



Automatic Schematic Review



Design for
Reliability

Next Generation Schematic Error Detection

BQR's fiXtress Schematic Review software implements an automated and innovative approach based on comprehensive knowledge and intelligence, instead of the standard manual approach.

fiXtress Schematic Review uses Logical Schematic Verification to automatically detect design errors using BQR's proprietary advanced algorithms, as well as regular Design Rule Checking (DRC), Electrical Rules Checking (ERC) and more. fiXtress Schematic Review can operate as a standalone module and can complement other fiXtress modules in order to provide a comprehensive Design for Reliability (DfR) solution for electrical circuits and PCB design.

Logical Schematic Review

Most DRC applications provide an abundance of false-positive errors because they focus on the visual aspects of a design (pixels/layout) and use scripts to check the design (scripts are difficult to define and require lengthy runtimes). Logical Schematic Review is based on an abundance of previously unleveraged information that is used to add intelligence, automate the process and to minimize false positives.

fiXtress Schematic Review uses the project BOM and Netlist (both from popular CAD applications) and predefined parts libraries. This data is used to determine whether components are connected according to proper engineering practices. For example, fiXtress Schematic Review checks for proper input values (such as sufficient voltage, proper resistance range, sufficient capacitance and so on) and enables engineers to check for a large set of component-based errors.

Checked by the BQR fiXtress Schematic Review

- ✔ Pull-up/pull-down resistors
- ✔ Receiver technology matching
- ✔ Power/ground pins
- ✔ Decoupling capacitors
- ✔ Unconnected pins/nets
- ✔ BOM/Netlist comparison
- ✔ Power inputs
- ✔ More than 120 automated rule checks

fiXtress Schematic Review – A Uniquely Innovative Solution

The design of both small and large PCBs incorporates a significant number of rules, practices and technological concepts, which collectively require a highly complex design review process.

fiXtress Schematic Review simplifies the engineering review process, reduces design time, increases design quality and automatically verifies the implementation of each company's customized engineering design practices.

fiXtress Schematic Review enables engineers to focus on design functionality by minimizing technical errors before layout, prototyping or fabout.

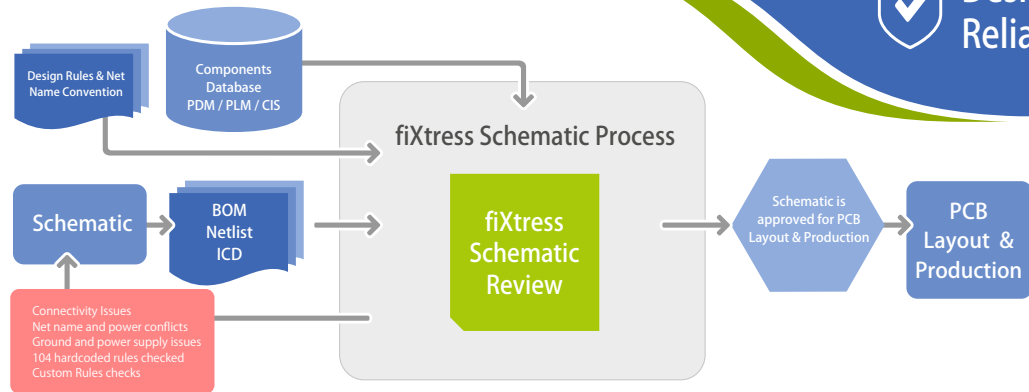


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Schematic Review Process



Schematic Review Process Flow

BQR's fiXtress Schematic Review is implemented throughout the design process, so that errors can be fixed while making the change is still easy and cost effective.

fiXtress Schematic Review uses the design BOM and Netlist as inputs. In addition, parts library models are uploaded and net names are parsed in order to obtain useful information about the design. fiXtress Schematic Review uses all input data to analyze the design for design errors.

fiXtress Schematic Review also provides an error report that is categorized by severity and details the schematic errors detected in the design. Electronic engineers can then use these reports to prioritize fixing these errors.

Custom Rules Generation

BQR understands that each design company faces its own unique design challenges, which may require the addition of new rules that check a design in accordance with a company's own design concepts or that handle specific technology issues. For this purpose, fiXtress Schematic Review is designed as a versatile software that enables electronic engineers to quickly and easily create and implement new design rules. BQR is committed to supplying the best tools in the industry and to providing support for the creation and implementation of new rules for fiXtress Schematic Review.

BQR Library Services

At BQR, we understand the complexity and know-how required to create a comprehensive parts library. As part of the fiXtress package, BQR offers both library creation and implementation services. The fiXtress software is installed with a master library that contains data about tens of thousands of components, which is updated quarterly. In addition, companies can use BQR services to enhance their fiXtress component libraries in order to enrich their PLM/PDM central library.