

National Semiconductor's New WEBENCH Visualizer Enables Real-Time Comparison of Power Solutions Across Multiple Criteria

Nov. 9, 2009 - National Semiconductor Corp. (NYSE:NSM) today introduced [WEBENCH® Visualizer](#) [1], a powerful comparison and selection tool that enables engineers to rapidly select an optimal power system design. WEBENCH Visualizer creates a graphical snapshot of options across multiple criteria,

such as power efficiency, footprint and system bill of materials (BOM) cost. Drawing from 25 different switching power supply architectures and 21,000 components, engineers can navigate through billions of power supply design alternatives in seconds. Design criteria can be modified and the real-time effects observed, allowing engineers to select the best DC/DC power supply based on their unique needs.

"With WEBENCH Visualizer, National has enabled analog experts to be superior business decision makers because we've given them all of the tools to produce the best possible design in the shortest time," said Phil Olson, vice president of Technical Sales Tools at National Semiconductor. "We've also given non-power experts the ability to do extraordinary things with analog power designs."

National's WEBENCH Visualizer tool supports a variety of power supply topologies such as buck, boost, buck-boost, SEPIC and flyback. Several alternative circuit configurations are also available to address specific needs like fixed-frequency and constant-on-time architectures as well as current-mode and voltage-mode control loops. With the broadest power parts library from 110 manufacturers, designers can specify a wide range of parameters:

- V_{in} from 1V to 48V; 100V
- V_{out} from 0.6V to 30V; 200V
- Power up to 300W
- Efficiency up to 96 percent
- Frequency up to 3 MHz
- Footprint from 14 mm by 14 mm

How WEBENCH Visualizer Works

The WEBENCH Visualizer tool features an optimizer dial that enables engineers to "dial-in" their preference for footprint, system BOM cost and power efficiency. The tool instantly creates 50-70 designs from 48 billion possible design options. It then highlights the smallest and most efficient designs, with one recommended as a starting point for further optimization.

A second visualizer control panel allows engineers to adjust their design options for voltage, current and temperature. In seconds, an updated set of solutions appears, highlighting each design's topology, schematic, footprint, efficiency, operating values and BOM cost/count. The tool's interactive filter allows engineers to further fine-tune the power supply design to meet the target system's exact requirements.

Once a design is selected, National's WEBENCH design environment offers the ability to further tune and optimize that design through additional component options and electrical and thermal simulation. With the "Build It!" feature, National ships a custom power supply prototype kit within 24 hours. To view a video demonstration or begin an analysis with the WEBENCH Visualizer tool, go to

www.national.com/visualizer [1]

The WEBENCH Visualizer tool is an extension of National's award-winning WEBENCH tools for LEDs and power design. These tools offer instant access to the latest simulation models, parametric data and package information, enabling designers to simultaneously compare the performance of multiple devices in multiple circuit requirements.

Note to editors: To view a high-resolution downloadable photo of this tool, visit National's [photo gallery](#) [2]

[SOURCE](#) [3]

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<http://www.ecnmag.com/products/2009/11/national-semiconductors-new-webench-visualizer-enables-real-time-comparison-power-solutions-across-multiple-criteria>

Links:

[1] <http://www.national.com/visualizer>

[2] <http://www.national.com/analog/pressroom/power>

[3] <http://www.national.com/news/item/0,1735,1435,00.html>

