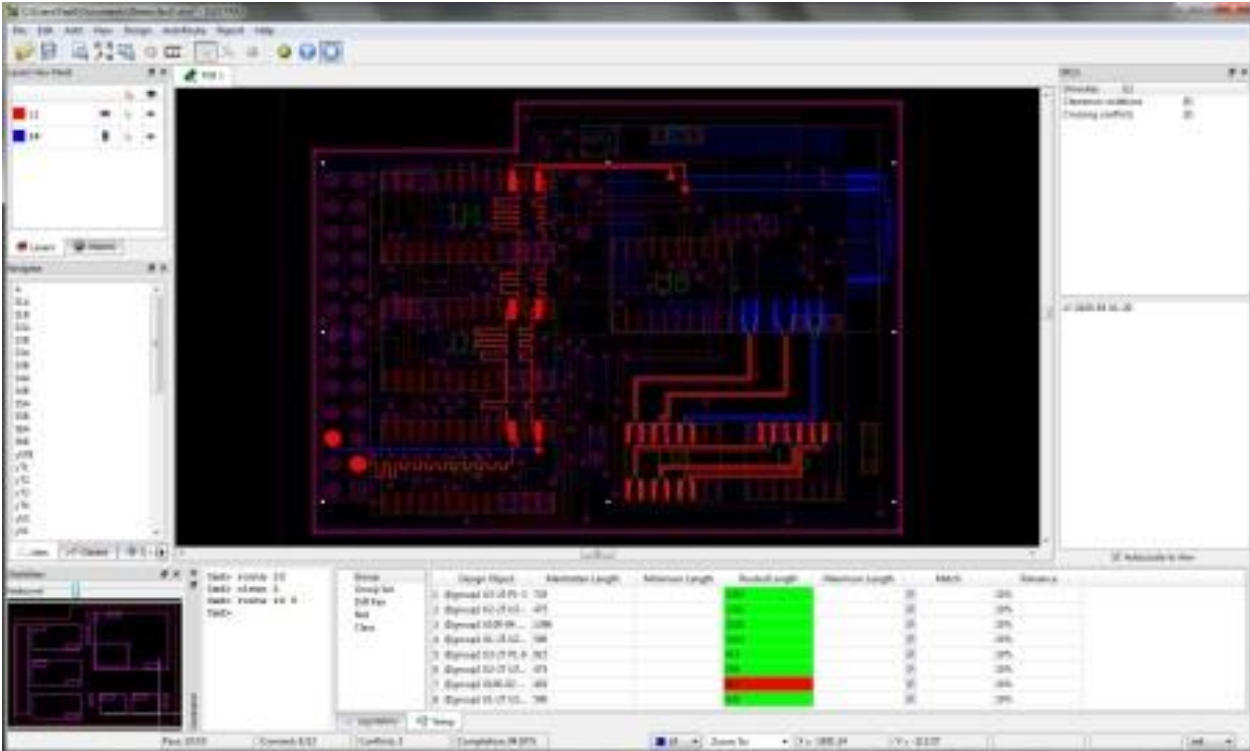


## ELECTRA V3

### Adaptive Shape-Based Autorouter



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

### Highlights

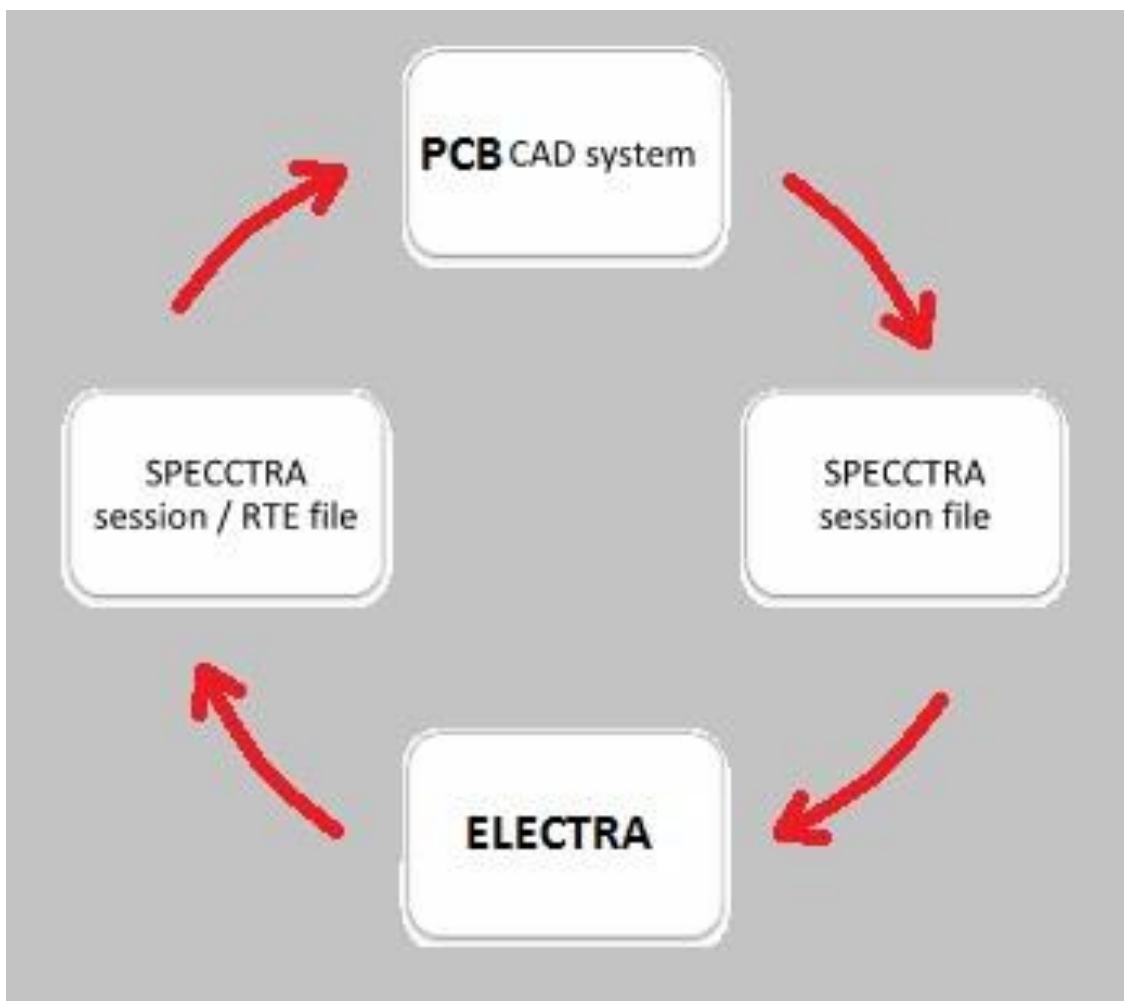
- Shape based autorouting with adaptive multi-pass conflict reduction technology
- Handles complex PCB designs with timing conditions such as min/max length, match length and differential pair constraints
- Active flow with controlled autorouting of preselected interconnects
- Real-time Verification
- Reasonable Cost of ownership
- PCB CAD plug-in, Specctra® DSN format support

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 of high density SMD or through holes boards and achieve the highest route completion rates.

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.

ELECTRA supports industry standard format by reading design file (Specctra 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
- SeeTrax,
- DipTrace,
- DEX,
- CadSoft Eagle and other popular PCB CAD systems.



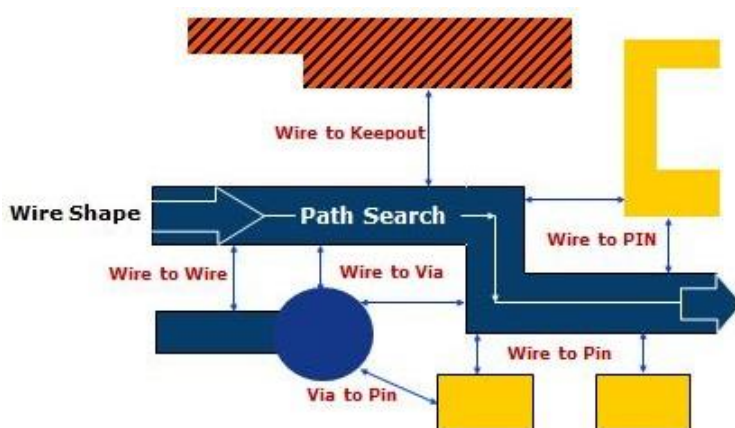
Powered by a multi-pass cost-based conflict reduction algorithm to find an optimal routing solution adapting to the natural flow of the nets while following advanced DFM and timing constraints

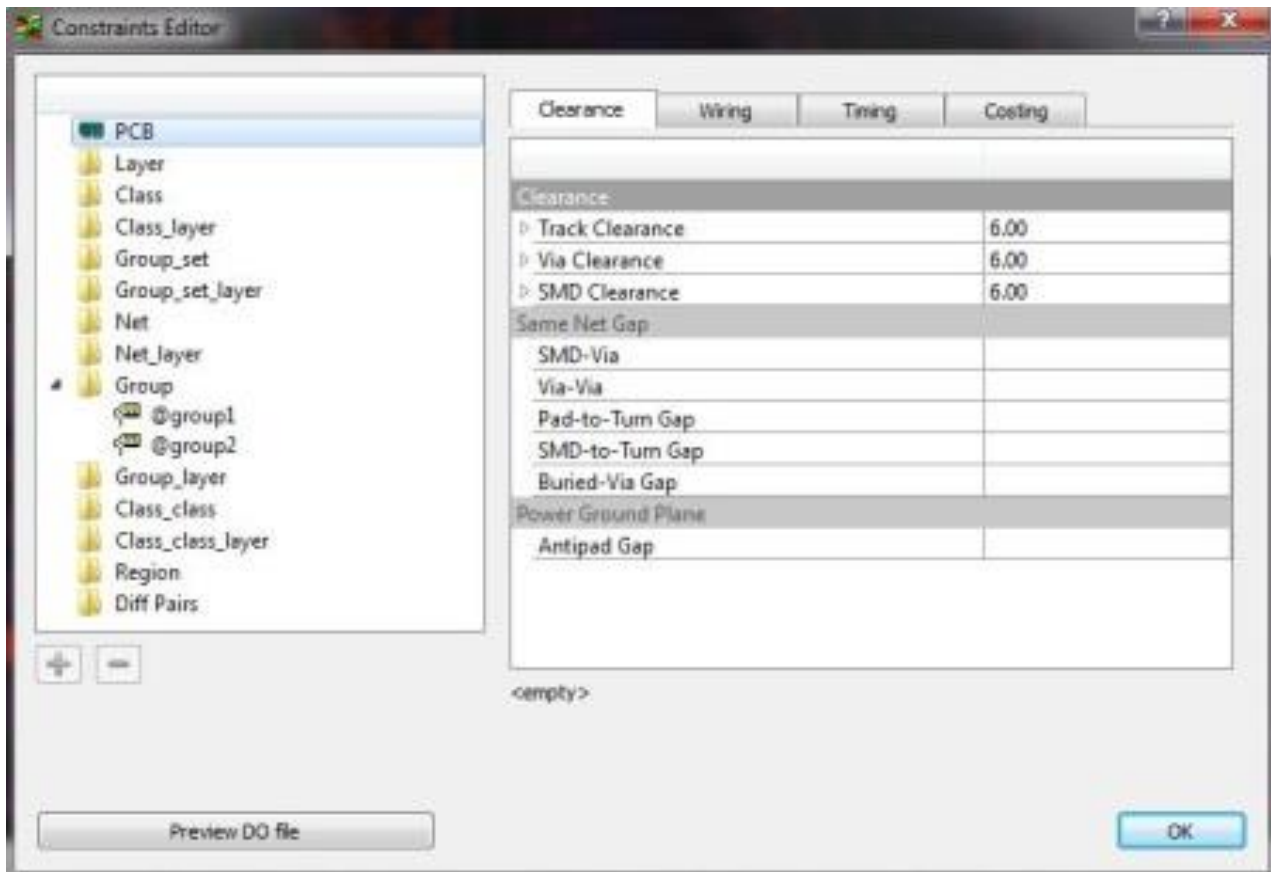
## Main Features

- AutoRouting of up to 256 layers
- Automatic Differential pairs routing
- Automatic Lengthening to reach minimum length
- Automatic Matching to target length
- Constraint Editing with Ease
- Wiring and Clearance rule by layer, net classes and inter-classes
- Via and use\_layer rule by net class
- AutoRouting by polygonal fence
- Area rules
- SMD escape fanout control
- Routes SMDs on both sides
- Blind and buried vias support
- Split Power/Ground Planes support
- Customizable cost factors
- Post-route cleanup optimization
- Real-time display of routing progress
- Anti-aliased rendering
- Fade view on selection
- DRC Violation browser
- Dockable Navigation Panels
- 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.





## Neu in ELECTRA V3

- Automatic Differential pairs routing
- Automatic Lengthening to reach minimum length
- Automatic Matching to target length
- Color coded Timing report
- Constraint Editing with Ease
- Net Class and Groups editing
- Extending Wiring and Clearance rule by layer, groups, net classes and inter-classes
- Added Constraints by Group and Group\_set
- Active flow with controlled autorouting of preselected interconnects
- AutoRouting by polygonal fence
- Interactive Area and Keep-in Fence editing
- GUI to customize cost factors
- Anti-aliased rendering
- Fade view on selection
- DRC Violation browser
- Modern GUI, mouse wheel to zoom and dockable Panels
- Preview DO file
- TCL Scriptable routing strategy (DO file)