



RNi

Chip-level Resistive Network Integrity Analysis

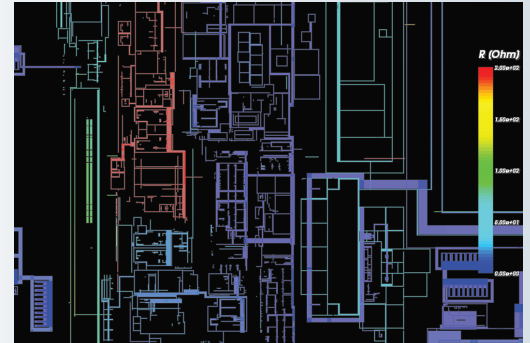
Avoid Respins, Field Failures, & Over Design

Typically Power and Ground networks are difficult to analyze. Any given point in one of these networks can have many parallel paths connecting it to its supply. Designers often over design to ensure adequate current carrying capacity at cell connections. Even worse, sometimes highly resistive paths are overlooked, leading to design failure or long term reliability issues.

Magwel offers a breakthrough in power and ground net modeling. RNi uses Magwel's proven solver to extract resistance values for all metal and vias in a supply network. Then it uses advanced algorithms to solve for the resistance from any pad to every point in the network. The results are shown graphically with a color gradient. This makes it easy to spot areas that have higher than expected resistance.

RNi is extremely useful for checking supply networks at any point in the design process. The design does not need to be LVS clean. Also, no stimulus or test bench is required. Problems with vias and metal widths will show up on the layout, so corrections can be made quickly. RNi has layout editing capabilities so that "what-if" scenarios can be explored without iterating between tools.

RNi uses advanced computational methods to run much faster than general purpose extractors. Often results can be obtained in only a few minutes.



RNi Highlights

- RNi rapidly extracts point-to-point resistances in large nets from GDSII layout
- Point-to-point resistances are extracted between pads and all points on the net
- No stimuli are required, only top level pads
- Plots a point-to-point resistance map through all metal and via layers
- Substrate paths can be included in the extraction
- Helps you visualize and quickly fix weak points in power distribution networks
- Runs in minutes, enables quick turn-around-time
- Easy to set up and use



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