

- Combined Shape based and Pattern Routing
- Adaptive Multi-pass conflict reduction technology
- Advanced Constraints Editor
- Automatic definition and Routing of Differential Pairs
- Automatic lengthening and length matching by meandering
- Real-time Verification of DFM and High speed constraints
- Enhanced Miter with long diagonal recoringing
- PCB CAD plug-in, Spectra® DSN format support
- Reasonable Cost of ownership



Adaptive Autorouting Technology

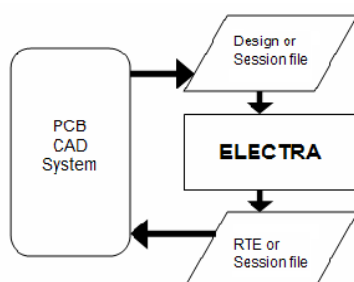
ELECTRA™ is a new generation of Shape-Based Autorouting software for PC boards.

By contrast with traditional gridded maze autorouters, a shape-based approach allows for more efficient use of routing area and is more suited to handle complex design rules requirements and achieve the highest route completion rate.

ELECTRA uses an effective multi-pass cost-based conflict reduction algorithm to find a routing solution adapting to the natural flow of the nets.

Adaptive routing algorithm is the only proven approach to reach high completion rate on today's complex PCBs. ELECTRA provides immediate feedback on the routing progress and conflict reduction rate.

CAD System Plug-in



ELECTRA supports industry standard format by reading design file (Spectra DSN).

Routing results are saved into standard route file format (RTE) or session file (SES). ELECTRA is designed to plug into an existing

PCB CAD system environment that is supporting DSN file format such as Altium, Pulsonix, CADInt, TargetPCB 3001, SeeTrax, DipTrace, DEX, CadSoft Eagle and other popular PCB CAD systems.

Main Features

- Gridless routing of up to 256 layers
- Shape-based architecture
- Differential pairs autorouting
- Length matching autorouting
- Autorouting to target length
- Wiring and Clearance rule by layer, net intra-classes and inter-classes
- Via size and use_layer rule by net class
- Width and spacing rule by area
- Split/full power and ground plane support
- SMD escape fanout control
- Routes SMDs on both sides of the board
- Blind via and buried via support
- Support for embedded components
- Split Power/Ground Planes support
- AutoRouting by polygonal keep-in fences
- Memory routing pass
- Supports pre-defined fanout patterns
- Customization of cost factors
- Post-route cleanup optimization
- Real-time display of routing progress
- Shadow mode display on selection
- DRC Violation browser
- Preview DO file
- Batch routing option
- TCL Scriptable routing strategy (DO file)

Advanced Rules Support

ELECTRA is driven by DFM and high speed layout rules. Each interconnect object can have its own minimum clearance and wiring constraints. The autorouter combines the rules of all design objects based on their precedence in the hierarchy. Net classes and group of connections can be constrained to be routed on specific layers (impedance control) and use different rules for each of the layers. Different via type can be assigned to each interconnect, these could be used for example for power and ground current carrying requirements. The autorouter finds a solution that simultaneously respects all the user defined rules constraints.

Product Configurations

ELECTRA is available and in different configurations with unlimited number of plane layers:

- ELECTRA **LITE** – for 4 signal layers and max 1000 pins
- ELECTRA **4L** – for designs having a maximum of 4 signal layers
- ELECTRA **UL** - for designs having a maximum of 256 layers.