

Top level view of Tanner L-Edit IC interface with schematic driven layout (SDL) capabilities.

# **Schematic Driven Layout (SDL) for Faster Physical Design**

Increase productivity and create layout that matches the schematic the first time with Tanner L-Edit IC layout tool together with Tanner SDL router. SDL reduces manual routing in layout by allowing you to interactively hand route entire critical nets or just sections and then let the auto router complete the rest. This gives you control over routing sensitive analog nets without burdening you with manually routing all of your nets. SDL takes L-Edit's renowned productivity and flexibility to the next level by bringing knowledge of the schematic into the layout tool.

#### **Make Best Practices Automatic**

SDL encourages good design practices by keeping close synchronization between the schematic and the layout. Names of devices, cells and nets are automatically set. Drawn routing is automatically labeled with the net name, for easy inspection and management.

### **Automate Repetitive Tasks**

Increase productivity and eliminate errors with automatic instancing of cells and parameterized devices. If device parameters change later, parameterized cells will be automatically regenerated during the engineering change order (ECO) process.

### **Improve Your Layout**

With real-time net flylines, you can optimize your placement to avoid routing congestion and place related devices near each other for better matching. With net highlighting, it's easy to optimize routing to avoid noisy or sensitive nets. The connectivity checker helps you quickly track down any shorts or opens for faster LVS completion.

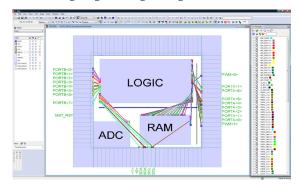
### **FEATURES AND BENEFITS:**

- Automated routing engine for analog cells and top-level chip assembly routing
- Automatic routing of wide traces and support for multiple vias for layer transitions
- Interactively hand route entire nets or critical sections and let router auto-complete the rest
- Import netlists from any schematic tool
- Automated instancing of subcells and parameterized cells
- Real-time flylines for block placement to minimize routing congestion
- Geometry net/pin marking, net/ pin highlighting, nets/ pins tracking and rip-up features
- Check for connectivity issues using the Short and Open Connectivity Checker
- Track engineering change orders (ECOs)
- Auto-router supports up to eight metal layers
- Easy setup with one GUI dialog containing all router settings
- Unparalleled customer support
- Flexible licensing



# **Track Your Progress**

SDL keeps track of which nets and pins have been routed, so you will always know what's left to do. When the design changes, SDL compares the old and new netlists and displays icons in the SDL navigator showing you exactly which nets and pins have been modified. Since routing geometries are tagged, you can easily highlight and rip up nodes, making engineering change orders a breeze.



Schematic driven layout (SDL) in Tanner L-Edit IC Layout shows realtime flylines and supports manual, manually-assisted, and fully automated routing modes.

### **SDL Router**

Layout engineers spend a significant amount of their time routing nets that are not performance-critical. Manual routing is the only way to achieve maximum performance on some nets, but the majority just need to be correctly and reasonably connected. SDL is an automatic routing engine integrated directly into Tanner L-Edit IC layout. It speeds layout by allowing the designer to focus on routes that require expensive hand craftsmanship for performance or addressing analog-sensitive nets or parts of nets, then letting the tool automatically route the noncritical nets. In addition to its block routing functions, SDL router makes an excellent top-level chip integration router.

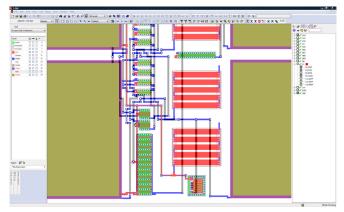
SDL is interactively controlled by a layout engineer through the SDL graphical user interface. It automatically uses the routing geometries drawn by the user, and runs on all or a specified subset of nets on each pass. Users can manually route part of a net and have the router automatically finish routing the rest.

#### **Automatic Trace Width Selection**

SDL uses a weighted spanning tree to select the correct wire width for each segment of a net. Wide traces automatically use appropriately sized via arrays on layer transitions.

## Easy to Use

SDL is entirely driven by the L-Edit SDL graphical interface. DRC rules and routing layers are configured in a simple dialog.



L-Edit SDL graphical interface is intuitively easy to learn and use.

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