

Tired of using IC layout tools for MEMS?

We certainly were.

Lets face it. MEMS layout is probably the most cumbersome part of the design process. Countless revisions, incompatible data formats, hundreds of little details to pay attention to — frankly it is not fun. This has been compounded by the fact that most tools available on the market are IC layout tools, or worse yet, architectural design tools.

Finally, a layout tool for MEMS



IntelliMask is the first layout tool designed specifically for the MEMS community. Our philosophy: *simple things*

should be simple, complex things should be possible.

Configurable palettes that you can drag and customize to fit your needs, clearly illustrated icons, and configurable grids and guides make it easy for you to layout your device.

We went a few steps further by automatically linking masks created in IntelliMask to process steps to

create 3D visualization of your device. In addition, you can now link the layout with automatic mesh creation and refinement for Device level analysis!

All of the features, none of the cost

IntelliMask incorporates MEMS specific design features not found in standard electronics and mechanical layout tools. Take designs from process definition through mask layout to device analysis within a single unified design environment.

We have also included several features requested specifically by MEMS designers. Arcs and curves are native, not an afterthought patched onto an IC layout tool. Control the grid down to a nanometer, or create complex shapes easily using our built in Boolean operations. You can create scaled, rotated, and arrayed instances of a cell, and your changes propagate without a hitch!

IntelliMask is not a lightweight mask editor, it's a best in class tool with features that are not found elsewhere. Advanced features such as symmetric difference can automatically invert your features from clear field (CF) to dark field (DF) and vice versa.

We have made it easy for you to import data from legacy layout tools — import and export DXF or GDSII from right within IntelliMask.

Advanced scripting

IntelliMask is fully scriptable, you can create complex parametric cells and features through scripting.

We've built in a language independent scripting engine so that you can use the language of your choice to script IntelliMask.

Feature highlights

Ease of use

- Designed for MEMS professionals.
- Easy to learn and easy to use Windows® compliant user interface
- Reconfigurable palettes that fit your workflow
- Define up to 4 workspace (saved views) that you can easily toggle between
- Zoom, pan, and auto-resize to fit all objects to window
- Easily configurable grids
- Keyboard shortcuts to major commands

Layout features

- All angle layout, polygons, rectangles, and chords
- Auto text tool. Easily insert text objects
- Curvilinear elements: circles, ellipses, arcs, free form splines, sinusoids, and others
- Multiple mask levels
- Global and local manipulation
- Cell-based hierarchies; define feature sets that can be propagated across the mask
- Create scaled, rotated, and arrayed cells
- Multi-copy with translation and optional rotation
- Automated array creation

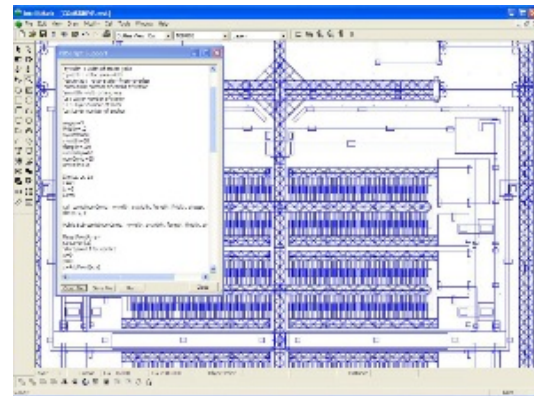
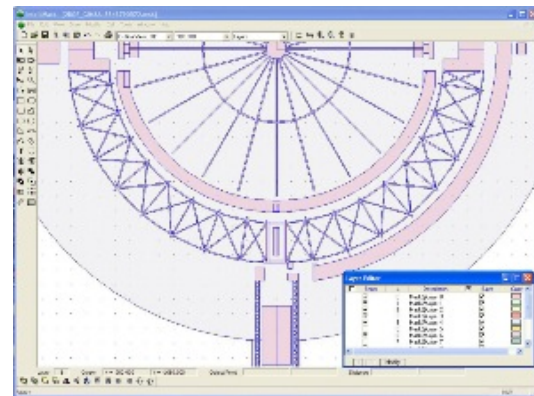
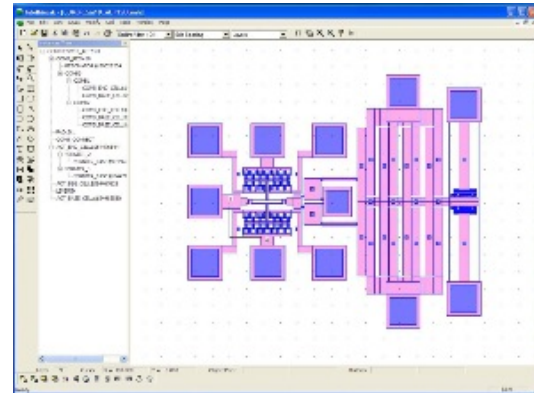
Advanced features

- Scripting for layout automation
- Geometric Boolean manipulation (union, intersection, and symmetric difference)
- Easy inversion from clear field (CF) to dark field (DF), and vice versa in a snap
- Bitmap import
- Import/Export to DXF and GDSII
- Mesh refinement cues
- Direct link to process modeling

Parametric library

Automate the layout of many common elements

- Active elements: linear and radial comb drives, harmonic side drives, rotary side drives
- Passive elements: journal bearings, crab leg springs, shuttle masses, serpentine beams, perforated plates, anchors
- Packaging elements: DIP, SOIC, QFPD, TO-can
- Test elements: Cross over tests, Euler beams, Guckel rings, Coils, stress measurement structures, vernier frames



IntelliSense Software
Solutions for the MEMS professional

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