex tasks such as component selection, improving efficiency and reducing manual work.