

Document Cables and Cable Harnesses for Machinery, Plant and Automotive Applications

E³.cable

D A T A S H E E T

Introduction

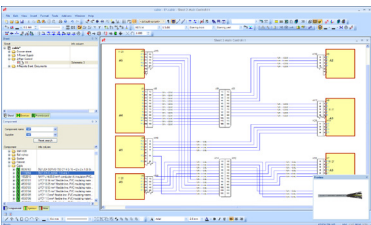
E³.cable is an object-oriented schematic system for cabling devices, designing cables and cable harnesses, like for example in machinery and plant applications, or for developing the physical power supply system for the automotive and aviation industries.

Connecting several circuit boards in an electronic system is normally realized using cables or backplanes. Data from PCB systems is imported in E³.cable and additionally treated as a black box. The entire system is now documented.

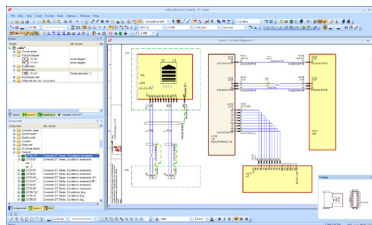
The ability to display different views of cable connections or connectors on any sheet allows E³.cable to create mounting drawings and signal tables in addition to block diagrams. A modification carried out anywhere in the schematic system is automatically updated online in all other views of the object.

Numerous automatic functions help the user avoid errors. Therefore, E³.cable automatically selects the appropriate mating connector when connecting or adjusts the connected connector when modifying the connector type.

After defining any wire or cable properties, such as wire color, cross-section, shielding, length, insulation, stripping, rest length, material number, mounting tool and so on, the cable harness is ready for production.



E³.cable standard functionality



E³.cable – enhanced standard display (optional)

Special Functionality in E³.cable

- Create block diagrams
- Automatic mating connector recognition for connectors
- Define connector pin terminals and cross-section checks
- Supports inline connectors and splicing
- Define shielded and twisted pairs as well as cable bundles
- Structuring of cable assemblies and cable bundles
- Wire assignment tables and assignment concepts
- Any cable/connector views
- Import interface data from PCBs as Black Box
- Predefined functional assemblies in the library
- Display special connectors using MIL standard (optional)

The E³.series Standard

- Completely integrated in Windows® environment
- User-interface in numerous languages; easy to switch
- Supports all Windows® fonts using UNICODE
- Configurable user interface and toolbars
- Object-oriented user interface with possibility to directly integrate in other applications
- Display drawings using different norms (DIN, ANSI, JIC)
- Supports any sheet format, e.g. DIN, Ladder, special formats
- Translate texts into any language
- Search mechanisms for symbols, devices, connections, texts and attributes...
- Context-sensitive Online Help
- 256 object-related display levels
- Print and plot using all Windows® standard drivers
- Supports standard formats like STEP, DXF/DWG, SVG, PDF, pixel graphics
- Bidirectional API (COM/DCOM Standard)
- Integrated database editor
- Compatible with all previous E³.series versions

The E³.series Base Functionality

- Automatic and parallel connections
- Save, load, copy, rotate and mirror drawings and areas
- Extensive functionality for exchanging symbols and components
- Continuous verification of adherence to manufacturing specifications, such as multiple assignment of symbols and overcrowding of components
- Supports variants and options, Boolean operators and alias names
- Online cross-references for connections and devices
- Object and text hyperlinks also within E³.series projects
- User-defined connection attributes
- User-defined grid sizes, fonts and line types
- Drag and Drop
- Dynamic zooming and panning

Additional E³.series Modules

E³.topology

From idea to detailed wiring plan, E³.topology enables early evaluation of system harnesses including their length, weight and cost. This allows tradeoff analysis of harnesses and sub-harnesses to optimize manufacturing, performance and cost.

E³.Wiring Diagram Generator

E³.Wiring Diagram Generator automatically creates standardized wiring diagrams using configurable placement and routing rules. Generation of entire systems or specific subsystems also processes variants, inline connectors and splices.

E³.panel

E³.panel is the module for panel layout and wiring. Optionally design the panel in 2D or 3D, place all devices and automatically connection wire pathways as specified.

E³.formboard

E³.formboard – the module used to create 1:1 nailboard drawings for manufacturing cable harnesses. Quickly and easily place views, define the cable harness structure as well as specify the mounting and cable protection.

E³.3D Routing Bridge

E³.3D Routing Bridge transfers wire, cable and cable harness information to 3D M-CAD systems. After routing, the individual wire lengths can be transferred back to E³.series.