

E³. WireWorks

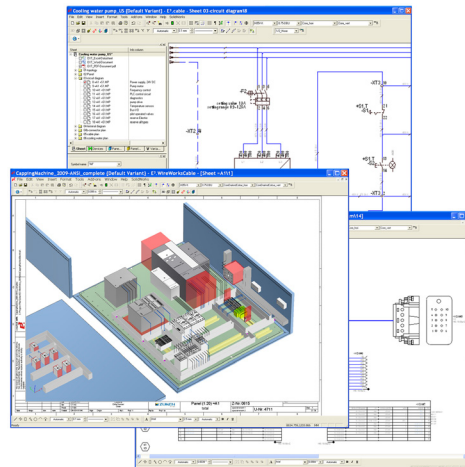
Engineering Design for Wiring, Harnesses, Cable Assemblies, Control Panels, Hydraulics and Pneumatics

E³.WireWorks is a Windows-based, modular, scalable and easy-to-learn system for design of wiring, harnesses, cable assemblies, control panels, hydraulics and pneumatics. Its modules include schematic (for circuit and fluid diagrams), cable (for advanced electrical and fluid design), panel (for cabinet and panel layout), and formboard (for 1:1 wiring harness nail board drawings). Together with SolidWorks® Routing tools, E³.WireWorks is a complete solution for the design engineer from concept through physical realization and manufacturing output. E³.WireWorks is designed to work out-of-the-box, either standalone or with SolidWorks Routing tools and SolidWorks PDM Enterprise.

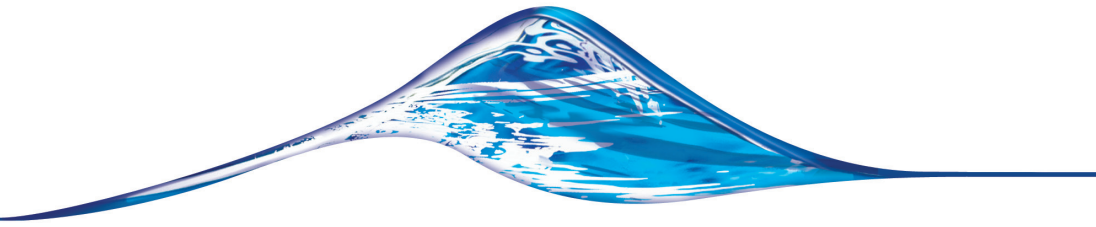
A central feature of E³.WireWorks is its multi-view project data file. This object-oriented architecture stores all views of the design (schematic, fluid, cable, panel, and formboard) in one design-rule-aware data file. When you make a change in one view, the change is reflected in all views. So, if you add or delete a component or connection in one module (such as schematic), that change is reflected in all other views, including the BOM. This automatically keeps all design documents in sync and eliminates the need to manually update and

annotate the corresponding views. This feature also means you can start the design in any module or view (including the BOM). Because the BOM is always up to date, it can be reviewed at any stage of the design (for example, by component engineering or procurement).

E³.WireWorks' flexibility allows you to work with many other file formats including the import and export of DXF/DWG, TIFF, GIF, JPG, PDF, DGN, CGM, VRML, and STEP AP-214. Supporting 10 languages and all Windows fonts, E³.WireWorks can readily be used for design projects spanning multiple geographies.



A complete environment for design of wiring, harnesses, cables, panels, hydraulics and pneumatics.



E³.WireWorks Schematic

Provides electrical and fluid engineers with an easy-to-use solution for designing and documenting electrical and fluid designs from circuit diagrams to terminal plans and bills of material. Its integrated core database and online DRC provide a consistent design approach to help eliminate errors, improve quality and reduce design time.

E³.WireWorks Cable

Includes all functionality of E³.WireWorks Schematic plus advanced design methods such as hierarchical circuit design and cable assembly generation. It provides engineers with the ability to design, develop and document electrical harness systems, cable assemblies and fluid designs to be used in any manufacturing segment – especially machinery, heavy equipment, special vehicles, and transportation.

E³.WireWorks Panel

Enables engineers to design cabinets and panels with all associated parts and wiring. It automatically calculates connection routes and wire lengths, enabling pre-assembly of wires and cables. All necessary data is generated for production, labeling, manufacturing cables, drilling, milling and producing reports.

E³.WireWorks Autoroute

Optional add-on for panel that enables automatic wire routing in the cabinet or panel.

E³.WireWorks Formboard

Provides engineers with the ability to document harnesses in two dimensions and create true working 1:1 scale nail board drawings ready for manufacturing. The formboard drawing is a view of the cables

and harnesses defined in the circuit diagram including connector placement, wire segments, coverings, cable protection, clips, pin and wire charts, etc.

SolidWorks Premium Routing Integration

Integrates with SolidWorks Premium Routing by transferring the necessary data to route wires, harnesses and cables throughout the system. Once routed, this information along with wire lengths are passed back into E³.WireWorks for use in formboard. The integration improves collaboration between electrical and mechanical engineers by sharing project information allowing them to see multiple views of cables, verify mating connectors and connector pin terminals, determine bend radius, clash detection, etc. The integration also includes bidirectional highlighting between SolidWorks Routing and E³.WireWorks circuit diagrams.

SolidWorks Enterprise PDM Integration

Integrates with SolidWorks Enterprise PDM allowing you to manage your entire project within the SolidWorks data vault. E³.WireWorks projects can be checked-in and checked-out of the project area, permitting work-in-progress (WIP) data management. Users can update attributes from either a checked-out E³.WireWorks project or from the Enterprise PDM data card; this can be immediate or part of the check-in process. Standard methods of versioning and release within Enterprise PDM are used, as set by the Enterprise PDM system administrator. Standard methods of versioning and release within Enterprise PDM are used, as set by the PDM Enterprise system administrator.

Core Features and Benefits

- **Multi-View Project File**
Make a change in one view (e.g. schematic) and it automatically changes in the other views (e.g. cable, panel, formboard, BOM).
- **Online design rule checks (DRC)**
Prevents errors in the design, reducing rework.
- **Design Reuse**
Modular design using predefined sub-circuits stored in a library for easy access.
- **Design-Rule-Aware Part Library**
Library parts contain the attributes that drive the DRC (e.g. AWG, predefined signals on pins, etc.).
- **SolidWorks Integration (Routing and PDM)**
Routing netlist, library information for wires, cables, and components. Cross-highlight between electrical and physical domains.
- **Built from Zuken E³.series**
Advanced CAD engine designed for electrical schematic, harness, hydraulic and pneumatic applications. Stable, proven technology with thousands of users.