



SPECIAL FUNCTIONALITY IN E³.cable

- Create block diagrams
- Automatic mating connectors
- Automatic connector pin terminals, cavity seals and cross-section checks
- Inline connectors and splicing
- Shielded, twisted pairs and cable bundles
- Table-driven wire assignment
- Multiple views of cables and connectors
- Interface data from PCBs
- Predefined functional assemblies
- Display special connectors using MIL standard (optional)
- Option and variant management
- Hierarchical design
- System rack design

E³.cable - Documentation and design of cables and harnesses

Introduction

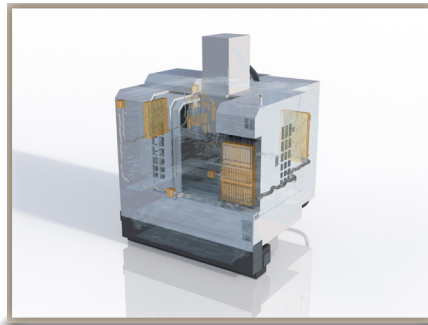
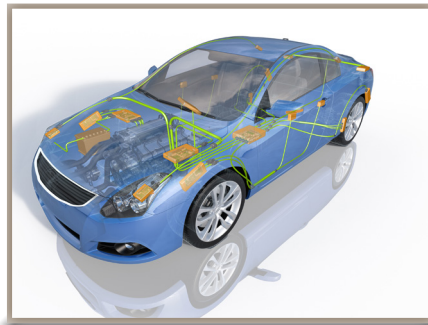
Zuken's E³.series is used for documenting and detailing electrical and fluid design projects. Its flexibility supports the entire process from definition and design, through manufacturing and maintenance. Its unique object-oriented architecture ensures all stages of the design are fully synchronized.

E³.cable is an integrated design solution for interconnecting devices and designing cables and harnesses. Its intelligent block functionality enables engineers to quickly represent dynamic equipment such as line replacement units (LRUs) or electronic control units (ECUs), while the hierarchy functionality enables a top-down or bottom-up design approach. E³.cable also includes one of E³.series' most powerful features; its ability to create multiple views of the same devices for design and documentation purposes.

E³.cable contains all the functionality of E³.schematic.

Supported industries

E³.cable is ideally suited for industries developing power and control harnesses for the automotive, off-highway and special purpose vehicle, and aerospace industries, or those developing field cabling for plant and machinery.

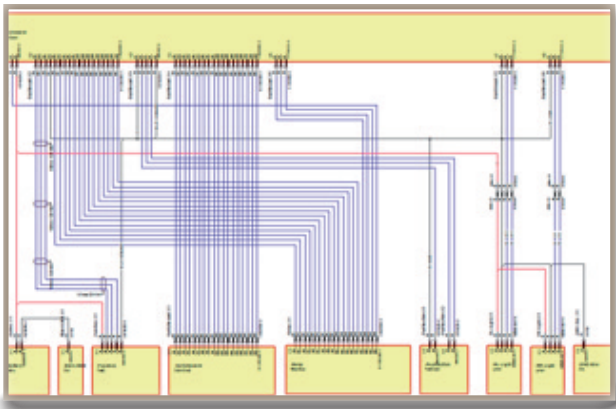


Cable and harness design

Dynamically create cables; conductors pulled from a library are grouped together to form cables and harnesses. Shielding or twisted pair structure is easily added and automatically shown in the schematic. Alternatively, predefined cables may be used.

Block diagrams

Dynamic blocks in E³.cable enable rapid development of interconnection schematics. Blocks can either represent single components, whole systems or sub-systems.



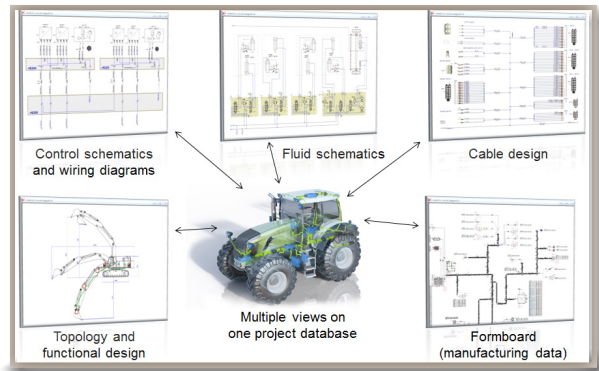
Interconnection schematics

Links to PCBs

Blocks can be integrated directly with PCBs. Connector and signal information from the PCB system is dynamically added to the blocks. Changes in the PCB design are re-imported into the block and all information is updated. A bi-directional interface exists when interfacing with Zuken's CR-8000 engineering design solution.

Hierarchical design

Blocks also support hierarchical design and can represent entire systems or sub-systems. Connections and ports added to the blocks enable signal transfer between levels. Multiple levels are supported and users can tunnel up or down in their designs to view and modify detail at any level.



Multi-view schematic and harness design

Multi-view functionality

E³.cable supports multi-view functionality; devices and cables detailed in the schematic can also be shown in a documentation view with manufacturing data added. Modifications carried out anywhere in the design are automatically updated in all other views.

Design for manufacture

E³.series' electrically-aware component library and specifically designed kernel means that E³.cable is optimized for electrical design and includes design rule checks. Connector mates, connector pin terminals and cavity seals are automatically assigned and short-circuits and incorrect part usage are prevented ensuring that correct design data is always available for manufacturing.

Additional E³.series options

E³.schematic

The core module of the E³.series suite enables the creation of schematic diagrams for electrical control systems.

E³.panel

For general arrangement drawings of cabinet enclosures. Work in either 2D or 3D, place devices, cable ducts and mounting rails and prepare panels for manufacture.

E³.formboard

Creates build-to-print detailed 1:1 harness designs; linked dynamically to E³.cable drawings.

E³.Revision Management

Document all physical and graphical changes between design iterations. Automatically produce engineering change order documentation.

E³.3D Routing Bridge

Transfer wire, cable and cable harness information to 3D MCAD systems. After routing, the individual wire lengths can be transferred back to E³.series.

E³.topology

Evaluate system harnesses early in the design flow for factors such as length, weight and cost. Enables tradeoff analysis of harnesses and sub-harnesses to optimize manufacturing performance and cost.

E³.redliner

Markup documents in a protected read-only copy of the design. Playback and jump to all recommended changes in the master design.

E³.view

View all E³.series projects and special viewer files with this free-of-charge viewer.